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Feasibility Study Report
Revision 0

Former Harshaw Chemical Company Site
Cleveland, Ohio

Volume 2 (Appendix B)

Formerly Utilized Sites Remedial Action Program

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Harshaw FUSRAP Future Land Use

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

The Former Harshaw Chemical Site is located at 1000 Harvard Avenue in Cleveland, Ohio, located approximately 3 miles south of downtown Cleveland. The site is located adjacent to the Cuyahoga River and Big Creek within an industrialized area in Cuyahoga County.

The site consists of approximately 55 acres and includes several developed and undeveloped land parcels located near the intersection of Harvard Avenue and Jennings Road. Developed site parcels include former production areas with remaining facility buildings, former production area foundations, and parking areas associated with previously demolished buildings, and re-developed privately-owned commercial properties.

The Harshaw Chemical Company (HCC) conducted chemical and radiological compound research and production activities under contract to the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) from 1942 through 1959. The primary radiological production process conducted under government contract involved the refining of uranium oxide feed material to produce numerous uranium based materials.

2.0 INVESTIGATIVE AREA DEFINITIONS

To aid in planning and implementation of remedial activities, the Former Harshaw Chemical Site Soils have been divided into seven Investigative Areas (IAs) as shown on Figure ES-1 and summarized in Table ES-1. These IAs serve to provide a common terminology for use in the planning and execution of remedial activities. These IAs are defined based upon available

information and may be modified (additions or subtractions) as conditions warrant. Each IA is associated with a specific environmental medium and the boundaries are based on geographic and infrastructure features.

Future land use of IAs was evaluated individually based on past use, contamination level, geographic features, and property remediation and release schedule. For this checklist, the evaluation of IA03 and IA04 were combined due their proximity and similar characteristics. Additionally, future use of IA01 (Building G-1) and IA02 (Other Buildings) was included in the evaluation of IA03 and IA04

2.1 INVESTIGATIVE AREA 01 (IA01) - BUILDING G-1

Investigative Area 01 (IA01) consists of the structure, building materials, and slab within the confines of Building G-1 (Sheet 1). Building G-1 is located within an approximately 1.6 acre fenced perimeter just south of the east-west rail spur. Building G-1 is a brick and steel structure building and the contamination present is believed to be a result of historical process operations. Major portions of this building are radiologically contaminated.

2.2 INVESTIGATIVE AREA 02 (IA02) - OTHER EXISTING BUILDINGS

Investigative Area 02 (IA02) consists of the remaining buildings currently existing on the site as seen on Sheet 1. These buildings are the Garage, the Foundry, the Warehouse, the Boiler House, and the Scale House. The Garage is located just west of the main site access and is a brick construction. The current use for the Garage is a Radioactive Material (RAM) storage area for roofing materials removed from the warehouse and placed into roll-off boxes. The Foundry is located north of the main site access. The majority of the building is of block construction and the current use is warehousing. The Warehouse is just east of the main site access. This building is a block construction and current usage is warehousing. The Boiler House is located just south of Building G-1. It is of brick construction and its current use is as a RAM storage area for IDW containerized during previous investigation campaigns under contract to Engelhard. The Scale House is located southeast of the Warehouse and consists of brick and frame construction.

2.3 INVESTIGATIVE AREA 03 (IA03) - SOIL IN VICINITY OF BUILDING G-1

Investigative Area 03 (IA03) contains the soils adjacent to Building G-1 and northward across the rail spur, and is approximately 11 acres. This geographic area is the area north of Harvard Avenue where the greatest extent of radiological contamination is known to exist. It is theorized that the area adjacent to Building G-1 was contaminated due to process spillage and emissions during radiological operations. The area across the rail spur likely was contaminated due to contaminant migration from vehicular traffic and due to possible filling of the area using soils with elevated radiological contaminant levels.

2.4 INVESTIGATIVE AREA 04 (IA04) - OTHER NORTHSIDE COMPLEX SOIL

Investigative Area 04 (IA04), which is approximately 17 acres in size, contains the soils within other areas north of Harvard Avenue previously part of the Former Harshaw Chemical Site.

Previous investigation work performed on these areas did not provide conclusive evidence of general elevated radiological levels but did contain localized elevated levels. Radiological and chemical contamination in this area would likely have been a result of storage, process, and fill operations.

2.5 INVESTIGATIVE AREA 05 (IA05) - SOUTHSIDE COMPLEX SOIL

Investigative Area 05 (IA05) contains the soils located south of Harvard Avenue and bounded by the Cuyahoga River and the Big Creek. IA05 is approximately 4 acres in size. Previous characterization efforts have indicated elevated radiological contaminant levels along the banks of both tributaries. These elevated levels are believed to be resultant from fill activities performed along the banks as well as possible storage and process operations in conjunction with the experimental laboratory previously demolished in this area.

2.6 INVESTIGATIVE AREA 06 (IA06) - EASTSIDE SOIL

Investigative Area 06 (IA06) contains the soils located just north of Harvard Avenue and east of the Cuyahoga River and is approximately six acres in size. Historic photographs show evidence of extensive fill activities in this area but no process or storage operations.

2.7 INVESTIGATIVE AREA 07 (IA07) - WESTSIDE SOIL

Investigative Area 07 (IA07) consists of the soils along the west side of the railroad, south of Harvard Avenue, east of Jennings Road, and north of Bradley Road. IA07 is approximately 19 acres in size. Historic evidence supports that fill activities (both disposal and grading) were performed in several distinct areas along this corridor. Historic photographs show fill activities occurring just south of Harvard along the north and south banks of Big Creek and probable disposal activities occurring in the middle and southern portions of this area.

3.0 SITE HISTORY

The HCC was initially purchased by the Harshaw, Fuller & Goodwin Company in 1905 and commercially manufactured chemical solvents, metal salts, fluorides, hydrofluoric acids, and other chemical products at the Harvard Avenue location. The HCC began production of chemical and radiological compounds for the MED in late 1942.

Under the Atomic Energy Act of 1946, the AEC was created to oversee the United States' nuclear energy program. The AEC effectively assumed control of all MED operations on January 1, 1947. As a result, all existing MED contracts were continued under the administration of the AEC after this date. The HCC also conducted numerous additional chemical and radiological research and production activities for the MED and later for the AEC through the end of government-contracted operations in 1959. The HCC also continued to conduct commercial chemical production activities throughout the period of MED/AEC contracted operations.

3.1 OPERATIONAL HISTORY

The primary production process associated with Former Harshaw Chemical Site MED/AEC contracted activities consisted of refining uranium oxide to produce several uranium-bearing materials including uranium hexafluoride (UF6), uranium tetrafluoride (UF4), and uranium tetrachloride (UCl4). Generally, two types of uranium refining processes were employed during the 1940s and 1950s: the "dry" process and the "wet" process. The dry process included the conversion of uranium oxide (U3O8) feed material to UF6. The product, UF6, was then further purified using fractional distillation.

The wet process used chemical solvent extraction to produce purified uranium compounds earlier in overall production when compared to the dry process. The wet process became the preferred method of uranium refining. Historic documents indicate that both the dry and wet processes were used by the HCC at the Harvard Avenue location.

The primary uranium compound production contract was Letter Contract W-7405-ENG-276, dated January 5, 1944. This contract authorized the construction and operation of a UF6 production facility (later known as Plant C or Building G-1). MED Contract W-7405-ENG-276 was finalized and signed on May 27, 1944. This contract served as the primary vehicle for the production of UF4, UF6, and uranium dioxide (UO2) by the HCC until production ceased in the early 1950s. The HCC received the final release and assignment of MED Contract W-7405-ENG-276 on December 23, 1959.

4.0 CONCLUSIONS

The probable future land use is a mix of industrial/commercial and recreational uses across the site. Residential use is precluded due to the industrial/commercial corridor surrounding the site and the proposed land use contained in the community master plans. The probable future land use for each IA is as follows:

- **IA03 and IA04** – A mix of retail, industrial, and recreational use. The *City of Cleveland 2020 Citywide Plan* proposes land use of this area as retail, light industrial, and recreational/open space. Additionally, the *Towpath Trail Extension: Alignment and Design Study* proposes an extension of the Towpath Trail and a loop trail, along with a potential Cuyahoga Valley Scenic Rail Stop, on the site. Currently, the Towpath Trail terminates at Harvard Avenue, approximately 0.2 miles east of the site. Also, a section of the trail was recently completed north of the site during the construction of the Steelyards Commons Shopping Center.

- **IA05 –** Industrial and Recreational. The *City of Cleveland 2020 Citywide Plan* proposes land use of this area as light industrial. Additionally, the *Towpath Trail Extension: Alignment and Design Study* proposes a Towpath Loop Trail on the site.

- **IA06** – Recreational. The *Towpath Trail Extension: Alignment and Design Study* proposes an extension of the Towpath Trail and park area on the site. Also, a section of the trail was recently completed north of the site during the construction of the Steelyards Commons Shopping Center.

- **IA07** – Industrial and Recreational. The *City of Cleveland 2020 Citywide Plan* proposes land use of this area as light industrial. Additionally, the *Towpath Trail Extension: Alignment and Design Study* proposes a Towpath Loop Trail and park area on the site.

Table ES-1. Investigative Area Descriptions

Investigative Area (IA)	Title	Description
IA01	Building G-1	Building structure
IA02	Other Existing Buildings	Garage, Foundry, Warehouse, Boiler House, and Scale House structures
IA03	Building G-1 Soil	Soil adjacent to and under Building G-1 (including north of the railroad)
IA04	Northside Complex Soil	Soil north of Harvard Avenue/west of the Cuyahoga River (outside IA03)
IA05	Southside Complex Soil	Soils south of Harvard Avenue/east of the railroad/north of Big Creek/west of the Cuyahoga River
IA06	Eastside Soil	Soil east of the Cuyahoga River/north of Harvard Avenue
IA07	Westside Soil	Soil south of Harvard Avenue/east of Jennings Road/north of Bradley Road/west of the railroad

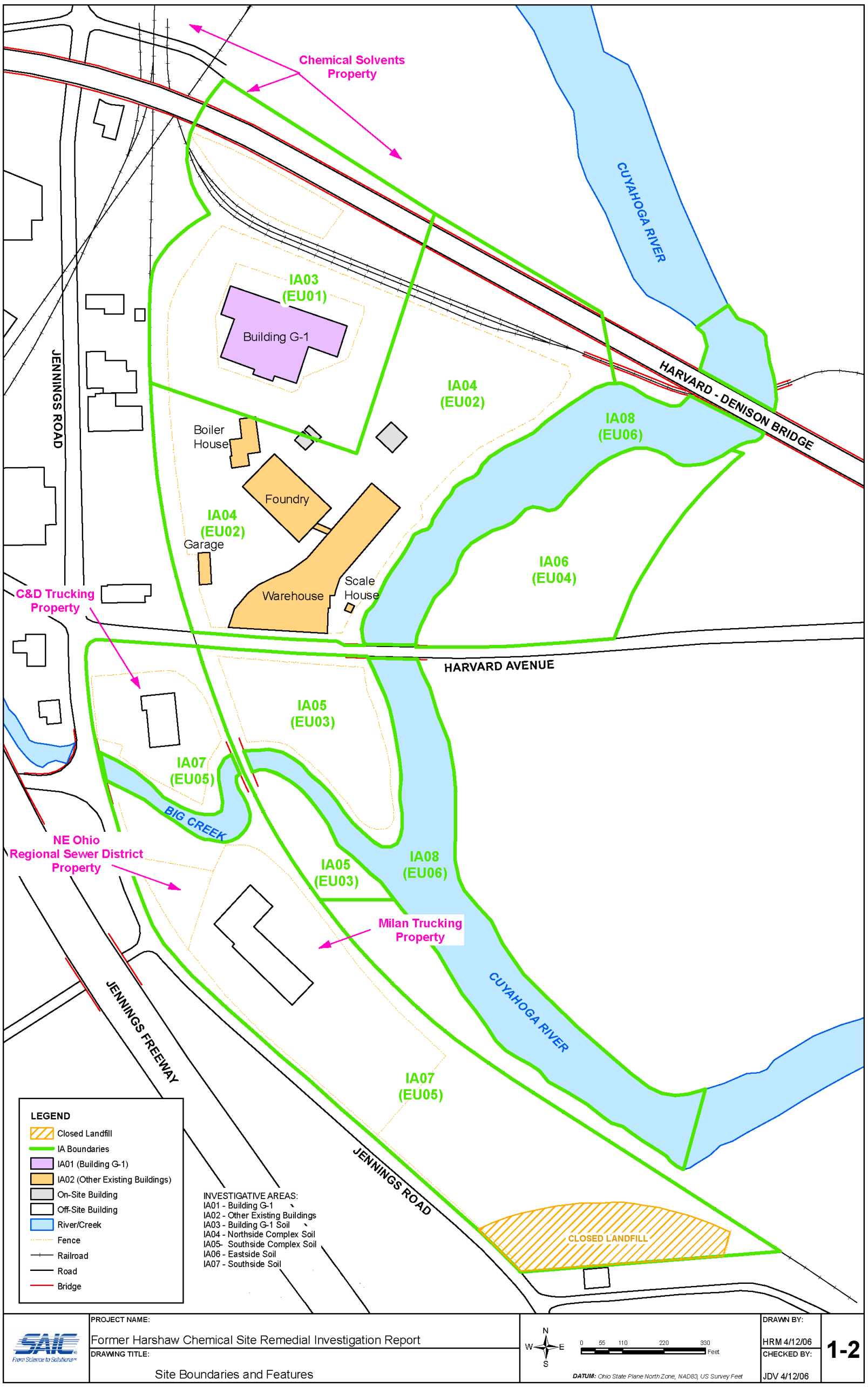

Figure ES-1. Former Harshaw Chemical Company Investigative Areas.

Project Name: Former Harshaw Chemical Company				Date: May 2012
Investigative Area:	**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
I. Description of Site:	The Investigative Areas (IAs) encompass 26 acres (11 acres in IA03 and 15 acres in IA04) in a predominantly industrial setting bordering the Cuyahoga River. The site includes industrial buildings and approximately 90% paved and 10% vegetated open space. Some buildings have been demolished and removed and in some cases the foundations of former buildings are still present.	The IA encompasses 5 acres in a predominantly industrial setting bordering the Cuyahoga River and Big Creek. The site is currently vacant and contains approximately 95% paved and 5% vegetated open space. All buildings have been demolished and removed and in some cases the foundations of former buildings are still present.	The IA encompasses 5 acres in a predominantly industrial setting bordering the Cuyahoga River. The site is currently vacant and is approximately 90% wooded and 10 % vegetated open space. No buildings or former building foundations are present in IA06.	The IA encompasses 19 acres in a predominantly industrial setting bordering the Cuyahoga River and Big Creek. The site contains commercial buildings and approximately 60% paved and 40% vegetated open space.
II. Property Ownership: **(See Appendix 1 for copies of the property deeds, maps and owner pages)**	BASF and BGD (Chevron) Company, LLC.	BASF	BGD (Chevron) Company, LLC.	E & S Property Managers, Northeast Ohio Regional Sewer District, The Stratonovich Group, LLC,, and Chevron Chemical Company, LLC.
III. Current Property Use: **(See Appendix 2 – Environmental Data Resources Reports, Appendix 3 – Photos of Surrounding Properties, Appendix 4 – Current Land Use Map and Surrounding Property Descriptions, Appendix 5 – Zoning Maps)**	Industrial	Undeveloped	Undeveloped	Commercial – 60% (C&D Truck Repair, UA Transport, LLC, Northeast Ohio Regional Sewer District), Undeveloped – 40%
A. Immediately Adjacent Property Use (Topographic Relationship):				
North	– B&O Railroad Right-of-Way (Same Elevation) – Harvard-Dennison Bridge Right-of-Way (Same Elevation) – Chemical Solvents (Same Elevation)	– Former Harshaw Chemical Company – IA03 (Same Elevation) – IA04 (Same Elevation)	– Cuyahoga River (Lower Elevation) – B & O Railroad Right-of-Way (Higher Elevation) – Harvard Denison Bridge Right-of-Way (Higher Elevation) – Former Harshaw Chemical Company – IA04 (Higher Elevation) – ArcelorMittal Steel (Higher Elevation)	– Big Creek (Lower Elevation) – Former Harshaw Chemical Company – IA05 (Same Elevation) – Cleats Club Seat Grille (Same Elevation)

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	South	– Former Harshaw Chemical Company – IA05 (Same Elevation) – C&D Truck Repair (Same Elevation)	– Cuyahoga River (Lower Elevation) – Big Creek (Lower Elevation) – B & O Railroad Right of Way (Same Elevation) – UA Transport, LLC (Same Elevation)	– TRANSInternational System-Tri-Modal System (Higher Elevation) – Ohio and Erie Canal Reservation - Towpath Trail (Higher Elevation) – Aluminum Company of America (Higher Elevation)	– Industrial Warehouse (Higher Elevation) – Vacant Warehouse (Higher Elevation) – Commercial and Industrial Property (Higher Elevation)
	East	– Cuyahoga River (Lower Elevation), Former Harshaw Chemical Company – IA06 (Same Elevation) – ArcelorMittal Steel (Same Elevation)	– Cuyahoga River (Lower Elevation) – TRANSInternational System-Tri-Modal System (Same Elevation)	– Specialized Construction (Higher Elevation)	– B&O Railroad (Same Elevation) – Cuyahoga River (Lower Elevation) – TRANSInternational System-Tri-Modal System (Same Elevation) – Petty Group, LLC Concrete Recycling (Same Elevation) – AlumaTech of Cleveland (Same Elevation) – River Recycling (Same Elevation)
	West	– B&O Railroad Right of Way (Same Elevation) – Norfolk and Western Railway Right of Way (Same Elevation) – Modern Building Supply Company, (Same Elevation) – Former Cleveland Welding Supply (Same Elevation), Former CSP Fabricating (Same Elevation) – Waste Management (Same Elevation) – Northeast Services, Inc./RJ Canvas Works – Cleats Club Seat Grille (Same Elevation)	– B&O Railroad Right of Way (Same Elevation) – C and D Truck Repair (Same Elevation)	– Cuyahoga River (Lower Elevation) – Former Harshaw Chemical Company – IA03 (Higher Elevation) – IA04 (Higher Elevation)	– Club Generations (Same Elevation) – Former All Industrial Roofing (Same Elevation) – Jennings Freeway Right-of-Way (Higher Elevation) – Single Family Home (Higher Elevation)

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
B. Property Use within ½ Mile (Topographic Relationship):					
	North	– Steelyard Commons Shopping Center (Same Elevation) – ArcelorMittal Steel (Same Elevation) – Single and Multi-Family Housing (Higher Elevation)	– B&O Railroad Right of Way (Same Elevation) – Norfolk and Western Railroad Right of Way (Same Elevation) – Chemical Solvents, Inc. (Same Elevation) – Steelyard Commons Shopping Center (Same Elevation) – ArcelorMittal Steel (Same Elevation)	– ArcelorMittal Steel (Higher Elevation) – Chemical Solvents, Inc. (Higher Elevation) – Steelyard Commons Shopping Center (Higher Elevation)	– B&O Railroad Right-of-Way (Same Elevation) – Norfolk and Western Railway Right of Way (Same Elevation) – Waste Management (Same Elevation) – Former CSP Fabricating (Same Elevation) – Former Cleveland Welding Supply (Same Elevation) – Harvard Denison Bridge Right-of-Way (Same Elevation) – Modern Building Supply Company (Same Elevation) – Tesar Industrial Contractors (Same Elevation) – Chemical Solvents, Inc. (Same Elevation) – Steelyard Commons Shopping Center (Same Elevation)
	South	– TRANSInternational System-Tri-Modal System (Same Elevation) – Petty Group, LLC Concrete Recycling (Same Elevation) – UA Transport, LLC (Same Elevation) – Northeast Ohio Regional Sewer District Sewer Pumping Station (Same Elevation) – Jennings Freeway Right-of-Way (Higher Elevation) – Former Harshaw Chemical Company – IA07 (Same Elevation) – Industrial Warehouse (Higher Elevation) – Vacant Warehouse (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation)	– Petty Group, LLC Concrete Recycling (Same Elevation) – Northeast Ohio Regional Sewer District Pumping Station (Same Elevation) – Former Harshaw Chemical Company – IA07 (Same Elevation) – Industrial Warehouse (Higher Elevation) – Vacant Warehouse (Higher Elevation) – Jennings Freeway Right-of-Way (Same Elevation) – Single and Multi-Family Housing (Higher Elevation)	– Petty Group, LLC Concrete Recycling (Higher Elevation) – UA Transport, LLC (Higher Elevation) – Former Harshaw Chemical Company – IA07 (Higher Elevation) – Industrial Warehouse (Higher Elevation) – Vacant Warehouse (Higher Elevation) – AlumaTech of Cleveland (Higher Elevation) – River Recycling Industries (Higher Elevation) – Jennings Freeway Right-of-Way (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation)	– Jennings Freeway Right-of-Way (Higher Elevation) – Commercial and Industrial Properties (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation)
	East	– Ohio and Erie Canal Reservation - Towpath Trail (Higher Elevation) – ArcelorMittal Steel (Same Elevation)	– Ohio and Erie Canal Reservation Towpath Trail (Higher Elevation) – Aluminum Company of America (Higher	– Vacant Restaurant (Higher Elevation) – ArcelorMittal Steel (Higher Elevation) – Aluminum Company of America	– Ohio and Erie Canal Reservation - Towpath Trail (Higher Elevation) – Aluminum Company of America

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
		– Specialized Construction (Higher Elevation) – Vacant Restaurant (Higher Elevation) – Aluminum Company of America (Higher Elevation)	Elevation)	(Higher Elevation)	(Higher Elevation)
	West	– Tesar Industrial Contractors (Same Elevation) – Waste Management (Same Elevation) – Club Generations (Same Elevation) – Jennings Freeway Right-of-Way (Higher Elevation) – Trucking Terminal (Same Elevation) – Single and Multi-Family Housing (Higher Elevation)	– Former All Industrial Roofing (Same Elevation) – Club Generations (Same Elevation) – Jennings Freeway Right-of-Way (Higher Elevation) – Trucking Terminal (Same Elevation) – Single and Multi-Family Housing (Higher Elevation)	– B&O Railroad Right of Way (Higher Elevation) – Norfolk and Western Railway Right of Way (Higher Elevation) – Former Cleveland Welding Supply (Higher Elevation) – Former CSP Fabricating (Higher Elevation) – Waste Management (Higher Elevation) – Cleats Club Seat Grille (Higher Elevation) – Tesar Industrial Contractors (Higher Elevation) – Northeast Services, Inc./RJ Canvas Works – Club Generations (Higher Elevation) – Jennings Freeway Right-of-Way (Higher Elevation) – Trucking Terminal (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation)	– Trucking Terminal (Same Elevation) – Crestview Estates Apartment Complex (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation) – Retail and Commercial Businesses (Higher Elevation)
C. Property Use within 1 Mile (Topographic Relationship):					
	North	– Steelyard Commons Shopping Center (Same Elevation) – ArcelorMittal Steel (Same Elevation)	– Same as IA03 and IA04	– Steelyard Commons Shopping Center (Higher Elevation) – ArcelorMittal Steel (Higher Elevation)	– Same as IA03 and IA04
	South	– Jennings Freeway Right-of-Way (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Single and Multi-Family Housing (Higher Elevation) – Retail and Commercial Businesses (Higher Elevation)
	East	– Aluminum Company of America (Higher Elevation) – ArcelorMittal Steel (Same Elevation) – Speedway Gas Station (Higher	– Same as IA03 and IA04	– Same as IA03 and IA04 except ArcelorMittal Steel is at a higher elevation	– Aluminum Company of America (Higher Elevation) – McGean Chemical Company (Higher Elevation)

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
		Elevation) – McGean Chemical Company (Higher Elevation) – Ohio Crankshaft Company (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation)			
	West	– Retail and Commercial Businesses (Higher Elevation) – Single and Multi-Family Housing (Higher Elevation) – Trucking Terminal (Same Elevation)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Single and Multi-Family Housing (Higher Elevation) – Retail and Commercial Businesses (Higher Elevation)
IV. Site Ownership and Operations History and Use:					
	A. Current Owner/Operations	– BASF Corporation (All buildings and land in IA03/IA04 excluding Building G-1) (2006 to present) – chemical warehousing – BGD (Chevron) Company, LLC (Building G-1) (1988 to present) – currently vacant	– BASF Corporation (2006 to present) – IA05 is currently vacant	– BGD (Chevron) Company, LLC (1988 to present) – IA06 is currently vacant	– E & S Property Managers (1999 to present) – C&D Truck Repair – Northeast Ohio Regional Sewer District (1985 to present) – Pumping Station – The Stratonovich Group, LLC (2010 to present) – UA Transport, LLC – BGD (Chevron) Company, LLC (1988 to present) – currently vacant
	B. Previous Owner/Operations	– Engelhard Corporation (1988 to 2006) – Harshaw Chemical Company (1914 to 1988) - Refer to Sanborn Maps contained in Appendix 2	– Engelhard Corporation (1988 to 2006) – Harshaw Chemical Company (1957 to 1988) - Refer to Sanborn Maps contained in Appendix 2	– Harshaw Chemical Company (1947 to 1988) - Refer to Sanborn Maps contained in Appendix 2	– Gamed Investment Company (2004 to 2010) - Milan Express Trucking – Harshaw Chemical Company (1956 to 1988)
	C. Prior Land Use	– Uranium processing, including the following steps: yellow cake (U_3O_8) → orange oxide (UO_3) → brown oxide (UO_2) → fluorination of UO_2 to green salt (UF_4) → fluorination of UF_4 to uranium hexafluoride (UF_6) – Production of specialty chemicals and metal salts	– Same as IA03 and IA04	– Some evidence of land disposal activities. No chemical or uranium processing took place in IA06.	– Potential staging area and land disposal activities. – A closed landfill is present in the southern portion of IA07. From 1950 to 1979, Harshaw Chemical Company deposited approximately 15,700 tons of mixed industrial waste into the landfill. The landfill was closed in 1981 under Regulation 3745-27-10 (EP-20-10).

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
V. Current Land Use Controls:					
	A. Description	– The current zoning classification for IA03 and IA04 is Unlimited Industry with a 115 foot height limit. Areas IA03 and IA04 are surrounded by a perimeter fence posted with "No Trespassing" signs. A fenced area, posted as a "Radioactive Contamination Area", surrounds Building G-1. – IA03 and IA04 are located within an Ohio Department of Natural Resources (ODNR) Coastal Management Area.	– The current zoning classification for the site (IA05) is Unlimited Industry with a 115 foot height limit. Area IA05 is surrounded by a perimeter fence posted with "No Trespassing" signs.	– The current zoning classification for the site (IA06) is Industrial. IA06 is not surrounded by a fence and there are no warning signs posted. – IA06 is located within an Ohio Department of Natural Resources (ODNR) Coastal Management Area.	– The current zoning classification for the site (IA07) is "Residence-Industry" (City of Cleveland Planning Commission). The vacant portion of IA07 is surrounded by a fence posted with "No Trespassing" signs.
	B. Regulatory Agencies which have the authority to monitor and enforce restrictions or other jurisdictional authorities over the property or affected media	– U.S. Environmental Protection Agency (USEPA) – Ohio Environmental Protection Agency (OEPA) – Ohio Department of Natural Resources (ODNR) - IA03 and IA04 are located within an ODNR – designated coastal management area, Endangered Species Consultation – U.S. Fish and Wildlife Service – Endangered Species Consultation	– Same as IA03 and IA04, except IA05 is not located in within an ODNR – designated coastal management area	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company				Date: May 2012
Investigative Area:	**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
VI. Potential Land Use Control Holders/Enforcers	Not applicable.	Not applicable.	Not applicable	Not applicable
VII. Current Zoning Laws, Regulations (Including Local Ordinances) and Maps	– IA03 and IA04 are currently zoned "Unlimited Industry" with a height limit of 115 feet (Cleveland City Planning Commission). Zoning maps of the site and surrounding area are contained in Appendix 5.	– Same as IA03 and IA04	– IA06 is currently zoned "Industrial" (Cuyahoga County Planning Commission). A zoning map of the site and surrounding area is contained in Appendix 5.	– IA07 is currently zoned "Residence-Industry" (Cleveland City Planning Commission). Zoning maps of the site and surrounding area are contained in Appendix 5.
VIII. Population Growth Patterns and Projections	– The population of Greater Cleveland and Cuyahoga County is projected to decline by 7% through 2030 (Ohio Department of Development, Office of Strategic Research, July 2003). Current population and demographic data for the surrounding neighborhoods is contained in Appendix 6 - Neighborhood Profiles and Demographic Data.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
IX. Community Master Plans:				
	Agency	Cleveland City Planning Commission	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	Contact Date	30 November 2006			
	Point of Contact	George Cantor			
	Contact Number	(216) 664-3806			
	Agency	Cuyahoga County Planning Commission	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	Contact Date	15 June 2006			
	Point of Contact	Dan Meany			
	Contact Number	(216) 443-3700			
	Description of Plan	– The City of Cleveland Planning Commission has prepared a draft master plan entitled "Connecting Cleveland – 2020 Citywide Plan. The plan is included in Appendix 7. Additionally,	– Same as IA03 and IA04, except IA05 is located in the Brooklyn Centre Neighborhood of Cleveland and is bordered by Tremont, Old Brooklyn and South Broadway Neighborhoods.	– Same as IA03 and IA04, except IA06 is located in the Village of Cuyahoga Heights. Additionally, IA06 is located adjacent to the Brooklyn Centre, Tremont, Old Brooklyn and South	– Same as IA03 and IA04, except IA07 is located in the Brooklyn Centre Neighborhood of Cleveland and is bordered by Tremont, Old Brooklyn and South Broadway Neighborhoods.

Project Name: Former Harshaw Chemical Company				Date: May 2012	
Investigative Area:		IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]	IA05	IA06	IA07
		the proposed 2020 and current land use maps for the site are located on the Planning Commission Interactive Mapping Web Page (http://planning.city.cleveland.oh.us/gis/cpc/basemap.jsp). Copies of the maps are included in Appendix 7. The proposed future land use of the site is light industrial and retail. Current Zoning Maps for the site and surrounding areas are included in Appendix 5. – IA03 and IA04 are located in the Brooklyn Centre and Tremont Neighborhoods of Cleveland. The site is bordered by the Old Brooklyn and South Broadway Neighborhoods of Cleveland. Appendix 6 contains neighborhood profiles and demographic data for these neighborhoods. – The site is located adjacent to the Village of Cuyahoga Heights. A Master Plan and current land use map have been prepared and are included in Appendix 8. The current land use surrounding the site is industrial. – Additionally, IA03 and IA04 are located approximately ½ mile west of the Village of Newburgh Heights. A zoning map for Newburgh Heights is included in Appendix 9. Residential and commercial design guidelines have also been prepared for Newburgh Heights and are contained in Appendix 9. – A plan has been developed for the extension of the Towpath Trail from its current terminus at Harvard Avenue, through IA03, IA04 and IA06 to Canal Park Basin in downtown Cleveland (~ 6 miles north). The plan, alignment maps and proposed trailhead location map are included in Appendix 10.		Broadway Neighborhoods of Cleveland.	

Project Name: Former Harshaw Chemical Company				Date: May 2012
Investigative Area:	**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
X. Historical and/or Recent Development Patterns	– Cleveland's Steelyard Commons Shopping Center, located approximately ½ mile north of the site, was constructed in 2007. The shopping center offers one million square feet of retail space with direct access from I-71 and the Jennings Freeway. Major retail stores include: Target, Wal-Mart Supercenter, Home Depot, and Best Buy. The center also includes a variety of restaurants, small retail stores, and a new section of the Towpath Trail. A site plan is contained in Appendix 11.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
XI. Existing Infrastructure Accessibility:				
A. Major Highways	– I-71 (located 1.1 miles Northwest of site) – I-77 (located 1.6 miles East of site) – I-90 (located 5.6 miles North of site)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
B. Railroads	– B & O Railroad (located adjacent to site) – Norfolk and Western Railway (located 0.2 miles Northwest of site)	– Same as IA03 and IA04	– B & O Railroad (located 0.1 miles West of site) – Norfolk and Western Railway (located 0.25 miles Northwest of site)	– B & O Railroad (located adjacent to site) – Norfolk and Western Railway (located 0.1 miles Northwest of site)
C. Public Transportation	– Available via the Greater Cleveland Regional Transportation Authority, nearest bus stop is located approximately ½ mile east of site	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
D. Public Utilities	– Public water, sewer, electric, telephone, and natural gas are available on-site	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
E. Navigable Waterways	– Cuyahoga River Federal Navigation Channel (located 1.1 miles Northeast of site)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
XII. Drinking Water Source:				
A. On-site	– Municipal Water Supply	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	B. Adjacent Properties (within a 4-mile radius)	– Municipal Water Supply	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	C. Current State and Federal Groundwater Classification	– Default groundwater classification for the State of Ohio is Class A with "critical resource" subclassifications. The Harshaw site does not contain groundwater that meets "Class A Critical Resource," although site groundwater resources meets Ohio Class A criteria, specifically for Total Dissolved Solids below 3000 mg/L (HCC averages ~1450 ug/L) and well-production greater than 0.1 gallon per minute (or 379 mL/min), which has been observed at most site wells. Since Ohio is an EPA agreement state, the Ohio conditions primarily apply versus EPA standards, although the EPA MCLs could be relevant and appropriate relative to quality. – Site is located within ½ mile buffer zone of Ohio Voluntary Action Program (VAP) – Urban Setting Designation (USD) zone. The designation indicates groundwater within the site boundaries should not be used for potable purposes – although this designation is only enforced within the Ohio VAP program.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	D. Natural/Existing Water Quality Conditions	– The current groundwater quality conditions at the site vary from west to east towards the Cuyahoga River. Groundwater extracted in the western portion exhibits high turbidity, variable yields, pH variations, significant nickel contamination, low dissolved oxygen and reduction-oxidation potential, as well as limited total uranium contamination. In the eastern areas the water yield is more consistent and of slightly better quality, although still influenced by these aforementioned conditions. The background or upgradient groundwater shows no site influence and lower specific conductance, which indicates less total dissolved solids and better quality. The current conditions on site and in the generally industrialized area indicate that local groundwater is not a high-quality resource and thus precluded from consumptive use with water utilities present.	– Same as IA03 and IA04	– There are no groundwater monitoring wells located in IA06. The generally industrialized area indicates that local groundwater is not a high-quality resource and thus precluded from consumptive use with water utilities present.	– The current conditions of IA07 and in the generally industrialized area indicate that local groundwater is not a high-quality resource and thus precluded from consumptive use with water utilities present.
XIII. Located within a State or Regional Comprehensive Groundwater Protection Area (Source – OEPA Division of Drinking and Groundwater Website)		– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
XIV. Industrial Water Source:					
	A. On-site	– Municipal Water Supply	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	B. Adjacent Properties (within a 4-mile radius)	– Municipal Water Supply, Cuyahoga River (ArcelorMittal Steel)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company				Date: May 2012
Investigative Area:	**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
XV. Surface Water				
A. Description	– **<u>Cuyahoga River</u>** – located along the eastern boundary of the site. The river is a recent geological formation, formed by the advance and retreat of the last ice sheet during the last ice age. When the final retreat occurred 10-12,000 years ago, the glacier scooped the land and caused changes in the drainage pattern near Akron which resulted in the south-flowing Cuyahoga precursor to turn north and create the U-shape we see today. As the Cuyahoga River found its way to Lake Erie it had to flow around glacial debris left by the receding ice sheet. The meanderings caused the river to take a 100-mile (160 km) journey from its headwaters to its mouth, which was only 30 miles (50 km) when traveled directly. – The lower Cuyahoga River has been subject to numerous changes. Originally, the river met Lake Erie approximately 4,000 feet west of its existing mouth, forming a shallow marsh. The new cut west of present-day Downtown Cleveland allowed traffic to flow freely between the river and the lake. Furthermore, while the natural depth of the Cuyahoga River is 3 to 6 feet, for the last 5 miles of its course from the ArcelorMittal Steel Cleveland Works to its mouth, it is dredged to a depth of 27 feet by the U.S. Army Corps of Engineers to accommodate ship traffic that serves the industries located on the River. Dredged material from the Cuyahoga River was placed into an open-lake placement area in Lake Erie prior to 1968 and then into confined disposal facilities in Cleveland Harbor.	– Same as IA03 and IA04 and Big Creek – Big Creek is the third largest tributary (of 12) of the Lower Cuyahoga River. The watershed is roughly triangular in shape with a total drainage area of 37.6 square miles. The creek traverses 12-miles through 7 municipalities (Cleveland, Brooklyn, Linndale, Parma, Parma Heights, Brook Park, and North Royalton). It is the most severely urbanized watershed (52% impervious). Big Creek enters the Cuyahoga River at a point 7.4 miles above the mouth of the Cuyahoga in Cleveland at Lake Erie.	– Same as IA03 and IA04	– Same as IA05

Project Name: Former Harshaw Chemical Company				Date: May 2012	
Investigative Area:		IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]	IA05	IA06	IA07
		– Dredged material from the Cleveland Outer Harbor was placed into an open-lake placement area in Lake Erie prior to 1974 and then into confined disposal facilities in Cleveland Harbor. The Cuyahoga has also been straightened and widened along the Federal Navigation Channel to facilitate maritime operations. The Federal Navigation Channel begins approximately 1.5 river miles (RM) downstream of the Harshaw site. – Fires plagued the Cuyahoga beginning in 1936 when a spark from a blow torch ignited floating debris and oils. Fires erupted on the river several more times before June 22, 1969, when a river fire captured the attention of *Time* magazine, which described the Cuyahoga as the river that "oozes rather than flows" and in which a person "does not drown but decays". This event helped spur an avalanche of pollution control activities resulting in the Clean Water Act, Great Lakes Water Quality Agreement, and the creation of the federal and state Environmental Protection Agency. As a result, large point sources of pollution on the Cuyahoga have received significant attention from the Ohio Environmental Protection Agency in recent decades. Water quality has improved and, in recognition of this improvement, the Cuyahoga River was designated as one of 14 American Heritage Rivers in 1998. Yet, pollution problems, including nonpoint source problems, Combined Sewer Overflows (CSOs), and stagnation due to water impounded by dams, remain. For this reason, the Environmental Protection Agency classified portions of the Cuyahoga			

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
		River Watershed as one of 43 Great Lakes Areas of Concern. (Source: USEPA - http://www.epa.gov/glnpo/aoc/cuyahoga.html)			
	B. Is the Surface Water a water of the United States?	– Yes	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	C. Is there a federally designated flood plain along the surface water body on site?	– Yes	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	D. On-site Surface Water Intakes?	– No	– No	– Same as IA05	– Same as IA05
	E. On-site Point Source Discharges to Surface Water (If yes, include description)?	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	F. Adjacent Property Surface Water Intakes (Within 15 miles downstream) (If yes, include description)?	– Yes, Industrial surface water intakes are located on the Cuyahoga River at ArcelorMittal Steel.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
XVI. Federal/State Land Use Designations					
	A. On-site	– None	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	B. Adjacent Properties	– Cleveland Metroparks – Ohio and Erie Canal Reservation (Appendix 4)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
XVII. Potentially Unique/Sensitive Environmental Conditions (These determinations are not part of the ARAR analysis for the site)					
	A. On-site:				

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Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	1. Critical habitat for Federal designated endangered or threatened species	– No – Additional coordination will be conducted with the USFWS during the Proposed Plan Phase of the project)	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	2. Marine Sanctuary	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	3. National Park	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	4. Designated Federal Wilderness Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	5. Areas identified under the Coastal Zone Management Act	– Yes – Project must be coordinated with ODNR. A map illustrating the ODNR designated Coastal Management Area is contained in Appendix 12. Management Policies are included in Appendix 12.	– No, Harvard Avenue is the southern boundary of the ODNR designated Coastal Management Area (See map contained in Appendix 12).	– Same as IA03 and IA04	– Same as IA05
	6. Sensitive areas identified under the National Estuary Program or Near Coastal Waters Program	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	7. Critical areas identified under the Clean Lakes Program	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	8. National Monument	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	9. National Seashore Recreational Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	10. National Lakeshore Recreational Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	11. Habitat known to be used by Federal designated or proposed endangered or threatened species	– No – Additional coordination will be conducted with the USFWS during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	12. National Preserve	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	13. National or State Wildlife Refuge	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	14. Unit of Coastal Barrier Resources System	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	15. Coastal Barrier (undeveloped)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	16. Federal land designated for protection of natural ecosystems	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	17. Administratively **Proposed Federal Wilderness Area**	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company				Date: May 2012	
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	18. Spawning areas critical for the maintenance of fish/shellfish species within river, lake, or coastal tidal waters	– No – Additional coordination will be conducted with the USFWS and ODNR during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	19. Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	20. Terrestrial areas utilized for breeding by large or dense aggregations of animals	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	21. National river reach designated as Recreational	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	22. Habitat known to be used by state designated endangered or threatened species	– No – Additional coordination will be conducted with the ODNR during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	23. Habitat known to be used by species under review as to its Federal endangered or threatened status	– No – Additional coordination will be conducted with the USFWS during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	24. Coastal Barrier (partially developed)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	25. Federally-designated Scenic or Wild River	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	26. State land designated for wildlife or game management	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	27. State-designated Scenic or Wild River	– No (Lower Cuyahoga). – The Upper Cuyahoga River, beginning at the Troy-Burton township line in Geauga County and continuing downstream to State Route 14 in Portage County, has been designated an Ohio State Scenic River.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	28. State-designated Natural Areas	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	29. Particular areas, relatively small in size, important to maintenance of unique biotic communities	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	30. State-designated areas for protection or maintenance of aquatic life	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company				Date: May 2012	
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	31. Wetlands	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	32. Cultural Factors (e.g., historical sites, Native American religious sites)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	33. Air Pollution	– Yes	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	34. Water Quality Concerns/Pollution	– Yes – Located within the Cuyahoga River AOC. Appendix 4 contains a map illustrating the boundaries of the AOC.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	35. Groundwater Contamination	– Yes - Uranium and Nickel. – Nickel contamination is not FUSRAP-related. The site owner is currently operating a pump and treat system for remediation of Nickel under the Ohio Voluntary Action Program.	– No groundwater contamination identified in groundwater monitoring wells sampled during the RI.	– Unknown, there are no groundwater monitoring wells located in IA06.	– Uranium concentrations that exceed RI background value detected in FS groundwater monitoring wells installed in 2008. – Groundwater conditions monitored annually as part of long-term monitoring program.
	36. Designated CERCLA/NPL Site(s)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	37. Sites under RCRA Corrective Action Orders	– Yes – Nickel contamination in groundwater. The site owner is currently operating a pump and treat system for remediation of Nickel under the Ohio Voluntary Action Program.	– No	– No	– No

Project Name: Former Harshaw Chemical Company				Date: May 2012	
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	38. Floodplain	– Yes - A map showing floodplains located on the site is contained in Appendix 4.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	39. Minority/Low Income Population	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	40. Sensitive Populations (e.g., hospitals, nursing homes, schools, day care centers, etc.)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	41. Current/Former NRC Licensee	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	42. Any other environmental license or permit	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
B. Adjacent Properties:					
	1. Critical habitat for Federal designated endangered or threatened species	– No – Additional coordination will be conducted with the USFWS during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	2. Marine Sanctuary	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	3. National Park	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company				Date: May 2012	
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	4. Designated Federal Wilderness Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	5. Areas identified under the Coastal Zone Management Act	– Yes – Project must be coordinated with ODNR. A map illustrating the ODNR designated Coastal Management Area is contained in Appendix 12. Management Policies are included in Appendix 12.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	6. Sensitive areas identified under the National Estuary Program or Near Coastal Waters Program	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	7. Critical areas identified under the Clean Lakes Program	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	8. National Monument	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	9. National Seashore Recreational Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	10. National Lakeshore Recreational Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	11. Habitat known to be used by Federal designated or proposed endangered or threatened species	– No – Additional coordination will be conducted with the USFWS during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	12. National Preserve	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	13. National or State Wildlife Refuge	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	14. Unit of Coastal Barrier Resources System	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	15. Coastal Barrier (undeveloped)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	16. Federal land designated for protection of natural ecosystems	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	17. Administratively Proposed Federal Wilderness Area	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	18. Spawning areas critical for the maintenance of fish/shellfish species within river, lake, or coastal tidal waters	– No – Additional coordination will be conducted with the USFWS and ODNR during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	19. Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	20. Terrestrial areas utilized for breeding by large or dense aggregations of animals	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	21. National river reach designated as Recreational	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	22. Habitat known to be used by state designated endangered or threatened species	– No – Additional coordination will be conducted with the ODNR during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	23. Habitat known to be used by species under review as to its Federal endangered or threatened status	– No – Additional coordination will be conducted with the USFWS during the Proposed Plan Phase of the project.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	24. Coastal Barrier (partially developed)	No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	25. Federally-designated Scenic or Wild River	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	26. State land designated for wildlife or game management	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	27. State-designated Scenic or Wild River	– No – Lower Cuyahoga. – The Upper Cuyahoga River, beginning at the Troy-Burton township line in Geauga County and continuing downstream to SR 14 in Portage County, has been designated an Ohio State Scenic River.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	28. State-designated Natural Areas	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	29. Particular areas, relatively small in size, important to maintenance of unique biotic communities	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	30. State-designated areas for protection or maintenance of aquatic life	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	31. Wetlands	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company					Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	32. Cultural Factors (e.g., historical sites, Native American religious sites)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	33. Air Pollution	– Yes	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	34. Water Quality Concerns/Pollution	– Yes – Located within the Cuyahoga River AOC. Appendix 4 contains a map illustrating the boundaries of the AOC.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	35. Groundwater Contamination	– Yes – Chemical Solvents, ArcelorMittal Steel West Properties	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	36. Designated CERCLA/NPL Site(s)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	37. Sites under RCRA Corrective Action Orders	– Yes - Chemical Solvents, ArcelorMittal Steel West Properties	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	38. Floodplain	– Yes - A map showing floodplains is contained in Appendix 4.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	39. Minority/Low Income Population	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	40. Sensitive Populations (e.g., hospitals, nursing homes, schools, day care centers, etc.)	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

Project Name: Former Harshaw Chemical Company				Date: May 2012
Investigative Area:		**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
	41. Current/Former NRC Licensee	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
	42. Any other environmental license or permit	– No	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04
XVIII. Site Issues Not Being Addressed Under USACE HTRW Project		– Nickel groundwater and heavy metal soil contamination.	– Same as IA03 and IA04	– Potential chemical contamination from past land disposal activities.	– Potential chemical contamination from past land disposal activities. A closed landfill located in the southern portion of IA07.
XIX. Potential for Groundwater Contamination from Soil Contaminant Migration:					
	A. USACE HTRW Constituents	– Yes – Uranium has been detected in the soil and groundwater monitoring wells surrounding Building G-1.	– Yes – Low level uranium contamination has been detected in soil samples collected form IA05.	– No – Low level uranium contamination in soil samples does not represent a threat to groundwater.	– Same as IA05
	B. Other Constituents	– Yes – Nickel groundwater and heavy metal soil contamination.	– Same as IA03 and IA04	– Potential chemical contamination from past land disposal activities.	– Same as IA06

Project Name: Former Harshaw Chemical Company				Date: May 2012
Investigative Area:	**IA03 and IA04 [Includes Building G-1 (IA01) and other existing buildings (IA02)]**	**IA05**	**IA06**	**IA07**
XX. Geographic and Geological Information	– The local physiography includes lower floodplain areas along the Cuyahoga River that quickly elevate to eastern and western uplands removed from the floodplain. The Cuyahoga River valley widens north of the site, where the Lake Erie lakeplain dominates local topography. The eastern and western uplands are underlain by till-mantled bedrock plateaus dissected by dendritic stream networks feeding the Cuyahoga River. The site is underlain by anthropogenic fill by reworked floodplain deposits in the west and thicker fill over alluvial sand and gravel channel deposits derived from historic river meandering. The site is indicative of anthropogenically terraced and elevated areas along the surrounding industrialized and developed Cuyahoga River corridor.	– Same as IA03 and IA04	– Same as IA03 and IA04	– Same as IA03 and IA04

XXI. Source of Site Ownership, Site Use Data and References Cited:

Property Use, Ownership, and Zoning Data –
City of Cleveland Planning Commission (http://planning.city.cleveland.oh.us/)
Cuyahoga County Planning Commission (http://planning.co.cuyahoga.oh.us/)

Property Deeds, Maps and Owner Pages –
Cuyahoga County Auditor's Office (http://auditor.cuyahogacounty.us/)

Towpath Trail Extension-
Cuyahoga County Planning Commission (http://planning.co.cuyahoga.oh.us/)

Steelyard Commons Planning Information – http://www.steelyardcommons.com/

Environmental Data Resources – Environmental Risk Management Information (www.edrnet.com)

XXII. Prepared by:

Name: [redacted]
Title Health Physicist, Environmental Health Team
Date:
Signature

XXIII. Approved by:

Name:
Title
Date:
Signature

Name:
Title
Date:
Signature

Name:
Title
Date:
Signature

Harshaw FUSRAP Future Land Use
List of Appendices

Appendix 1 – Harshaw FUSRAP Parcel Deeds, Ownership Sheets, and Maps

Appendix 2 – Environmental Data Resources Reports

Appendix 3 – Photos of Harshaw FUSRAP Site and Surrounding Properties

Appendix 4 – Maps of Harshaw FUSRAP Current Land Use, Floodplain and Wetlands, Cuyahoga River AOC and Surrounding Property Information

Appendix 5 – Zoning Maps

Appendix 6 – Surrounding Neighborhood Descriptions and Demographics

Appendix 7 – Cleveland 2020 City wide Plan

Appendix 8 – Village of Cuyahoga Heights Master Plan and Addendum

Appendix 9 – Newburgh Heights Residential and Commercial Design Guidelines and Zoning

Appendix 10 – Towpath Trail Extension Plan and Maps

Appendix 11 – Cleveland's Steelyard Commons Information and Maps

Appendix 12 – Coastal Management Policies and Cuyahoga River Coastal Management Area Map

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Harshaw FUSRAP Future Land Use
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Figure 3-7. Ohio and Erie Canal Reservation – Towpath Trail Extension

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Figure 3-11. Jennings Road

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Figure 3-14. Waste Management

Figure 3-15. Former CSP Fabricating

Figure 3-16. Former Cleveland Welding Supply

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Figure 3-20. Modern Builders Supply

Figure 3-21. Tesar Industrial Contractors, Inc.

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Figure 3-28. Former Harshaw Chemical Company Investigative Area 07

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Figure 4-1. Aerial Photo of the Former Harshaw Chemical Company Investigative Areas and Adjacent Properties

Figure 4-2. Harshaw FUSRAP 100-year floodplains and Wetlands - ½ and 1-Mile Radius

Figure 4-3. Harshaw FUSRAP Current Land Use - ½ and 1-Mile Radius

Figure 4-4. City of Cleveland Planning Commission GIS - Current Land Use

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Figure 5-1. Harshaw FUSRAP Current Zoning - ½ and 1-Mile Radius

Figure 5-2. City of Cleveland Planning Commission Zoning Map for Harshaw FUSRAP and Surrounding Area

Figure 5-3. Cuyahoga Heights Zoning and Current Land Use

Appendix 7.

Figure 7-1. City of Cleveland Planning Commission GIS - Current Land Use

Figure 7-2. City of Cleveland Planning Commission GIS – Proposed 2020 Land Use

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Figure 8-1. Cuyahoga Heights Zoning and Current Land Use

Appendix 9.

Figure 9-1. Newburgh Heights Zoning Map

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Figure 10-1. Proposed Towpath Trail Extension Alignment Plan 2007 Update – Entire Trail

Figure 10-2. Proposed Towpath Trail Extension for the Harshaw FUSRAP Site

Figure 10-3. Proposed Towpath Trail Extension Potential Trailheads

Figure 10-4. Proposed Towpath Trail Extension Environmental Regeneration Plan

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Figure 11-1. Cleveland's Steelyard Commons Site Plan

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Figure 12-1. Ohio Department of Natural Resources Designated Cuyahoga River Coastal Management Area

Figure 1-1 Current Ownership Chart

Current Tax Payer of Record	Ownership Interest	Assessor's Permanent Parcel No.	Description	Owner's Mailing Address	Owner's Telephone No.
E & S Property Managers, L.L.C.	100%	009-30-001	See Section 1.2 - Legal Descriptions	c/o [redacted] Attn: [redacted]	[redacted]
Harshaw Chemical Company***	100%	009-30-002	See Section 1.2 - Legal Descriptions	[redacted]	[redacted]
Northeast Ohio Regional Sewer District	100%	009-09-003	See Section 1.2 - Legal Descriptions	City of Cleveland, [redacted]	[redacted]
Cadlerock Properties Joint Venture, L.P.	100%	009-30-047	See Section 1.2 - Legal Descriptions	[redacted]	[redacted]
BGD Company	100%	009-30-048	See Section 1.2 - Legal Descriptions	* [redacted]	Not Available

Figure 1-/ Current Ownership Chart

Current Tax Payer of Record	Ownership Interest	Assessor's Permanent Parcel No.	Description	Owner's Mailing Address	Owner's Telephone No.
Harshaw/Filtrol Partnership****	100%	009-09-012 and 008-34-022	See Section 1.2 - Legal Descriptions	N/A	N/A
Pavlish Real Estate Holding Company	100%	008-34-021	See Section 1.2 - Legal Descriptions	** [redacted]	Not Available
Harshaw Chemical Company***	100%	008-34-026	See Section 1.2 - Legal Descriptions	[redacted]	[redacted]
Harshaw Chemical Company***	100%	008-34-027	See Section 1.2 - Legal Descriptions	[redacted]	[redacted]
BGD Company	100%	008-34-028	See Section 1.2 - Legal Descriptions	* [redacted]	Not Available
BGD Company	100%	521-02-001	See Section 1.2 - Legal Descriptions	* [redacted]	Not Available

* Ohio Secretary of State shows B.G.D., Inc. as inactive. No address is listed. The registered agent is: [redacted]; effective as of November 18, 1988. Internet

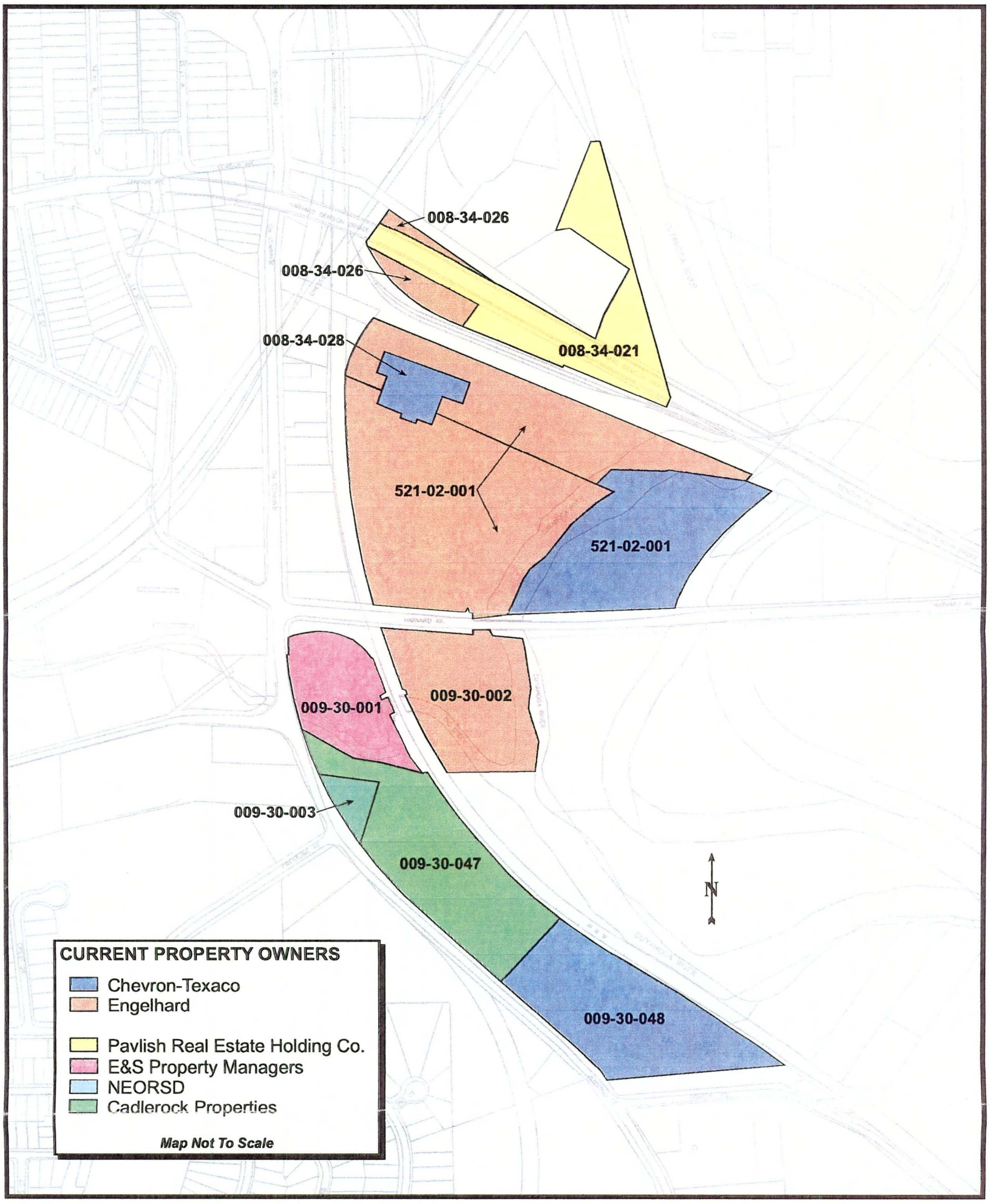

Figure 1-2. Site-Wide Parcel Map

PARCEL OWNERSHIP SHEET

MAP NO. 521

PAGE NO. 2

Parcel No.	Date of Deed	Owner's Name	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to
1		[redacted]										
2												
3	6-1-29								1-3-03	1-6-03 T.O.D. 9-16-04 [redacted]		
4	1-5-38 12-9-33								1-13-82			
5	6-4-47											
6	4-29-49 10-6-48											
7	8-6-80											

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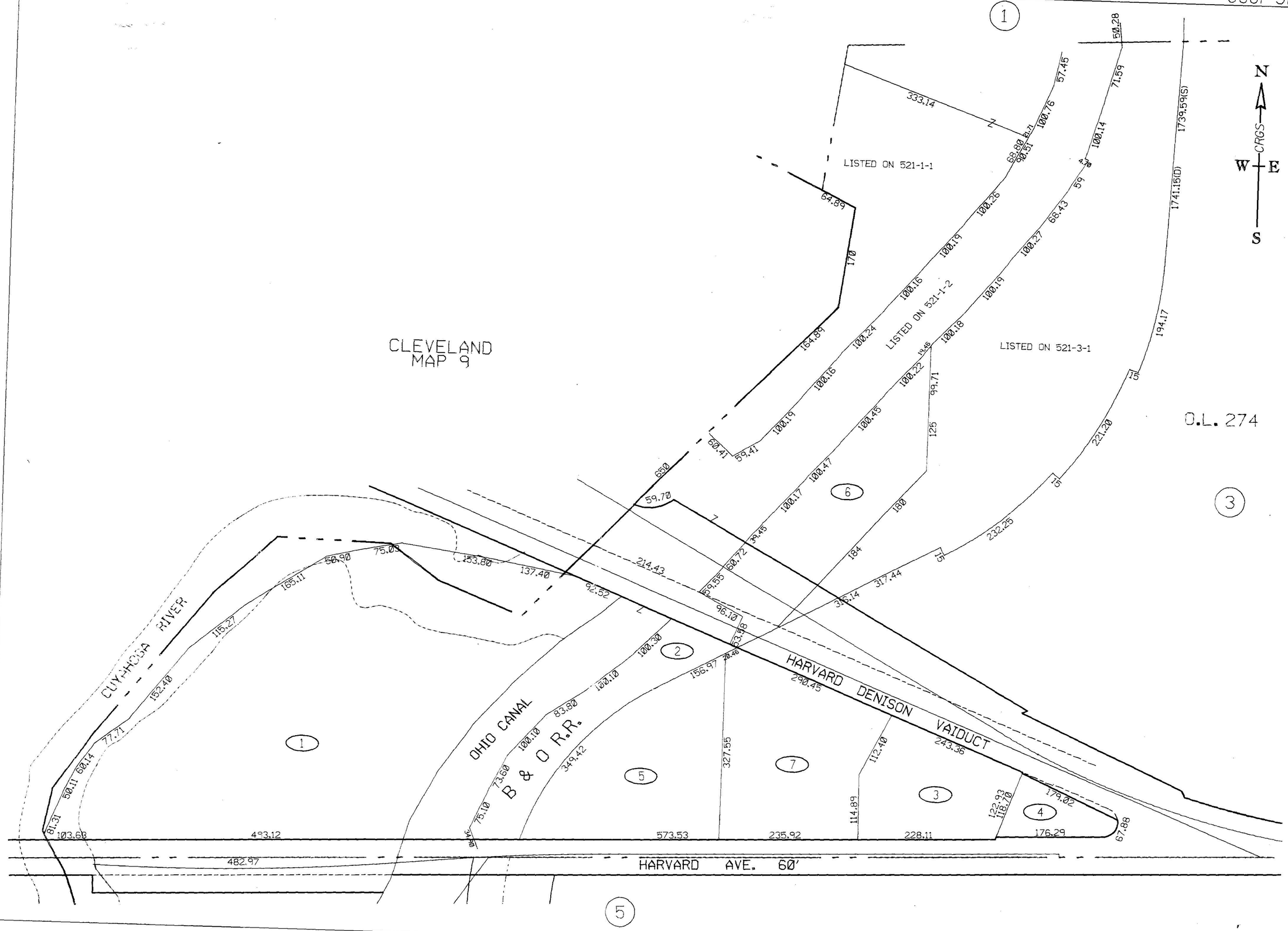

CUYAHOGA HTS. MAP 521

2

ADDITION: J. TIMOTHY McCORMACK

PARCEL IDENTIFICATION DISTRICT SHEET

Started March 5, 1976
Previous Sheet On File

MAP NO. 9 **PAGE NO. 30**

Parcel No.	Date of Deed	Owner's Name	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to
1	11-17-56	The ~~Harshaw Chemical~~ Co.	12-19-84	~~HARSHAW FILTROL PARTNERSHIP~~ 5-25-88 THE HARSHAW CHEMICAL CO.					9-28-99	[redacted] 8-27-04 G&S PROP. MANAGER, LLC.		
2	5-31-57	The ~~Harshaw Chemical~~ Co.	12-19-84	~~HARSHAW FILTROL PARTNERSHIP~~ 5-25-88 THE HARSHAW CHEMICAL CO.								
3	4-14-53	~~City of Cleveland~~ 11-6-85 Regional Sewer District										
4	4-5-62	Paris Developement Corp.										
5	5-23-68	[redacted] 6-3-85	3-12-91	[redacted]	2-12-93	[redacted]						
6	6-16-74	[redacted] 2-26-47										
7	4-29-59	[redacted] 2-1-47										
8	5-1-74	[redacted]	2-19-91	State of Ohio								
9	6-2-72											
10	2-11-73		3-3-77	[redacted] 4-2-85 8-20-86		[redacted]	6-23-99	[redacted]				
11	1-11-61	[redacted]	5-84	[redacted]	7-5-84	[redacted]	10-3-03	[redacted]				
12	12-18-75		1-30-78	[redacted]	8-6-80	[redacted]						
13	4-1-85		3-18-98	[redacted]								
14	8-31-79		8-28-83	[redacted]								
15	3-6-61		8-4-77	[redacted]								
16	3-31-83		03	[redacted] 9-11-03 E.H.	9-29-06	[redacted]						
17	5-6-81		10-85	[redacted]	8-1-85	[redacted]	10-21-02					
18	4-18-74											
19	7-15-71											
20	9-21-72											
21	7-16-73	[redacted]	4-30-82	[redacted]	11-17-89	[redacted]	2-23-96	[redacted]				
22	10-30-74											
23	6-12-75											
24	3-20-67											
25	4-17-67		5-17-95	[redacted]								
26	3-11-83											
27	8-2											
28	12-6-65		03	[redacted]								
29	12-29-60		84	[redacted]	9-25-84	[redacted]			8-15-89	[redacted]		
30	12-30-60		7-13-88	[redacted]	3-10-92 CITY of Cleveland							
31	2-23-61	[redacted]										
32	10-23-64		5-28 83	[redacted]	11-6-91 State of Ohio							
33	8-9-61		2-25-78	[redacted]	9-29-93 STATE of Ohio							
34	8-27-70											
35	7-21-75											
36	10-30-74											
37	9-15-61		91 State of Ohio									
38	8-2-61		5-19-05	[redacted]								
39	11-21-61		6-18-91 STATE OF OHIO									
40	3-5-75		State of Ohio									
41	9-11-74	State of Ohio										
42	5-21-70	[redacted]	3-77	[redacted]	6-18-91 STATE OF OHIO							
43	2-24-61			[redacted] 3-10-92 CITY of Cleveland								
44	6-13-6		2-5-91	State of Ohio								
45	5-1		12-5-91	~~State of Ohio~~ 8-8-05 CITY of CLEVE								
46	10-21-70		CITY OF Cleveland									
47	4-28-61			[redacted] 6-4-16-99 ~~ENDEROCK PROPS. JOINT VENTURE~~ 12-4-04 Gamed INV. Co.								
48	3-3-73		6-13-88 BGD Co.									
49	11-17-56		~~12-5-91 STATE of Ohio~~ 8-8-05 CITY of CLEVELAND									
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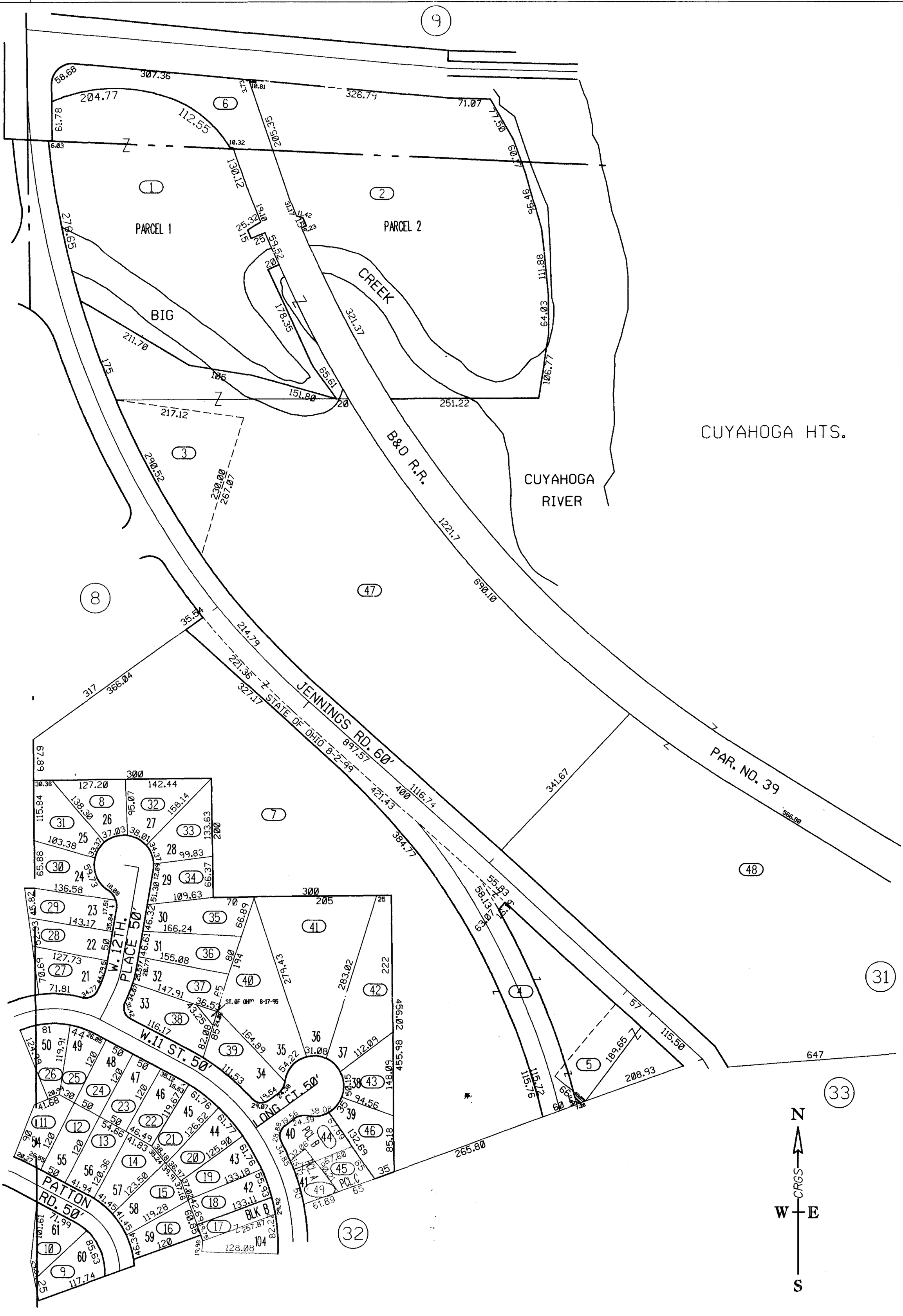
MAP OF SURVEY V. 232 PGS. 5-10
PLYMOUTH DEV. INC. VALLEY SUBD. V.178 P.30
VALLEY VIEW SUBD. NO.2 V.184 P.44
LOT SPLIT & CONS. V.340 P.71 8-5-05



CLEVELAND MAP 9

SCALE: 1"=100'
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DRAWN: 10-04-1990 REVISED: 9-14-99ej

FORM A

THIS SHEET STARTED NOV. 1,1966
PREVIOUS SHEET ON FILE

PAGE NO. 9 PARCEL IDENTIFICATION DISTRICT SHEET MAP NO. 9

Parcel No.	Date of Deed	Owner's Name	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to
1	10-20-47	[redacted]	7-12-79	[redacted]	6-13-88	[redacted]						
2	7-22-50	[redacted]	28-70	~~City of Cleve.~~	3-23-7[illegible]	[redacted]	1-3-83	[redacted]	2-19-02	Republic Services of Ohio Hauling LLC		
3	8-14-63	[redacted]	65	[redacted] 11-25-80	[redacted]	1-27-81	[redacted]		27-81	[redacted]		
4		[redacted]										
5												
6	10-16-64	[redacted]										
7	10-16-64	[redacted]										
8	6-7-54	[redacted]	7-5-78	[redacted]	2-19-02	Republic Services of Ohio Hauling LLC						
9	1-13-55 6-17-40	[redacted]	6-16-80	[redacted]	5-13-85 7-21-86	[redacted]	1-21-99	[redacted]	1-25-99	[redacted]		[redacted]
10	2-13-64 12-18-50	[redacted]	0-12-84	[redacted]	5-17-96	[redacted]	4-25-01	[redacted]	2-19-02	Republic Services of Ohio Hauling LLC		
11	2-13-64 12-18-50	[redacted]	0-12-84	[redacted]	5-17-96	[redacted]	4-25-01	[redacted]	2-19-02	Republic Services of Ohio Hauling LLC		
12	1-23-14		12-19-89	~~HARSHAW FILTROL~~	PARTNERSHIP	5-25-88	THE HARSHAW CHEMICAL					
13	9-4-62		4-16-69	~~9-12-68 H. STEEL CONST. INC.~~	9-12-72	[redacted]	4-6-79	[redacted]	4-8-0[illegible]	[redacted]	10-5-04	JENNINGS PROPS.
14	9-8-52	[redacted]	10-30-74	[redacted]	12-6-9[illegible]	[redacted]	7-6-98	[redacted]	GENEVIEVE	7-30-99	[redacted]	
15	6-7-54	[redacted]	Co. Inc	7-5-78	[redacted]	2-19-02	Republic Services of Hauling LLC					
16	8-8-62	[redacted]	8-6-71	[redacted]	10-18-85	[redacted]	10-27-00	[redacted]	12-6-01	E. 131	[redacted]	
17	2-5-58	[redacted]	7-1-99	[redacted]								
18	9-8-52	[redacted]	3-11-71 7-10-70	[redacted]								
19	8-31-71	[redacted]	10-27-00	[redacted]								
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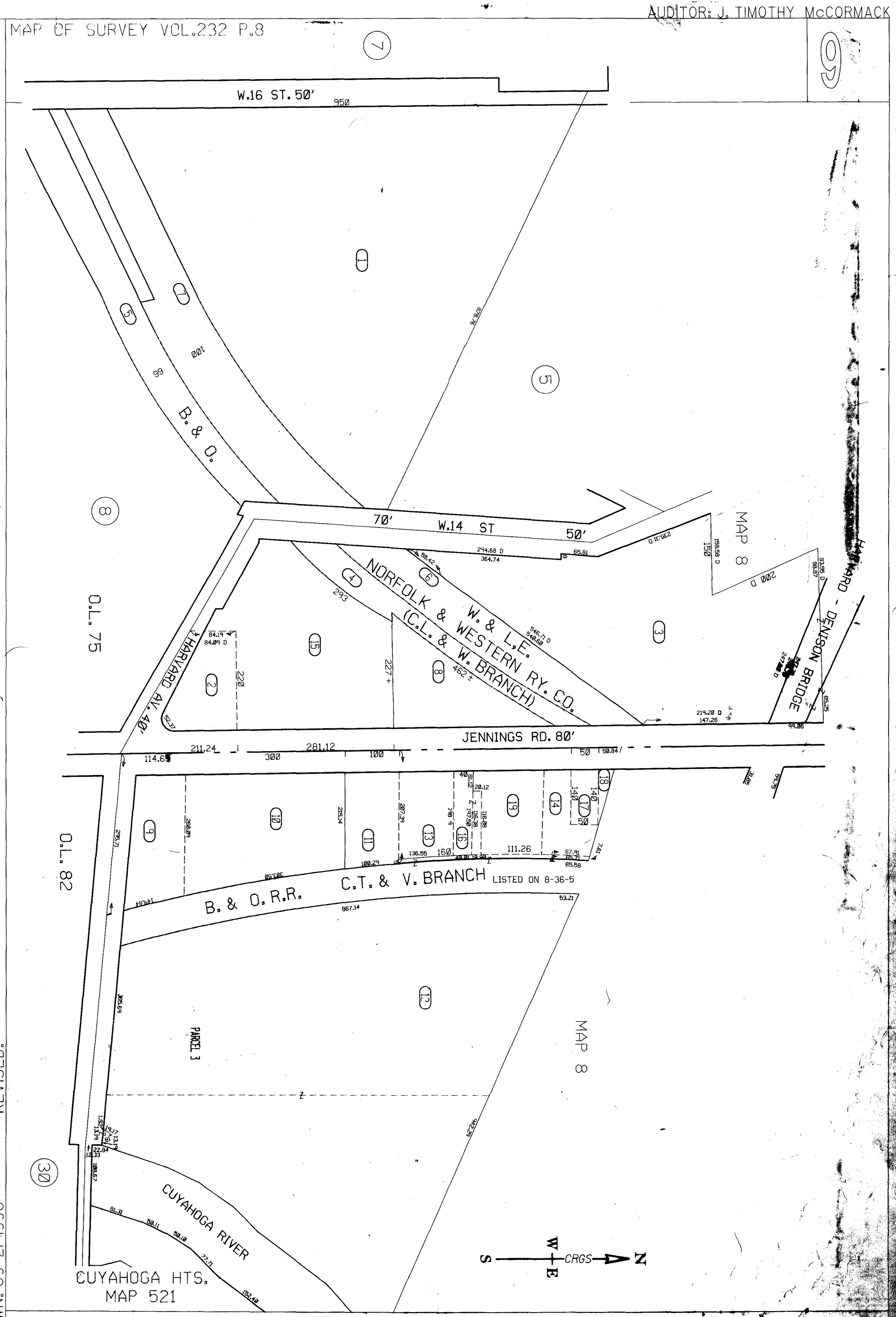
GEORGE H. J. [illegible] COUNTY AUDITOR

[redacted]

AUDITOR: J. TIMOTHY McCORMACK

MAP OF SURVEY VOL.232 P.8

9



DRAWN: 09-21-1990 REVISED:

SCALE: 1"=100'
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CLEVELAND MAP 9

FORM A

THIS SHEET STARTED 6-24-88
PREVIOUS SHEET ON FILE

PARCEL IDENTIFICATION DISTRICT SHEET

MAP NO. 8 PAGE NO. 34

Parcel No.	Date of Deed	Owner's Name	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to	Trf. Date	Transferred to
1	8-2-74	[redacted]	3-25-97 1-28-97	Paulish Real Estate Holding Co.										
2	8-2-74	[redacted]	3-25-97 1-28-97	Paulish Real Estate Holding Co.										
3		[redacted]												
4		[redacted]												
5	8-17-59	[redacted]	4-4-91	Modern Builders Supply, Inc.	8-3-0	[redacted]								
6	12-27-85	ANN PROPERTIES												
7	11-22-60 5-12-50	20 4-15-69 ELCO LUBRICANT CORP.												
8	10-29-75	9-12-85 ~~B.M. KAPPUS~~	9-2-88	EARNEST INVESTMENT CO.	11-13-00	LEVEL 5, INC.								
9	9-9-83 1-29-60	~~CUYAHOGA LIME CO.~~	7-17-90	~~Chemical Solvents Inc~~	7-29-93	~~Hill Top Farm~~ 9-2-93	2-4-97	KIE-KAO INVESTMENTS LTD.						
10	12-9-82 12-23-72	~~EDW. H. PAULISH~~	3-25-97 1-28-97	Paulish Real Estate Holding Co.										
11	3-29-46	~~DARLING & COMPANY~~	8-13-93	PAULISH REAL ESTATE										
12	10-20-80	~~DARLING & CO.~~	10-1-96	CHEMICAL SOLVENTS, INC.										
13	LEASE 10-16-67	NORFOLK & WESTERN												
14	LEASE 10-16-67	NORFOLK & WESTERN												
15	LEASE 10-16-67	NORFOLK & WESTERN												
16	LEASE 10-16-67	NORFOLK & WESTERN												
17	LEASE 10-16-67	NORFOLK & WESTERN												
18	LEASE 10-16-67	NORFOLK & WESTERN												
19	LEASE 10-16-67	NORFOLK & WESTERN												
20		B.&O. RR. CO.-C.T.&V. BR.												
21	6-13-88	~~BGO CO.~~ 12-13-96		Paulish Real Estate Holding Co.										
22	3-11-81 11-7-45	THE HARSHAW CHEMICAL CO.												
23	12-27-85	ANN PROPERTIES												
24	2-21- [illegible]	~~AIR~~ PRODUCTS & CHEM., INC												
25	2-22-82	[redacted]												
26	5-25-88 [illegible]	THE HARSHAW CHEM. CO.												
27	5-25-88 [illegible]	THE HARSHAW CHEM. CO.												
28		FR. HARSHAW CHEM.												
29	6-13-88	BGO CO.												
30	8-12-82	~~CHEMICAL SOLVENTS, INC.~~	3-25-97 1-28-97	Paulish Real Estate Holding Co.										
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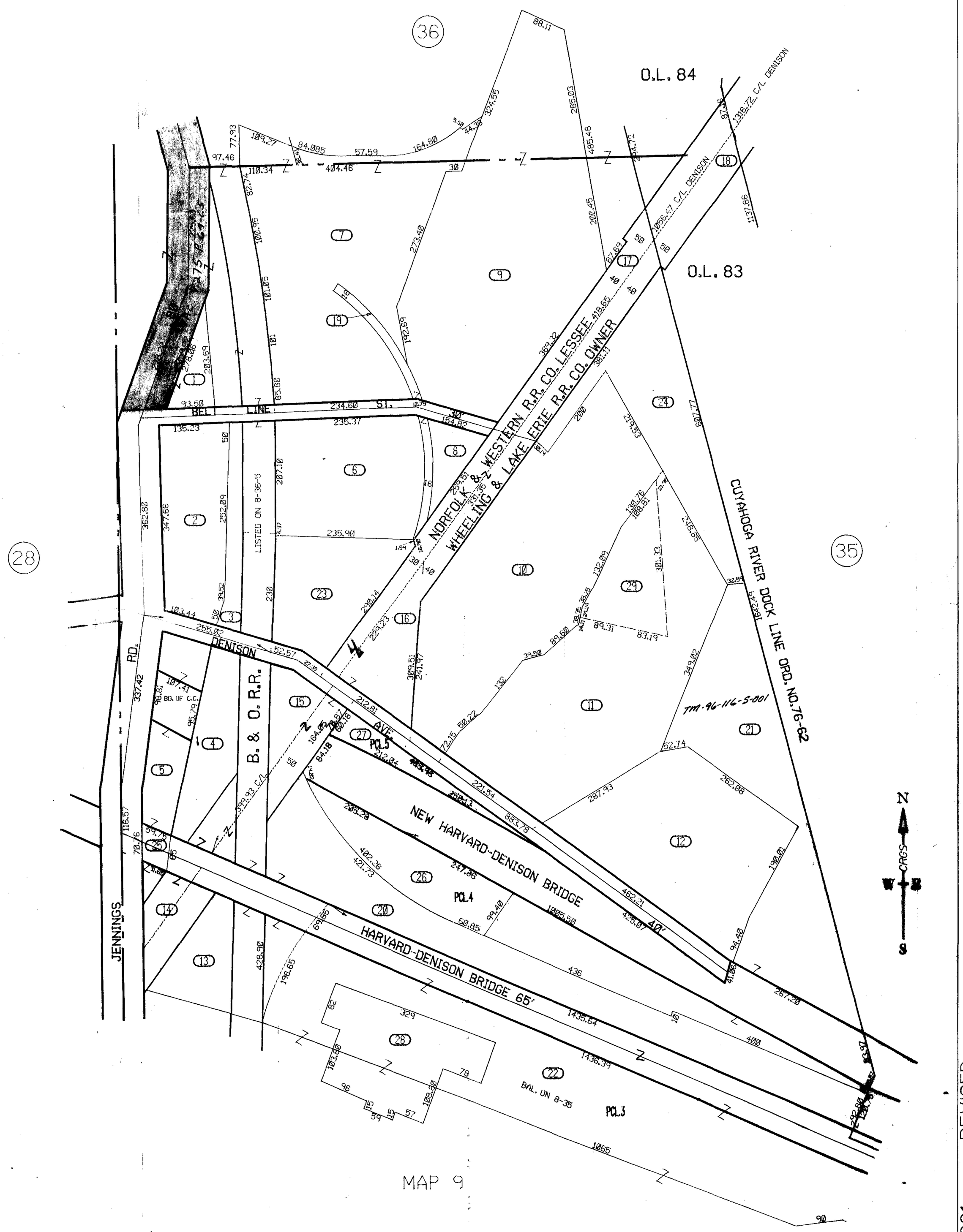
[redacted], COUNTY AUDITOR

AUDITOR: J. TIMOTHY McCORMACK

34

MAP OF SURVEY OF PCL. NO.3,4,5 V.232 P.8-10



CLEVELAND MAP 8

SCALE: 1"=120'

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DRAWN: JUNE 1991 REVISED:

VOL. 88-2733 PAGE 43

584922

QUITCLAIM DEED

RECORDED THIS DATE
CUYAHOGA COUNTY RECORDER
88 JUN 13 PM 2:42

KNOW ALL MEN BY THESE PRESENTS:

THAT THE HARSHAW CHEMICAL COMPANY, a corporation incorporated under the laws of the State of New Jersey, the Grantor, for good and valuable consideration, the receipt of which is hereby acknowledged, has given, granted, remised, released and forever quit claimed, and does by these presents absolutely give, grant, remise, release and forever quit claim unto BGD COMPANY, a Delaware corporation, the Grantee, whose tax mailing address is [redacted] all such right and title as it, the said Grantor, has in and to the parcels of land, situated in the City of Cleveland, County of Cuyahoga and State of Ohio more particularly described as Parcels A, B, C and D in the attachments hereto, together with all improvements located on and all rights, privileges and easements appurtenant to such property.

IN WITNESS WHEREOF, THE HARSHAW CHEMICAL COMPANY, Grantor, has caused its corporate name and seal to be affixed hereto and this instrument to be duly executed by

Property Address: 1000 Harvard Avenue - Building C - Cleveland, Ohio 44109

PPN: 008-34-028, 009-30-048, 521-02-001 and 008-34-021 [redacted]

PARCEL NO.

CONVEYANCE IS IN COMPLIANCE WITH SEC. 319.202 O.R.C.

PAID

JUN 13 1988

COUNTY AUDITOR

Conveyance Fee [redacted] Receipt No. 8640B

TYPE ARMS LENGTH (YES ( ) NO ( )

[redacted] County Auditor By [redacted] Deputy

U S TITLE AGENCY, LTD.
132585

[redacted], its ASSISTANT SECRETARY and [redacted], its ASSISTANT SECRETARY, this 31ST day of AUGUST, 1987.

THE HARSHAW CHEMICAL COMPANY

By: [redacted]

By: [redacted]
Its ASSISTANT SECRETARY

Signed and acknowledged in the presence of us (as to all of the above):

[redacted]

STATE OF CALIFORNIA,)
CITY AND COUNTY OF SAN FRANCISCO)

BEFORE ME, a notary public in and for said City and County, personally appeared the above named THE HARSHAW CHEMICAL COMPANY, by [redacted], its ASSISTANT SECRETARY and [redacted], its ASSISTANT SECRETARY who acknowledged that they did sign the foregoing instrument and that the same is the free act and deed of said corporation and the free act and deed of each of them personally and as such officers.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal at the City and County of San Francisco, this 31 day of August, 1987.

[redacted]
Notary Public

My Commission Expires Jan 7 1991

Recording Requested by
and when recorded mail to:

[redacted]

PARCEL A (page 1 of 3)

VOL. 88-2733 PAGE 46

Situated in the City of Cleveland, County of

Cuyahoga and State of Ohio, and known as being part of

Original Brooklyn Township Lot No. 83, and **further described as Parcel No. 3A (Building "C") as shown on Map of Survey of Parcel No. 3A for the Harshaw/Filtrol Partnership recorded in Volume 232 of Maps, Page 11 of Cuyahoga County Records and more fully described ad follows:**

Beginning at a point in the centerline of Harvard Avenue (width varies) at its intersection with the centerline of the Baltimore and Ohio Railroad;

Thence South 84°-37'-47" East along the centerline of Harvard Avenue, as aforesaid, 32.13 feet to a point;

Thence by the arc of a curve bearing to the right: Radius = 2786.30 feet, Delta = 0°-39'-35", Arc = 32.08 feet, Chord = 32.08 feet and Chord Bearing North 15°-23'-36" West to a point at the intersection of the Northerly line of Harvard Avenue, as aforesaid, with the Easterly right-of-way line of the Baltimore and Ohio Railroad;

Thence by the arc of a curve bearing to the right and along the Easterly right-of-way line of the Baltimore and Ohio Railroad: Radius = 2786.30 feet, Delta = 16°-23'-56", Arc = 797.48 feet, Chord = 794.76 feet and Chord Bearing North 6°-51'-51" West to a point and P.T. of said curve;

Thence North 1°-20'-53" East along the Easterly right-of-way line of the Baltimore and Ohio Railroad 46.20 feet to a point;

Thence South 70°-44'-19" East about 165.1 feet to a point at the outside wall of Building "C" and the principal place of beginning;

Thence North 19°-25'-00" East along the outside wall of said Building "C" about 30.0 feet to an inside corner;

Thence North 70°-35'-00" West along the outside wall of said Building "C" about 39 feet to an outside corner;

Thence North 19°-25'-00" East along the outside wall of said Building "C" about 82 feet to an outside corner;

Thence South 70°-35'-00" East along the outside wall of said Building "C" about 329 feet to an outside corner;

Thence South 19°-25'-00" West along the outside wall of said Building "C" about 82 feet to an outside corner;

[redacted]
COUNTY ENGINEER
TAX MAP DIVISION

Thence North 70°-35'-00" West along the outside wall of said Building "C" about 78 feet to an inside corner;

Thence South 19°-25'-00" West along the outside wall of said Building "C" about 103.8 feet to an outside corner;

Thence North 70°-35'-00" West along the outside wall of said Building "C" about 57 feet to an inside corner;

Thence South 19°-25'-00" West along the outside wall of said Building "C" about 15 feet to an outside corner;

Thence North 70°-35'-00" West along the outside wall of said Building "C" about 59 feet to an outside corner;

Thence North 19°-25'-00" East along the outside wall of said Building "C" about 15 feet to an inside corner;

Thence North 70°-35'-00" West along the outside wall of said Building "C" about 96 feet to an outside corner;

Thence North 19°-25'-00" East along the outside wall of said Building "C" about 73.8 feet to a point and the principal place of beginning and containing 1.1448 acres of land according to a survey by The Western Reserve Surveying Company in November, 1984, be the same more or less but subject to all legal highways.

TOGETHER WITH

1. The landlord's interest in the above described premises under that certain Lease and Right of First Refusal to Purchase dated as of December 18, 1984 between The Harshaw Chemical Company, as landlord, and Harshaw/Filtrol Partnership, as tenant, recorded in the official records of County of Cuyahoga, State of Ohio, in Deed Book Volume 84-5995, Page 11 of Leases; and

2. An easement for ingress and egress between Harvard Avenue and the above-described premises, as described below, such easement being across "Parcel No. 3" as described in that certain Quitclaim Deed dated December 14, 1984, from The Harshaw Chemical Company and Kewanee Industries, Inc., Grantors, to Harshaw/Filtrol Partnership, Grantee, recorded in the official records of County of Cuyahoga, State of Ohio, in Deed Book Volume 84-5994, beginning at Page 62.

The Western Reserve Surveying Co.

[redacted]

A-2580
December 18, 1984

LEGAL DESCRIPTION
OF 20 FT. EASEMENT FOR INGRESS AND EGRESS

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 83, and more fully described as follows:

Beginning at a point in the centerline of Harvard Avenue (width varies) at its intersection with the centerline of the Baltimore and Ohio Railroad;

Thence South 84°-37'-47" East along the centerline of Harvard Avenue, as aforesaid, 32.13 feet to a point;

Thence by the arc of a curve bearing to the right: Radius = 2786.30 feet, Delta = 0°-39'-35", Arc = 32.08 feet, Chord = 32.08 feet and Chord Bearing North 15°-23'-36" West to a point at the intersection of the Northerly line of Harvard Avenue, as aforesaid, with the Easterly right-of-way line of the Baltimore and Ohio Railroad;

Thence South 84°-37'-47" East along the Northerly line of Harvard Avenue, as aforesaid, 325.70 feet to a point and the principal place of beginning of a 20 foot easement for ingress and egress, 10 feet on each side of the following described centerline:

Thence North 13°-20'-49" East along the centerline of said easement 149.05 feet to a point;

Thence North 41°-29'-37" East along the centerline of said easement 269.61 feet to a point;

Thence North 47°-28'-23" West along the centerline of said easement 95.81 feet to a point;

Thence North 69°-44'-48" West along the centerline of said easement 40.25 feet to a point;

Thence North 47°-07'-21" West along the centerline of said easement 253.08 feet to a point;

Thence North 13°-35'-04" East along the centerline of said easement about 172 feet to a point on the outside wall of Building "C", be the same more or less.

PARCEL B (page 1 of 2)

Deed Book Volume 5437, Pages 584-586
From: [redacted] VOL. 88-2733 PAGE 49
To: The Harshaw Chemical Company
April 20, 1942

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 82, and bounded and described as follows:

Beginning on the South line of land conveyed to The Gas Products Company by deed dated January 7, 1927 and recorded in Volume 3559, Page 52 of Cuyahoga County Records, at the Northeasterly corner of land conveyed to The Board of County Commissioners of Cuyahoga County, Ohio, by deed dated April 28, 1941 and recorded in Volume 5231, Page 316 of Cuyahoga County Records; thence Southeasterly along the Northeasterly line of land so conveyed to The Board of County Commissioners of Cuyahoga County, Ohio, which line is also the center line of Jennings Road, S.W., as relocated, on a curved line deflecting to the left 615.89 feet to a point of tangency in said center line, said point of tangency being in the center line of Jennings Road, S. W., as originally established, and said curved line having a radius of 1432.39 feet; thence Southeasterly along the center line of Jennings Road, S.W., 897.57 feet to an angle therein; thence continuing Southerly along said center line to its intersection with the Westerly prolongation of the Northerly line of the first parcel of land conveyed to [redacted], by deed dated April 30, 1918 and recorded in Volume 2018, Page 507 of Cuyahoga County Records; thence Easterly along the said Westerly prolongation and along the Northerly line of the first parcel of land so conveyed to [redacted], to the Southwesterly line of The Baltimore and Ohio Railroad Company's right-of-way; thence Northwesterly along the Southwesterly line of said right-of-way, about 245 feet 3 inches to the Northerly line of land conveyed to [redacted] by deed dated September 13, 1870 and recorded in Volume 179, Page 137 of Cuyahoga County Records; thence Easterly along the Northerly line of land so conveyed to [redacted], to the Northeasterly line of The Baltimore and Ohio Railroad Company's right-of-way; thence Southeasterly along the Northeasterly line of said right-of-way, 280 feet to the most Westerly corner of land conveyed to The River Smelting and Refining Company by deed dated August 1, 1927 and recorded in Volume 3570, Page 612 of Cuyahoga County Records; thence Northeasterly along the Northwesterly line of land so conveyed to The River Smelting and Refining Company to the West bank of the Cuyahoga River; thence down the West bank of the Cuyahoga River to the Southeasterly corner of land conveyed to the Austin Powder Company by deed dated April 4, 1883, and recorded in Volume 348, Page 505 of Cuyahoga County Records; thence Westerly along the Southerly line of land so conveyed

to the Austin Powder Company to the Easterly line of The Baltimore and Ohio Railroad Company's right-of-way; thence Westerly in a direct line to the Southeasterly corner land conveyed to The Gas Products Company, as aforesaid; thence Westerly along the Southerly line of land so conveyed to The Gas Products Company to the place of beginning, and containing about 20.95 Acres of land, be the same more or less, but subject to all legal highways and waterways.

Excepting from the above describec premises the land within the boundaries of The Baltimore and Ohio Railroad Company's right-of-way.

Excepting from the above described land, the following additional lands:

(A) Land conveyed to the City of Cleveland by Deed recorded APRIL 14, 1953 in Volume 7802, Page 283 of Cuyahoga County Records.

(B) Land conveyed to Cuyahoga Smelting and Processing Co., by Deed recorded JANUARY 19, 1965 in Volume 8240, Page 267 of Cuyahoga County Records.

(C) Land conveyed to DACK Realty, Inc., by Deed recorded MARCH 22, 1972 in Volume 12975, Page 725 of Cuyahoga County Records.

But including as part of the above described premises all the right, title and interest of the Grantor in and to all and singular the easements and other rights attaching or appertaining to the above described premised by virtur of the reservations made and reserved in the following deeds: Deed of [redacted] et al. to [redacted], dated April 30, 1918, and recorded in Volume 2033, Page 454 of Cuyahoga County, Ohio, Deed Records; deed from [redacted] et al. to [redacted] dated April 30, 1918, recorded in Volume 2033, Page 457 of Cuyahoga County, Ohio, Deed Records; deed from [redacted], et al. to [redacted] dated April 30, 1918, and recorded in Volume 2033, page 459 of Cuyahoga County, Ohio, Deed Records; and deed from [redacted] et al. to [redacted] dated April 30, 1918, and recorded in Volume 2018, page 507 of Cuyahoga County, Ohio, Deed Records.

And including as part of the above described premises all of the lessor interest created by the certain agreement between [redacted] W. [redacted] et al. and [redacted], dated July 13, 1914 (not of record), and by said [redacted] thereafter assigned to The East Ohio Gas Company of Cleveland, Ohio, hereby including the right to receive all payments accruing under said agreement in favor of said lessor interest from and after the date of the transfer of this deed.

And including as part of the above described premises all the right, title and interest of the Grantor in any or all other rights, easements and appurtenances, including riparian rights, attaching or in any wise appertaining to the above described premises.

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Deed Book Volume 6443, Pages 446-448
From: Austin Powder Company
To: The Harshaw Chemical Company
December 1, 1947

Situated in the Village of Cuyahoga Heights, and, as to the land underlying the Cuyahoga River, partly in the City of Cleveland, County of Cuyahoga and State of Ohio and being part of Original 100 Acre Lot No. 274, and being further described as follows:

Volume 6443, Pages 446-448 (cont'd)

Beginning in the center line of Harvard Avenue, 60 feet wide, at its intersection with the northwesterly line of the Ohio Canal Lands as shown on the [redacted] Survey of December 1912, said beginning being distant South 88° 04' 00" East 483.84 feet from a Stone Monument at an angle point in said center line.

Thence North 20° 21' 45" East along the northwesterly line of the Ohio Canal Lands a distance of 31.62 feet to a point in the northerly line of Harvard Avenue and the true place of beginning of this description.

Thence North 88° 04' 00" West along the northerly line of Harvard Avenue a distance of 493.12 feet to an angle point in said northerly line.

Thence North 85° 20' 50" West continuing along the northerly line of Harvard Avenue a distance of 103.63 feet to its intersection with the center line of the Cuyahoga River.

Thence along the center line of the Cuyahoga River along the following courses and distances:

North 20°44'50" East a distance of 81.31 feet.
North 27° 10' 30" East a distance of 50.11 feet.
North 35° 11' 00" East a distance of 50.14 feet.
North 47° 29' 20" East a distance of 77.71 feet.
North 39° 35' 30" East a distance of 152.40 feet.
North 51° 27' 30" East a distance of 115.27 feet.
North 59° 36' 20" East a distance of 165.11 feet.
North 77° 54' 30" East a distance of 50.90 feet.
North 82° 08' 10" East a distance of 75.03 feet.
South 78° 39' 50" East a distance of 153.806 feet.
South 76° 15' 10" East a distance of 137.40 feet to a point in the southwesterly line of lands conveyed to the City of Cleveland for the Harvard-Denison Viaduct by deed recorded in Volume 1369, Page 498 of Cuyahoga County Deed Records.

Thence South 63° 39' 44" East along the southwesterly line of lands so conveyed to the City of Cleveland a distance of 92.52 feet to its intersection with the northwesterly line of the Ohio Canal Lands.

Thence along the northwesterly line of the Ohio Canal Lands along the following courses and distances:

South 51° 49' 20" West a distance of 27.53 feet.
South 53° 29' 45" West a distance of 100.04 feet.
South 47° 41' 45" West a distance of 106.01 feet.
South 40° 35' 45" West a distance of 99.96 feet.
South 35° 02' 50" West a distance of 106.96 feet.
South 26° 52' 40" West a distance of 100.41 feet.
South 20° 21' 45" West a distance of 29.90 feet to the place of beginning, according to the survey of The F. A. Pease Engineering Company, dated October, 1947, but subject to all legal highways and to the rights of the United States and the State of Ohio in the navigable waters included in the above described premises and to the rights of the State of Ohio in that part, if any, of the above described premises which is part of the Ohio Canal lands.

Deed Book Volume 7679, Pages 63-66
From: Republic Steel Corporation
To: The Harshaw Chemical Company
January 29, 1953

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original 100 Acre Lot No. 275, and part of Original Brooklyn Township Lot No. 83, and being further bounded and described as follows:

Beginning in the center line of Denison Avenue, S.W. (40 feet wide) at a point distant 50.00 feet southeasterly measured along said center line, from its intersection with the center line of The Wheeling and Lake Erie Railway Company's right of way, said point of beginning being a northwesterly corner of [redacted] conveyed by The Cleveland Trust Company and [redacted], Trustee, under the Will of [redacted], to Republic Steel Corporation by Deed recorded in Volume 4698, Page 558, of Cuyahoga County Records;

COURSE No. 1: Thence S. 54° 33' 00" E. along said center line of Denison Avenue, S.W. 883.83 feet to the easterly extremity thereof, and being a corner point in a westerly line of land conveyed to Republic Steel Corporation as aforesaid;

COURSE No. 2: Thence N. 22° 27' 00" E. along the easterly end of Denison Avenue, S. W., being also along a westerly line of land conveyed to Republic Steel Corporation as aforesaid, 20.53 feet to a point in the northerly line of Denison Avenue, S.W.;

COURSE No. 3: Thence S. 54° 33' 00" E. 4.00 feet to an angle point in a westerly line of land conveyed to Republic Steel Corporation as aforesaid;

COURSE No. 4: Thence N. 20° 04' 57" along a westerly line of land conveyed to Republic Steel Corporation as aforesaid, 94.40 feet to an angle point in said line;

COURSE No. 5: Thence N. 29° 27' 00" E. in part along a westerly line of land conveyed to Republic Steel Corporation as aforesaid, and also in part along a westerly line of Parcel #2 conveyed to Cuyahoga Valley Realty Company to Republic Steel Corporation by Deed recorded in Volume 4698, Page 551, of Cuyahoga County Records, 190.01 feet to an angle point therein;

COURSE No. 6: Thence N. 54° 33' 00" W. along a southwesterly line of land conveyed to Republic Steel Corporation as last aforesaid, 262.08 feet to an angle point therein;

COURSE No. 7: Thence S. 81° 00' 10" W. 52.74 feet to the southwesterly corner of a parcel of land conveyed by The Stadler Products Company to Republic Steel Corporation by Deed recorded in Volume 4709, Page 490, of Cuyahoga County Records;

COURSE No. 8: Thence N. 20° 15' 24" E. along a westerly line of land conveyed to Republic Steel Corporation as last aforesaid, 349.02 feet to the northwesterly corner thereof, and being also the southeasterly corner of a parcel of land conveyed by Republic Steel Corporation to The Stadler Products Company by Deed recorded in Volume 4709, Page 493, of Cuyahoga County Records;

COURSE No. 9: Thence N. 29° 54' 43" W. along a northeasterly line of land so conveyed to The Stadler Products Company, 468.38 feet to the most northerly corner thereof;

COURSE No. 10: Thence S. 35° 33' 00" along a northwesterly line of land so conveyed to The Stadler Products Company and its projection southwesterly, 200.00 feet to a point, said point being also the most westerly corner of a parcel of land conveyed by Republic Steel Corporation to The Stadler Products Company by Deed recorded in Volume 4709, Page 496, of Cuyahoga County Records, said point being also in the center line of Belt Line Street, now vacated;

COURSE No. 11: Thence N. 48° 07' 30" W. along said center line of Belt Line Street, 30.19 feet to its intersection with the easterly line of The Wheeling and Lake Erie Railway Company's right of way (80 feet wide), being also the easterly line of a parcel of land conveyed by [redacted] to The Cleveland Belt Line Railroad Company by Deed recorded in Volume 518, Page 49, of Cuyahoga County Records;

COURSE No. 12: Thence N. 35° 33' 00" E. along the easterly line of said right of way, 401.11 feet to a point;

COURSE No. 13: Thence S. 54° 27' 00" E. along a jog in said right-of-way line, 10.00 feet to a point in the easterly line of The Wheeling and Lake Erie Railway Company's right of way (100 feet wide);

COURSE No. 14: Thence N. 35° 33' 00" E. along the easterly line of said The Wheeling and Lake Erie Railway Company's 100-foot right of way, 15.11 feet to its intersection with the westerly dock line of the Cuyahoga River as established by City of Cleveland Ordinance No. 1946-A-48, Section 27;

COURSE No. 15: Thence S. 14° 39' 05" E. along said westerly dock line of the Cuyahoga River, 1577.39 feet to an angle point therein;

COURSE No. 16: Thence S. 22° 37' 14" W. continuing along said westerly dock line, 26.87 feet to its intersection with a southwesterly line of land conveyed by The Cleveland Trust Company and [redacted], Trustee, under the Will of [redacted] to Republic Steel Corporation by Deed recorded in Volume 4698, Page 558, of Cuyahoga County Records;

COURSE No. 17: Thence N. 67° 22' 07" along a southwesterly line of land conveyed to Republic Steel Corporation as last aforesaid, 0.92 feet to a point;

COURSE No. 18: Thence S. 22° 37' 53" W. along a jog in said southwesterly line of land conveyed to Republic Steel Corporation as last aforesaid, 10.00 feet to a point;

COURSE No. 19: Thence N. 67° 22' 07" W. along a southwesterly line of land conveyed to Republic Steel Corporation as last aforesaid, 400.00 feet to a point;

COURSE No. 20: Thence S. 22° 37' 53" W. along a jog in said line, 10.00 feet to a point;

COURSE No. 21: Thence N. 67° 22' 07" W. along a southwesterly line of land conveyed to Republic Steel Corporation as last aforesaid, 436.00 feet to a point of curve in said line;

COURSE No. 22: Thence northwesterly along the arc of a circle deflecting to the right and having a radius of 553.89 feet, an arc distance of 421.73 feet to a point in a line parallel with and 50 feet distant easterly, measured at right angles from the center line of The Wheeling and Lake Erie Railway Company's right of way, the chord of which arc bears N. 45° 32' 54" W. 411.61 feet;

COURSE No. 23: Thence N. 35° 33' 00" E. along the easterly line of the Wheeling and Lake Erie Railway Company's right of way, 164.05 feet to the place of beginning, according to a survey made by Bauer Surveys Company and dated October 22, 1952.

Subject to existing easements, licenses and rights of way, if any, public highways and restrictions, if any, imposed by zoning ordinances or appearing of record.

EXCEPTING THEREFROM that part conveyed by The Harshaw Chemical Company to Board of Cuyahoga County Commissioners by Deed recorded February 28, 1975 in Volume 13812, Page 83 of Cuyahoga County Records.

ALSO EXCEPTING THEREFROM that part conveyed by The Harshaw Chemical Company to Air Products and Chemicals, Inc., by Deed recorded February 21, 1979, in Volume 15006, Page 153 of Cuyahoga County Records.

AND EXPRESSLY EXCLUDING THEREFROM any portion of such parcel lying within "Parcel No. 4 The Harshaw/Filtrol Partnership" as appears on Plat recorded in Volume 232 of Maps, Page 9 of Cuyahoga County Records, and within "Parcel No. 5 The Harshaw/Filtrol Partnership,", as appears on Plat recorded in Volume 232 of Maps, Page 10 of Cuyahoga County Records.

The Western Reserve Surveying Co.
4705 STATE ROAD
CLEVELAND, OHIO 44109
PHONE 216 741-0110 741-3243

A-2580
November 30, 1984

LEGAL DESCRIPTION
OF
PARCEL NO. 4
THE HARSHAW/FILTROL PARTNERSHIP

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 83, and more fully described as follows:

Beginning at a point in the centerline of Denison Avenue, S.W. (40 feet wide) at a point distant 50.00 feet Southeasterly measured along said centerline, from its intersection with the centerline of The Wheeling and Lake Erie Railway Company's right-of-way, said point of beginning being a Northwesterly corner of a parcel of land conveyed by The Cleveland Trust Company and [redacted] Trustee, under the Will of [redacted], to Republic Steel Corporation by Deed recorded in Volume [redacted], Page 558, of Cuyahoga County Records;

Thence South 35°-30'-35" West along the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way 164.05 feet to a point on the Southwesterly line of said parcel conveyed to Republic Steel Corporation;

Thence by the arc of a curve bearing to the left and along the Southwesterly line of said parcel conveyed to Republic Steel Corporation: Radius = 553.69 feet, Delta = 2°-00'-55", Arc = 19.48 feet, Chord = 19.48 feet and Chord Bearing South 24°-46'-36" East to a point on the Southerly right-of-way line of the Harvard-Denison Bridge and the principal place of beginning;

Thence by the arc of a curve bearing to the right and along the Southerly right-of-way line of The Harvard-Denison Bridge: Radius = 2035.98 feet, Delta = 5°-46'-36", Arc = 205.28 feet, Chord = 205.19 feet and Chord Bearing South 63°-33'-03" East to a point and P.T. of said curve;

Thence South 60°-39'-45" East along the Southerly right-of-way line of The Harvard-Denison Bridge 247.86 feet to a point;

Thence South 35°-30'-35" West 99.40 feet to a point on the Southwesterly line of said parcel conveyed to Republic Steel Corporation;

Page 2
LEGAL DESCRIPTION OF
PARCEL NO. 4
THE MARSHAW/FILTROL PARTNERSHIP

Thence North 67°-24'-32" West along the Southwesterly line of said parcel conveyed to Republic Steel Corporation 60.85 feet to a point and P.C. of a curve;

Thence by the arc of a curve bearing to the right and along the Southwesterly line of said parcel conveyed to Republic Steel Corporation: Radius = 553.69 Feet, Delta = 41°-37'-31", Arc = 402.26 feet, Chord = 393.47 feet and Chord Bearing North 46°-35'-46" West to a point on the Southerly right-of-way line of The Harvard-Denison Bridge and the principal place of beginning and containing 0.8665 acres of land according to a survey by The Western Reserve Surveying Company in November, 1984, be the same more or less but subject to all legal highways.

The Western Reserve Surveying Co.
4705 STATE ROAD
CLEVELAND, OHIO 44109
PHONE 216/741-0110 741-3243

A-2580
November 29, 1984

LEGAL DESCRIPTION
OF
PARCEL NO. 5
THE HARSHAW/FILTROL PARTNERSHIP

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 83, and more fully described as follows:

Beginning at a point in the centerline of Denison Avenue, S.W. (40 feet wide) at a point distant 50.00 feet Southeasterly measured along said centerline, from its intersection with the centerline of The Wheeling and Lake Erie Railway Company's right-of-way, said point of beginning being a Northwesterly corner of a parcel of land conveyed by The Cleveland Trust Company and [redacted] Trustee, under the Will of [redacted], to Republic Steel Corporation by Deed recorded in Volume [redacted]6958, Page 558, of Cuyahoga County Records;

Thence South 35°-30'-35" West along the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way 20.00 feet to a point on the Southerly line of Denison Avenue, as aforesaid, and the principal place of beginning;

Thence South 54°-35'-25" East along the Southerly line of Denison Avenue, as aforesaid, 465.96 feet to a point on the Northerly right-of-way line of The Harvard-Denison Bridge;

Thence North 60°-39'-45" West along the Northerly right-of-way line of The Harvard-Denison Bridge 258.13 feet to a point and P.C. of a curve;

Thence by the arc of a curve bearing to the left and along the Northerly right-of-way line of The Harvard-Denison Bridge: Radius = 2130.98 feet, Delta = 5°-42'-04", Arc = 212.04 feet, Chord = 211.95 feet and Chord Bearing North 63°-30'-47" West to a point on the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way;

Thence North 35°-30'-35" East along the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way 60.18 feet to a point and the principal place of beginning and containing 0.2821 acres of land according to a survey by The Western Reserve Surveying Company in November, 1984, be the same more or less but subject to all legal highways.

RECORDING REQUESTED BY AND
WHEN RECORDED MAIL TO:

CAHILL GORDON & REINDEL
Eighty Pine Street
New York, New York 10005
Attn: Joseph P. Conway

RECORDED THIS DATE
FRANK RUSSO
CUYAHOGA CTY. RECORDER

88 MAY 25 PM 4:01

576264

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DEED

KNOW ALL MEN BY THESE PRESENTS:

That HARSHAW/FILTROL PARTNERSHIP, a Delaware partnership, who claim fee title by or through the following instruments: (a) number 1120132, recorded in volume 84-5994, page 62; (b) number 965681, recorded in volume 83-1815, page 5; (c) number 965880, recorded in volume 83-1814, page 70; and (d) number 1047091, recorded in volume 84-2903, page 11, Cuyahoga County Recorder's Office, hereby grants to THE HARSHAW CHEMICAL COMPANY, a New Jersey corporation, whose tax mailing address is: Director of Taxes, c/o Engelhard Corporation, Menlo Park CN40, Edison, New Jersey 08818, all such right, title and interest as it, HARSHAW/FILTROL PARTNERSHIP, has in and to the parcel of land described in Exhibit A attached hereto, situated in the Cities of Cleveland, Beachwood and Solon, all in the County of Cuyahoga, State of Ohio, together with all rights, privileges and easements appurtenant thereto.

IN WITNESS WHEREOF, HARSHAW/FILTROL PARTNERSHIP has caused its partnership name to be affixed hereto and this instrument to be duly executed by THE HARSHAW CHEMICAL COMPANY, its general partner, on this 23 day of May, 1988.

Signed and acknowledged
in the presence of us
(as to all of the above)

[redacted]

HARSHAW/FILTROL PARTNERSHIP

By THE HARSHAW CHEMICAL COMPANY,
its [redacted]

By [redacted]

Name [redacted]

Title: Vice President & Secretary

[redacted]

By FILTROL CORPORATION,
its general partner [redacted]

By [redacted]

Name [redacted]

Title: Vice President & Secretary

4260r

PROPERTY ADDRESSES & PERMANENT PARCEL NOS:
Harvard & Denison Avenues - Cleve., Ohio 009-30-001, 009-30-002, 008-34-022, 009-09-012, 008-34-026 & 008-34-027
[redacted] 742-24-012
[redacted] 953-24-003 & 953-24-004

S TITLE AGENCY, Inc.
1322584 - 1305583
13258L

STATE OF CALIFORNIA)
) ss.
COUNTY OF ALAMEDA)

Personally appeared before me, the undersigned authority in and for said County and State, within my jurisdiction, the within named [redacted], duly identified before me, who acknowledged that he is V.P. & Secty, of FILTROL CORPORATION, a Delaware corporation, and that for and on behalf of said corporation, and as its act and deed as general partner of HARSHAW/FILTROL PARTNERSHIP, a Delaware general partnership, and for and on behalf of said general partnership, and as its act and deed, he signed and delivered the above and foregoing instrument for the purposes mentioned on the day and in the year therein mentioned, after first having been duly authorized by said corporation and general partnership so to do.

Given under my hand and official seal on this 23rd day of MAY, 1988.

[redacted]

NOTARY PUBLIC

My Commission Expires:

MAY 14, 1990

OFFICIAL SEAL
[redacted]
NOTARY PUBLIC-CALIFORNIA
COUNTY OF ALAMEDA
My Commission Expires May 14, 1990

4263r

ACKNOWLEDGEMENT

STATE OF CALIFORNIA)
) ss.
COUNTY OF ALAMEDA)

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On this 23rd day of May, 1988, before me, the undersigned, a Notary Public in and for the State of California, personally sppeared [redacted], personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed the within instrument as the V.P. & Secty of THE HARSHAW CHEMICAL COMPANY, on behalf of said corporation, the corporation that executed the within instrument on behalf of the HARSHAW/FILTROL PARTNERSHIP, said corporation being known to me to be one of the partners of said partnership, the partnership that executed the within instrument, and acknowledged to me that such corporation executed the within instrument as such partner and that such partnership executed the same as its and their free act and deed.

WITNESS my hand and official seal.

[redacted]

Notary Public for the
State of California

Seal

OFFICIAL SEAL
VIOLET MACDONALD
NOTARY PUBLIC-CALIFORNIA
COUNTY OF ALAMEDA
My Commission Expires May 14, 1990

My commission expires:
MAY 14, 1990

THIS INSTRUMENT PREPARED BY:

[redacted]

4260r

EXHIBIT A

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PARCEL NO. 1:

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot Nos. 82 and 83, being further known as Parcel No. 1 as shown on Map of Survey of Parcel No. 1 for The Harshaw/Filtrol Partnership recorded in Volume 232 of Maps, Page 6 of Cuyahoga County Records and more fully described as follows:

Beginning at a point at the Northwesterly corner of Original Brooklyn Township Lot No. 82; Thence North 89 deg. 56'12" East along the Northerly line of said Original Lot No. 82 a distance of 33.97 feet to a point on an Easterly line of Jennings Road (width varies) and the principal place of beginning;

Thence continuing North 89 deg. 56'12" East along the Northerly line of said Original Lot No. 82 and on a change of right-of-way width 6.03 feet to a point on an Easterly line of Jennings Road, as aforesaid;

Thence North 0 deg. 41'41" West along an Easterly line of Jennings Road, as aforesaid, 61.78 feet to a point on the Northerly line of a parcel of land so conveyed to The Harshaw Chemical Company by Deed recorded in Volume 8807, Page 223 of Cuyahoga County Deed Records;

Thence by the arc of a curve bearing to the right and along a Northely line of said parcel conveyed to The Harshaw Chemical Company: Radius = 272.90 feet, Delta = 42 deg. 59'30", Arc = 204.77 feet, Chord = 200.00 feet and Chord bearing North 88 deg. 40'25" East to a point of compound curvature;

Thence by the arc of a curve bearing to the right and along a Northerly line of said parcel conveyed to The Harshaw Chemical Company; Radius = 193.36 feet, Delta = 33 deg. 00'33", Arc = 112.55 feet, Chord = 111.00 feet and Chord bearing South 53 deg. 27'38" East to a point on the Northerly line of said Original Lot No. 82;

Thence North 89 deg. 56'12" East along the Northerly line of said Original Lot No. 82

009-30-001
009-30-002 thru

PARCEL NO. see page one

CONVEYANCE IS IN COMPLIANCE WITH SEC. 319.202 O.R.C.

PAID
MAY 25 1988

Conveyance Fee —0— Receipt No. 7696D

TYPE [redacted] ARMS LENGTH YES [ ] NO [X]

[redacted] County Auditor By [redacted] Deputy

[redacted]
COUNTY ENGINEER
TAX MAP DIVISION [redacted]

a distance of 10.32 feet to a point on the Westerly right-of-way line of the Baltimore and Ohio Railroad;
Thence by the arc of a curve bearing to the left and along the Westerly right-of-way line of The Baltimore and Ohio Railroad; Radius = 2846.30 feet, Delta = 2 deg. 37'10", Arc = 130.12 feet, Chord = 130.11 feet, and Chord bearing South 19 deg. 47'50" East to a point of compound curvature;
Thence by the arc of a curve bearing to the left and along the Westerly right-of-way line of The Baltimore and Ohio Railroad: Radius = 1940.08 feet, Delta = 0 deg. 33'51", Arc = 19.10 feet, Chord = 19.10 feet, and Chord bearing South 21 deg. 25'37" East to a point on the Northerly line of Parcel "A" conveyed to The Baltimore and Ohio Railroad Company by Deed recorded in Volume 6291, Page 505 of Cuyahoga County Deed Records;
Thence South 58 deg. 38'28" West along the Northerly line of said Parcel "A" conveyed to the Baltimore and Ohio Railroad Company 25.32 feet to a point;
Thence South 21 deg. 55'17" East along the Westerly line of said Parcel "A" conveyed to The Baltimore and Ohio Railroad Company 15.00 feet to a point;
Thence North 67 deg. 43'51" East along the Southerly line of said "Parcel A" conveyed to The Baltimore and Ohio Railroad Company 25.00 feet to a point on the Westerly right-of-way line of The Baltimore and Ohio Railroad;
Thence by the arc of a curve bearing to the left and along the Westerly right-of-way line of The Baltimore and Ohio Railroad: Radius = 1940.08 feet, Delta = 1 deg. 45'28", Arc = 59.52 feet, Chord = 59.51 feet, and chord bearing South 23 deg. 06'32" East to a point on the Northerly line of Parcel "B" conveyed to The Baltimore and Ohio Railroad Company by Deed recorded in Volume 6291, Page 505 of Cuyahoga County Deed Records;
Thence South 65 deg. 58'24" West along the Northerly line of said Parcel "B" conveyed to The Baltimore and Ohio Railroad Company 20.00 feet to a point;
Thence South 25 deg. 06'37" East along a Westerly line of said Parcel "B" conveyed to The Baltimore and Ohio Railroad Company 178.35 feet to a point;
Thence South 36 deg. 51'15" East along a Southwesterly line of said Parcel "B" conveyed to The Baltimore and Ohio Railroad Company 65.51 feet to a point on the Northerly line of a parcel of land conveyed to Dack Realty, Inc., by Deed recorded in Volume 12375, Page 725 of Cuyahoga County Deed Records;
Thence North 74 deg. 46'49" West along the Northerly line of said parcel conveyed to Dack Realty, Inc. 150.04 feet to a point;
Thence North 81 deg. 07'46" West along the Northerly line of said parcel conveyed to Dack Realty, Inc. 105.00 feet to a point;
Thence North 39 deg. 30'16" West along the Northerly line of said parcel conveyed to Dack Realty, Inc., 211.70 feet to a point on the Easterly line of Jennings Road, as aforesaid;
Thence by the arc of a curve bearing to the right and along the Easterly line of Jennings Road, as aforesaid: Radius = 1402.39 feet, Delta = 11 deg. 18'10", Arc = 276.65 feet, Chord = 276.20 feet and Chord bearing North 10 deg. 51'47" West to a point and the principal place of beginning, according to a survey by The Western Reserve Surveying Company in NOVEMBER, 1984, be the same more or less, but subject to all legal highways.

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot Nos. 82 and 83, being further known as Parcel No. 2 as shown on Map of Survey of Parcel No. 2 for the Harshaw/Filtrol

Partnership recorded in Volume 282 of Maps, Page 7 of Cuyahoga County Records, and more fully described as follows:
Beginning at a point in the centerline of Harvard Avenue (width varies) at its intersection with the centerline of Baltimore and Ohio Railroad; Thence South 84 deg. 37'47" East along the centerline of Harvard Avenue, as aforesaid, 42.45 feet to a point; Thence by the arc of a curve bearing to the left; Radius = 2776.30 feet, Delta = 1 deg. 03'19", Arc = 52.75 feet, Chord = 52.74 feet and Chord bearing South 15 deg. 20'30" East to a point at the intersection of the Southerly line of Harvard Avenue, as aforesaid, and the Easterly right-of-way line of the Baltimore and Ohio Railroad, said point being the principal place of beginning:
Thence South 84 deg. 37'47" East along the Southerly line of Harvard Avenue, as aforesaid, 338.75 feet to an angle point; Thence South 88 deg. 34'02" East along the Southerly line of Harvard Avenue, as aforesaid, 71.07 feet to a point on the West bank of the Cuyahoga River; Thence along the West Bank of the Cuyahoga River the following courses and distances: South 30 deg. 10'38" East a distance of 77.50 feet; South 20 deg. 00'54" East a distance of 60.17 feet; South 16 deg. 03'46 East a distance of 98.46 feet; South 3 deg. 45'21" East a distance of 111.88 feet; South 0 deg. 21'25" East a distance of 64.03 feet; South 9 deg. 11'33" West a distance of 106.77 feet to a point; Thence South 89 deg. 48'33" West 231.22 feet to a stone on the Easterly right-of-way line of the Baltimore and Ohio Railroad; Thence by the arc of a curve bearing to the right and along the Easterly right- of-way line of the Baltimore and Ohio Railroad: Radius = 1880.08 feet, Delta = 9 deg. 47'38", Arc = 321.37 feet, Chord = 320.98 feet, and Chord bearing North 27 deg. 39'28" West to a point at the Southwesterly corner of a parcel of land conveyed to the Baltimore and Ohio Railroad by Deed recorded in Volume 6275, Page 213 of Cuyahoga County Deed Records; Thence North 67 deg. 14'20" East along the Southerly line of said parcel conveyed to the Baltimore and Ohio Railroad Company 9.23 feet to a point; Thence North 22 deg. 39'24" West along the Easterly line of said parcel conveyed to the Baltimore and Ohio Railroad Company, 15.00 feet to a point; Thence North 73 deg. 50'35" West along the Northerly line of said parcel conveyed to the Baltimore and Ohio Railroad Company 11.42 feet; to a point on the Easterly right-of-way line of the Baltimore and Ohio Railroad; Thence by the arc of a curve bearing to the right and along the Easterly right-of-way line of the Baltimore and Ohio Railroad: Radius = 1880.08 feet, Delta = 0 deg. 38'39", Arc = 31.17 feet, Chord 31.17 feet, and Chord bearing North 21 deg. 39'13" West to a point of compound curvature; Thence by the arc of curve bearing to the right and along the Easterly right-of-way line of the Baltimore and Ohio Railroad: Radius = 2786.30 feet, Delta = 4 deg. 13'22", Arc = 208.35 feet, Chord = 208.31 feet, and Chord bearing North 18 deg. 39'44" West to a point on the Northerly line of a parcel of land conveyed to The Harshaw Chemical Company by Deed recorded in Volume 8468, Page 446 of Cuyahoga County Deed Records; Thence South 84 deg. 37'47" East along the Northerly line of said parcel conveyed to The Harshaw Chemical Company 10.81 feet to a point, said point being 40.00 feet measured radially from the original centerline of the Baltimore and Ohio Railroad right-of-way; Thence by the arc of a curve bearing to the right and along the 40 ft. right-of-way line; Radius = 2776.30 feet, Delta = 0 deg. 04'37", Arc = 3.74 feet, Chord = 3.74 feet and Chord bearing North16 deg. 35'18" West to a point and the principal place of beginning, according to a survey by The Western Reserve Surveying Company, in NOVEMBER, 1984, be the same more or less, but subject to all legal highways.

PARCEL NO. 3
Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as

being part of Original Brooklyn Township Lot No. 81, being further known as Parcel No. 3 as shown on Map of Survey of Parcel No. 3 for The Harshaw/Filtrol Partnership recorded in Volume 232 of Maps, Page 8 of Cuyahoga County Records, and more fully described as follows:
Beginning at a point in the centerline of Harvard Avenue (width varies) at its intersection with the centerline of Baltimore and Ohio Railroad. Thence South 84 deg. 37'47" East along the centerline of Harvard Avenue, as aforesaid, 32.13 feet to a point; Thence by the arc of a curve bearing to the right: Radius = 2786.30 feet, Delta = 0 deg. 39'35", Arc = 32.08
feet, Chord = 32.08 feet and chord bearing North 13 deg. 23'36" West to a point at the intersection of the Northerly line of Harvard Avenue, as aforesaid, with the Easterly right-of-way line of the Baltimore and Ohio Railroad, said point being the principal place of beginning: Thence by the arc of a curve bearing to the right and along the Easterly right of way line of the Baltimore and Ohio Railroad: Radius = 2786.30 feet, Delta = 16 deg. 23'56", Arc = 797.48 feet, Chord = 794.73 feet and chord bearing North 6 deg. 31'51" West to a point and P.T. of said curve: Thence North 1 deg. 20'53" East along the Easterly right-of-way line of the Baltimore and Ohio Railroad 53.21 feet to a point on the Westerly line of a parcel of land conveyed to the Harshaw Chemical Company by Deed recorded in Volume 6008, Page 553 of Cuyahoga County Deed Records; Thence by the arc of curve bearing to the right and along the Westerly line of said parcel conveyed to the Harshaw Chemical Company: Radius = 303.25 feet, Delta = 22 deg. 23'24" Arc = 196.66 feet, Chord = 195.41 feet and Chord bearing North 28 deg. 37'21" East to a point at the Southwesterly corner of a parcel of land conveyed to Harshaw Chemical Company, Inc., by Deed recorded in Volume 13424, Page 155 of Cuyahoga County Deed Records; Thence by the arc of a curve bearing to the right and along the Northwesterly line of said parcel conveyed to Harshaw Chemical Company, Inc.; Radius = 303.25 feet, Delta = 7 deg. 36'40", Arc = 69.78 feet, Chord = 69.72 feet and Chord bearing North 43 deg. 47' 24" East to a point on the Northeasterly line thereof: Thence South 67 deg. 25'19" East along the Northeasterly line of said parcel conveyed to Harshaw Chemical Company, Inc., 1435.64 feet to a point at the most Easterly corner of thereof: Thence South 43 deg. 22'26" West 69.53 feet to a point on the Southwesterly line of said parcel conveyed to Harshaw Chemical Company, Inc.: Thence along the centerline of the Cuyahoga River along the following courses and distances: South 43 deg. 22'26" West a distance of 7.67 feet; North 79 deg. 26'22" West, a distance of 133.81 feet; North 81 deg. 53'01" West a distance of 153.81 feet; South 78 deg. 54'56" West a distance of 73.03 feet; South 74 deg. 41'18" West a distance of 50.90 feet; South 56 deg. 23'08" West a distance of 163.11 feet: South 48 deg. 14'17" West a distance of 115.27 feet; South 36 deg. 22'18" West a distance of 152.40 feet; South 44 deg. 16'09" West, a distance of 77.71 feet; South 31 deg. 57'49" West a distance of 50.14 feet; South 23 deg. 57'19" West a distance of 50.11 feet; South 17 deg. 31'37" West a distance of 81.31 feet to a point on the Northerly line of Harvard Avenue, as aforesaid: Thence North 88 deg. 34'02" West along the Northerly line of Harvard Avenue, as aforesaid, 108.67 feet to an angle point; Thence North 84 deg. 37'47" West along the Northerly line of Harvard Avenue as aforesaid, 365.69 feet to a point and the principal place of beginning, according to a Survey by The Western Reserve Surveying Company, in NOVEMBER, 1984, be the same more or less, but subject to all legal highways.

EXCEPTING FROM the above-described premises Parcel No. 3A (Building "C"), as shown on Map or Survey of Parcel No. 3A for The Harshaw/Filtrol Partnership recorded in Volume 232 of Maps, Page 11 of Cuyahoga County Records.

PARCEL NO. 4
Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 83, and being further known as Parcel No. 4, as shown on Map of Survey of Parcel No. 4 for The Marshaw/Filtrol Partnership recorded in Volume 232 of Maps, Page 9 of Cuyahoga County Records, and more fully described as follows:
Beginning at a point in the centerline of Denison Avenue, S.W. (40 feet wide) at a point distant 50.00 feet Southeasterly measured along said centerline, from its intersection with the centerline of The Wheeling and Lake Erie Railway Company's right-of-way, said point of beginning being a Northwesterly corner of a parcel of land conveyed by The Cleveland Trust Company and F.C. Newcomer, Trustee, under the Will of Benjamin Rose, to Republic Steel Corporation by Deed recorded in Volume 4634, Page 338 of Cuyahoga County Records; Thence South 35 deg. 30'35" West along the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way 164.05 feet to a point on the Southwesterly line of said parcel conveyed to Republic Steel Corporation; Thence by the arc of a curve bearing to the left and along the Southwesterly line of said parcel conveyed to Republic Steel Corporation: Radius = 553.69 feet, Delta = 2 deg. 00'55", Arc = 19.48 feet, Chord = 19.48 feet and Chord bearing South 24 deg. 46'36" East to a point on the Southerly right-of-way line of the Harvard-Denison Bridge and the principal place of beginning; Thence by the arc of a curve bearing to the right and along the Southerly right-of-way line of The Harvard-Denison Bridge: Radius = 2035.98 feet, Delta = 5 deg. 46'36", Arc = 205.28 feet, Chord = 205.19 feet and chord bearing South 63 deg. 33'03" East to a point and P.T. of said curve; Thence South 60 deg. 39'45" East along the Southerly right-of-way line of The Harvard Denison Bridge 247.86 feet to a point; Thence South 35 deg. 30'35" West, 99.40 feet to a point on the Southwesterly line of said parcel conveyed to Republic Steel Corporation; Thence North 67 deg. 24'32" West along the Southwesterly line of said parcel conveyed to Republic Steel Corporation 60.85 feet to a point and P.C. of a curve; Thence by the arc of a curve bearing to the right and along the Southwesterly line of said parcel conveyed to Republic Steel Corporation: Radius = 553.69 feet, Delta = 41 deg. 37' 31", Arc = 402.26 feet, Chord = 393.47 feet and Chord bearing North 46 deg. 35'46" West to a point on the Southerly right-of-way line of The Harvard-Denison Bridge and the principal place of beginning, according to a survey by The Western Reserve Surveying Company, in NOVEMBER, 1984, be the same more or less, but subject to all legal highways.

PARCEL NO. 5:
Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 83 and being further known as Parcel No. 5 as shown on Map of Survey of Parcel No. 5 for The Marshaw/Filtrol Partnership recorded in Volume 232 of Maps, Page 10 of Cuyahoga County Records, and more fully described as follows:
Beginning at a point in the centerline of Denison Avenue, S.W., (40 feet wide) at a point distant 50.00 feet Southeasterly measured along said centerline, from its intersection with the centerline of The Wheeling and Lake Erie Railway Company's right-of-way, said point of beginning being a Northwesterly corner of a parcel of land conveyed by The Cleveland Trust Company and F.C. Newcomer, Trustee, under the Will of Benjamin Rose, to Republic Steel Corporation by Deed recorded in Volume 4699, Page 338 of Cuyahoga County Records; Thence South 35 deg. 30'35" West along the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way 20.00 feet to a point on the Southerly line of Denison Avenue as aforesaid, and the principal place of beginning; Thence South 54 deg. 35'25" East along the Southerly line of

Denison Avenue, as aforesaid, 465.96 feet to a point on the Northerly right-of-way line of The Harvard Denison Bridge; Thence North 60 deg. 39'45" West along the Northerly right-of-way line of The Harvard-Denison Bridge 238.12 feet to a point and P.C. of a curve;

Thence by the arc of a curve bearing to the left and along the Northerly right-of-way line of The Harvard-Denison Bridge: Radius = 2130.96 feet, Delta = 5 deg. 42'04", Arc = 212.04 feet, Chord = 211.95 feet and Chord bearing North 63 deg. 30'47" West to a point on the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way; Thence North 35 deg. 30'35" East along the Easterly line of The Wheeling and Lake Erie Railway Company's right-of-way 60.18 feet to a point and the principal place of beginning, according to a survey by The Western Reserve Surveying Company in NOVEMBER, 1984, be the same more or less, but subject to all legal highways.

PARCEL NO. 6:

Situated in the City of Beachwood, County of Cuyahoga and State of Ohio and known as being part of Original Warrensville Township Lot No. 59, bounded and described as follows:

Beginning at the intersection of the curved center line of Mercantile Road, 60 feet wide, as dedicated in the Commerce Park Development as recorded in Volume 165, Pages 73, 74 and 75 of Cuyahoga County Map Records, with the center line of High Point Road, 60 feet wide, as dedicated in Volume 192, Page 58 of Cuyahoga County Map Records; thence along the arc of a curve deflecting to the left forming the center line of Mercantile Road, having a radius of 448.30 feet and whose chord bears North 38 degrees 09' 40" East 266.82 feet, an arc distance of 270.52 feet to a point of tangency; thence South 69 degrees 09' 08" East 30.00 feet to a point of tangency in the Easterly side line of said Mercantile Road and the principal place of beginning of the parcel herein intended to be described; thence North 20 degrees 50' 52" East along said Easterly side line of Mercantile Road 407.10 feet to a point; thence South 89 degrees 55' 53" East 576.82 feet to a point; thence South 0 degrees 09' 41" East 495.08 feet to a point; thence North 89 degrees 53' 23" West 785.25 feet to a point in the Easterly curved side line of Mercantile Road; thence along the arc of a curve deflecting to the left forming said Easterly side line of Mercantile Road having a radius of 478.30 feet, whose chord bears North 28 degrees 38' 20" East 129.68 feet, an arc distance of 130.08 feet to the aforementioned point of tangency and the principal place of beginning, containing 7.643 acres of land, be the same more or less, but subject to all legal highways.

PARCEL NO. 7:

Situated in the City of Solon, County of Cuyahoga, State of Ohio and known as being part of Original Solon Township Lot No. 3, Tract No. 3, and bounded and described as follows:

Beginning in the centerline of Cochran Road (60 feet wide) at the Southwesterly corner of a parcel of land conveyed to Blanche Mason by deed dated July 15, 1935 and recorded in Volume 4534, Page 528, of Cuyahoga County Records. Said point being due South measured along the centerline a distance of 964.25 feet from the Northwesterly corner of Original Lot No. 3. Thence North 88 deg. 48' 58" East along the Southerly line of land so conveyed to Blanche Mason a distance of 880.00 feet to an iron pin which is the principal place of beginning of the following described parcel of land.

Course 1: Thence North 88 deg. 48' 58" East along the Southerly line of land so conveyed to Blanche Mason a distance of 1852.48 feet to an iron pin in the Easterly line of Original Lot No. 3, said pin bears South 0 deg. 04' 50" East a distance of 953.39 feet from the Northeasterly corner of said Original Lot No. 3;

Course 2: Thence South 0 deg. 04' 50" East along said Easterly line of Original Lot No. 3 a distance of 601.12 feet to an iron pin in the Northeasterly corner of a parcel of land conveyed to Anna Marek by deed dated January 20, 1927 and recorded in Volume 3559, Page 249 of Cuyahoga County Records;

Course 3: Thence South 88 deg. 38' 10" West along the Northerly line of land so conveyed to Anna Marek a distance of 1853.31 feet to an iron pin;

Course 4: Thence North 0 deg. 00' 20" East a distance of 606.98 feet to the principal place of beginning, according to a survey in May 1968 by Neff and Associates, be the same more or less, but subject to all legal highways.

PARCEL NO. 8:

Situated in the City of Solon, County of Cuyahoga, State of Ohio and known as being part of Original Solon Township Lot No. 3, Tract No. 3, and bounded and described as follows:

Beginning in the centerline of Cochran Road (60 feet wide) at the Southwesterly corner of a parcel of land conveyed to Blanche Mason by deed dated July 15, 1935 and recorded in Volume 4534, Page 528 of Cuyahoga County Records. Said point being due South measured along the centerline a distance of 964.25 feet from the Northwesterly corner of Original Lot No. 3.

Course 1: Thence due South along said centerline a distance of 609.75 feet to the Northwesterly corner of a parcel of land conveyed to Anna Marek by deed dated January 20, 1927, and recorded in Volume 3559, Page 249 of Cuyahoga County Records

Course 2: Thence North 88 deg. 38' 10" East along the Northerly line of said parcel so conveyed to Anna Marek a distance of 880.00 feet to an iron pin;

Course 3: Thence North 0 deg. 00' 20" East a distance of 606.98 feet to an iron pin set in the Southerly line of land conveyed to Blanche Mason as aforesaid;

Course 4: Thence South 88 deg. 48' 58" West along said Southerly line of land conveyed to Blanche Mason a distance of 880.00 feet to thhe place of beginning, according to a survey made in May, 1968, by Neff and Associates, be the same more or less, but subject to all legal highways.

EXCEPTING THEREFROM, however, the following described property:
Situated in the City of Solon, County of Cuyahoga and State of Ohio and known as being part of Original Solon Township Lot No. 3, Tract No. 3, being part of the land conveyed to The National City Bank of Cleveland, Trustee by deed recorded in Volume 12338, Page 597 of Cuyahoga County Deed Records and known as Auditor's Parcel No. 933-24-4 and being further described as follows:

Beginning at the intersection of the south line of land now owned by The National City Bank of Cleveland, Trustee conveyed to them as aforesaid with the east line of Cochran Road hereto established 60 feet wide;

thence North 1 degree 12 minutes 53 seconds East a distance of 609.66 feet along said east line of Cochran Road 60 feet wide to an intersection with the north line of land now owned by The National City Bank of Cleveland, Trustee conveyed to them as aforesaid;

thence South 89 degrees 54 minutes 7 seconds East a distance of 20.00 feet along said north line to a point;

thence South 1 degree 12 minutes 53 seconds West a distance of 609.60 feet along a line parallel with and distant easterly 20.00 feet measured at a right angle from the east line of Cochran Road 60 feet wide to an intersection with the south line of land now owned by The National City Bank of Cleveland, Trustee conveyed to them as aforesaid;

thence South 89 degrees 54 minutes 53 seconds West a distance of 20.01 feet along said south line to the point of beginning.

Bearings given herein are to an assumed meridian and are used to indicate angles only.

This description was prepared by Environmental Design Associates, Inc., by Robert E. Vannice, Registered Surveyor No. 5190.

Partnerships Filed _____
NO. _____ Volume _____
[redacted] County Recorder

Partnerships Filed 5-25-88
NO. 9961 Volume 81
Frank R[illegible], County Recorder
[redacted] Deputy

U S TITLE AGENCY, INC.

Permanent Parcel #: 009-30-047

Type Instrument: Warranty Deed
Tax District #: 3100
Grantor: Cadlerock Properties Joint
Grantee: Gamed Investment Co.
Balance Assumed: $ 0.00
Total Consideration: $ 250,000.00
Conv. Fee Paid: $ 1,000.00
Transfer Fee Paid: $ 0.50
Fee Paid by: ATTORNEY
Exempt Code.

Date: 2/4/2004
Tax List Year: 2004
Land Use Code: 4820
Land Value: 302,000
Building Value: 257,900
Total Value: 559,900
Arms Length Sale: YES
Rcpt: a-01302004-50
Inst #: 75190
Check #:

[redacted]
CUYAHOGA COUNTY AUDITOR

CUYAHOGA COUNTY RECORDER
[redacted]
DEED 02/04/2004 02:47:38 PM
200402040591

Our File No. CG01A001

GENERAL WARRANTY DEED

CADLEROCK PROPERTIES JOINT VENTURE, L.P., an Ohio limited partnership, of Trumbull County, Ohio, Grantor, for the sum of Two Hundred Fifty Thousand and 00/100 Dollars ($250,000.00) and other valuable consideration paid, grants, with general warranty covenants to **GAMED INVESTMENT CO.**, an Ohio corporation, Grantee, whose tax mailing address is [redacted], the real estate in the City of Cleveland, County of Cuyahoga, State of Ohio, and further described in Exhibit A attached hereto and made a part hereof.

A survey of this property was made by [redacted], registered surveyor.

Also known as: 4041 Jennings Road, Cleveland, Ohio 44109-3049

Permanent Parcel No.: 009-30-047

Prior Instrument Reference: Instrument No. 752237, Volume 98-04405, Page 57, Cuyahoga County Recorder.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in anywise belonging unto the said Grantee, its successors and assigns forever; and Grantor does hereby bind itself and its successors and assigns to **WARRANT AND FOREVER DEFEND** all and singular the said premises unto the said Grantee, its successors and assigns forever, saving and excepting that certain mortgage in favor of Firstar Bank NA dated March 31, 2000, recorded at AFN: 200004040582 on April 4, 2000.

C:\Dawn\Deeds\CC30A154-LWD(OH).doc

In witness whereof, **CADLEROCK PROPERTIES JOINT VENTURE, L.P.** has caused this deed to be executed by its duly authorized representative this 2ND day of February, 2004.

CADLEROCK PROPERTIES JOINT VENTURE, L.P.

By: CadleRock, Inc., its general partner

By: [redacted]

STATE OF OHIO)
) SS
COUNTY OF TRUMBULL)

Before me, a Notary Public in and for said County and State, personally appeared [redacted], President of CadleRock, Inc., general partner of **CADLEROCK PROPERTIES JOINT VENTURE, L.P.**, the Grantor herein, who, under penalty of perjury in violation of Section 2921.11 of the Ohio Revised Code, represented to me to be said person, and who signed the foregoing instrument and acknowledged the same as his voluntary act and deed.

Executed this 2ND day of February, 2004.

[redacted]
Notary Public, State of Ohio

[redacted]
Notary Public, State of Ohio
My Comm. Expires Sept. 20, 2007

This Instrument Prepared By:

[redacted]

C:\Dawn\Deeds\CC30A154-LWD(OH).doc

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 82 and bounded as follows:

Beginning in the Easterly curved line of Jennings Road, 60 feet wide, as now established, at the Northwesterly corner of a parcel of land conveyed to the city of Cleveland by deed recorded in Volume 7802, Page 283 of Cuyahoga County Records; thence South 79 degrees 08' 36" East along the Northerly line of said land conveyed to the City of Cleveland 217.12 feet to the Northeasterly corner of said land; thence South 20 degrees 02' 27" West along the Southeasterly line of said land, 230.00 feet to the most Southerly corner of said land and a point in the Easterly curved line of Jennings Road; thence Southerly along the Easterly curved line of Jennings Road, being the arc of a circle deflecting to the left, 299.69 feet to a point of tangency in said Easterly line, said arc having a radius of 1402.39 feet and a chord which bears South 39 degrees 40' 10" East, 299.12 feet; thence South 45 degrees 47' 30" East along the Easterly line of Jennings Road, 400 feet to a point; thence North 44 degrees 12' 30" East, at right angles to the Easterly line of Jennings Road, About 310 feet to a Point in the Westerly Right of Way line of the B. & O. Railroad Company; thence Northerly along the Westerly Right of Way line of the B. & O. Railroad Company about 690 feet to the Southeasterly corner of Parcel "B" of land conveyed to The Baltimore and Ohio Railroad Company by deed recorded in Volume 6291, Page 505 of Cuyahoga County Records thence North 88 degrees 01' 26" West along the Southerly line of said Parcel "B", 20.00 feet to the Southwesterly corner of said Parcel "B"; thence North 72 degrees 31" 02" West, 151.80 feet to a point; thence North 79 degrees 08' 36" West, 105.00 feet to point; thence North 57 degrees 31' 06" West, 211.70 feet to a point; in the Easterly curved line of Jennings Road; thence Southerly along the Easterly Curved line of Jennings Road being the arc of a circle deflecting to the left, 175.00 feet to the place of beginning, said arc having a radius of 1402.39 feet and a chord which bears South 18 degrees 06' 12" East, 174.89 feet, be the same more or less, but subject to all legal highways.

The courses used in this description are given to an assumed meridian and are used to indicate angles only.

[redacted]
Legal Description complies with Cuyahoga County Conveyance Standards and is approved for transfer:

FEB 04 2004

W.S.
Agent

649227 VOL. 98-00029 PAGE 36

Deed 22.00

RECORDED THIS DATE
PATRICK J. O'MALLEY
CUYAHOGA CTY RECORDER

98 JAN -2 PM 3:52

GENERAL WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS THAT [redacted] and [redacted] husband and wife (together, "Grantors"), who claim title by or through instrument recorded in Volume 15438, Page 557, Cuyahoga County Recorder's Office, for the consideration received to their full satisfaction of Anchor Holdings, Ltd., an Ohio limited liability company ("Grantee"), whose tax mailing address will be [redacted] do give, grant, bargain, sell and convey unto the said Grantee, its successors and assigns, the premises situated in the City of Cleveland, County of Cuyahoga, and State of Ohio, more particularly described in EXHIBIT "A" attached hereto and made a part hereof, be the same more or less, but subject to all legal highways.

TO HAVE AND TO HOLD the above granted and bargained premises, with appurtenances thereof, unto the said Grantees, their heirs and assigns forever.

And Grantors do for themselves and their heirs, executors and administrators, covenant with the said Grantee, its successors and assigns, that at and until the ensealing of these presents, they are well seized of the above described premises, as a good and indefeasible estate in Fee Simple, and have good right to bargain and sell the same in the manner and form as above written, and that the same are free from all encumbrances whatsoever, except all restrictions, reservations, conditions, easements (however created), and oil and gas leases of record; such encroachments as do not materially and adversely affect the use or value of said premises; zoning ordinances, if any; real estate taxes and assessments, both general and special, not yet due and payable; and such other encumbrances as are shown on EXHIBIT "B" attached hereto and made a part hereof, that Grantors will warrant and defend said premises, with the appurtenances thereunto belonging, to said Grantees, its successors and assigns, against all lawful claims and demands whatsoever except as hereinabove set forth.

IN WITNESS WHEREOF, Grantors have executed this General Warranty Deed this 8 day of Dec., 1997.

Witnesses as to both signatures:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]S.
COUNTY ENGINEER TAX MAP DIVISION
LEGAL DESCRIPTION APPROVED FOR TRANSFER

Chem 98001 9/26/98

ALF\ALF\1693773.1

CHICAGO TITLE INSURANCE CO. ORDER #

STATE OF OHIO)
)ss:
COUNTY OF CUYAHOGA)

BEFORE ME, a Notary Public in and for said county and state, personally appeared the above-named [redacted] acknowledged that they did sign the foregoing instrument and that the same is their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal at Cleveland, Ohio, this 26th day of Dec., 1997.

[redacted]

NOTARY PUBLIC

[redacted]
Notary Public, State of Ohio, Lake Cty.
My Commission Expires Feb. 12, 2001

This Instrument Prepared By:

[redacted]

EXHIBIT A

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio, and known as being part of Original Brooklyn Township Lot No. 74 and bounded and described as follows:

Beginning at a point on the Westerly line of Jennings Road, S.W. (80 feet wide) at the Southerly line of the Harvard-Denison Bridge Right of Way; thence Southerly along the Westerly line of Jennings Road, S.W., a distance of 219.20 feet to the Northwesterly line of the Wheeling and Lake Erie Railroad Right of Way; thence South 36° 09' 30" West along the Northwesterly line of said Right of Way, a distance of 498.29 feet to a point of curve; thence deflecting to the right on a curve with a radius of 1399.69 feet, an arc of 58.42 feet, a chord of 58.42 feet and bearing of South 37° 21' 15" West to a point on the Easterly line of West 14th Street (66 feet wide); thence North 4° 32' 00" East along the Easterly line of West 14th Street, a distance of 294.68 feet to a point; thence North 85° 28' 00" West, a distance of 8.00 feet to a point on the Easterly line of West 14th Street (50 feet wide); thence North 4° 32' 00" East along said Easterly line of West 14th Street, a distance of 65.81 feet to an angle in Street line; thence North 21° 38' 30" West, a distance of 235.31 feet to a point on the Southerly line of The Petty and Baldwin Allotment as recorded in Volume 10, Page 24, Cuyahoga County Records; thence North 89° 41' 00" East along said Southerly line of said Allotment a distance of 158.58 feet; thence North 21° 38' 30" West, a distance of 200 feet to the Southerly line of Curtiss-Ambler Subdivision as recorded in Volume 26, Page 5 of Cuyahoga County Records; thence North 89° 41' 00" East along the Southerly line of said Subdivision a distance of 83.55 feet to the Southerly line of the Harvard-Denison Bridge Right of Way; thence South 66° 43' 00" East along the Southerly line of said Right of Way, a distance of 247.62 feet to the place of beginning, containing 3.620 acres according to a survey by Arthur Bisler, dated December 31, 1949, be the same more or less, but subject to all legal highways.

[redacted]

PARCEL NO. 009-09-003
CONVEYANCE BY 219 O.R.C.

CUYAHOGA COUNTY AUDITOR

JAN 2 1998

Conveyance Fee
TYPE

[redacted]

EXHIBIT "B"

ADDITIONAL ENCUMBRANCES

1. Lease dated as of the 18 day of NOV., 1997, by and between Anchor Holdings, Ltd., an Ohio limited liability company, and Tesar Industrial Contractors, Inc., an Ohio corporation.

File Edit View Applications Tools Window Help

Go 2006 Pay 2007

- Auditor Maint & Processing
  - Adjustments Wizard
- General Maintenance
- Public Inquiry
- Reports
- Set Up
- Transfer Menu
  - Recording Info
  - Transfer Cashiering
  - Transfer Wizard
- Treasurer Maint & Processing

Real type: Real

Property number: 008-34-021

Id | Addr | Value | Tax | Transfer | Special | Note | A/R | Lender | Reduction | CAUV | Lis Pen

Property Transfer Card Information

Instrument Date & Type	To Deeded Owner	Conveyance Number	Deed Number	Exempt Reason	Sales Amount
12/13/1996 Warranty Deed	Pavlish Real Estate Holding Company, An Ohio Corp.				53200

Modify

Last Modified By

UserID	Notes Modified	Category	Subcate...	Tax Year

New

Remove

Modify

File Edit View Applications Tools Window Help

Go 2006 Pay 2007

- Auditor Maint & Processing
  - Adjustments Wizard
- General Maintenance
  - Public Inquiry
- Reports
- Set Up
- Transfer Menu
  - Recording Info
  - Transfer Cashiering
  - Transfer Wizard
- Treasurer Maint & Processing

Real type: Real

Property number: 008-34-021

Id | Addr | Value | Tax | Transfer | Special | Note | A/R | Lender | Reduction | CAUV | Lis Pen

Property Transfer Card Information

Number of Parcels	From Property Number	Transfer Date	Recorded Date & Book	AFN
0	008-34-021	12/13/1996	12/13/1996 12250 0029	V96122500029

Last Modified By

UserID	Notes Modified	Category	Subcate...	Tax Year

M o

New

Remove

Modify

DED
$22.00

395676

VOL. 96-12250 PAGE 29

CORPORATION LIMITED WARRANTY DEED

For a valuable consideration, receipt of which is hereby acknowledged, BGD Company, a Delaware corporation, ("Grantor") hereby grants with limited warranty covenants to Pavlish Real Estate Holding Company, an Ohio corporation, ("Grantee"), the real property in the County of Cuyahoga, State of Ohio, described as shown on Exhibit "1" hereto and hereafter referred to as the "Property."

Without limitation to the foregoing, by acceptance and recordation of this Deed, Grantee acknowledges the prior uses of the Property and Grantee convenants for itself, its successors and assigns that the Property is acquired by Grantee "AS IS, WHERE IS AND WITH ALL FAULTS," without any representations or warranties whatsoever, express or implied, and hereby releases Grantor from any and all liability on account of the physical condition of the Property.

Subject to all matters appearing of record in the office of the Recorder of said County, including all conditions, covenants and restrictions and all exceptions and reservations.

Prior Instrument Reference: Volume 88-2733, Page 43.
Permanent Parcel Number 008-34-021.

IN WITNESS WHEREOF, Grantor has executed this instrument this 20th day of November, 1996.

96 DEC 13 PM 3:19

RECORDED THIS DATE
CUYAHOGA CTY RECORDER

Agreed and accepted:

Signed and Acknowledged
in the Presence of:

[redacted]
(Signature of Witness #1)

[redacted]
(Printed Name of Witness #1)

[redacted]

GRANTOR: BGD Company,
[redacted]

By: [redacted]
ASSISTANT SECRETARY

PARCEL NO. 008-34-021
CONVEYANCE IS IN COMPLIANCE WITH SEC. 319.202 O.R.C.
PAID

DEC 13 1996

Conveyance Fee 212.80 Receipt No. 267264
TYPE [redacted] ARMS LENGTH YES
Cuyahoga County Auditor By [redacted]

[redacted]

CT04A1252

GRANTEE: Pavlish Real Estate Holding Company, an Ohio corporation

[redacted]
(Signature of Witness #1)

By [redacted]

[redacted]
(Printed Name of Witness #1)

[redacted]
(Signature of Witness #2)

[redacted]
(Printed Name of Witness #2)

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN FRANCISCO)

On November 20, 1996, before me, [redacted], a Notary Public in and for the State California, personally appeared [redacted], personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in her/his authorized capacity(ies), and that by his/her signature on the instrument the person or the entity upon behalf of which the person acted, executed this instrument as its free act and deed.

[redacted]

[redacted]
Notary Public — California
SAN FRANCISCO COUNTY
My Comm. Expires JUN 26,1999

STATE OF OHIO)
) ss.
COUNTY OF CUYAHOGA)

The foregoing instrument was acknowledged before me this 18th day of November, 1996, by [redacted], the President of Pavlish Real Estate Holding Company, who acknowledged that he did sign the foregoing instrument and that the same is his free act and deed on behalf of Pavlis[redacted]

Notary Public

[redacted]
Notary Public, State of Ohio
Recorded In Cuyahoga County
My Commission Expires 6-19-99

EXHIBIT 1

Situated in the City of Cleveland, County of Cuyahoga and State of Ohio and known as being part of Original Brooklyn Township Lot No. 83, and more fully described as follows:

Beginning at a point on the Southeasterly prolongation of the Northeasterly line of Denison Avenue (40 feet wide) at the Southeasterly corner of a parcel conveyed to Darling & Company, by deed recorded in Volume 15297, Page 859 of Cuyahoga County Deed Records;

Thence North 20°02'34" East along the Southeasterly line of said parcel conveyed to Darling & Company, 4.50 feet to a point on the Northeasterly line of a parcel of land conveyed to the Board of County Commissioners by deed recorded in Volume 13812, Page 83 of Cuyahoga County Deed Records and the principal place of beginning;

Thence continuing North 20°02'34" East along the Southeasterly line of said parcel conveyed to Darling & Company, 89.90 feet to an angle point;

Thence North 29°24'33" East along the Southeasterly line of said parcel conveyed to Darling & Company, 190.01 feet to a point at the most Easterly corner thereof;

Thence North 54°35'27" West along the Northeasterly line of said parcel conveyed to Darling & Company, 262.08 feet to an angle point;

Thence South 80°57'47" West along the Northerly line of said parcel conveyed to Darling & Company, 52.75 feet to a point on a Southeasterly line of a parcel of land conveyed to Pavlish Real Estate Holding Company by deed recorded in Volume 93-08584, Page 22 of Cuyahoga County Deed Records;

Thence North 20°12'57"East along the Southeasterly line of said parcel conveyed to Pavlish Real Estate Holding Company, 349.02 feet to a point on the Southeasterly line of a parcel of land conveyed to Air Products and Chemicals, Inc. by deed recorded in Volume 15006, Page 153 of Cuyahoga County Deed Records;

Thence North 75°18'24" East along the Southeasterly line of said parcel conveyed to Air Products and Chemicals, Inc., 32.60 feet to a point on the Westerly dock

[redacted] COUNTY ENGINEER [redacted] DIVISION
LEGAL DESCRIPTION [redacted] FOR TRANSFER [redacted]

rda\LEGAL DESCRIPT-HARVARD DENI-DDM

line of the Cuyahoga River as established by City of Cleveland Ordinance No. 1946-A-48, Section 27;

Thence South 14°41'36" East along the Westerly dock line of the Cuyahoga River 891.53 feet to a point on the Northeasterly line of said parcel conveyed to the Board of County Commissioners;

Thence North 60°39'45" West along the Northeasterly line of said parcel conveyed to the Board of County Commissioners, 271.52 feet to a point and the principal place of beginning and containing 2.2916 acres of land, be the same more or less, but subject to all legal highways.

EDR-Industrial Site Addendum™

Air, Water, OSHA Report

HARSHAW FUSRAP (IA07)
4041 Jennings Road
Cleveland, OH 44109

Inquiry Number: 1714738.9s

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

The EDR Industrial Site Addendum is a comprehensive presentation of government filings on a facility
The report is divided into three sections:

Section 1: Facility Summary . . . . . Page 3

Summary of facility filings including a review of the following areas: air emissions, water discharges, and health & safety issues.
Due to inconsistent name and/or locational information, records on the same facility may be listed in separate facility columns.

Section 2: Facility Detail Reports . . . . . Page 4

All available detailed information from databases where sites are identified.

Section 3: Databases Searched and Update Information. . . . . Page 6

Name, source, update dates, contact phone number and description of each of the databases searched for this report.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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SECTION 1: FACILITY SUMMARY

Due to inconsistent name and/or locational information, records on the same facility may be listed in separate facility columns.

	RECORD 1 **HARSHAW FUSRAP (IA07)** 4041 JENNINGS ROAD CLEVELAND, OH	**RECORD 2** 4041 JENNINGS ROAD CLEVELAND, OH	**TOTAL (YES)**
AIR EMISSIONS Permitted air emissions (AIRS)	NO	NO	0
Reported emergency releases to air (ERNS/A)	NO	NO	0
Compliance data (AIRS/COM)	NO	NO	0
WATER DISCHARGES Permitted waste water discharges (NPDES/PCS)	NO	NO	0
Reported emergency releases to water (ERNS/W)	NO	NO	0
Enforcement actions (NPDES/PCS-ENF)	NO	NO	0
Inactive waste water discharges (NPDES-PCS INACT)	NO	NO	0
Stormwater permit (STORMWATER)	NO	NO	0
HEALTH AND SAFETY Inspected by the Occupational Safety and Health Administration (OSHA)	NO	NO	0
Violations under OSHA (OSHA/VIOL)	NO	NO	0
Facility has had accidents according to the Occupational Safety and Health Administration (OSHA/ACC)	NO	NO	0
TOTAL (YES)	0	0	0

- A "NO" indicates that no findings were identified based on an exact name, address and/or EPA facility identification number search. Facility information may be available under an alternate name, address and/or EPA identification number.
- NR = Not Requested

SECTION 2: FACILITY DETAIL REPORTS

Record 1: HARSHAW FUSRAP (IA07)
CLEVELAND, OH (EDR ID#)

AIR EMISSIONS

Facility has permitted air emissions . . . . . NO

Facility has reported emergency releases to air. . . . . NO

Facility has compliance data . . . . . NO

WATER DISCHARGES

Facility has permitted waste water discharges. . . . . NO

Facility has reported emergency releases to water. . . . . NO

Facility has enforcement actions . . . . . NO

Facility has an inactive waste water permit. . . . . NO

Facility has stormwater discharges . . . . . NO

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration . . . . . NO

Facility has violations cited by the Occupational Safety and Health Administration. . . . . NO

Facility has had accidents according to the Occupational Safety and Health Administration. . . . . NO

TOTALS (YES) 0

Record 2:

CLEVELAND, OH (EDR ID#)

AIR EMISSIONS

Facility has permitted air emissions . . . . . NO

Facility has reported emergency releases to air. . . . . NO

Facility has compliance data . . . . . NO

WATER DISCHARGES

Facility has permitted waste water discharges. . . . . NO

Facility has reported emergency releases to water. . . . . NO

Facility has enforcement actions . . . . . NO

Facility has an inactive waste water permit. . . . . NO

Facility has stormwater discharges . . . . . NO

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration . . . . . NO

Facility has violations cited by the Occupational Safety and Health Administration. . . . . NO

Facility has had accidents according to the Occupational Safety and Health Administration. . . . . NO

TOTALS (YES) 0

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

FACILITY RELATED DATABASES

AIR EMISSIONS

AIRS: Aerometric Information Retrieval System Facility Subsystem
Source: EPA
Telephone: 919-541-5454

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Database Release Frequency: Annually
Date of Last EDR Contact: 04/26/2006
Date of Next Scheduled Update: 07/24/2006

WATER DISCHARGES

PCS: Permit Compliance System
Source: EPA/Office of Water
Telephone: 202-564-4099
PCS is EPA's database system for managing wastewater discharges to surface bodies of water as part of the National Pollutant Discharge Elimination System under the Clean Water Act. Facility data, discharge monitoring report information and compliance/enforcement activities are included in the database. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/30/2006
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 07/10/2006
Date of Next Scheduled Update: 10/09/2006

PCS INACTIVE: Listing of Inactive PCS Permits
Source: Environmental Protection Agency
Telephone: 202-564-2496
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 03/13/2006
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 05/15/2006
Date of Next Scheduled Update: 08/14/2006

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Database Release Frequency: Annually
Date of Last EDR Contact: 04/26/2006
Date of Next Scheduled Update: 07/24/2006

HEALTH AND SAFETY

OSHA: Occupational Safety and Health Administration
Source: Department of Labor
Telephone: 202-219-7888
Specific inspection, violation and fatality/catastrophe information regarding inspections of interest.

Date of Government Version: 12/31/2004
Database Release Frequency: Annually
Date of Last EDR Contact: 04/14/2006
Date of Next Scheduled Update: 07/17/2006

The EDR Environmental Lien Search Report

HARSHAW FUSRAP (IA07)
4041 JENNINGS RD
CLEVELAND, OHIO

Wednesday, July 26, 2006

Project Number: L06-4479

The Standard In Environmental Risk Management Information

440 Wheelers Farm Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802

ENVIRONMENTAL LIEN REPORT

The EDR Environmental Lien Search Report is intended to assist in the search for environmental liens filed in land title records.

TARGET PROPERTY INFORMATION

ADDRESS

HARSHAW FUSRAP (IA07)
4041 JENNINGS RD
CLEVELAND, OHIO

DEED INFORMATION

Type of Deed: WD ☒ QCD ☐ Other ☐

Title is vested in: Gamed Investment Co., an Ohio Corporation

Title received from: Cadlerock Properties Joint Venture, L.P., an Ohio Limited Partnership

Deed Dated: 02-02-2004
Deed Recorded: 02-04-2004
Instrument No: 2004-02040591

Comments: As to Parcel 009-30-047

Type of Deed: WD ☐ QCD ☒ Other ☐

Title is vested in: BGD Company, a Delaware Corporation

Title received from: The Harshaw Chemical Company, a New Jersey Corporation

Deed Dated: 08-31-1987
Deed Recorded: 06-13-1988
Volume: 88-2733
Page: 43
Comments: As to Parcel 009-30-048

LEGAL DESCRIPTION

Description: Being those parcels or tracts of land, known as being part of Original Brooklyn Township Lot No. 82, situated and lying in the City of Cleveland, Cuyahoga County, State of Ohio

Assessor's Parcel Numbers: 009-30-047 and 009-30-048

ENVIRONMENTAL LIEN

Environmental Lien: **Yes** ☐ **No** ☒

If yes:

1st Party:

2nd Party:

Dated:
Recorded:
Book:
Page:
Comments:

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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The EDR Environmental Lien Search Report

HARSHAW FUSRAP
1000 HARVARD AVE
CLEVELAND, OHIO

Wednesday, July 26, 2006

Project Number: L06-4480

The Standard In Environmental Risk Management Information

440 Wheelers Farm Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802

ENVIRONMENTAL LIEN REPORT

The EDR Environmental Lien Search Report is intended to assist in the search for environmental liens filed in land title records.

TARGET PROPERTY INFORMATION

ADDRESS

HARSHAW FUSRAP
1000 HARVARD AVE
CLEVELAND, OHIO

DEED INFORMATION

Type of Deed: WD ☐ QCD ☐ Other ☒ DEED

Title is vested in: The Harshaw Chemical Company, a New Jersey Corporation

Title received from: Harshaw/Filtrol Partnership, a Delaware Partnership

Deed Dated: 05-23-1988
Deed Recorded: 05-25-1988
Volume: 88-2352
Page: 3

Comments: As to Parcel 009-30-002

Type of Deed: WD ☐ QCD ☐ Other ☒ DEED

Title is vested in: The Harshaw Chemical Company, a New Jersey Corporation

Title received from: Harshaw/Filtrol Partnership, a Delaware Partnership

Deed Dated: 05-23-1988
Deed Recorded: 05-25-1988
Volume: 88-2352
Page: 3

Comments: As to Parcel 008-34-022

Type of Deed: WD ☐ QCD ☒ Other ☐

Title is vested in: BGD Company, a Delaware Corporation

Title received from: The Harshaw Chemical Company, a New Jersey Corporation

Deed Dated: 08-31-1987
Deed Recorded: 06-13-1988
Volume: 88-2733
Page: 43
Comments: As to Parcel 008-34-028

LEGAL DESCRIPTION

Description: Being those parcels or tracts of land, known as being part of Original Brooklyn Township Lot No. 82 and 83, situated and lying in the City of Cleveland, Cuyahoga County, State of Ohio

Assessor's Parcel Numbers: 008-34-022; 008-34-028; and 009-30-002

ENVIRONMENTAL LIEN

Environmental Lien: **Yes** ☐ **No** ☒

If yes:

1st Party:

2nd Party:

Dated:
Recorded:
Book:
Page:
Comments:

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The EDR-City Directory
Abstract

Harshaw FUSRAP
1000 Harvard Avenue
Cleveland, OH 44109

Inquiry Number: 1714652.6

Friday, July 14, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening report designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1930 through 2002. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

This report compiles information by geocoding the subject properties (that is, plotting the latitude and longitude for such subject properties and obtaining data concerning properties within 1/8th of a mile of the subject properties). There is no warranty or guarantee that geocoding will report or list all properties within the specified radius of the subject properties and any such warranty or guarantee is expressly disclaimed. Accordingly, some properties within the aforementioned radius and the information concerning those properties may not be referenced in this report.

Date EDR Searched Historical Sources: July 14, 2006

Target Property:
1000 Harvard Avenue
Cleveland, OH 44109

Year	***Uses***	***Source***
1930	Address Not Listed in Research Source	The Cleveland Directory Co.
1935	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL CO WHSE (1000)	
1941	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL CO WHSE (1000)	
1949	Address Not Listed in Research Source	The Cleveland Directory Co.
1951	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL SO PLANT (1000)	
1954	Address Not Listed in Research Source	The Cleveland Directory Co.
1955	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL CO PLANT (1000)	
1959	Address Not Listed in Research Source	The Cleveland Directory Co.
1961	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL CO PLANT (1000)	
1962	Address Not Listed in Research Source	The Cleveland Directory Co.
1967	Address Not Listed in Research Source	The Cleveland Directory CO.
1970	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL CO PLANT (1000)	
1972	Address Not Listed in Research Source	The Cleveland Directory Co.
1974	****HARVARD AVE****	The Cleveland Directory Co.
	HARSHAW CHEMICAL CO PLANT (1000)	
1980	Address Not Listed in Research Source	The Cleveland Directory CO.

Year	Uses	Source
1981	Address Not Listed in Research Source	Ohio Bell Telephone Company
1983	****HARVARD AVE****	The Ohio Bell Telephone Co.
	HARSHAW EMPLOYEES FEDERAL CREDIT UNION (1000)	
	HARVARD PLANT (1000)	
	PLANT (1000)	
1986	****HARVARD AVE****	Ohio Bell
	HARSHAW EMPLOYEES FEDERAL CREDIT UNION (1000)	
	HARSHAW FILTROL PARTNERSHIP (1000)	
	HARVARD PLANT (1000)	
	MANUFACTURING CENTERS (1000)	
1991	Address Not Listed in Research Source	Ohio Bell
2002	****HARVARD AVE****	HAINES & COMPANY
	CLEVELAND CITY (1000)	
	CLEVELANDMUNICIPALSD (1000)	
	CORPORATION (1000)	
	ENGELHARD (1000)	

Adjoining Properties

SURROUNDING

Multiple Addresses
Cleveland, OH 44109

Year	Uses	Source
1930	****VALLEY RD****	The Cleveland Directory Co.
	IMPORTERS OIL CO (3670)	
1935	Address Not Listed in Research Source	The Cleveland Directory Co.
1941	Address Not Listed in Research Source	The Cleveland Directory Co.
1949	Address Not Listed in Research Source	The Cleveland Directory Co.
1951	****HARVARD AVE****	The Cleveland Directory Co.
	CLEANRITE DUCT CLEANING CO (1102)	
1954	Address Not Listed in Research Source	The Cleveland Directory Co.

Year	Uses	Source
1955	****HARVARD AVE****	The Cleveland Directory Co.
	ROGERS CHAS Z TRANSPORTATION CO (619)	
1959	Address Not Listed in Research Source	The Cleveland Directory Co.
1961	****W 14TH****	The Cleveland Directory Co.
	DUFFEE CLYDE D MOTOR EXP INC (3910)	
	KEYSTONE MOTOR EXP INC (3910)	
	WERNER TRANS CO (3910)	
	****HARVARD AVE****	The Cleveland Directory Co.
	ROGERS CHAS J TRANS CO TRUCKING (619)	
	AJAX PETROLEUM PRODUCTS CO GARAGE (811)	
	[redacted]	
	LUMPYS CAFE (1323)	
1962	Address Not Listed in Research Source	The Cleveland Directory Co.
1967	Address Not Listed in Research Source	The Cleveland Directory CO.
1970	****W 14TH ST****	The Cleveland Directory Co.
	JOHNSON A S CO INDL CONSTN (3870)	
	WERNER CONTINENTAL INC TRUCKING (3910)	
	****HARVARD AVE****	The Cleveland Directory Co.
	ROGERS CHARLES J TRANSPORTATION CO TRUCKING (619)	
	[redacted]	
1972	Address Not Listed in Research Source	The Cleveland Directory Co.
1974	****W 14TH ST****	The Cleveland Directory Co.
	JOHNSON A S CO INDL CONSTN (3870)	
	WARNER CONTINENTAL INC TRUCKING (3910)	
	****HARVARD AVE****	The Cleveland Directory Co.
	ROGERS CHARLES J TRANSPORTATION CO TRUCKING (619)	
	AJAZ BITUMINOUS PAVING INC (811)	
	[redacted]	
1980	Address Not Listed in Research Source	The Cleveland Directory CO.

Year	Uses	Source
1981	**W 14TH ST**	Ohio Bell Telephone Company
	[redacted]	
	14TH ST	Ohio Bell Telephone Company
	[redacted]	
	HARVARD AVE	Ohio Bell Telephone Company
	[redacted]	
	SOUTH SHORE INSURANCE AGCY (1204)	
1983	**HARVARD AVE**	The Ohio Bell Telephone Co.
	O K TRCKNG CO THE (550)	
	RYDER TRUCK LINES INC (550)	
	RYDER TRUCK RENTAL AND LEANIG (550)	
	HARVARD ST	The Ohio Bell Telephone Co.
	INO ANS CALL (619)	
	ROGERS C J TRANS CO (619)	
	IF NO ANS CALL (811)	
	BROOKLYN FREIGHT STATION (1001)	
	CREWV CALLER CLARK AV (1001)	
	W 144TH ST	The Ohio Bell Telephone Co.
	[redacted]	
	W 145TH ST	The Ohio Bell Telephone Co.
	[redacted]	

Year	Uses	Source
1983 (continued)		
	W 149TH ST	The Ohio Bell Telephone Co.
	[redacted]	
	HARVARD AVE	The Ohio Bell Telephone Co.
	[redacted]	
1986	**W 14TH ST**	Ohio Bell
	MUSHROOM TRANSPTN CO INC (3910)	
	HARVARD AVE	Ohio Bell
	RYDER P I E NATIONWIDE INC (550)	
	AJAX BITUMINOUS PAVING INC (711)	
	HARVARD ST	Ohio Bell
	ROGERS C J TRANS CO (619)	
	BROOKLYN FREIGHT STATION (1001)	
	SW 14TH ST	Ohio Bell
	[redacted]	
	W 145TH ST	Ohio Bell
	[redacted]	
	W 148TH ST	Ohio Bell
	[redacted]	
	W 149TH ST	Ohio Bell
	[redacted]	
	W 14TH ST	Ohio Bell
	[redacted]	
	HARVARD AVE	Ohio Bell
	[redacted]	

Year	Uses	Source
1986	(continued)	
	[redacted]	
	[redacted]	
1991	**W 14TH ST**	Ohio Bell
	CHURCHILL TRUCK S LIN E S IN C (3910)	
	CHURCHMACK ALLAN G ATTY (3910)	
	E HARVARD AVE	Ohio Bell
	AJAX CLEANING CONTRACTORS (711)	
	IF NO ANS CALL (711)	
	HARVARD AVE	Ohio Bell
	IF NO ANSWER CALL (619)	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	HARVARD ST	Ohio Bell
	BROOKLYN FREIGHT STATION (1001)	
	CREW CALLER CLARK AV (1001)	
	W 149TH ST	Ohio Bell
	[redacted]	
	[redacted]	
	[redacted]	
	HARVARD AVE	Ohio Bell
	[redacted]	
	[redacted]	
2002	**W 14TH**	HAINES & COMPANY
	PBIPBEXPRESS (3870)	
	DENNISONTRANSPRTN (3910)	
	VALLEY PKY	HAINES & COMPANY
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	

Year	Uses	Source
2002 (continued)		
	****VALLEY RD****	HAINES & COMPANY
	XXXX (3626)	
	****HARVARD AVE****	HAINES & COMPANY
	CUYAHOGA HEIGHTS (550)	
	CUYAHOGA HEIGHTS LSD (550)	
	JEVIC (550)	
	TRANSPORTATION (550)	
	PIZZA 4 WINGS (600)	
	XXXX (619)	
	COEINC (711)	
	CONSTRUCTION INC (711)	
	SPECIALIZED (711)	
	[redacted]	
	[redacted]	
	XXXX (1001)	

EDR-Industrial Site Addendum™

Air, Water, OSHA Report

HARSHAW FUSRAP
1000 Harvard Avenue
Cleveland, OH 44105

Inquiry Number: 1714652.9s

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

The EDR Industrial Site Addendum is a comprehensive presentation of government filings on a facility
The report is divided into three sections:

Section 1: Facility Summary . . . . . Page 3

Summary of facility filings including a review of the following areas: air emissions, water discharges, and health & safety issues.
Due to inconsistent name and/or locational information, records on the same facility may be listed in separate facility columns.

Section 2: Facility Detail Reports . . . . . Page 4

All available detailed information from databases where sites are identified.

Section 3: Databases Searched and Update Information. . . . . Page 12

Name, source, update dates, contact phone number and description of each of the databases searched for this report.

Thank you for your business.
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SECTION 1: FACILITY SUMMARY

Due to inconsistent name and/or locational information, records on the same facility may be listed in separate facility columns.

	RECORD 1 **ATOTECH USA INC** 1000 HARVARD AVE CLEVELAND, OH 44109 EDR ID #I-053903500142	**RECORD 2** **HARSHAW FILTROL CORP** 1000 HARVARD AVE S W CUYAHOGA HTS, OH 44105 EDR ID #O-101564961	**RECORD 3** **HARSHAW/FILTROL CORP** 1000 HARVARD AVE SW CUYAHOGA HTS, OH 44105 EDR ID #O-002233864	**TOTAL (YES)**
AIR EMISSIONS Permitted air emissions (AIRS)	**YES - p5**	NO	NO	1
Reported emergency releases to air (ERNS/A)	NO	NO	NO	0
Compliance data (AIRS/COM)	NO	NO	NO	0
WATER DISCHARGES Permitted waste water discharges (NPDES/PCS)	NO	NO	NO	0
Reported emergency releases to water (ERNS/W)	NO	NO	NO	0
Enforcement actions (NPDES/PCS-ENF)	NO	NO	NO	0
Inactive waste water discharges (NPDES-PCS INACT)	NO	NO	NO	0
Stormwater permit (STORMWATER)	NO	NO	NO	0
HEALTH AND SAFETY Inspected by the Occupational Safety and Health Administration (OSHA)	NO	**YES - p9**	**YES - p11**	2
Violations under OSHA (OSHA/VIOL)	NO	NO	NO	0
Facility has had accidents according to the Occupational Safety and Health Administration (OSHA/ACC)	NO	NO	NO	0
TOTAL (YES)	1	1	1	3

- A "NO" indicates that no findings were identified based on an exact name, address and/or EPA facility identification number search. Facility information may be available under an alternate name, address and/or EPA identification number.
- NR = Not Requested

SECTION 2: FACILITY DETAIL REPORTS

Record 1: ATOTECH USA INC
CLEVELAND, OH 44109 (EDR ID# I-053903500142)

AIR EMISSIONS

Facility has permitted air emissions . . . . . YES

Facility has reported emergency releases to air. . . . . NO

Facility has compliance data . . . . . NO

WATER DISCHARGES

Facility has permitted waste water discharges. . . . . NO

Facility has reported emergency releases to water. . . . . NO

Facility has enforcement actions . . . . . NO

Facility has an inactive waste water permit. . . . . NO

Facility has stormwater discharges . . . . . NO

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration . . . . . NO

Facility has violations cited by the Occupational Safety and Health Administration. . . . . NO

Facility has had accidents according to the Occupational Safety and Health Administration. . . . . NO

TOTALS (YES) 1

AIR EMISSIONS

Facility has emitted air emissions

DATABASE: Aerometric Information Retrieval System (AIRS)

ATOTECH USA INC
1000 HARVARD AVE
CLEVELAND, OH 44109
EDR ID #I-053903500142

COMPLIANCE & VIOL DATA MINOR SOURCES:

County Code : 035
State : OHIO
Zip Code : 44109
EPA Plant ID : 110000906146
Dunn & Bradst # Not reported
Air Quality Cntrl Region : 174
SIC Code : 2819
North Am. Industrial Classf : Not reported
Plant Name : ATOTECH USA INC
Plant Address : 1000 HARVARD AVE
CLEVELAND
OH
County Name : CUYAHOGA
Current HPV Flag : Not reported
Default Compliance Status : IN COMPLIANCE - CERTIFICATION
Default Classification Code : POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Govt Facility Code : ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT

HIST COMPLIANCE MINOR SOURCES:

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0601
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0502
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0403
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0504
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0503
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0501
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0404
Air Prog Code Hist File : 0

Region Code : 05
State : OHIO
County Code : 035
State Compliance Status IN COMPLIANCE - CERTIFICATION
Hst Compliance Dt : 0402
Air Prog Code Hist File : 0

COMPLIANCE & VIOL DATA BY MINOR SOURCES:

Air Program Code :	SIP SOURCE
Plant Air Program Pollutant :	CARBON MONOXIDE
Default Pollutant Compliance Status :	IN COMPLIANCE - CERTIFICATION
Default Pollutant Classification :	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Arrainment/Non Attainment Indicator :	ATTAINMENT AREA FOR GIVEN POLLUTANT
Repeat Violator Date :	Not reported
Turnover Compliance :	Not reported
Air Program Code :	SIP SOURCE
Plant Air Program Pollutant :	FUGITIVE EMISSIONS
Default Pollutant Compliance Status :	NO APPLICABLE STATE REGULATION
Default Pollutant Classification :	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Arrainment/Non Attainment Indicator :	ATTAINMENT AREA FOR GIVEN POLLUTANT
Repeat Violator Date :	Not reported
Turnover Compliance :	Not reported
Air Program Code :	SIP SOURCE
Plant Air Program Pollutant :	NO2
Default Pollutant Compliance Status :	IN COMPLIANCE - CERTIFICATION
Default Pollutant Classification :	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Arrainment/Non Attainment Indicator :	ATTAINMENT AREA FOR GIVEN POLLUTANT
Repeat Violator Date :	Not reported
Turnover Compliance :	Not reported
Air Program Code :	SIP SOURCE
Plant Air Program Pollutant :	TOTAL PARTICULATE MATTER
Default Pollutant Compliance Status :	IN COMPLIANCE - CERTIFICATION
Default Pollutant Classification :	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Arrainment/Non Attainment Indicator :	ALL OTHER NON-ATTAINMENT FOR PRIMARY AND SECONDARY STANDARDS
Repeat Violator Date :	Not reported
Turnover Compliance :	Not reported
Air Program Code :	SIP SOURCE
Plant Air Program Pollutant :	SULFUR DIOXIDE
Default Pollutant Compliance Status :	IN COMPLIANCE - CERTIFICATION
Default Pollutant Classification :	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Arrainment/Non Attainment Indicator :	ALL OTHER NON-ATTAINMENT FOR PRIMARY AND SECONDARY STANDARDS
Repeat Violator Date :	Not reported
Turnover Compliance :	Not reported
Air Program Code :	SIP SOURCE
Plant Air Program Pollutant :	VOLATILE ORGANIC COMPOUNDS
Default Pollutant Compliance Status :	IN COMPLIANCE - CERTIFICATION
Default Pollutant Classification :	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Arrainment/Non Attainment Indicator :	ALL OTHER NON-ATTAINMENT FOR PRIMARY AND SECONDARY STANDARDS
Repeat Violator Date :	Not reported
Turnover Compliance :	Not reported

AIRS Minor records:

EPA Plant ID:	110000906146	Dunn & Bradst #:	Not reported
Region Code:	05		
County Code:	035	State:	OHIO
Air Qlty Cntrl Region:	174		
SIC Code:	2819		
North Am. Indust. Classf:	Not reported		
Compliance Plant ID:	00142		
Plant Name:	ATOTECH USA INC		
Plant Address:	1000 HARVARD AVE CLEVELAND, OH 44109		
CMS Category:	Not reported	County Name:	CUYAHOGA
Current HPV Flag:	Not reported		
Default Compliance Status:	IN COMPLIANCE - CERTIFICATION		
Default Classification Code:	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR		
Govt Facility Code:	ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT		

AIRS Minor Compliance & Violation Data:

Air Program Code:	0
Air Pollutant:	CARBON MONOXIDE
Default Pollutant Classif.:	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Pollutant Comp. Status:	4
Default Arrainment/	

Non Attainment Indicator: ATTAINMENT AREA FOR GIVEN POLLUTANT
Repeat Violator Date: Not reported
Turnover Compliance: Not reported

Air Program Code: 0
Air Pollutant: FUGITIVE EMISSIONS
Default Pollutant Classif.: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Pollutant Comp. Status: 8
Default Arrainment/
Non Attainment Indicator: ATTAINMENT AREA FOR GIVEN POLLUTANT
Repeat Violator Date: Not reported
Turnover Compliance: Not reported

Air Program Code: 0
Air Pollutant: NO2
Default Pollutant Classif.: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Pollutant Comp. Status: 4
Default Arrainment/
Non Attainment Indicator: ATTAINMENT AREA FOR GIVEN POLLUTANT
Repeat Violator Date: Not reported
Turnover Compliance: Not reported

Air Program Code: 0
Air Pollutant: TOTAL PARTICULATE MATTER
Default Pollutant Classif.: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Pollutant Comp. Status: 4
Default Arrainment/
Non Attainment Indicator: ALL OTHER NON-ATTAINMENT FOR PRIMARY AND SECONDARY STANDARDS
Repeat Violator Date: Not reported
Turnover Compliance: Not reported

Air Program Code: 0
Air Pollutant: SULFUR DIOXIDE
Default Pollutant Classif.: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Pollutant Comp. Status: 4
Default Arrainment/
Non Attainment Indicator: ALL OTHER NON-ATTAINMENT FOR PRIMARY AND SECONDARY STANDARDS
Repeat Violator Date: Not reported
Turnover Compliance: Not reported

Air Program Code: 0
Air Pollutant: VOLATILE ORGANIC COMPOUNDS
Default Pollutant Classif.: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Default Pollutant Comp. Status: 4
Default Arrainment/
Non Attainment Indicator: ALL OTHER NON-ATTAINMENT FOR PRIMARY AND SECONDARY STANDARDS
Repeat Violator Date: Not reported
Turnover Compliance: Not reported

AIRS Minor Historical Compliance Data:

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0601
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0502
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0403
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0504
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0503
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0501
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0404
Air Prog code-hist. file: 0

State Complance Status: IN COMPLIANCE - CERTIFICATION
Hist. Compliance Date: 0402
Air Prog code-hist. file: 0

Record 2: HARSHAW FILTROL CORP
CUYAHOGA HTS, OH 44105 (EDR ID# O-101564961)

AIR EMISSIONS

Facility has permitted air emissions . . . . . NO

Facility has reported emergency releases to air. . . . . NO

Facility has compliance data . . . . . NO

WATER DISCHARGES

Facility has permitted waste water discharges. . . . . NO

Facility has reported emergency releases to water. . . . . NO

Facility has enforcement actions . . . . . NO

Facility has an inactive waste water permit. . . . . NO

Facility has stormwater discharges . . . . . NO

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration . . . . . YES

Facility has violations cited by the Occupational Safety and Health Administration. . . . . NO

Facility has had accidents according to the Occupational Safety and Health Administration. . . . . NO

TOTALS (YES) 1

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration

DATABASE: Occupational Safety and Health Administration (OSHA)

HARSHAW FILTROL CORP
1000 HARVARD AVE S W
CUYAHOGA HTS, OH 44105
EDR ID #O-101564961

OSHA INSPECTIONS:

OSHA Inspection Activity Number 101564961

Establishment:	HARSHAW FILTROL CORP 1000 HARVARD AVE S W CUYAHOGA HTS, OH 44105 CUYAHOGA County
Primary SIC:	2899, CHEMICAL PREPARATIONS, NEC
Secondary SIC:	Not reported
Employees at Site:	Not reported
Total Employees:	Not reported

Inspection Report ID:	0522300	Lost Workday Injury Rate:	Not reported
Inspector Title:	Safety Officer	Case Completed Date:	Not reported
Total Inspection Time:	5.5 hours	Unionized:	Not reported

Record 3: HARSHAW/FILTROL CORP
CUYAHOGA HTS, OH 44105 (EDR ID# O-002233864)

AIR EMISSIONS

Facility has permitted air emissions . . . . . NO

Facility has reported emergency releases to air. . . . . NO

Facility has compliance data . . . . . NO

WATER DISCHARGES

Facility has permitted waste water discharges. . . . . NO

Facility has reported emergency releases to water. . . . . NO

Facility has enforcement actions . . . . . NO

Facility has an inactive waste water permit. . . . . NO

Facility has stormwater discharges . . . . . NO

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration . . . . . YES

Facility has violations cited by the Occupational Safety and Health Administration. . . . . NO

Facility has had accidents according to the Occupational Safety and Health Administration. . . . . NO

TOTALS (YES) 1

HEALTH AND SAFETY

Facility has been inspected by the Occupational Safety and Health Administration

DATABASE: Occupational Safety and Health Administration (OSHA)

HARSHAW/FILTROL CORP
1000 HARVARD AVE SW
CUYAHOGA HTS, OH 44105
EDR ID #O-002233864

OSHA INSPECTIONS:

OSHA Inspection Activity Number 002233864

Establishment:	HARSHAW/FILTROL CORP 1000 HARVARD AVE SW CUYAHOGA HTS, OH 44105 CUYAHOGA County
Primary SIC:	2899, CHEMICAL PREPARATIONS, NEC
Secondary SIC:	Not reported
Employees at Site:	Not reported
Total Employees:	Not reported

Inspection Report ID:	0522300	Lost Workday Injury Rate:	Not reported
Inspector Title:	Safety Officer	Case Completed Date:	Not reported
Total Inspection Time:	16.0 hours	Unionized:	Not reported

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

FACILITY RELATED DATABASES

AIR EMISSIONS

AIRS: Aerometric Information Retrieval System Facility Subsystem
Source: EPA
Telephone: 919-541-5454

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Database Release Frequency: Annually
Date of Last EDR Contact: 04/26/2006
Date of Next Scheduled Update: 07/24/2006

WATER DISCHARGES

PCS: Permit Compliance System
Source: EPA/Office of Water
Telephone: 202-564-4099
PCS is EPA's database system for managing wastewater discharges to surface bodies of water as part of the National Pollutant Discharge Elimination System under the Clean Water Act. Facility data, discharge monitoring report information and compliance/enforcement activities are included in the database. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/30/2006
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 07/10/2006
Date of Next Scheduled Update: 10/09/2006

PCS INACTIVE: Listing of Inactive PCS Permits
Source: Environmental Protection Agency
Telephone: 202-564-2496
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 03/13/2006
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 05/15/2006
Date of Next Scheduled Update: 08/14/2006

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Database Release Frequency: Annually
Date of Last EDR Contact: 04/26/2006
Date of Next Scheduled Update: 07/24/2006

HEALTH AND SAFETY

OSHA: Occupational Safety and Health Administration
Source: Department of Labor
Telephone: 202-219-7888
Specific inspection, violation and fatality/catastrophe information regarding inspections of interest.

Date of Government Version: 12/31/2004
Database Release Frequency: Annually
Date of Last EDR Contact: 04/14/2006
Date of Next Scheduled Update: 07/17/2006

EDR NEPACheck®

Harshaw FUSRAP
1000 Harvard Avenue
Cleveland, OH 44105

Inquiry Number: 1714652.8s

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR NEPACheck® DESCRIPTION

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects and actions, analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

The EDR NEPACheck provides information which may be used, in conjunction with additional research, to determine whether a proposed site or action will have significant environmental effect.

The report provides maps and data for the following items (where available). Search results are provided in the Map Findings Summary on page 2 of this report.

Section	Regulation
Natural Areas Map	
• Federal Lands Data:	
- Officially designated wilderness areas	47 CFR 1.1307(1)
- Officially designated wildlife preserves, sanctuaries and refuges	47 CFR 1.1307(2)
- Wild and scenic rivers	40 CFR 6.302(e)
- Fish and Wildlife	40 CFR 6.302
• Threatened or Endangered Species, Fish and Wildlife, Critical Habitat Data (where available)	47 CFR 1.1307(3); 40 CFR 6.302
Historic Sites Map	
• National Register of Historic Places	47 CFR 1.1307(4); 40 CFR 6.302
• State Historic Places (where available)	
• Indian Reservations	
Flood Plain Map	
• National Flood Plain Data (where available)	47 CFR 1.1307(6); 40 CFR 6.302
Wetlands Map	
• National Wetlands Inventory Data (where available)	47 CFR 1.1307(7); 40 CFR 6.302
FCC & FAA Map	
• FCC antenna/tower sites, AM Radio Towers, FAA Markings and Obstructions, AM Radio Interference Zones, Airports, Topographic gradient	47 CFR 1.1307(8)
Key Contacts and Government Records Searched	

MAP FINDINGS SUMMARY

The databases searched in this report are listed below. Database descriptions and other agency contact information is contained in the Key Contacts and Government Records Searched section on page 25 of this report.

TARGET PROPERTY ADDRESS

HARSHAW FUSRAP
1000 HARVARD AVENUE
CLEVELAND, OH 44105

Inquiry #: 1714652.8s
Date: 7/13/6

TARGET PROPERTY COORDINATES

Latitude (North):	41.449200 - 41˚ 26' 57.1''
Longitude (West):	81.685600 - 81˚ 41' 8.2''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	442731.5
UTM Y (Meters):	4588638.5

Applicable Regulation from 47 CFR/FCC Checklist	Database	Search Distance (Miles)	Within Search	Within 1/8 Mile
NATURAL AREAS MAP				
1.1307a (1) Officially Designated Wilderness Area	US Federal Lands	1.00	NO	NO
1.1307a (2) Officially Designated Wildlife Preserve	US Federal Lands	1.00	NO	NO
1.1307a (3) Threatened or Endangered Species or Critical Habitat	OH Endangered Species	1.00	NO	NO
1.1307a (2) Officially Designated Wildlife Preserve	OH Managed Lands	1.00	NO	NO
1.1307a (3) Threatened or Endangered Species or Critical Habitat	County Endangered Species	County	YES	N/A
HISTORIC SITES MAP				
1.1307a (4) Listed or eligible for National Register	National Register Hist. Places	1.00	YES	NO
	Indian Reservation	1.00	NO	NO
FLOODPLAIN MAP				
1.1307 (6) Located in a Flood Plain	FLOODPLAIN	1.00	YES	YES
WETLANDS MAP				
1.1307 (7) Change in surface features (wetland fill)	NWI	1.00	NO	NO
	OH COASTAL ZONE	20.00	YES	YES
FCC & FAA SITES MAP				
	FCC Cellular	1.00	NO	NO
	FCC Antenna	1.00	YES	NO
	FCC Tower	1.00	NO	NO
	FCC AM Tower	1.00	NO	NO
	FAA DOF	1.00	YES	NO
	Airports	1.00	YES	YES
	Power Lines	1.00	NO	NO

Natural Areas Map

- Target Property
- Roads
- County Boundary
- Waterways
- Water
- Airports
- Locations
- Federal Areas
- Federal Linear Features
- State Areas
- State Linear Features

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.8s DATE: July 13, 2006

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NATURAL AREAS MAP FINDINGS

Endangered Species Listed for: CUYAHOGA County, OH.
Source: EPA Endangered Species Protection Program Database

BIRD:	PLOVER, PIPING
MAMMAL:	BAT, INDIANA

Map ID Direction Distance Distance (ft.)	EDR ID Database

No mapped sites were found in EDR's search of available government records within the search radius around the target property.

Historic Sites Map

- Target Property
- Streets
- County Boundary
- Waterways
- Water
- Airports
- Historic Sites
- Federal Historic Areas
- State Historic Areas
- US Indian Reservations
- Scenic Trail

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.8s DATE: July 13, 2006

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HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)				EDR ID Database
A1 WNW 1/2-1 mi 4411	Resource Name:	Eighth Reformed Church		
	Alternate Name:	Brooklyn Centre MRA		87000436
	Resource Address:	2409 Willowdale		National Register Hist. Places
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Date received/pending nomination		
	Certification Date:	19870210	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Religion		
	Building Material:	None listed, Stone, Stucco		
	Other Names:	Eighth United Church of Christ		

A2 WNW 1/2-1 mi 4461	Resource Name:	Malio House		
	Alternate Name:	Brooklyn Centre MRA		87000439
	Resource Address:	3781 W. Twenty-fifth St.		National Register Hist. Places
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19870319	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Domestic		
	Building Material:	None listed, Weatherboard		

HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)				EDR ID Database
3 NW 1/2-1 mi 4516	Resource Name:	Riverside Cemetery Chapel		87000446 National Register Hist. Places
	Alternate Name:	Brooklyn Centre MRA		
	Resource Address:	3607 Pearl Rd.		
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19870319	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Vacant/not in use		
	Building Material:	None listed, Sandstone, Slate		

A4 WNW 1/2-1 mi 4545	Resource Name:	Cleveland Fire Department Engine Company No. 24		87000432 National Register Hist. Places
	Alternate Name:	Brooklyn Centre MRA		
	Resource Address:	3725 W. Twenty-fifth St.		
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Date received/pending nomination		
	Certification Date:	19870210	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Government		
	Building Material:	None listed, Brick, Stone		

HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)				EDR ID Database
B5 WNW 1/2-1 mi 4555	Resource Name:	Brooklyn Bank Building		84002912 National Register Hist. Places
	Alternate Name:	Not Reported		
	Resource Address:	3764 W. 25th St.		
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19840719	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Vacant/not in use		
	Building Material:	None listed, Brick, Iron, Terra cotta		
	Other Names:	Farnsworth Building		

6 WNW 1/2-1 mi 4619	Resource Name:	Riverside Cemetery Building		87000445 National Register Hist. Places
	Alternate Name:	Brooklyn Centre MRA		
	Resource Address:	3607 W. Twenty-fifth St.		
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19870319	Acreage: 1	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Commerce/trade, Funerary		
	Building Material:	None listed, Stone, Ceramic tile		

HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)				EDR ID Database
B7 WNW 1/2-1 mi 4682	Resource Name:	Brooklyn Memorial Methodist Church		
	Alternate Name:	Brooklyn Centre MRA		87000430 National Register Hist. Places
	Resource Address:	2607 Archwood		
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Date received/pending nomination		
	Certification Date:	19870210	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Religion		
	Building Material:	None listed, Brick, Stone		

C8 WNW 1/2-1 mi 4808	Resource Name:	Bomante House		
	Alternate Name:	Brooklyn Centre MRA		87000441 National Register Hist. Places
	Resource Address:	3000 Mapledale Ave.		
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19870319	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Domestic		
	Building Material:	Wood, Slate, Iron, Stucco, Concrete		

HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)				EDR ID Database
C9 WNW 1/2-1 mi 4823	Resource Name:	Third Church of Christ Scientist		
	Alternate Name:	Brooklyn Centre MRA		87000444
	Resource Address:	3648 W. Twenty-fifth St.		National Register Hist. Places
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19870319	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Vacant/not in use		
	Building Material:	None listed, Brick		

10 WNW 1/2-1 mi 4944	Resource Name:	Archwood Congregational Church		
	Alternate Name:	Not Reported		94000416
	Resource Address:	2800 Archwood Ave.		National Register Hist. Places
	Resource Type:	Building		
	Location:	CLEVELAND, OH		
	County:	CUYAHOGA, OH		
	Primary Certification:	Listed in the national register		
	Certification Date:	19940513	Acreage: 9	
	Number of Buildings:	1	Number of Objects: 0	
	Number of Sites:	0	Num. of Structures: 0	
	Number of non-contributing Buildings:	0		
	Number of non-contributing Objects:	0		
	Number of non-contributing Sites:	0		
	Num. of non-contributing Structures:	0		
	Applicable Criteria:	Architecture/Engineering		
	Areas of Significance:	Architecture		
	Current Function:	Religion		
	Building Material:	None listed, Brick, Sandstone, Asphalt		
	Other Names:	Archwood United Church of Christ		

HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)			EDR ID Database
11 WNW 1/2-1 mi 5128	Resource Name: Alternate Name: Resource Address: Resource Type: Location: County: Primary Certification: Certification Date: Number of Buildings: Number of Sites: Number of non-contributing Buildings: Number of non-contributing Objects: Number of non-contributing Sites: Num. of non-contributing Structures: Applicable Criteria: Areas of Significance: Current Function: Building Material:	Archwood Avenue Historic District Brooklyn Centre MRA Archwood Ave. roughly bounded by W. Thirty-first Pl. and W. Thirty-seventh St. District CLEVELAND, OH CUYAHOGA, OH Listed in the national register 19870319 Acreage: 130 57 Number of Objects: 0 0 Num. of Structures: 0 0 0 0 0 Architecture/Engineering Architecture Domestic None listed, Brick	87000428 National Register Hist. Places

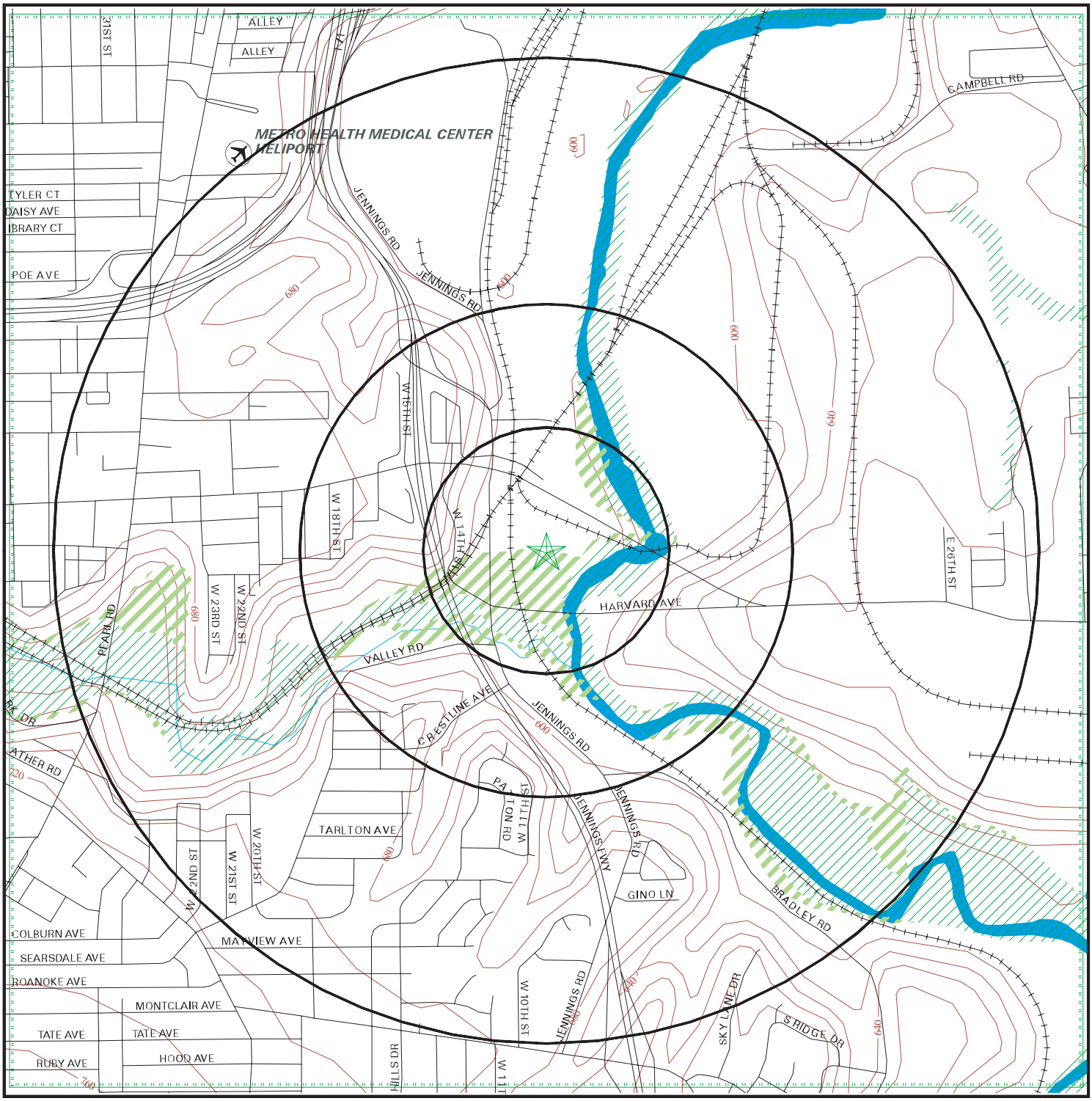
UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

	Status EDR ID Database

No unmapped sites were found in EDR's search of available government records.

Flood Plain Map



0 1/4 1/2 1 Miles

- Major Roads
- Contour Lines
- Waterways
- County Boundary
- Airports
- Power Lines
- Pipe Lines
- Fault Lines
- Water
- 100-year flood zone
- 500-year flood zone
- Electronic FEMA data available
- Electronic FEMA data not available

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.8s DATE: July 13, 2006

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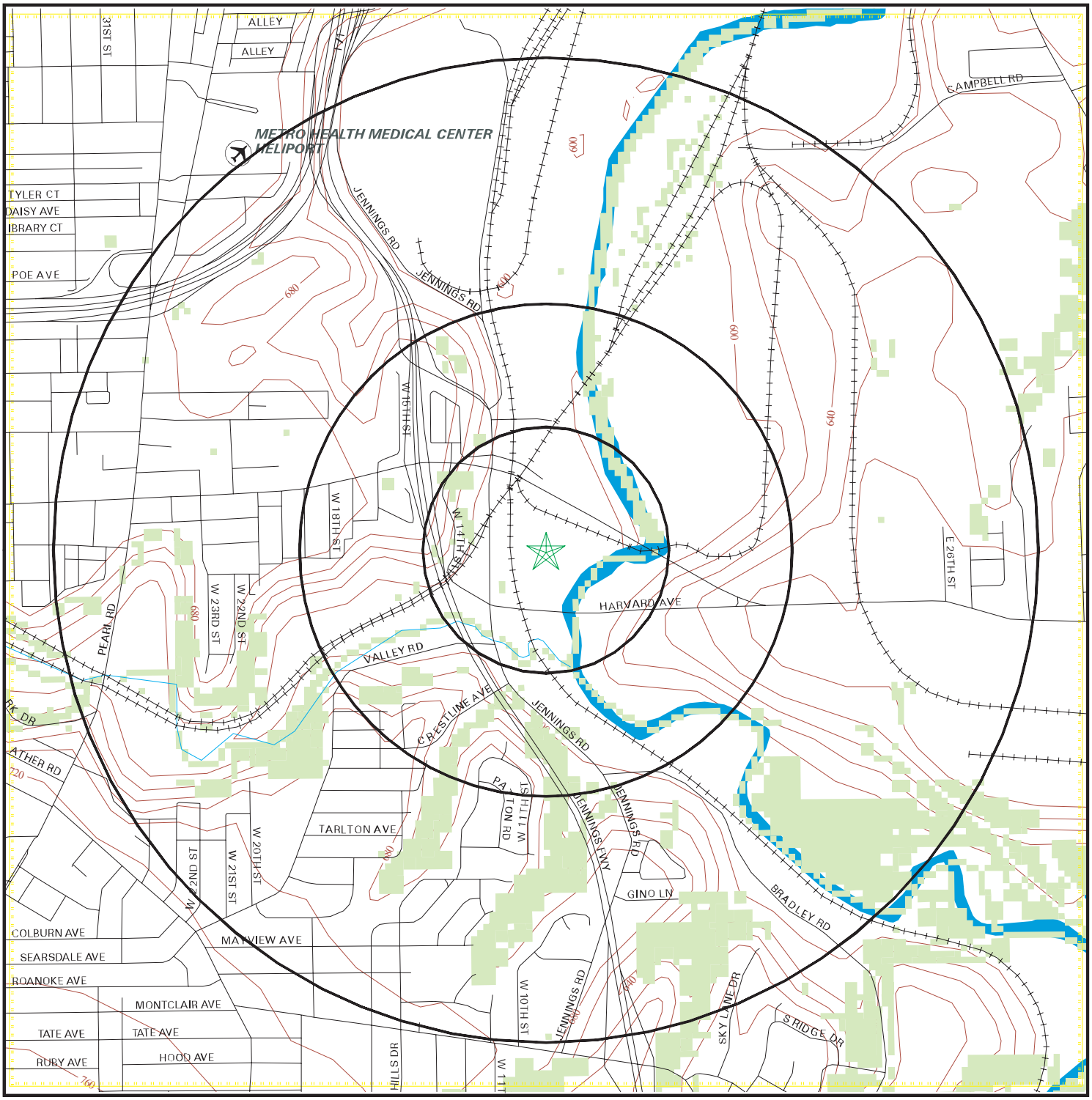
FLOOD PLAIN MAP FINDINGS

Source: FEMA Q3 Flood Data

County	FEMA flood data electronic coverage
CUYAHOGA, OH	YES
Flood Plain panel at target property:	3901040025B
Additional Flood Plain panel(s) in search area:	
3901190001B	
3906540001B	

National Wetlands Inventory Map



0 1/4 1/2 1 Miles

- Major Roads
- Contour Lines
- Waterways
- County Boundary
- Airports
- Power Lines
- Pipe Lines
- Fault Lines
- Water
- National Wetland Inventory
- State Wetlands
- Electronic NWI data available
- Electronic NWI data not available

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.8s DATE: July 13, 2006

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WETLANDS MAP FINDINGS

Source: Fish and Wildlife Service NWI data

NWI hardcopy map at target property: Cleveland South
Additional NWI hardcopy map(s) in search area:
Not reported in source data

Map ID Direction Distance Distance (ft.)	Code and Description*	Database

No Sites Reported.

*See Wetland Classification System for additional information.

WETLANDS CLASSIFICATION SYSTEM

National Wetland Inventory Maps are produced by the U.S. Fish and Wildlife Service, a sub-department of the U.S. Department of the Interior. In 1974, the U.S. Fish and Wildlife Service developed a criteria for wetland classification with four long range objectives:

- to describe ecological units that have certain homogeneous natural attributes,
- to arrange these units in a system that will aid decisions about resource management,
- to furnish units for inventory and mapping, and
- to provide uniformity in concepts and terminology throughout the U.S.

High altitude infrared photographs, soil maps, topographic maps and site visits are the methods used to gather data for the productions of these maps. In the infrared photos, wetlands appear as different colors and these wetlands are then classified by type. Using a hierarchical classification, the maps identify wetland and deepwater habitats according to:

- system
- subsystem
- class
- subclass
- modifiers

(as defined by Cowardin, et al. U.S. Fish and Wildlife Service FWS/OBS 79/31. 1979.)

The classification system consists of five systems:

1. marine
2. estuarine
3. riverine
4. lacustrine
5. palustrine

The marine system consists of deep water tidal habitats and adjacent tidal wetlands. The riverine system consists of all wetlands contained within a channel. The lacustrine systems includes all nontidal wetlands related to swamps, bogs & marshes. The estuarine system consists of deepwater tidal habitats and where ocean water is diluted by fresh water. The palustrine system includes nontidal wetlands dominated by trees and shrubs and where salinity is below .5% in tidal areas. All of these systems are divided in subsystems and then further divided into class.

National Wetland Inventory Maps are produced by transferring gathered data on a standard 7.5 minute U.S.G.S. topographic map. Approximately 52 square miles are covered on a National Wetland Inventory map at a scale of 1:24,000. Electronic data is compiled by digitizing these National Wetland Inventory Maps.

SYSTEM — **MARINE**

SUBSYSTEM — **1 - SUBTIDAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 2 Worm	

SUBSYSTEM — **2 - INTERTIDAL**

CLASS	AB-AQUATIC BED	RF-REEF	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE
Subclass	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 2 Worm	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic

SYSTEM — **E - ESTUARINE**

SUBSYSTEM — **1 - SUBTIDAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	

SUBSYSTEM — **2 - INTERTIDAL**

CLASS	AB-AQUATIC BED	RF-REEF	SB - STREAMBED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	SS-SCRUB SHRUB	FO-FORESTED
Subclass	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

SYSTEM — **R - RIVERINE**

SUBSYSTEM	**1 - TIDAL**	**2 - LOWER PERENNIAL**	**3 - UPPER PERENNIAL**	**4 - INTERMITTENT**	**5 - UNKNOWN PERENNIAL**
CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	*SB-STREAMBED	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	**EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble 3 Cobble-Gravel 4 Sand 5 Mud 6 Organic 7 Vegetated	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

* STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.
**EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

SYSTEM — **L - LACUSTRINE**

SUBSYSTEM — **1 - LIMNETIC**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	

SUBSYSTEM — **2 - LITTORAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

SUBSYSTEM

P - PALUSTRINE

CLASS	RB--ROCK BOTTOM	UB--UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	US--UNCONSOLIDATED SHORE	ML--MOSS-LICHEN	EM--EMERGENT	SS--SCRUB-SHRUB	FO--FORESTED	OW-OPEN WATER/ Unknown
Bottom									
Subclass	1 Bedrock 2 Rubble 3 Mud 4 Organic	1 Cobble-Gravel 2 Sand	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6Deciduous 7 Evergreen	

MODIFIERS

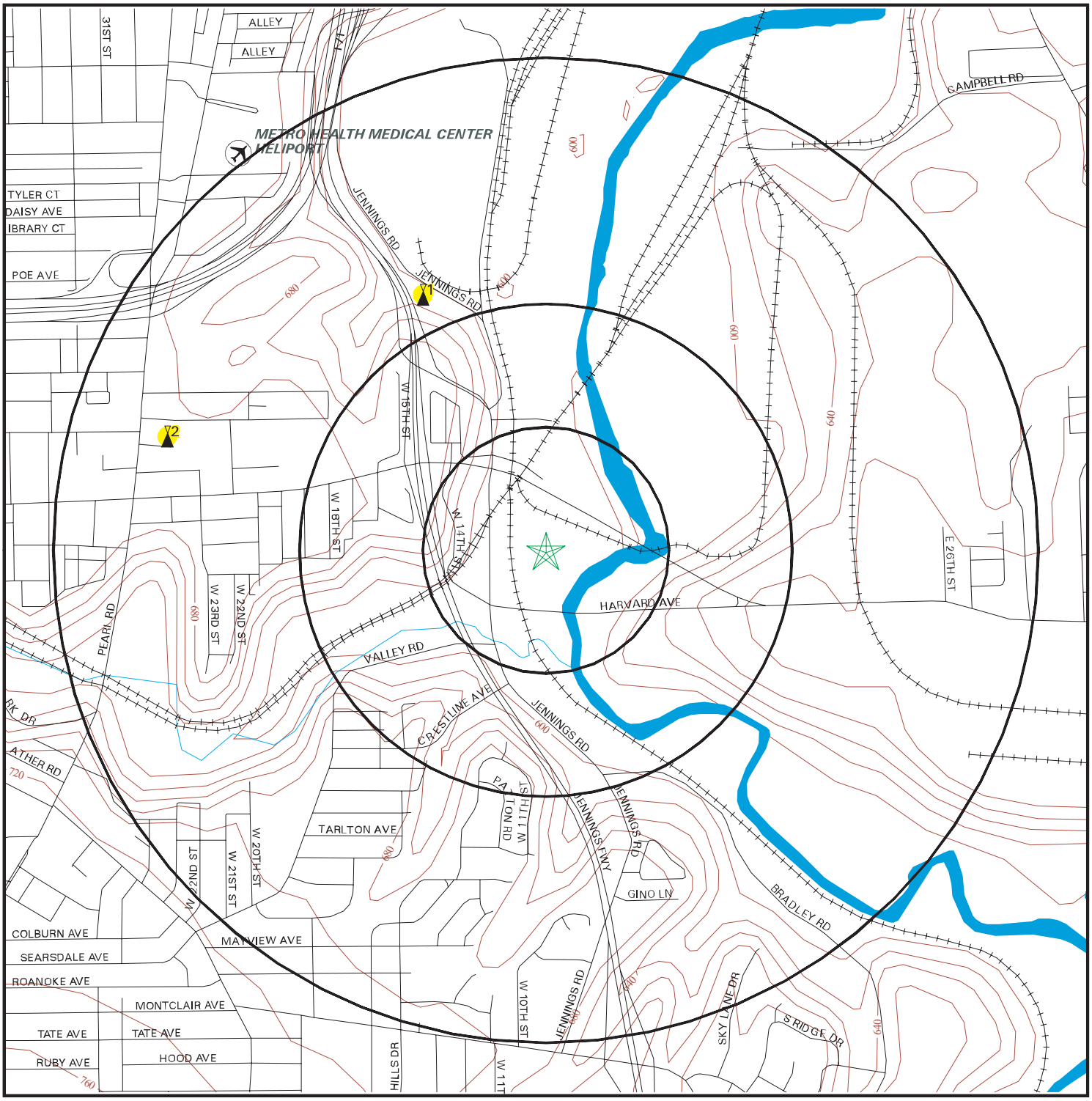
In order to more adequately describe wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	**Tidal**	**Coastal Halinity**	**Inland Salinity pH Modifier for**			**all Fresh Water**		
A Temporarily Flooded	H Permanently Flooded	K Artificially Flooded	*S Temporary-Tidal	1 Hyperhaline	7 Hypersaline		g Organic	b Beaver
B Saturated	J Intermittently Flooded	L Subtidal	*R Seasonal-Tidal	2 Euhaline	8 Eusaline	a Acid	n Mineral	d Partially Drained/Ditched
C Seasonally Flooded	K Artificially Flooded	M Irregularly Exposed	*T Semipermanent -Tidal	3 Mixohaline (Brackish)	9 Mixosaline	t Circumneutral		f Farmed
D Seasonally Flooded/ Well Drained	W Intermittently Flooded/Temporary	N Regularly Flooded	V Permanent -Tidal	4 Polyhaline	0 Fresh	i Alkaline		h Diked/Impounded
E Seasonally Flooded/ Saturated	Y Saturated/Semipermanent/ Seasonal	P Irregularly Flooded	U Unknown	5 Mesohaline				r Artificial Substrate
F Semipermanently Flooded	Z Intermittently Exposed/Permanent			6 Oligohaline				s Spoil
G Intermittently Exposed	U Unknown			0 Fresh				x Excavated

*These water regimes are only used in tidally influenced, freshwater systems.

Source: U.S. Department of the Interior
Fish and Wildlife Service
National Wetlands Inventory

FCC & FAA Sites Map



0 1/4 1/2 1 Miles

- Streets
- Contour Lines
- County Boundary
- Waterways
- Power Lines
- Water
- Airports
- Sites
- Omni Directional AM Interference
- Directional AM Interference

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.8s DATE: July 13, 2006

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FCC & FAA SITES MAP FINDINGS
TOWERS

Map ID Direction Distance Distance (ft.)	EDR ID Database
1 NNW 1/2-1 mi 3040	ANT100000011604 ANTREG

Tower ID:	1011903		
Address:	APPROX .5 MI OFF 25TH ST & RIVERSIDE CEMETARY, CLEVELAND, OH		
Lat (NAD 27):	412724	Lon (NAD 27):	0814126
Lat (NAD 83):	412724	Lon (NAD 83):	0814125
Construction Date:	May 17 1996	Dismantled Date:	
Nepa Flag:	N	FAA ID:	95-AGL-3526-OE
Structure Type:	TOWER	Elevation (M):	182.50
Structure Hgt (M):	56.30	Hgt Above Ground:	60.60
Hgt Above Ground (M):	60.6559371	Hgt Above Mean Sea Level (M):	243.233352
Date Activated:	Jan 27 1999	License Issue Date:	Jan 14 1997
Date Keyed:	Jan 14 1997	Date Printed:	Feb 10 1997
Date Processed:	Jan 14 1997	Date Received:	Jan 13 1997
Licensee Signature	JOAN ROBBINS		
Nature of Modification:		Purpose:	R
Company (DBA) Name:			
Owner Name:	GTE MOBILNET OF OHIO LIMITED PARTNERSHIP		
Attention:	REGULATORY DEPT		
Owner Address:	[redacted]		
Owner PO Box:		Phone Number:	[redacted]
E-Mail Address:	[redacted]		
Internet Domain:	MOBILNET.GTE.COM		
Painting & Lighting Specs:		Date of Last Remarks:	
Special Conditions #1:			
Special Conditions #2:			
Key Remarks:			

This record is for a license, and it may or may not indicate a site which has been built.

2 WNW 1/2-1 mi 4239	DOF000000051713 FAA DOF

Unique ID:	366199	Obstruction #:	6199
City:	CLEVELAND	State:	Ohio
Verification Status:	unverified	Obstruction Type:	TOWER
Latitude:	41 27 09N	Longitude:	081 42 02W
Frequency:	Not Reported	Type of Lighting: Not Reported	
Above Ground Level Height (Ft.):		0135	
Above Mean Sea Level Height (Ft.):		00825	
Horizontal Accuracy:	Not Reported	Vertical Accuracy:	Not Reported
Painted/Marked:	Not Reported	FAA Study #:	Not Reported

FCC & FAA SITES MAP FINDINGS
AIRPORTS

EDR ID
Database

AIR12964
AIRPORTS

Site Number:	17746.35*H		
Airport Type:	HELIPORT	State:	OHIO
County:	CUYAHOGA	City:	CLEVELAND
Facility Name:	METRO HEALTH MEDICAL CENTER	Owner type:	PR
Use:	PR	Owner:	METRO HEALTH SYSTEMS
Owner Address	[redacted]	City/State:	CLEVELAND, OH 44109
Phone:		Mgmt Name:	[redacted]
Mgmt Address:		Mgmt City/St:	CLEVELAND, OH 44109
Mgmt Phone:		Latitude:	41-27-39.185N
Longitude:	081-41-51.469W	Lat Method:	E
Elev (ft):	690	Elev method:	E
Aero chart:	DETROIT	Dist from Business:	00
Dir from Business:	N	Date Active:	11/1986
Certified Date:	Not Reported	Fed agreements:	Not Reported
Is Int'l Airport?:	Not Reported	Is Customs Airport?:	Not Reported
Inspection Method:	2	Inspected by:	N
Last inspected:	Not Reported	Attendance:	ALL/ALL/ALL
Lighting:	RDO REQ	Has ATC Tower:	N
Beacon Color:	CGY	Landing fee:	Not Reported
Single engine:	Not Reported	Multi engine:	Not Reported
Jet engines:	Not Reported	Helicopters:	002
Gliders:	Not Reported	Military:	Not Reported
Ultralights:	Not Reported	Commercial:	Not Reported
Air taxis:	Not Reported	Local ops:	Not Reported

Runway id:	H1	Length:	50
Width:	175	Surface:	CONC
Lights Intensity:	Not Reported	Base End Id:	H1
Markings:	Not Reported	Latitude:	Not Reported
Longitude:	Not Reported	Elevation:	Not Reported
Approach lights:	Not Reported	End Lights:	Not Reported
Centerline Lights:	Not Reported	Touchdown Lights:	Not Reported
Recip End ID:	Not Reported	Recip markings:	Not Reported
Recip Lat:	Not Reported	Recip Long:	Not Reported
Recip Elev:	Not Reported	Recip App Lgts:	Not Reported
Recip End Lgts:	Not Reported	Recip Ctr Lgts:	Not Reported

FCC & FAA SITES MAP FINDINGS
POWERLINES

EDR ID
Database

No Sites Reported.

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Various Federal laws and executive orders address specific environmental concerns. NEPA requires the responsible offices to integrate to the greatest practical extent the applicable procedures required by these laws and executive orders. EDR provides key contacts at agencies charged with implementing these laws and executive orders to supplement the information contained in this report.

NATURAL AREAS
Officially designated wilderness areas
Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

Federal Contacts for Additional Information

National Park Service, Midwest Region
1709 Jackson Street
Omaha, NE 68102
402-221-3471

USDA Forest Service, Eastern
310 West Wisconsin Avenue
Milwaukee, WI 53203
414-297-3693

BLM - Eastern States Office
7450 Boston Blvd.
Springfield, VA 22153
703-440-1713

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

Officially designated wildlife preserves, sanctuaries and refuges
Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

OH Managed Lands: Managed Lands
The location and extent of areas owned and/or managed by the divisions of the Ohio Dept. of Natural Resources
Source: Dept. of Natural Resources.
Telephone: 614-265-1044

Federal Contacts for Additional Information

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

State Contacts for Additional Information

Dept. of Natural Resources 614-265-6305

Wild and scenic rivers

Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

Federal Contacts for Additional Information

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

Endangered Species

Government Records Searched in This Report

Endangered Species Protection Program Database
A listing of endangered species by county.
Source: Environmental Protection Agency
Telephone: 703-305-5239

OH Endangered Species: OH Endangered Species - Natural Heritage Database
Known locations for Ohios rare plants and animals, high quality plant communities and other natural features.
Source: Department of Natural Resources.
Telephone: 614-265-6472

Federal Contacts for Additional Information

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

State Contacts for Additional Information

Natural Heritage Database, Dept. of Natural Resources 614-265-6453

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

LANDMARKS, HISTORICAL, AND ARCHEOLOGICAL SITES
Historic Places
Government Records Searched in This Report
National Register of Historic Places:
The National Register of Historic Places is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. These contribute to an understanding of the historical and cultural foundations of the nation.
The National Register includes:
- All prehistoric and historic units of the National Park System;
- National Historic Landmarks, which are properties recognized by the Secretary of the Interior as possessing national significance; and
- Properties significant in American, state, or local prehistory and history that have been nominated by State Historic Preservation Officers, federal agencies, and others, and have been approved for listing by the National Park Service.

Date of Government Version: 03/15/2000

Federal Contacts for Additional Information
Park Service; Advisory Council on Historic Preservation
1849 C Street NW
Washington, DC 20240
Phone: (202) 208-6843

State Contacts for Additional Information
Ohio Historic Preservation Office 614-297-2600

Indian Religious Sites
Government Records Searched in This Report
Indian Reservations:
This map layer portrays Indian administrated lands of the United States that have any area equal to or greater than 640 acres.
Source: USGS
Phone: 888-275-8747
Date of Government Version: 10/01/2003

Federal Contacts for Additional Information
Department of the Interior- Bureau of Indian Affairs
Office of Public Affairs
1849 C Street, NW
Washington, DC 20240-0001
Office: 202-208-3711
Fax: 202-501-1516

National Association of Tribal Historic Preservation Officers
1411 K Street NW, Suite 700
Washington, DC 20005
Phone: 202-628-8476
Fax: 202-628-2241

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

State Contacts for Additional Information
A listing of local Tribal Leaders and Bureau of Indian Affairs Representatives can be found at:
http://www.doi.gov/bia/areas/agency.html

Scenic Trails

State Contacts for Additional Information
North County Trail Association
49 Monroe Center Suite 200B
Grand Rapids, Michigan 49503
616-454-5506

FLOOD PLAIN, WETLANDS AND COASTAL ZONE

Flood Plain Management
Government Records Searched in This Report
Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

Federal Contacts for Additional Information
Federal Emergency Management Agency 877-3362-627

State Contacts for Additional Information
Ohio Emergency Management Agency 614-889-7150

Wetlands Protection
Government Records Searched in This Report
NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

Federal Contacts for Additional Information
Fish & Wildlife Service 813-570-5412

State Contacts for Additional Information
Dept. of Natural Resources 614-265-6305

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Coastal Zone Management

Government Records Searched in This Report

CAMA Management Areas
Dept. of Env., Health & Natural Resources
919-733-2293

Federal Contacts for Additional Information

Office of Ocean and Coastal Resource Management
N/ORM, SSMC4
1305 East-West Highway
Silver Spring, Maryland 20910
301-713-3102

State Contacts for Additional Information

Dept. of Natural Resources, Office of Real Estate & Land Mgmt. 614-265-6413

Government Records Searched in This Report

Coastal Zones
Dept. of Natural Resources
614-265-6383

FCC & FAA SITES MAP

For NEPA actions that come under the authority of the FCC, the FCC requires evaluation of Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

Government Records Searched in This Report

Cellular

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

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Tower

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

Portions copyright (C) 1999 Percon Corporation. All rights reserved.

Antenna Registration

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

Portions copyright (C) 1999 Percon Corporation. All rights reserved.

AM Tower

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

FAA Digital Obstacle File
National Oceanic and Atmospheric Administration
Telephone: 301-436-8301
Describes known obstacles of interest to aviation users in the US. Used by the Federal Aviation Administration (FAA) and the National Oceanic and Atmospheric Administration to manage the National Airspace System.

Airport Landing Facilities
Federal Aviation Administration
Telephone (800) 457-6656
Private and public use landing facilities.

Electric Power Transmission Line Data
PennWell Corporation
Telephone: (800) 823-6277
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Excessive Radio Frequency Emission
For NEPA actions that come under the authority of the FCC, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the determination of whether the particular facility, operation or transmitter would cause human exposure to levels of radio frequency in excess of certain limits.

Federal Contacts for Additional Information
Office of Engineering and Technology
Federal Communications Commission
445 12th Street SW
Washington, DC 20554
Phone: 202-418-2470

OTHER CONTACT SOURCES

STREET AND ADDRESS INFORMATION

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The EDR Radius Map
with GeoCheck®

Harshaw FUSRAP
1000 Harvard Avenue
Cleveland, OH 44105

Inquiry Number: 1714652.2s

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1000 HARVARD AVENUE
CLEVELAND, OH 44105

COORDINATES

Latitude (North):	41.449200 - 41˚ 26' 57.1''
Longitude (West):	81.685600 - 81˚ 41' 8.2''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	442731.5
UTM Y (Meters):	4588638.5
Elevation:	589 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	41081-D6 CLEVELAND SOUTH, OH
Most Recent Revision:	1994

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions
NPL RECOVERY..... Federal Superfund Liens
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
ERNS..... Emergency Response Notification System
HMIRS..... Hazardous Materials Information Reporting System
US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

EXECUTIVE SUMMARY

DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SHWS	This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
TOWNGAS	DERR Towngas Database
HIST LF	Old Solid Waste Landfill
UNREG LTANKS	Ohio Leaking UST File
ARCHIVE UST	Archived Underground Storage Tank Sites
OH Spills	Emergency Response Database
ENG CONTROLS	Sites with Engineering Controls
INST CONTROL	Sites with Institutional Engineering Controls
VCP	Voluntary Action Program Sites
DRYCLEANERS	Drycleaner Facility Listing
BROWNFIELDS	Ohio Brownfield Inventory
CDL	Clandestine Drug Lab Locations
NPDES	NPDES General Permit List
USD	Urban Setting Designation Sites
HIST INST CONTROLS	Institutional Controls Database
HIST ENG CONTROLS	Operation & Maintenance Agreements Database
HIST USD	Urban Setting Designations Database

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

CERCLIS-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 02/01/2006 has revealed that there are 4 CERC-NFRAP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHEMICAL SOLVENTS INC	***1010 DENISON AVE***	***1/8 - 1/4 NW***	***D12***	***24***
CHEMICAL SOLVENTS INC	***3751 JENNINGS RD***	***1/4 - 1/2 NNW***	***19***	***66***
RESEARCH OIL COMPANY	***3680 VALLEY ROAD***	***1/4 - 1/2 SW***	***G20***	***79***
TRUCKING CO DUMP	***BRADLEY & JENNINGS***	***1/4 - 1/2 SSE***	***H26***	***86***

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/15/2006 has revealed that there are 6 CORRACTS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ENGELHARD CORP	***1000 HARVARD AVE***	***1/8 - 1/4 SW***	***C10***	***14***
CHEMICAL SOLVENTS INC	***1010 DENISON AVE***	***1/8 - 1/4 NW***	***D12***	***24***
CHEMICAL SOLVENTS INC	***3751 JENNINGS RD***	***1/4 - 1/2 NNW***	***19***	***66***
ISG CLEVELAND WEST PROPERTIES	***3341 JENNINGS ROAD***	***1/2 - 1 NNW***	***I30***	***87***
WABASH ALLOYS DIVISION CONNELL	***4365 BRADLEY RD***	***1/2 - 1 SE***	***33***	***108***
MOBILE TANK CAR SERV	***3610 BROOKSIDE PARK DR***	***1/2 - 1 WSW***	***J35***	***113***

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery

Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-TSDF list, as provided by EDR, and dated 03/09/2006 has revealed that there are 2 RCRA-TSDF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHEMICAL SOLVENTS INC	*1010 DENISON AVE*	*1/8 - 1/4 NW*	*D12*	*24*
CHEMICAL SOLVENTS INC	*3751 JENNINGS RD*	*1/4 - 1/2 NNW*	*19*	*66*

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/09/2006 has revealed that there are 3 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ENGELHARD CORP	*1000 HARVARD AVE*	*1/8 - 1/4 SW*	*C10*	*14*
CHEMICAL SOLVENTS INC	*1010 DENISON AVE*	*1/8 - 1/4 NW*	*D12*	*24*
ALCOA WHEEL & FORGED PRODUCTS	*1600 HARVARD AVENUE*	*1/8 - 1/4 ESE*	*F16*	*58*

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store , treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/09/2006 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PARAMOUNT INDUSTRIES	*3961 JENNINGS RD*	*1/8 - 1/4 WSW*	*4*	*7*
REPUBLIC WASTE SERVICES	*3980 JENNINGS RD*	*1/8 - 1/4 SW*	*B6*	*8*
ATOTECH USA INC	*1000 HARVARD AVE*	*1/8 - 1/4 SW*	*C9*	*10*
CHURCHILL TRUCK LINES INC	*3910 WEST 14TH STREET*	*1/8 - 1/4 WNW*	*E13*	*56*

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

DERR: The DERR database is an index of sites for which Ohio EPA maintains files. It includes sites with known or suspected contamination, but a site's inclusion in the database does not mean that it is now or has ever been contaminated.

A review of the DERR list, as provided by EDR, and dated 03/14/2006 has revealed that there are 10 DERR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHEVRON ENGLEHARD	***1000 HARVARD AVE***	***1/8 - 1/4 SW***	***C8***	***9***
Activity: RR				
CHEMICAL SOLVENTS INC	***1010 DENISON AVE***	***1/8 - 1/4 NW***	***D12***	***24***
CHEMICAL SOLVENTS INC	***3751 JENNINGS RD***	***1/4 - 1/2 NNW***	***19***	***66***
RESEARCH OIL CO	***3680 VALLEY RD***	***1/4 - 1/2 SW***	***G21***	***80***
Activity: RR				
TRUCKING CO DUMP	***BRADLEY & JENNINGS***	***1/4 - 1/2 SSE***	***H26***	***86***
BURDETT OXYGEN CO	4181 BRADLEY RD	1/2 - 1 SSE	28	87
RIV SMELTING & REFINING CO	4195 BRADLEY RD	1/2 - 1 SSE	29	87
JONES & LAUGHLIN STEEL CLEVELA	***3341 JENNINGS RD***	***1/2 - 1 NNW***	***I31***	***104***
OHIO DRUM RECONDITIONING	***3967 PEARL RD***	***1/2 - 1 W***	***32***	***106***
MOBILE TANK CAR SERV (DUP OF N	***3610 BROOKSIDE PARK DR***	***1/2 - 1 WSW***	***J34***	***112***

OH MSL: Ohio EPA no longer maintains or publishes the MSL, which was a list of sites with known or suspected contamination. Please be advised that this report does not constitute a determination that any site identified in the report is or may be contaminated.

A review of the MSL list, as provided by EDR, and dated 03/01/1999 has revealed that there are 5 MSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
RESEARCH OIL COMPANY	***3680 VALLEY ROAD***	***1/4 - 1/2 SW***	***G20***	***79***
TRUCKING CO DUMP	BRADLEY / JENNINGS	1/4 - 1/2 SSE	H27	86
JONES & LAUGHLIN STEEL CLEVELA	***3341 JENNINGS RD***	***1/2 - 1 NNW***	***I31***	***104***
OHIO DRUM RECONDITIONING	***3967 PEARL RD***	***1/2 - 1 W***	***32***	***106***
MOBILE TANK CAR SERV (DUP OF N	***3610 BROOKSIDE PARK DR***	***1/2 - 1 WSW***	***J34***	***112***

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Ohio Environmental Protection Agency's Licensed Solid Waste Facilities.

A review of the SWF/LF list, as provided by EDR, and dated 05/23/2006 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ALUMINUM COMPANY OF AMERICA AL	***1600 HARVARD AVENUE***	***1/8 - 1/4 ESE***	***F17***	***65***

EXECUTIVE SUMMARY

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Commerce Division of State Fire Marshal's List of Reported Petroleum Underground Storage Tank Release Incidents.

A review of the LUST list, as provided by EDR, and dated 03/15/2006 has revealed that there are 14 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
DARLING & CO	***908 DENISON AVE***	***0 - 1/8 NNE***	***1***	***6***
Facility Status: Inactive FR Status: No Further Action letter issued				
TESAR INDUSTRIAL CONTRACTORS	***3920 JENNINGS RD***	***0 - 1/8 W***	***A3***	***7***
Facility Status: Inactive FR Status: No Further Action letter issued				
PARAMOUNT INDUSTRIES	***3961 JENNINGS RD***	***1/8 - 1/4 WSW***	***4***	***7***
Facility Status: Inactive FR Status: No Further Action letter issued				
AJAX BITUMINOUS PAVING	811 HARVARD AVE	1/8 - 1/4 SSW	5	8
Facility Status: Inactive FR Status: No Further Action letter issued				
WASTE MANAGEMENT OF OHIO	3980 JENNINGS RD	1/8 - 1/4 SW	B7	9
Facility Status: Inactive FR Status: No Further Action letter issued				
CHEVRON ENGLEHARD	***1000 HARVARD AVE***	***1/8 - 1/4 SW***	***C8***	***9***
Facility Status: Active FR Status: No Further Action letter issued				
CCI LOCATION	808 DENNISON AVE	1/8 - 1/4 NW	D11	24
Facility Status: Inactive FR Status: No Further Action letter issued				
CHURCHILL TRUCK LINES, INC.	3910 W 14TH ST	1/8 - 1/4 WNW	E14	57
Facility Status: Inactive FR Status: No Further Action letter issued				
ALUMINUM CO. OF AMERICA	***1600 HARVARD AVE.***	***1/8 - 1/4 ESE***	***F15***	***57***
Facility Status: Inactive FR Status: No Further Action letter issued				
Facility Status: Inactive FR Status: No Further Action letter issued				
EVEREADY PRODUCTS CORP	***1101 BELT LINE ST***	***1/4 - 1/2 NNW***	***22***	***81***
Facility Status: Inactive FR Status: No Further Action letter issued				
OHIO TRANSPORT CORP.	3750 VALLEY RD	1/4 - 1/2 SW	23	85
Facility Status: Inactive FR Status: No Further Action letter issued				
CLEVELAND TRUCK FACILITY	4160 JENNINGS RD	1/4 - 1/2 S	24	85
Facility Status: Inactive FR Status: No Further Action letter issued				
Facility Status: Inactive FR Status: No Further Action letter issued				
SUPERIOR FORWARDING CO., INC.	3800 VALLEY RD	1/4 - 1/2 SW	25	86
Facility Status: Inactive FR Status: No Further Action letter issued				

Lower Elevation	Address	Dist / Dir	Map ID	Page
CADLE CO.	***4041 JENNINGS RD***	***1/8 - 1/4 SSW***	***18***	***66***
Facility Status: Active FR Status: Initial Corrective Action Program Report				

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Commerce Division of State Fire Marshal's Facility File.

A review of the UST list, as provided by EDR, and dated 03/15/2006 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

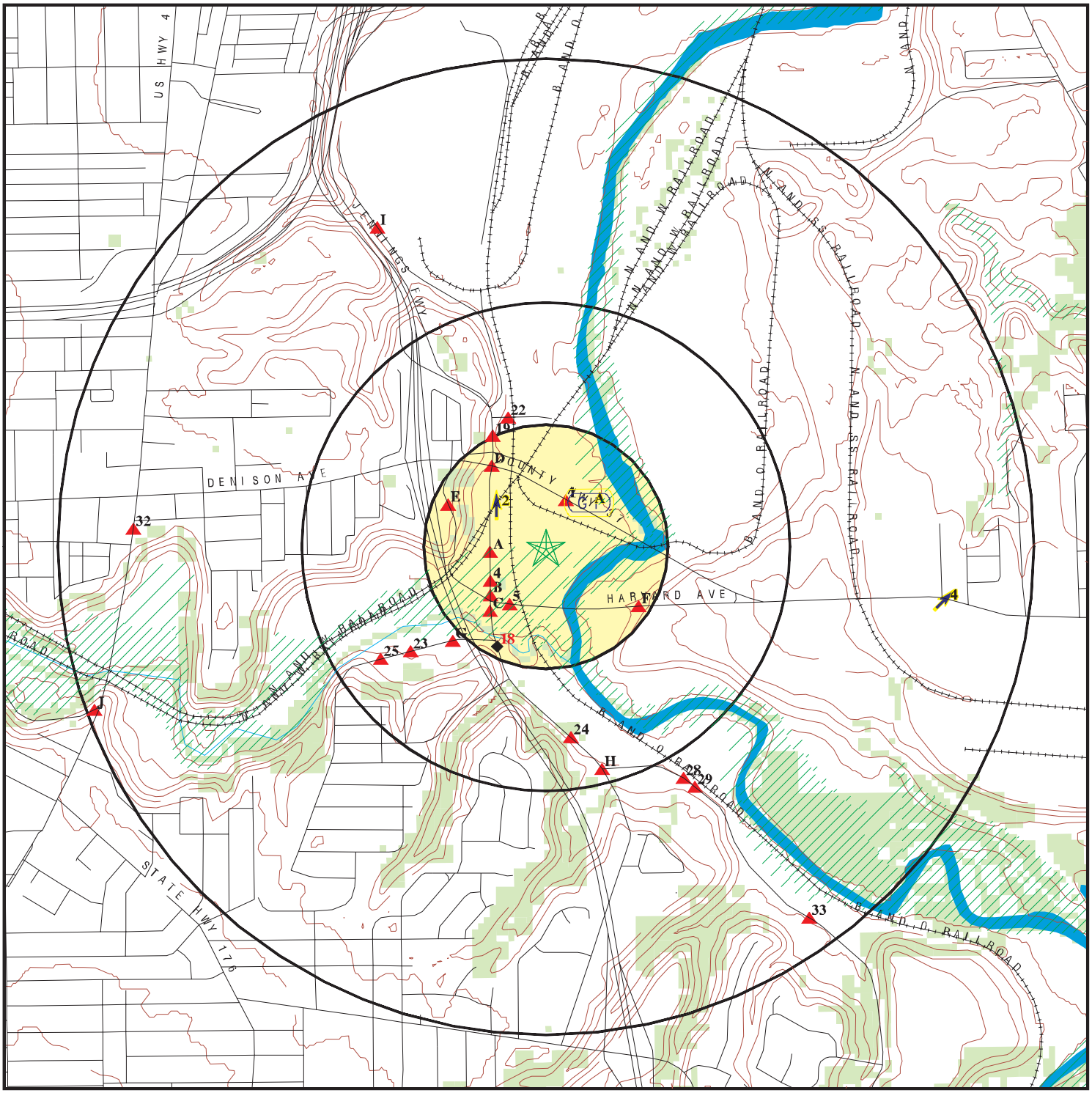
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TESAR INDUSTRIAL CONTRACTORS	3920 JENNINGS RD	0 - 1/8 W	A2	6

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CAMPBELL ROAD COMPOST FACILITY	SWF/LF
NORTON COMPOST FACILITY	SWF/LF, OH Spills
TRUCKING COMPANY DUMP AKA HARKNESS	HIST LF
WEST 14TH STREET LANDFILL	HIST LF
LTV STEEL	LUST, OH Spills
FREIGHT SYSTEM PROPERTY	LUST
STATE ROAD TRANSMISSION	LUST
ODOT HIGHWAY BRIDGE	RCRA-SQG, FINDS
ODOT HIGHWAY BRIDGE	RCRA-SQG, FINDS
HARSHAW CHEMICAL	OH Spills
HARSHAW CHEMICAL CO	OH Spills
NORTH COAST ROOFING	DERR
SOHIO	UNREG LTANKS
HARSHAW CHEMICAL CO THE OFFICE	EDR Historical Cleaners
HARSHAW CHEMICAL CO THE OFFICE	EDR Historical Cleaners

OVERVIEW MAP - 1714652.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Landfill Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.2s DATE: July 13, 2006

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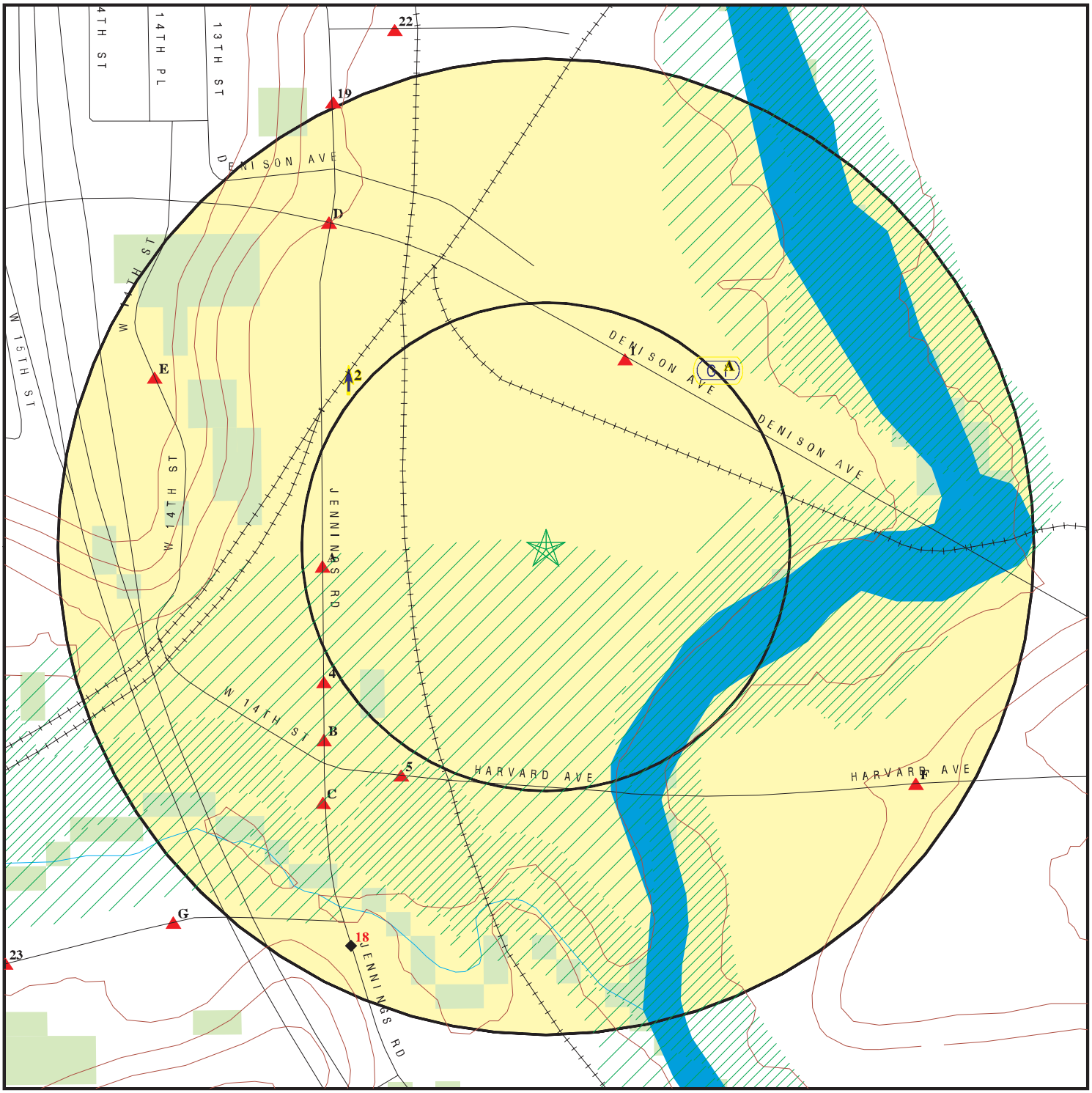
DETAIL MAP - 1714652.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Harshaw FUSRAP ADDRESS: 1000 Harvard Avenue Cleveland OH 44105 LAT/LONG: 41.4492 / 81.6856	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714652.2s DATE: July 13, 2006

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	1	3	NR	NR	4
CORRACTS		1.000	0	2	1	3	NR	6
RCRA TSD		0.500	0	1	1	NR	NR	2
RCRA Lg. Quan. Gen.		0.250	0	3	NR	NR	NR	3
RCRA Sm. Quan. Gen.		0.250	0	4	NR	NR	NR	4
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
State Haz. Waste		N/A	N/A	N/A	N/A	N/A	N/A	N/A
DERR		1.000	0	2	3	5	NR	10
TOWNGAS		1.000	0	0	0	0	NR	0
MSL		1.000	0	0	2	3	NR	5
State Landfill		0.500	0	1	0	NR	NR	1
HIST LF		0.500	0	0	0	NR	NR	0
LUST		0.500	2	8	4	NR	NR	14
UNREG LTANKS		0.500	0	0	0	NR	NR	0
UST		0.250	1	0	NR	NR	NR	1
ARCHIVE UST		0.250	0	0	NR	NR	NR	0
OH Spills		TP	NR	NR	NR	NR	NR	0
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
USD		0.500	0	0	0	NR	NR	0
HIST INST CONTROLS		0.500	0	0	0	NR	NR	0
HIST ENG CONTROLS		0.500	0	0	0	NR	NR	0
HIST USD		0.500	0	0	0	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
1 NNE < 1/8 550 ft.	**DARLING & CO 908 DENISON AVE CLEVELAND, OH 44109**	**LUST OH Spills**	**1002990901 N/A**

Relative:
Equal

Actual:
589 ft.

LUST:

Owner:	DARLING & CO
LTF Status:	1 SUS/CON from regulated UST
Release Number:	18010196-N00001
Owner Address:	908 DENISON AVE CLEVELAND, OH 44109
Facility Status:	**Inactive**
FR Status:	**No Further Action letter issued**
Old Facility Id:	Not reported
Former Lust Release Number:	181104100.0
Release Date:	Not reported

SPILLS:

Spill Year :	1991
Spill Month :	5
Spill Number :	1758
Date Spill Reported :	05/13/91
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9105-18-1758
Reporter Name :	SFM
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	GASOLINE

A2 West < 1/8 607 ft.	**TESAR INDUSTRIAL CONTRACTORS 3920 JENNINGS RD CLEVELAND, OH 44109**	**UST**	**U000692658 N/A**

Site 1 of 2 in cluster A

Relative:
Higher

Actual:
590 ft.

UST:

Facility ID:	18003817	Tank ID:	T00001
Owner:	TESAR INDUSTRIAL CONTRACTORS		
Owner Address:	3920 JENNINGS RD CLEVELAND, OH 44109		
Capacity:	6000	Tank Status:	Currently In Use
Install Date:	09/01/91		
Content:	Gasoline		
Tank Type:	Bare Steel		

Facility ID:	18003817	Tank ID:	T00002
Owner:	TESAR INDUSTRIAL CONTRACTORS		
Owner Address:	3920 JENNINGS RD CLEVELAND, OH 44109		
Capacity:	6000	Tank Status:	Currently In Use
Install Date:	09/01/91		
Content:	Diesel		
Tank Type:	Bare Steel		

A3 West < 1/8 607 ft. | **TESAR INDUSTRIAL CONTRACTORS** | **FINDS** | **1005808981**
3920 JENNINGS RD | **LUST** | **110006253712**
CLEVELAND, OH 44109

Site 2 of 2 in cluster A

Relative: Higher

Actual: 590 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

LUST:
Owner: TESAR INDUSTRIAL CONTRACTORS
LTF Status: 1 SUS/CON from regulated UST
Release Number: 18003817-N00001
Owner Address: 3920 JENNINGS RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 183817
Former Lust Release Number: 181297200.0
Release Date: 1991-09-18 00:00:00

---

4 WSW 1/8-1/4 703 ft. | **PARAMOUNT INDUSTRIES** | **RCRA-SQG** | **1001224790**
3961 JENNINGS RD | **FINDS** | **OHR000028845**
CLEVELAND, OH 44109 | **LUST**

Relative: Higher

Actual: 591 ft.

RCRAInfo:
Owner: [redacted]
EPA ID: [redacted]
Contact: [redacted]
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

PARAMOUNT INDUSTRIES (Continued) **1001224790**

LUST:
Owner: PARAMOUNT INDUSTRIES
LTF Status: 6 Closure of regulated UST
Release Number: 18010486-N00001
Owner Address: 3961 JENNINGS RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: Not reported
Former Lust Release Number: 188097900.0
Release Date: Not reported

---

5 SSW 1/8-1/4 732 ft. | **AJAX BITUMINOUS PAVING** | **LUST** | **S104265452**
811 HARVARD AVE | **N/A**
CUYAHOGA HEIGHTS, OH 0

Relative: Higher

Actual: 590 ft.

LUST:
Owner: AJAX BITUMINOUS PAVING
LTF Status: 6 Closure of regulated UST
Release Number: 18010442-N00001
Owner Address: 811 HARVARD AVE
CUYAHOGA HEIGHTS, OH 44105
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: Not reported
Former Lust Release Number: 187066100.0
Release Date: Not reported

B6 SW 1/8-1/4 796 ft. | **REPUBLIC WASTE SERVICES** | **RCRA-SQG** | **1000397318**
3980 JENNINGS RD | **FINDS** | **OHD021144662**
CLEVELAND, OH 44109 | **OH Spills**

Site 1 of 2 in cluster B

Relative: Higher

Actual: 592 ft.

RCRAInfo:
Owner: NAME NOT REPORTED
EPA ID: [redacted]
Contact: [redacted]
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

REPUBLIC WASTE SERVICES (Continued) **1000397318**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SPILLS:

Spill Year :	1996
Spill Month :	3
Spill Number :	0906
Date Spill Reported :	03/11/96
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9603-18-0906
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	HYDRAULIC OIL

B7 **WASTE MANAGEMENT OF OHIO** **LUST** **S104775692**
SW **3980 JENNINGS RD** **N/A**
1/8-1/4 **CLEVELAND, OH 44109**
796 ft.

Site 2 of 2 in cluster B

Relative: Higher

Actual: 592 ft.

LUST:

Owner:	WASTE MANAGEMENT OF OHIO, INC.
LTF Status:	1 SUS/CON from regulated UST
Release Number:	18007390-N00001
Owner Address:	3980 JENNINGS RD CLEVELAND, OH 44109
Facility Status:	**Inactive**
FR Status:	**No Further Action letter issued**
Old Facility Id:	187390
Former Lust Release Number:	180070101.0
Release Date:	1996-10-03 00:00:00

C8 **CHEVRON ENGLEHARD** **LUST** **S104517637**
SW **1000 HARVARD AVE** **DERR** **N/A**
1/8-1/4 **CLEVELAND, OH 44109**
918 ft.

Site 1 of 3 in cluster C

Relative: Higher

Actual: 591 ft.

LUST:

Owner:	HARSHAW CHEMICAL CO.
LTF Status:	6 Closure of regulated UST
Release Number:	18001869-N00002
Owner Address:	[redacted]
Facility Status:	**Active**
FR Status:	**No Further Action letter issued**
Old Facility Id:	181869
Former Lust Release Number:	189111802.0
Release Date:	1992-09-24 00:00:00

DERR:

Facility Id:	218001949
EPA Id:	OHD000804682
Lat/Long:	41.447348 / -81.6876

CHEVRON ENGLEHARD (Continued) **S104517637**

Alias: Harshaw Chemical Co
District: NEDO
Activity: RR
Site Info: 330-963-1200

C9
SW
1/8-1/4
918 ft.

Relative: Higher

Actual: 591 ft.

ATOTECH USA INC
1000 HARVARD AVE
CLEVELAND, OH 44109

RCRA-SQG **1000467666**
FINDS **OHD987008745**
OH Spills
CT MANIFEST

Site 2 of 3 in cluster C

RCRAInfo:
Owner: [redacted]
EPA ID: [redacted]
Contact: [redacted]

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/23/1996
Actual Date Achieved Compliance: 04/12/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/06/1996
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/23/1996
Actual Date Achieved Compliance: 04/12/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/06/1996
Penalty Type: Not reported

Regulation Violated: 3745-65-31
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/23/1996
Actual Date Achieved Compliance: 04/12/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/06/1996
Penalty Type: Not reported

There are 3 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19960412
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19960412
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19960412

ATOTECH USA INC (Continued) **1000467666**

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

SPILLS:

Spill Year :	1985
Spill Month :	6
Spill Number :	1816
Date Spill Reported :	06/04/85
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8506-18-1816
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	SODIUM HYDROXIDE TO NEUTRALIZE SULFURIC ACID 93%

ATOTECH USA INC (Continued) **1000467666**

Spill Year :	1985
Spill Month :	6
Spill Number :	1816
Date Spill Reported :	06/04/85
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8506-18-1816
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	SODIUM HYDROXIDE TO NEUTRALIZE SULFURIC ACID 93%

Spill Year :	1992
Spill Month :	4
Spill Number :	1372
Date Spill Reported :	04/14/92
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9204-18-1372
Reporter Name :	CITIZEN
Confidential :	No
District Code :	NE
Employee Number :	1746
Product Spilled:	MATERIAL RED SODIUM LAURYL SULFATE SOLUTION

Spill Year :	1992
Spill Month :	4
Spill Number :	1372
Date Spill Reported :	04/14/92
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9204-18-1372
Reporter Name :	CITIZEN
Confidential :	No
District Code :	NE
Employee Number :	1746
Product Spilled:	MATERIAL RED SODIUM LAURYL SULFATE SOLUTION

ATOTECH USA INC (Continued) **1000467666**

Spill Year :	1985
Spill Month :	5
Spill Number :	1593
Date Spill Reported :	05/16/85
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8505-18-1593
Reporter Name :	OEPA
Confidential :	No
District Code :	NE
Employee Number :	1745
Product Spilled:	ANTIMONY SOLIDS

Click this hyperlink while viewing on your computer to access
4 additional OH SPILL record(s) in the EDR Site Report.

CT MANIFEST:

Year:	1996
Manifest ID:	CTF0443881
TSDF EPA ID:	CTD000604488
TSDF Name:	CLEAN HARBORS OF CONNECTICUT INC
TSDF Address:	[redacted]
TSDF City,St,Zip:	[redacted]
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	05/13/96
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	05/21/96
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator EPA ID:	OHD987008745
Gererator Phone:	Not reported
Generator Address:	Not reported
Generator City,State,Zip:	Not reported
Generator Country:	Not reported
Special Handling:	Not reported
Discrepancies:	No
Date Shipped:	05/31/96
Date Received:	05/21/96
Last modified date:	04/26/04
Last modified by:	IG
Comments:	Not reported

Click this hyperlink while viewing on your computer to access
9 additional CT MANIFEST: record(s) in the EDR Site Report.

C10 SW 1/8-1/4 918 ft.

Relative: Higher

Actual: 591 ft.

ENGELHARD CORP
1000 HARVARD AVE
CLEVELAND, OH 44109

Site 3 of 3 in cluster C

FINDS
OH Spills
RCRA-LQG
CORRACTS
CT MANIFEST
NY MANIFEST

1000381454
OHD000804682

CORRACTS Data:

EPA Id:	OHD000804682
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/10/1992
Corrective Action:	CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
2002 NAICS Title:	Not reported

EPA Id:	OHD000804682
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/10/1992
Corrective Action:	CA225IN - Stabilization Measures Evaluation, This facility is not , amenable to stabilization activity because of, a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available
2002 NAICS Title:	Not reported

EPA Id:	OHD000804682
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	07/12/1990
Corrective Action:	CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
2002 NAICS Title:	Not reported

EPA Id:	OHD000804682
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	07/12/1990
Corrective Action:	CA050 - RFA Completed
2002 NAICS Title:	Not reported

RCRAInfo Corrective Action Summary:

Event:	CA Prioritization, Facility or area was assigned a medium corrective action priority.
Event Date:	06/10/1992
Event:	Stabilization Measures Evaluation,This facility is not amenable to stabilization activity because of a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available.
Event Date:	06/10/1992

ENGELHARD CORP (Continued) **1000381454**

Event: RFA Completed
Event Date: 07/12/1990

Event: RFA Determination Of Need For An RFI, RFI is Necessary;
Event Date: 07/12/1990

RCRAInfo:
Owner: HARSHAW CHEMICAL CO
[redacted]
EPA ID: OHD000804682
Contact: [redacted]
Classification: Large Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: 3745-66-43 & 66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/23/1991
Actual Date Achieved Compliance: 03/24/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/27/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-43 & 66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 07/13/1990
Actual Date Achieved Compliance: 01/28/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/19/1990
Penalty Type: Not reported

Regulation Violated: 3745-66-12(B)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 10/18/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 10/18/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 40 CFR 268
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 05/17/1989

Regulation Violated: 3745-65-13(B)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 09/07/1988

ENGELHARD CORP (Continued) **1000381454**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-52
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 09/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16(D)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 09/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 05/17/1989

Regulation Violated: 3745-52-11 & 3745-65-13
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3734.02(F)
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-56(A)-(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-74 & 65-15

ENGELHARD CORP (Continued) **1000381454**

Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94 & 65-15
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94 & 65-15
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-56(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS

ENGELHARD CORP (Continued) **1000381454**

Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 01/28/1986

ENGELHARD CORP (Continued) **1000381454**

Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-11 & 66-15
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-15(D)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-55
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

ENGELHARD CORP (Continued) **1000381454**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-77
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-52-40
Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

There are 39 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19920324
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19910128
Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19881018
	TSD-TANKS REQUIREMENTS	19881018
	TSD-GENERAL STANDARDS	19880907
	TSD-GENERAL STANDARDS	19880907
	TSD-CONTINGENCY PLAN REQUREMENTS	19880907
Other Evaluation	GENERATOR-LAND BAN REQUIREMENTS	19890517
	TSD-LAND BAN REQUIREMENTS	19890517
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19870506
	GENERATOR-OTHER REQUIREMENTS	19870506
	TSD-GENERAL STANDARDS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506

ENGELHARD CORP (Continued) **1000381454**

	TSD-TANKS REQUIREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19870506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19860407
	TSD-GENERAL STANDARDS	19860407
	TSD-CONTAINERS REQUIREMENTS	19860407
	TSD-GENERAL STANDARDS	19860407
	TSD-CONTINGENCY PLAN REQUREMENTS	19860407
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19860407
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19830503
	TSD-GENERAL STANDARDS	19830503
	TSD-CONTINGENCY PLAN REQUREMENTS	19830503
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19830503
	TSD-CONTAINERS REQUIREMENTS	19830503
	TSD-CONTAINERS REQUIREMENTS	19830503
	TSD-CONTAINERS REQUIREMENTS	19830503
	GENERATOR-RECORDKEEPING REQUIREMENTS	19830503

FINDS:

Other Pertinent Environmental Activity Identified at Site:

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

ENGELHARD CORP (Continued) **1000381454**

SPILLS:

Spill Year :	1992
Spill Month :	4
Spill Number :	1365
Date Spill Reported :	04/14/92
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9204-18-1365
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	FOAM

CT MANIFEST:

Year:	1993
Manifest ID:	CTF0288337
TSDF EPA ID:	CTD000604488
TSDF Name:	CLEAN HARBORS OF CONNECTICUT, INC.
TSDF Address:	51 BRODERICK RD
TSDF City,St,Zip:	BRISTOL, CT 06010
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	04/30/93
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	05/12/93
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator EPA ID:	OHD000804682
Gererator Phone:	2167498179
Generator Address:	Not reported
Generator City,State,Zip:	Not reported
Generator Country:	Not reported
Special Handling:	Yes
Discrepancies:	Yes
Date Shipped:	04/30/93
Date Received:	05/19/93
Last modified date:	04/27/04
Last modified by:	IG
Comments:	Not reported

Click this hyperlink while viewing on your computer to access additional CT MANIFEST: detail in the EDR Site Report.

NY MANIFEST:

Document ID:	NYA8114571
Manifest Status:	C
Trans1 State ID:	000000000
Trans2 State ID:	000000000
Generator Ship Date:	890614

ENGELHARD CORP (Continued) **1000381454**

Trans1 Recv Date:	890614
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	890614
Part A Recv Date:	890707
Part B Recv Date:	890619
Generator EPA ID:	OHD000804682
Trans1 EPA ID:	OHD986966190
Trans2 EPA ID:	Not reported
TSDF ID:	NYD043815703
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Quantity:	00935
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	017
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	01100
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	020
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00220
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	89
Facility Type:	Generator
EPA ID:	OHD000804682
Facility Name:	ENGELHARD CORPORATION
Facility Address:	1000 HARVARD AVENUE
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	ENGELHARD CORPORATION
Mailing Contact:	Not reported
Mailing Address:	1000 HARVARD AVENUE
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-749-8189

Click this hyperlink while viewing on your computer to access
15 additional NY MANIFEST: record(s) in the EDR Site Report.

D11
NW
1/8-1/4
1055 ft.

Relative:
Higher

Actual:
600 ft.

CCI LOCATION
808 DENNISON AVE
CLEVELAND, OH 44109

LUST **S100029359**
N/A

Site 1 of 2 in cluster D

LUST:
Owner: CCI LOCATION
LTF Status: 1 SUS/CON from regulated UST
Release Number: 18010616-N00001
Owner Address: 808 DENNISON AVE
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: Not reported
Former Lust Release Number: 18974800.0
Release Date: Not reported

D12
NW
1/8-1/4
1061 ft.

Relative:
Higher

Actual:
601 ft.

CHEMICAL SOLVENTS INC
1010 DENISON AVE
CLEVELAND, OH 44109

FINDS **1000299269**
RCRA-LQG **44109CHMCL10**
TRIS
RCRA-TSDF
DERR
CORRACTS
CERC-NFRAP
MANIFEST
NY MANIFEST

Site 2 of 2 in cluster D

CERCLIS-NFRAP Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Code: NFRAP
NPL Status: Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	09/06/1985
Assessment:	PRELIMINARY ASSESSMENT	Completed:	09/06/1985
Assessment:	ARCHIVE SITE	Completed:	09/06/1985

CORRACTS Data:

EPA Id: OHD980897656
Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/31/1992
Corrective Action: CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title: Waste Treatment and Disposal

RCRAInfo Corrective Action Summary:
Event: CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date: 03/31/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

RCRAInfo:
Owner: [redacted]

EPA ID: OHD980897656

Contact: [redacted]

Classification: Large Quantity Generator, TSDF
TSDF Activities: Used oil Transporter, Used oil processor, Used oil market burner

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	14915662.00	D002	0.00
D004	14915662.00	D005	12559590.00
D006	14915662.00	D007	14915662.00
D008	14915662.00	D009	12559590.00
D010	14915662.00	D011	12559590.00
D018	14915662.00	D019	12559590.00
D021	12559590.00	D022	14915662.00
D023	12559590.00	D026	14915662.00
D027	12559590.00	D033	12559590.00
D034	12559590.00	D035	14915662.00
D038	12559590.00	D039	14915662.00
D040	14915662.00	F001	14915662.00
F002	14915662.00	F003	14915662.00
F004	12559590.00	F005	14915662.00
U002	12559590.00	U009	12559590.00
U031	12559590.00	U044	12559590.00
U052	12559590.00	U057	12559590.00
U070	12559590.00	U080	12559590.00
U123	12559590.00	U154	12559590.00
U159	12559590.00	U210	0.00
U213	12559590.00	U220	12559590.00
U223	0.00	U226	12559590.00
U239	12559590.00		

Violation Status: Violations exist

Regulation Violated: 3745-54-56(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 12/07/2004
Actual Date Achieved Compliance: 05/06/2005

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/05/2005
Penalty Type: Not reported

Regulation Violated: 3745-54-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 12/07/2004
Actual Date Achieved Compliance: 12/07/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/05/2005
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 12/07/2004

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Actual Date Achieved Compliance: 12/22/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/05/2005
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 06/17/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/01/2004
Penalty Type: Not reported

Regulation Violated: 3745-55-93(C)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 10/11/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/01/2004
Penalty Type: Not reported

Regulation Violated: 3745-270-50(A)(2)(a)
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 10/11/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/01/2004
Penalty Type: Not reported

Regulation Violated: 3745-279-44(A) & 279-53(A)
Area of Violation: OHIO USED OIL ACTIVITIES
Date Violation Determined: 12/14/2002
Actual Date Achieved Compliance: 05/21/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/04/2003
Penalty Type: Not reported

Regulation Violated: 3745-54-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 12/14/2002
Actual Date Achieved Compliance: 12/14/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/04/2003
Penalty Type: Not reported

Regulation Violated: 3745-52-34(A)(2)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/05/2001
Actual Date Achieved Compliance: 01/09/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/09/2002
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 12/05/2001
Actual Date Achieved Compliance: 01/09/2002

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/09/2002
Penalty Type: Not reported

Regulation Violated: 3745-55-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 04/19/2001
Actual Date Achieved Compliance: 05/09/2001

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 04/19/2001
Actual Date Achieved Compliance: 01/09/2002

Regulation Violated: 3745-54-73
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 10/25/2000
Actual Date Achieved Compliance: 02/01/2001

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/17/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC A.26
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.34
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.35
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.33
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-71
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 10/01/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1999
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/01/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1999
Penalty Type: Not reported

Regulation Violated: PC B.6
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 06/14/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/1999
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/14/1999
Actual Date Achieved Compliance: 06/30/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/1999
Penalty Type: Not reported

Regulation Violated: 3745-54-16(B)
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 12/14/1998
Actual Date Achieved Compliance: 04/28/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/08/1999
Penalty Type: Not reported

Regulation Violated: 3745-54-16(B)
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 04/23/1999

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-66-93(E)
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 04/28/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/21/1997
Actual Date Achieved Compliance: 03/21/1997

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1997
Penalty Type: Not reported

Regulation Violated: 3745-59-50(A)(2)(a)
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 08/28/1996
Actual Date Achieved Compliance: 08/28/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/16/1996
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-15
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-16
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-15(D)
Area of Violation: TSD-PART B APPLICATION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-56(J)
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34(A)(3)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/14/1995
Actual Date Achieved Compliance: 07/21/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/04/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-15(D)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 03/14/1995
Actual Date Achieved Compliance: 07/21/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/04/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-50
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-93(C)(4)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-94
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-PART B APPLICATION
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 10/17/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/06/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 07/06/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.11/3745-54-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 10/17/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/06/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 07/06/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-55-42

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-55-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11 & 3745-54-13
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11 & 3745-59-07
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-31 & 3745-55-75
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-50

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-17
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-31
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-56(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-14
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-07(A)(6)

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 08/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-15 & 55-74
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-55-75
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 03/31/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/10/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-72,-65-13/3745-52-11
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-58-45
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-97
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-73/3745-65-31
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-71(A)(2)/3745-65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Regulation Violated: 3745-65-71(A)(1)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-73(B)(13)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-74(B)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-71(A)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-76,-58-32,52-11,59-07
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-50(A)(2)/3745-52-34
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-92
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-43(C)(3)
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/09/1992
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/12/1992
Penalty Type: Not reported

Regulation Violated: PERM.COND. II.F(2)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 08/19/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.C

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. I.B
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.D(2)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.K(1)(a)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.L(A)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.E(2)

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. III.D(1)(2)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.K(5)(a)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.J.(1)(C)(D)(E)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.J(1)(A)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.I(4)

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11/3745-59-07
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-31/3745-66-51
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-34(C)
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-14
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-91
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Penalty Type: Not reported

Regulation Violated: 3745-66-92
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-71(A)(1)(3)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-93
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-92/3745-66-93
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-59-50(B)
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-71 & 65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-73(A)&(B)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-94(A)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 02/12/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-95
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-74
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34(C)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1991
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 03/15/1990
Actual Date Achieved Compliance: 04/24/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/15/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 03/07/1990
Actual Date Achieved Compliance: 04/24/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/15/1990
Penalty Type: Not reported

Regulation Violated: 3745-66-12
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-13
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3734.02(F)
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-93
Area of Violation: TSD-TANKS REQUIREMENTS

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/23/1989

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-20 & 52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 03/02/1989
Actual Date Achieved Compliance: 04/05/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 11/16/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-53-20
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 11/16/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 11/16/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-32, 65-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/26/1988
Actual Date Achieved Compliance: 09/28/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/26/1988
Actual Date Achieved Compliance: 09/28/1988

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/27/1988
Actual Date Achieved Compliance: 08/03/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/14/1988
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-37
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1988
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/22/1988
Actual Date Achieved Compliance: 03/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/02/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-15,66-74,66-94
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/22/1988
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/02/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 02/02/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1987
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 03/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1987
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1987
Penalty Type: Not reported

Regulation Violated: 3734.02(E)
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 05/08/1986
Actual Date Achieved Compliance: 08/13/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/15/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 07/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 07/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 08/13/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/15/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 07/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Penalty Summary:

Penalty Description	Penalty Date	Penalty Amount	Lead Agency
Final Monetary Penalty	5/1/1996	42000	STATE
Final SEP Credit	5/1/1996	15000	STATE

There are 145 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	TSD-CONTINGENCY PLAN REQUREMENTS	20050506
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	20041207
	TSD-GENERAL STANDARDS	20041222
Compliance Evaluation Inspection	TSD-CONTAINERS REQUIREMENTS	20040617
	TSD-TANKS REQUIREMENTS	20041011
	TSD-LAND BAN REQUIREMENTS	20041011
Compliance Evaluation Inspection	OHIO USED OIL ACTIVITIES	20040521
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	20021214
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20020109
	TSD-CONTAINERS REQUIREMENTS	20020109
Compliance Evaluation Inspection	TSD-CONTAINERS REQUIREMENTS	20010509
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20020109
Compliance Evaluation Inspection	TSD-PERMIT CONDITION	20010201
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19991001
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19991001
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19991001
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19990630
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19990428
Compliance Evaluation Inspection	TSD-PERMIT CONDITION	19990423
	TSD-PERMIT CONDITION	19990428
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19970321
Compliance Evaluation Inspection	GENERATOR-LAND BAN REQUIREMENTS	19960828
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19960410
	TSD-PERMIT CONDITION	19960410
	TSD-PART B APPLICATION	19960410
	TSD-PERMIT CONDITION	19960410
	TSD-PERMIT CONDITION	19960410
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950721
	TSD-GENERAL STANDARDS	19950721
Compliance Evaluation Inspection	GENERATOR-LAND BAN REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19941216
Compliance Evaluation Inspection	TSD-PART B APPLICATION	19941017
	GENERATOR-GENERAL REQUIREMENTS	19940706
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941017
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940706
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19940110

CHEMICAL SOLVENTS INC (Continued)			**1000299269**
		GENERATOR-LAND BAN REQUIREMENTS	19940110
		GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940110
		GENERATOR-LAND BAN REQUIREMENTS	19940110
		GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940331
		GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940110
		GENERATOR-LAND BAN REQUIREMENTS	19930804
		TSD-GENERAL STANDARDS	19940110
		TSD-GENERAL STANDARDS	19940110
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19940110
		TSD-CONTINGENCY PLAN REQUREMENTS	19940110
	Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19930720
		TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19931207
		TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19931207
		TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19931207
		TSD-OTHER REQUIREMENTS (OVERSIGHT)	19930720
		TSD-MANIFEST REQUIREMENTS	19931207
		TSD-TANKS REQUIREMENTS	19931207
		TSD-TANKS REQUIREMENTS	19931207
		TSD-GENERAL STANDARDS	19931207
		TSD-LAND BAN REQUIREMENTS	19930720
		TSD-CONTAINERS REQUIREMENTS	19930720
		TSD-MANIFEST REQUIREMENTS	19931207
		TSD-MANIFEST REQUIREMENTS	19931207
		TSD-CONTAINERS REQUIREMENTS	19931207
		TSD-MANIFEST REQUIREMENTS	19930720
		TSD-MANIFEST REQUIREMENTS	19930720
		TSD-MANIFEST REQUIREMENTS	19930720
	Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
	Other Evaluation	TSD-LAND BAN REQUIREMENTS	19980605
		TSD-LAND BAN REQUIREMENTS	19980605
		TSD-GENERAL STANDARDS	19980605
		TSD-GENERAL STANDARDS	19980605
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19980605
		TSD-CONTINGENCY PLAN REQUREMENTS	19980605
		TSD-CONTINGENCY PLAN REQUREMENTS	19980605
		TSD-MANIFEST REQUIREMENTS	19980605
		TSD-MANIFEST REQUIREMENTS	19980605
		TSD-MANIFEST REQUIREMENTS	19980605
		TSD-CONTAINERS REQUIREMENTS	19980605
		TSD-TANKS REQUIREMENTS	19980605
	Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19921123
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19921123
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19921123
		TSD-CONTAINERS REQUIREMENTS	19921123
		TSD-GENERAL STANDARDS	19921123
		TSD-LAND BAN REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19921123
		TSD-MANIFEST REQUIREMENTS	19921123
		GENERATOR-MANIFEST REQUIREMENTS	19921123
		TSD-MANIFEST REQUIREMENTS	19921123
	Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19920505
		TSD-GENERAL STANDARDS	19920505
		TSD-GENERAL STANDARDS	19920505

CHEMICAL SOLVENTS INC (Continued) **1000299269**

	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19920505
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19920505
	TSD-CONTAINERS REQUIREMENTS	19920505
	TSD-CONTAINERS REQUIREMENTS	19920505
	TSD-TANKS REQUIREMENTS	19920212
	TSD-TANKS REQUIREMENTS	19920505
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
Compliance Evaluation Inspection	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19900424
	TSD-CONTAINERS REQUIREMENTS	19900424
Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19890906
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19890906
	GENERATOR-MANIFEST REQUIREMENTS	19890906
	TSD-CONTAINERS REQUIREMENTS	19890809
	TSD-CONTAINERS REQUIREMENTS	19890809
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19890809
	TSD-CONTINGENCY PLAN REQUREMENTS	19890906
	TSD-MANIFEST REQUIREMENTS	19890809
	TSD-MANIFEST REQUIREMENTS	19890906
	TSD-TANKS REQUIREMENTS	19890906
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19890906
	TSD-GENERAL STANDARDS	19890906
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19890405
Compliance Evaluation Inspection	GENERATOR-MANIFEST REQUIREMENTS	19890119
	GENERATOR-OTHER REQUIREMENTS	19890119
	TSD-MANIFEST REQUIREMENTS	19890119
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880928
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880928
Other Evaluation	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880803
Other Evaluation	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880307
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880202
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880307
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
Other Evaluation	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860813
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19860813
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860715
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860715
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860813
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860715

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

CHEMICAL SOLVENTS INC (Continued) **1000299269**

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

DERR:

Facility Id:	218000151
EPA Id:	OHD980897656
Lat/Long:	41.451376 / -81.685043
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

PA MANIFEST:

Manifest Number:	PAH153076
Manifest Type:	T
Generator Epa Id:	OHD980897656
Generator Date:	01/21/2005
Mailing Address:	1010 DENISON AVE
Mailing City,St,Zip:	CLEVELAND, OH 44109
Contact Name:	Not reported
Contact Phone:	216-741-9310
TSD Epa Id:	PAD002389559
TSD Date:	01/22/2005
TSD Facility Name:	KEYSTONE CEMENT CO
TSD Facility Address:	RTE 329
TSD Facility City:	BATH
TSD Facility State:	PA
Page Number:	1.00000
Line Number:	1.00000
Waste Number:	D007
Container Number:	1.00000
Container Type:	TT
Waste Quantity:	5377.00000
Unit:	G
Handling Code:	Not reported
Tsp Epa Id:	NYD980769947
Date Tsp Sig:	01/21/2005

Click this hyperlink while viewing on your computer to access
31 additional PA MANIFEST: record(s) in the EDR Site Report.

NY MANIFEST:

Document ID:	NYO3128454
Manifest Status:	C
Trans1 State ID:	7A002

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Trans2 State ID:	Not reported
Generator Ship Date:	840402
Trans1 Recv Date:	840402
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	840403
Part A Recv Date:	840411
Part B Recv Date:	840409
Generator EPA ID:	OHD980897656
Trans1 EPA ID:	NYD088658646
Trans2 EPA ID:	Not reported
TSDF ID:	NYD080336241
Waste Code:	F005 - UNKNOWN
Quantity:	04400
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	080
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	84
Facility Type:	Both Generator and TSD
EPA ID:	OHD980897656
Facility Name:	CHEMICAL SOLVENTS INC
Facility Address:	1010 DENISON AVE
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	CHEMICAL SOLVENTS INCORPORATED
Mailing Contact:	Not reported
Mailing Address:	1010 DENISON AVENUE
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310
Mailing Name:	CHEMICAL SOLVENTS INC
Mailing Contact:	[redacted]
Mailing Address:	[redacted]
Mailing City:	[redacted]
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310

Click this hyperlink while viewing on your computer to access
60 additional NY MANIFEST: record(s) in the EDR Site Report.

E13 WNW 1/8-1/4 1153 ft.

Relative: Higher

Actual: 668 ft.

CHURCHILL TRUCK LINES INC
3910 WEST 14TH STREET
CLEVELAND, OH 44109

RCRA-SQG 1000562445
FINDS OHD987033206

Site 1 of 2 in cluster E

RCRAInfo:

Owner: [redacted]

EPA ID: OHD987033206

Contact: [redacted]

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: 3745-279-22(D)
Area of Violation: OHIO USED OIL ACTIVITIES
Date Violation Determined: 08/22/2003
Actual Date Achieved Compliance: 10/15/2003

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/2003
Penalty Type: Not reported

Regulation Violated: 3745-279-22(C)
Area of Violation: OHIO USED OIL ACTIVITIES
Date Violation Determined: 08/22/2003
Actual Date Achieved Compliance: 10/15/2003

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/2003
Penalty Type: Not reported

There are 2 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	OHIO USED OIL ACTIVITIES	20031015
	OHIO USED OIL ACTIVITIES	20031015

FINDS:

Other Pertinent Environmental Activity Identified at Site:

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

E14 WNW 1/8-1/4 1153 ft. — **CHURCHILL TRUCK LINES, INC.** — **LUST** — **S104775415** / **N/A**

3910 W 14TH ST
CLEVELAND, OH 44108

Site 2 of 2 in cluster E

Relative: Higher

Actual: 668 ft.

LUST:
Owner: SKIP GREY
LTF Status: 6 Closure of regulated UST
Release Number: 18001098-N00001
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 181098
Former Lust Release Number: 185073200.0
Release Date: Not reported

F15 ESE 1/8-1/4 1188 ft. — **ALUMINUM CO. OF AMERICA** — **LUST, OH Spills, MLTS** — **1001494798** / **N/A**

1600 HARVARD AVE.
CLEVELAND, OH 44105

Site 1 of 3 in cluster F

Relative: Higher

Actual: 608 ft.

MLTS:
License Number: C-5023 — First License Date: 0
License Date: 0 — Institution Code: 34226
License Expires: 0
Primary Program: Not reported
License Use: Not reported
Department: ENVIRONMENTAL/INDUSTRIAL HYGIENE
Building: Not reported
Status: Not reported
Contact Name: [redacted] — Contact Phone: Not reported
States Allowing Use: Not reported
Store Material: Not reported
Redistribution: Not reported — Incineration: Not reported
Burial: Not reported
Last Inspection: Not reported
Inspector Name: Not reported
Next Inspection: Not reported

LUST:
Owner: ALUMINUM CO. OF AMERICA
LTF Status: 6 Closure of regulated UST
Release Number: 18000876-N00001
Owner Address: 1600 HARVARD AVE
CLEVELAND, OH 44105
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 180876
Former Lust Release Number: 18812601.0
Release Date: 1991-03-21 00:00:00

ALUMINUM CO. OF AMERICA (Continued) **1001494798**

Owner: ALUMINUM CO. OF AMERICA
LTF Status: 6 Closure of regulated UST
Release Number: 18000876-N00002
Owner Address: 1600 HARVARD AVE
CLEVELAND, OH 44105
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 180876
Former Lust Release Number: 18812602.0
Release Date: 1992-10-15 00:00:00

SPILLS:

Spill Year :	1994
Spill Month :	11
Spill Number :	4960
Date Spill Reported :	11/17/94
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9411-18-4960
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	HYDROFLOURIC ACID

F16 **ALCOA WHEEL & FORGED PRODUCTS** **PADS** **1000300296**
ESE **1600 HARVARD AVENUE** **FINDS** **44105LMNMC16**
1/8-1/4 **CLEVELAND, OH 44105** **OH Spills**
1188 ft. **RCRA-LQG**
Site 2 of 3 in cluster F **TRIS**
Relative: **NY MANIFEST**
Higher

RCRAInfo:
Owner: ALCOA WHEEL & FORGED PRODUCTS
Actual: EPA ID: OHD083321299
608 ft.

Contact: [redacted]

Classification: Large Quantity Generator
TSDF Activities: Not reported

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	4521.00	D002	3336542.00
D007	3340102.00	D008	63058.00
D009	298.00	D018	2197.00
D028	2197.00	D035	2197.00
D039	2197.00	D040	2197.00

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

Violation Status: Violations exist

Regulation Violated: 3745-52-42
Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 11/13/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-52-40
Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 11/13/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 11/13/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-16 OR 52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 11/13/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/09/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-52
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/09/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 09/10/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Proposed Monetary Penalty

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/02/1991
Penalty Type: Proposed Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/13/1990
Penalty Type: Proposed Monetary Penalty

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 01/15/1992
Penalty Type: Proposed Monetary Penalty

Regulation Violated: 3745-52-11
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/19/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 11/13/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-31
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/19/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 09/10/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Proposed Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/02/1991
Penalty Type: Proposed Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/13/1990
Penalty Type: Proposed Monetary Penalty

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 01/15/1992
Penalty Type: Proposed Monetary Penalty

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/02/1991

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-74
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/02/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: 3745-66-95
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 03/22/1990
Actual Date Achieved Compliance: 10/09/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/17/1990
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 08/28/1989
Actual Date Achieved Compliance: 03/22/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1989
Penalty Type: Proposed Monetary Penalty

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 01/15/1992
Penalty Type: Proposed Monetary Penalty

Regulation Violated: Not reported
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 08/28/1989
Actual Date Achieved Compliance: 01/18/1991

Penalty Summary:

Penalty Description	Penalty Date	Penalty Amount	Lead Agency
Final Monetary Penalty	1/15/1992	31800	STATE
Proposed Monetary Penalty	1/15/1992	31800	STATE

There are 16 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	19920910
	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	19920910
	GENERATOR-GENERAL REQUIREMENTS	19981019
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19981019
	GENERATOR-MANIFEST REQUIREMENTS	19901113
	GENERATOR-RECORDKEEPING REQUIREMENTS	19901113
	GENERATOR-RECORDKEEPING REQUIREMENTS	19901113
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19901113
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19901113
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19911009
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19911009
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19911002
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19911002

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

	TSD-TANKS REQUIREMENTS	19911009
Compliance Evaluation Inspection	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	19900322
Other Evaluation	GENERATOR-LAND BAN REQUIREMENTS	19910118

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

RACT/BACT/LAER Clearinghouse (RBLC) data base contains case-specific information on the 'Best Available' air pollution technologies that have been required to reduce the emission of air pollutants from stationary sources (e.g., power plants, steel mills, chemical plants, etc.). This information has been provided by State and local permitting agencies. The Clearinghouse also contains a regulation data base that summarizes EPA emission limits required in New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Maximum Achievable Control Technology (MACT) standards.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

SPILLS:

Spill Year :	1998
Spill Month :	2
Spill Number :	0591
Date Spill Reported :	02/17/98
Sequential Number :	0
Lat/Long :	412640.60 / 814041.74
Spill No. :	9802-18-0591
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	1746
Product Spilled:	DIESEL FUEL

Spill Year :	1998
Spill Month :	2
Spill Number :	0654
Date Spill Reported :	02/20/98
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9802-18-0654
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	NOX

Spill Year :	1991
Spill Month :	11
Spill Number :	4708
Date Spill Reported :	11/05/91
Sequential Number :	0
Lat/Long :	412645 / 814130
Spill No. :	9111-18-4708
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	WASTE NITRIC ACID D002

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

Spill Year :	1991
Spill Month :	11
Spill Number :	4708
Date Spill Reported :	11/05/91
Sequential Number :	0
Lat/Long :	412645 / 814130
Spill No. :	9111-18-4708
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	WASTE NITRIC ACID D002

Spill Year :	1993
Spill Month :	3
Spill Number :	1063
Date Spill Reported :	03/24/93
Sequential Number :	0
Lat/Long :	412645 / 814130
Spill No. :	9303-18-1063
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	WASTE WATER

Click this hyperlink while viewing on your computer to access
3 additional OH SPILL record(s) in the EDR Site Report.

NY MANIFEST:

Document ID:	NYG0403794
Manifest Status:	Not reported
Trans1 State ID:	NYD046765574
Trans2 State ID:	Not reported
Generator Ship Date:	04/20/2000
Trans1 Recv Date:	04/20/2000
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/20/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	OHD083321299
Trans1 EPA ID:	NYD049836679
Trans2 EPA ID:	Not reported
TSDF ID:	0335101ME
Waste Code:	B007 - OTHER MISCELLANEOUS PCB WASTES
Quantity:	14733
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	001
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	L Landfill.
Specific Gravity:	01.00
Year:	00
Facility Type:	Generator
EPA ID:	OHD083321299
Facility Name:	ALUMINUM COMPANY OF AMERICA
Facility Address:	1600 HARVARD AVENUE

ALCOA WHEEL & FORGED PRODUCTS (Continued) **1000300296**

Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	ALUMINUM COMPANY OF AMERICA
Mailing Contact:	[redacted]
Mailing Address:	1600 HARVARD AVENUE
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44105
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	[redacted]

Click this hyperlink while viewing on your computer to access
360 additional NY MANIFEST: record(s) in the EDR Site Report.

F17 **ALUMINUM COMPANY OF AMERICA ALCOA LANDFILL** **SWF/LF** **1006427512**
ESE **1600 HARVARD AVENUE** **OH Spills** **N/A**
1/8-1/4 **CLEVELAND, OH 44105**
1188 ft.

Site 3 of 3 in cluster F

Relative:
Higher

Actual:
608 ft.

LF:

Facility ID:	18-00-23	Status:	CLOSED
Type:	INDUSTRIAL SW LF		
Closed Facility:	Yes		
Class:	Not reported	Captive:	Yes
SWMD:	118		
Operator:	ALUMINUM COMPANY OF AMERICA		
Operator Addr:	1600 HARVARD AVENUE CLEVELAND, OH 44105		
Operator Phone:	2166414190		
Owner:	ALUMINUM COMPANY OF AMERICA		
Owner Addr:	1600 HARVARD AVENUE CLEVELAND, OH 44105		
Facility Addr 2:	Not reported		
Org. Comments:	Not reported		
Issue Date:	Not reported		
Expire Date:	Not reported		
Registration #:	Not reported		
Licence Holder:	ALUMINUM COMPANY OF AMERICA		
LH Addr:	1600 HARVARD AVENUE CLEVELAND, OH 44105 2166413600		
Last Update:	04/19/96		
Docket # :	Not reported		
Start Date :	Not reported		
End Date :	Not reported		
Core Place ID :	Not reported		
Core Addr ID :	Not reported		
District Office :	Not reported		
Phone Number :	Not reported		
Applicant Name :	Not reported		
Applicant Address:	Not reported Not reported		
Organization ID :	Not reported		
Report ID :	Not reported		

ALUMINUM COMPANY OF AMERICA ALCOA LANDFILL (Continued) **1006427512**

SPILLS:

Spill Year :	1998
Spill Month :	2
Spill Number :	0484
Date Spill Reported :	02/10/98
Sequential Number :	0
Lat/Long :	412640.60 / 814041.74
Spill No. :	9802-18-0484
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	1746
Product Spilled:	HYDRAULIC OIL

---

18 SSW 1/8-1/4 1201 ft. | **CADLE CO.** **4041 JENNINGS RD** **CLEVELAND, OH 44144** | **LUST** **OH Spills** | **S103703177** **N/A**

Relative: Lower

Actual: 587 ft.

LUST:

Owner:	CADLE CO.
LTF Status:	1 SUS/CON from regulated UST
Release Number:	18000148-N00001
Owner Address:	[redacted]
Facility Status:	**Active**
FR Status:	**Initial Corrective Action Program Report**
Old Facility Id:	180148
Former Lust Release Number:	185019100.0
Release Date:	1999-11-08 00:00:00

SPILLS:

Spill Year :	1995
Spill Month :	2
Spill Number :	0425
Date Spill Reported :	02/03/95
Sequential Number :	0
Lat/Long :	N412642.19 / W82719.77
Spill No. :	9502-18-0425
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	1746
Product Spilled:	MATERIAL UNKNOWN

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19 NNW 1/4-1/2 1333 ft. | **CHEMICAL SOLVENTS INC** **3751 JENNINGS RD** **CLEVELAND, OH 44109** | **FINDS** **OH Spills** **RCRA-LQG** **RCRA-TSDF** **RAATS** **DERR** **CORRACTS** **CERC-NFRAP** **NY MANIFEST** | **1000299268** **OHD052937885**

Relative: Higher

Actual: 603 ft.

CHEMICAL SOLVENTS INC (Continued) **1000299268**

CERCLIS-NFRAP Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Code:	NFRAP
NPL Status:	Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	06/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	09/06/1985
Assessment:	ARCHIVE SITE	Completed:	09/06/1985

CORRACTS Data:

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	03/31/1992
Corrective Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	12/20/1996
Corrective Action:	CA100DC - RFI Imposition , Focused data collection required for stabilization evaluation
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	/ /
Corrective Action:	CA750IN - Migration of Contaminated Groundwater under Control , More information is needed to make a determination
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	/ /
Corrective Action:	CA150 - RFI Workplan Approved
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	/ /
Corrective Action:	CA200 - RFI Approved
2002 NAICS Title:	42269

Click this hyperlink while viewing on your computer to access
3 additional CORRACTS record(s) in the EDR Site Report.

CHEMICAL SOLVENTS INC (Continued) **1000299268**

RCRAInfo Corrective Action Summary:

Event: RFI Workplan Approved
Event Date: Not reported

Event: RFI Approved
Event Date: Not reported

Event: Date For Remedy Selection (CM Imposed)
Event Date: Not reported

Event: Certification Of Remedy Completion Or Construction Completion
Event Date: Not reported

Event: Igration of Contaminated Groundwater under Control, More information is needed to make a determination.
Event Date: Not reported

Event: Current Human Exposures under Control, More information is needed to make a determination.
Event Date: Not reported

Event: RFI Imposition, Focused data collection required for stabilization evaluation.
Event Date: 12/20/1996

Event: CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date: 03/31/1992

RCRAInfo:

Owner: CHEMICAL SOLVENTS INC
(216) 741-9310
EPA ID: OHD052937885

Contact: [redacted]

Classification: Large Quantity Generator, TSDF
TSDF Activities: Not reported

BIENNIAL REPORTS:

Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	20213.00	D035	20213.00
D039	20213.00	D040	20213.00
F002	20213.00	F003	20213.00
F005	20213.00		

Violation Status: Violations exist

Regulation Violated: 3745-52-34(C)(1)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 06/17/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/2004
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 06/17/2004

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/2004
Penalty Type: Not reported

Regulation Violated: 3745-55-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC A.26
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.33
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.34
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.35
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/01/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1999
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 12/14/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 12/14/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-43(C)(3)
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/09/1992
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/09/1992
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/12/1992

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/04/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-12(D)(2)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 06/15/1992
Actual Date Achieved Compliance: 04/05/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/15/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/28/1993
Penalty Type: Not reported

Regulation Violated: 3745-65-73(B)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-15(B)(4)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-14(B)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 07/15/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 07/15/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-52(D)&(E)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-59-07(A)(1)(b)

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1991
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1991
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-12
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Date Violation Determined: 03/02/1989
Actual Date Achieved Compliance: 04/05/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/23/1988
Actual Date Achieved Compliance: 10/26/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 08/23/1988
Actual Date Achieved Compliance: 10/26/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 08/23/1988
Actual Date Achieved Compliance: 10/26/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1988
Penalty Type: Not reported

Regulation Violated: 3745-53-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16/3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-33
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 02/19/1988

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-21
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 02/19/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/19/1987
Penalty Type: Not reported

Regulation Violated: 3745-66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 12/09/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/19/1987
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 02/19/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/19/1987
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 05/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-71 & 66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 05/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-13
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-55
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-14
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-17
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 05/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-52-41
Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

There are 53 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20040617
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20040617
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19991001
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19981214
	TSD-GENERAL STANDARDS	19981214
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
Other Evaluation	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19930405
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19920505
	TSD-GENERAL STANDARDS	19920505
	TSD-CONTINGENCY PLAN REQUREMENTS	19920505
	TSD-GENERAL STANDARDS	19920715
	TSD-GENERAL STANDARDS	19920715
	TSD-LAND BAN REQUIREMENTS	19920505
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19890906
	GENERATOR-MANIFEST REQUIREMENTS	19890906
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19890906
	TSD-MANIFEST REQUIREMENTS	19890906
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19890405
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19881026
	GENERATOR-MANIFEST REQUIREMENTS	19881026
	GENERATOR-MANIFEST REQUIREMENTS	19881026
Other Evaluation	GENERATOR-MANIFEST REQUIREMENTS	19881026
	GENERATOR-MANIFEST REQUIREMENTS	19881026

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Compliance Evaluation Inspection	GENERATOR-MANIFEST REQUIREMENTS	19880407
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880407
	GENERATOR-MANIFEST REQUIREMENTS	19880407
	GENERATOR-MANIFEST REQUIREMENTS	19880407
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880407
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19880219
	TSD-MANIFEST REQUIREMENTS	19880219
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19871209
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830323
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19830323
	TSD-CONTAINERS REQUIREMENTS	19830506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830323
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830323
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19830107
	TSD-GENERAL STANDARDS	19830506
	TSD-MANIFEST REQUIREMENTS	19830107
	TSD-GENERAL STANDARDS	19830323
	TSD-GENERAL STANDARDS	19830107
	GENERATOR-RECORDKEEPING REQUIREMENTS	19830107

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

CHEMICAL SOLVENTS INC (Continued) **1000299268**

SPILLS:

Spill Year :	2004
Spill Month :	3
Spill Number :	0842
Date Spill Reported :	03/03/04
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	0403-18-0842
Reporter Name :	JACK
Confidential :	No
District Code :	NE
Employee Number :	1769
Product Spilled:	MERCURY

Spill Year :	2004
Spill Month :	3
Spill Number :	0845
Date Spill Reported :	03/03/04
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	0403-18-0845
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	1769
Product Spilled:	MERCURY

DERR:

Facility Id:	218000150
EPA Id:	OHD052937885
Lat/Long:	41.445554 / -81.687
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

NY MANIFEST:

Document ID:	NYO2435229
Manifest Status:	C
Trans1 State ID:	OH031
Trans2 State ID:	Not reported
Generator Ship Date:	830120
Trans1 Recv Date:	830120
Trans2 Recv Date:	830121
TSD Site Recv Date:	830121
Part A Recv Date:	030208
Part B Recv Date:	030208
Generator EPA ID:	OHD052937885
Trans1 EPA ID:	OHD052937885
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	F005 - UNKNOWN
Quantity:	04400
Units:	P - Pounds
Number of Containers:	080
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Year:	83
Facility Type:	Both Generator and TSD
EPA ID:	OHD052937885
Facility Name:	CHEMICAL SOLVENTS
Facility Address:	3751 JENNINGS ROAD
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	CHEMICAL SOLVENTS
Mailing Contact:	UNKNOWN
Mailing Address:	3751 JENNINGS ROAD
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310
Mailing Name:	CHEMICAL SOLVENTS
Mailing Contact:	UNKNOWN
Mailing Address:	3751 JENNINGS ROAD
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310

Click this hyperlink while viewing on your computer to access additional NY MANIFEST: detail in the EDR Site Report.

G20 **RESEARCH OIL COMPANY** **RCRA-SQG** **1000200203**
SW **3680 VALLEY ROAD** **FINDS** **OHD980795363**
1/4-1/2 **CLEVELAND, OH 44109** **CERC-NFRAP**
1431 ft. **MSL**

Site 1 of 2 in cluster G

Relative: Higher

Actual: 592 ft.

CERCLIS-NFRAP Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Code:	DR
NPL Status:	Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	06/25/1992
Assessment:	PRELIMINARY ASSESSMENT	Completed:	12/07/1992
Assessment:	ARCHIVE SITE	Completed:	12/28/1995

RESEARCH OIL COMPANY (Continued) **1000200203**

RCRAInfo:
Owner: NAME NOT REPORTED
[redacted]
EPA ID: OHD980795363
Contact: [redacted]
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

OH MSL:
Facility ID: 218-1378
EPA ID: OHD980795363
Lat/Long: 41 26 47 / 81 41 17
Facility Type: Active

G21 **RESEARCH OIL CO** **OH Spills** **1001887392**
SW **3680 VALLEY RD** **DERR** **N/A**
1/4-1/2 **CLEVELAND, OH 44109**
1431 ft.

Site 2 of 2 in cluster G

Relative: Higher

Actual: 592 ft.

SPILLS:
Spill Year : 1978
Spill Month : 4
Spill Number : 0523
Date Spill Reported : 04/10/78
Sequential Number : 0
Lat/Long : Not reported
Spill No. : 7804-18-0523
Reporter Name : CITIZEN
Confidential : No
District Code : NE
Employee Number : 1745
Product Spilled: OIL

RESEARCH OIL CO (Continued) **1001887392**

Spill Year :	1985
Spill Month :	2
Spill Number :	0471
Date Spill Reported :	02/25/85
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8502-18-0471
Reporter Name :	FD
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	WASTE OIL

DERR:

Facility Id:	218001378
EPA Id:	OHD980795363
Lat/Long:	41.44638889 / -81.68805556
Alias:	Not reported
District:	NEDO
Activity:	RR
Site Info:	330-963-1200

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22 NNW 1/4-1/2 1456 ft. **EVEREADY PRODUCTS CORP** **FINDS** **1000355216**
1101 BELT LINE ST **LUST** **OHD004186987**
CLEVELAND, OH 44109 **RCRA-LQG**
SSTS

Relative: Higher

Actual: 596 ft.

RCRAInfo:

Owner:	EVEREADY PRODUCTS & MFG CORP
EPA ID:	OHD004186987
Contact:	[redacted]
Classification:	Large Quantity Generator
TSDF Activities:	Not reported

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	56103.00	D035	9924.00
D039	23226.00	D040	54049.00
F001	13302.00	F002	44125.00
F003	44125.00	F005	13302.00
U070	2054.00		

Violation Status: Violations exist

Regulation Violated:	3745-52-41
Area of Violation:	GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined:	08/09/2005
Actual Date Achieved Compliance:	08/09/2005
Enforcement Action:	WRITTEN INFORMAL
Enforcement Action Date:	08/09/2005
Penalty Type:	Not reported
Regulation Violated:	3745-65-16(C)
Area of Violation:	GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined:	08/30/2001
Actual Date Achieved Compliance:	01/04/2002

EVEREADY PRODUCTS CORP (Continued) **1000355216**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/12/2001
Penalty Type: Not reported

Regulation Violated: 3745-65-16(A)(B)(C)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-16(D)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-50 thru 65-53
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-55
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-32(C)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-33(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL

EVEREADY PRODUCTS CORP (Continued) **1000355216**

Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-65-33(B)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-52-34(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 10/27/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-66-74
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

Regulation Violated: 3745-52-34(C)(1)(b)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/20/1994
Actual Date Achieved Compliance: 01/04/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1994
Penalty Type: Not reported

There are 14 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Non-Financial Record Review	GENERATOR-RECORDKEEPING REQUIREMENTS	20050809
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20020104
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950104

EVEREADY PRODUCTS CORP (Continued) **1000355216**

GENERATOR-PRE-TRANSPORT REQUIREMENTS 19941027
GENERATOR-PRE-TRANSPORT REQUIREMENTS 19950104
GENERATOR-PRE-TRANSPORT REQUIREMENTS 19950104

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

SSTS:

Product:	INDISPENSIBLE
Status:	Not reported
Registration #:	010240OH001
Report Year:	2002
Permit:	Registered
Product #:	00033400241
Product Type:	End-use blend, formulation, or concentrate
Product Class:	Disinfectant, germicide, sanitizer
Product Use:	All other products
Market:	Marketed in the United States
Country:	Not reported
Region:	05

Product:	BIG BOSS
Status:	Not reported
Registration #:	010240OH001
Report Year:	2002
Permit:	Registered
Product #:	00033400214
Product Type:	End-use blend, formulation, or concentrate
Product Class:	Disinfectant, germicide, sanitizer
Product Use:	All other products
Market:	Marketed in the United States
Country:	Not reported
Region:	05

EVEREADY PRODUCTS CORP (Continued) **1000355216**

LUST:
Owner: EVEREADY PRODUCTS CORP.
LTF Status: 1 SUS/CON from regulated UST
Release Number: 18000420-N00001
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 180420
Former Lust Release Number: 181045500.0
Release Date: Not reported

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23 SW 1/4-1/2 1846 ft. **OHIO TRANSPORT CORP.** **LUST** **S104775610**
3750 VALLEY RD **N/A**
CLEVELAND, OH 44109

Relative: Higher
Actual: 595 ft.

LUST:
Owner: OHIO TRANSPORT CORP.
LTF Status: 6 Closure of regulated UST
Release Number: 18002553-N00001
Owner Address: 3750 VALLEY RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 182553
Former Lust Release Number: 184217700.0
Release Date: Not reported

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24 South 1/4-1/2 2077 ft. **CLEVELAND TRUCK FACILITY** **LUST** **S104775362**
4160 JENNINGS RD **N/A**
CLEVELAND, OH 44109

Relative: Higher
Actual: 594 ft.

LUST:
Owner: PHILIP & JACQUELINE CASSEL
LTF Status: 6 Closure of regulated UST
Release Number: 18000840-N00001
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 180840
Former Lust Release Number: 189010500.0
Release Date: Not reported

Owner: [redacted]
LTF Status: 6 Closure of regulated UST
Release Number: 18000840-N00002
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 180840
Former Lust Release Number: 189010501.0
Release Date: 1999-07-19 00:00:00

25 SW 1/4-1/2 2157 ft. | **SUPERIOR FORWARDING CO., INC.** | **LUST** | **S103703389** / **N/A**
3800 VALLEY RD
CLEVELAND, OH 44109

Relative: Higher
Actual: 606 ft.

LUST:
Owner: SUPERIOR FORWARDING CO., INC.
LTF Status: 6 Closure of regulated UST
Release Number: 18009597-N00001
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 189597
Former Lust Release Number: 185128700.0
Release Date: Not reported

H26 SSE 1/4-1/2 2478 ft. | **TRUCKING CO DUMP** | **DERR** | **1003872164**
BRADLEY & JENNINGS | **CERC-NFRAP** | **OHD980509871**
CLEVELAND, OH 44101

Site 1 of 2 in cluster H

Relative: Higher
Actual: 602 ft.

CERCLIS-NFRAP Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Code: NFRAP
NPL Status: Not on the NPL
CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	10/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	05/01/1983
Assessment:	HRS PACKAGE	Completed:	01/01/1984
Assessment:	SITE INSPECTION	Completed:	01/01/1984
Assessment:	ARCHIVE SITE	Completed:	01/01/1984

CERCLIS-NFRAP Alias Name(s):
HARKNESS LOT
TRUCKING CO DUMP

DERR:
Facility Id: 218000823
EPA Id: OHD980509871
Lat/Long: 41.44833333 / -81.68583333
Alias: Harkness Lot
District: NEDO
Activity: Not reported
Site Info: 330-963-1200

H27 SSE 1/4-1/2 2484 ft. | **TRUCKING CO DUMP** | **MSL** | **1000173298** / **N/A**
[redacted]
CLEVELAND, OH 44109

Site 2 of 2 in cluster H

Relative: Higher
Actual: 602 ft.

OH MSL:
Facility ID: 218-0823
EPA ID: OHD980509871
Lat/Long: 41 26 54 / 81 41 09
Facility Type: None

28 SSE 1/2-1 2908 ft. — **BURDETT OXYGEN CO**, **4181 BRADLEY RD**, **CLEVELAND, OH 44109** — **DERR** — **1000188634** / **N/A**

Relative: Higher
Actual: 599 ft.

DERR:

Facility Id:	218000121
EPA Id:	OHD004176426
Lat/Long:	41.442422 / -81.68
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

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29 SSE 1/2-1 3055 ft. — **RIV SMELTING & REFINING CO**, **4195 BRADLEY RD**, **CLEVELAND, OH 44109** — **DERR** — **S104517669** / **N/A**

Relative: Higher
Actual: 601 ft.

DERR:

Facility Id:	218001625
EPA Id:	OHD004187035
Lat/Long:	41.442127 / -81.6795
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

I30 NNW 1/2-1 3906 ft. — **ISG CLEVELAND WEST PROPERTIES INC**, **3341 JENNINGS ROAD**, **CLEVELAND, OH 44109** — **PADS**, **FINDS**, **OH Spills**, **RCRA-LQG**, **RCRA-TSDF**, **CORRACTS**, **CERC-NFRAP**, **NY MANIFEST** — **1000220130** / **OHD046203774**

Site 1 of 2 in cluster I

Relative: Higher
Actual: 590 ft.

CERCLIS-NFRAP Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Code:	NFRAP
NPL Status:	Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	08/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	10/09/1980
Assessment:	SITE INSPECTION	Completed:	10/09/1980
Assessment:	HRS PACKAGE	Completed:	07/28/1986
Assessment:	ARCHIVE SITE	Completed:	12/12/1996

CORRACTS Data:

EPA Id:	OHD046203774
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	08/09/1991
Corrective Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title:	Iron and Steel Mills

EPA Id:	OHD046203774
Region:	05
Area Name:	ENTIRE FACILITY

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Actual Date: 09/26/1989
Corrective Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
2002 NAICS Title: Iron and Steel Mills

EPA Id: OHD046203774
Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 09/26/1989
Corrective Action: CA050 - RFA Completed
2002 NAICS Title: Iron and Steel Mills

RCRAInfo Corrective Action Summary:
Event: CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date: 08/09/1991

Event: RFA Completed
Event Date: 09/26/1989

Event: RFA Determination Of Need For An RFI, RFI is Necessary;
Event Date: 09/26/1989

RCRAInfo:
Owner: [redacted]

EPA ID: OHD046203774

Contact: [redacted]

Classification: Large Quantity Generator, TSDF
TSDF Activities: Not reported

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	27590.04	D002	47330.00
D003	470.00	D008	600.00
D018	100.00	D035	1400.00
D039	1840.01	D040	1400.00
F001	7960.07	U154	440.01
U226	1400.00		

Violation Status: Violations exist

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 06/25/2003
Actual Date Achieved Compliance: 08/04/2003

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/26/2003
Penalty Type: Not reported

Regulation Violated: 3745-66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 06/25/2003
Actual Date Achieved Compliance: 12/10/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/26/2003
Penalty Type: Not reported

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/04/2003
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/31/2003
Penalty Type: Not reported

Regulation Violated: 3745-66-42, 66-43, 66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 06/02/1998
Actual Date Achieved Compliance: 02/08/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1998
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/01/1999
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/02/2001
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/10/1997
Actual Date Achieved Compliance: 12/17/1997

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/07/1997
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 03/27/1996
Actual Date Achieved Compliance: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 03/16/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/30/1987
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-42 -43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1994
Actual Date Achieved Compliance: 02/08/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/19/1994
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/18/1995
Penalty Type: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/02/2001
Penalty Type: Not reported

Regulation Violated: 3745-65-33(B)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/15/1994
Actual Date Achieved Compliance: 07/11/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/28/1994
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/15/1994
Actual Date Achieved Compliance: 07/11/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/28/1994
Penalty Type: Not reported

Regulation Violated: 3745-66-93(C)(4)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/15/1994
Actual Date Achieved Compliance: 07/11/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/28/1994
Penalty Type: Not reported

Regulation Violated: 261.33
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 04/28/1993
Actual Date Achieved Compliance: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/24/1993
Penalty Type: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: 3745-52-11
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 04/28/1993
Actual Date Achieved Compliance: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/24/1993
Penalty Type: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: 3745-65-16(B)(D)(E)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/29/1992
Actual Date Achieved Compliance: 01/04/1993

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/26/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-52(C)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/29/1992
Actual Date Achieved Compliance: 01/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/26/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1992
Penalty Type: Not reported

Regulation Violated: 3745-59-07(A)(1)(b)
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 10/29/1992
Actual Date Achieved Compliance: 01/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/26/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-95
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 10/29/1992
Actual Date Achieved Compliance: 01/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/26/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1992
Penalty Type: Not reported

Regulation Violated: 3745-59-07(A)
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 10/29/1992
Actual Date Achieved Compliance: 01/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/26/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-74(B)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/29/1992
Actual Date Achieved Compliance: 01/04/1993

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/26/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-42 & 66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/23/1992
Actual Date Achieved Compliance: 02/08/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1992
Penalty Type: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: 3745-67-51
Area of Violation: TSD-WASTE PILE REQUIREMENTS
Date Violation Determined: 02/20/1992
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-67-53
Area of Violation: TSD-WASTE PILE REQUIREMENTS
Date Violation Determined: 02/20/1992
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-94
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 02/20/1992
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-11
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 02/20/1992
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-34(A)(4)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/20/1992
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Penalty Type: Not reported

Regulation Violated: 3745-66-74
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/20/1992
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-67-51 & 67-53
Area of Violation: TSD-WASTE PILE REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 09/23/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/06/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-66
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 09/23/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/06/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-67
Area of Violation: TSD-WASTE PILE REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 09/23/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/06/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-20 & 52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 01/06/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-93(1)(c)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 01/06/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-74
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 01/06/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Regulation Violated: 3745-65-33
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 09/11/1991
Actual Date Achieved Compliance: 01/06/1992

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Regulation Violated: 3745-67-51
Area of Violation: TSD-WASTE PILE REQUIREMENTS
Date Violation Determined: 08/27/1990
Actual Date Achieved Compliance: 09/23/1992

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/13/1990
Penalty Type: Not reported

Regulation Violated: 3745-66-96(A)&(B)(2)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 08/27/1990
Actual Date Achieved Compliance: 09/11/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/13/1990
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 08/27/1990
Actual Date Achieved Compliance: 05/26/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/13/1990
Penalty Type: Not reported

Regulation Violated: 3745-67-53
Area of Violation: TSD-WASTE PILE REQUIREMENTS
Date Violation Determined: 08/27/1990
Actual Date Achieved Compliance: 01/06/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/13/1990
Penalty Type: Not reported

Regulation Violated: 40 CFR 268
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 08/27/1990
Actual Date Achieved Compliance: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 08/27/1990
Actual Date Achieved Compliance: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: 3745-66-95
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Penalty Type: Not reported

Regulation Violated: 3745-66-93(C)(4)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-74
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: 07/24/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Regulation Violated: 40 CFR 268
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 05/02/1989
Actual Date Achieved Compliance: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 07/17/1996
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 04/28/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 04/28/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 04/28/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/12/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 10/30/1987
Actual Date Achieved Compliance: 02/08/2002

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 03/16/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/30/1987
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-14
Area of Violation: TSD-GENERAL STANDARDS

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Date Violation Determined: 05/28/1987
Actual Date Achieved Compliance: 07/24/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1987
Penalty Type: Not reported

Regulation Violated: 3745-66-43,67-51
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/28/1987
Actual Date Achieved Compliance: 09/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/12/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 05/11/1989
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/07/1990
Penalty Type: Not reported

Enforcement Action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Action Date: 08/27/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/27/1990
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/30/1991
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1987
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/13/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-71
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/28/1987
Actual Date Achieved Compliance: 07/24/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1987
Penalty Type: Not reported

Regulation Violated: 3734.02
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 06/03/1986
Actual Date Achieved Compliance: 05/28/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-10/17,30/37,50/56,etc.
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 06/03/1986

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Actual Date Achieved Compliance: 05/28/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-74
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/03/1986
Actual Date Achieved Compliance: 09/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/03/1986
Actual Date Achieved Compliance: 09/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 06/03/1986
Actual Date Achieved Compliance: 05/28/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-66 & 3745-67
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 06/03/1986
Actual Date Achieved Compliance: 05/28/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-23(A)(2)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/20/1985
Actual Date Achieved Compliance: 10/25/1985

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/27/1985
Penalty Type: Not reported

Regulation Violated: 3745-52-42(B)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/20/1985
Actual Date Achieved Compliance: 10/25/1985

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/27/1985
Penalty Type: Not reported

Regulation Violated: 3745-66-74
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/20/1985
Actual Date Achieved Compliance: 10/25/1985

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/27/1985
Penalty Type: Not reported

Regulation Violated: 3745-65-53 & 52-34
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 09/18/1984
Actual Date Achieved Compliance: 02/01/1985

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/26/1984
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/18/1984
Actual Date Achieved Compliance: 02/01/1985

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/26/1984
Penalty Type: Not reported

Regulation Violated: 3745-52-34(A)(4)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/06/1983
Actual Date Achieved Compliance: 06/20/1985

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/26/1983
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/26/1984
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 06/24/1982
Actual Date Achieved Compliance: 09/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-75
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/24/1982
Actual Date Achieved Compliance: 09/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1982
Penalty Type: Not reported

There are 68 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20030804
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20041210
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19971217

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Detailed Multimedia Inspection	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940711
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940711
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940711
Other Evaluation	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	
	GENERATOR-GENERAL REQUIREMENTS	
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19930104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19930104
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19930104
	GENERATOR-LAND BAN REQUIREMENTS	19930104
	GENERATOR-LAND BAN REQUIREMENTS	19930104
	TSD-TANKS REQUIREMENTS	19930104
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Compliance Evaluation Inspection	TSD-WASTE PILE REQUIREMENTS	19920526
	TSD-WASTE PILE REQUIREMENTS	19920526
	TSD-CONTAINERS REQUIREMENTS	19920526
	TSD-TANKS REQUIREMENTS	19920526
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19920526
	GENERATOR-GENERAL REQUIREMENTS	19920526
Compliance Evaluation Inspection	TSD-WASTE PILE REQUIREMENTS	19920923
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19920923
	TSD-WASTE PILE REQUIREMENTS	19920923
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19920106
	TSD-MANIFEST REQUIREMENTS	19920106
	TSD-TANKS REQUIREMENTS	19920106
	GENERATOR-MANIFEST REQUIREMENTS	19920106
Compliance Evaluation Inspection	TSD-WASTE PILE REQUIREMENTS	19920923
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19920923
	TSD-WASTE PILE REQUIREMENTS	19920106
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19920526
	TSD-TANKS REQUIREMENTS	19910911
Other Evaluation	GENERATOR-LAND BAN REQUIREMENTS	
	TSD-LAND BAN REQUIREMENTS	
Compliance Evaluation Inspection	TSD-TANKS REQUIREMENTS	19890724
	TSD-TANKS REQUIREMENTS	19890724
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19920923
	GENERATOR-MANIFEST REQUIREMENTS	19890724
	TSD-GENERAL STANDARDS	19890724
	TSD-GENERAL STANDARDS	19890724
	TSD-CONTINGENCY PLAN REQUREMENTS	19890724
	TSD-CONTAINERS REQUIREMENTS	19890724
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19890724
	TSD-WASTE PILE REQUIREMENTS	19920106
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19920526
Other Evaluation	GENERATOR-LAND BAN REQUIREMENTS	
	TSD-LAND BAN REQUIREMENTS	
Compliance Evaluation Inspection	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19920923
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19890119
	TSD-GENERAL STANDARDS	19890119
	TSD-GENERAL STANDARDS	19890119
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20020208
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19870724
	TSD-MANIFEST REQUIREMENTS	19870724
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19920923
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19870528

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19870528
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19870528
	GENERATOR-OTHER REQUIREMENTS	19870528
	TSD-CONTAINERS REQUIREMENTS	19860915
	TSD-TANKS REQUIREMENTS	19860915
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19851025
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19851025
	TSD-CONTAINERS REQUIREMENTS	19851025
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19850620
	TSD-CONTINGENCY PLAN REQUREMENTS	19850201
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19850201
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19850620
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19830906
	TSD-CONTAINERS REQUIREMENTS	19830906

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RACT/BACT/LAER Clearinghouse (RBLC) data base contains case-specific information on the 'Best Available' air pollution technologies that have been required to reduce the emission of air pollutants from stationary sources (e.g., power plants, steel mills, chemical plants, etc.). This information has been provided by State and local permitting agencies. The Clearinghouse also contains a regulation data base that summarizes EPA emission limits required in New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Maximum Achievable Control Technology (MACT) standards.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

SPILLS:

Spill Year :	1996
Spill Month :	5
Spill Number :	1976
Date Spill Reported :	05/10/96
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9605-18-1976
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	FUEL OIL #6

NY MANIFEST:

Document ID:	NYB2456910
Manifest Status:	C
Trans1 State ID:	T521AX
Trans2 State ID:	Not reported
Generator Ship Date:	930803
Trans1 Recv Date:	930803
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	930809
Part A Recv Date:	930813
Part B Recv Date:	930824
Generator EPA ID:	OHD046203774
Trans1 EPA ID:	OHD982061350
Trans2 EPA ID:	Not reported
TSDF ID:	NYD048148175
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Quantity:	00300
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Year:	93
Facility Type:	Both Generator and TSD
EPA ID:	OHD046203774
Facility Name:	LTV STEEL (WEST)
Facility Address:	3341 JENNINGS ROAD
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	LTV STEEL (WEST)
Mailing Contact:	[redacted]
Mailing Address:	[redacted]
Mailing City:	[redacted]ND
Mailing State:	[redacted]
Mailing Zip:	[redacted]
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	[redacted]
Mailing Name:	CLEVELAND WORKS
Mailing Contact:	[redacted]
Mailing Address:	[redacted]

ISG CLEVELAND WEST PROPERTIES INC (Continued) **1000220130**

Mailing City: CLEVELAND
Mailing State: OH
Mailing Zip: 44109
Mailing Zip4: Not reported
Mailing Country: Not reported
Mailing Phone: 216-398-3165

Click this hyperlink while viewing on your computer to access additional NY MANIFEST: detail in the EDR Site Report.

I31
NNW
1/2-1
3906 ft.

Relative:
Higher

Actual:
590 ft.

JONES & LAUGHLIN STEEL CLEVELAND WK **LUST** **S103686198**
3341 JENNINGS RD **OH Spills** **N/A**
CLEVELAND, OH 44109 **DERR**
MSL

Site 2 of 2 in cluster I

LUST:
Owner: [redacted]
LTF Status: 6 Closure of regulated UST
Release Number: 18000036-N00001
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 180036
Former Lust Release Number: Not reported
Release Date: 2004-08-20 00:00:00

OH MSL:
Facility ID: 218-0432
EPA ID: OHD046203774
Lat/Long: 41 41 15 / 81 27 30
Facility Type: None

SPILLS:
Spill Year : 1999
Spill Month : 6
Spill Number : 1981
Date Spill Reported : 06/01/99
Sequential Number : 0
Lat/Long : Not reported
Spill No. : 9906-18-1981
Reporter Name : [redacted]
Confidential : No
District Code : NE
Employee Number : Not reported
Product Spilled: KO62 WASTE

JONES & LAUGHLIN STEEL CLEVELAND WK (Continued) **S103686198**

Spill Year :	1999
Spill Month :	11
Spill Number :	3872
Date Spill Reported :	11/02/99
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9911-18-3872
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	PROCESS WATER

Spill Year :	1991
Spill Month :	3
Spill Number :	0984
Date Spill Reported :	03/27/91
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9103-18-0984
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	OIL

Spill Year :	1992
Spill Month :	4
Spill Number :	1228
Date Spill Reported :	04/05/92
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9204-18-1228
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	OIL & GREASE

JONES & LAUGHLIN STEEL CLEVELAND WK (Continued) **S103686198**

Spill Year :	1992
Spill Month :	7
Spill Number :	2960
Date Spill Reported :	07/13/92
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9207-18-2960
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	STORM WATER

Click this hyperlink while viewing on your computer to access
23 additional OH SPILL record(s) in the EDR Site Report.

DERR:

Facility Id:	218000432
EPA Id:	OHD046203774
Lat/Long:	41.458789 / -81.691639
Alias:	Wean Port
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

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32 West 1/2-1 4467 ft. **OHIO DRUM RECONDITIONING** **CERCLIS** **1000325155**
3967 PEARL RD **FINDS** **OHD017757303**
CLEVELAND, OH 44109 **RCRA-LQG**
DERR
MSL

Relative: Higher

Actual: 690 ft.

CERCLIS Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Status:	Referred to Removal - NFRAP
NPL Status:	Not on the NPL

CERCLIS Assessment History:

Assessment:	DISCOVERY	Completed:	05/01/1979
Assessment:	PRELIMINARY ASSESSMENT	Completed:	12/01/1984
Assessment:	SITE INSPECTION	Completed:	12/19/1985
Assessment:	HRS PACKAGE	Completed:	10/20/1987
Assessment:	EXPANDED SITE INSPECTION	Completed:	09/30/1994
Assessment:	UNILATERAL ADMIN ORDER	Completed:	09/06/1996
Assessment:	Lodged By DOJ	Completed:	10/08/1998
Assessment:	CONSENT DECREE	Completed:	01/11/1999
Assessment:	REMOVAL	Completed:	01/18/1999
Assessment:	REMOVAL	Completed:	09/15/1999
Assessment:	PRP REMOVAL	Completed:	08/31/2000
Assessment:	Lodged By DOJ	Completed:	03/04/2003
Assessment:	NON-NPL PRP SEARCH	Completed:	04/01/2003
Assessment:	ADMIN ORDER ON CONSENT	Completed:	04/01/2003
Assessment:	CONSENT DECREE	Completed:	05/03/2003
Assessment:	ADMIN ORDER ON CONSENT	Completed:	08/05/2003
Assessment:	Lodged By DOJ	Completed:	04/21/2004
Assessment:	CONSENT DECREE	Completed:	06/16/2004

CERCLIS Site Status:
Not reported

OHIO DRUM RECONDITIONING (Continued) **1000325155**

RCRAInfo:
Owner: OHIO DRUM
(312) 555-1212
EPA ID: OHD017757303
Contact: [redacted]
Classification: Large Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

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RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

OH MSL:
Facility ID: 218-0594
EPA ID: OHD017757303
Lat/Long: 41 26 52 / 81 43 00
Facility Type: None

DERR:
Facility Id: 218000594
EPA Id: OHD017757303
Lat/Long: 41.44777778 / -81.71666667
Alias: Not reported
District: NEDO
Activity: Not reported
Site Info: 330-963-1200

33 SE 1/2-1 4920 ft.

Relative: Higher

Actual: 596 ft.

WABASH ALLOYS DIVISION CONNELL
4365 BRADLEY RD
CLEVELAND, OH 44109

PADS **1000310168**
FINDS **OHD064095102**
RCRA-LQG
RCRA-TSDF
UST
CORRACTS

CORRACTS Data:

EPA Id:	OHD064095102
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	03/31/1993
Corrective Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title:	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)

RCRAInfo Corrective Action Summary:

Event:	CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date:	03/31/1993

RCRAInfo:

Owner:	WABASH ALLOYS LLC
EPA ID:	OHD064095102
Contact:	[redacted]
Classification:	Large Quantity Generator, TSDF
TSDF Activities:	Not reported

BIENNIAL REPORTS:

Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D006	43854.00	D008	271160.00

Violation Status: Violations exist

Regulation Violated:	3745-66-42,43,47
Area of Violation:	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined:	11/29/1993
Actual Date Achieved Compliance:	06/06/1995
Enforcement Action:	WRITTEN INFORMAL
Enforcement Action Date:	12/07/1993
Penalty Type:	Not reported
Regulation Violated:	3745-66-42,-43,-47
Area of Violation:	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined:	08/25/1992
Actual Date Achieved Compliance:	06/06/1995
Enforcement Action:	WRITTEN INFORMAL
Enforcement Action Date:	08/26/1992
Penalty Type:	Not reported
Regulation Violated:	3745-65-52(E)
Area of Violation:	TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined:	10/01/1991
Actual Date Achieved Compliance:	10/16/1991
Enforcement Action:	WRITTEN INFORMAL

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

Enforcement Action Date: 10/02/1991
Penalty Type: Not reported

Regulation Violated: 3745-59-07
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 10/01/1991
Actual Date Achieved Compliance: 10/16/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/02/1991
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 04/01/1991
Actual Date Achieved Compliance: 05/14/1991

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 10/28/1988
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1988
Penalty Type: Not reported

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 10/28/1988
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1988
Penalty Type: Not reported

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 10/22/1987
Actual Date Achieved Compliance: 11/09/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-GOUNDWATER MONITORING REQUIREMENTS
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

Date Violation Determined: 11/04/1986
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/19/1986
Penalty Type: Not reported

There are 13 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19950606
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19950606
Compliance Evaluation Inspection	TSD-CONTINGENCY PLAN REQUREMENTS	19911016
	TSD-LAND BAN REQUIREMENTS	19911016
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19910514
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19871109
Compliance Evaluation Inspection	TSD-GOUNDWATER MONITORING REQUIREMENTS	19950606
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19950606
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19950606
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606
Other Evaluation	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

UST:

Facility ID: 18002016 Tank ID: T00001
Owner: CONNELL LTD PARTNERSHIP
Owner Address: [redacted]
CLEVELAND, OH 44109
Capacity: 6000 Tank Status: Currently In Use
Install Date: 01/01/95
Content: Diesel

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

Tank Type: Double Walled (Interstice)

Facility ID: 18002016 Tank ID: T00002
Owner: CONNELL LTD PARTNERSHIP
Owner Address: [redacted]
CLEVELAND, OH 44109
Capacity: 2500 Tank Status: Currently In Use
Install Date: 01/01/95
Content: Diesel
Tank Type: Double Walled (Interstice)

J34 **MOBILE TANK CAR SERV (DUP OF NO NAM** **OH Spills** **S103686201**
WSW **3610 BROOKSIDE PARK DR** **DERR** **N/A**
1/2-1 **CLEVELAND, OH 44109** **MSL**
5192 ft.

Site 1 of 2 in cluster J

Relative: Higher

Actual: 683 ft.

OH MSL:
Facility ID: 218-0532
EPA ID: OHD000720227
Lat/Long: 41 26 03 / 81 49 03
Facility Type: None

SPILLS:
Spill Year : 1981
Spill Month : 12
Spill Number : 2824
Date Spill Reported : 12/07/81
Sequential Number : 0
Lat/Long : Not reported
Spill No. : 8112-18-2824
Reporter Name : APC
Confidential : No
District Code : NE
Employee Number : Not reported
Product Spilled: HAZARDOUS WASTE

MOBILE TANK CAR SERV (DUP OF NO NAM (Continued) **S103686201**

Spill Year :	1983
Spill Month :	3
Spill Number :	0623
Date Spill Reported :	03/23/83
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8303-18-0623
Reporter Name :	USEPA
Confidential :	No
District Code :	NE
Employee Number :	1754
Product Spilled:	TANKCAR WASHING

DERR:

Facility Id:	218000532
EPA Id:	OHD000720227
Lat/Long:	41.43416667 / -81.8175
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

J35 WSW 1/2-1 5192 ft.

Relative: Higher

Actual: 683 ft.

MOBILE TANK CAR SERV
3610 BROOKSIDE PARK DR
CLEVELAND, OH 44109

Site 2 of 2 in cluster J

CERCLIS **1000254194**
RCRA-SQG **OHD000720227**
FINDS
RCRA-TSDF
RAATS
CORRACTS

CERCLIS Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Status:	Referred to Removal - NFRAP
NPL Status:	Not on the NPL
Site Description:	FORMER RAILROAD CAR WASHING FACILITY INVOLVED IN TREATMENT AND STORAGE OF HAZARDOUS WASTES.FORMER RAILROAD CAR WASHING FACILITY INVOLVED IN TREATMENT AND STORAGE OF HAZARDOUS WASTES.

CERCLIS Assessment History:

Assessment:	DISCOVERY	Completed:	08/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	12/01/1984
Assessment:	HRS PACKAGE	Completed:	10/29/1987
Assessment:	SITE INSPECTION	Completed:	10/29/1987
Assessment:	NON-NPL PRP SEARCH	Completed:	10/14/1988
Assessment:	UNILATERAL ADMIN ORDER	Completed:	01/24/1990
Assessment:	ADMIN ORDER ON CONSENT	Completed:	08/29/1991
Assessment:	UNILATERAL ADMIN ORDER	Completed:	01/29/1992
Assessment:	PRP REMOVAL	Completed:	05/24/1993

CERCLIS Site Status:
Stabilized

CERCLIS Alias Name(s):
NO NAME
MOBILE TANK CAR SERV
MOBILE TANK CAR SERV

CORRACTS Data:

EPA Id:	OHD000720227
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	09/30/1993

MOBILE TANK CAR SERV (Continued) **1000254194**

Corrective Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
2002 NAICS Title: Not reported

RCRAInfo Corrective Action Summary:
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.
Event Date: 09/30/1993

RCRAInfo:
Owner: MOBILE TANK CAR SERVICES INC
(216) 747-7907
EPA ID: OHD000720227
Contact: [redacted]
Classification: TSDF
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 12/09/1988
Actual Date Achieved Compliance: 03/21/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/30/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 12/09/1988
Actual Date Achieved Compliance: 03/21/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/30/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: FORMAL ENFORCEMENT AGREEMENT
Date Violation Determined: 07/29/1988
Actual Date Achieved Compliance: Not reported

Regulation Violated: Not reported
Area of Violation: FORMAL ENFORCEMENT AGREEMENT
Date Violation Determined: 07/29/1988
Actual Date Achieved Compliance: 01/29/1992

There are 4 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19890321
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19890321
Compliance Schedule Evaluation	FORMAL ENFORCEMENT AGREEMENT	
Compliance Schedule Evaluation	FORMAL ENFORCEMENT AGREEMENT	19920129

MOBILE TANK CAR SERV (Continued) **1000254194**

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CLEVELAND	1009182755	HARSHAW CHEMICAL CO THE OFFICE	1945 E 197TH ST		EDR Historical Cleaners
CLEVELAND	1002710531	LTV STEEL	WEST 3RD STREET GATE 3 ORE DOCK		LUST, OH Spills
CLEVELAND	1009186012	HARSHAW CHEMICAL CO THE OFFICE	1945 E 97TH ST		EDR Historical Cleaners
CLEVELAND	S105859375	TRUCKING COMPANY DUMP AKA HARKNESS	BRADLEY / JENNINGS STREETS		HIST LF
CLEVELAND	S104517663	NORTH COAST ROOFING	JENNINGS AVE		DERR
CLEVELAND	S105501538	FREIGHT SYSTEM PROPERTY	1110 LOWER DENISON AVE	44109	LUST
CLEVELAND	S106615545	CAMPBELL ROAD COMPOST FACILITY	80" MILL BLDG., ISG COMPLEX, WEST SIDE	44105	SWF/LF
CLEVELAND	S106297514	HARSHAW CHEMICAL	N/A		OH Spills
CLEVELAND	S106296750	HARSHAW CHEMICAL CO	N/A		OH Spills
CLEVELAND	S105859374	WEST 14TH STREET LANDFILL	SOUTH OF JCT. I-71 / W 14TH		HIST LF
CLEVELAND	1004768042	ODOT HIGHWAY BRIDGE	INTERSTATE RT 71 SECT 1174	44125	RCRA-SQG, FINDS
CLEVELAND	1000873765	ODOT HIGHWAY BRIDGE	INTERSTATE RTE 90 SECTION 356	44125	RCRA-SQG, FINDS
CLEVELAND	S107556733	STATE ROAD TRANSMISSION	4837 STATE RD	44109	LUST
CUYAHOGA HEIGHTS	S105902175	SOHIO	STATE / PORTAGE	44125	UNREG LTANKS
VALLEY VIEW	S102894310	NORTON COMPOST FACILITY	CANAL RD	44125	SWF/LF, OH Spills

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D003	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D018	BENZENE
D019	CARBON TETRACHLORIDE
D021	CHLOROBENZENE
D022	CHLOROFORM
D023	O-CRESOL
D026	CRESOL
D027	1,4-DICHLOROBENZENE

EPA Waste Codes Addendum

Code	Description
D028	1,2-DICHLOROETHANE
D033	HEXACHLOROBUTADIENE
D034	HEXACHLOROETHANE
D035	METHYL ETHYL KETONE
D038	PYRIDINE
D039	TETRACHLOROETHYLENE
D040	TRICHLOROETHYLENE
F001	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F002	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F004	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004;

EPA Waste Codes Addendum

Code	Description
	AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
U002	ACETONE (I)
U002	2-PROPANONE (I)
U009	ACRYLONITRILE
U009	2-PROPENENITRILE
U031	1-BUTANOL (I)
U031	N-BUTYL ALCOHOL (I)
U044	CHLOROFORM
U044	METHANE, TRICHLORO-
U052	CRESOL (CRESYLIC ACID)
U052	PHENOL, METHYL-
U057	CYCLOHEXANONE (I)
U070	BENZENE, 1,2-DICHLORO-
U070	O-DICHLOROBENZENE
U080	METHANE, DICHLORO-
U080	METHYLENE CHLORIDE
U123	FORMIC ACID (C,T)
U154	METHANOL (I)
U154	METHYL ALCOHOL (I)
U159	2-BUTANONE (I,T)
U159	METHYL ETHYL KETONE (MEK) (I,T)
U210	ETHENE, TETRACHLORO-
U210	TETRACHLOROETHYLENE
U213	FURAN, TETRAHYDRO-(I)
U213	TETRAHYDROFURAN (I)
U220	BENZENE, METHYL-
U220	TOLUENE

EPA Waste Codes Addendum

Code	Description
U223	BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T)
U223	TOLUENE DIISOCYANATE (R,T)
U226	ETHANE, 1,1,1-TRICHLORO-
U226	METHYL CHLOROFORM
U239	BENZENE, DIMETHYL- (I,T)
U239	XYLENE (I)

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/23/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/23/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/21/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/09/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 04/26/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/14/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 01/19/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 33

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 04/26/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/13/2006
Date Data Arrived at EDR: 04/28/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 32

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/06/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/21/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/13/2005
Date Made Active in Reports: 08/17/2005
Number of Days to Update: 35

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/12/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/29/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 03/31/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 05/11/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 02/13/2006
Date Data Arrived at EDR: 04/21/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 19

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/12/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/09/2006
Date Data Arrived at EDR: 03/29/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 62

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 09/25/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/27/2006
Date Data Arrived at EDR: 05/02/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 28

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/30/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Ohio EPA
Telephone: 614-644-2924
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: N/A

DERR: Division of Emergency & Remedial Response's Database
The DERR listings contains sites from all of Ohio that are in the Division of Emergency and Remedial Response (DERR) database, which is an index of sites for which our district offices maintain files. The database is NOT a record of contaminated sites or sites suspected of contamination. Not all sites in the database are contaminated, and a site's absence from the database does not imply that it is uncontaminated.

Date of Government Version: 03/14/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Ohio EPA, Div. of Emergency and Remedial Response
Telephone: 614-644-3538
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

TOWNGAS: DERR Towngas Database
The database includes 82 very old sites (circa 1895) which produced gas from coal for street lighting. Most visual evidence of these sites has disappeared, however the potential for buried coal tar remains. The database is no longer in active use.

Date of Government Version: 07/28/1992
Date Data Arrived at EDR: 02/21/2003
Date Made Active in Reports: 03/05/2003
Number of Days to Update: 12

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 02/12/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

MSL: Master Sites List
Ohio EPA no longer maintains or publishes the MSL, which was a list of sites with known or suspected contamination. Please be advised that this report does not constitute a determination that any site identified in the report is or may be contaminated.

Date of Government Version: 03/01/1999
Date Data Arrived at EDR: 03/29/1999
Date Made Active in Reports: 04/21/1999
Number of Days to Update: 23

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2068
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

SWF/LF: Licensed Solid Waste Facilities
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/23/2006
Date Data Arrived at EDR: 05/24/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 35

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2621
Last EDR Contact: 05/11/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

HIST LF: Old Solid Waste Landfill

A list of about 1200 old abandoned dumps or landfills. This database was developed from Ohio EPA staff notebooks and other information dating from the mid-1970s

Date of Government Version: 01/01/1980
Date Data Arrived at EDR: 07/01/2003
Date Made Active in Reports: 07/17/2003
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/26/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LUST: Leaking Underground Storage Tank File

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Department of Commerce
Telephone: 614-752-7924
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

UNREG LTANKS: Ohio Leaking UST File

A suspected or confirmed release of petroleum from a non-regulated UST.

Date of Government Version: 08/25/1999
Date Data Arrived at EDR: 08/19/2003
Date Made Active in Reports: 08/26/2003
Number of Days to Update: 7

Source: Department of Commerce
Telephone: 614-752-7938
Last EDR Contact: 08/01/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST: Underground Storage Tank Tank File

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 04/03/2006
Number of Days to Update: 19

Source: Department of Commerce
Telephone: 614-752-7938
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

ARCHIVE UST: Archived Underground Storage Tank Sites

Underground storage tank records that have been removed from the Underground Storage Tank database.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Department of Commerce, Division of State Fire Marshal
Telephone: 614-752-7938
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

SPILLS: Emergency Response Database

Incidents reported to the Emergency Response Unit. The focus of the ER program is to minimize the impact on the environment from accidental releases, spills, and unauthorized discharges from any fixed or mobile sources. Incidents involving petroleum products, hazardous materials, hazardous waste, abandoned drums, or other materials which may pose as a pollution threat to the state?s water, land, or air should be reported immediately. Not all incidents included in the database are actual SPILLS, they can simply be reported incidents.

Date of Government Version: 06/05/2006
Date Data Arrived at EDR: 06/06/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 22

Source: Ohio EPA
Telephone: 614-644-2084
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

ENG CONTROLS: Sites with Engineering Controls
A database that tracks properties with engineering controls.

Date of Government Version: 03/20/2006
Date Data Arrived at EDR: 04/04/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 30

Source: Ohio EPA
Telephone: 614-644-2324
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

INST CONTROL: Sites with Institutional Engineering Controls
A database that tracks properties with institutional controls.

Date of Government Version: 03/20/2006
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 28

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2324
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

VCP: Voluntary Action Program Sites
Site involved in the Voluntary Action Program.

Date of Government Version: 03/06/2006
Date Data Arrived at EDR: 03/06/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 24

Source: Ohio EPA, Voluntary Action Program
Telephone: 614-644-1298
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaner facility locations.

Date of Government Version: 04/20/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 15

Source: Ohio EPA
Telephone: 614-644-3469
Last EDR Contact: 04/20/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

BROWNFIELDS: Ohio Brownfield Inventory
A statewide brownfields inventory. A brownfield is an abandoned, idled or under-used industrial or commercial property where expansion or redevelopment is complicated by known or potential releases of hazardous substances and/or petroleum.

Date of Government Version: 04/11/2006
Date Data Arrived at EDR: 05/19/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 40

Source: Ohio EPA
Telephone: 614-644-3748
Last EDR Contact: 07/13/2006
Next Scheduled EDR Contact: 10/09/2006
Data Release Frequency: Varies

CDL: Clandestine Drug Lab Locations
A list of clandestine drug lab sites with environmental impact. This list is extracted from the SPILLS database based on the "product" type.

Date of Government Version: 03/22/2006
Date Data Arrived at EDR: 04/10/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 24

Source: Ohio EPA
Telephone: 614-644-2080
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

NPDES: NPDES General Permit List
General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 05/02/2006
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 26

Source: Ohio EPA
Telephone: 614-644-2031
Last EDR Contact: 06/02/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

USD: Urban Setting Designation Sites
A USD may be requested for properties participating in the VAP when there is no current or future use of the ground water by local residents for drinking, showering, bathing or cooking. In these areas, an approved USD would lower the cost of cleanup and promote economic redevelopment while still protecting public health and safety. If these USDs were to be approved, the ground water cleanup or response requirements for the areas could be lessened. The Ohio EPA director may approve a USD request based on a demonstration that the USD requirements are met and an evaluation of existing and future uses of ground water in the area. The Ohio EPA director's decision on approval or denial of the request is needed before cleanup requirements for the site can be determined.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 04/25/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/07/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

HIST INST CONTROLS: Institutional Controls Database
"Institutional control" is a restriction that is recorded in the same manner as a deed which limits access to or use of the property such that exposure to hazardous substances or petroleum are effectively and reliably eliminated or mitigated. Examples of institutional controls include land and water use restrictions. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 28

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

HIST ENG CONTROLS: Operation & Maintenance Agreements Database
Volunteers that complete a voluntary action that relies on the ongoing operation and maintenance (O&M) of an engineered control to make the site protective (e.g" cap systems and ground water treatment systems) must enter into a legally binding agreement with the Ohio EPA before the director issues a covenant not to sue. This O&M Agreement must describe how the remedy is constructed and how itwill be monitored, maintained and repaired. It also lays out inspection opportunities for the agency. Companies must document that they have the financial capability to operate any remedy relied on, before the agency will agree to enter into the O&M Agreement. The statute requires that the agency be notified of any change in ownership. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/04/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 30

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

HIST USD: Urban Setting Designations Database
A USD may be requested for properties participating in the VAP when there is no current or future use of the ground water by local residents for drinking, showering, bathing or cooking. In these areas, an approved USD would lower the cost of cleanup and promote economic redevelopment while still protecting public health and safety. If these USDs were to be approved, the ground water cleanup or response requirements for the areas could be lessened. The Ohio EPA director may approve a USD request based on a demonstration that the USD requirements are met and an evaluation of existing and future uses of ground water in the area. The Ohio EPA director's decision on approval or denial of the request is needed before cleanup requirements for the site can be determined. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/25/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 04/07/2006
Number of Days to Update: 49

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 04/24/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 8

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/05/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/02/2006
Date Data Arrived at EDR: 05/31/2006
Date Made Active in Reports: 06/27/2006
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/31/2006
Next Scheduled EDR Contact: 08/28/2006
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 05/04/2006
Date Made Active in Reports: 06/06/2006
Number of Days to Update: 33

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 09/30/2005
Date Data Arrived at EDR: 05/09/2006
Date Made Active in Reports: 05/24/2006
Number of Days to Update: 15

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/17/2006
Number of Days to Update: 61

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 05/15/2006
Next Scheduled EDR Contact: 08/14/2006
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 46

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/11/2006
Next Scheduled EDR Contact: 10/09/2006
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Day Care Facilities
Source: Department of Job & Family Services
Telephone: 614-466-6282

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

HARSHAW FUSRAP
1000 HARVARD AVENUE
CLEVELAND, OH 44105

TARGET PROPERTY COORDINATES

Latitude (North):	41.44920 - 41˚ 26' 57.1''
Longitude (West):	81.6856 - 81˚ 41' 8.2''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	442731.5
UTM Y (Meters):	4588638.5
Elevation:	589 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	41081-D6 CLEVELAND SOUTH, OH
Most Recent Revision:	1994

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

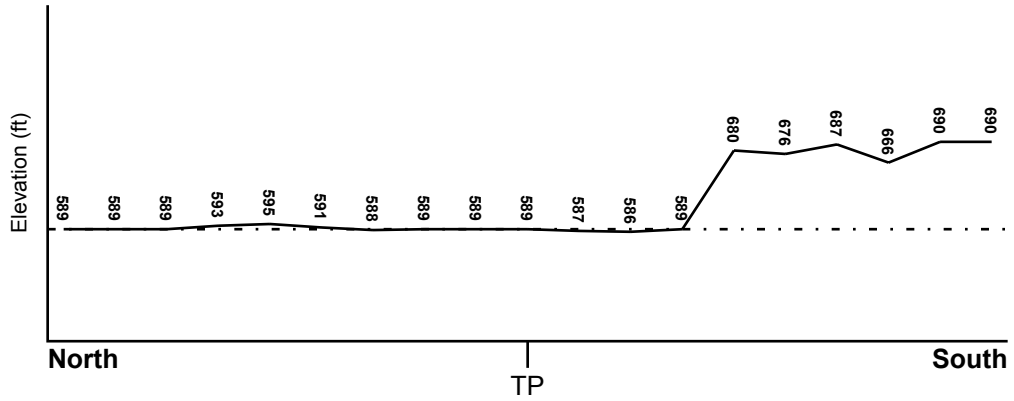
TOPOGRAPHIC INFORMATION

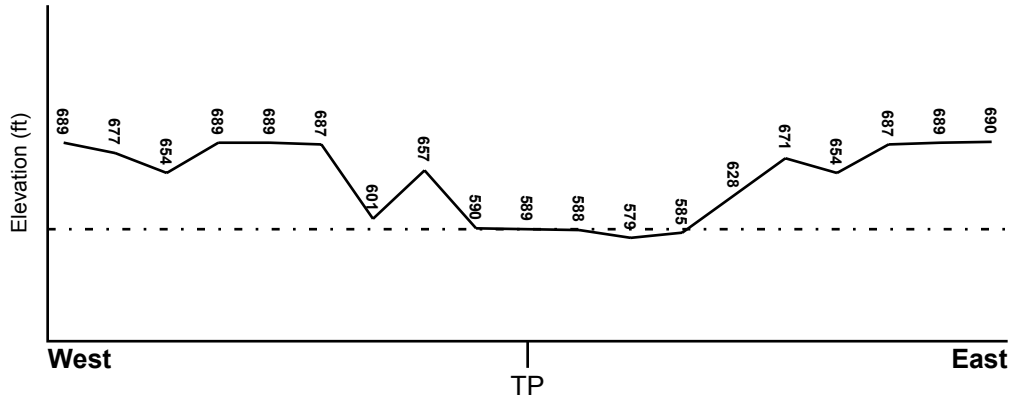
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General East

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 589 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
CUYAHOGA, OH	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 3901040025B

Additional Panels in search area: 3901190001B
3906540001B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CLEVELAND SOUTH	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
2	1/8 - 1/4 Mile NW	N
4	1/2 - 1 Mile East	NE

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Devonian
Series:	Upper Devonian
Code:	D3 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: clay loam
sandy loam
loam
silt loam

Surficial Soil Types: clay loam
sandy loam
loam
silt loam

Shallow Soil Types: silty clay loam

Deeper Soil Types: stratified
unweathered bedrock
weathered bedrock
clay loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

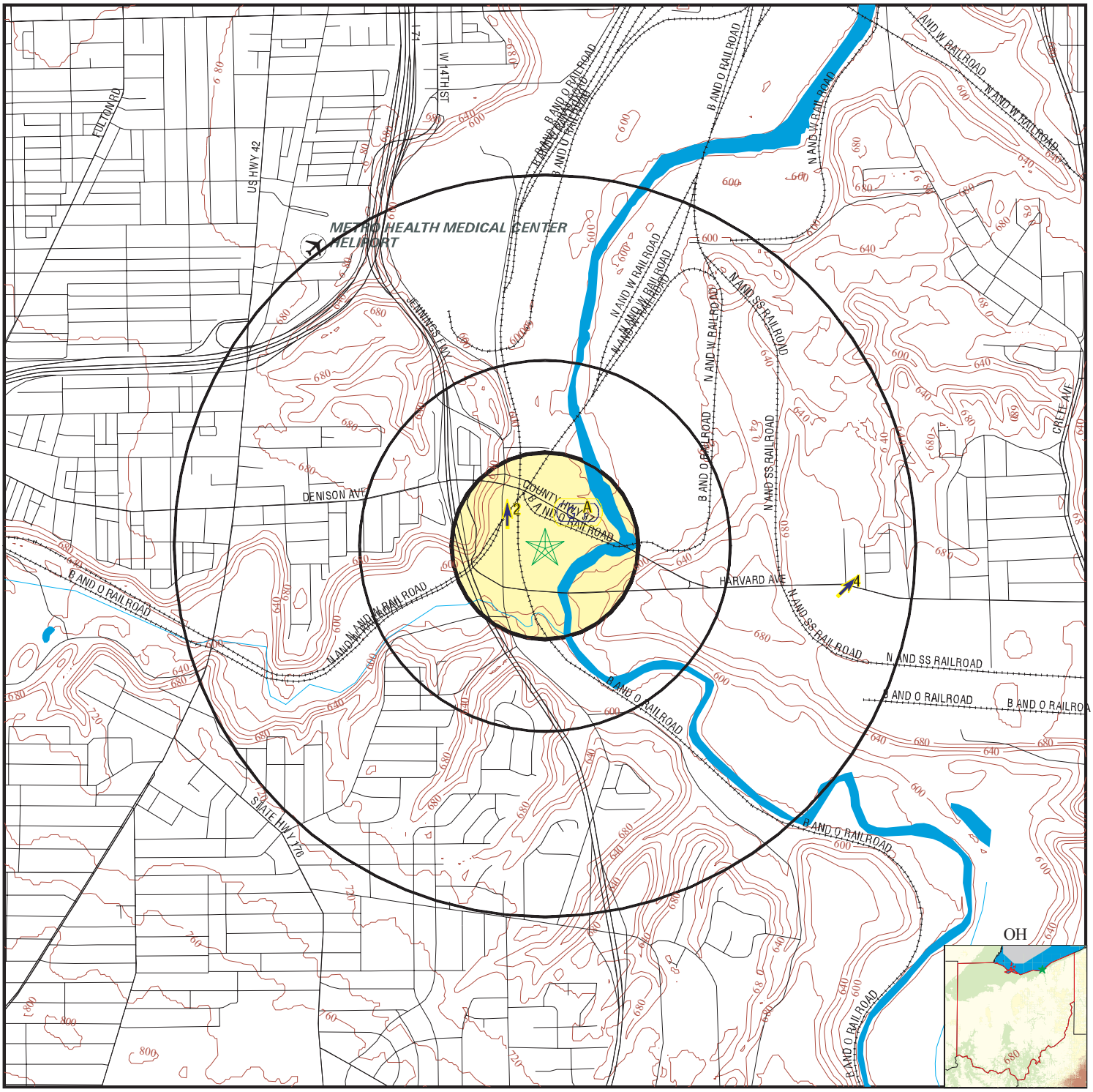
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 1714652.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME: Harshaw FUSRAP	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 1000 Harvard Avenue Cleveland OH 44105	CONTACT: Marc Graham
LAT/LONG: 41.4492 / 81.6856	INQUIRY #: 1714652.2s
	DATE: July 13, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
A1 **NNE** **0 - 1/8 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1811041-00 NOT REPORTED 9.41 FT. 18-23 FT. Not Reported 1/92	**AQUIFLOW**	**17010**
2 **NW** **1/8 - 1/4 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1812972-00 N 14.0 18.0 Not Reported 10/95	**AQUIFLOW**	**12488**
A3 **NE** **1/8 - 1/4 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	189748-00 NOT REPORTED 12.9 15.95 Not Reported 2/1990	**AQUIFLOW**	**19502**
4 **East** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1841738 NE 0.78 20 Not Reported 3/1998	**AQUIFLOW**	**11798**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: OH Radon

Radon Test Results

Zip	Total Sites	Median	1st Quartile	3rd Quartile	Min.	Max.
44105	81	1.3	0.7	2.4	0.1	38.3

Federal EPA Radon Zone for CUYAHOGA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 44105

Number of sites tested: 3

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.767 pCi/L	67%	33%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Public Water System Data
Source: Ohio Environmental Protection Agency
Telephone: 614-644-3677
The database includes community, transient noncommunity and nontransient noncommunity water wells; and source treatment unit locations.

Water Well Database
Source: Department of Natural Resources
Telephone: 614-265-6747

OTHER STATE DATABASE INFORMATION

RADON

State Database: OH Radon
Source: Department of Health
Telephone: 614-644-2727
Radon Statistics for Zip Code Areas

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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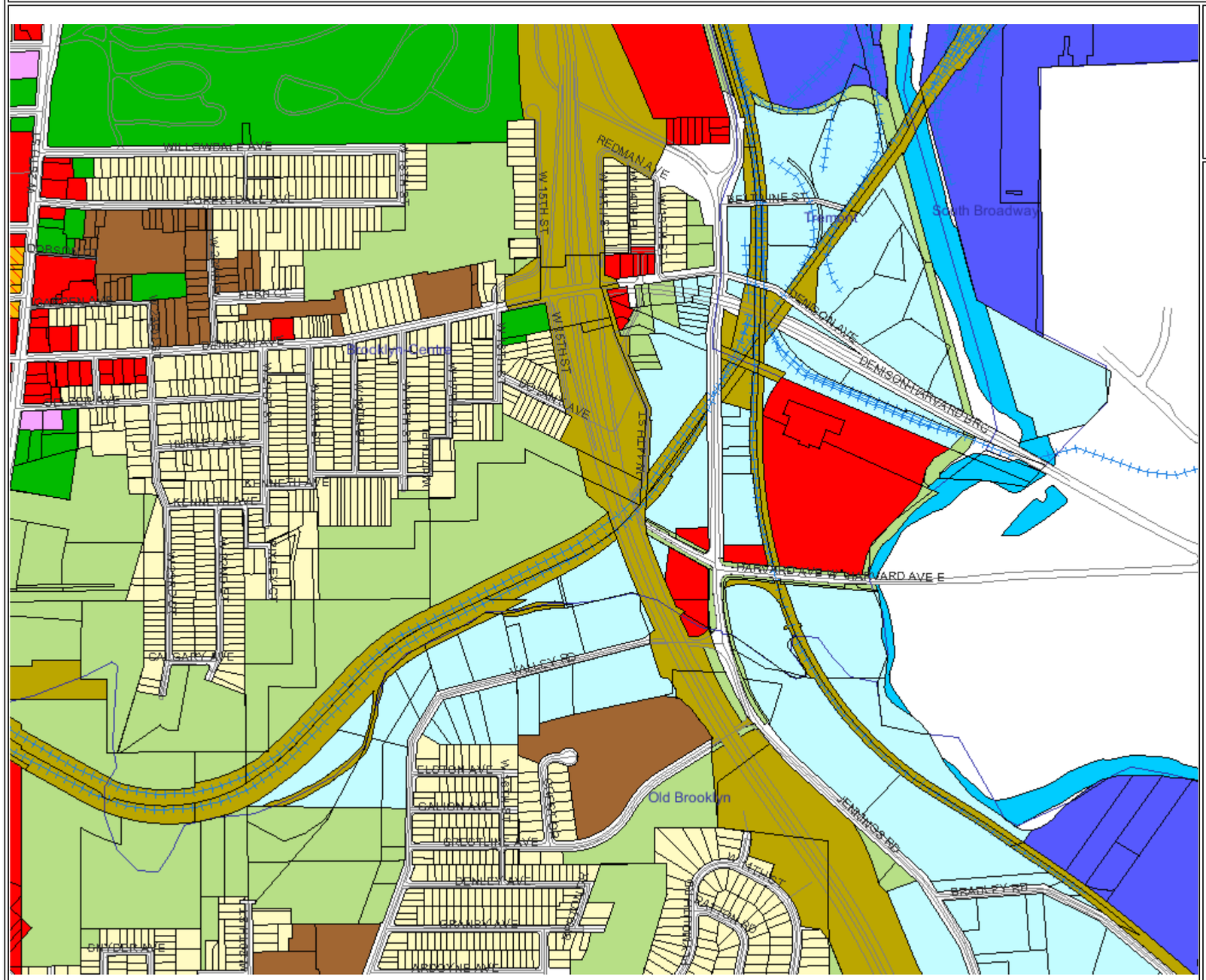
IA03/IA04 2020 Citywide Plan Land Use (Draft)



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LEGEND

Community Facilities

- EMS
- Fire
- Health
- Hospital
- Library
- Park
- Playground
- Police
- Recre Center
- School
- Freeway
- Municipal Limit
- Parcel
- Zoning
- Census Tract
- Statistical Planning Area
- Planning District
- Police District
- Ward
- Pavement
- Railroad
- Street
- Building
- Retail District
- Local Landmark District
- National Landmark District
- Empowerment Zone
- Business Revitalization District
- Lake/Rivers

Civic Vision Landuse(Draft)

- Single or Two Family
- Multi Family
- Office
- Retail
- Commercail Services
- Light Industry
- Heavey Industry
- Institutional
- Recreation/Open Space
- Transportation/Utilities
- Commercial Parking
- Mixed Use

Existing Landuse

- Vacant Land
- Single Family
- Two Family
- Multi Family
- Office
- Retail
- Commercail Services
- Light Industry
- Heavey Industry
- Institutional
- Recreation/Open Space
- Transportation/Utilities
- Commercial Parking

The EDR Aerial Photo Decade Package

Harshaw FUSRAP
1000 Harvard Avenue
Cleveland, OH 44105

Inquiry Number: 1714652.5

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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Date EDR Searched Historical Sources:

Aerial Photography July 13, 2006

Target Property:

1000 Harvard Avenue

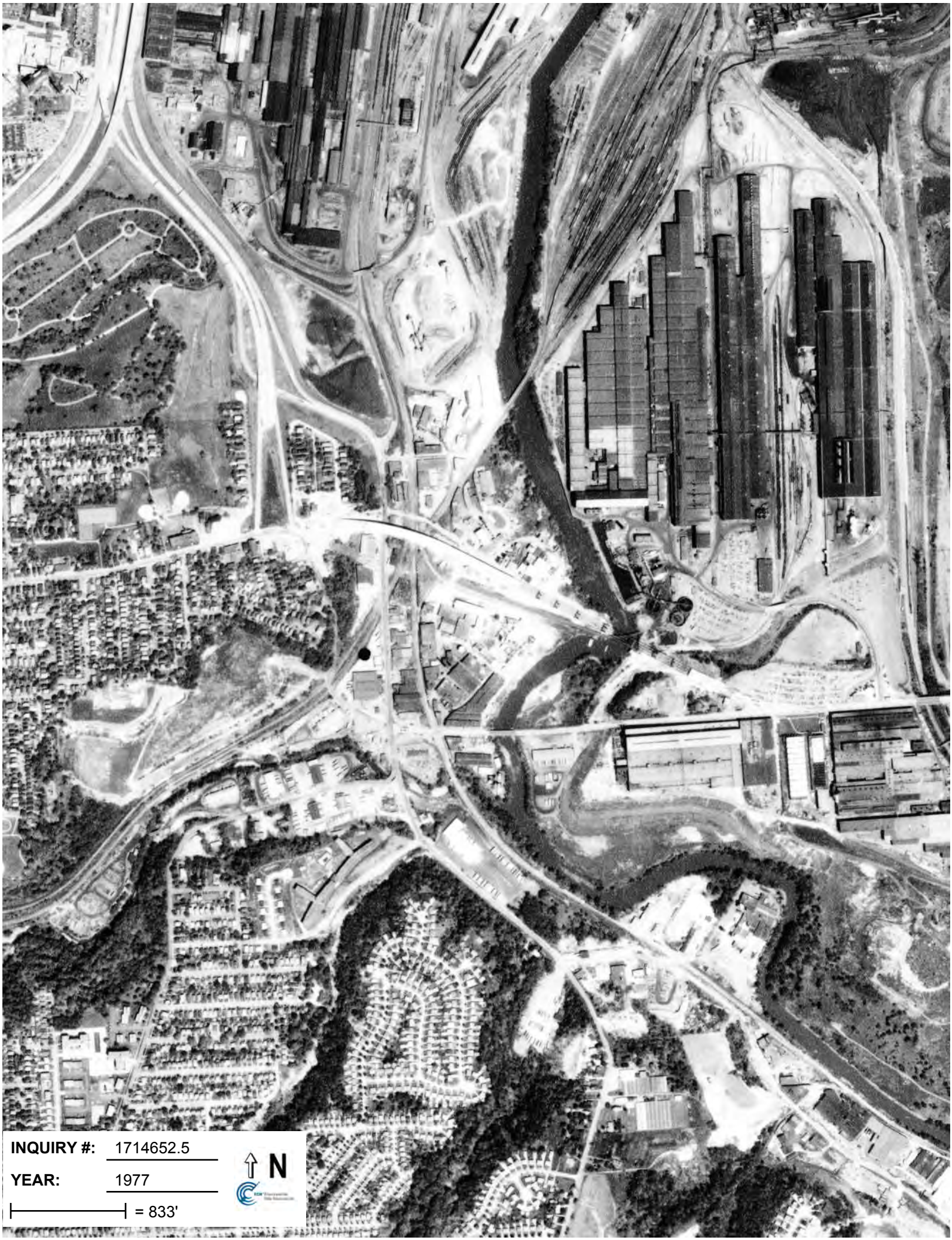
Cleveland, OH 44105

Year	***Scale***	***Details***	***Source***
1938	Aerial Photograph. Scale: 1"=750'	Panel #: 2441081-D6/Flight Date: June 29, 1938	EDR
1952	Aerial Photograph. Scale: 1"=750'	Panel #: 2441081-D6/Flight Date: April 16, 1952	EDR
1962	Aerial Photograph. Scale: 1"=750'	Panel #: 2441081-D6/Flight Date: April 08, 1962	EDR
1977	Aerial Photograph. Scale: 1"=833'	Panel #: 2441081-D6/Flight Date: May 11, 1977	EDR
1991	Aerial Photograph. Scale: 1"=833'	Panel #: 2441081-D6/Flight Date: November 17, 1991	EDR

INQUIRY #: 1714652.5
YEAR: 1938
= 750'
N

INQUIRY #: 1714652.5
YEAR: 1952
= 750'
N

INQUIRY #: 1714652.5
YEAR: 1962
= 750'
N


INQUIRY #: 1714652.5
YEAR: 1977
= 833'
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INQUIRY #: 1714652.5
YEAR: 1991
= 833'
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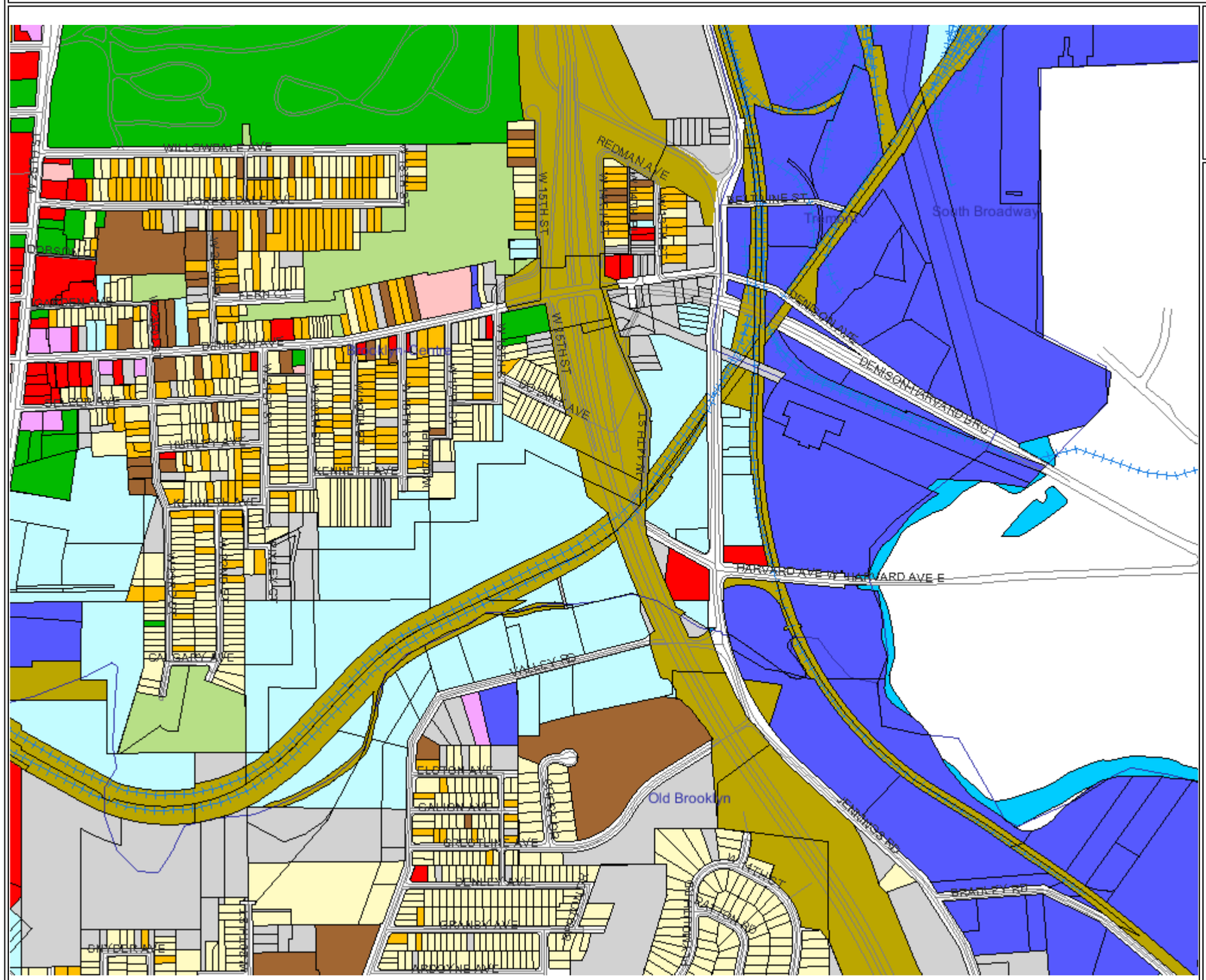
IA03/IA04 Current Land Use



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LEGEND

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- Parcel
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- Census Tract
- Statistical Planning Area
- Planning District
- Police District
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- Local Landmark District
- National Landmark District
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1776 Niagra Street
Buffalo, NY 14207

Order Date: 7/13/2006 **Completion Date:** 7/13/2006
Inquiry #: 1714652.3s
P.O. #: NA
Site Name: Harshaw FUSRAP
Address: 1000 Harvard Avenue
City/State: Cleveland, OH 44105
Cross Streets:

Customer Project: NA
1091724ERK 716-879-4367

Based on client-supplied information, fire insurance maps for the following years were identified

1903 - 1 Map
1913 - 1 Map
1950 - 1 Map
1952 - 1 Map
1956 - 1 Map
1966 - 1 Map
1972 - 1 Map

Limited Permission to Photocopy Total Maps: 7

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USER'S GUIDE

This User's Guide provides guidelines for accessing Sanborn Map® images and for transferring them to your Word Processor.

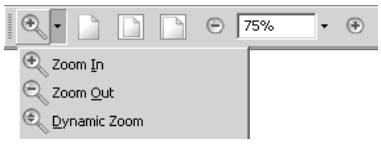
Reading Sanborn Maps

- Sanborn Maps document historical property use by displaying property information through words, abbreviations, and map symbols. The Sanborn Map Key provides information to help interpret the symbols and abbreviations used on Sanborn Maps. The Key is available from EDR's Web Site at: http://www.edrnet.com/reports/samples/key.pdf

Organization of Electronic Sanborn Image File

- Sanborn Map Report, listing years of coverage
- User's Guide
- Oldest Sanborn Map Image
- Most recent Sanborn Map Image

Navigating the Electronic Sanborn Image File

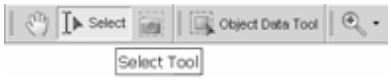


1. Open file on screen.
2. Identify TP (Target Property) on the most recent map.
3. Find TP on older printed images.
4. Using Acrobat® Reader®, zoom to 250% in order to view more clearly. (200-250% is the approximate equivalent scale of hardcopy Sanborn Maps.)
   A. On the menu bar, click "View" and then "Zoom to..."
   B. Or, use the magnifying tool and drag a box around the TP

Printing a Sanborn Map From the Electonic File

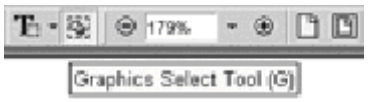
- EDR recommends printing images at 300 dpi (300 dpi prints faster than 600 dpi)
- To print only the TP area, cut and paste from Acrobat to your word processor application.

<u>Acrobat Versions 6 and 7</u>



1. Go to the menu bar
2. Click the "Select Tool"
3. Draw a box around the area selected
4. "Right click" on your mouse
5. Select "Copy Image to Clipboard"
6. Go to Word Processor such as Microsoft Word, paste and print.

<u>Acrobat Version 5</u>



1. Go to the menu bar
2. Click the "Graphics Select Tool"
3. Draw a box around the area selected
4. Go to "Menu"
5. Highlight "Edit"
6. Highlight "Copy"
7. Go to Word Processor such as Microsoft Word, paste and print.

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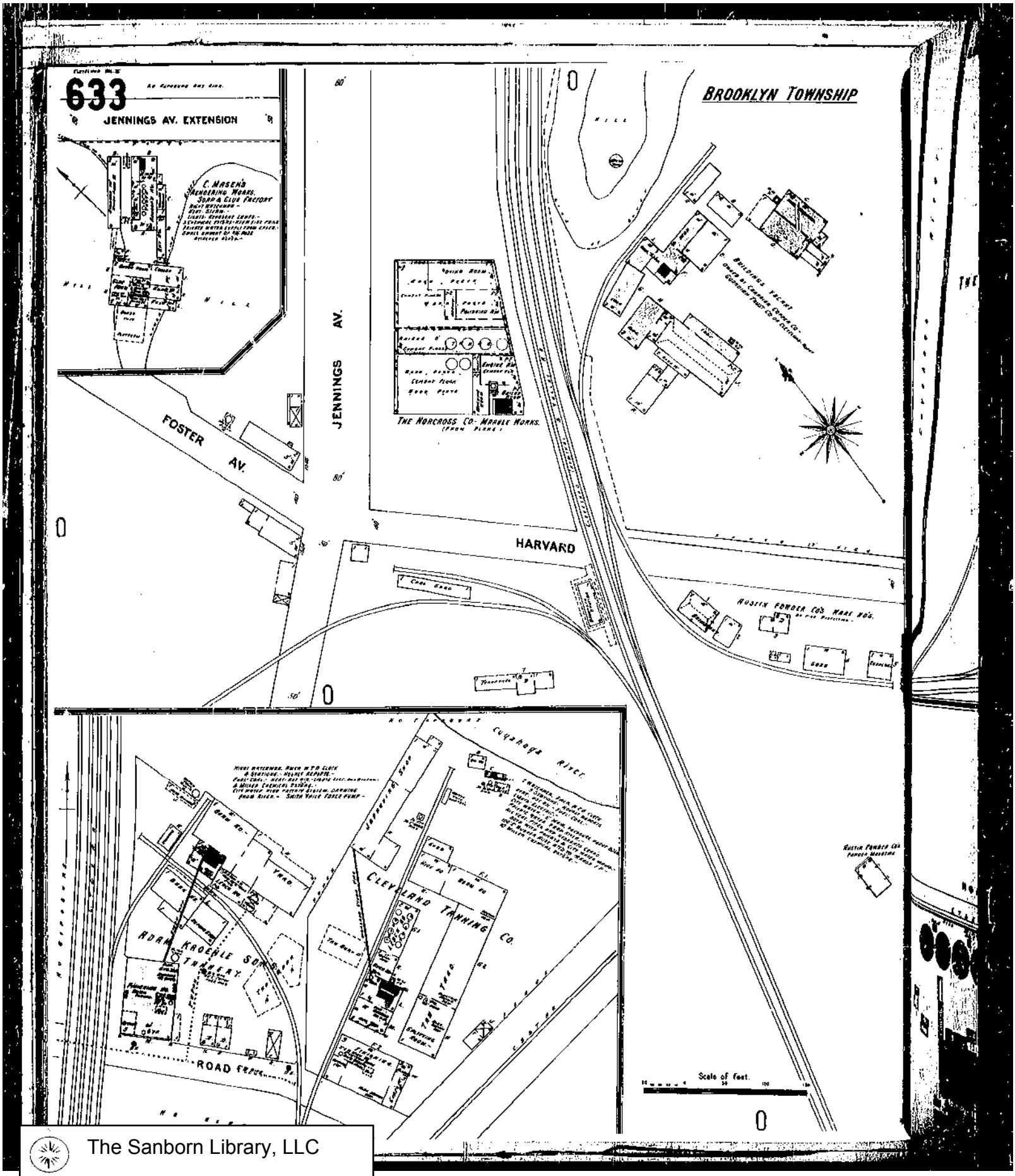
- Due to file size limitations, certain ISPs, including AOL, may occasionally delay or decline to deliver files. Please contact your ISP to identify their specific file size limitations.



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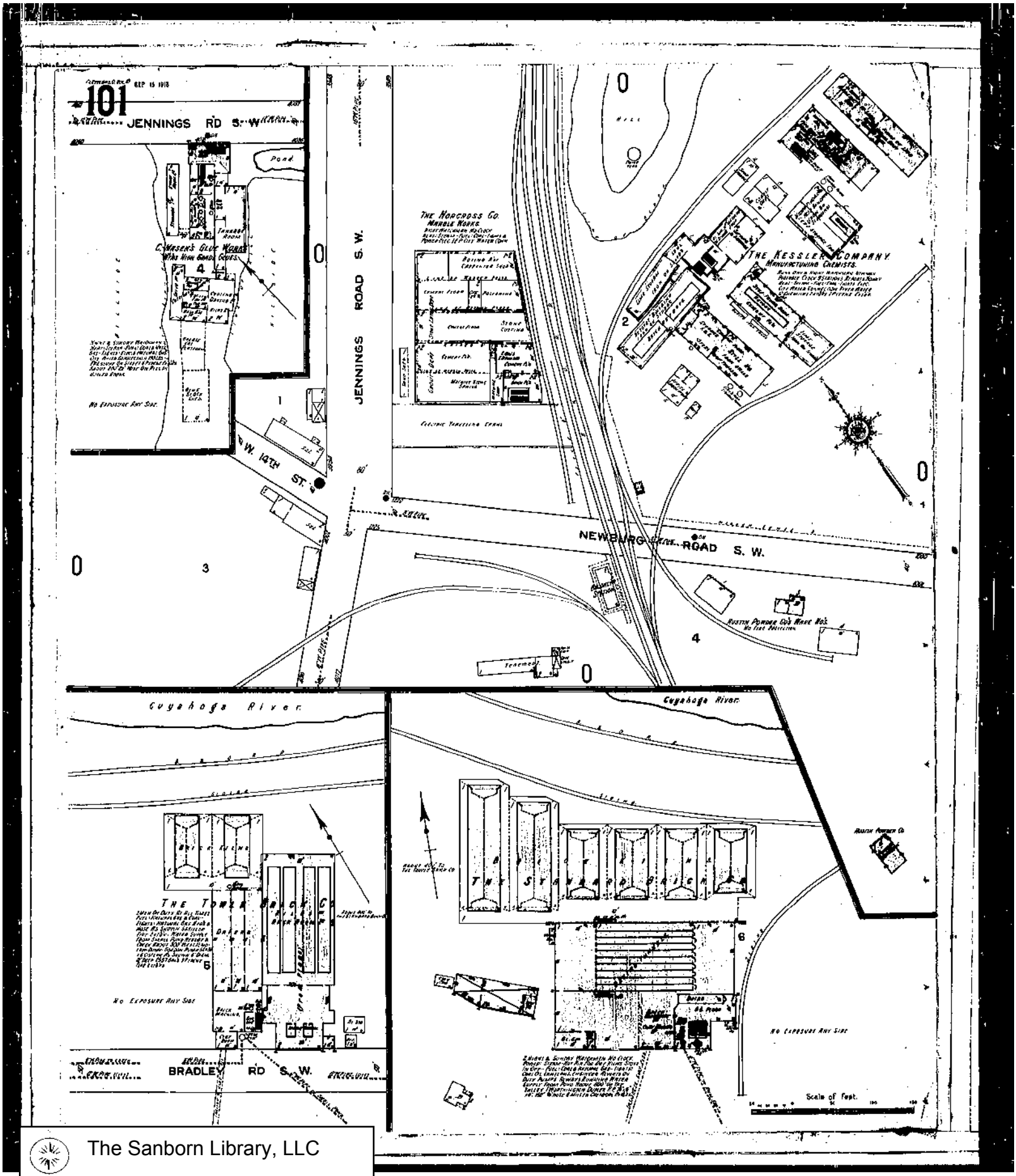

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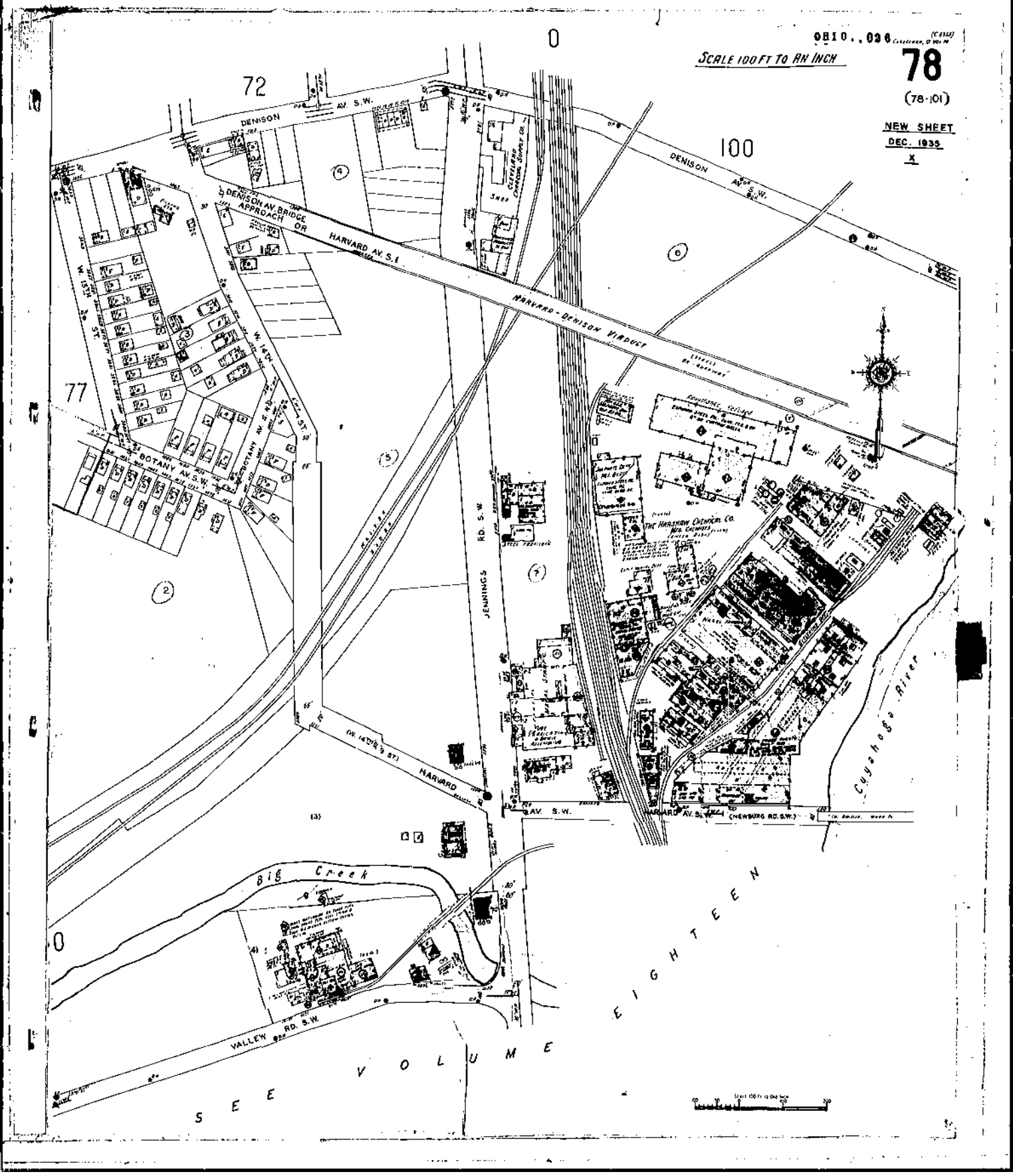

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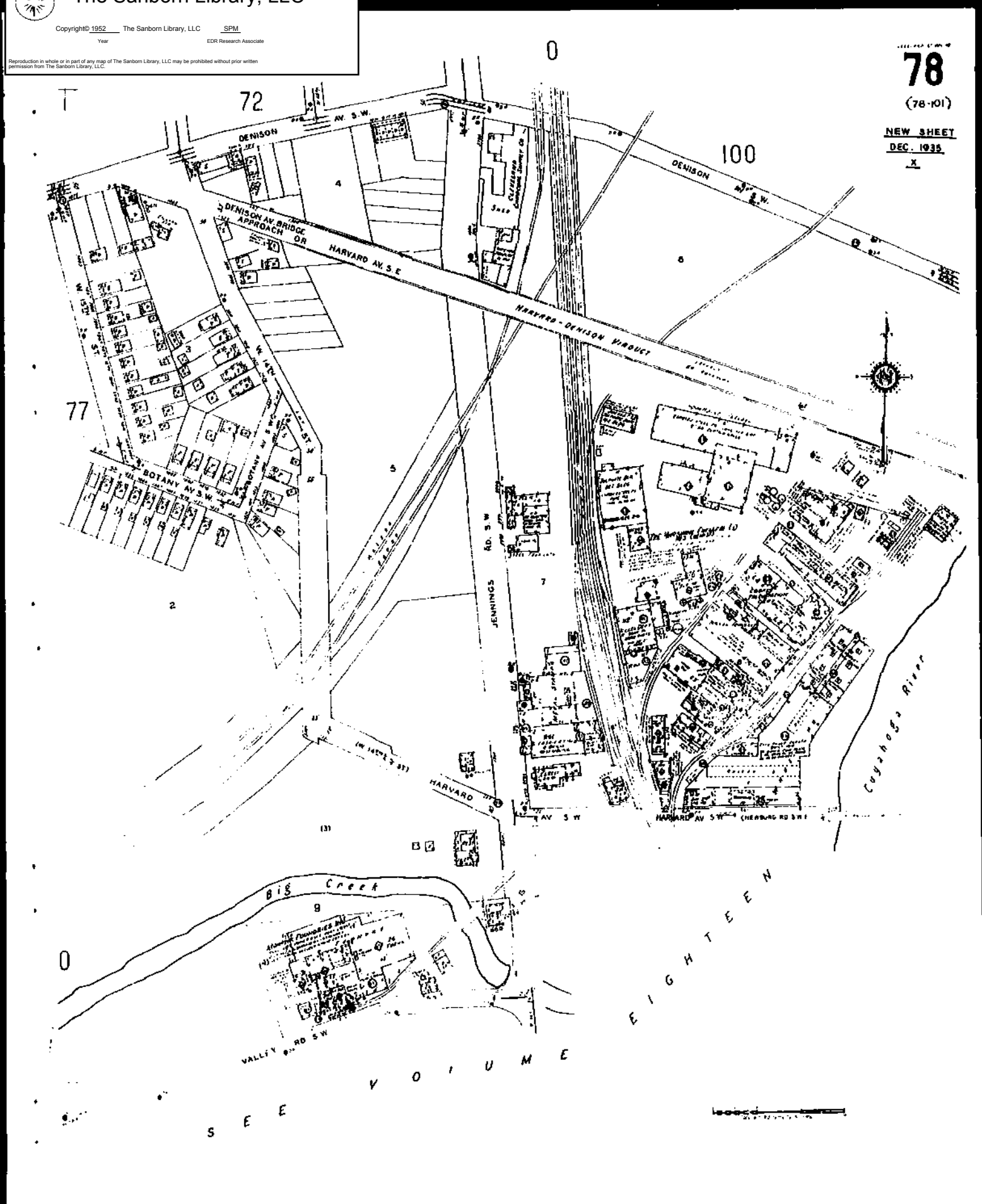

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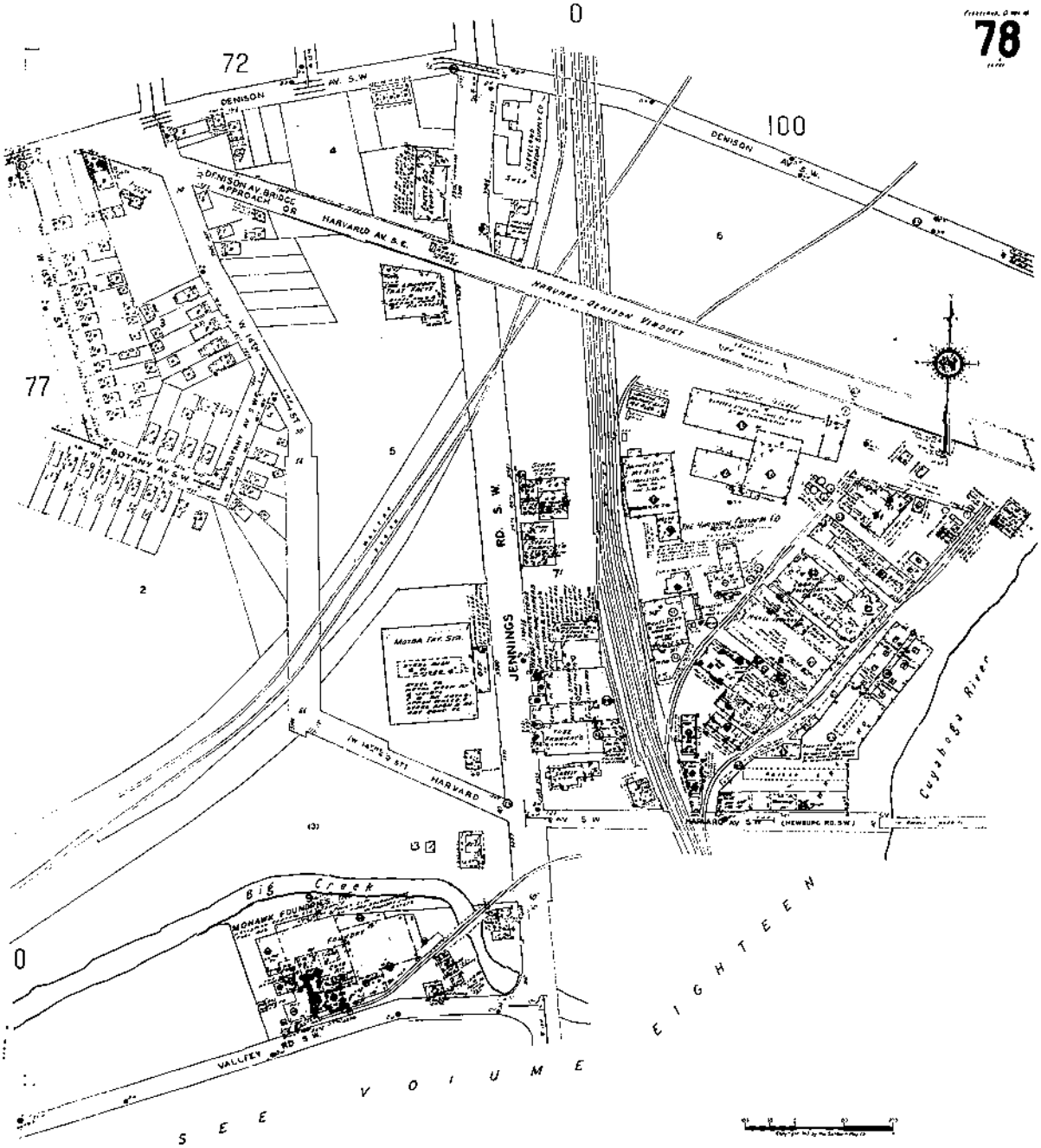

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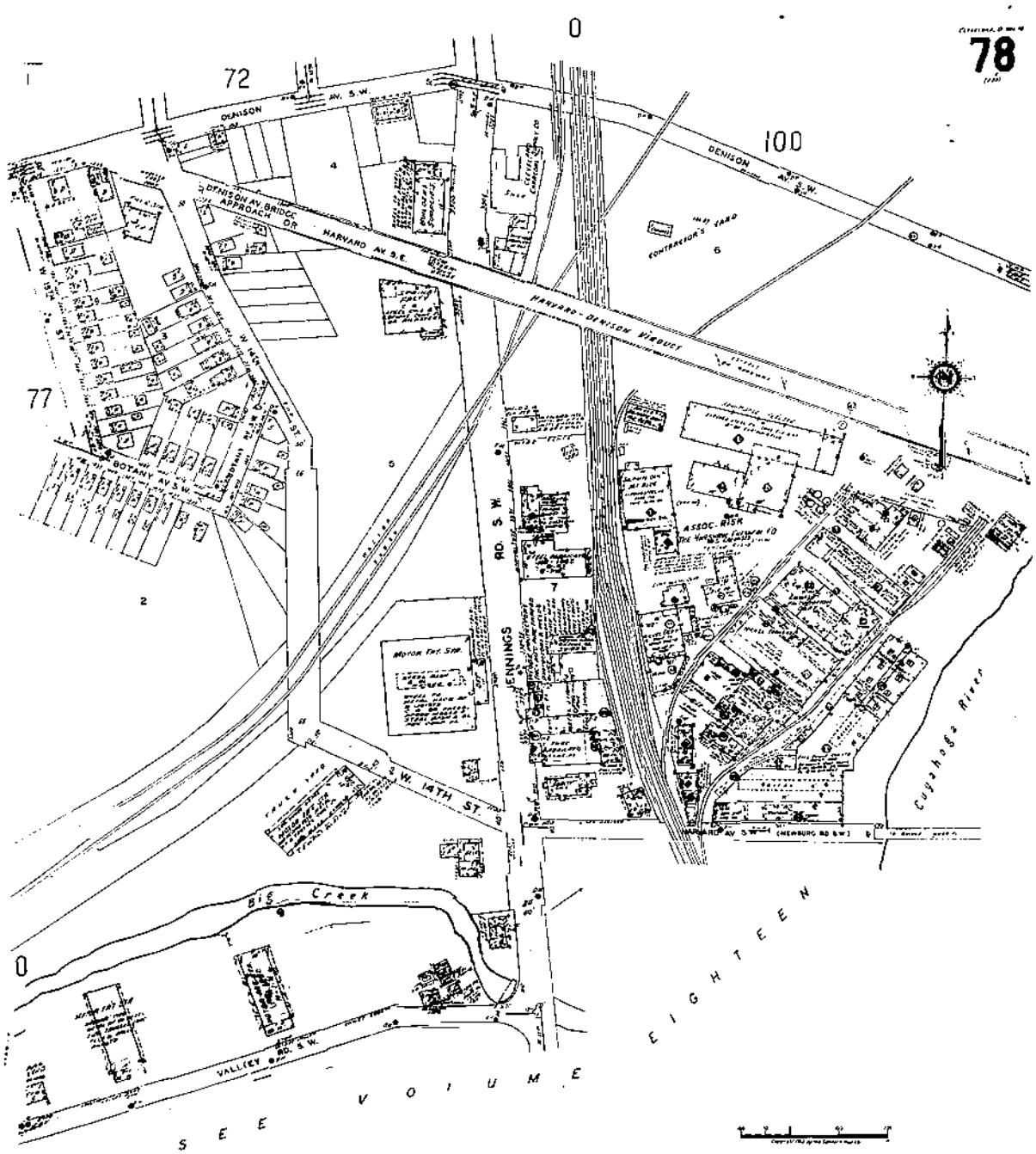

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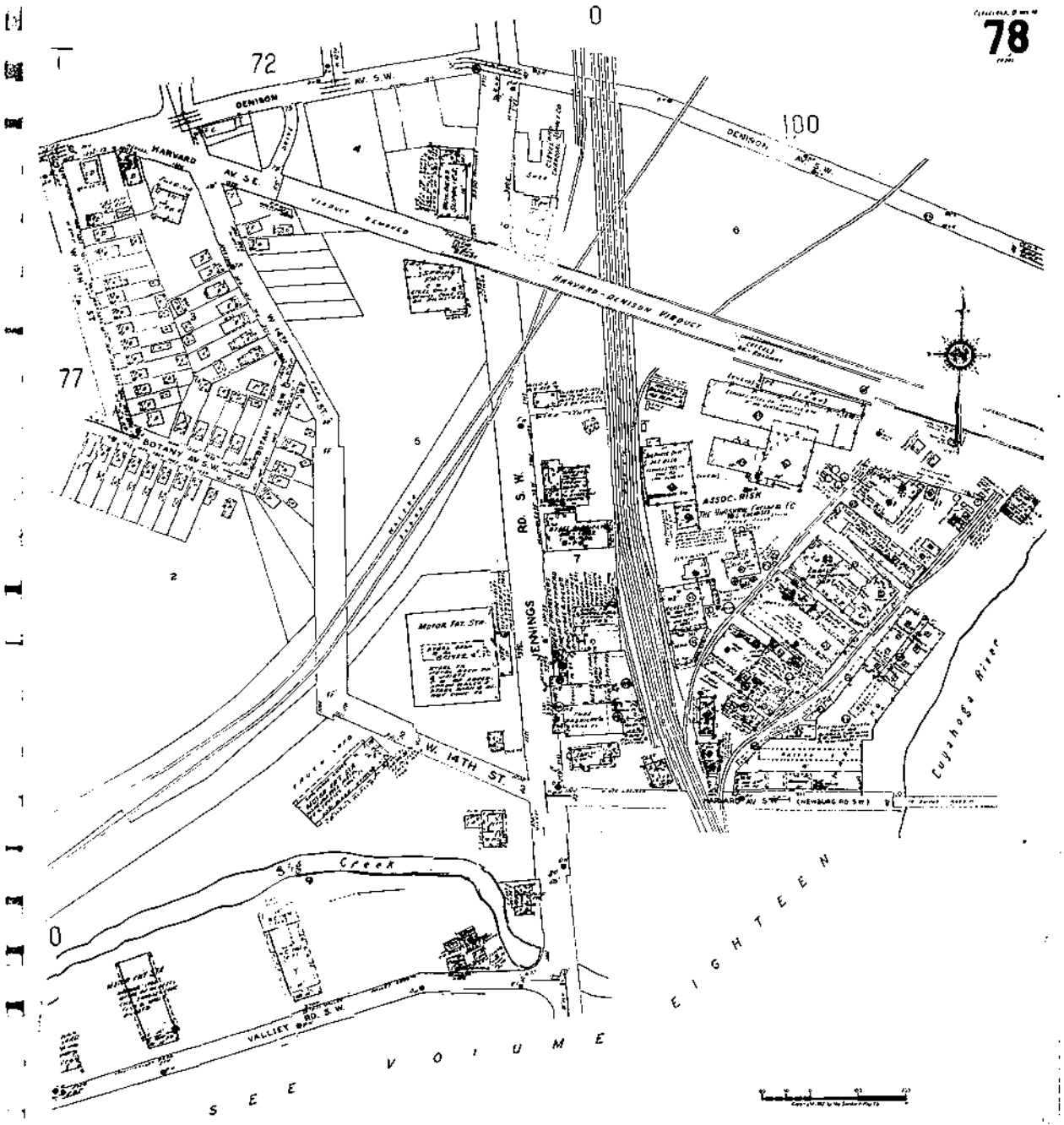
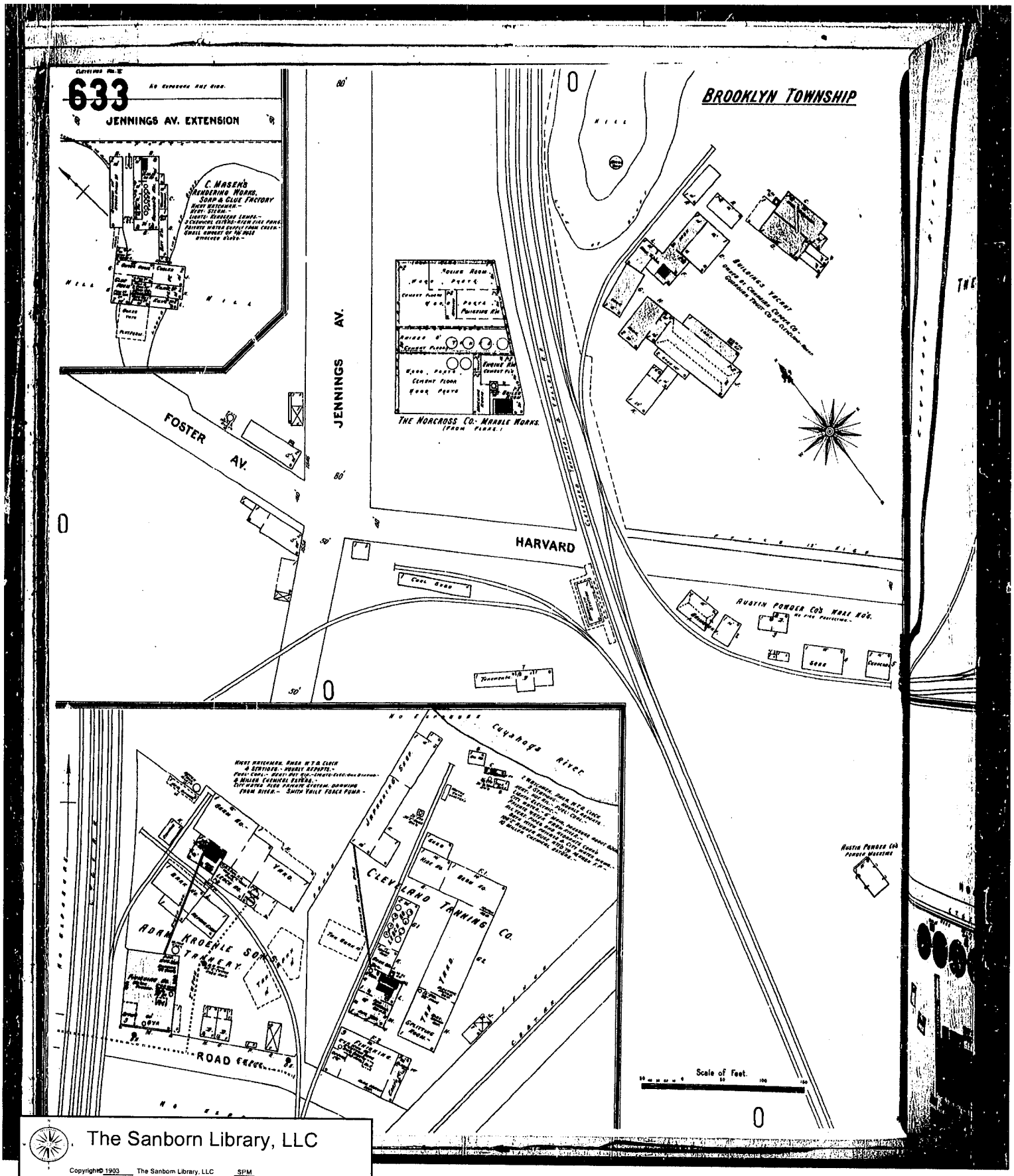


1903



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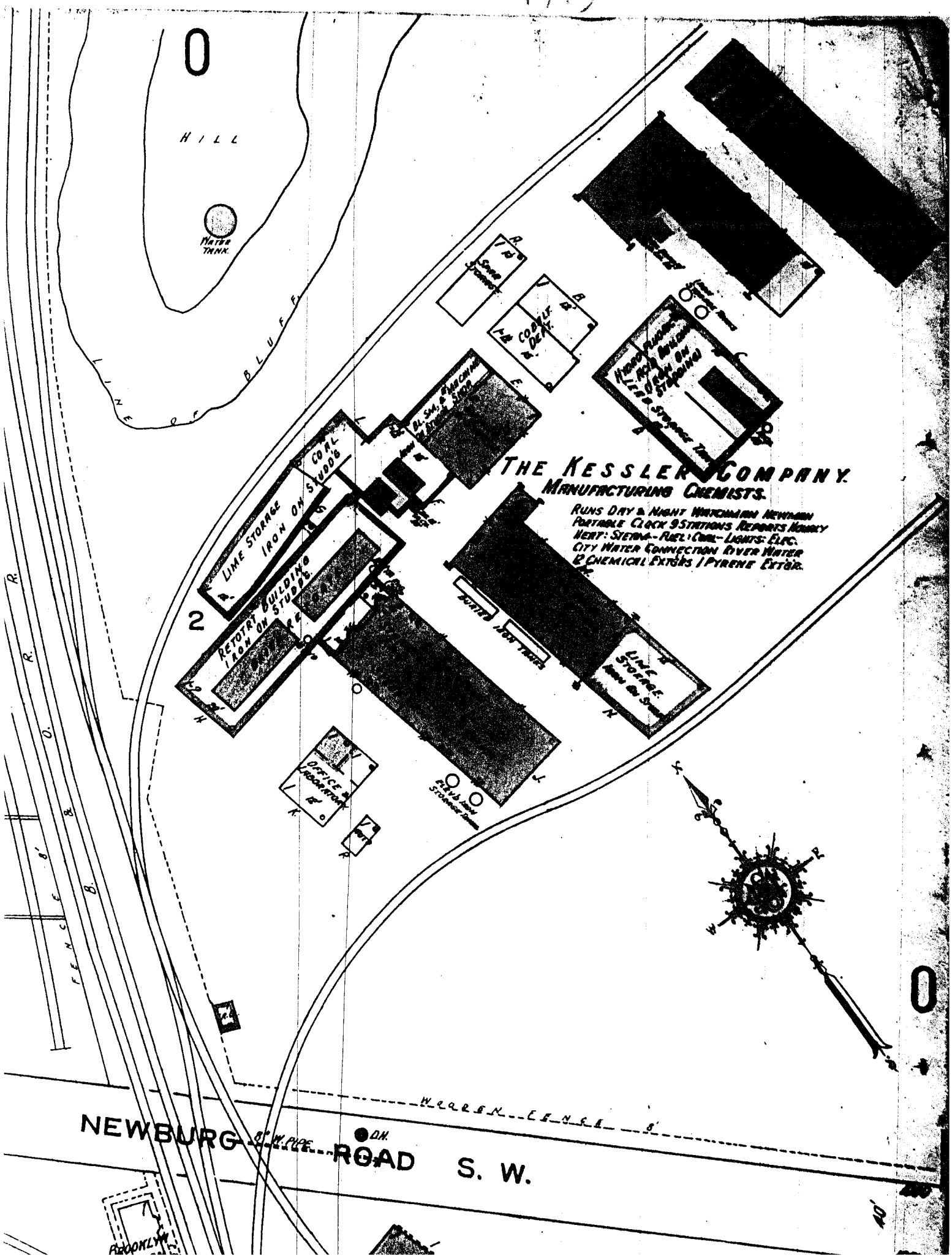
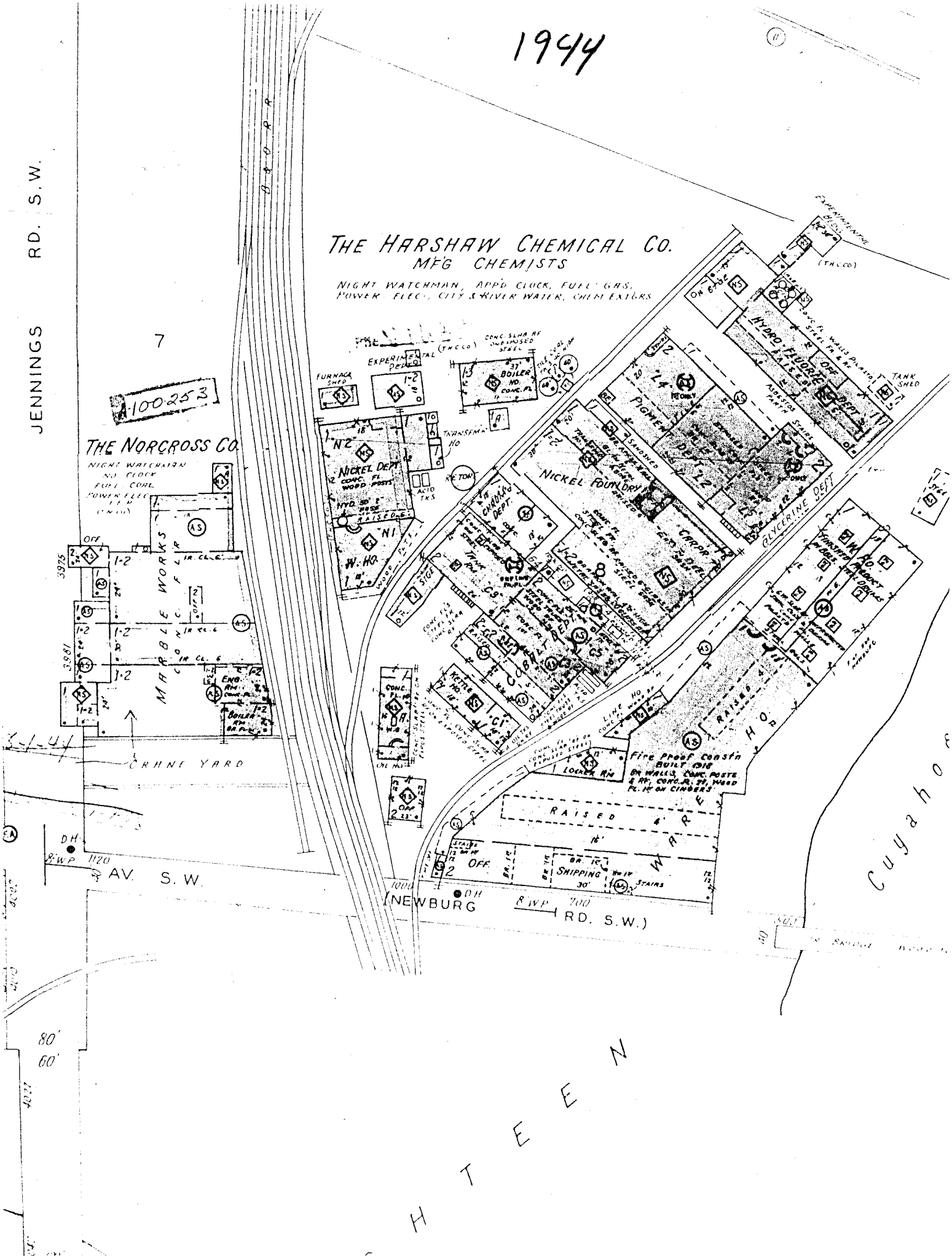
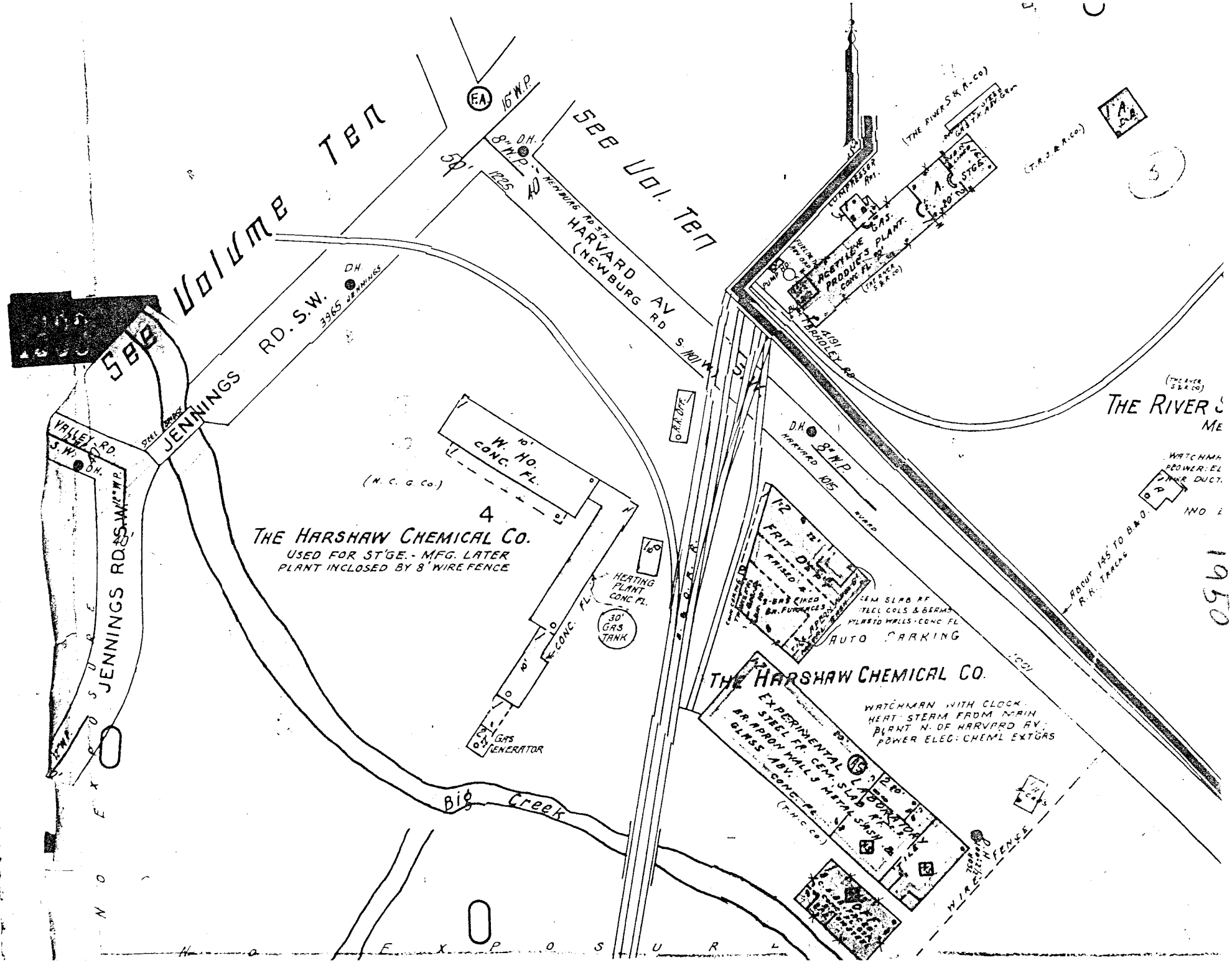
1713

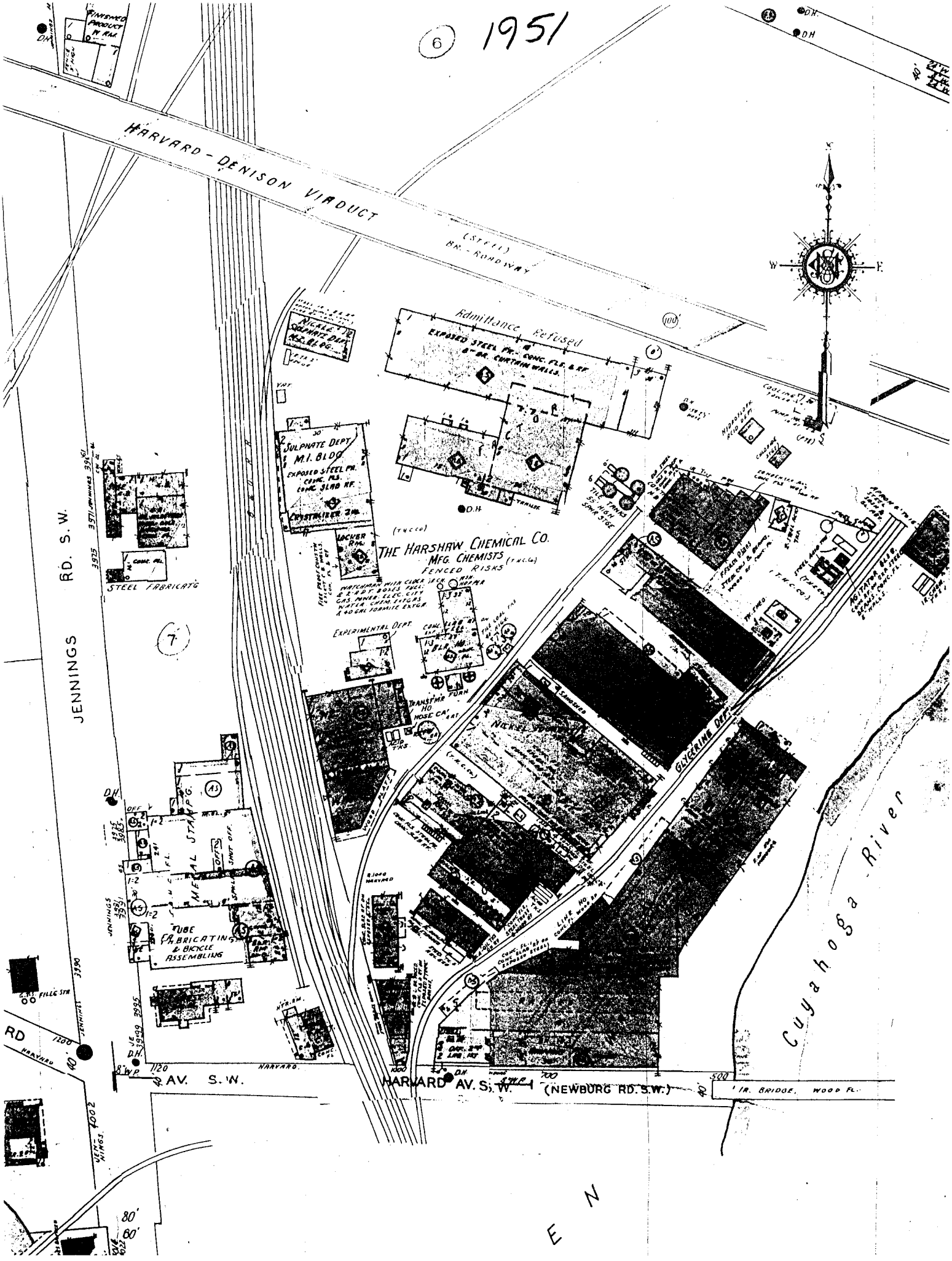

0
HILL
WATER TANK
LINE OF BLUFF
SAND HOUSE
COBBLE & DEBT.
HEAVY PRODUCT & ROLL BUILDING
LEAD STORAGE TANK
BL. SM. & MACHINE & REPAIR SHOP
THE KESSLER COMPANY
MANUFACTURING CHEMISTS.
RUNS DAY & NIGHT WATCHMAN NEWMAN
PORTABLE CLOCK 9 STATIONS REPORTS HOURLY
HEAT: STEAM - FUEL: COAL - LIGHTS: ELEC.
CITY WATER CONNECTION RIVER WATER
& CHEMICAL EXTRS. / PYRENE EXTRS.
LIME STORAGE
IRON ON STUDDS
COAL
2
RETORT BUILDING
IRON ON STUDDS
SCALE
IRON TANKS
LIME STORAGE
IRON ON STUDS
OFFICE & LABORATORY
PLUG IRON STORAGE TANK
R. R.
O.
B.
FENCE
WIRE FENCE
NEWBURG
8" W. PIPE
D.H.
ROAD
S. W.
BROOKLYN
0

1944

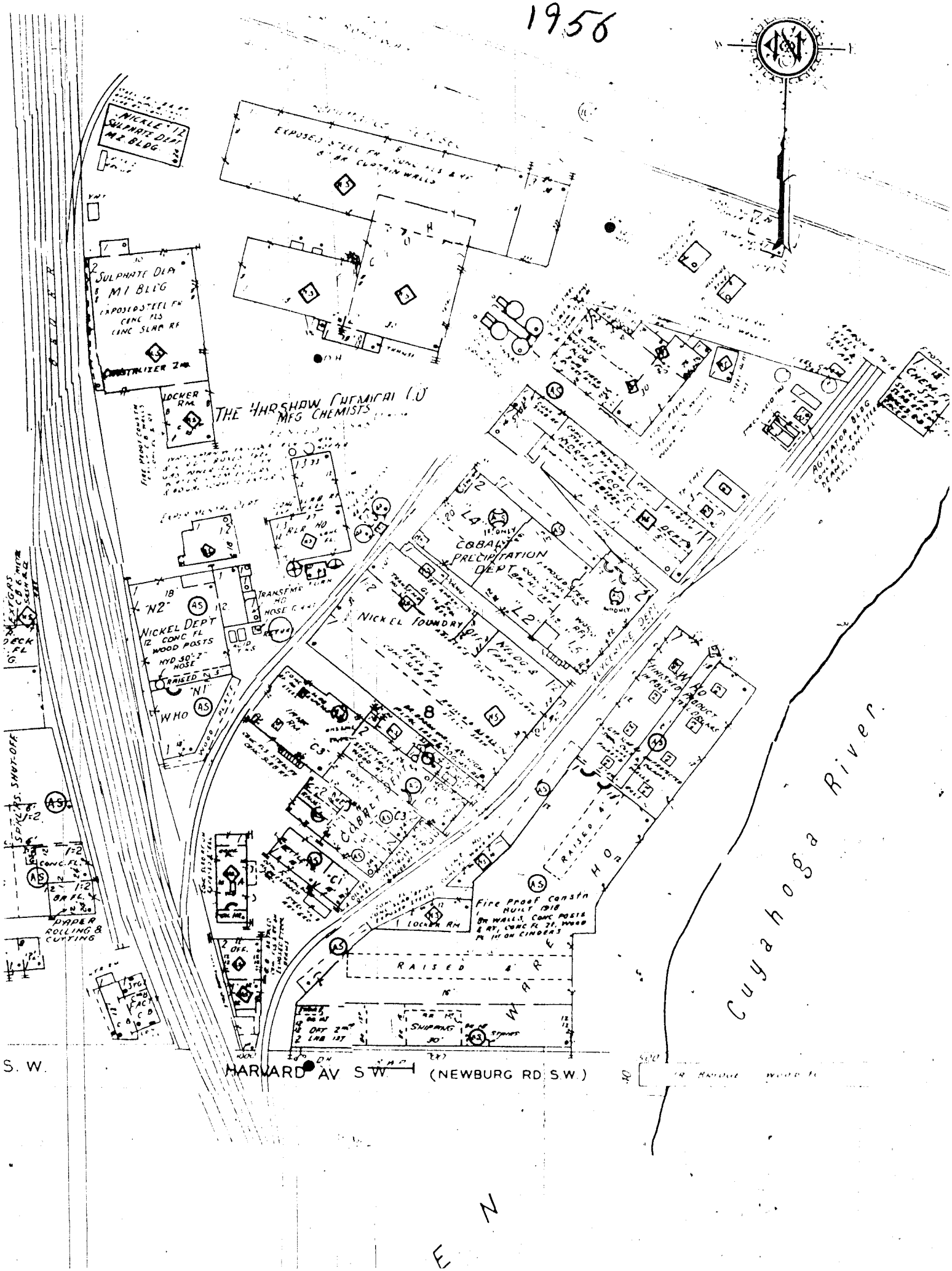

THE HARSHAW CHEMICAL CO.
MFG CHEMISTS
NIGHT WATCHMAN, APP'D CLOCK, FULL GAS, POWER ELEC., CITY & RIVER WATER, CHEM EXT'GRS
THE NORCROSS CO.
NIGHT WATCHMAN
NO CLOCK
FULL COAL
POWER ELEC
MARBLE WORKS
CRANE YARD
JENNINGS RD. S.W.
(NEWBURG RD. S.W.)
AV. S.W.
NICKEL DEPT
W. HQ.
NICKEL FOUNDRY
PIGMENT DEPT
HYDRO FLUORIC DEPT
GLYCERINE DEPT
COBALT DEPT
CHROMIC DEPT.
EXPERIMENTAL DEPT
FURNACE SHED
BOILER HO.
TRANSFER HO
TANK SHED
Fire Proof Constn
BUILT 1916
RAISED
SHIPPING
OFF
Cuyahoga

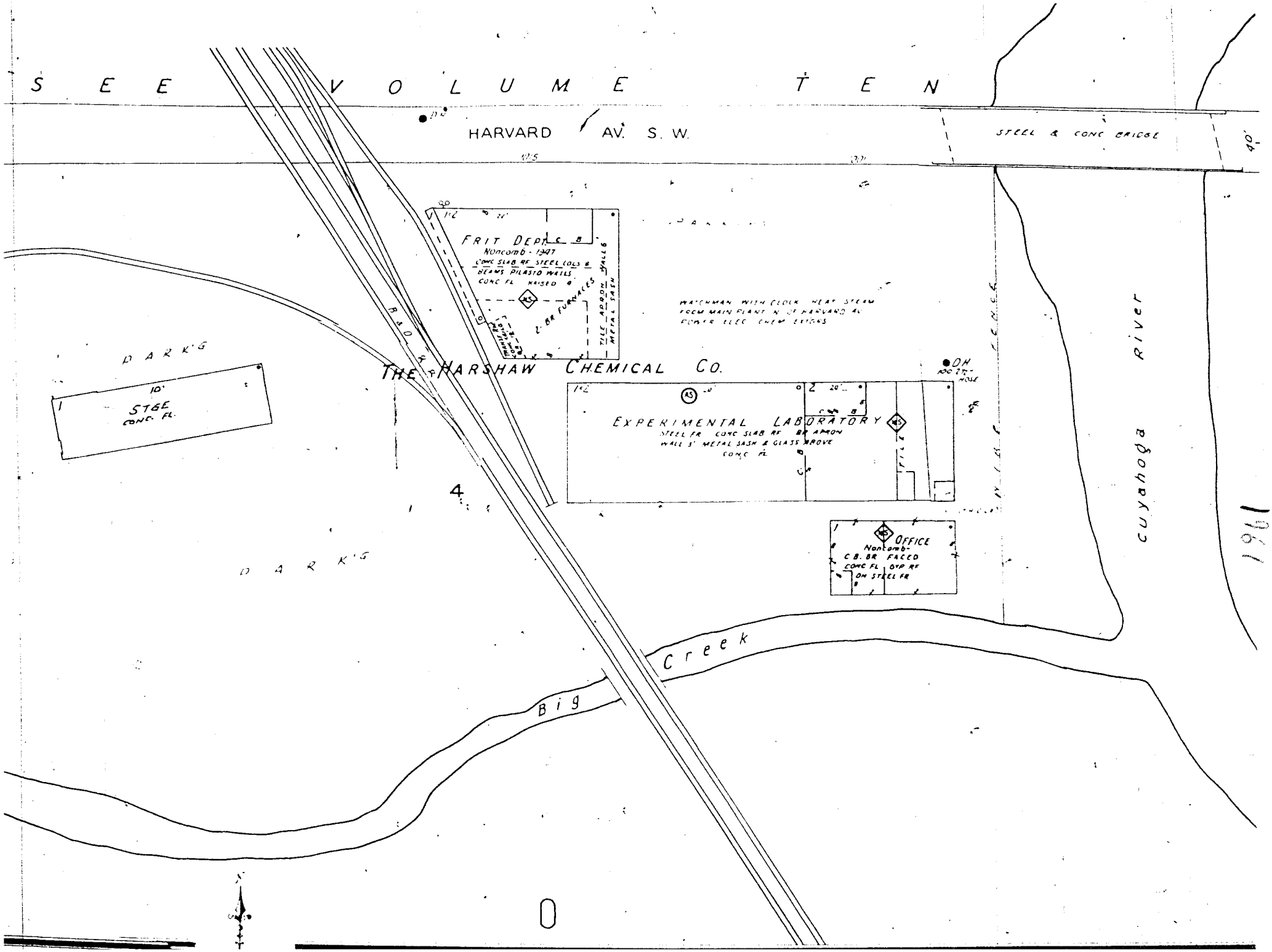

See Volume Ten
See Vol. Ten
JENNINGS RD. S.W.
VALLEY RD. S.W.
JENNINGS RD. S.W.
HARVARD AV (NEWBURG RD S.W.)
NEWBURG RD. S.W.
THE HARSHAW CHEMICAL CO.
USED FOR ST'GE. - MFG. LATER
PLANT INCLOSED BY 8' WIRE FENCE
(N. C. G. Co.)
W. HO. CONC. FL.
HEATING PLANT CONC. FL.
30' GAS TANK
GAS GENERATOR
Big Creek
ACETYLENE GAS PRODUCTS PLANT
(THE RIVER S. & R. Co.)
(T. R. J. & R. Co.)
HOLEY RD.
FRIT DEPT.
AUTO PARKING
THE HARSHAW CHEMICAL CO.
WATCHMAN WITH CLOCK
HEAT STEAM FROM MAIN
PLANT N. OF HARVARD AV.
POWER ELEC: CHEM'L EXT'GAS
EXPERIMENTAL LABORATORY
STEEL FR. CEM. SLAB FL.
BR. APRON WALLS METAL SASH
GLASS ABV.
CONC. FL.
(T. H. C. Co.)
WIRE FENCE
THE RIVER S
ABOUT 145' TO B. & O. R. R. TRACKS
1950

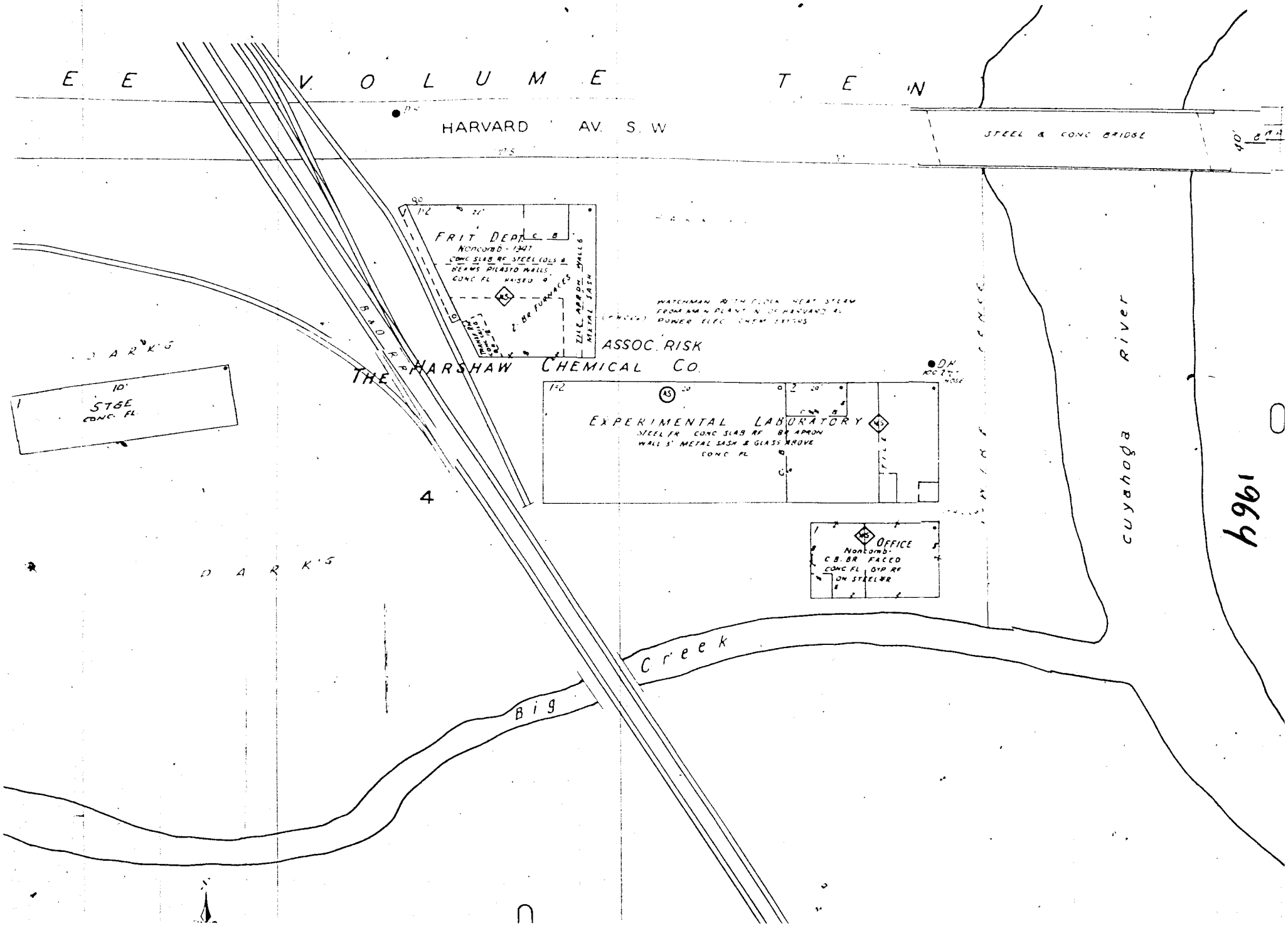
6 1951

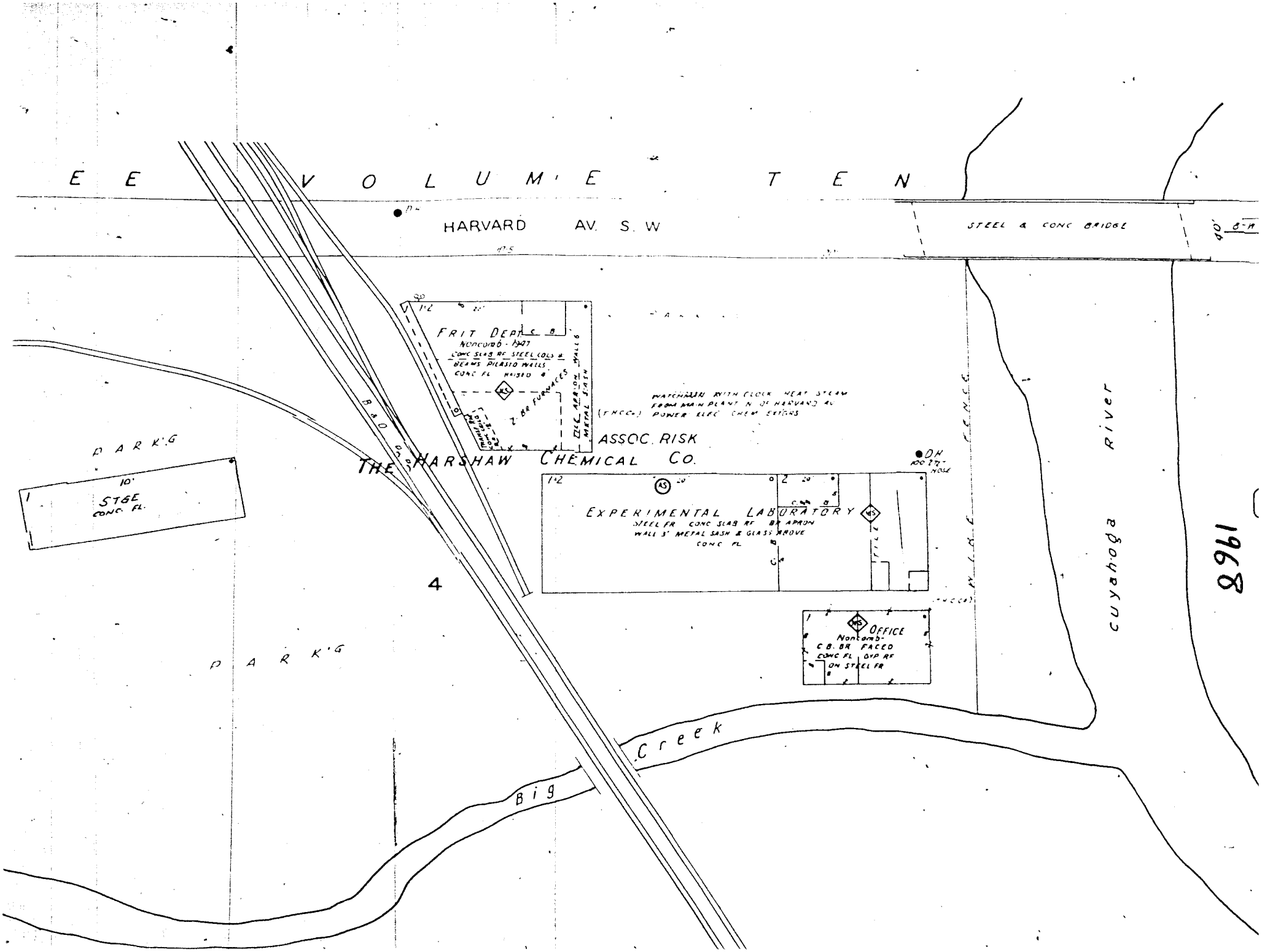

HARVARD - DENISON VIADUCT
(STEEL) BR. - ROADWAY
Admittance Refused
EXPOSED STEEL FR. - CONC. FLR. & RF. 8" BR. CURTAIN WALLS.
SULPHATE DEPT. M.I. BLDG.
EXPOSED STEEL FR. CONC. FLS. CONC. SLAB RF.
CRYSTALIZER BLDG.
LOCKER RM.
THE HARSHAW CHEMICAL CO.
MFG. CHEMISTS
FENCED RISKS
EXPERIMENTAL DEPT.
STEEL FABRICATG
JENNINGS RD. S.W.
METAL STAMPG.
TUBE FABRICATING & BICYCLE ASSEMBLING
NICKEL
GLYCERINE DEPT.
Cuyahoga River
HARVARD AV. S.W.
(NEWBURG RD. S.W.)
1 IR. BRIDGE, WOOD FL.
N
E

1956

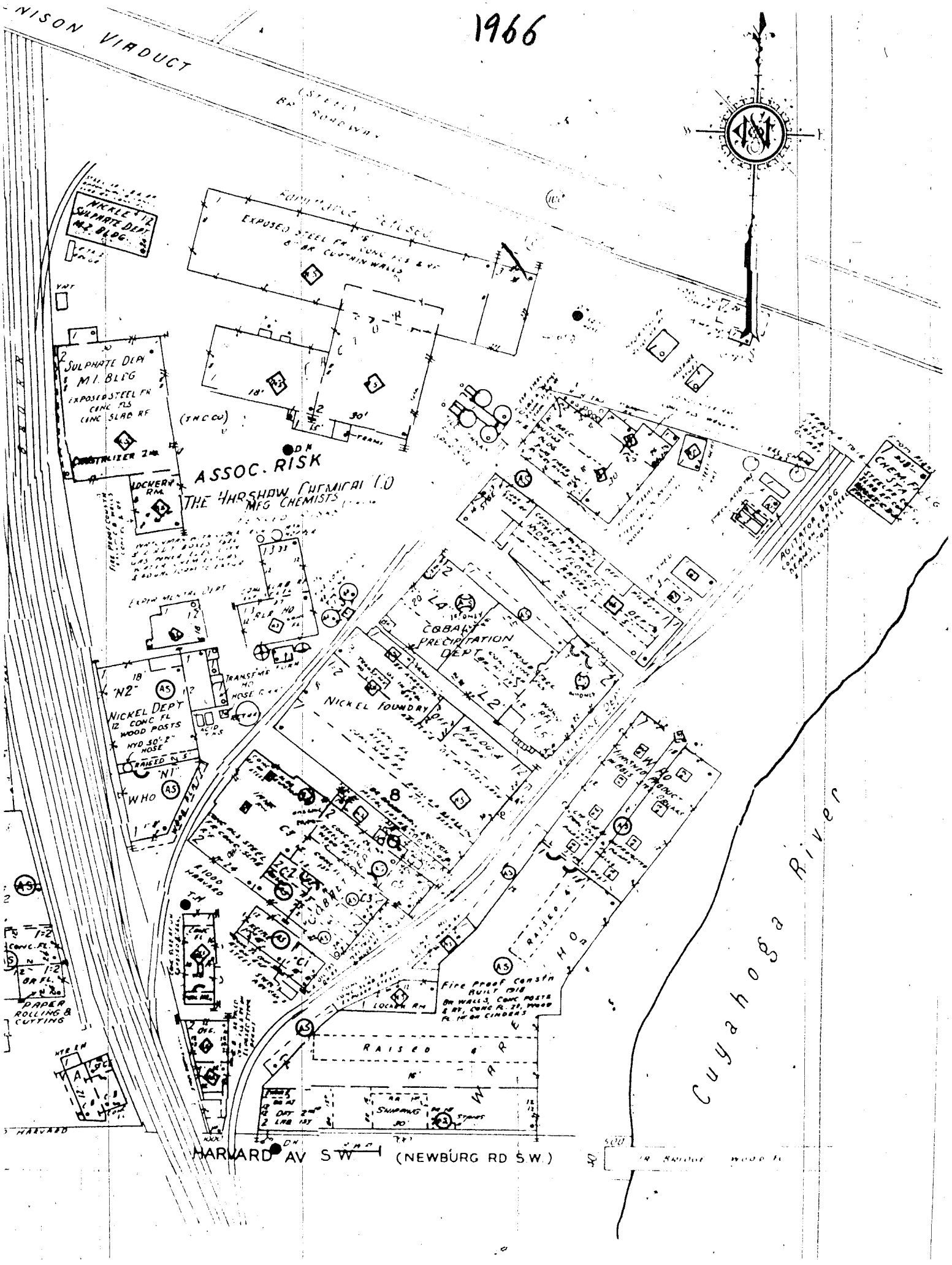

NICKLE 12
SULPHATE DEPT
M2 BLDG
EXPOSED STEEL FR
SULPHATE DEPT
M1 BLDG
EXPOSED STEEL FR
CONC FLS
CONC SLAB RF
CRYSTALIZER 2
LOCKER RM
THE HARSHAW CHEMICAL CO
MFG CHEMISTS
COBALT
PRECIPITATION
DEPT
NICKEL FOUNDRY
NICKEL DEPT
12 CONC FL
WOOD POSTS
HYD 30'-2" HOSE
RAISED
WHO
TRANSFMR
HO
HOSE
AGITATOR BLDG
SPILLS, SHOT-OFF
PAPER
ROLLING &
CUTTING
Fire Proof Constn
HOUSE 1918
BR WALLS, CONC POSTS
& RF, CONC FL 2F, WOOD
FR IN ON CINDERS
RAISED
SHIPPING
HARVARD AV S.W.
(NEWBURG RD S.W.)
Cuyahoga River
S. W.
N
E


SEE VOLUME TEN
HARVARD AV. S. W.
STEEL & CONC BRIDGE
FRIT DEPT
Noncomb - 1947
CONC SLAB RF STEEL COLS & BEAMS PILASTR WALLS
CONC FL RAISED 8"
2' BR FURNACES
TILE APRON WALLS
METAL SASH
WATCHMAN WITH CLOCK HEAT STEAM FROM MAIN PLANT N. OF HARVARD AV
POWER ELEC CHEM EXTGRS
THE HARSHAW CHEMICAL CO.
EXPERIMENTAL LABORATORY
STEEL FR CONC SLAB RF BR APRON WALL 3' METAL SASH & GLASS ABOVE
CONC FL
OFFICE
Noncomb-
C.B. BR FACED
CONC FL GYP RF ON STEEL FR
STGE
CONC FL
DARKG
DARKG
RAILROAD
Big Creek
Cuyahoga River
OH
4
1941

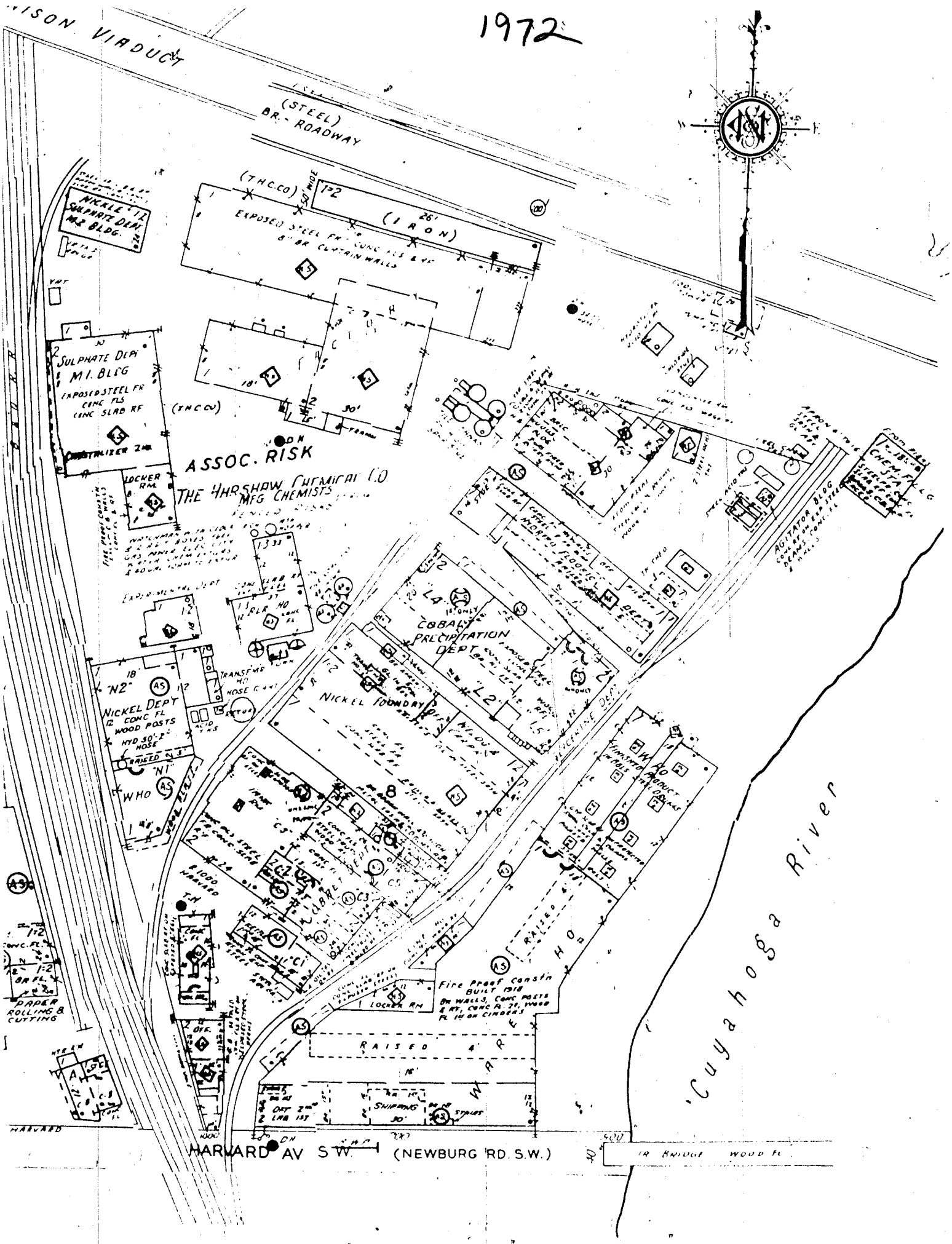

E E V O L U M E T E N
HARVARD AV. S. W
STEEL & CONC BRIDGE
FRIT DEPT
Noncomb - 1947
CONC SLAB RF STEEL COLS & BEAMS PILASTR WALLS
CONC FL RAISED 9"
2 BR FURNACES
ZINC APRON
METAL SASH WALLS
WATCHMAN WITH CLOCK HEAT STEAM FROM MAIN PLANT N. OF HARVARD AV
POWER ELEC CHEM SYSTEMS
ASSOC. RISK
THE HARSHAW CHEMICAL Co.
EXPERIMENTAL LABORATORY
STEEL FR CONC SLAB RF BR APRON
WALLS METAL SASH & GLASS ABOVE
CONC FL
OFFICE
Noncomb.
C.B. BR FACED
CONC FL GYP RF
ON STEEL RR
STGE
CONC FL
DARK'S
DARK'S
4
Big
Creek
Cuyahoga River
1964


E E V O L U M E T E N
HARVARD AV. S. W
STEEL & CONC BRIDGE
FRIT DEPT
NONCOMB - 1947
CONC SLAB RF STEEL COLS & BEAMS PILASTO WALLS
CONC FL RAISED 4'
2 BR FURNACES
ELEC APRON
METAL SASH
WALLS
WATCHMAN WITH CLOCK HEAT STEAM FROM MAIN PLANT N OF HARVARD AV
(THCCo) POWER ELEC CHEM SYSTEMS
ASSOC. RISK
THE HARSHAW CHEMICAL CO.
EXPERIMENTAL LABORATORY
STEEL FR CONC SLAB RF BR APRON
WALL S METAL SASH & GLASS ABOVE
CONC FL
OFFICE
NONCOMB-
C.B. BR FACED
CONC FL
SYP RF
ON STEEL FR
STGE
CONC FL
PARK'G
PARK'G
B & O
FENCE
Cuyahoga River
Big Creek
4
1968

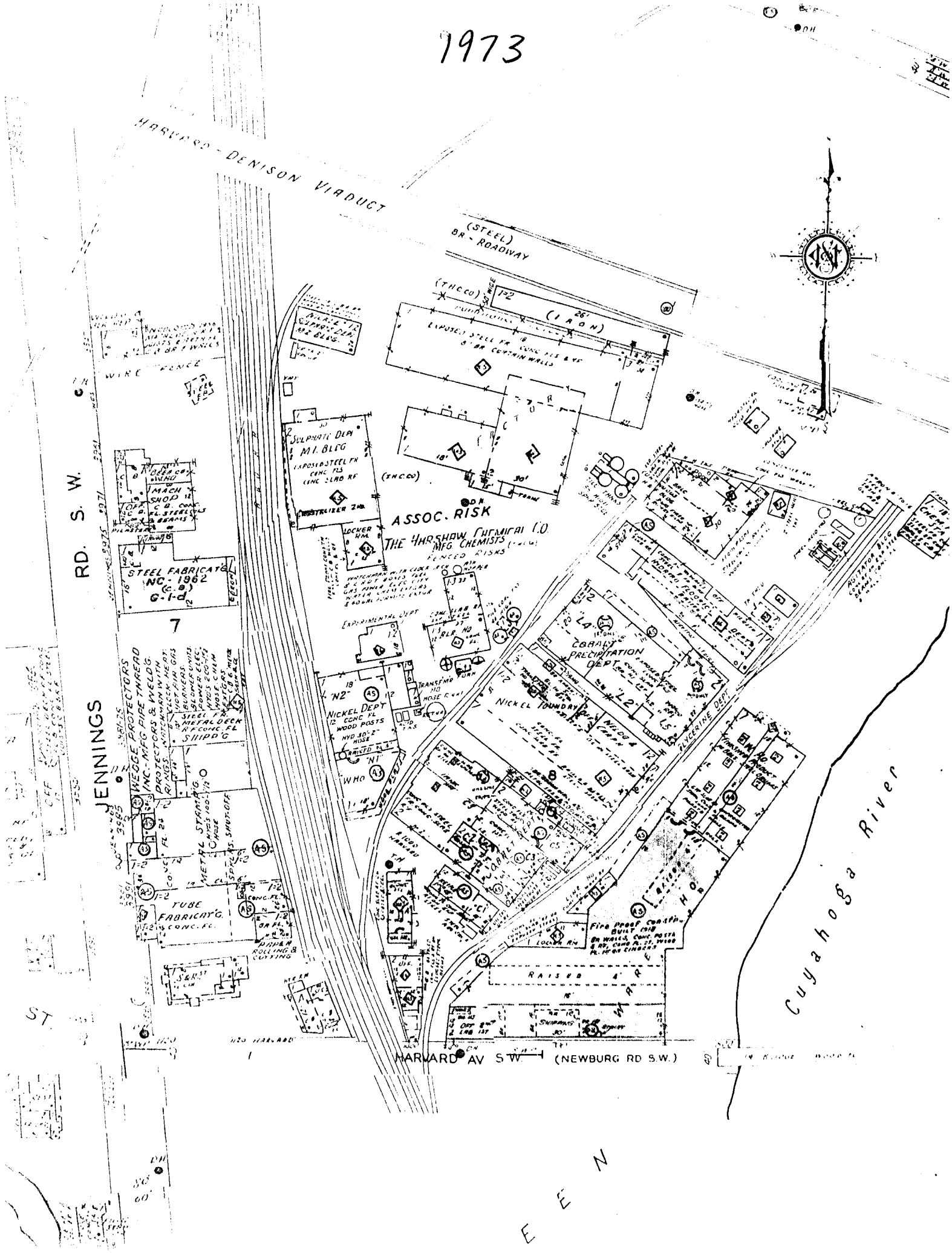
1966


NISON VIADUCT
NICKLE & 12 SULPHATE DEPT. M2 BLDG.
EXPOSED STEEL FR. CONC. FLS & RF. & BR. CURTAIN WALLS
SULPHATE DEPT M1 BLDG
EXPOSED STEEL FR. CONC. FLS. CONC. SLAB RF.
CRYSTALIZER 2
LOCKER RM.
ASSOC. RISK
THE HARSHAW CHEMICAL CO. MFG CHEMISTS
COBALT PRECIPITATION DEPT
NICKEL FOUNDRY
NICKEL DEPT
12 CONC. FL. WOOD POSTS
HYD. 50'-2" HOSE
RAISED N.S.
WHO
COBALT
PAPER ROLLING & CUTTING
Fire Proof Constn. Built Mill
RAISED
SHIPPING
HARVARD AV S.W. (NEWBURG RD S.W.)
Cuyahoga River

1972


VIADUCT
(STEEL)
BR. - ROADWAY
(THC.CO)
(IRON)
EXPOSED STEEL FR
8" BR CURTAIN WALLS
NICKEL SULPHATE DEPT. M2 BLDG.
SULPHATE DEPT M1. BLDG
EXPOSED STEEL FR
CONC FLS
CONC SLAB RF
ASSOC. RISK
THE HARSHAW CHEMICAL CO
MFG CHEMISTS
LOCKER RM
COBALT PRECIPITATION DEPT
NICKEL FOUNDRY
NICKEL DEPT
12" CONC FL
WOOD POSTS
HYD 50'-2" HOSE
WHO
CHEM. STA.
AGITATOR BLDG
Fire Proof Constn
BUILT 1918
RAISED 4'
SHIPPING
PAPER ROLLING & CUTTING
HARVARD AV S.W.
(NEWBURG RD. S.W.)
Cuyahoga River

1973


HARVARD - DENISON VIADUCT
(STEEL) BR - ROADWAY
(THCCO)
(IRON)
EXPOSED STEEL FR. CONC. FLS & RF
8" BR CURTAIN WALLS
WIRE FENCE
SULPHATE DEPT
M.I. BLDG
EXPOSED STEEL FR
CONC FLS
CONC SLAB RF
FERTILIZER 2ND
(THCCO)
ASSOC. RISK
THE HARSHAW CHEMICAL CO.
MFG CHEMISTS
FENCED RISKS
LOCKER RM.
MACH SHOP
STEEL FABRICATG
NC-1962
(C.B.)
G-1-d
7
EXPERIMENTAL DEPT
TRANSFMR
NICKEL DEPT
12 CONC FL
WOOD POSTS
HYD 50'-2" HOSE
"N2"
"N1"
WHO
NICKEL FOUNDRY
COBALT PRECIPITATION DEPT
"L4"
"L2"
"L5"
GLYCERINE DEPT
HEDGE PROTECTORS
INC.-MFG PIPE THREAD
PROTECTORS & WELDG.
STEEL FR
METAL DECK
R.F. CONC. FL
SHIPPG
METAL STRAIGHTG
SHUT-OFF
TUBE FABRICATG
CONC. FL.
PAPER ROLLING & CUTTING
Fire Proof Constr.
BUILT 1918
RAISED 4'
SHIPPING
JENNINGS
RD. S. W.
ST.
Cuyahoga River
HARVARD AV S.W. (NEWBURG RD S.W.)

IA03/IA04/IA05/
IA06

EDR Historical Topographic Map Report

Harshaw FUSRAP
1000 Harvard Avenue
Cleveland, OH 44105

Inquiry Number: 1714652.4

July 13, 2006

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440 Wheelers Farms Road
Milford, Connecticut 06461

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EDR Historical Topographic Map Report

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900's.

Thank you for your business.

Please contact EDR at 1-800-352-0050
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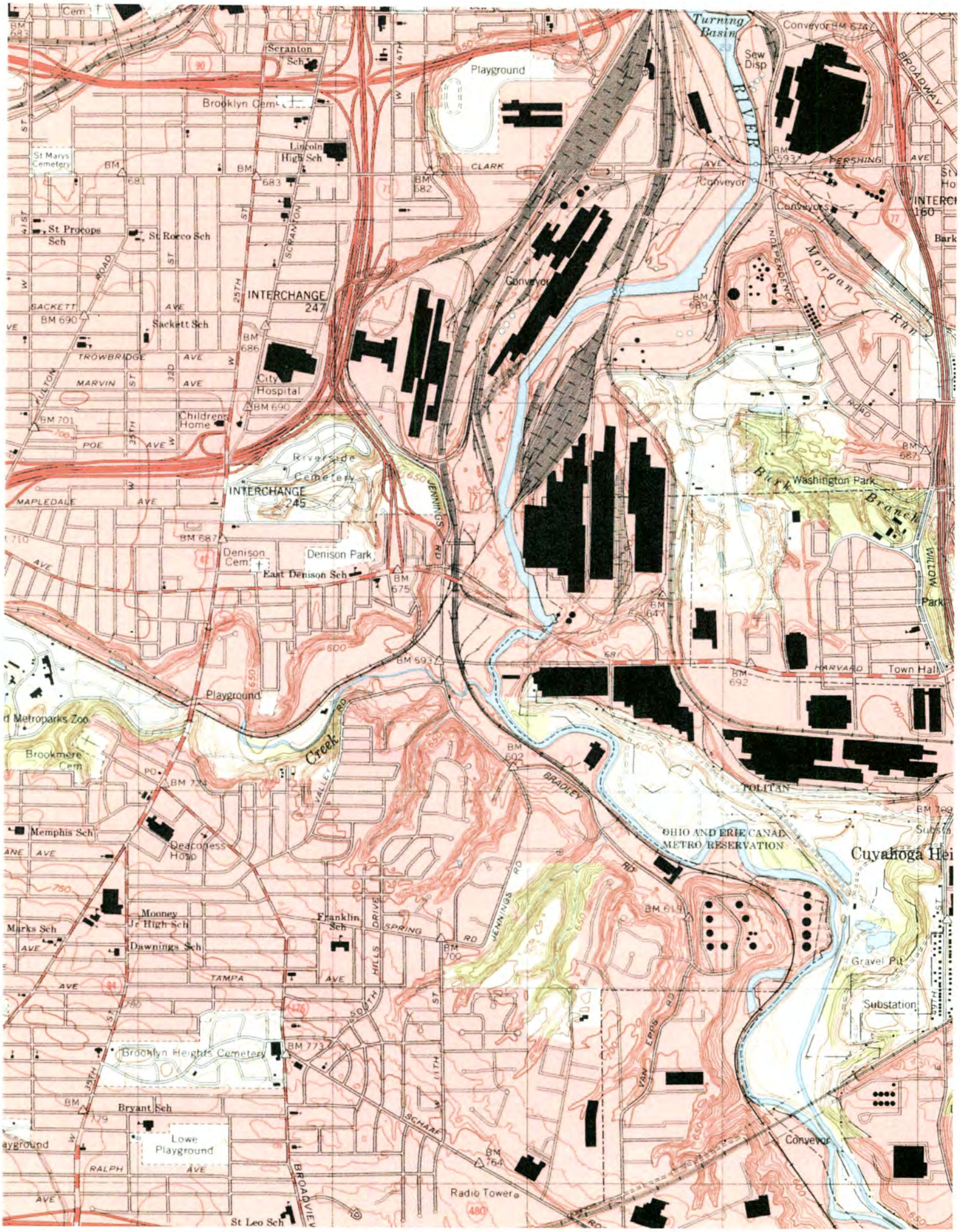
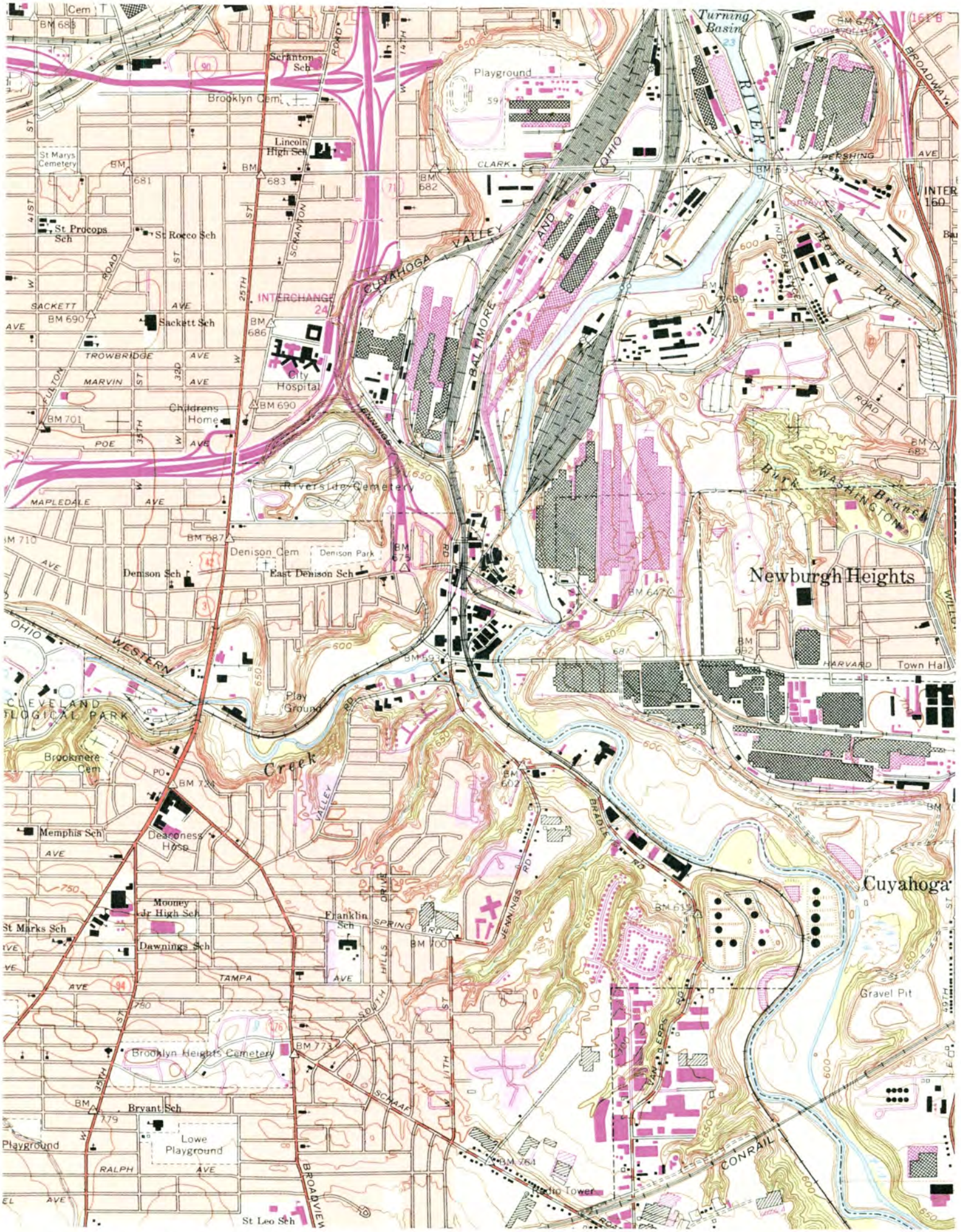


N ^ EDR INQUIRY# 1714652.4 TARGET QUAD: CLEVELANDSOUTH YEAR: 1994 Series: 7.5' Scale: 1:24,000



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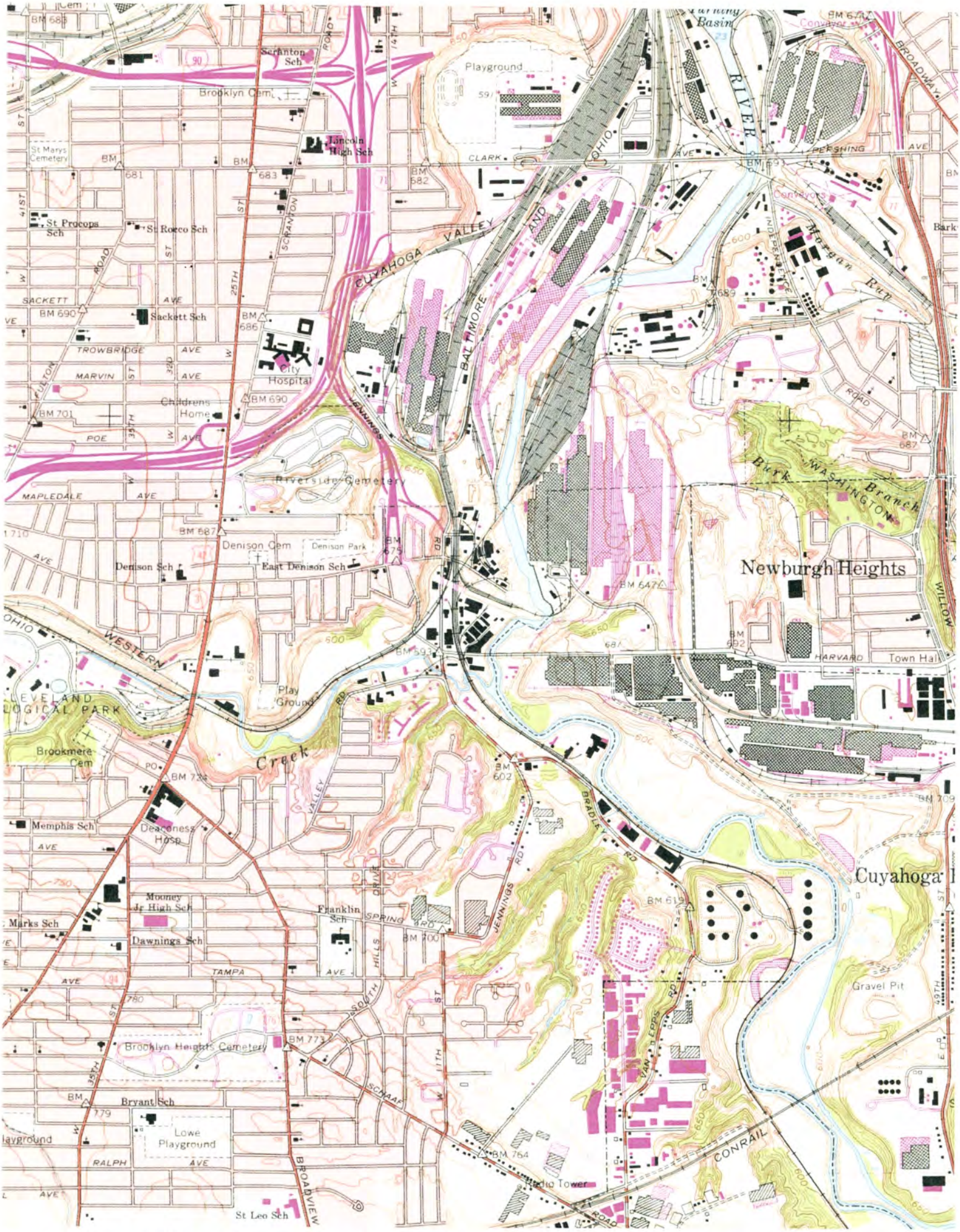

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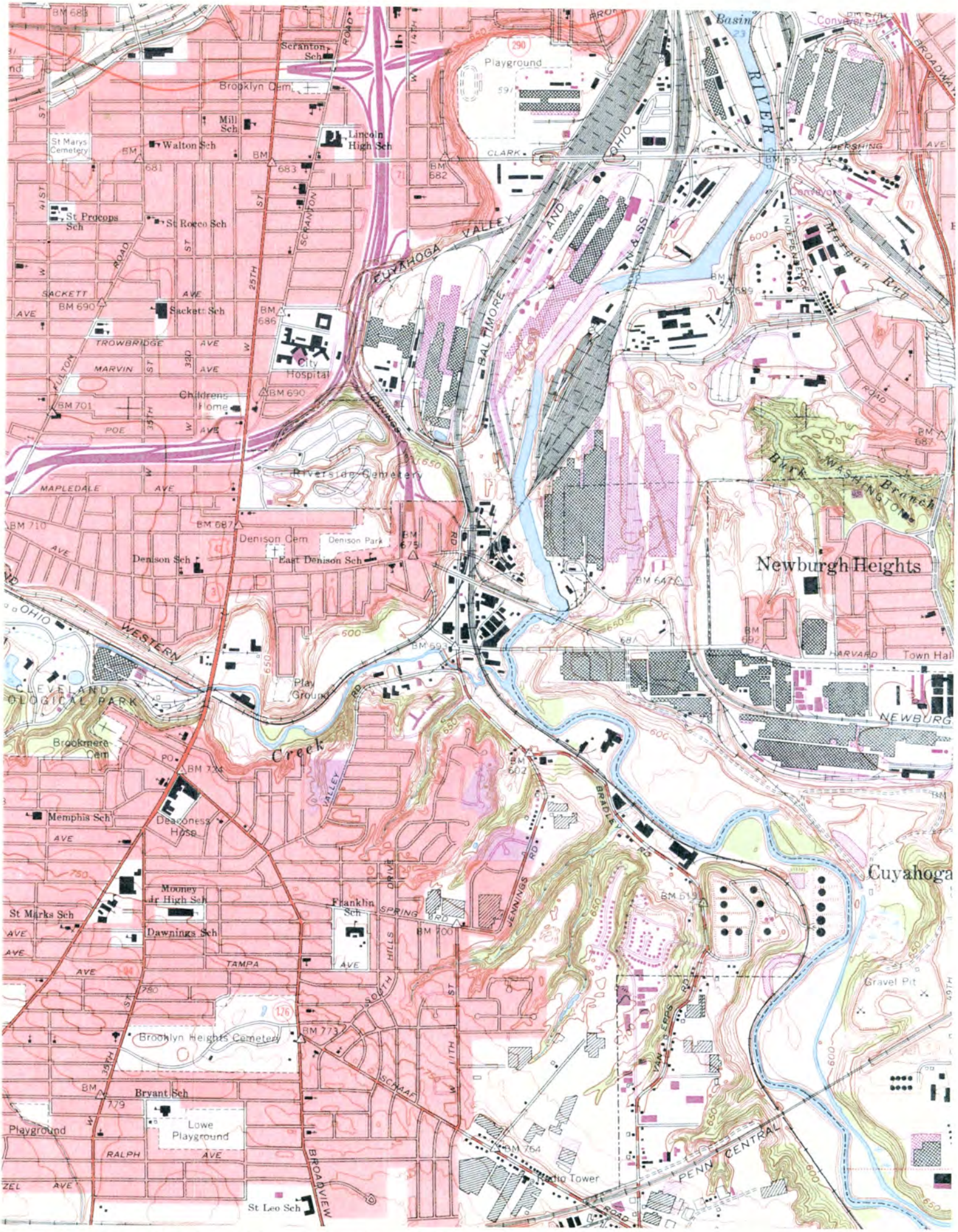

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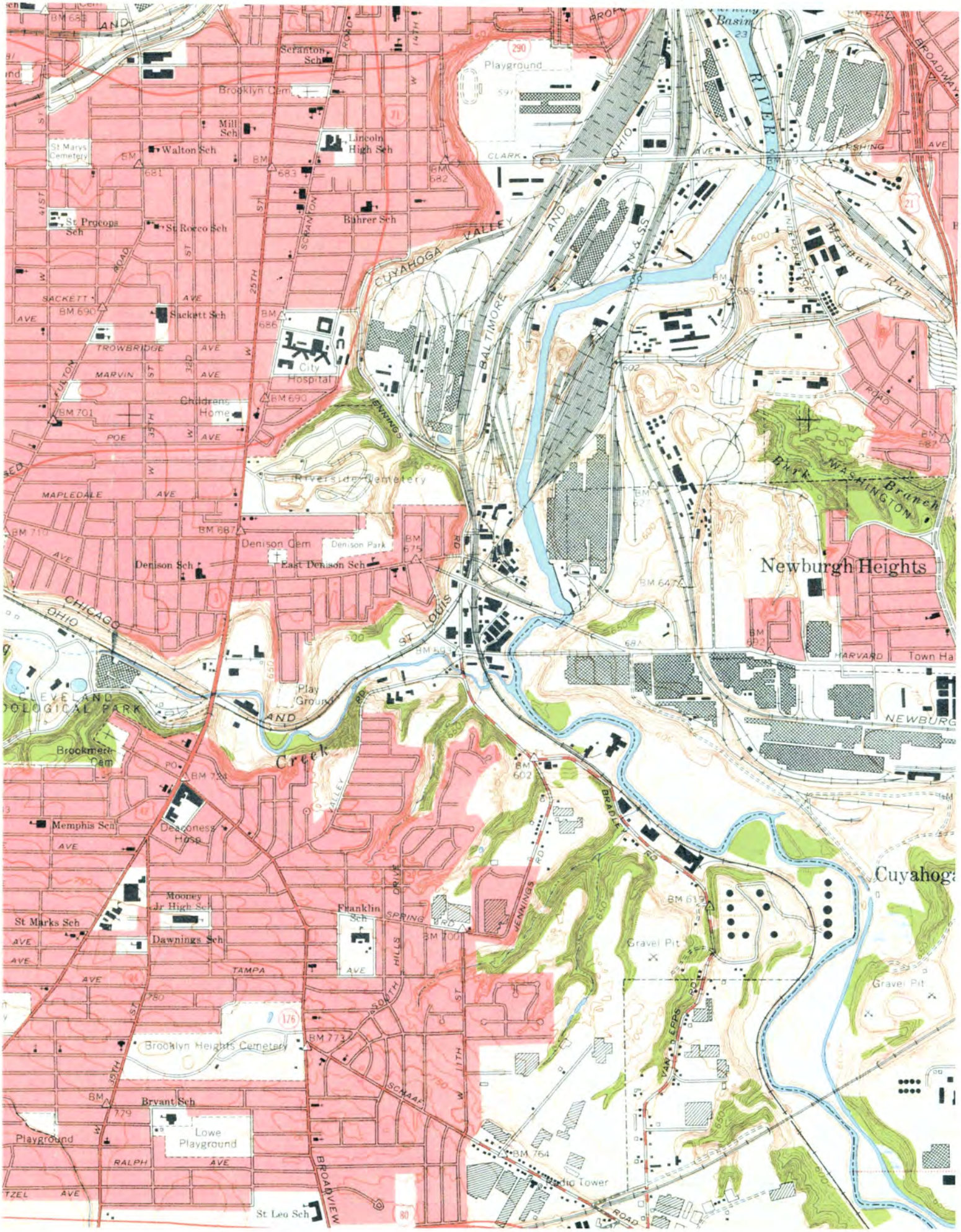

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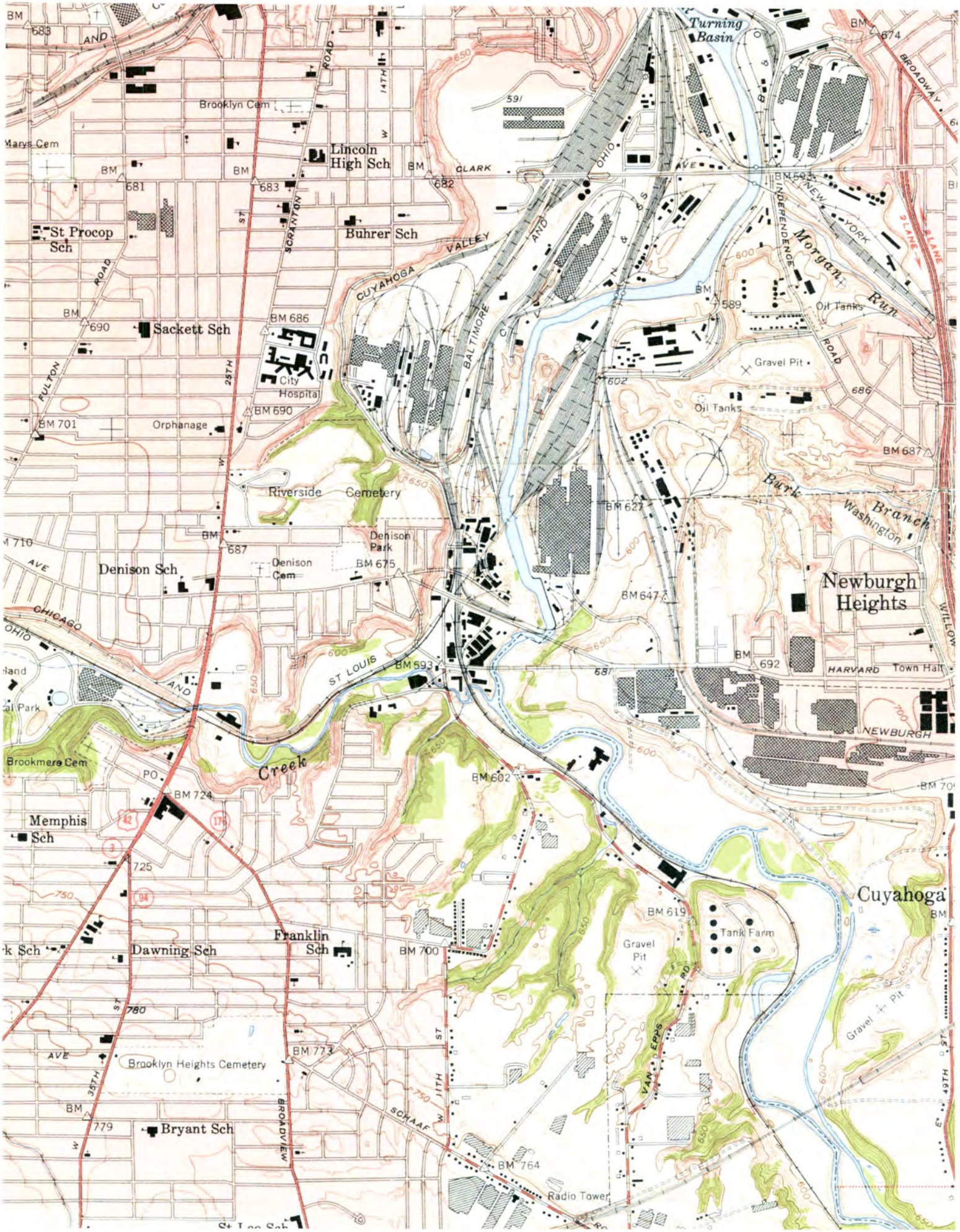

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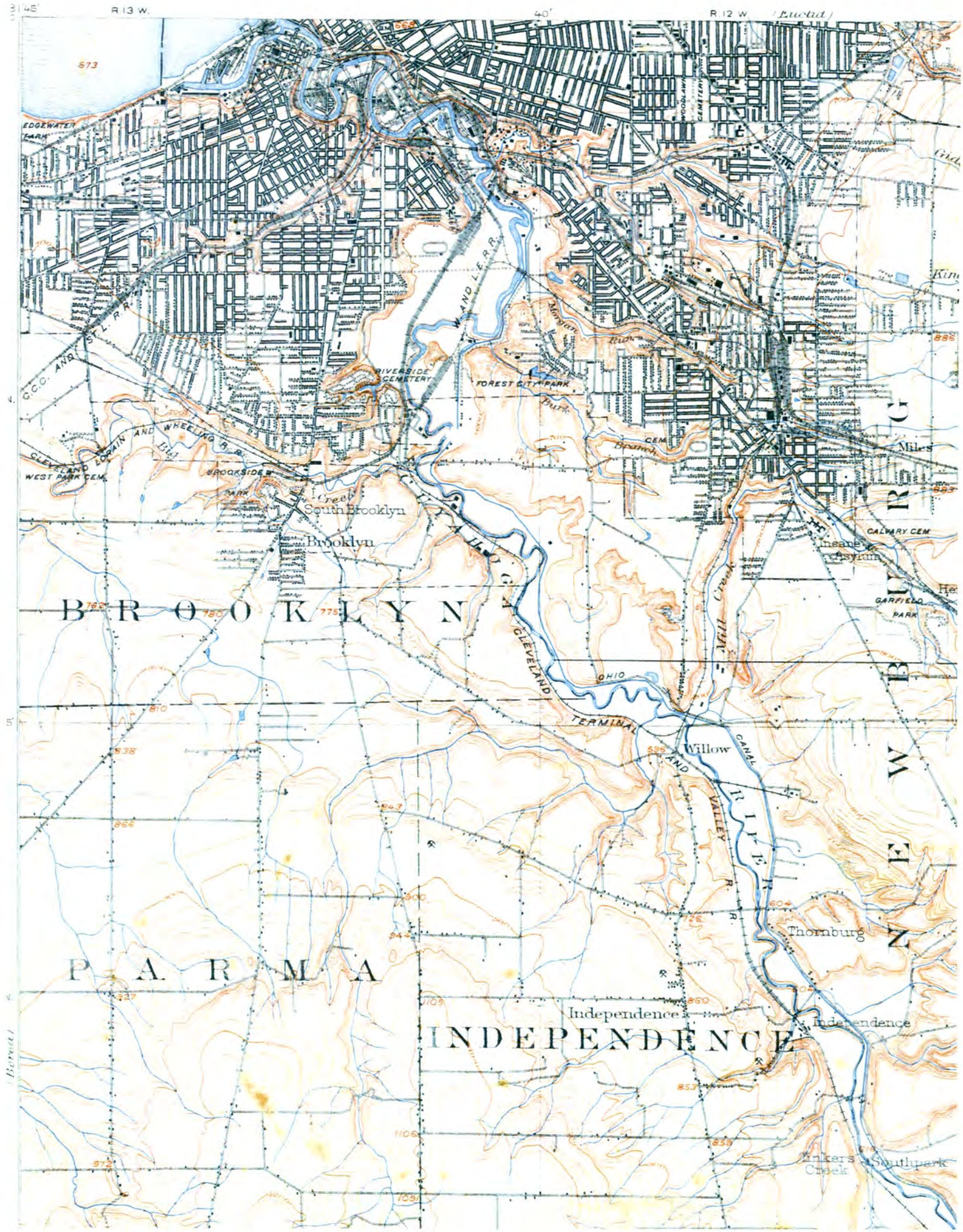

N ^ EDR INQUIRY# 1714652.4 TARGET QUAD: CLEVELAND YEAR: 1903 Series: 15' Scale: 1:62,500

The EDR Aerial Photo Decade Package

Harshaw FUSRAP (IA07)
4041 Jennings Road
Cleveland, OH 44109

Inquiry Number: 1714738.5

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

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Date EDR Searched Historical Sources:

Aerial Photography July 13, 2006

Target Property:

4041 Jennings Road

Cleveland, OH 44109

Year	***Scale***	***Details***	***Source***
1938	Aerial Photograph. Scale: 1"=750'	Panel #: 2441081-D6/Flight Date: June 29, 1938	EDR
1952	Aerial Photograph. Scale: 1"=750'	Panel #: 2441081-D6/Flight Date: April 16, 1952	EDR
1962	Aerial Photograph. Scale: 1"=750'	Panel #: 2441081-D6/Flight Date: April 08, 1962	EDR
1977	Aerial Photograph. Scale: 1"=833'	Panel #: 2441081-D6/Flight Date: May 11, 1977	EDR
1991	Aerial Photograph. Scale: 1"=833'	Panel #: 2441081-D6/Flight Date: November 17, 1991	EDR

INQUIRY #: 1714738.5
YEAR: 1938
= 750'
N

INQUIRY #: 1714738.5
YEAR: 1952
= 750'
N

INQUIRY #: 1714738.5
YEAR: 1962
= 750'
N

USDA
38
INQUIRY #: 1714738.5
YEAR: 1977
= 833'
N

INQUIRY #: 1714738.5
YEAR: 1991
= 833'
N

The EDR-City Directory
Abstract

Harshaw FUSRAP (IA07)
4041 Jennings Road
Cleveland, OH 44109

Inquiry Number: 1714738.6

Thursday, July 13, 2006

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EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening report designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1930 through 2002. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

This report compiles information by geocoding the subject properties (that is, plotting the latitude and longitude for such subject properties and obtaining data concerning properties within 1/8th of a mile of the subject properties). There is no warranty or guarantee that geocoding will report or list all properties within the specified radius of the subject properties and any such warranty or guarantee is expressly disclaimed. Accordingly, some properties within the aforementioned radius and the information concerning those properties may not be referenced in this report.

Date EDR Searched Historical Sources: July 13, 2006

Target Property:
4041 Jennings Road
Cleveland, OH 44109

Year	***Uses***	***Source***
1930	Address Not Listed in Research Source	The Cleveland Directory Co.
1935	Address Not Listed in Research Source	The Cleveland Directory Co.
1941	Address Not Listed in Research Source	The Cleveland Directory Co.
1949	Address Not Listed in Research Source	The Cleveland Directory Co.
1951	Address Not Listed in Research Source	The Cleveland Directory Co.
1954	Address Not Listed in Research Source	The Cleveland Directory Co.
1955	Address Not Listed in Research Source	The Cleveland Directory Co.
1959	Address Not Listed in Research Source	The Cleveland Directory Co.
1961	Address Not Listed in Research Source	The Cleveland Directory Co.
1962	Address Not Listed in Research Source	The Cleveland Directory Co.
1967	Address Not Listed in Research Source	The Cleveland Directory CO.
1970	Address Not Listed in Research Source	The Cleveland Directory Co.
1972	Address Not Listed in Research Source	The Cleveland Directory Co.
1974	Address Not Listed in Research Source	The Cleveland Directory Co.
1980	Address Not Listed in Research Source	The Cleveland Directory CO.

Year	Uses	Source
1981	Address Not Listed in Research Source	Ohio Bell Telephone Company
1983	Address Not Listed in Research Source	The Ohio Bell Telephone Co.
1986	****JENNINGS RD****	Ohio Bell
	CARRIER SYSTS MOTOR FREIGHT INC (4041)	
	NORTHEAST OHIO TRACTOR & TRAILER REPAIR SERV INC (4041)	
1991	Address Not Listed in Research Source	Ohio Bell
2002	****JENNINGS RD****	HAINES & COMPANY
	H&MINTL (4041)	
	TRANSMOBILE INC (4041)	
	TRANSPORTATION INC (4041)	

Adjoining Properties

SURROUNDING

Multiple Addresses
Cleveland, OH 44109

Year	Uses	Source
1930	****JENNINGS RD****	The Cleveland Directory Co.
	GAS PRODUCTS CO WELDING APPARATUS (3965)	
	HIGHWAY OIL CO (3970)	
	IMPORTERS OIL CO (3970)	
	SUPERIOR BRICK CO (4002)	
	[redacted]	
1935	****JENNINGS RD****	The Cleveland Directory Co.
	GAS PRODUCTS CO WELDING APPARATUS (3965)	
	HIGHWAY OIL CO (3970)	
	[redacted]	
	TOICH STEPH C AUTO REPR (4010)	
1941	****JENNINGS RD****	The Cleveland Directory Co.
	CARBO OXYGEN CO SLS OFFICE (3965)	
	NATL CYLINDER GAS CO (3965)	
	GREAT LAKES RUBBER CO (3985)	
	RIPICH ANDREW J FILLING STA (3990)	
	[redacted]	

Year	Uses	Source
1941 (continued)		
	HEPNER LEO T FILLING STA (4014)	
1949	Address Not Listed in Research Source	The Cleveland Directory Co.
1951	****BRADLEY RD****	The Cleveland Directory Co.
	RIVER SMELTING & REFG CO (4159)	
	****JENNINGS RD****	The Cleveland Directory Co.
	STAR COAL & SUP CO (3961)	
	PETERS JOHN M CONSTN CO (3971)	
	RESCO INC METAL WINDOWS (3971)	
	E & M STEEL & CONSTN CO (3975)	
	WEDGE PROTECTORS INC METAL STAMPINGS (3985)	
	DAVIS EUG J FILL STA (3990)	
	B & B PAPER CONVERTERS (3991)	
	UNITED METAL FABRICATORS INC (3991)	
	ZUZEK MICHL BEER (3995)	
	[redacted]	
	ZELEZNIK INC RESTR (4002)	
	HEPNER LEO T FILL STA (4014)	
1954	Address Not Listed in Research Source	The Cleveland Directory Co.
1955	****BRADLEY RD****	The Cleveland Directory Co.
	BRENNAN TRANS SERV (4130)	
	YANKEE LINES INC BR TRUCKING (4150)	
	****JENNINGS RD****	The Cleveland Directory Co.
	ALLIED SALVAGE & SUP CO (3961)	
	HATTERS MFG INC MACHS (3971)	
	E & M STEEL & CONSTN CO (3975)	
	DENVER CHICAGO TRUCKING CO INC (3980)	
	WEDGE PROTECTORS INC MTL STAMPINGS (3985)	
	STANDARD OIL GAS STA (3990)	
	B & B PAPER CONVERTERS (3991)	
	UNITED METAL FABRICATORS INC (3991)	
	ZUZEKS STEAK HOUSE (3995)	
	ZELEZNIK ALICE L (4002)	
	ZELEZNIK CAFE INC BEER (4002)	

Year	Uses	Source
1955 (continued)	PURE OIL CO GAS STA (4014)	
1959	Address Not Listed in Research Source	The Cleveland Directory Co.
1961	****BRADLEY RD****	The Cleveland Directory Co.
	TROJAN FREIGHT LINES INC (4125)	
	L & B WHOL SUP PIPE FITTINGS (4130)	
	VACANT (4150)	
	****JENNINGS RD****	The Cleveland Directory Co.
	NATL BOILER WORKS (3947)	
	SIMS MTR TRANSPORT LINES (3961)	
	TRI COUNTY DISTRIBUTORS WHOL BEVERAGE (3961)	
	HATTERS MFG INC MACH MFG (3971)	
	E & M STEEL & CONSTN CO STEEL FABICATORS (3975)	
	DENVER CHICAGO TRUCKING CO (3980)	
	WEDGE PROTECTORS INC MTL STAMPING (3985)	
	DAVIS STANDARD OIL GAS STA (3990)	
	UNITED METAL FABRICATORS INC (3991)	
	ZUZEKS STEAK HOUSE (3995)	
	ZELEZNIK FRANK JR (4002)	
	ZELEZNIKS CAFE INC BEER (4002)	
	PAULS PURE TRUCK STOP GAS STA (4014)	
1962	Address Not Listed in Research Source	The Cleveland Directory Co.
1967	Address Not Listed in Research Source	The Cleveland Directory CO.
1970	****BRADLEY RD****	The Cleveland Directory Co.
	TROJAN FREIGHT LINES INC (4125)	
	BRADLEY METAL CO WHSE (4130)	
	****JENNINGS RD****	The Cleveland Directory Co.
	NATIONAL BOILER WORKS INC BUY SELL & REPAIR BOILERS (3947)	
	ALLIED SALVAGE JUNK YD (3961)	
	VACANT (3961)	
	HI LO ENGINEERING CO MATL HANDLING EQUIP (3971)	
	E & M STEEL & CONSTRUCTION INC (3975)	
	TIME D C INC TRANS LINES (3980)	

Year	Uses	Source
1970 (continued)		
	WEDGE PRODUCTS INC MTL STAMPING (3985)	
	DAVIS SOHIO GASOLINE STATION (3990)	
	UNITED METAL FABRICATORS INC (3991)	
	ZUZEKS STEAK HOUSE (3995)	
	ZELEZNIK FRANK JR (4002)	
	ZELEZNIKS TAVERN (4002)	
	PAULS PURE TRUCK STOP (4014)	
1972	Address Not Listed in Research Source	The Cleveland Directory Co.
1974	****BRADLEY RD****	The Cleveland Directory Co.
	TROJAN FREIGHT LINES INC (4125)	
	BRADLEY METAL CO WHSE (4130)	
	****JENNINGS RD****	The Cleveland Directory Co.
	NATIONAL BOILER WORKS INC BUY SELL & REPAIR BOLLERS (3947)	
	VACANT (3947)	
	PARAMOUNT INDUSTRIES (3961)	
	SCHUSTER TOOL & DIE CO (3971)	
	SUBURBAN POWER PIPE (3975)	
	TIME D C INC TRANS LINES (3980)	
	WEDGE PRODUCTS INC MTL STAMPING (3985)	
	DAVIS SOHIO (3990)	
	UNITED METAL FABRICATORS INC (3991)	
	ZUZEKS STEAK HOUSE (3995)	
	ZELEZNIK FRANK JR (4002)	
	ZELEZNIKS TAVERN (4002)	
	JOHNS SERVICE GARAGE (4014)	
1980	Address Not Listed in Research Source	The Cleveland Directory CO.
1981	****BRADLEY RD****	Ohio Bell Telephone Company
	[redacted]	
	****JENNINGS RD****	Ohio Bell Telephone Company

Year	Uses	Source
1981 (continued)	PIMPO WM M (3971)	
1983	**BRADLEY RD**	The Ohio Bell Telephone Co.
	CASE CASTING SALES 21691 TUNGSTEN RD (4125)	
	CAMS MOTOR SERV INC (4125)	
	CASE CARTAGE CO INC (4125)	
	OHIO FAST FREIGHT CORP (4125)	
	JEUNNINGS RD	The Ohio Bell Telephone Co.
	A (3985)	
	JENNINGS RD	The Ohio Bell Telephone Co.
	CO (3971)	
	A & L FABRICATING CORP (3975)	
	SCA SERVICES OF CLEVE INC (3980)	
	SCASERVSOFCLEVE (3980)	
	D & R AUTO SERV (3990)	
	CUDNIKS TAVERN (3995)	
	WOLFS GARAGE & TIRE SERV INC (3995)	
	WOLFS PAINTING & DECORATING INC (3995)	
	T & M TRUCK & AUTO SERV (4014)	
	T & M WASTE MATRL CO INC (4014)	
	TMI REALTY INC REAL ESTATE (4014)	
	TMITERMINAL TOIER (4014)	
	JENNINGS ST	The Ohio Bell Telephone Co.
	KEELER E CO (3947)	
	NATIONAL BOILER WORKS INC (3947)	
	BRADLEY RD	The Ohio Bell Telephone Co.
	[redacted]	
	SCHUENEMANN PAUL G ILL (4110)	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	JENNINGS RIDGE DR	The Ohio Bell Telephone Co.
	[redacted]	
	JENNINGS RD	The Ohio Bell Telephone Co.

Year	Uses	Source
1983	(continued)	
	[redacted]	
1986	**JENNINGS RD**	Ohio Bell
	MIKES MECHANICAL SERV (3971)	
	SCHUSTER TOOL & DIE CO (3971)	
	A & L FABRICATING CORP (3975)	
	WASTE MANAGEMENT OF OHIO CLEVELAND (3980)	
	R & T EQUIPMENT & REPAIR INC (3985)	
	R & T EQUIPMENT & REPAIR INC (3985)	
	JENNINGS AUTO (3990)	
	CUDNIKS TAVERN (3995)	
	VALLEY AUTO SERV (3995)	
	ZELEZNIKAS TAVERN (4002)	
	OHIO INDUSTRIAL ROOFING (4014)	
	JENNINGS ST	Ohio Bell
	NATIONAL BOILER WORKS INC (3947)	
	BRADLEY RD	Ohio Bell
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	JENNINGS RD	Ohio Bell
	[redacted]	
1991	**BRADLEY RD**	Ohio Bell
	COIL TRANSFER (4125)	
	JENNINGS RD	Ohio Bell
	SCHUSTER TOOL & DIE CO (3971)	
	MODULAIRE A W MI SERVICE (3980)	
	WASTE MANAGEMENT OF OHIO CLEVELAND (3980)	
	R & T EQUIPMENT & REPAIR INC (3985)	
	CUDNIKS TAVERN (3995)	
	ZELEZNIKS TAVERN (4002)	
	OHIO INDUSTRIAL INC (4014)	
	JENNINGS ST	Ohio Bell
	NATIONAL BOILER WORKS INC BOILER PARTS & REPAIRS (3947)	
	BRADLEY RD	Ohio Bell

Year	Uses	Source
1991	(continued)	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	JENNINGS RD	Ohio Bell
	[redacted]	
2002	**BRADLEY RD**	HAINES & COMPANY
	CLEVELAND CITY (4125)	
	CLEVELAND MUNICIPALSD (4125)	
	DECATRANSPORT (4125)	
	DINCESSEUGENE (4125)	
	FROM 4101 JENNINGSRD S (4125)	
	TOBROOKLYN HTS LINE (4125)	
	ARESOURCESYSTEMS (4130)	
	JENNINGS RIDGE DR	HAINES & COMPANY
	CLEVELAND CITY (4207)	
	CLEVELAND MUNICIPAL 8D (4207)	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	RIVER RIDGE DR	HAINES & COMPANY

Year	***Uses***	***Source***
2002	(continued)	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	
	****JENNINGS RD****	HAINES & COMPANY
	[redacted]	
	[redacted]	
	BAURGEORGE (3961)	
	BAURGEORGE (3971)	
	A&L FABRICATING (3975)	
	[redacted]	
	REPUBLIC WASTE (3980)	
	REPUBLICWASTE (3980)	
	SERVICES CLEVE (3980)	
	SERVICESOF OH (3980)	
	TSCHOFENKAREN (3985)	
	XXXX (3990)	
	4TH W (3995)	
	CUDNIKMICHAEL (3995)	
	CUDNIKS TAVERN (3995)	
	SIROTZKIM (4002)	
	[redacted]	
	ZELEZNIKSTAVERN (4002)	
	[redacted]	
	ALLINDUSTRIAL (4014)	
	ROOFING INC (4014)	
	TRUCKING 9 EQUIPMEN (4015)	

EDR NEPACheck®

Harshaw FUSRAP (IA07)
4041 Jennings Road
Cleveland, OH 44109

Inquiry Number: 1714738.8s

July 13, 2006

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EDR NEPACheck® DESCRIPTION

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects and actions, analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

The EDR NEPACheck provides information which may be used, in conjunction with additional research, to determine whether a proposed site or action will have significant environmental effect.

The report provides maps and data for the following items (where available). Search results are provided in the Map Findings Summary on page 2 of this report.

Section	Regulation
Natural Areas Map	
• Federal Lands Data:	
- Officially designated wilderness areas	47 CFR 1.1307(1)
- Officially designated wildlife preserves, sanctuaries and refuges	47 CFR 1.1307(2)
- Wild and scenic rivers	40 CFR 6.302(e)
- Fish and Wildlife	40 CFR 6.302
• Threatened or Endangered Species, Fish and Wildlife, Critical Habitat Data (where available)	47 CFR 1.1307(3); 40 CFR 6.302
Historic Sites Map	
• National Register of Historic Places	47 CFR 1.1307(4); 40 CFR 6.302
• State Historic Places (where available)	
• Indian Reservations	
Flood Plain Map	
• National Flood Plain Data (where available)	47 CFR 1.1307(6); 40 CFR 6.302
Wetlands Map	
• National Wetlands Inventory Data (where available)	47 CFR 1.1307(7); 40 CFR 6.302
FCC & FAA Map	
• FCC antenna/tower sites, AM Radio Towers, FAA Markings and Obstructions, AM Radio Interference Zones, Airports, Topographic gradient	47 CFR 1.1307(8)
Key Contacts and Government Records Searched	

MAP FINDINGS SUMMARY

The databases searched in this report are listed below. Database descriptions and other agency contact information is contained in the Key Contacts and Government Records Searched section on page 21 of this report.

TARGET PROPERTY ADDRESS

HARSHAW FUSRAP (IA07)
4041 JENNINGS ROAD
CLEVELAND, OH 44109

Inquiry #: 1714738.8s
Date: 7/13/6

TARGET PROPERTY COORDINATES

Latitude (North):	41.444199 - 41˚ 26' 39.1''
Longitude (West):	81.684502 - 81˚ 41' 4.2''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	442819.0
UTM Y (Meters):	4588083.0

Applicable Regulation from 47 CFR/FCC Checklist	Database	Search Distance (Miles)	Within Search	Within 1/8 Mile
NATURAL AREAS MAP				
1.1307a (1) Officially Designated Wilderness Area	US Federal Lands	1.00	NO	NO
1.1307a (2) Officially Designated Wildlife Preserve	US Federal Lands	1.00	NO	NO
1.1307a (3) Threatened or Endangered Species or Critical Habitat	OH Endangered Species	1.00	NO	NO
1.1307a (2) Officially Designated Wildlife Preserve	OH Managed Lands	1.00	NO	NO
1.1307a (3) Threatened or Endangered Species or Critical Habitat	County Endangered Species	County	YES	N/A
HISTORIC SITES MAP				
1.1307a (4) Listed or eligible for National Register	National Register Hist. Places	1.00	NO	NO
	Indian Reservation	1.00	NO	NO
FLOODPLAIN MAP				
1.1307 (6) Located in a Flood Plain	FLOODPLAIN	1.00	YES	YES
WETLANDS MAP				
1.1307 (7) Change in surface features (wetland fill)	NWI	1.00	NO	NO
	OH COASTAL ZONE	20.00	YES	NO
FCC & FAA SITES MAP				
	FCC Cellular	1.00	YES	NO
	FCC Antenna	1.00	YES	NO
	FCC Tower	1.00	NO	NO
	FCC AM Tower	1.00	NO	NO
	FAA DOF	1.00	NO	NO
	Airports	1.00	NO	NO
	Power Lines	1.00	NO	NO

Natural Areas Map

- Target Property
- Roads
- County Boundary
- Waterways
- Water
- Locations
- Federal Areas
- Federal Linear Features
- State Areas
- State Linear Features

SITE NAME: Harshaw FUSRAP (IA07) ADDRESS: 4041 Jennings Road Cleveland OH 44109 LAT/LONG: 41.4442 / 81.6845	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714738.8s DATE: July 13, 2006

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NATURAL AREAS MAP FINDINGS

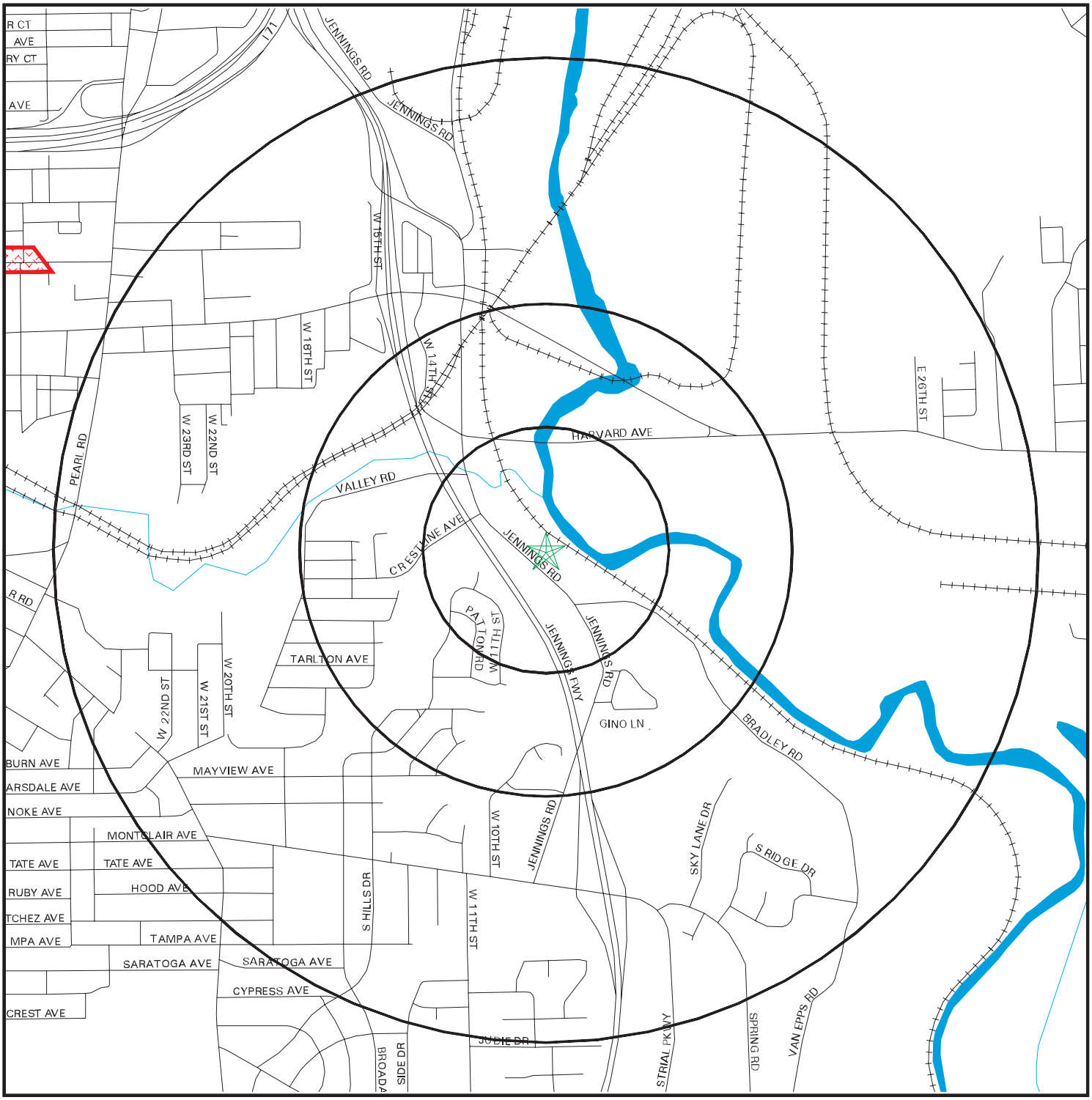
Endangered Species Listed for: CUYAHOGA County, OH.
Source: EPA Endangered Species Protection Program Database

BIRD:	PLOVER, PIPING
MAMMAL:	BAT, INDIANA

Map ID Direction Distance Distance (ft.)	EDR ID Database

No mapped sites were found in EDR's search of available government records within the search radius around the target property.

Historic Sites Map



- Target Property
- Streets
- County Boundary
- Waterways
- Water
- Historic Sites
- Federal Historic Areas
- State Historic Areas
- US Indian Reservations
- Scenic Trail

SITE NAME: Harshaw FUSRAP (IA07)	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 4041 Jennings Road Cleveland OH 44109	CONTACT: Marc Graham INQUIRY #: 1714738.8s
LAT/LONG: 41.4442 / 81.6845	DATE: July 13, 2006

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HISTORIC SITES MAP FINDINGS

Map ID Direction Distance Distance (ft.)	EDR ID Database

No mapped sites were found in EDR's search of available government records within the search radius around the target property.

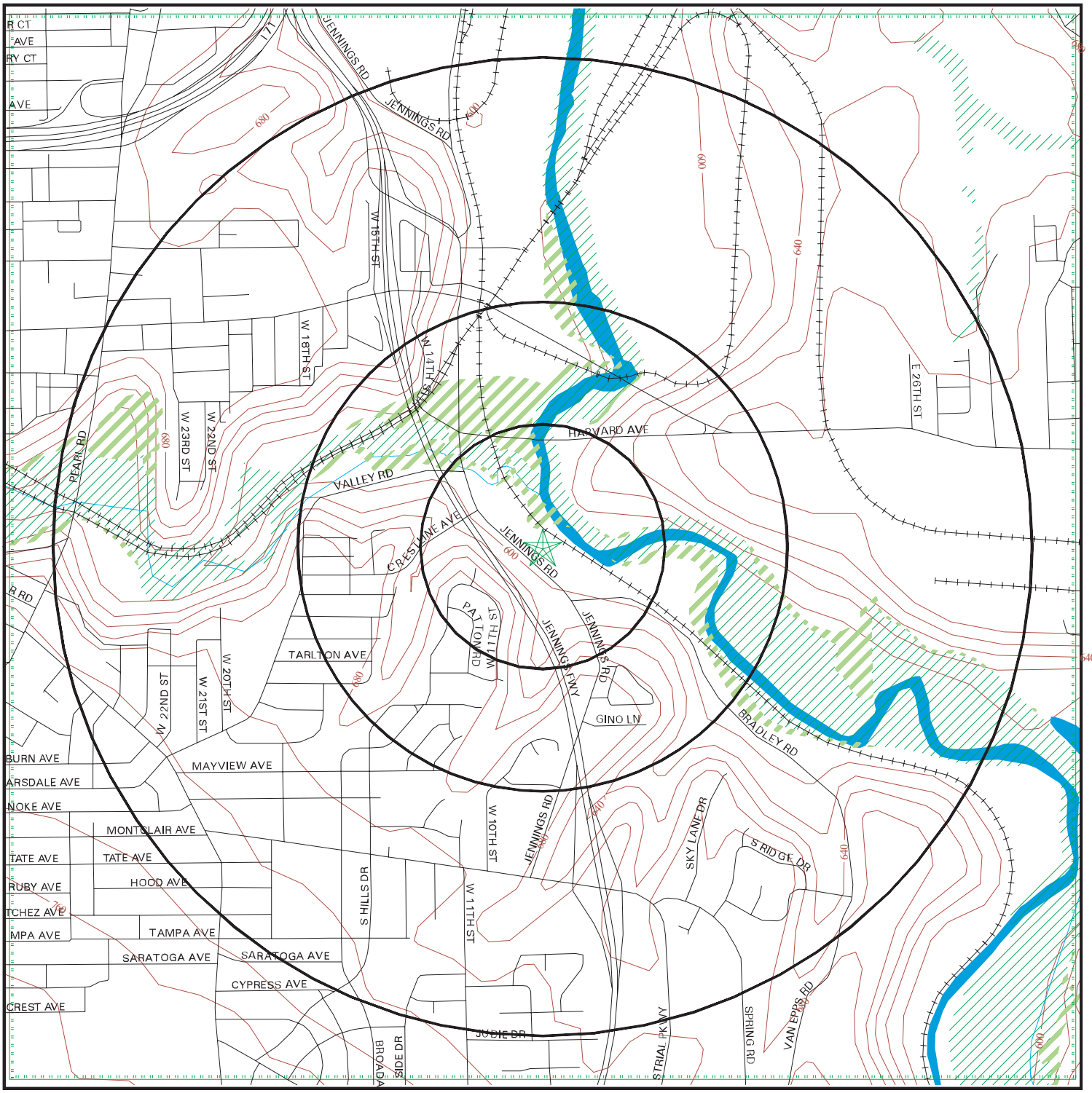
UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

	Status EDR ID Database

No unmapped sites were found in EDR's search of available government records.

Flood Plain Map



Major Roads
Contour Lines
Waterways
County Boundary
Power Lines
Pipe Lines
Fault Lines
Water
100-year flood zone
500-year flood zone
Electronic FEMA data available
Electronic FEMA data not available

SITE NAME: Harshaw FUSRAP (IA07) ADDRESS: 4041 Jennings Road Cleveland OH 44109 LAT/LONG: 41.4442 / 81.6845	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714738.8s DATE: July 13, 2006

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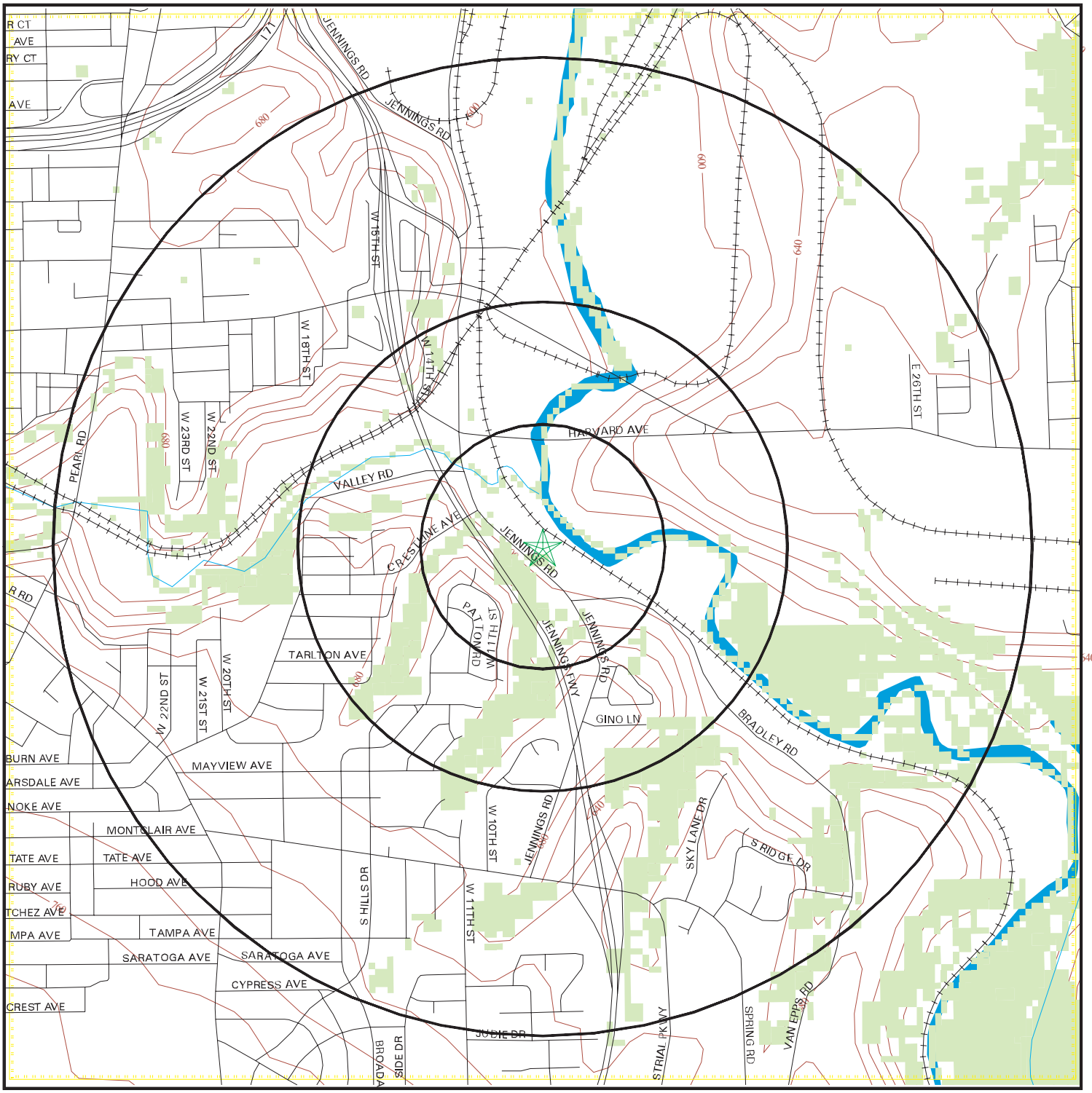
FLOOD PLAIN MAP FINDINGS

Source: FEMA Q3 Flood Data

County	FEMA flood data electronic coverage
CUYAHOGA, OH	YES
Flood Plain panel at target property:	3901040025B
Additional Flood Plain panel(s) in search area:	
3901190001B	
3906540001B	
3901010001B	

National Wetlands Inventory Map



Major Roads
Contour Lines
Waterways
County Boundary
Power Lines
Pipe Lines
Fault Lines
Water
National Wetland Inventory
State Wetlands
Electronic NWI data available
Electronic NWI data not available

SITE NAME: Harshaw FUSRAP (IA07) ADDRESS: 4041 Jennings Road Cleveland OH 44109 LAT/LONG: 41.4442 / 81.6845	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714738.8s DATE: July 13, 2006

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WETLANDS MAP FINDINGS

Source: Fish and Wildlife Service NWI data

NWI hardcopy map at target property: Cleveland South
Additional NWI hardcopy map(s) in search area:
Not reported in source data

Map ID Direction Distance Distance (ft.)	Code and Description*	Database

No Sites Reported.

*See Wetland Classification System for additional information.

WETLANDS CLASSIFICATION SYSTEM

National Wetland Inventory Maps are produced by the U.S. Fish and Wildlife Service, a sub-department of the U.S. Department of the Interior. In 1974, the U.S. Fish and Wildlife Service developed a criteria for wetland classification with four long range objectives:

- to describe ecological units that have certain homogeneous natural attributes,
- to arrange these units in a system that will aid decisions about resource management,
- to furnish units for inventory and mapping, and
- to provide uniformity in concepts and terminology throughout the U.S.

High altitude infrared photographs, soil maps, topographic maps and site visits are the methods used to gather data for the productions of these maps. In the infrared photos, wetlands appear as different colors and these wetlands are then classified by type. Using a hierarchical classification, the maps identify wetland and deepwater habitats according to:

- system
- subsystem
- class
- subclass
- modifiers

(as defined by Cowardin, et al. U.S. Fish and Wildlife Service FWS/OBS 79/31. 1979.)

The classification system consists of five systems:

1. marine
2. estuarine
3. riverine
4. lacustrine
5. palustrine

The marine system consists of deep water tidal habitats and adjacent tidal wetlands. The riverine system consists of all wetlands contained within a channel. The lacustrine systems includes all nontidal wetlands related to swamps, bogs & marshes. The estuarine system consists of deepwater tidal habitats and where ocean water is diluted by fresh water. The palustrine system includes nontidal wetlands dominated by trees and shrubs and where salinity is below .5% in tidal areas. All of these systems are divided in subsystems and then further divided into class.

National Wetland Inventory Maps are produced by transferring gathered data on a standard 7.5 minute U.S.G.S. topographic map. Approximately 52 square miles are covered on a National Wetland Inventory map at a scale of 1:24,000. Electronic data is compiled by digitizing these National Wetland Inventory Maps.

SYSTEM — **MARINE**

SUBSYSTEM — **1 - SUBTIDAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 2 Worm	

SUBSYSTEM — **2 - INTERTIDAL**

CLASS	AB-AQUATIC BED	RF-REEF	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE
Subclass	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 2 Worm	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic

SYSTEM — **E - ESTUARINE**

SUBSYSTEM — **1 - SUBTIDAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	

SUBSYSTEM — **2 - INTERTIDAL**

CLASS	AB-AQUATIC BED	RF-REEF	SB - STREAMBED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	SS-SCRUB SHRUB	FO-FORESTED
Subclass	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

SYSTEM — **R - RIVERINE**

SUBSYSTEM	**1 - TIDAL**	**2 - LOWER PERENNIAL**	**3 - UPPER PERENNIAL**	**4 - INTERMITTENT**	**5 - UNKNOWN PERENNIAL**
CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	*SB-STREAMBED	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	**EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble 3 Cobble-Gravel 4 Sand 5 Mud 6 Organic 7 Vegetated	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

* STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.
**EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

SYSTEM — **L - LACUSTRINE**

SUBSYSTEM — **1 - LIMNETIC**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	

SUBSYSTEM — **2 - LITTORAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

SUBSYSTEM

P - PALUSTRINE

CLASS	RB--ROCK BOTTOM	UB--UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	US--UNCONSOLIDATED SHORE	ML--MOSS-LICHEN	EM--EMERGENT	SS--SCRUB-SHRUB	FO--FORESTED	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble 3 Mud 4 Organic	1 Cobble-Gravel 2 Sand	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6Deciduous 7 Evergreen	

MODIFIERS

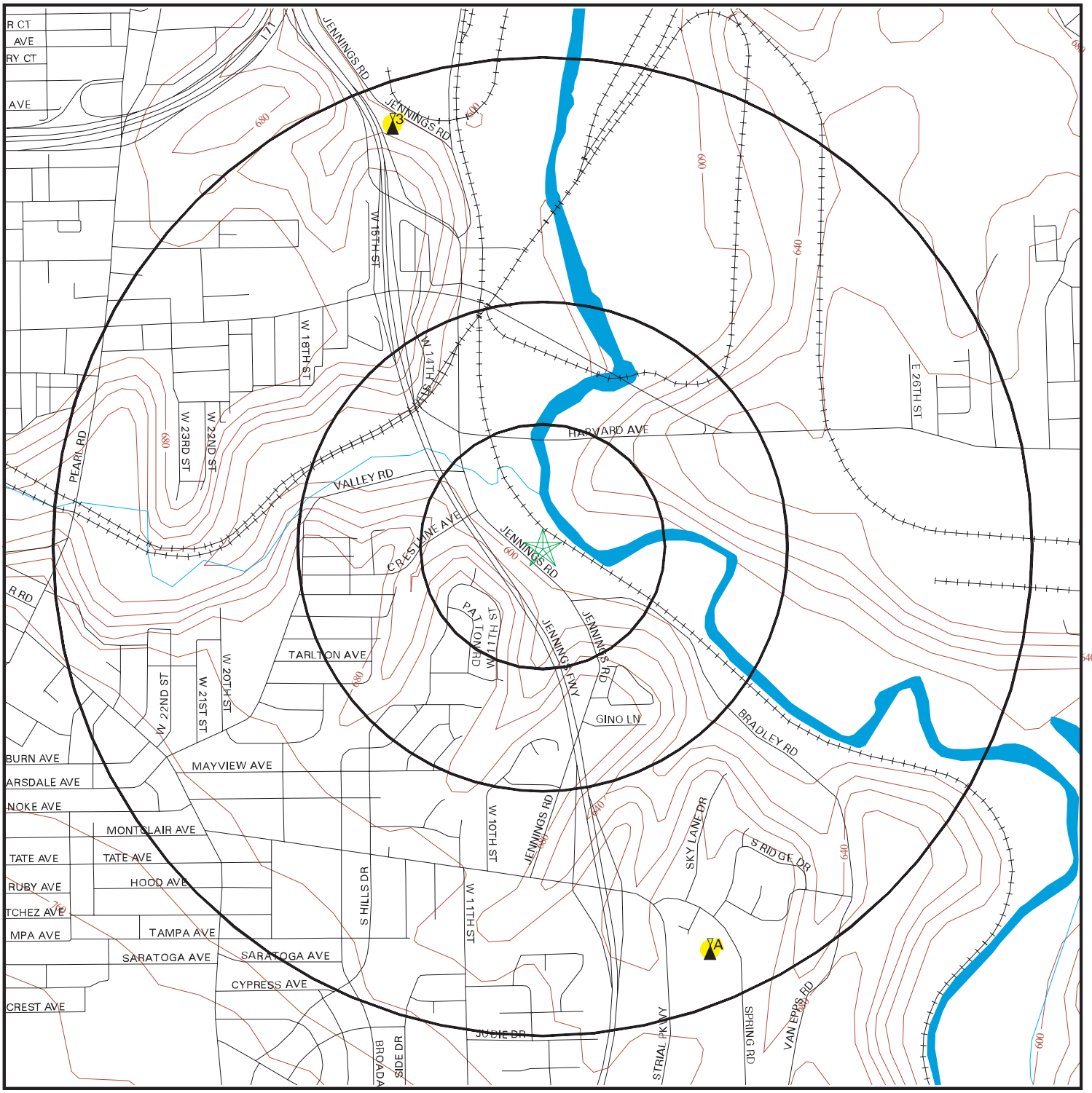
In order to more adequately describe wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	**Tidal**	**Coastal Halinity**	**Inland Salinity pH Modifier for all Fresh Water**					
A Temporarily Flooded	H Permanently Flooded	K Artificially Flooded	*S Temporary-Tidal	1 Hyperhaline	7 Hypersaline		g Organic	b Beaver
B Saturated	J Intermittently Flooded	L Subtidal	*R Seasonal-Tidal	2 Euhaline	8 Eusaline	a Acid	n Mineral	d Partially Drained/Ditched
C Seasonally Flooded	K Artificially Flooded	M Irregularly Exposed	*T Semipermanent -Tidal	3 Mixohaline (Brackish)	9 Mixosaline	t Circumneutral		f Farmed
D Seasonally Flooded/ Well Drained	W Intermittently Flooded/Temporary	N Regularly Flooded	V Permanent -Tidal	4 Polyhaline	0 Fresh	i Alkaline		h Diked/Impounded
E Seasonally Flooded/ Saturated	Y Saturated/Semipermanent/ Seasonal	P Irregularly Flooded	U Unknown	5 Mesohaline				r Artificial Substrate
F Semipermanently Flooded	Z Intermittently Exposed/Permanent			6 Oligohaline				s Spoil
G Intermittently Exposed	U Unknown			0 Fresh				x Excavated

*These water regimes are only used in tidally influenced, freshwater systems.

Source: U.S. Department of the Interior
Fish and Wildlife Service
National Wetlands Inventory

FCC & FAA Sites Map



Streets
Contour Lines
County Boundary
Waterways
Power Lines
Water
Sites
Omni Directional AM Interference
Directional AM Interference

SITE NAME: Harshaw FUSRAP (IA07) ADDRESS: 4041 Jennings Road Cleveland OH 44109 LAT/LONG: 41.4442 / 81.6845	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714738.8s DATE: July 13, 2006

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FCC & FAA SITES MAP FINDINGS
TOWERS

Map ID Direction Distance Distance (ft.)	EDR ID Database
A1 SSE 1/2-1 mi 4705	CEL100000029109 CELLULAR

Low Frequency:	870.03000000	High Frequency:	879.99000000
Callsign:	KNKA235	Radio Code:	CL
DBA Name:	NORTHERN OHIO CELLULAR TELEPHONE COMPANY		
Contact:	Not Reported		
Licensee:	NORTHERN OHIO CELLULAR TELEPHONE COMPANY Not Reported WORTHINGTON, OH 43085		
Transmitter Address:	4544 SPRING ROAD CLEVELAND, OH		
County:	CUYAHOGA		
Latitude:	412556	Longitude:	0814041
Elevation:	00000	Height:	00000
Height Average:	00000	Effective Height:	00080
Structure Height:	00150	Class Code:	FB
ERP:	00000000	Database ID:	Y
License Date:	940926	Emissions:	40K0F3E 40K0F1D
Issue Date:	940622	Expiration Date:	941001
Mobile Vehicles:	Not Reported	Total Units:	Not Reported
Control Point Auth:	00	Authorization Type:	L

This record is for a license, and it may or may not indicate a site which has been built.

A2 SSE 1/2-1 mi 4705	CEL100000000340 CELLULAR

Low Frequency:	825.03000000	High Frequency:	834.99000000
Callsign:	KNKA235	Radio Code:	CL
DBA Name:	NORTHERN OHIO CELLULAR TELEPHONE COMPANY		
Contact:	Not Reported		
Licensee:	NORTHERN OHIO CELLULAR TELEPHONE COMPANY Not Reported WORTHINGTON, OH 43085		
Transmitter Address:	4544 SPRING ROAD CLEVELAND, OH		
County:	CUYAHOGA		
Latitude:	412556	Longitude:	0814041
Elevation:	00000	Height:	00000
Height Average:	00000	Effective Height:	00080
Structure Height:	00150	Class Code:	MO
ERP:	00000000	Database ID:	Y
License Date:	940926	Emissions:	40K0F3E 40K0F1D
Issue Date:	940622	Expiration Date:	941001
Mobile Vehicles:	Not Reported	Total Units:	Not Reported
Control Point Auth:	00	Authorization Type:	L

This record is for a license, and it may or may not indicate a site which has been built.

FCC & FAA SITES MAP FINDINGS
TOWERS

Map ID Direction Distance Distance (ft.)	EDR ID Database
3 NNW 1/2-1 mi 4840	ANT100000011604 ANTREG

Tower ID:	1011903		
Address:	APPROX .5 MI OFF 25TH ST & RIVERSIDE CEMETARY, CLEVELAND, OH		
Lat (NAD 27):	412724	Lon (NAD 27):	0814126
Lat (NAD 83):	412724	Lon (NAD 83):	0814125
Construction Date:	May 17 1996	Dismantled Date:	
Nepa Flag:	N	FAA ID:	95-AGL-3526-OE
Structure Type:	TOWER	Elevation (M):	182.50
Structure Hgt (M):	56.30	Hgt Above Ground:	60.60
Hgt Above Ground (M):	60.6559371	Hgt Above Mean Sea Level (M):	243.233352
Date Activated:	Jan 27 1999	License Issue Date:	Jan 14 1997
Date Keyed:	Jan 14 1997	Date Printed:	Feb 10 1997
Date Processed:	Jan 14 1997	Date Received:	Jan 13 1997
Licensee Signature	JOAN ROBBINS		
Nature of Modification:		Purpose:	R
Company (DBA) Name:			
Owner Name:	GTE MOBILNET OF OHIO LIMITED PARTNERSHIP		
Attention:	REGULATORY DEPT		
Owner Address:	245 PERIMETER CENTER PKY, ATLANTA, GA 30346		
Owner PO Box:		Phone Number:	7703911732
E-Mail Address:	[redacted]		
Internet Domain:	MOBILNET.GTE.COM		
Painting & Lighting Specs:		Date of Last Remarks:	
Special Conditions #1:			
Special Conditions #2:			
Key Remarks:			

This record is for a license, and it may or may not indicate a site which has been built.

FCC & FAA SITES MAP FINDINGS
AIRPORTS

EDR ID
Database

No Sites Reported.

FCC & FAA SITES MAP FINDINGS
POWERLINES

EDR ID
Database

No Sites Reported.

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Various Federal laws and executive orders address specific environmental concerns. NEPA requires the responsible offices to integrate to the greatest practical extent the applicable procedures required by these laws and executive orders. EDR provides key contacts at agencies charged with implementing these laws and executive orders to supplement the information contained in this report.

NATURAL AREAS
Officially designated wilderness areas
Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

Federal Contacts for Additional Information

National Park Service, Midwest Region
1709 Jackson Street
Omaha, NE 68102
402-221-3471

USDA Forest Service, Eastern
310 West Wisconsin Avenue
Milwaukee, WI 53203
414-297-3693

BLM - Eastern States Office
7450 Boston Blvd.
Springfield, VA 22153
703-440-1713

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

Officially designated wildlife preserves, sanctuaries and refuges
Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

OH Managed Lands: Managed Lands
The location and extent of areas owned and/or managed by the divisions of the Ohio Dept. of Natural Resources
Source: Dept. of Natural Resources.
Telephone: 614-265-1044

Federal Contacts for Additional Information

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

State Contacts for Additional Information

Dept. of Natural Resources 614-265-6305

Wild and scenic rivers

Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2004

Federal Contacts for Additional Information

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

Endangered Species

Government Records Searched in This Report

Endangered Species Protection Program Database
A listing of endangered species by county.
Source: Environmental Protection Agency
Telephone: 703-305-5239

OH Endangered Species: OH Endangered Species - Natural Heritage Database
Known locations for Ohios rare plants and animals, high quality plant communities and other natural features.
Source: Department of Natural Resources.
Telephone: 614-265-6472

Federal Contacts for Additional Information

Fish & Wildlife Service, Region 3
BHW Federal Building One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5230

State Contacts for Additional Information

Natural Heritage Database, Dept. of Natural Resources 614-265-6453

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

LANDMARKS, HISTORICAL, AND ARCHEOLOGICAL SITES
Historic Places
Government Records Searched in This Report
National Register of Historic Places:
The National Register of Historic Places is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. These contribute to an understanding of the historical and cultural foundations of the nation.
The National Register includes:
- All prehistoric and historic units of the National Park System;
- National Historic Landmarks, which are properties recognized by the Secretary of the Interior as possessing national significance; and
- Properties significant in American, state, or local prehistory and history that have been nominated by State Historic Preservation Officers, federal agencies, and others, and have been approved for listing by the National Park Service.

Date of Government Version: 03/15/2000

Federal Contacts for Additional Information
Park Service; Advisory Council on Historic Preservation
1849 C Street NW
Washington, DC 20240
Phone: (202) 208-6843

State Contacts for Additional Information
Ohio Historic Preservation Office 614-297-2600

Indian Religious Sites
Government Records Searched in This Report
Indian Reservations:
This map layer portrays Indian administrated lands of the United States that have any area equal to or greater than 640 acres.
Source: USGS
Phone: 888-275-8747
Date of Government Version: 10/01/2003

Federal Contacts for Additional Information
Department of the Interior- Bureau of Indian Affairs
Office of Public Affairs
1849 C Street, NW
Washington, DC 20240-0001
Office: 202-208-3711
Fax: 202-501-1516

National Association of Tribal Historic Preservation Officers
1411 K Street NW, Suite 700
Washington, DC 20005
Phone: 202-628-8476
Fax: 202-628-2241

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

State Contacts for Additional Information
A listing of local Tribal Leaders and Bureau of Indian Affairs Representatives can be found at:
http://www.doi.gov/bia/areas/agency.html

Scenic Trails

State Contacts for Additional Information
North County Trail Association
49 Monroe Center Suite 200B
Grand Rapids, Michigan 49503
616-454-5506

FLOOD PLAIN, WETLANDS AND COASTAL ZONE

Flood Plain Management
Government Records Searched in This Report
Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

Federal Contacts for Additional Information
Federal Emergency Management Agency 877-3362-627

State Contacts for Additional Information
Ohio Emergency Management Agency 614-889-7150

Wetlands Protection
Government Records Searched in This Report
NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

Federal Contacts for Additional Information
Fish & Wildlife Service 813-570-5412

State Contacts for Additional Information
Dept. of Natural Resources 614-265-6305

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Coastal Zone Management

Government Records Searched in This Report

CAMA Management Areas
Dept. of Env., Health & Natural Resources
919-733-2293

Federal Contacts for Additional Information

Office of Ocean and Coastal Resource Management
N/ORM, SSMC4
1305 East-West Highway
Silver Spring, Maryland 20910
301-713-3102

State Contacts for Additional Information

Dept. of Natural Resources, Office of Real Estate & Land Mgmt. 614-265-6413

Government Records Searched in This Report

Coastal Zones
Dept. of Natural Resources
614-265-6383

FCC & FAA SITES MAP

For NEPA actions that come under the authority of the FCC, the FCC requires evaluation of Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

Government Records Searched in This Report

Cellular

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

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Tower

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

Portions copyright (C) 1999 Percon Corporation. All rights reserved.

Antenna Registration

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

Portions copyright (C) 1999 Percon Corporation. All rights reserved.

AM Tower

Federal Communications Commission
Mass Media Bureau
2nd Floor - 445 12th Street SW
Washington DC 20554 USA
Telephone (202) 418-2700

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

FAA Digital Obstacle File
National Oceanic and Atmospheric Administration
Telephone: 301-436-8301
Describes known obstacles of interest to aviation users in the US. Used by the Federal Aviation Administration (FAA) and the National Oceanic and Atmospheric Administration to manage the National Airspace System.

Airport Landing Facilities
Federal Aviation Administration
Telephone (800) 457-6656
Private and public use landing facilities.

Electric Power Transmission Line Data
PennWell Corporation
Telephone: (800) 823-6277
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Excessive Radio Frequency Emission
For NEPA actions that come under the authority of the FCC, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the determination of whether the particular facility, operation or transmitter would cause human exposure to levels of radio frequency in excess of certain limits.

Federal Contacts for Additional Information
Office of Engineering and Technology
Federal Communications Commission
445 12th Street SW
Washington, DC 20554
Phone: 202-418-2470

OTHER CONTACT SOURCES

STREET AND ADDRESS INFORMATION

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The EDR Radius Map
with GeoCheck®

Harshaw FUSRAP (IA07)
4041 Jennings Road
Cleveland, OH 44109

Inquiry Number: 1714738.2s

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

4041 JENNINGS ROAD
CLEVELAND, OH 44109

COORDINATES

Latitude (North):	41.444200 - 41˚ 26' 39.1''
Longitude (West):	81.684500 - 81˚ 41' 4.2''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	442819.0
UTM Y (Meters):	4588083.0
Elevation:	588 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	41081-D6 CLEVELAND SOUTH, OH
Most Recent Revision:	1994

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
CADLE CO. 4041 JENNINGS RD CLEVELAND, OH 44144	LUST Facility Status: Active FR Status: Initial Corrective Action Program Report OH Spills	N/A
MILAN EXPRESS CO INC 4041 JENNINGS RD CLEVELAND, OH 44109	NPDES	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL RECOVERY	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
RCRA-SQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SHWS	This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
TOWNGAS	DERR Towngas Database
HIST LF	Old Solid Waste Landfill
UNREG LTANKS	Ohio Leaking UST File
UST	Underground Storage Tank Tank File
ARCHIVE UST	Archived Underground Storage Tank Sites
ENG CONTROLS	Sites with Engineering Controls
INST CONTROL	Sites with Institutional Engineering Controls
VCP	Voluntary Action Program Sites
DRYCLEANERS	Drycleaner Facility Listing
BROWNFIELDS	Ohio Brownfield Inventory
CDL	Clandestine Drug Lab Locations
USD	Urban Setting Designation Sites
HIST INST CONTROLS	Institutional Controls Database
HIST ENG CONTROLS	Operation & Maintenance Agreements Database
HIST USD	Urban Setting Designations Database

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR Historical Auto Stations EDR Proprietary Historic Gas Stations
EDR Historical Cleaners EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

CERCLIS-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 02/01/2006 has revealed that there are 3 CERC-NFRAP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TRUCKING CO DUMP	***BRADLEY & JENNINGS***	***0 - 1/8 SSE***	***B4***	***7***
BURDETT OXYGEN COMPANY	4181 BRADLEY ROAD	1/4 - 1/2 ESE	C7	8
RESEARCH OIL COMPANY	***3680 VALLEY ROAD***	***1/4 - 1/2 WNW***	***F15***	***21***

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/15/2006 has revealed that there are 5 CORRACTS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ENGELHARD CORP	***1000 HARVARD AVE***	***1/4 - 1/2 NW***	***E12***	***11***
CHEMICAL SOLVENTS INC	***1010 DENISON AVE***	***1/2 - 1 NNW***	***26***	***27***
CHEMICAL SOLVENTS INC	***3751 JENNINGS RD***	***1/2 - 1 NNW***	***27***	***59***
WABASH ALLOYS DIVISION CONNELL	***4365 BRADLEY RD***	***1/2 - 1 SE***	***28***	***71***
MOBILE TANK CAR SERV	***3610 BROOKSIDE PARK DR***	***1/2 - 1 W***	***G30***	***77***

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

DERR: The DERR database is an index of sites for which Ohio EPA maintains files. It includes sites with known or suspected contamination, but a site's inclusion in the database does not mean that it is now or has ever been contaminated.

A review of the DERR list, as provided by EDR, and dated 03/14/2006 has revealed that there are 9 DERR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TRUCKING CO DUMP	***BRADLEY & JENNINGS***	***0 - 1/8 SSE***	***B4***	***7***
BURDETT OXYGEN CO	4181 BRADLEY RD	1/4 - 1/2 ESE	C8	8
CHEVRON ENGLEHARD	***1000 HARVARD AVE***	***1/4 - 1/2 NW***	***E13***	***21***
Activity: RR				
RIV SMELTING & REFINING CO	4195 BRADLEY RD	1/4 - 1/2 ESE	14	21
RESEARCH OIL CO	***3680 VALLEY RD***	***1/4 - 1/2 WNW***	***F16***	***22***
Activity: RR				
CHEMICAL SOLVENTS INC	***1010 DENISON AVE***	***1/2 - 1 NNW***	***26***	***27***
CHEMICAL SOLVENTS INC	***3751 JENNINGS RD***	***1/2 - 1 NNW***	***27***	***59***
OHIO DRUM RECONDITIONING	***3967 PEARL RD***	***1/2 - 1 WNW***	***29***	***75***
MOBILE TANK CAR SERV (DUP OF N	***3610 BROOKSIDE PARK DR***	***1/2 - 1 W***	***G31***	***79***

OH MSL: Ohio EPA no longer maintains or publishes the MSL, which was a list of sites with known or suspected contamination. Please be advised that this report does not constitute a determination that any site identified in the report is or may be contaminated.

A review of the MSL list, as provided by EDR, and dated 03/01/1999 has revealed that there are 4 MSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TRUCKING CO DUMP	BRADLEY / JENNINGS	1/8 - 1/4 SSE	B5	8
RESEARCH OIL COMPANY	***3680 VALLEY ROAD***	***1/4 - 1/2 WNW***	***F15***	***21***
OHIO DRUM RECONDITIONING	***3967 PEARL RD***	***1/2 - 1 WNW***	***29***	***75***
MOBILE TANK CAR SERV (DUP OF N	***3610 BROOKSIDE PARK DR***	***1/2 - 1 W***	***G31***	***79***

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Ohio Environmental Protection Agency's Licensed Solid Waste Facilities.

A review of the SWF/LF list, as provided by EDR, and dated 05/23/2006 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ALUMINUM COMPANY OF AMERICA AL	***1600 HARVARD AVENUE***	***1/4 - 1/2 NNE***	***D9***	***9***

EXECUTIVE SUMMARY

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Commerce Division of State Fire Marshal's List of Reported Petroleum Underground Storage Tank Release Incidents.

A review of the LUST list, as provided by EDR, and dated 03/15/2006 has revealed that there are 14 LUST sites within approximately 0.5 miles of the target property.

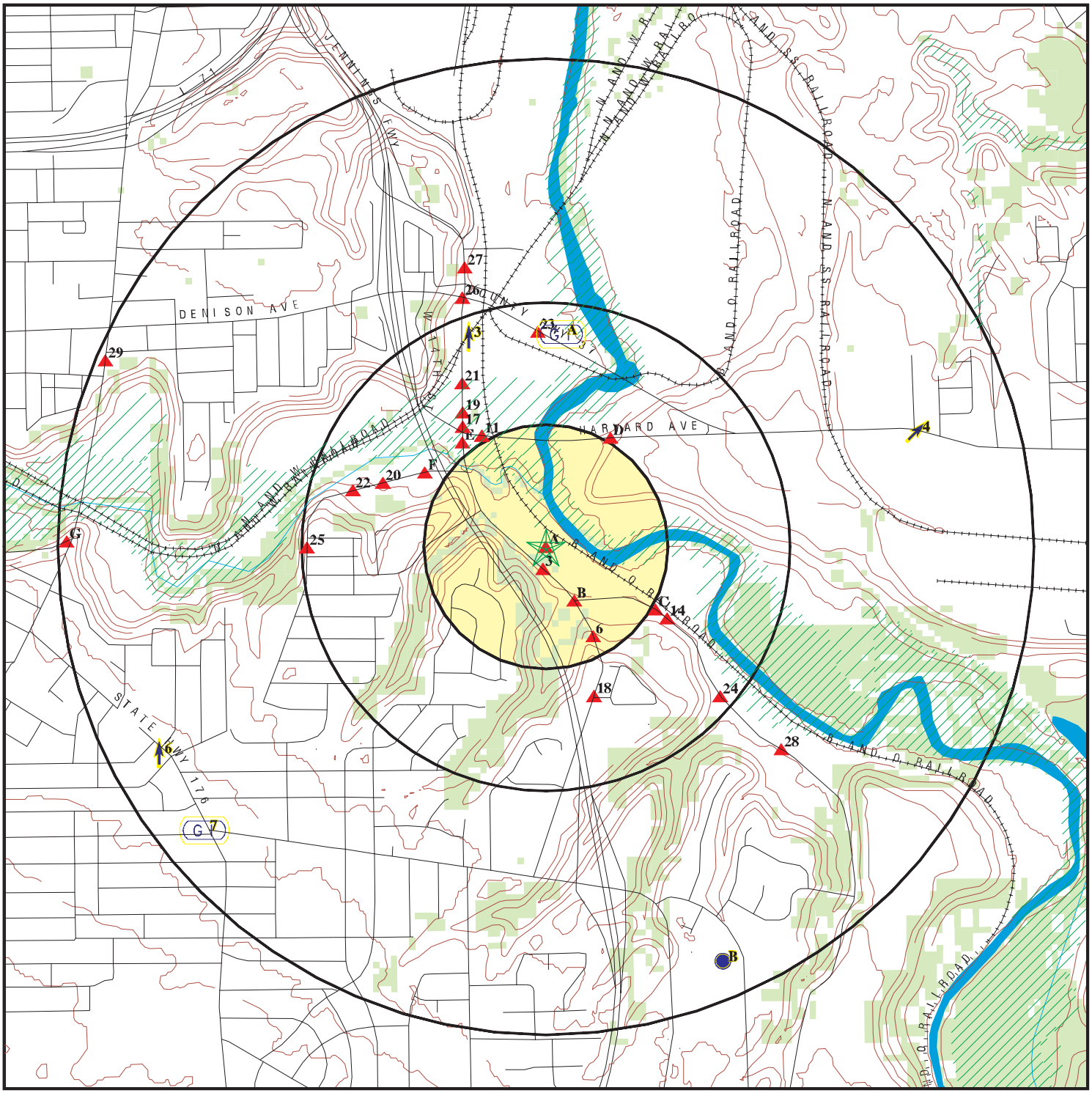
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CLEVELAND TRUCK FACILITY	4160 JENNINGS RD	0 - 1/8 S	3	7
Facility Status: Inactive FR Status: No Further Action letter issued				
Facility Status: Inactive FR Status: No Further Action letter issued				
FORMER COOKS GREENHOUSE	4245 JENNINGS RD	1/8 - 1/4 SSE	6	8
Facility Status: Inactive FR Status: No Further Action letter issued				
ALUMINUM CO. OF AMERICA	***1600 HARVARD AVE.***	***1/4 - 1/2 NNE***	***D10***	***10***
Facility Status: Inactive FR Status: No Further Action letter issued				
Facility Status: Inactive FR Status: No Further Action letter issued				
AJAX BITUMINOUS PAVING	811 HARVARD AVE	1/4 - 1/2 NNW	11	11
Facility Status: Inactive FR Status: No Further Action letter issued				
CHEVRON ENGLEHARD	***1000 HARVARD AVE***	***1/4 - 1/2 NW***	***E13***	***21***
Facility Status: Active FR Status: No Further Action letter issued				
WASTE MANAGEMENT OF OHIO	3980 JENNINGS RD	1/4 - 1/2 NW	17	23
Facility Status: Inactive FR Status: No Further Action letter issued				
SPRING HILL VILLA APARTMENTS	4330 JENNINGS RD	1/4 - 1/2 SSE	18	24
Facility Status: Inactive FR Status: No Further Action letter issued				
PARAMOUNT INDUSTRIES	***3961 JENNINGS RD***	***1/4 - 1/2 NNW***	***19***	***24***
Facility Status: Inactive FR Status: No Further Action letter issued				
OHIO TRANSPORT CORP.	3750 VALLEY RD	1/4 - 1/2 WNW	20	25
Facility Status: Inactive FR Status: No Further Action letter issued				
TESAR INDUSTRIAL CONTRACTORS	***3920 JENNINGS RD***	***1/4 - 1/2 NNW***	***21***	***25***
Facility Status: Inactive FR Status: No Further Action letter issued				
SUPERIOR FORWARDING CO., INC.	3800 VALLEY RD	1/4 - 1/2 WNW	22	25
Facility Status: Inactive FR Status: No Further Action letter issued				
DARLING & CO	***908 DENISON AVE***	***1/4 - 1/2 N***	***23***	***26***
Facility Status: Inactive FR Status: No Further Action letter issued				
M.E.B. PROPERTIES, INC.	***4287 BRADLEY RD***	***1/4 - 1/2 SE***	***24***	***26***
Facility Status: Active FR Status: No responce to DEF letter sent				
VALLEY ROAD PROPERTIES	3926 VALLEY RD	1/4 - 1/2 W	25	27
Facility Status: Inactive FR Status: No Further Action letter issued				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CAMPBELL ROAD COMPOST FACILITY	SWF/LF
NORTON COMPOST FACILITY	SWF/LF, OH Spills
TRUCKING COMPANY DUMP AKA HARKNESS	HIST LF
LTV STEEL	LUST, OH Spills
FREIGHT SYSTEM PROPERTY	LUST
STATE ROAD TRANSMISSION	LUST
ODOT HIGHWAY BRIDGE	RCRA-SQG, FINDS
ODOT HIGHWAY BRIDGE	RCRA-SQG, FINDS
HARSHAW CHEMICAL	OH Spills
HARSHAW CHEMICAL CO	OH Spills
NORTH COAST ROOFING	DERR
SOHIO	UNREG LTANKS
HARSHAW CHEMICAL CO THE OFFICE	EDR Historical Cleaners
HARSHAW CHEMICAL CO THE OFFICE	EDR Historical Cleaners

OVERVIEW MAP - 1714738.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Harshaw FUSRAP (IA07) ADDRESS: 4041 Jennings Road Cleveland OH 44109 LAT/LONG: 41.4442 / 81.6845	CLIENT: U.S. Army Corps of Engineers CONTACT: Marc Graham INQUIRY #: 1714738.2s DATE: July 13, 2006

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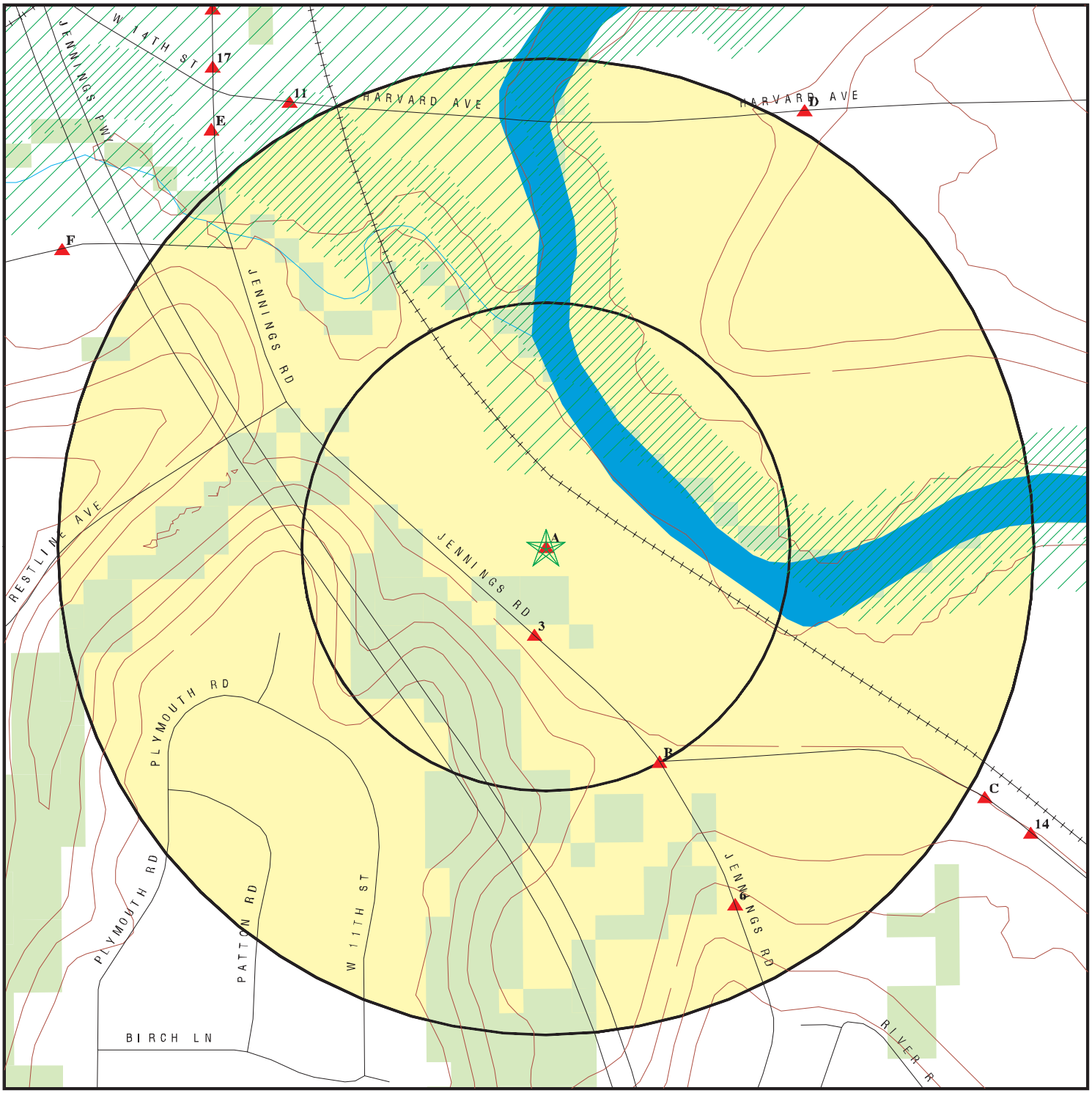
DETAIL MAP - 1714738.2s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	1	0	2	NR	NR	3
CORRACTS		1.000	0	0	1	4	NR	5
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
State Haz. Waste		N/A	N/A	N/A	N/A	N/A	N/A	N/A
DERR		1.000	1	0	4	4	NR	9
TOWNGAS		1.000	0	0	0	0	NR	0
MSL		1.000	0	1	1	2	NR	4
State Landfill		0.500	0	0	1	NR	NR	1
HIST LF		0.500	0	0	0	NR	NR	0
LUST	X	0.500	1	1	12	NR	NR	14
UNREG LTANKS		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
ARCHIVE UST		0.250	0	0	NR	NR	NR	0
OH Spills	X	TP	NR	NR	NR	NR	NR	0
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
NPDES	X	TP	NR	NR	NR	NR	NR	0
USD		0.500	0	0	0	NR	NR	0
HIST INST CONTROLS		0.500	0	0	0	NR	NR	0
HIST ENG CONTROLS		0.500	0	0	0	NR	NR	0
HIST USD		0.500	0	0	0	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

A1 Target Property — **CADLE CO.**
4041 JENNINGS RD
CLEVELAND, OH 44144

LUST — **S103703177**
OH Spills — **N/A**

Site 1 of 2 in cluster A

Actual: 588 ft.

LUST:

Owner: CADLE CO.
LTF Status: 1 SUS/CON from regulated UST
Release Number: 18000148-N00001
Owner Address: [redacted]
Facility Status: Active
FR Status: Initial Corrective Action Program Report
Old Facility Id: 180148
Former Lust Release Number: 185019100.0
Release Date: 1999-11-08 00:00:00

SPILLS:

Spill Year : 1995
Spill Month : 2
Spill Number : 0425
Date Spill Reported : 02/03/95
Sequential Number : 0
Lat/Long : N412642.19 / W82719.77
Spill No. : 9502-18-0425
Reporter Name : [redacted]
Confidential : No
District Code : NE
Employee Number : 1746
Product Spilled: MATERIAL UNKNOWN

A2 Target Property — **MILAN EXPRESS CO INC**
4041 JENNINGS RD
CLEVELAND, OH 44109

NPDES — **S107758303**
N/A

Site 2 of 2 in cluster A

Actual: 588 ft.

OH NPDES:

Facility Telephone: 216 341 8183
Facility Contact: TOM BOND
Company Name: MILAN EXPRESS CO INC
Company Contact: [redacted]
Company Telephone: 731 686 7428
Company Address: 1091 KEFAUVER DR
Comany City,St,Zip: MILAN, TN 38358
Receiving Waters: BIG CREEK
Start Date: Not reported
End Date: Not reported
Acreage: Not reported
Facility Renew: 3GR00818*AG
Send Date: 04/10/01
District: 3

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
3 **South** **< 1/8** **239 ft.**	**CLEVELAND TRUCK FACILITY** **4160 JENNINGS RD** **CLEVELAND, OH 44109**	**LUST**	**S104775362** **N/A**

Relative:
Higher

Actual:
594 ft.

LUST:
Owner: [redacted]
LTF Status: 6 Closure of regulated UST
Release Number: 18000840-N00001
Owner Address: [redacted]
Facility Status: **Inactive**
FR Status: **No Further Action letter issued**
Old Facility Id: 180840
Former Lust Release Number: 189010500.0
Release Date: Not reported

Owner: [redacted]
LTF Status: 6 Closure of regulated UST
Release Number: 18000840-N00002
Owner Address: [redacted]
Facility Status: **Inactive**
FR Status: **No Further Action letter issued**
Old Facility Id: 180840
Former Lust Release Number: 189010501.0
Release Date: 1999-07-19 00:00:00

B4 **SSE** **< 1/8** **657 ft.**	**TRUCKING CO DUMP** **BRADLEY & JENNINGS** **CLEVELAND, OH 44101**	**DERR** **CERC-NFRAP**	**1003872164** **OHD980509871**

Site 1 of 2 in cluster B

Relative:
Higher

Actual:
602 ft.

CERCLIS-NFRAP Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Code: NFRAP
NPL Status: Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	10/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	05/01/1983
Assessment:	HRS PACKAGE	Completed:	01/01/1984
Assessment:	SITE INSPECTION	Completed:	01/01/1984
Assessment:	ARCHIVE SITE	Completed:	01/01/1984

CERCLIS-NFRAP Alias Name(s):
HARKNESS LOT
TRUCKING CO DUMP

DERR:
Facility Id: 218000823
EPA Id: OHD980509871
Lat/Long: 41.44833333 / -81.68583333
Alias: Harkness Lot
District: NEDO
Activity: Not reported
Site Info: 330-963-1200

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
B5 SSE 1/8-1/4 664 ft. Relative: Higher Actual: 602 ft.	**TRUCKING CO DUMP BRADLEY / JENNINGS CLEVELAND, OH 44109**	**MSL**	**1000173298 N/A**

Site 2 of 2 in cluster B

OH MSL:
- Facility ID: 218-0823
- EPA ID: OHD980509871
- Lat/Long: 41 26 54 / 81 41 09
- Facility Type: None

---

6 SSE 1/8-1/4 1094 ft. Relative: Higher Actual: 645 ft.	**FORMER COOKS GREENHOUSE 4245 JENNINGS RD CLEVELAND, OH 44109**	**LUST**	**S103703224 N/A**

LUST:
- Owner: AMERI CON GROUP
- LTF Status: 6 Closure of regulated UST
- Release Number: 18001178-N00001
- Owner Address: [redacted]
- **Facility Status: Inactive**
- **FR Status: No Further Action letter issued**
- Old Facility Id: 181178
- Former Lust Release Number: 185171800.0
- Release Date: Not reported

C7 ESE 1/4-1/2 1367 ft. Relative: Higher Actual: 599 ft.	**BURDETT OXYGEN COMPANY 4181 BRADLEY ROAD CLEVELAND, OH 44109**	**CERC-NFRAP**	**1002990915 OHD004176426**

Site 1 of 2 in cluster C

CERCLIS-NFRAP Classification Data:
- Federal Facility: Not a Federal Facility
- Non NPL Code: NFRAP
- NPL Status: Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	10/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	11/29/1985
Assessment:	ARCHIVE SITE	Completed:	11/29/1985

CERCLIS-NFRAP Alias Name(s):
- CUYAHOGA SMELTING & PROCESSING CO INC
- BURDETT OXYGEN CO
- BURDETT OXYGEN CO

C8 ESE 1/4-1/2 1367 ft. Relative: Higher Actual: 599 ft.	**BURDETT OXYGEN CO 4181 BRADLEY RD CLEVELAND, OH 44109**	**DERR**	**1000188634 N/A**

Site 2 of 2 in cluster C

DERR:
- Facility Id: 218000121
- EPA Id: OHD004176426
- Lat/Long: 41.442422 / -81.68
- Alias: Not reported
- District: NEDO

BURDETT OXYGEN CO (Continued) **1000188634**

Activity: Not reported
Site Info: 330-963-1200

D9
NNE
1/4-1/2
1373 ft.

Relative:
Higher

Actual:
608 ft.

ALUMINUM COMPANY OF AMERICA ALCOA LANDFILL **SWF/LF** **1006427512**
1600 HARVARD AVENUE **OH Spills** **N/A**
CLEVELAND, OH 44105

Site 1 of 2 in cluster D

LF:

Facility ID:	18-00-23	Status:	CLOSED
Type:	INDUSTRIAL SW LF		
Closed Facility:	Yes		
Class:	Not reported	Captive:	Yes
SWMD:	118		
Operator:	ALUMINUM COMPANY OF AMERICA		
Operator Addr:	1600 HARVARD AVENUE CLEVELAND, OH 44105		
Operator Phone:	2166414190		
Owner:	ALUMINUM COMPANY OF AMERICA		
Owner Addr:	1600 HARVARD AVENUE CLEVELAND, OH 44105		
Facility Addr 2:	Not reported		
Org. Comments:	Not reported		
Issue Date:	Not reported		
Expire Date:	Not reported		
Registration #:	Not reported		
Licence Holder:	ALUMINUM COMPANY OF AMERICA		
LH Addr:	1600 HARVARD AVENUE CLEVELAND, OH 44105 2166413600		
Last Update:	04/19/96		
Docket # :	Not reported		
Start Date :	Not reported		
End Date :	Not reported		
Core Place ID :	Not reported		
Core Addr ID :	Not reported		
District Office :	Not reported		
Phone Number :	Not reported		
Applicant Name :	Not reported		
Applicant Address	Not reported Not reported		
Organization ID :	Not reported		
Report ID :	Not reported		

ALUMINUM COMPANY OF AMERICA ALCOA LANDFILL (Continued) **1006427512**

SPILLS:

Spill Year :	1998
Spill Month :	2
Spill Number :	0484
Date Spill Reported :	02/10/98
Sequential Number :	0
Lat/Long :	412640.60 / 814041.74
Spill No. :	9802-18-0484
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	1746
Product Spilled:	HYDRAULIC OIL

D10 NNE 1/4-1/2 1373 ft. | **ALUMINUM CO. OF AMERICA 1600 HARVARD AVE. CLEVELAND, OH 44105** | **LUST OH Spills MLTS** | **1001494798 N/A**

Site 2 of 2 in cluster D

Relative: Higher

Actual: 608 ft.

MLTS:

License Number:	C-5023	First License Date:	0
License Date:	0	Institution Code:	34226
License Expires:	0		
Primary Program:	Not reported		
License Use:	Not reported		
Department:	ENVIRONMENTAL/INDUSTRIAL HYGIENE		
Building:	Not reported		
Status:	Not reported		
Contact Name:	[redacted]	Contact Phone:	Not reported
States Allowing Use:	Not reported		
Store Material:	Not reported		
Redistribution:	Not reported	Incineration:	Not reported
Burial:	Not reported		
Last Inspection:	Not reported		
Inspector Name:	Not reported		
Next Inspection:	Not reported		

LUST:

Owner:	ALUMINUM CO. OF AMERICA
LTF Status:	6 Closure of regulated UST
Release Number:	18000876-N00001
Owner Address:	1600 HARVARD AVE CLEVELAND, OH 44105
Facility Status:	**Inactive**
FR Status:	**No Further Action letter issued**
Old Facility Id:	180876
Former Lust Release Number:	18812601.0
Release Date:	1991-03-21 00:00:00

Owner:	ALUMINUM CO. OF AMERICA
LTF Status:	6 Closure of regulated UST
Release Number:	18000876-N00002
Owner Address:	1600 HARVARD AVE CLEVELAND, OH 44105
Facility Status:	**Inactive**
FR Status:	**No Further Action letter issued**
Old Facility Id:	180876
Former Lust Release Number:	18812602.0

ALUMINUM CO. OF AMERICA (Continued) **1001494798**

Release Date: 1992-10-15 00:00:00

SPILLS:

Spill Year :	1994
Spill Month :	11
Spill Number :	4960
Date Spill Reported :	11/17/94
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9411-18-4960
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	HYDROFLOURIC ACID

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11 NNW 1/4-1/2 1388 ft. **AJAX BITUMINOUS PAVING** **LUST** **S104265452**
811 HARVARD AVE **N/A**
CUYAHOGA HEIGHTS, OH 0

Relative: Higher

Actual: 590 ft.

LUST:

Owner:	AJAX BITUMINOUS PAVING
LTF Status:	6 Closure of regulated UST
Release Number:	18010442-N00001
Owner Address:	811 HARVARD AVE CUYAHOGA HEIGHTS, OH 44105
Facility Status:	**Inactive**
FR Status:	**No Further Action letter issued**
Old Facility Id:	Not reported
Former Lust Release Number:	187066100.0
Release Date:	Not reported

E12 NW 1/4-1/2 1446 ft. **ENGELHARD CORP** **FINDS** **1000381454**
1000 HARVARD AVE **OH Spills** **OHD000804682**
CLEVELAND, OH 44109 **RCRA-LQG**
CORRACTS
Site 1 of 2 in cluster E **CT MANIFEST**
NY MANIFEST

Relative: Higher

Actual: 591 ft.

CORRACTS Data:

EPA Id:	OHD000804682
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/10/1992
Corrective Action:	CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
2002 NAICS Title:	Not reported

EPA Id:	OHD000804682
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/10/1992
Corrective Action:	CA225IN - Stabilization Measures Evaluation, This facility is not , amenable to stabilization activity because of, a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available

ENGELHARD CORP (Continued) **1000381454**

2002 NAICS Title: Not reported

EPA Id: OHD000804682
Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/12/1990
Corrective Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
2002 NAICS Title: Not reported

EPA Id: OHD000804682
Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/12/1990
Corrective Action: CA050 - RFA Completed
2002 NAICS Title: Not reported

RCRAInfo Corrective Action Summary:

Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.
Event Date: 06/10/1992

Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity because of a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available.
Event Date: 06/10/1992

Event: RFA Completed
Event Date: 07/12/1990

Event: RFA Determination Of Need For An RFI, RFI is Necessary;
Event Date: 07/12/1990

RCRAInfo:

Owner: HARSHAW CHEMICAL CO
(216) 398-0550
EPA ID: OHD000804682

Contact: [redacted]

Classification: Large Quantity Generator
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: 3745-66-43 & 66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/23/1991
Actual Date Achieved Compliance: 03/24/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/27/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-43 & 66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 07/13/1990
Actual Date Achieved Compliance: 01/28/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/19/1990

ENGELHARD CORP (Continued) **1000381454**

Penalty Type: Not reported

Regulation Violated: 3745-66-12(B)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 10/18/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 10/18/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 40 CFR 268
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 05/17/1989

Regulation Violated: 3745-65-13(B)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 09/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-52
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 09/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16(D)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 09/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/27/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 07/22/1988
Actual Date Achieved Compliance: 05/17/1989

Regulation Violated: 3745-52-11 & 3745-65-13
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986

ENGELHARD CORP (Continued) **1000381454**

Penalty Type: Not reported

Regulation Violated: 3734.02(F)
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-56(A)-(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-74 & 65-15
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94 & 65-15
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

ENGELHARD CORP (Continued) **1000381454**

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94 & 65-15
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-54
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-56(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-94
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-16

ENGELHARD CORP (Continued) **1000381454**

Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/20/1986
Actual Date Achieved Compliance: 05/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/18/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-11 & 66-15
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 01/28/1986
Actual Date Achieved Compliance: 04/07/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/24/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS

ENGELHARD CORP (Continued) **1000381454**

Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-15(D)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-55
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-77
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/08/1983
Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

Regulation Violated: 3745-52-40
Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined: 02/08/1983

ENGELHARD CORP (Continued) **1000381454**

Actual Date Achieved Compliance: 05/03/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/18/1983
Penalty Type: Not reported

There are 39 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19920324
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19910128
Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19881018
	TSD-TANKS REQUIREMENTS	19881018
	TSD-GENERAL STANDARDS	19880907
	TSD-GENERAL STANDARDS	19880907
	TSD-CONTINGENCY PLAN REQUREMENTS	19880907
Other Evaluation	GENERATOR-LAND BAN REQUIREMENTS	19890517
	TSD-LAND BAN REQUIREMENTS	19890517
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19870506
	GENERATOR-OTHER REQUIREMENTS	19870506
	TSD-GENERAL STANDARDS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
	TSD-CONTINGENCY PLAN REQUREMENTS	19870506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19870506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19870506
	TSD-TANKS REQUIREMENTS	19870506
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19860407
	TSD-GENERAL STANDARDS	19860407
	TSD-CONTAINERS REQUIREMENTS	19860407
	TSD-GENERAL STANDARDS	19860407
	TSD-CONTINGENCY PLAN REQUREMENTS	19860407
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19860407
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19830503
	TSD-GENERAL STANDARDS	19830503
	TSD-CONTINGENCY PLAN REQUREMENTS	19830503
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19830503
	TSD-CONTAINERS REQUIREMENTS	19830503
	TSD-CONTAINERS REQUIREMENTS	19830503
	TSD-CONTAINERS REQUIREMENTS	19830503
	GENERATOR-RECORDKEEPING REQUIREMENTS	19830503

FINDS:

Other Pertinent Environmental Activity Identified at Site:

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

ENGELHARD CORP (Continued) **1000381454**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

SPILLS:

Spill Year :	1992
Spill Month :	4
Spill Number :	1365
Date Spill Reported :	04/14/92
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	9204-18-1365
Reporter Name :	COMPANY
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	FOAM

CT MANIFEST:

Year:	1993
Manifest ID:	CTF0288337
TSDF EPA ID:	CTD000604488
TSDF Name:	CLEAN HARBORS OF CONNECTICUT, INC.
TSDF Address:	51 BRODERICK RD
TSDF City,St,Zip:	BRISTOL, CT 06010
TSDF Country:	USA
TSDF Telephone:	Not reported
Transport Date:	04/30/93
Transporter EPA ID:	MAD039322250
Transporter Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
Transporter Country:	USA
Transporter Phone:	Not reported
Trans 2 Date:	05/12/93
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
Trans 2 Address:	Not reported
Trans 2 City,St,Zip:	CT
Trans 2 Country:	USA
Trans 2 Phone:	Not reported
Generator EPA ID:	OHD000804682
Gererator Phone:	2167498179
Generator Address:	Not reported
Generator City,State,Zip:	Not reported
Generator Country:	Not reported
Special Handling:	Yes
Discrepancies:	Yes
Date Shipped:	04/30/93
Date Received:	05/19/93
Last modified date:	04/27/04
Last modified by:	IG
Comments:	Not reported

ENGELHARD CORP (Continued) **1000381454**

Click this hyperlink while viewing on your computer to access additional CT MANIFEST: detail in the EDR Site Report.

NY MANIFEST:

Document ID:	NYA8114571
Manifest Status:	C
Trans1 State ID:	000000000
Trans2 State ID:	000000000
Generator Ship Date:	890614
Trans1 Recv Date:	890614
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	890614
Part A Recv Date:	890707
Part B Recv Date:	890619
Generator EPA ID:	OHD000804682
Trans1 EPA ID:	OHD986966190
Trans2 EPA ID:	Not reported
TSDF ID:	NYD043815703
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Quantity:	00935
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	017
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	01100
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	020
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	Not reported
Quantity:	00220
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Year:	89
Facility Type:	Generator
EPA ID:	OHD000804682
Facility Name:	ENGELHARD CORPORATION
Facility Address:	1000 HARVARD AVENUE
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	ENGELHARD CORPORATION
Mailing Contact:	Not reported
Mailing Address:	1000 HARVARD AVENUE
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported

ENGELHARD CORP (Continued) **1000381454**

Mailing Phone: 216-749-8189

Click this hyperlink while viewing on your computer to access
15 additional NY MANIFEST: record(s) in the EDR Site Report.

E13
NW
1/4-1/2
1446 ft.

Relative:
Higher

Actual:
591 ft.

CHEVRON ENGLEHARD **LUST** **S104517637**
1000 HARVARD AVE **DERR** **N/A**
CLEVELAND, OH 44109

Site 2 of 2 in cluster E

LUST:
Owner: HARSHAW CHEMICAL CO.
LTF Status: 6 Closure of regulated UST
Release Number: 18001869-N00002
Owner Address: [redacted]
Facility Status: Active
FR Status: No Further Action letter issued
Old Facility Id: 181869
Former Lust Release Number: 189111802.0
Release Date: 1992-09-24 00:00:00

DERR:
Facility Id: 218001949
EPA Id: OHD000804682
Lat/Long: 41.447348 / -81.6876
Alias: Harshaw Chemical Co
District: NEDO
Activity: RR
Site Info: 330-963-1200

14
ESE
1/4-1/2
1523 ft.

Relative:
Higher

Actual:
601 ft.

RIV SMELTING & REFINING CO **DERR** **S104517669**
4195 BRADLEY RD **N/A**
CLEVELAND, OH 44109

DERR:
Facility Id: 218001625
EPA Id: OHD004187035
Lat/Long: 41.442127 / -81.6795
Alias: Not reported
District: NEDO
Activity: Not reported
Site Info: 330-963-1200

F15
WNW
1/4-1/2
1536 ft.

Relative:
Higher

Actual:
592 ft.

RESEARCH OIL COMPANY **RCRA-SQG** **1000200203**
3680 VALLEY ROAD **FINDS** **OHD980795363**
CLEVELAND, OH 44109 **CERC-NFRAP**
MSL

Site 1 of 2 in cluster F

RESEARCH OIL COMPANY (Continued) **1000200203**

CERCLIS-NFRAP Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Code: DR
NPL Status: Not on the NPL
CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	06/25/1992
Assessment:	PRELIMINARY ASSESSMENT	Completed:	12/07/1992
Assessment:	ARCHIVE SITE	Completed:	12/28/1995

RCRAInfo:
Owner: NAME NOT REPORTED
[redacted]
EPA ID: OHD980795363
Contact: [redacted]
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

OH MSL:
Facility ID: 218-1378
EPA ID: OHD980795363
Lat/Long: 41 26 47 / 81 41 17
Facility Type: Active

F16 **RESEARCH OIL CO** **OH Spills** **1001887392**
WNW **3680 VALLEY RD** **DERR** **N/A**
1/4-1/2 **CLEVELAND, OH 44109**
1536 ft.

Site 2 of 2 in cluster F

Relative:
Higher

Actual:
592 ft.

RESEARCH OIL CO (Continued) **1001887392**

SPILLS:

Spill Year :	1978
Spill Month :	4
Spill Number :	0523
Date Spill Reported :	04/10/78
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	7804-18-0523
Reporter Name :	CITIZEN
Confidential :	No
District Code :	NE
Employee Number :	1745
Product Spilled:	OIL

Spill Year :	1985
Spill Month :	2
Spill Number :	0471
Date Spill Reported :	02/25/85
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8502-18-0471
Reporter Name :	FD
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	WASTE OIL

DERR:

Facility Id:	218001378
EPA Id:	OHD980795363
Lat/Long:	41.44638889 / -81.68805556
Alias:	Not reported
District:	NEDO
Activity:	RR
Site Info:	330-963-1200

17
NW
1/4-1/2
1581 ft.

Relative:
Higher

Actual:
592 ft.

WASTE MANAGEMENT OF OHIO **LUST** **S104775692**
3980 JENNINGS RD **N/A**
CLEVELAND, OH 44109

LUST:

Owner:	WASTE MANAGEMENT OF OHIO, INC.
LTF Status:	1 SUS/CON from regulated UST
Release Number:	18007390-N00001
Owner Address:	3980 JENNINGS RD CLEVELAND, OH 44109
Facility Status:	**Inactive**
FR Status:	**No Further Action letter issued**
Old Facility Id:	187390
Former Lust Release Number:	180070101.0
Release Date:	1996-10-03 00:00:00

18 SSE 1/4-1/2 1696 ft. | **SPRING HILL VILLA APARTMENTS**
4330 JENNINGS RD
CLEVELAND, OH 0 | **LUST** | **S104265582**
N/A

Relative: Higher

Actual: 691 ft.

LUST:
Owner: SPRING HILL VILLA APARTMENTS
LTF Status: 6 Closure of regulated UST
Release Number: 18010492-N00001
Owner Address: 4330 JENNINGS RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: Not reported
Former Lust Release Number: 188119100.0
Release Date: Not reported

---

19 NNW 1/4-1/2 1712 ft. | **PARAMOUNT INDUSTRIES**
3961 JENNINGS RD
CLEVELAND, OH 44109 | **RCRA-SQG**
FINDS
LUST | **1001224790**
OHR000028845

Relative: Higher

Actual: 591 ft.

RCRAInfo:
Owner: [redacted]
EPA ID: OHR000028845
Contact: [redacted]
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:
Owner: PARAMOUNT INDUSTRIES
LTF Status: 6 Closure of regulated UST
Release Number: 18010486-N00001
Owner Address: 3961 JENNINGS RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: Not reported
Former Lust Release Number: 188097900.0
Release Date: Not reported

20 WNW 1/4-1/2 1894 ft. — **OHIO TRANSPORT CORP.** — **LUST** — **S104775610** / **N/A**
3750 VALLEY RD
CLEVELAND, OH 44109

Relative: Higher
Actual: 595 ft.

LUST:
Owner: OHIO TRANSPORT CORP.
LTF Status: 6 Closure of regulated UST
Release Number: 18002553-N00001
Owner Address: 3750 VALLEY RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 182553
Former Lust Release Number: 184217700.0
Release Date: Not reported

---

21 NNW 1/4-1/2 1986 ft. — **TESAR INDUSTRIAL CONTRACTORS** — **FINDS** — **1005808981**
3920 JENNINGS RD — **LUST** — **110006253712**
CLEVELAND, OH 44109

Relative: Higher
Actual: 590 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

LUST:
Owner: TESAR INDUSTRIAL CONTRACTORS
LTF Status: 1 SUS/CON from regulated UST
Release Number: 18003817-N00001
Owner Address: 3920 JENNINGS RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 183817
Former Lust Release Number: 181297200.0
Release Date: 1991-09-18 00:00:00

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22 WNW 1/4-1/2 2175 ft. — **SUPERIOR FORWARDING CO., INC.** — **LUST** — **S103703389** / **N/A**
3800 VALLEY RD
CLEVELAND, OH 44109

Relative: Higher
Actual: 606 ft.

LUST:
Owner: SUPERIOR FORWARDING CO., INC.
LTF Status: 6 Closure of regulated UST
Release Number: 18009597-N00001
Owner Address: [redacted]
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 189597
Former Lust Release Number: 185128700.0
Release Date: Not reported

23 North 1/4-1/2 2330 ft.

DARLING & CO
908 DENISON AVE
CLEVELAND, OH 44109

LUST **1002990901**
OH Spills **N/A**

Relative: Higher

Actual: 589 ft.

LUST:
Owner: DARLING & CO
LTF Status: 1 SUS/CON from regulated UST
Release Number: 18010196-N00001
Owner Address: 908 DENISON AVE
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: Not reported
Former Lust Release Number: 181104100.0
Release Date: Not reported

SPILLS:
Spill Year : 1991
Spill Month : 5
Spill Number : 1758
Date Spill Reported : 05/13/91
Sequential Number : 0
Lat/Long : Not reported
Spill No. : 9105-18-1758
Reporter Name : SFM
Confidential : No
District Code : NE
Employee Number : Not reported
Product Spilled: GASOLINE

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24 SE 1/4-1/2 2483 ft.

M.E.B. PROPERTIES, INC.
4287 BRADLEY RD
CLEVELAND, OH 44109

LUST **U003095475**
ARCHIVE UST **N/A**

Relative: Higher

Actual: 590 ft.

LUST:
Owner: M.E.B. PROPERTIES, INC.
LTF Status: 6 Closure of regulated UST
Release Number: 18000101-N00001
Owner Address: [redacted]
Facility Status: Active
FR Status: No responce to DEF letter sent
Old Facility Id: 180101
Former Lust Release Number: 187107600.0
Release Date: 1997-08-18 00:00:00

UST ARCHIVE:
Facility ID: 18000101 Tank ID: T00001
Owner: M.E.B. PROPERTIES, INC.
Owner Address: [redacted]
Capacity: 8000 Tank Status: Currently In Use
Install Date: Not reported
Content: Diesel
Tank Type: Other

25 West 1/4-1/2 2585 ft. | **VALLEY ROAD PROPERTIES**
3926 VALLEY RD
CLEVELAND, OH 44109 | **LUST** | **S104265584** / **N/A**

Relative: Higher

Actual: 684 ft.

LUST:
Owner: VALLEY ROAD PROPERTIES
LTF Status: 6 Closure of regulated UST
Release Number: 18009671-N00001
Owner Address: 3926 VALLEY RD
CLEVELAND, OH 44109
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 189671
Former Lust Release Number: 188130800.0
Release Date: Not reported

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26 NNW 1/2-1 2843 ft. | **CHEMICAL SOLVENTS INC**
1010 DENISON AVE
CLEVELAND, OH 44109 | **FINDS**
RCRA-LQG
TRIS
RCRA-TSDF
DERR
CORRACTS
CERC-NFRAP
MANIFEST
NY MANIFEST | **1000299269** / **44109CHMCL10**

Relative: Higher

Actual: 601 ft.

CERCLIS-NFRAP Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Code: NFRAP
NPL Status: Not on the NPL
CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	09/06/1985
Assessment:	PRELIMINARY ASSESSMENT	Completed:	09/06/1985
Assessment:	ARCHIVE SITE	Completed:	09/06/1985

CORRACTS Data:

EPA Id: OHD980897656
Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/31/1992
Corrective Action: CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title: Waste Treatment and Disposal

RCRAInfo Corrective Action Summary:
Event: CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date: 03/31/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

RCRAInfo:
Owner: [redacted]
EPA ID: OHD980897656
Contact: [redacted]
Classification: Large Quantity Generator, TSDF
TSDF Activities: Used oil Transporter, Used oil processor, Used oil market burner

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	14915662.00	D002	0.00
D004	14915662.00	D005	12559590.00
D006	14915662.00	D007	14915662.00
D008	14915662.00	D009	12559590.00
D010	14915662.00	D011	12559590.00
D018	14915662.00	D019	12559590.00
D021	12559590.00	D022	14915662.00
D023	12559590.00	D026	14915662.00
D027	12559590.00	D033	12559590.00
D034	12559590.00	D035	14915662.00
D038	12559590.00	D039	14915662.00
D040	14915662.00	F001	14915662.00
F002	14915662.00	F003	14915662.00
F004	12559590.00	F005	14915662.00
U002	12559590.00	U009	12559590.00
U031	12559590.00	U044	12559590.00
U052	12559590.00	U057	12559590.00
U070	12559590.00	U080	12559590.00
U123	12559590.00	U154	12559590.00
U159	12559590.00	U210	0.00
U213	12559590.00	U220	12559590.00
U223	0.00	U226	12559590.00
U239	12559590.00		

Violation Status: Violations exist

Regulation Violated: 3745-54-56(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 12/07/2004
Actual Date Achieved Compliance: 05/06/2005

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/05/2005
Penalty Type: Not reported

Regulation Violated: 3745-54-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 12/07/2004
Actual Date Achieved Compliance: 12/07/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/05/2005
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 12/07/2004

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Actual Date Achieved Compliance: 12/22/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/05/2005
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 06/17/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/01/2004
Penalty Type: Not reported

Regulation Violated: 3745-55-93(C)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 10/11/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/01/2004
Penalty Type: Not reported

Regulation Violated: 3745-270-50(A)(2)(a)
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 10/11/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/01/2004
Penalty Type: Not reported

Regulation Violated: 3745-279-44(A) & 279-53(A)
Area of Violation: OHIO USED OIL ACTIVITIES
Date Violation Determined: 12/14/2002
Actual Date Achieved Compliance: 05/21/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/04/2003
Penalty Type: Not reported

Regulation Violated: 3745-54-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 12/14/2002
Actual Date Achieved Compliance: 12/14/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/04/2003
Penalty Type: Not reported

Regulation Violated: 3745-52-34(A)(2)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/05/2001
Actual Date Achieved Compliance: 01/09/2002

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/09/2002
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 12/05/2001
Actual Date Achieved Compliance: 01/09/2002

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/09/2002
Penalty Type: Not reported

Regulation Violated: 3745-55-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 04/19/2001
Actual Date Achieved Compliance: 05/09/2001

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 04/19/2001
Actual Date Achieved Compliance: 01/09/2002

Regulation Violated: 3745-54-73
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 10/25/2000
Actual Date Achieved Compliance: 02/01/2001

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/17/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC A.26
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.34
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.35
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.33
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-71
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 10/01/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1999
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/01/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1999
Penalty Type: Not reported

Regulation Violated: PC B.6
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 06/14/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/1999
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/14/1999
Actual Date Achieved Compliance: 06/30/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/1999
Penalty Type: Not reported

Regulation Violated: 3745-54-16(B)
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 12/14/1998
Actual Date Achieved Compliance: 04/28/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/08/1999
Penalty Type: Not reported

Regulation Violated: 3745-54-16(B)
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 04/23/1999

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-66-93(E)
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 04/28/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/21/1997
Actual Date Achieved Compliance: 03/21/1997

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1997
Penalty Type: Not reported

Regulation Violated: 3745-59-50(A)(2)(a)
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 08/28/1996
Actual Date Achieved Compliance: 08/28/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/16/1996
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-15
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-16
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-15(D)
Area of Violation: TSD-PART B APPLICATION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-56(J)
Area of Violation: TSD-PERMIT CONDITION
Date Violation Determined: 09/01/1995
Actual Date Achieved Compliance: 04/10/1996

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34(A)(3)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/14/1995
Actual Date Achieved Compliance: 07/21/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/04/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-15(D)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 03/14/1995
Actual Date Achieved Compliance: 07/21/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/04/1995
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-50
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-93(C)(4)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-94
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 09/20/1994
Actual Date Achieved Compliance: 12/16/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/01/1994
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-PART B APPLICATION
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 10/17/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/06/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 07/06/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.11/3745-54-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 10/17/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/06/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/29/1994
Actual Date Achieved Compliance: 07/06/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/20/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-55-42

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-55-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11 & 3745-54-13
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11 & 3745-59-07
Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-31 & 3745-55-75
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-50

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-17
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-31
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-56(J)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-14
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-07(A)(6)

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: GENERATOR-LAND BAN REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 08/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-54-15 & 55-74
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 01/10/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-55-75
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/27/1993
Actual Date Achieved Compliance: 03/31/1994

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/04/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/10/1994
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-72,-65-13/3745-52-11
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-58-45
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3734.02(E)&(F)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-97
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-73/3745-65-31
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-71(A)(2)/3745-65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Regulation Violated: 3745-65-71(A)(1)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-73(B)(13)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-74(B)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-71(A)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-76,-58-32,52-11,59-07
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-59-50(A)(2)/3745-52-34
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 07/20/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-92
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 02/02/1993
Actual Date Achieved Compliance: 12/07/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/05/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/20/1993
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-43(C)(3)
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/09/1992
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/12/1992
Penalty Type: Not reported

Regulation Violated: PERM.COND. II.F(2)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 08/19/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.C

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. I.B
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.D(2)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.K(1)(a)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.L(A)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.E(2)

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. III.D(1)(2)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.K(5)(a)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.J.(1)(C)(D)(E)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.J(1)(A)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: PERM.COND. II.I(4)

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 08/18/1992
Actual Date Achieved Compliance: 06/05/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-11/3745-59-07
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-31/3745-66-51
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-34(C)
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-14
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-91
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Penalty Type: Not reported

Regulation Violated: 3745-66-92
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-71(A)(1)(3)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-93
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-92/3745-66-93
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-59-50(B)
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 06/25/1992
Actual Date Achieved Compliance: 11/23/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-71 & 65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-73(A)&(B)
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-94(A)
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 02/12/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-95
Area of Violation: TSD-TANKS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-65-74
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-52-34(C)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 11/27/1991
Actual Date Achieved Compliance: 05/05/1992

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Final Monetary Penalty

Enforcement Action: FINAL CONSENT DECREES
Enforcement Action Date: 05/01/1996
Penalty Type: Final Monetary Penalty

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1991
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 03/15/1990
Actual Date Achieved Compliance: 04/24/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/15/1990
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 03/07/1990
Actual Date Achieved Compliance: 04/24/1990

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/15/1990
Penalty Type: Not reported

Regulation Violated: 3745-66-12
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-13
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3734.02(F)
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-93
Area of Violation: TSD-TANKS REQUIREMENTS

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: TSD-PREPAREDNESS/PREVENTION REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 08/09/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/23/1989

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-20 & 52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/16/1989
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 03/02/1989
Actual Date Achieved Compliance: 04/05/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 11/16/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-53-20
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 11/16/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 11/16/1988
Actual Date Achieved Compliance: 01/19/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/12/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-32, 65-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/26/1988
Actual Date Achieved Compliance: 09/28/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 07/26/1988
Actual Date Achieved Compliance: 09/28/1988

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/27/1988
Actual Date Achieved Compliance: 08/03/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/14/1988
Penalty Type: Not reported

Regulation Violated: 3745-66-71
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-37
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1988
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/22/1988
Actual Date Achieved Compliance: 03/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/02/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-15,66-74,66-94
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 01/22/1988
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/02/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 02/02/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1987
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 03/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1987
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 06/14/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/16/1987
Penalty Type: Not reported

Regulation Violated: 3734.02(E)
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 05/08/1986
Actual Date Achieved Compliance: 08/13/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/15/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 07/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 07/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 08/13/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/15/1986
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 03/19/1986
Actual Date Achieved Compliance: 07/15/1986

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 04/02/1986
Penalty Type: Not reported

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Penalty Summary:

Penalty Description	Penalty Date	Penalty Amount	Lead Agency
Final Monetary Penalty	5/1/1996	42000	STATE
Final SEP Credit	5/1/1996	15000	STATE

There are 145 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	TSD-CONTINGENCY PLAN REQUREMENTS	20050506
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	20041207
	TSD-GENERAL STANDARDS	20041222
Compliance Evaluation Inspection	TSD-CONTAINERS REQUIREMENTS	20040617
	TSD-TANKS REQUIREMENTS	20041011
	TSD-LAND BAN REQUIREMENTS	20041011
Compliance Evaluation Inspection	OHIO USED OIL ACTIVITIES	20040521
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	20021214
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20020109
	TSD-CONTAINERS REQUIREMENTS	20020109
Compliance Evaluation Inspection	TSD-CONTAINERS REQUIREMENTS	20010509
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20020109
Compliance Evaluation Inspection	TSD-PERMIT CONDITION	20010201
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19991001
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19991001
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19991001
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19990630
Compliance Evaluation Inspection	GENERATOR-OTHER REQUIREMENTS	19990428
Compliance Evaluation Inspection	TSD-PERMIT CONDITION	19990423
	TSD-PERMIT CONDITION	19990428
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19970321
Compliance Evaluation Inspection	GENERATOR-LAND BAN REQUIREMENTS	19960828
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19960410
	TSD-PERMIT CONDITION	19960410
	TSD-PART B APPLICATION	19960410
	TSD-PERMIT CONDITION	19960410
	TSD-PERMIT CONDITION	19960410
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19950721
	TSD-GENERAL STANDARDS	19950721
Compliance Evaluation Inspection	GENERATOR-LAND BAN REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941216
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19941216
Compliance Evaluation Inspection	TSD-PART B APPLICATION	19941017
	GENERATOR-GENERAL REQUIREMENTS	19940706
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19941017
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940706
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19940110

CHEMICAL SOLVENTS INC (Continued)			**1000299269**
		GENERATOR-LAND BAN REQUIREMENTS	19940110
		GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940110
		GENERATOR-LAND BAN REQUIREMENTS	19940110
		GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940331
		GENERATOR-PRE-TRANSPORT REQUIREMENTS	19940110
		GENERATOR-LAND BAN REQUIREMENTS	19930804
		TSD-GENERAL STANDARDS	19940110
		TSD-GENERAL STANDARDS	19940110
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19940110
		TSD-CONTINGENCY PLAN REQUREMENTS	19940110
	Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19930720
		TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19931207
		TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19931207
		TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19931207
		TSD-OTHER REQUIREMENTS (OVERSIGHT)	19930720
		TSD-MANIFEST REQUIREMENTS	19931207
		TSD-TANKS REQUIREMENTS	19931207
		TSD-TANKS REQUIREMENTS	19931207
		TSD-GENERAL STANDARDS	19931207
		TSD-LAND BAN REQUIREMENTS	19930720
		TSD-CONTAINERS REQUIREMENTS	19930720
		TSD-MANIFEST REQUIREMENTS	19931207
		TSD-MANIFEST REQUIREMENTS	19931207
		TSD-CONTAINERS REQUIREMENTS	19931207
		TSD-MANIFEST REQUIREMENTS	19930720
		TSD-MANIFEST REQUIREMENTS	19930720
		TSD-MANIFEST REQUIREMENTS	19930720
	Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
	Other Evaluation	TSD-LAND BAN REQUIREMENTS	19980605
		TSD-LAND BAN REQUIREMENTS	19980605
		TSD-GENERAL STANDARDS	19980605
		TSD-GENERAL STANDARDS	19980605
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19980605
		TSD-CONTINGENCY PLAN REQUREMENTS	19980605
		TSD-CONTINGENCY PLAN REQUREMENTS	19980605
		TSD-MANIFEST REQUIREMENTS	19980605
		TSD-MANIFEST REQUIREMENTS	19980605
		TSD-MANIFEST REQUIREMENTS	19980605
		TSD-CONTAINERS REQUIREMENTS	19980605
		TSD-TANKS REQUIREMENTS	19980605
	Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19921123
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19921123
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19921123
		TSD-CONTAINERS REQUIREMENTS	19921123
		TSD-GENERAL STANDARDS	19921123
		TSD-LAND BAN REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-TANKS REQUIREMENTS	19921123
		TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19921123
		TSD-MANIFEST REQUIREMENTS	19921123
		GENERATOR-MANIFEST REQUIREMENTS	19921123
		TSD-MANIFEST REQUIREMENTS	19921123
	Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19920505
		TSD-GENERAL STANDARDS	19920505
		TSD-GENERAL STANDARDS	19920505

CHEMICAL SOLVENTS INC (Continued) **1000299269**

	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19920505
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19920505
	TSD-CONTAINERS REQUIREMENTS	19920505
	TSD-CONTAINERS REQUIREMENTS	19920505
	TSD-TANKS REQUIREMENTS	19920212
	TSD-TANKS REQUIREMENTS	19920505
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
Compliance Evaluation Inspection	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19900424
	TSD-CONTAINERS REQUIREMENTS	19900424
Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19890906
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19890906
	GENERATOR-MANIFEST REQUIREMENTS	19890906
	TSD-CONTAINERS REQUIREMENTS	19890809
	TSD-CONTAINERS REQUIREMENTS	19890809
	TSD-PREPAREDNESS/PREVENTION REQUIREMENTS	19890809
	TSD-CONTINGENCY PLAN REQUREMENTS	19890906
	TSD-MANIFEST REQUIREMENTS	19890809
	TSD-MANIFEST REQUIREMENTS	19890906
	TSD-TANKS REQUIREMENTS	19890906
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19890906
	TSD-GENERAL STANDARDS	19890906
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19890405
Compliance Evaluation Inspection	GENERATOR-MANIFEST REQUIREMENTS	19890119
	GENERATOR-OTHER REQUIREMENTS	19890119
	TSD-MANIFEST REQUIREMENTS	19890119
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880928
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880928
Other Evaluation	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880803
Other Evaluation	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880307
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880202
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880307
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880614
Other Evaluation	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860813
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19860813
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860715
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860715
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860813
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19860715

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

CHEMICAL SOLVENTS INC (Continued) **1000299269**

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

DERR:

Facility Id:	218000151
EPA Id:	OHD980897656
Lat/Long:	41.451376 / -81.685043
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

PA MANIFEST:

Manifest Number:	PAH153076
Manifest Type:	T
Generator Epa Id:	OHD980897656
Generator Date:	01/21/2005
Mailing Address:	1010 DENISON AVE
Mailing City,St,Zip:	CLEVELAND, OH 44109
Contact Name:	Not reported
Contact Phone:	[redacted]
TSD Epa Id:	PAD002389559
TSD Date:	01/22/2005
TSD Facility Name:	KEYSTONE CEMENT CO
TSD Facility Address:	RTE 329
TSD Facility City:	BATH
TSD Facility State:	PA
Page Number:	1.00000
Line Number:	1.00000
Waste Number:	D007
Container Number:	1.00000
Container Type:	TT
Waste Quantity:	5377.00000
Unit:	G
Handling Code:	Not reported
Tsp Epa Id:	NYD980769947
Date Tsp Sig:	01/21/2005

Click this hyperlink while viewing on your computer to access
31 additional PA MANIFEST: record(s) in the EDR Site Report.

NY MANIFEST:

Document ID:	NYO3128454
Manifest Status:	C
Trans1 State ID:	7A002

CHEMICAL SOLVENTS INC (Continued) **1000299269**

Trans2 State ID:	Not reported
Generator Ship Date:	840402
Trans1 Recv Date:	840402
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	840403
Part A Recv Date:	840411
Part B Recv Date:	840409
Generator EPA ID:	OHD980897656
Trans1 EPA ID:	NYD088658646
Trans2 EPA ID:	Not reported
TSDF ID:	NYD080336241
Waste Code:	F005 - UNKNOWN
Quantity:	04400
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	080
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	84
Facility Type:	Both Generator and TSD
EPA ID:	OHD980897656
Facility Name:	CHEMICAL SOLVENTS INC
Facility Address:	1010 DENISON AVE
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	CHEMICAL SOLVENTS INCORPORATED
Mailing Contact:	Not reported
Mailing Address:	1010 DENISON AVENUE
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310
Mailing Name:	CHEMICAL SOLVENTS INC
Mailing Contact:	[redacted]
Mailing Address:	[redacted]
Mailing City:	[redacted]D
Mailing State:	OH
Mailing Zip:	[redacted]
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	[redacted]

Click this hyperlink while viewing on your computer to access
60 additional NY MANIFEST: record(s) in the EDR Site Report.

27	**CHEMICAL SOLVENTS INC**	**FINDS**	**1000299268**
NNW	**3751 JENNINGS RD**	**OH Spills**	**OHD052937885**
1/2-1	**CLEVELAND, OH 44109**	**RCRA-LQG**	
3148 ft.		**RCRA-TSDF**	
		RAATS	
Relative:		**DERR**	
Higher		**CORRACTS**	
		CERC-NFRAP	
Actual:		**NY MANIFEST**	
603 ft.			

CERCLIS-NFRAP Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Code:	NFRAP
NPL Status:	Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	06/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	09/06/1985
Assessment:	ARCHIVE SITE	Completed:	09/06/1985

CORRACTS Data:

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	03/31/1992
Corrective Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	12/20/1996
Corrective Action:	CA100DC - RFI Imposition , Focused data collection required for stabilization evaluation
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	/ /
Corrective Action:	CA750IN - Migration of Contaminated Groundwater under Control , More information is needed to make a determination
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	/ /
Corrective Action:	CA150 - RFI Workplan Approved
2002 NAICS Title:	42269

EPA Id:	OHD052937885
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	/ /
Corrective Action:	CA200 - RFI Approved
2002 NAICS Title:	42269

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Click this hyperlink while viewing on your computer to access
3 additional CORRACTS record(s) in the EDR Site Report.

RCRAInfo Corrective Action Summary:

Event: RFI Workplan Approved
Event Date: Not reported

Event: RFI Approved
Event Date: Not reported

Event: Date For Remedy Selection (CM Imposed)
Event Date: Not reported

Event: Certification Of Remedy Completion Or Construction Completion
Event Date: Not reported

Event: Igration of Contaminated Groundwater under Control, More information is needed to make a determination.
Event Date: Not reported

Event: Current Human Exposures under Control, More information is needed to make a determination.
Event Date: Not reported

Event: RFI Imposition, Focused data collection required for stabilization evaluation.
Event Date: 12/20/1996

Event: CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date: 03/31/1992

RCRAInfo:

Owner: CHEMICAL SOLVENTS INC
(216) 741-9310
EPA ID: OHD052937885

Contact: [redacted]

Classification: Large Quantity Generator, TSDF
TSDF Activities: Not reported

BIENNIAL REPORTS:

Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	20213.00	D035	20213.00
D039	20213.00	D040	20213.00
F002	20213.00	F003	20213.00
F005	20213.00		

Violation Status: Violations exist

Regulation Violated: 3745-52-34(C)(1)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 06/17/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/2004
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 06/17/2004
Actual Date Achieved Compliance: 06/17/2004

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/30/2004
Penalty Type: Not reported

Regulation Violated: 3745-55-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC A.26
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.33
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-55-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.34
Area of Violation: GENERATOR-OTHER REQUIREMENTS
Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: PC B.35
Area of Violation: GENERATOR-OTHER REQUIREMENTS

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Date Violation Determined: 05/31/2000
Actual Date Achieved Compliance: 08/02/2000

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/02/2000
Penalty Type: Not reported

Regulation Violated: 3745-66-73(A)
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 10/01/1999
Actual Date Achieved Compliance: 10/01/1999

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/09/1999
Penalty Type: Not reported

Regulation Violated: 3745-52-34
Area of Violation: GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 12/14/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-66-73
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 04/28/1998
Actual Date Achieved Compliance: 12/14/1998

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/04/1998
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/20/1993
Actual Date Achieved Compliance: 10/27/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/03/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-43(C)(3)
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/09/1992
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/09/1992

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/12/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/04/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-12(D)(2)
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 06/15/1992
Actual Date Achieved Compliance: 04/05/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 07/15/1992
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/28/1993
Penalty Type: Not reported

Regulation Violated: 3745-65-73(B)
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-15(B)(4)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-14(B)
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 07/15/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 07/15/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-52(D)&(E)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-59-07(A)(1)(b)
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 11/26/1991
Actual Date Achieved Compliance: 05/05/1992

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 02/12/1992
Penalty Type: Not reported

Regulation Violated: 3745-66-43
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1991
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-42
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 09/05/1991
Actual Date Achieved Compliance: 02/04/1993

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 09/06/1991
Penalty Type: Not reported

Regulation Violated: 3745-66-12
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-72
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-53
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 05/23/1989
Actual Date Achieved Compliance: 09/06/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 06/05/1989

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 03/02/1989
Actual Date Achieved Compliance: 04/05/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1989
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 08/23/1988
Actual Date Achieved Compliance: 10/26/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 08/23/1988
Actual Date Achieved Compliance: 10/26/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 08/23/1988
Actual Date Achieved Compliance: 10/26/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/25/1988
Penalty Type: Not reported

Regulation Violated: 3745-53-20
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-16/3745-52-34
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-33
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Regulation Violated: 3745-52-23
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-52-21
Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
Date Violation Determined: 02/19/1988
Actual Date Achieved Compliance: 04/07/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/03/1988
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 02/19/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/19/1987
Penalty Type: Not reported

Regulation Violated: 3745-66-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 12/09/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/19/1987
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 03/19/1987
Actual Date Achieved Compliance: 02/19/1988

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/19/1987
Penalty Type: Not reported

Regulation Violated: 3745-65-16
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 05/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-35
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-52-34

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-71 & 66-73
Area of Violation: TSD-CONTAINERS REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 05/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-66-13
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-55
Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
Date Violation Determined: 12/28/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 01/07/1983
Penalty Type: Not reported

Regulation Violated: 3745-65-14
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-17
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 05/06/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-73
Area of Violation: TSD-MANIFEST REQUIREMENTS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 03/23/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-65-15
Area of Violation: TSD-GENERAL STANDARDS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

Regulation Violated: 3745-52-41
Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined: 07/08/1982
Actual Date Achieved Compliance: 01/07/1983

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/31/1982
Penalty Type: Not reported

There are 53 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20040617
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20040617
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
	GENERATOR-OTHER REQUIREMENTS	20000802
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19991001
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19981214
	TSD-GENERAL STANDARDS	19981214
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19931027
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
Other Evaluation	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19930405
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19920505
	TSD-GENERAL STANDARDS	19920505
	TSD-CONTINGENCY PLAN REQUREMENTS	19920505
	TSD-GENERAL STANDARDS	19920715
	TSD-GENERAL STANDARDS	19920715
	TSD-LAND BAN REQUIREMENTS	19920505
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19930204
Compliance Evaluation Inspection	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19890906
	GENERATOR-MANIFEST REQUIREMENTS	19890906
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19890906
	TSD-MANIFEST REQUIREMENTS	19890906
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19890405
Compliance Evaluation Inspection	TSD-MANIFEST REQUIREMENTS	19881026
	GENERATOR-MANIFEST REQUIREMENTS	19881026

CHEMICAL SOLVENTS INC (Continued) **1000299268**

	GENERATOR-MANIFEST REQUIREMENTS	19881026
Other Evaluation	GENERATOR-MANIFEST REQUIREMENTS	19881026
	GENERATOR-MANIFEST REQUIREMENTS	19881026
Compliance Evaluation Inspection	GENERATOR-MANIFEST REQUIREMENTS	19880407
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880407
	GENERATOR-MANIFEST REQUIREMENTS	19880407
	GENERATOR-MANIFEST REQUIREMENTS	19880407
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19880407
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19880219
	TSD-MANIFEST REQUIREMENTS	19880219
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19871209
Compliance Evaluation Inspection	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830323
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19830323
	TSD-CONTAINERS REQUIREMENTS	19830506
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830323
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	19830323
Compliance Evaluation Inspection	TSD-GENERAL STANDARDS	19830107
	TSD-GENERAL STANDARDS	19830506
	TSD-MANIFEST REQUIREMENTS	19830107
	TSD-GENERAL STANDARDS	19830323
	TSD-GENERAL STANDARDS	19830107
	GENERATOR-RECORDKEEPING REQUIREMENTS	19830107

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

CHEMICAL SOLVENTS INC (Continued) **1000299268**

SPILLS:

Spill Year :	2004
Spill Month :	3
Spill Number :	0842
Date Spill Reported :	03/03/04
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	0403-18-0842
Reporter Name :	JACK
Confidential :	No
District Code :	NE
Employee Number :	1769
Product Spilled:	MERCURY

Spill Year :	2004
Spill Month :	3
Spill Number :	0845
Date Spill Reported :	03/03/04
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	0403-18-0845
Reporter Name :	[redacted]
Confidential :	No
District Code :	NE
Employee Number :	1769
Product Spilled:	MERCURY

DERR:

Facility Id:	218000150
EPA Id:	OHD052937885
Lat/Long:	41.445554 / -81.687
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

NY MANIFEST:

Document ID:	NYO2435229
Manifest Status:	C
Trans1 State ID:	OH031
Trans2 State ID:	Not reported
Generator Ship Date:	830120
Trans1 Recv Date:	830120
Trans2 Recv Date:	830121
TSD Site Recv Date:	830121
Part A Recv Date:	030208
Part B Recv Date:	030208
Generator EPA ID:	OHD052937885
Trans1 EPA ID:	OHD052937885
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	F005 - UNKNOWN
Quantity:	04400
Units:	P - Pounds
Number of Containers:	080
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100

CHEMICAL SOLVENTS INC (Continued) **1000299268**

Year:	83
Facility Type:	Both Generator and TSD
EPA ID:	OHD052937885
Facility Name:	CHEMICAL SOLVENTS
Facility Address:	3751 JENNINGS ROAD
Facility City:	CLEVELAND
Facility Zip 4:	Not reported
Country:	Not reported
County:	Not reported
Mailing Name:	CHEMICAL SOLVENTS
Mailing Contact:	UNKNOWN
Mailing Address:	3751 JENNINGS ROAD
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310
Mailing Name:	CHEMICAL SOLVENTS
Mailing Contact:	UNKNOWN
Mailing Address:	3751 JENNINGS ROAD
Mailing City:	CLEVELAND
Mailing State:	OH
Mailing Zip:	44109
Mailing Zip4:	Not reported
Mailing Country:	Not reported
Mailing Phone:	216-741-9310

Click this hyperlink while viewing on your computer to access additional NY MANIFEST: detail in the EDR Site Report.

28
SE
1/2-1
3360 ft.

Relative:
Higher

Actual:
596 ft.

WABASH ALLOYS DIVISION CONNELL
4365 BRADLEY RD
CLEVELAND, OH 44109

PADS **1000310168**
FINDS **OHD064095102**
RCRA-LQG
RCRA-TSDF
UST
CORRACTS

CORRACTS Data:

EPA Id:	OHD064095102
Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	03/31/1993
Corrective Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
2002 NAICS Title:	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)

RCRAInfo Corrective Action Summary:

Event:	CA Prioritization, Facility or area was assigned a low corrective action priority.
Event Date:	03/31/1993

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

RCRAInfo:
Owner: WABASH ALLOYS LLC
EPA ID: OHD064095102

Contact: [redacted]

Classification: Large Quantity Generator, TSDF
TSDF Activities: Not reported

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D006	43854.00	D008	271160.00

Violation Status: Violations exist

Regulation Violated: 3745-66-42,43,47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 11/29/1993
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/07/1993
Penalty Type: Not reported

Regulation Violated: 3745-66-42,-43,-47
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 08/25/1992
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 08/26/1992
Penalty Type: Not reported

Regulation Violated: 3745-65-52(E)
Area of Violation: TSD-CONTINGENCY PLAN REQUREMENTS
Date Violation Determined: 10/01/1991
Actual Date Achieved Compliance: 10/16/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/02/1991
Penalty Type: Not reported

Regulation Violated: 3745-59-07
Area of Violation: TSD-LAND BAN REQUIREMENTS
Date Violation Determined: 10/01/1991
Actual Date Achieved Compliance: 10/16/1991

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/02/1991
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 04/01/1991
Actual Date Achieved Compliance: 05/14/1991

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 10/28/1988
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

Enforcement Action Date: 11/02/1988
Penalty Type: Not reported

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 10/28/1988
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/02/1988
Penalty Type: Not reported

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 10/22/1987
Actual Date Achieved Compliance: 11/09/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 10/27/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-GOUNDWATER MONITORING REQUIREMENTS
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-CLOSURE/POST-CLOSURE REQUIREMENTS
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 01/12/1987
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: CIVIL ACTION FOR COMPLIANCE
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: FINAL JUDICIAL ORDERS
Enforcement Action Date: 04/01/1988
Penalty Type: Not reported

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/16/1987
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 11/04/1986
Actual Date Achieved Compliance: 06/06/1995

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 11/19/1986
Penalty Type: Not reported

There are 13 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19950606
Financial Record Review	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19950606
Compliance Evaluation Inspection	TSD-CONTINGENCY PLAN REQUREMENTS	19911016
	TSD-LAND BAN REQUIREMENTS	19911016
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19910514
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19871109
Compliance Evaluation Inspection	TSD-GOUNDWATER MONITORING REQUIREMENTS	19950606
	TSD-CLOSURE/POST-CLOSURE REQUIREMENTS	19950606
	TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS	19950606

WABASH ALLOYS DIVISION CONNELL (Continued) **1000310168**

	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606
Other Evaluation	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19950606

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

UST:

Facility ID:	18002016	Tank ID:	T00001
Owner:	CONNELL LTD PARTNERSHIP		
Owner Address:	[redacted]		
Capacity:	6000	Tank Status:	Currently In Use
Install Date:	01/01/95		
Content:	Diesel		
Tank Type:	Double Walled (Interstice)		

Facility ID:	18002016	Tank ID:	T00002
Owner:	CONNELL LTD PARTNERSHIP		
Owner Address:	[redacted]		
Capacity:	2500	Tank Status:	Currently In Use
Install Date:	01/01/95		
Content:	Diesel		
Tank Type:	Double Walled (Interstice)		

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29 **OHIO DRUM RECONDITIONING** **CERCLIS** **1000325155**
WNW **3967 PEARL RD** **FINDS** **OHD017757303**
1/2-1 **CLEVELAND, OH 44109** **RCRA-LQG**
5173 ft. **DERR**
MSL

Relative:
Higher

Actual:
690 ft.

OHIO DRUM RECONDITIONING (Continued) **1000325155**

CERCLIS Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Status: Referred to Removal - NFRAP
NPL Status: Not on the NPL

CERCLIS Assessment History:

Assessment:	DISCOVERY	Completed:	05/01/1979
Assessment:	PRELIMINARY ASSESSMENT	Completed:	12/01/1984
Assessment:	SITE INSPECTION	Completed:	12/19/1985
Assessment:	HRS PACKAGE	Completed:	10/20/1987
Assessment:	EXPANDED SITE INSPECTION	Completed:	09/30/1994
Assessment:	UNILATERAL ADMIN ORDER	Completed:	09/06/1996
Assessment:	Lodged By DOJ	Completed:	10/08/1998
Assessment:	CONSENT DECREE	Completed:	01/11/1999
Assessment:	REMOVAL	Completed:	01/18/1999
Assessment:	REMOVAL	Completed:	09/15/1999
Assessment:	PRP REMOVAL	Completed:	08/31/2000
Assessment:	Lodged By DOJ	Completed:	03/04/2003
Assessment:	NON-NPL PRP SEARCH	Completed:	04/01/2003
Assessment:	ADMIN ORDER ON CONSENT	Completed:	04/01/2003
Assessment:	CONSENT DECREE	Completed:	05/03/2003
Assessment:	ADMIN ORDER ON CONSENT	Completed:	08/05/2003
Assessment:	Lodged By DOJ	Completed:	04/21/2004
Assessment:	CONSENT DECREE	Completed:	06/16/2004

CERCLIS Site Status:
Not reported

RCRAInfo:
Owner: OHIO DRUM
(312) 555-1212
EPA ID: OHD017757303
Contact: [redacted]
Classification: Large Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

OHIO DRUM RECONDITIONING (Continued) **1000325155**

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

OH MSL:

Facility ID:	218-0594
EPA ID:	OHD017757303
Lat/Long:	41 26 52 / 81 43 00
Facility Type:	None

DERR:

Facility Id:	218000594
EPA Id:	OHD017757303
Lat/Long:	41.44777778 / -81.71666667
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

G30
West
1/2-1
5185 ft.

Relative:
Higher

Actual:
683 ft.

MOBILE TANK CAR SERV **CERCLIS** **1000254194**
3610 BROOKSIDE PARK DR **RCRA-SQG** **OHD000720227**
CLEVELAND, OH 44109 **FINDS**
RCRA-TSDF
Site 1 of 2 in cluster G **RAATS**
CORRACTS

CERCLIS Classification Data:

Federal Facility:	Not a Federal Facility
Non NPL Status:	Referred to Removal - NFRAP
NPL Status:	Not on the NPL
Site Description:	FORMER RAILROAD CAR WASHING FACILITY INVOLVED IN TREATMENT AND STORAGE OF HAZARDOUS WASTES.FORMER RAILROAD CAR WASHING FACILITY INVOLVED IN TREATMENT AND STORAGE OF HAZARDOUS WASTES.

CERCLIS Assessment History:

Assessment:	DISCOVERY	Completed:	08/01/1980
Assessment:	PRELIMINARY ASSESSMENT	Completed:	12/01/1984
Assessment:	HRS PACKAGE	Completed:	10/29/1987
Assessment:	SITE INSPECTION	Completed:	10/29/1987
Assessment:	NON-NPL PRP SEARCH	Completed:	10/14/1988
Assessment:	UNILATERAL ADMIN ORDER	Completed:	01/24/1990
Assessment:	ADMIN ORDER ON CONSENT	Completed:	08/29/1991
Assessment:	UNILATERAL ADMIN ORDER	Completed:	01/29/1992
Assessment:	PRP REMOVAL	Completed:	05/24/1993

CERCLIS Site Status:
Stabilized

CERCLIS Alias Name(s):
NO NAME
MOBILE TANK CAR SERV
MOBILE TANK CAR SERV

CORRACTS Data:

EPA Id:	OHD000720227
Region:	05

MOBILE TANK CAR SERV (Continued) **1000254194**

Area Name: ENTIRE FACILITY
Actual Date: 09/30/1993
Corrective Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
2002 NAICS Title: Not reported

RCRAInfo Corrective Action Summary:
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.
Event Date: 09/30/1993

RCRAInfo:
Owner: MOBILE TANK CAR SERVICES INC
(216) 747-7907
EPA ID: OHD000720227
Contact: [redacted]
Classification: TSDF
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 12/09/1988
Actual Date Achieved Compliance: 03/21/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/30/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-OTHER REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 12/09/1988
Actual Date Achieved Compliance: 03/21/1989

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 12/30/1988
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: FORMAL ENFORCEMENT AGREEMENT
Date Violation Determined: 07/29/1988
Actual Date Achieved Compliance: Not reported

Regulation Violated: Not reported
Area of Violation: FORMAL ENFORCEMENT AGREEMENT
Date Violation Determined: 07/29/1988
Actual Date Achieved Compliance: 01/29/1992

There are 4 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19890321
	TSD-OTHER REQUIREMENTS (OVERSIGHT)	19890321
Compliance Schedule Evaluation	FORMAL ENFORCEMENT AGREEMENT	
Compliance Schedule Evaluation	FORMAL ENFORCEMENT AGREEMENT	19920129

MOBILE TANK CAR SERV (Continued) **1000254194**

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

G31
West
1/2-1
5185 ft.

Relative:
Higher

Actual:
683 ft.

MOBILE TANK CAR SERV (DUP OF NO NAM
3610 BROOKSIDE PARK DR
CLEVELAND, OH 44109

OH Spills **S103686201**
DERR **N/A**
MSL

Site 2 of 2 in cluster G

OH MSL:

Facility ID:	218-0532
EPA ID:	OHD000720227
Lat/Long:	41 26 03 / 81 49 03
Facility Type:	None

MOBILE TANK CAR SERV (DUP OF NO NAM (Continued) **S103686201**

SPILLS:

Spill Year :	1981
Spill Month :	12
Spill Number :	2824
Date Spill Reported :	12/07/81
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8112-18-2824
Reporter Name :	APC
Confidential :	No
District Code :	NE
Employee Number :	Not reported
Product Spilled:	HAZARDOUS WASTE

Spill Year :	1983
Spill Month :	3
Spill Number :	0623
Date Spill Reported :	03/23/83
Sequential Number :	0
Lat/Long :	Not reported
Spill No. :	8303-18-0623
Reporter Name :	USEPA
Confidential :	No
District Code :	NE
Employee Number :	1754
Product Spilled:	TANKCAR WASHING

DERR:

Facility Id:	218000532
EPA Id:	OHD000720227
Lat/Long:	41.43416667 / -81.8175
Alias:	Not reported
District:	NEDO
Activity:	Not reported
Site Info:	330-963-1200

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CLEVELAND	1009182755	HARSHAW CHEMICAL CO THE OFFICE	1945 E 197TH ST		EDR Historical Cleaners
CLEVELAND	1002710531	LTV STEEL	WEST 3RD STREET GATE 3 ORE DOCK		LUST, OH Spills
CLEVELAND	1009186012	HARSHAW CHEMICAL CO THE OFFICE	1945 E 97TH ST		EDR Historical Cleaners
CLEVELAND	S105859375	TRUCKING COMPANY DUMP AKA HARKNESS	BRADLEY / JENNINGS STREETS		HIST LF
CLEVELAND	S104517663	NORTH COAST ROOFING	JENNINGS AVE		DERR
CLEVELAND	S105501538	FREIGHT SYSTEM PROPERTY	1110 LOWER DENISON AVE	44109	LUST
CLEVELAND	S106615545	CAMPBELL ROAD COMPOST FACILITY	80" MILL BLDG., ISG COMPLEX, WEST SIDE	44105	SWF/LF
CLEVELAND	S106297514	HARSHAW CHEMICAL	N/A		OH Spills
CLEVELAND	S106296750	HARSHAW CHEMICAL CO	N/A		OH Spills
CLEVELAND	1004768042	ODOT HIGHWAY BRIDGE	INTERSTATE RT 71 SECT 1174	44125	RCRA-SQG, FINDS
CLEVELAND	1000873765	ODOT HIGHWAY BRIDGE	INTERSTATE RTE 90 SECTION 356	44125	RCRA-SQG, FINDS
CLEVELAND	S107556733	STATE ROAD TRANSMISSION	4837 STATE RD	44109	LUST
CUYAHOGA HEIGHTS	S105902175	SOHIO	STATE / PORTAGE	44125	UNREG LTANKS
VALLEY VIEW	S102894310	NORTON COMPOST FACILITY	CANAL RD	44125	SWF/LF, OH Spills

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D018	BENZENE
D019	CARBON TETRACHLORIDE
D021	CHLOROBENZENE
D022	CHLOROFORM
D023	O-CRESOL
D026	CRESOL
D027	1,4-DICHLOROBENZENE
D033	HEXACHLOROBUTADIENE
D034	HEXACHLOROETHANE
D035	METHYL ETHYL KETONE

EPA Waste Codes Addendum

Code	Description
D038	PYRIDINE
D039	TETRACHLOROETHYLENE
D040	TRICHLOROETHYLENE
F001	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F002	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F004	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
U002	ACETONE (I)
U002	2-PROPANONE (I)
U009	ACRYLONITRILE

EPA Waste Codes Addendum

Code	Description
U009	2-PROPENENITRILE
U031	1-BUTANOL (I)
U031	N-BUTYL ALCOHOL (I)
U044	CHLOROFORM
U044	METHANE, TRICHLORO-
U052	CRESOL (CRESYLIC ACID)
U052	PHENOL, METHYL-
U057	CYCLOHEXANONE (I)
U070	BENZENE, 1,2-DICHLORO-
U070	O-DICHLOROBENZENE
U080	METHANE, DICHLORO-
U080	METHYLENE CHLORIDE
U123	FORMIC ACID (C,T)
U154	METHANOL (I)
U154	METHYL ALCOHOL (I)
U159	2-BUTANONE (I,T)
U159	METHYL ETHYL KETONE (MEK) (I,T)
U210	ETHENE, TETRACHLORO-
U210	TETRACHLOROETHYLENE
U213	FURAN, TETRAHYDRO-(I)
U213	TETRAHYDROFURAN (I)
U220	BENZENE, METHYL-
U220	TOLUENE
U223	BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T)
U223	TOLUENE DIISOCYANATE (R,T)
U226	ETHANE, 1,1,1-TRICHLORO-
U226	METHYL CHLOROFORM

EPA Waste Codes Addendum

Code	Description
U239	BENZENE, DIMETHYL- (I,T)
U239	XYLENE (I)

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/23/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/23/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/21/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/09/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 04/26/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/14/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 01/19/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 33

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 04/26/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/13/2006
Date Data Arrived at EDR: 04/28/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 32

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/06/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/21/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/13/2005
Date Made Active in Reports: 08/17/2005
Number of Days to Update: 35

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/12/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/29/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 03/31/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 05/11/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 02/13/2006
Date Data Arrived at EDR: 04/21/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 19

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/12/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/09/2006
Date Data Arrived at EDR: 03/29/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 62

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 09/25/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/27/2006
Date Data Arrived at EDR: 05/02/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 28

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/30/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Ohio EPA
Telephone: 614-644-2924
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: N/A

DERR: Division of Emergency & Remedial Response's Database
The DERR listings contains sites from all of Ohio that are in the Division of Emergency and Remedial Response (DERR) database, which is an index of sites for which our district offices maintain files. The database is NOT a record of contaminated sites or sites suspected of contamination. Not all sites in the database are contaminated, and a site's absence from the database does not imply that it is uncontaminated.

Date of Government Version: 03/14/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Ohio EPA, Div. of Emergency and Remedial Response
Telephone: 614-644-3538
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

TOWNGAS: DERR Towngas Database
The database includes 82 very old sites (circa 1895) which produced gas from coal for street lighting. Most visual evidence of these sites has disappeared, however the potential for buried coal tar remains. The database is no longer in active use.

Date of Government Version: 07/28/1992
Date Data Arrived at EDR: 02/21/2003
Date Made Active in Reports: 03/05/2003
Number of Days to Update: 12

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 02/12/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

MSL: Master Sites List
Ohio EPA no longer maintains or publishes the MSL, which was a list of sites with known or suspected contamination. Please be advised that this report does not constitute a determination that any site identified in the report is or may be contaminated.

Date of Government Version: 03/01/1999
Date Data Arrived at EDR: 03/29/1999
Date Made Active in Reports: 04/21/1999
Number of Days to Update: 23

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2068
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

SWF/LF: Licensed Solid Waste Facilities
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/23/2006
Date Data Arrived at EDR: 05/24/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 35

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2621
Last EDR Contact: 05/11/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

HIST LF: Old Solid Waste Landfill

A list of about 1200 old abandoned dumps or landfills. This database was developed from Ohio EPA staff notebooks and other information dating from the mid-1970s

Date of Government Version: 01/01/1980
Date Data Arrived at EDR: 07/01/2003
Date Made Active in Reports: 07/17/2003
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/26/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LUST: Leaking Underground Storage Tank File

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Department of Commerce
Telephone: 614-752-7924
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

UNREG LTANKS: Ohio Leaking UST File

A suspected or confirmed release of petroleum from a non-regulated UST.

Date of Government Version: 08/25/1999
Date Data Arrived at EDR: 08/19/2003
Date Made Active in Reports: 08/26/2003
Number of Days to Update: 7

Source: Department of Commerce
Telephone: 614-752-7938
Last EDR Contact: 08/01/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST: Underground Storage Tank Tank File

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 04/03/2006
Number of Days to Update: 19

Source: Department of Commerce
Telephone: 614-752-7938
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

ARCHIVE UST: Archived Underground Storage Tank Sites

Underground storage tank records that have been removed from the Underground Storage Tank database.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Department of Commerce, Division of State Fire Marshal
Telephone: 614-752-7938
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

SPILLS: Emergency Response Database

Incidents reported to the Emergency Response Unit. The focus of the ER program is to minimize the impact on the environment from accidental releases, spills, and unauthorized discharges from any fixed or mobile sources. Incidents involving petroleum products, hazardous materials, hazardous waste, abandoned drums, or other materials which may pose as a pollution threat to the state?s water, land, or air should be reported immediately. Not all incidents included in the database are actual SPILLS, they can simply be reported incidents.

Date of Government Version: 06/05/2006
Date Data Arrived at EDR: 06/06/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 22

Source: Ohio EPA
Telephone: 614-644-2084
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

ENG CONTROLS: Sites with Engineering Controls
A database that tracks properties with engineering controls.

Date of Government Version: 03/20/2006
Date Data Arrived at EDR: 04/04/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 30

Source: Ohio EPA
Telephone: 614-644-2324
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

INST CONTROL: Sites with Institutional Engineering Controls
A database that tracks properties with institutional controls.

Date of Government Version: 03/20/2006
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 28

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2324
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

VCP: Voluntary Action Program Sites
Site involved in the Voluntary Action Program.

Date of Government Version: 03/06/2006
Date Data Arrived at EDR: 03/06/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 24

Source: Ohio EPA, Voluntary Action Program
Telephone: 614-644-1298
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaner facility locations.

Date of Government Version: 04/20/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 15

Source: Ohio EPA
Telephone: 614-644-3469
Last EDR Contact: 04/20/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

BROWNFIELDS: Ohio Brownfield Inventory
A statewide brownfields inventory. A brownfield is an abandoned, idled or under-used industrial or commercial property where expansion or redevelopment is complicated by known or potential releases of hazardous substances and/or petroleum.

Date of Government Version: 04/11/2006
Date Data Arrived at EDR: 05/19/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 40

Source: Ohio EPA
Telephone: 614-644-3748
Last EDR Contact: 07/13/2006
Next Scheduled EDR Contact: 10/09/2006
Data Release Frequency: Varies

CDL: Clandestine Drug Lab Locations
A list of clandestine drug lab sites with environmental impact. This list is extracted from the SPILLS database based on the "product" type.

Date of Government Version: 03/22/2006
Date Data Arrived at EDR: 04/10/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 24

Source: Ohio EPA
Telephone: 614-644-2080
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

NPDES: NPDES General Permit List

General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 05/02/2006
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 26

Source: Ohio EPA
Telephone: 614-644-2031
Last EDR Contact: 06/02/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

USD: Urban Setting Designation Sites

A USD may be requested for properties participating in the VAP when there is no current or future use of the ground water by local residents for drinking, showering, bathing or cooking. In these areas, an approved USD would lower the cost of cleanup and promote economic redevelopment while still protecting public health and safety. If these USDs were to be approved, the ground water cleanup or response requirements for the areas could be lessened. The Ohio EPA director may approve a USD request based on a demonstration that the USD requirements are met and an evaluation of existing and future uses of ground water in the area. The Ohio EPA director's decision on approval or denial of the request is needed before cleanup requirements for the site can be determined.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 04/25/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/07/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

HIST INST CONTROLS: Institutional Controls Database

"Institutional control" is a restriction that is recorded in the same manner as a deed which limits access to or use of the property such that exposure to hazardous substances or petroleum are effectively and reliably eliminated or mitigated. Examples of institutional controls include land and water use restrictions. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 28

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

HIST ENG CONTROLS: Operation & Maintenance Agreements Database

Volunteers that complete a voluntary action that relies on the ongoing operation and maintenance (O&M) of an engineered control to make the site protective (e.g" cap systems and ground water treatment systems) must enter into a legally binding agreement with the Ohio EPA before the director issues a covenant not to sue. This O&M Agreement must describe how the remedy is constructed and how itwill be monitored, maintained and repaired. It also lays out inspection opportunities for the agency. Companies must document that they have the financial capability to operate any remedy relied on, before the agency will agree to enter into the O&M Agreement. The statute requires that the agency be notified of any change in ownership. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/04/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 30

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

HIST USD: Urban Setting Designations Database

A USD may be requested for properties participating in the VAP when there is no current or future use of the ground water by local residents for drinking, showering, bathing or cooking. In these areas, an approved USD would lower the cost of cleanup and promote economic redevelopment while still protecting public health and safety. If these USDs were to be approved, the ground water cleanup or response requirements for the areas could be lessened. The Ohio EPA director may approve a USD request based on a demonstration that the USD requirements are met and an evaluation of existing and future uses of ground water in the area. The Ohio EPA director's decision on approval or denial of the request is needed before cleanup requirements for the site can be determined. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/25/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 04/07/2006
Number of Days to Update: 49

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 04/24/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 8

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/05/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/02/2006
Date Data Arrived at EDR: 05/31/2006
Date Made Active in Reports: 06/27/2006
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/31/2006
Next Scheduled EDR Contact: 08/28/2006
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 05/04/2006
Date Made Active in Reports: 06/06/2006
Number of Days to Update: 33

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 09/30/2005
Date Data Arrived at EDR: 05/09/2006
Date Made Active in Reports: 05/24/2006
Number of Days to Update: 15

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/17/2006
Number of Days to Update: 61

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 05/15/2006
Next Scheduled EDR Contact: 08/14/2006
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 46

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/11/2006
Next Scheduled EDR Contact: 10/09/2006
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Day Care Facilities
Source: Department of Job & Family Services
Telephone: 614-466-6282

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

HARSHAW FUSRAP (IA07)
4041 JENNINGS ROAD
CLEVELAND, OH 44109

TARGET PROPERTY COORDINATES

Latitude (North):	41.44420 - 41˚ 26' 39.1''
Longitude (West):	81.6845 - 81˚ 41' 4.2''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	442819.0
UTM Y (Meters):	4588083.0
Elevation:	588 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	41081-D6 CLEVELAND SOUTH, OH
Most Recent Revision:	1994

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

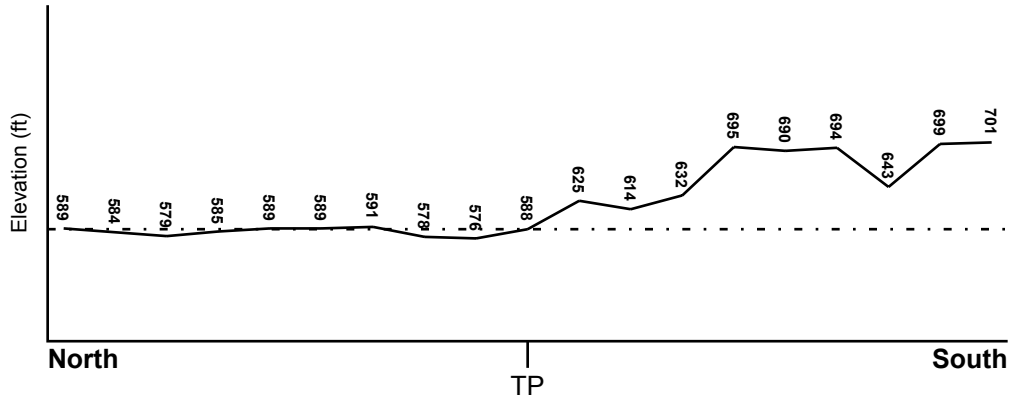
TOPOGRAPHIC INFORMATION

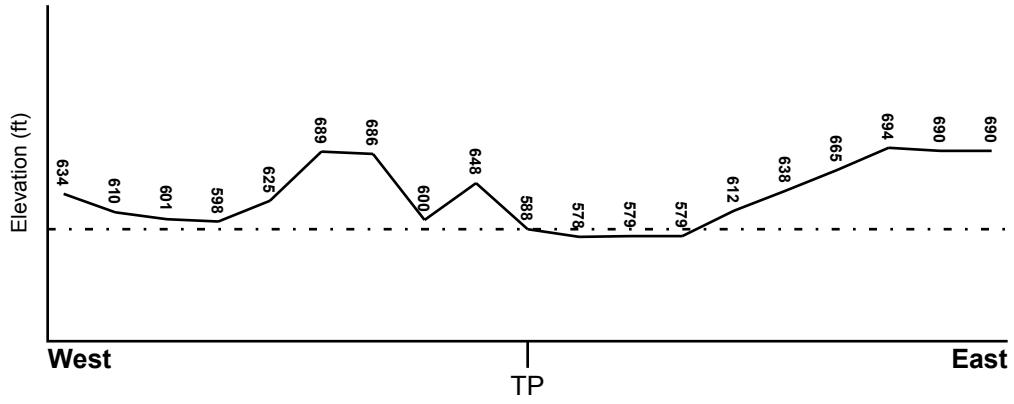
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 588 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
CUYAHOGA, OH	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 3901040025B

Additional Panels in search area: 3901190001B
3906540001B
3901010001B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CLEVELAND SOUTH	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
3	1/4 - 1/2 Mile NNW	N
4	1/2 - 1 Mile ENE	NE
B5	1/2 - 1 Mile SSE	NNW
6	1/2 - 1 Mile WSW	N
B8	1/2 - 1 Mile SSE	NE

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Devonian
Series:	Upper Devonian
Code:	D3 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	URBAN LAND
Soil Surface Texture:	variable
Hydrologic Group:	Not reported
Soil Drainage Class:	Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 10 inches
Depth to Bedrock Max:	> 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: clay loam
sandy loam
loam
silt loam

Surficial Soil Types: clay loam
sandy loam
loam
silt loam

Shallow Soil Types: silty clay loam

Deeper Soil Types: stratified
unweathered bedrock
weathered bedrock
clay loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

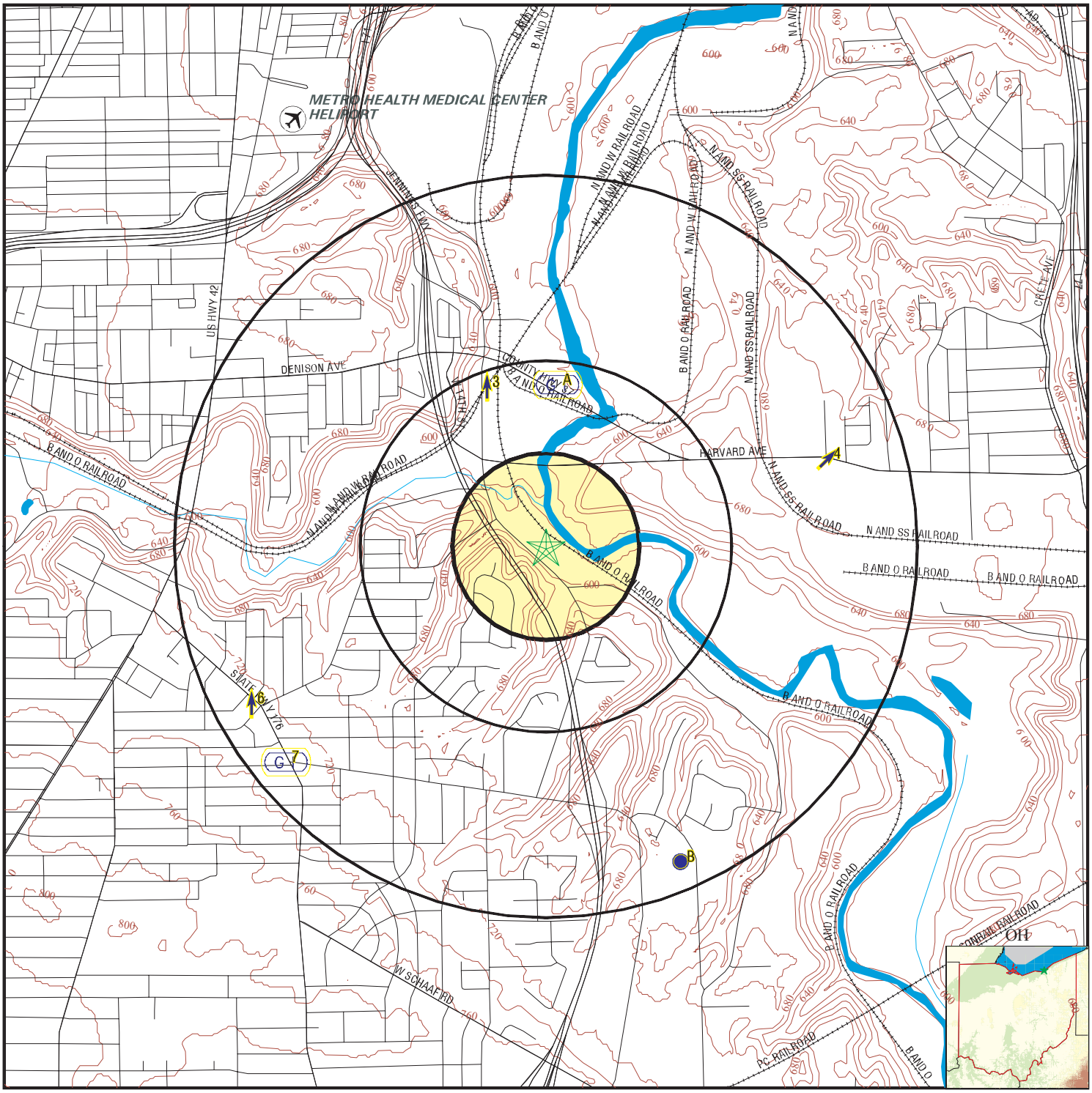
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 1714738.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

N

SITE NAME: Harshaw FUSRAP (IA07)	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 4041 Jennings Road Cleveland OH 44109	CONTACT: Marc Graham
LAT/LONG: 41.4442 / 81.6845	INQUIRY #: 1714738.2s
	DATE: July 13, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
A1 **North** **1/4 - 1/2 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	189748-00 NOT REPORTED 12.9 15.95 Not Reported 2/1990	**AQUIFLOW**	**19502**
A2 **North** **1/4 - 1/2 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1811041-00 NOT REPORTED 9.41 FT. 18-23 FT. Not Reported 1/92	**AQUIFLOW**	**17010**
3 **NNW** **1/4 - 1/2 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1812972-00 N 14.0 18.0 Not Reported 10/95	**AQUIFLOW**	**12488**
4 **ENE** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1841738 NE 0.78 20 Not Reported 3/1998	**AQUIFLOW**	**11798**
B5 **SSE** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1831981-00 NNW 15 17 Not Reported 8/93	**AQUIFLOW**	**14824**
6 **WSW** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1800082-00 N 11.24 12.23 Not Reported 9/90	**AQUIFLOW**	**12621**
7 **SW** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	1803163 NOT REPORTED Not Reported Not Reported 10-12 FT SEPT. 1990	**AQUIFLOW**	**16941**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
B8 **SSE** **1/2 - 1 Mile** **Higher**	Site ID:	189836-00	**AQUIFLOW**	**13386**
	Groundwater Flow:	NE		
	Shallow Water Depth:	5.95		
	Deep Water Depth:	8.06		
	Average Water Depth:	Not Reported		
	Date:	3/18/1993		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: OH Radon

Radon Test Results

Zip	Total Sites	Median	1st Quartile	3rd Quartile	Min.	Max.
44109	80	1.2	0.6	1.7	0	14.4

Federal EPA Radon Zone for CUYAHOGA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 44109

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.680 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Public Water System Data
Source: Ohio Environmental Protection Agency
Telephone: 614-644-3677
The database includes community, transient noncommunity and nontransient noncommunity water wells; and source treatment unit locations.

Water Well Database
Source: Department of Natural Resources
Telephone: 614-265-6747

OTHER STATE DATABASE INFORMATION

RADON

State Database: OH Radon
Source: Department of Health
Telephone: 614-644-2727
Radon Statistics for Zip Code Areas

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: [redacted]

U.S. Army Corps of

1776 Niagra Street

Buffalo, NY 14207

Order Date: 7/13/2006 **Completion Date:** 7/13/2006

Inquiry #: 1714738.3s

P.O. #: NA

Site Name: Harshaw FUSRAP (IA07)

Address: 4041 Jennings Road

City/State: Cleveland, OH 44109

Cross Streets:

Customer Project: NA

1091724ERK [redacted]

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

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IA07

EDR Historical Topographic Map Report

Harshaw FUSRAP
1000 Harvard Avenue
Cleveland, OH 44105

Inquiry Number: 1714652.4

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

Form-ERK

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900's.

Thank you for your business.

Please contact EDR at 1-800-352-0050
with any questions or comments.

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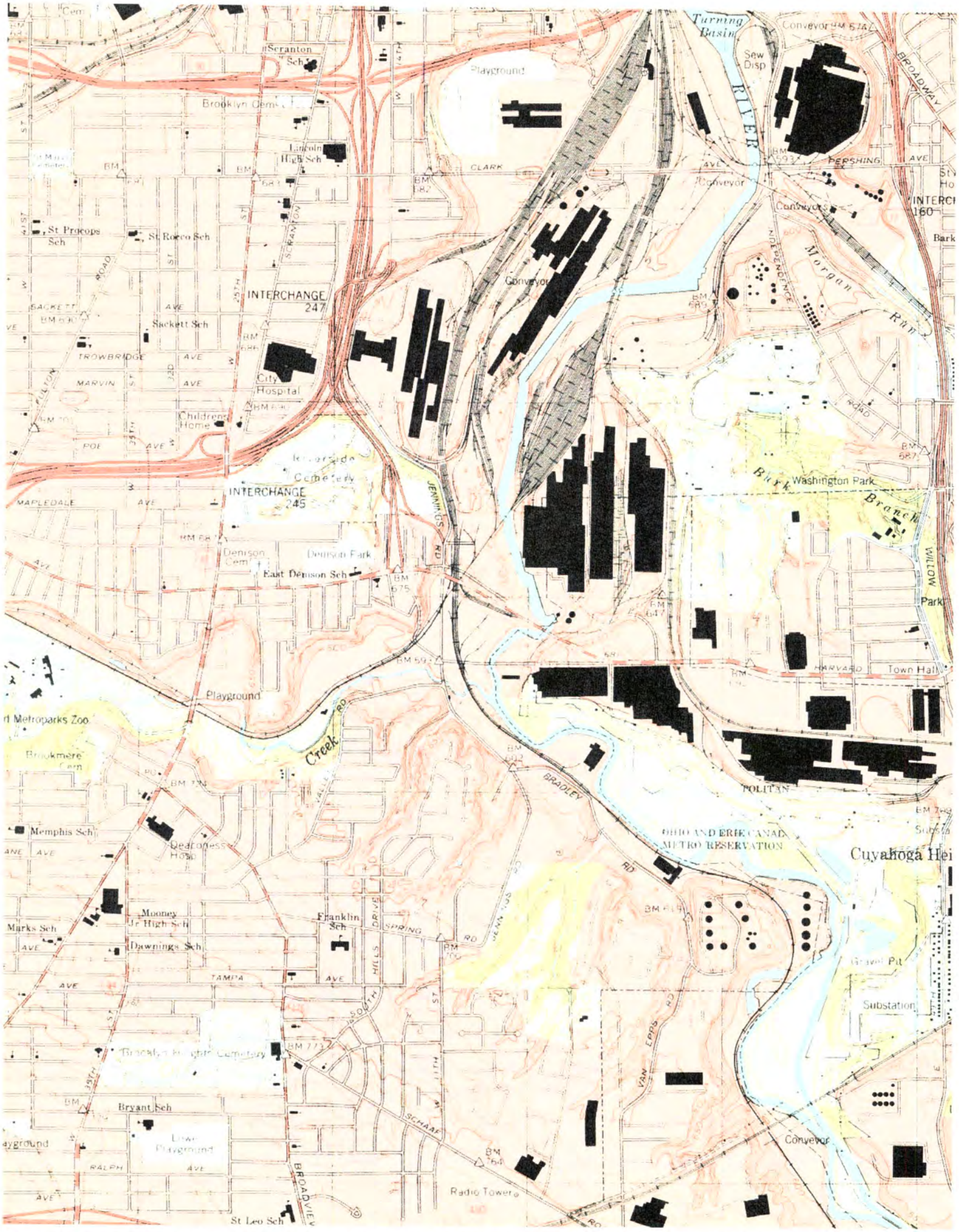

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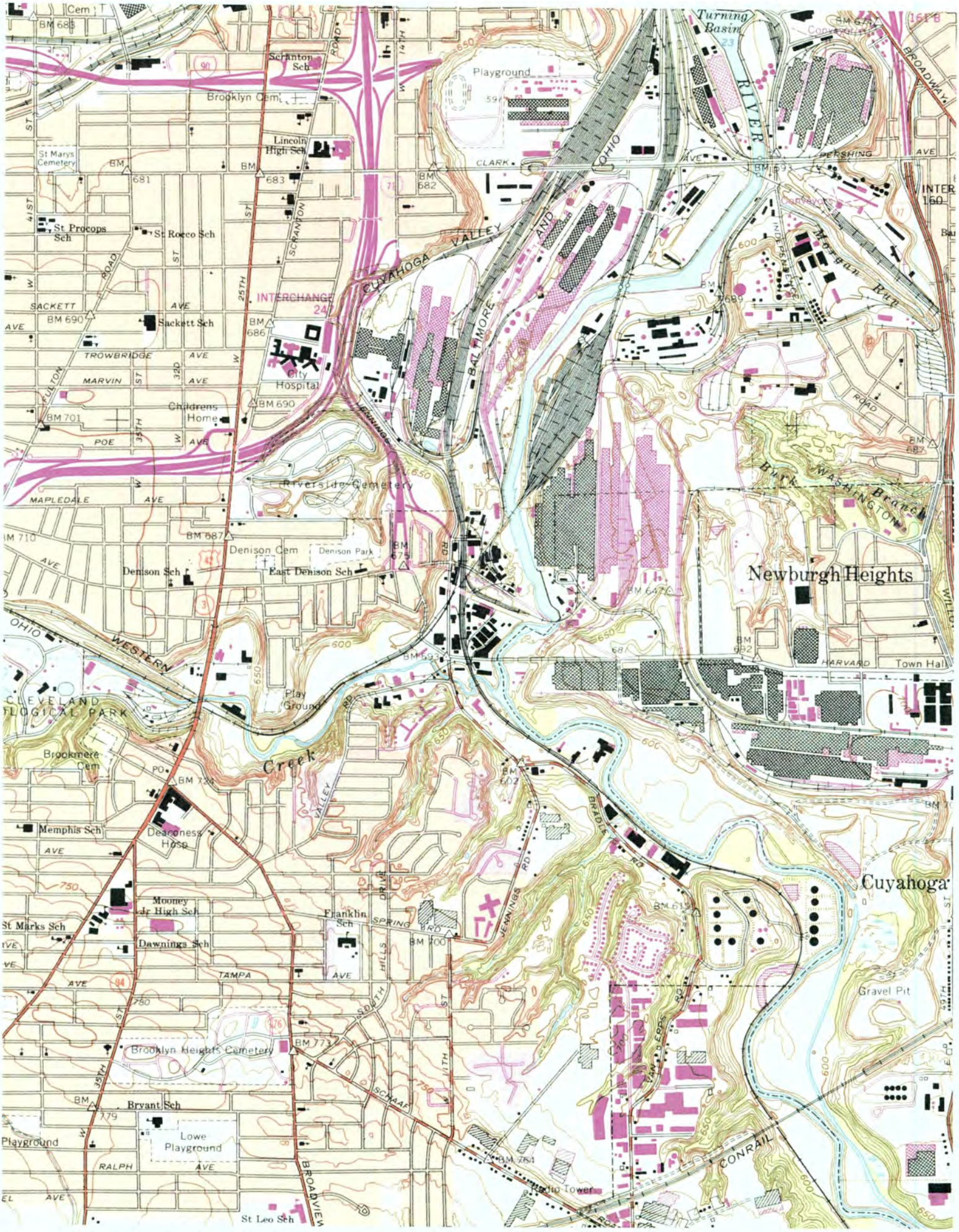

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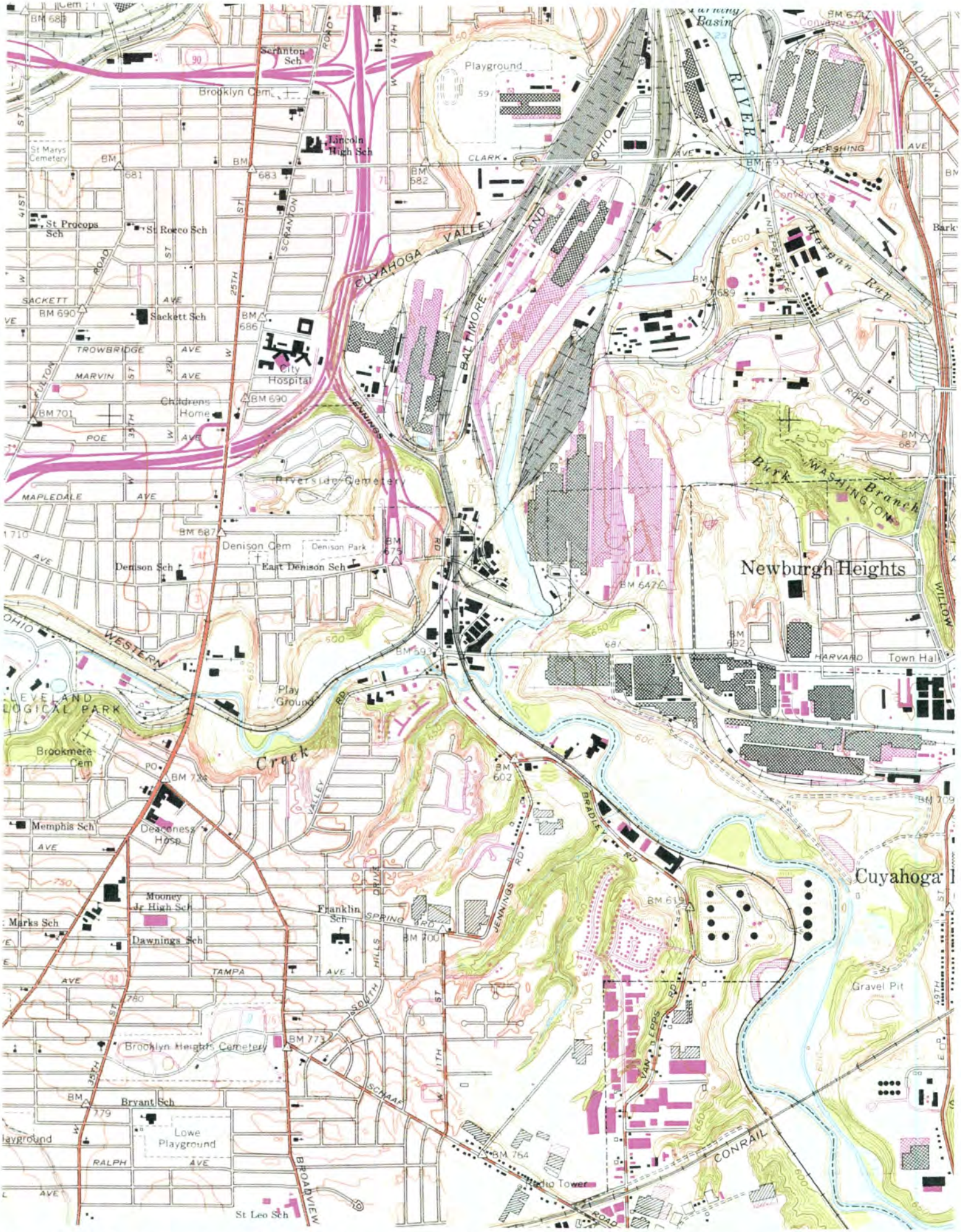

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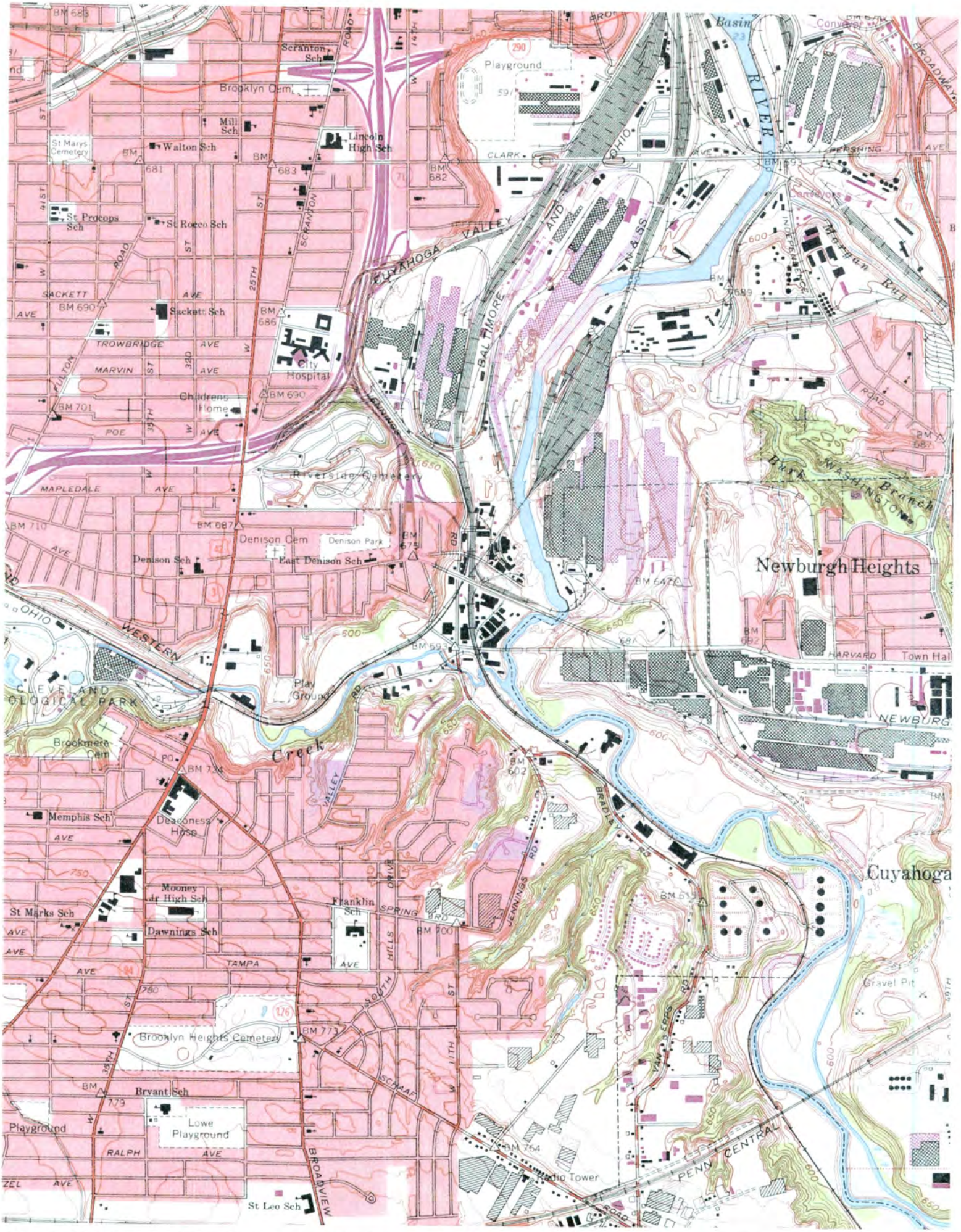

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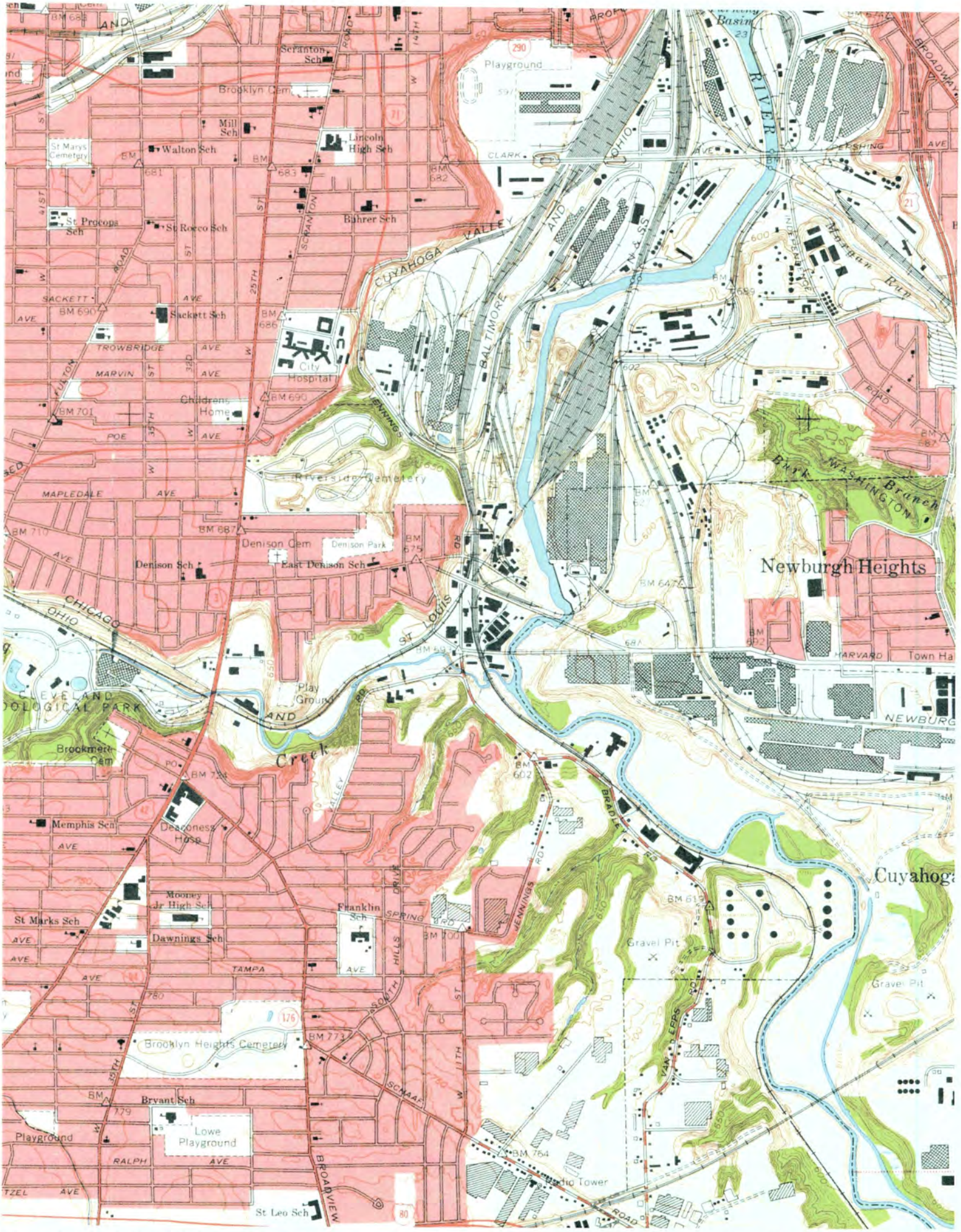

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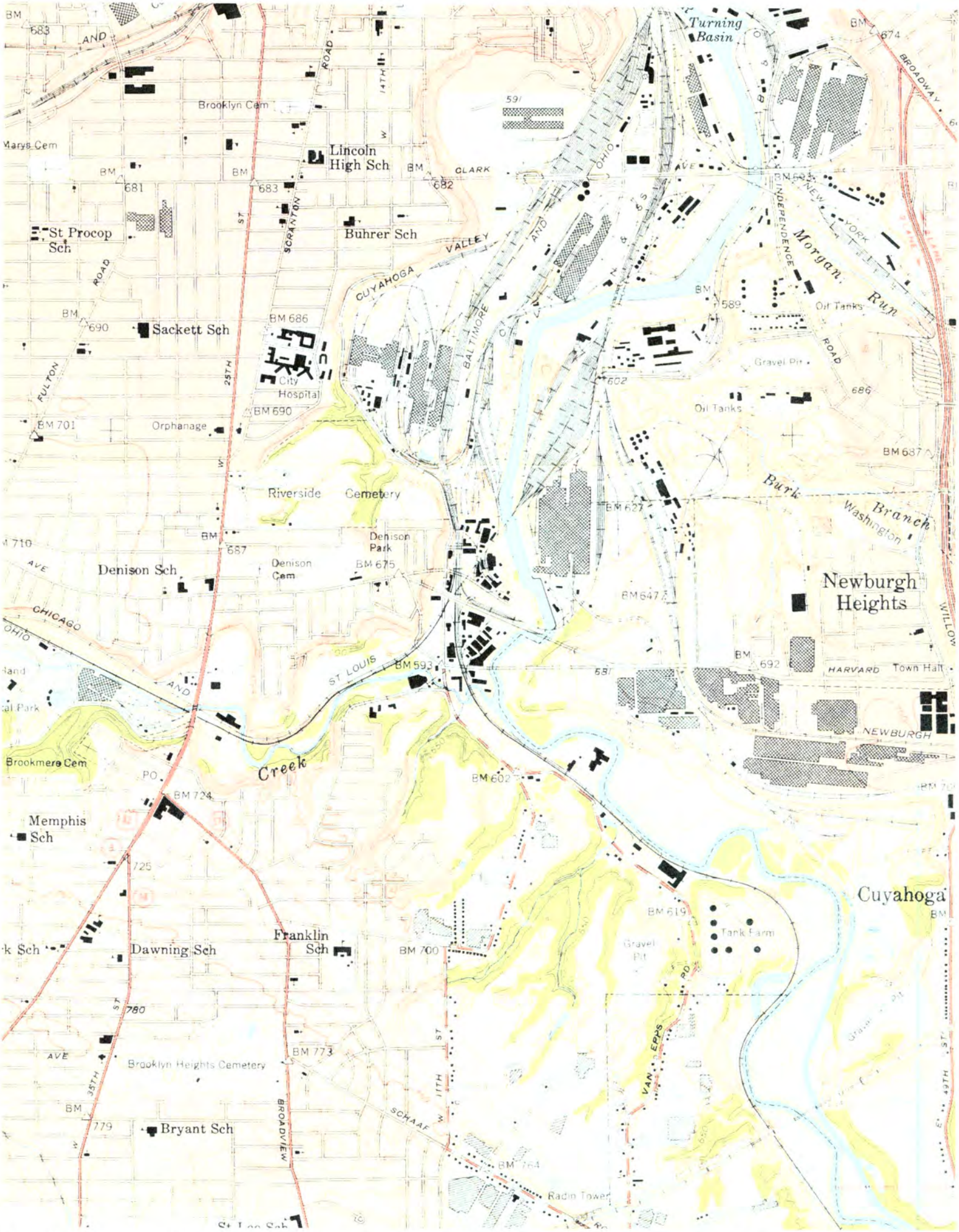

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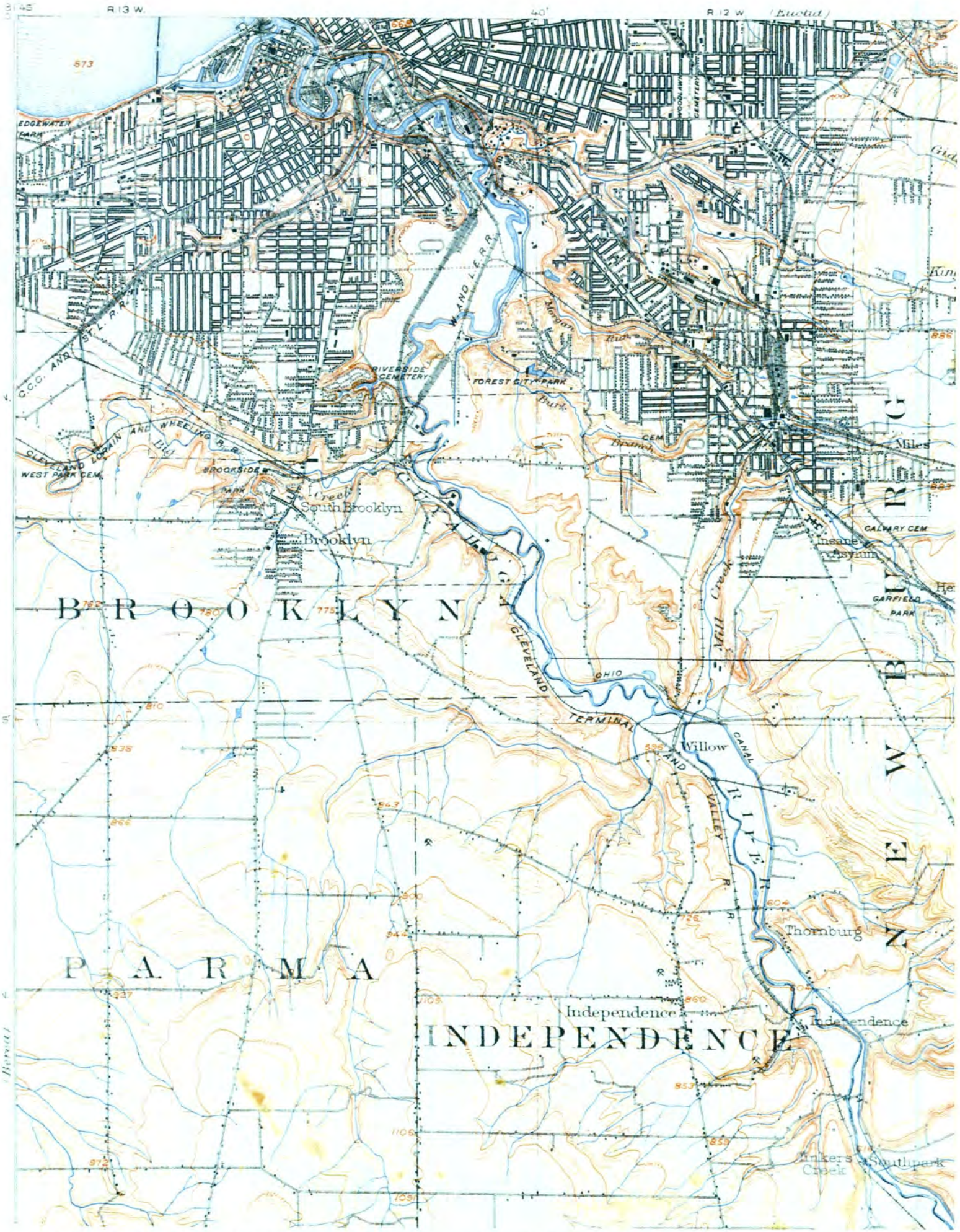


N ^ EDR INQUIRY# 1714652.4 TARGET QUAD: CLEVELAND YEAR: 1903 Series: 15' Scale: 1:62,500

Figure 3-1. Former Harshaw Chemical Company Investigative Area 03/04
1000 Harvard Avenue
(Taken from Harvard-Dennison Bridge)

Figure 3-2. Former Harshaw Chemical Company Investigative Area 05 Vacant Land Harvard Avenue (Across from 1000 Harvard Avenue)

Figure 3-3. Former Harshaw Chemical Company Investigative Area 06
Vacant Land Harvard Avenue (East of 1000 Harvard Avenue)
(Taken from Harvard-Dennison Bridge)

Figure 3-4. Building G-1
1000 Harvard Avenue
(Taken from Harvard-Dennison Bridge)

Figure 3-5. ArcelorMittal Steel
Harvard Avenue

Figure 3-6. Ohio and Erie Canal Reservation – Towpath Trail
Harvard Avenue

Figure 3-7. Ohio and Erie Canal Reservation – Towpath Trail Extension Harvard Avenue

Figure 3-8. TRANSInternational System - Tri-Modal Service
550 Harvard Avenue

Figure 3-9. Aluminum Companies of America
1600 Harvard Avenue

Figure 3-10. Specialized Construction
711 Harvard Avenue

Figure 3-11. Jennings Road
(Looking South from Harvard-Dennison Bridge)

Figure 3-12. Harvard-Dennison Bridge

Figure 3-13. Cleats Club Seat Grille
3995 Jennings Road

Figure 3-14. Waste Management
3985 Jennings Road

Figure 3-15. Former CSP Fabricating
3975 Jennings Road

Figure 3-16. Former Cleveland Welding Supply
3971 Jennings Road

Figure 3-17. Small Shop
3947 Jennings Road

Figure 3-18. Modern Builders Supply
3905 Jennings Road

Figure 3-19. Chemical Solvents, Inc.
3751 Jennings Road
(Photo taken from Harvard-Dennison Bridge)

Figure 3-20. Modern Builders Supply
3900 Jennings Road

Figure 3-21. Tesar Industrial Contractors, Inc.
3920 Jennings Road

Figure 3-22. Northwest Services, Inc./RJ Canvas Works
3980 Jennings Road

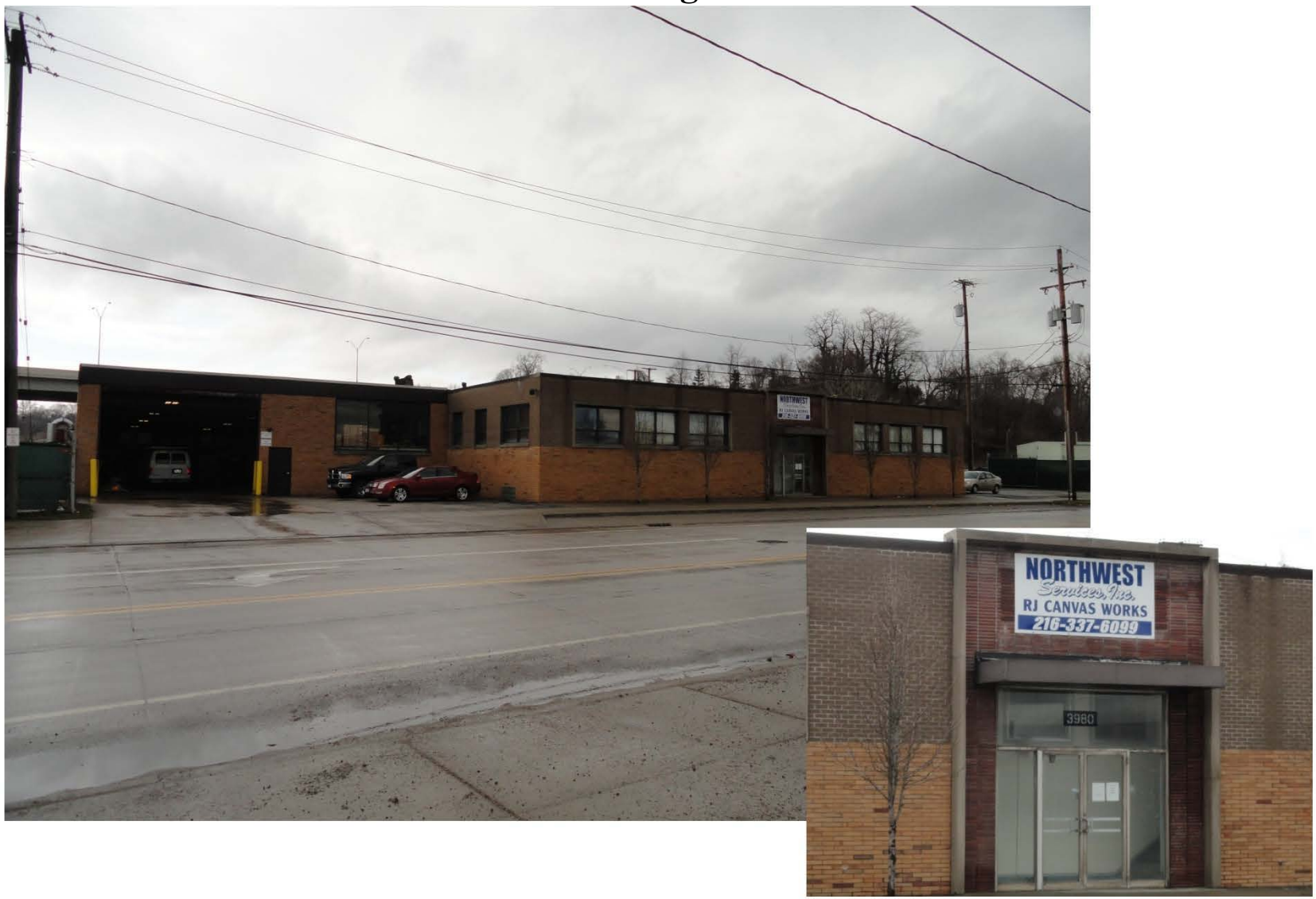


Figure 3-23. Club Generation
4002 Jennings Road

Figure 3-24. Former All Industrial Roofing
4010 Jennings Road

Figure 3-25. C and D Truck and Equipment, Inc.
4015 Jennings Road

Figure 3-26. Northeast Ohio Regional Sewer District Pumping Station 4029 Jennings Road

Figure 3-27. UA Transport, LLC
4041 Jennings Road

Figure 3-28. Former Harshaw Chemical Company Investigative Area 07 Vacant Land Jennings Road (SE of 4015 Jennings Road)

Figure 3-29. Residence (Located across from IA07)

[redacted]

Figure 3-30. Commercial Property
4160 Jennings Road

Figure 3-31. Industrial Warehouse
4175 Jennings Road

Figure 3-32. Former Trucking Company
4125 Bradley Road (Adjacent to IA07)

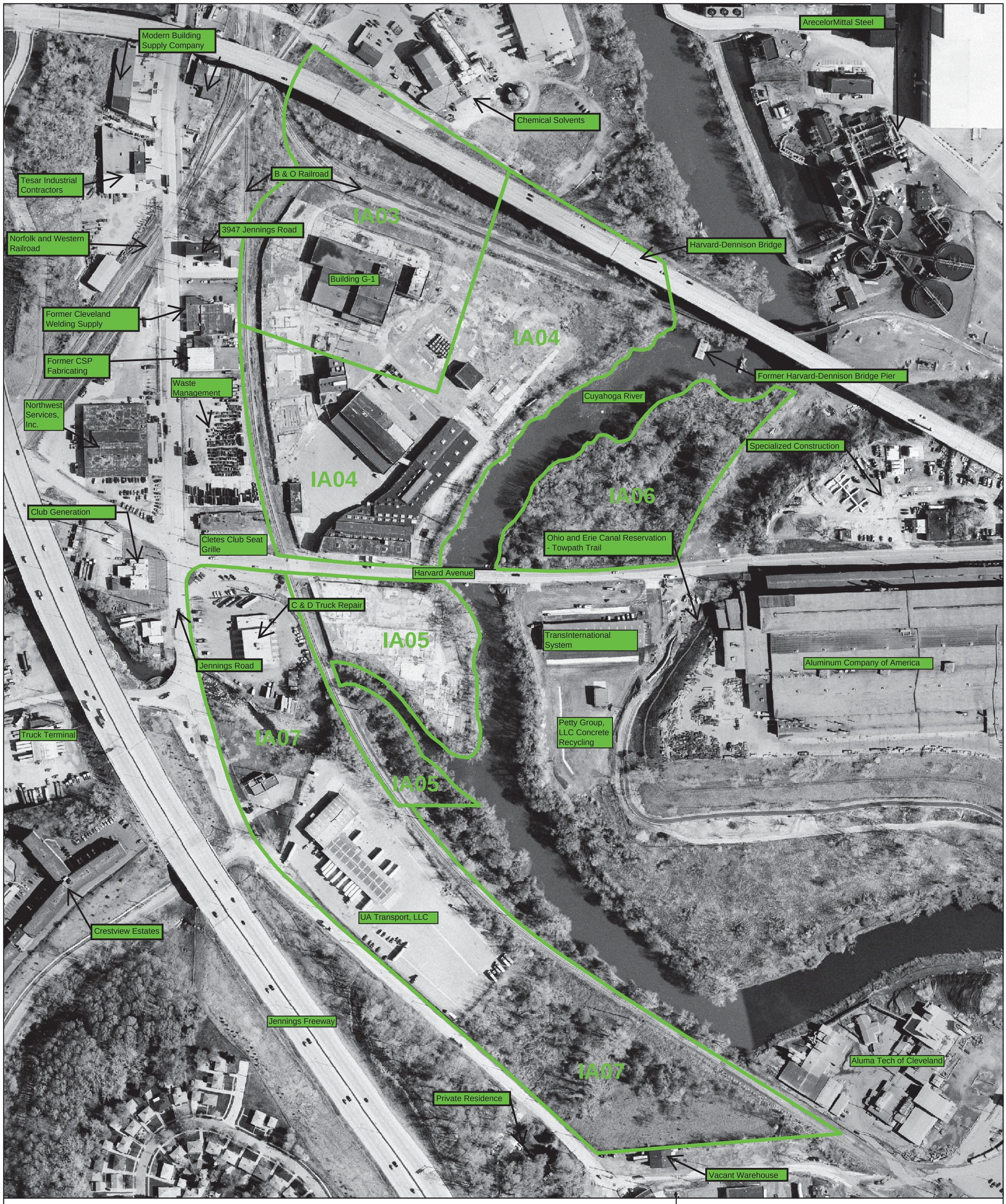
Figure 3-33. Aluma Tech of Cleveland
4181 Bradley Road

Figure 3-34. River Recycling, Inc.
4195 Bradley Road

Figure 3-35. Vacant Warehouse
4130 Bradley Road

Figure 3-36. Crestview Apartments

[redacted]



LEGEND

Investigative Area Boundary

N
W E
S

0 40 80 160 240 320 400 Feet

NOTE: IA08 (Sediment and Surface Water), IA09 (Sewers and Drains), and IA10 (Groundwater) do not have specific geographic boundaries and are not included on this map.

Figure 4-1. Aerial Photo of the Former Harshaw Chemical Company Investigative Areas and Adjacent Properties

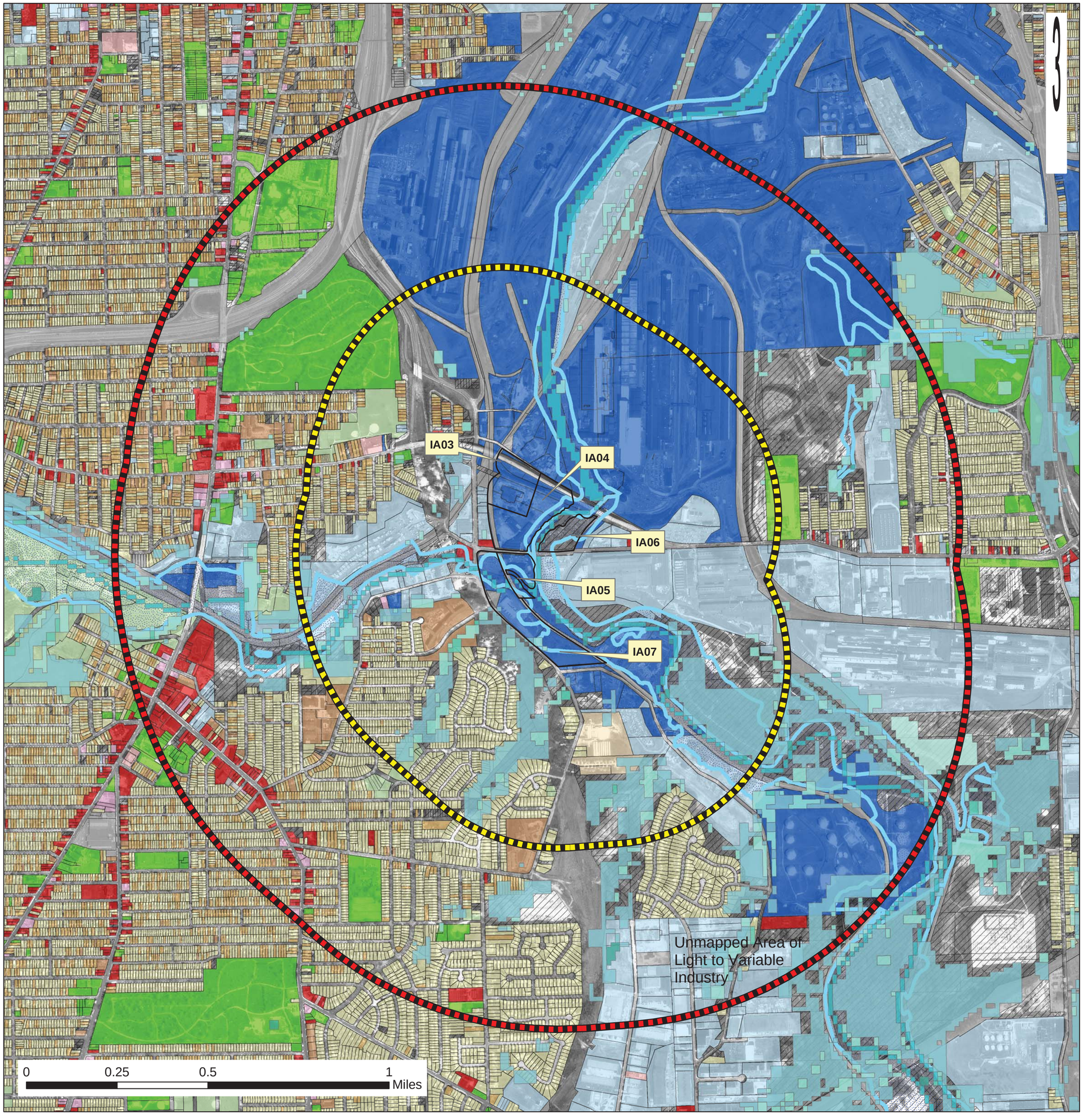


Figure 4-2. Harshaw FUSRAP 100-year floodplains and Wetlands - ½ and 1-Mile Radius

Harshaw FUSRAP Land Use Assessment

HCC IA Boundaries

HCC Half-Mile Buffer

HCC One-Mile Buffer

Cuyahoga Co. Weltands

- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40

Cuyahoga River 100-Year Floodplains

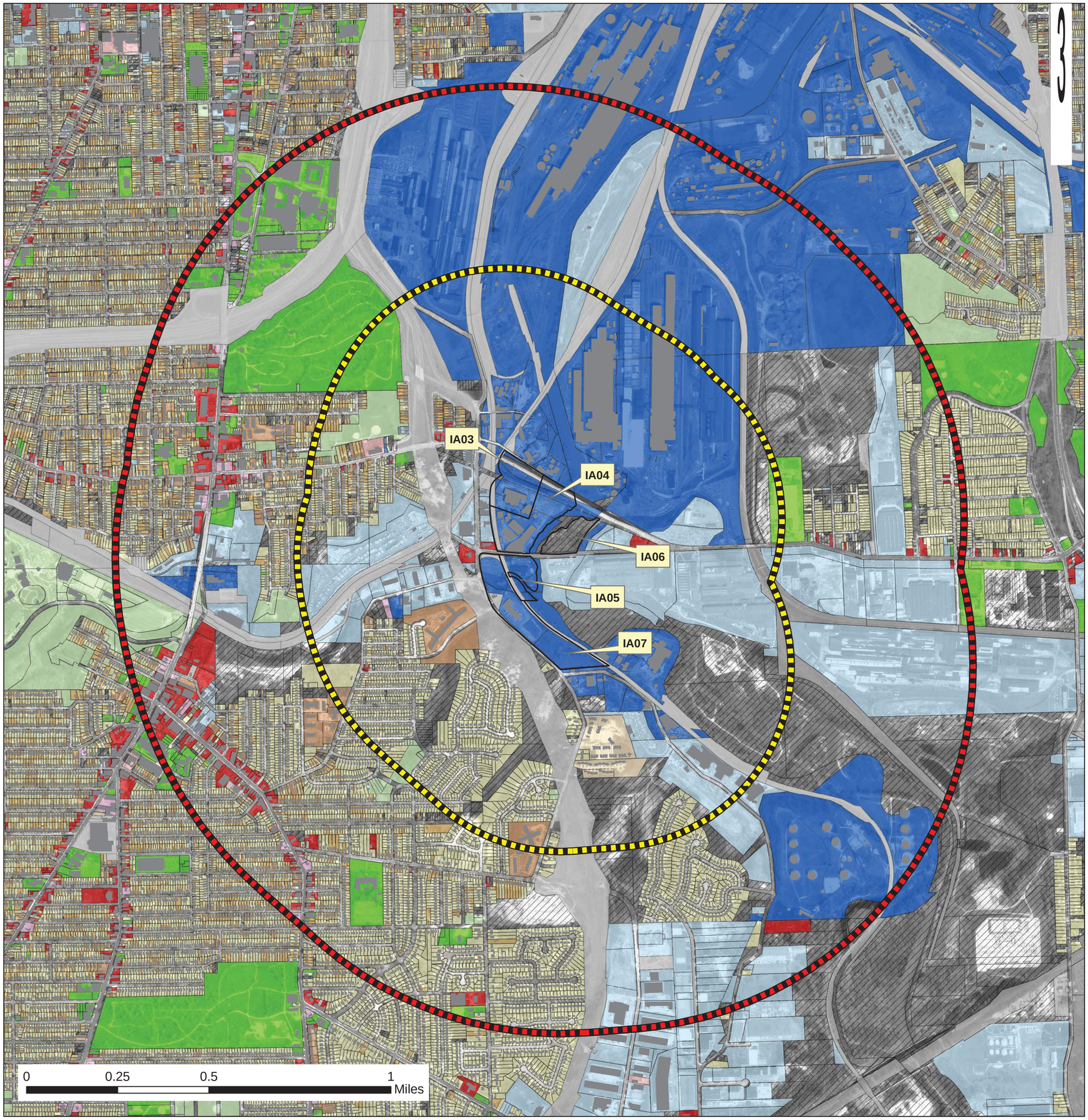


Figure 4-3. Harshaw FUSRAP Current Land Use - ½ and 1-Mile Radius

Land Use Criteria	One-Mile Count	Half-Mile Count
COMMERCIAL	22	1
HEAVY INDUSTRY	70	59
INDUSTRY - VARIABLE	47	9
INSTITUTIONAL	73	2
LIGHT INDUSTRY	89	40
MULTI-FAMILY	102	16
OFFICE	8	2
RECREATION	31	11
RESIDENTIAL	305	--
RETAIL	160	13
SINGLE FAMILY	2981	847
TOWNHOUSE	3	3
TRANSPORTATION	50	21
TWO FAMILY	580	113
VACANT	332	131

Harshaw FUSRAP Land Use Assessment

HCC IA Boundaries

HCC Half-Mile Buffer

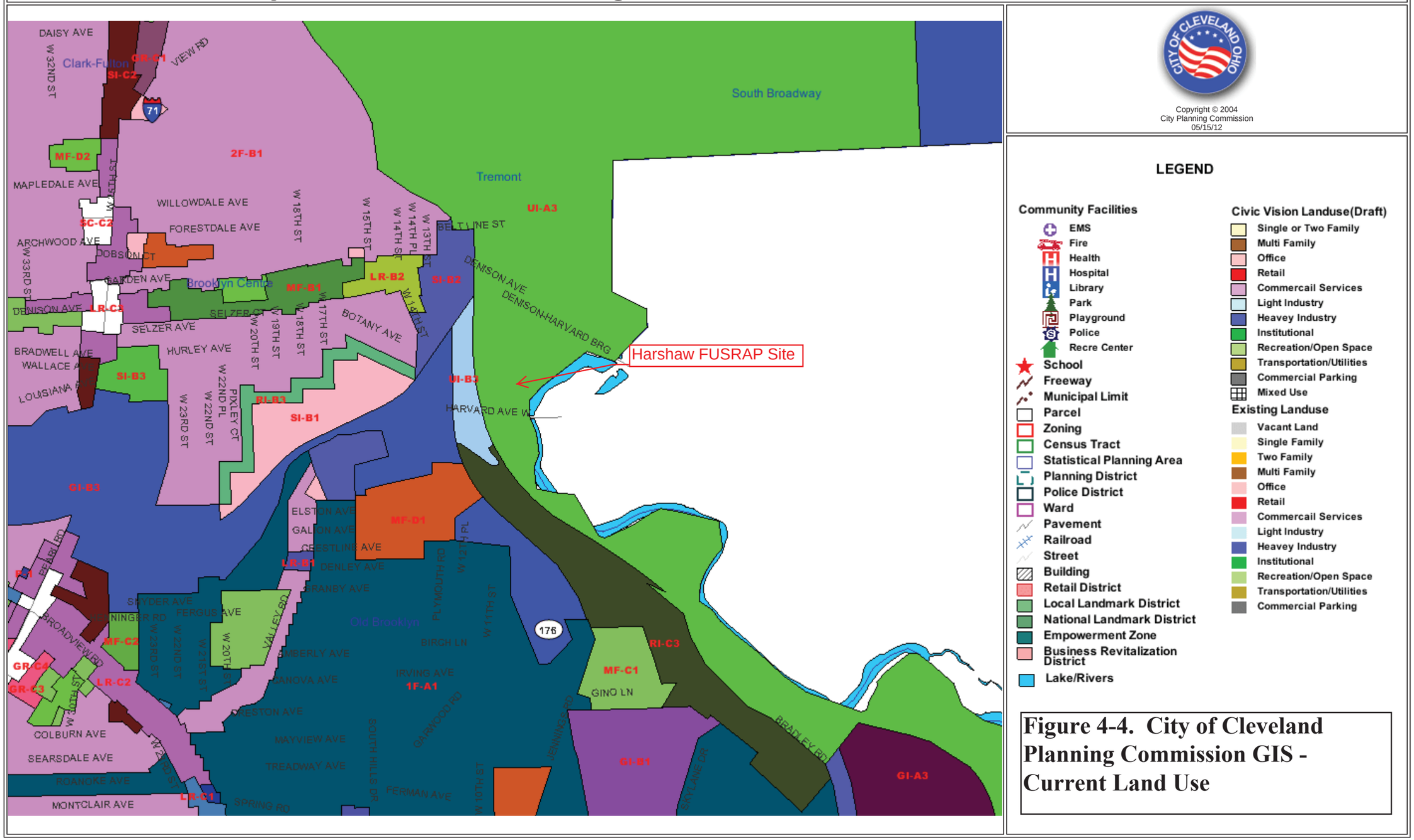
HCC One-Mile Buffer

Cuyahoga Valley Land Use

- SINGLE FAMILY
- TWO FAMILY
- MULTI-FAMILY
- TOWNHOUSE
- RESIDENTIAL
- MIXED USE: LIVE-WORK
- COMMERCIAL
- COMMERCIAL PARKING
- COMMERCIAL SERVICES
- OFFICE
- RETAIL
- VARIABLE INDUSTRY
- HEAVY INDUSTRY
- INSTITUTIONAL
- RECREATION
- TRANSPORTATION
- VACANT LAND
- VARIOUS

Clevealnd City Parcel Buildings (2000)

City of Cleveland Planning Commission GIS - Current Land Use



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City Planning Commission
05/15/12

LEGEND

Community Facilities
- EMS
- Fire
- Health
- Hospital
- Library
- Park
- Playground
- Police
- Recre Center
- School
- Freeway
- Municipal Limit
- Parcel
- Zoning
- Census Tract
- Statistical Planning Area
- Planning District
- Police District
- Ward
- Pavement
- Railroad
- Street
- Building
- Retail District
- Local Landmark District
- National Landmark District
- Empowerment Zone
- Business Revitalization District
- Lake/Rivers

Civic Vision Landuse(Draft)
- Single or Two Family
- Multi Family
- Office
- Retail
- Commercail Services
- Light Industry
- Heavey Industry
- Institutional
- Recreation/Open Space
- Transportation/Utilities
- Commercial Parking
- Mixed Use

Existing Landuse
- Vacant Land
- Single Family
- Two Family
- Multi Family
- Office
- Retail
- Commercail Services
- Light Industry
- Heavey Industry
- Institutional
- Recreation/Open Space
- Transportation/Utilities
- Commercial Parking

Figure 4-4. City of Cleveland Planning Commission GIS - Current Land Use

Figure 4-4. City of Cleveland Planning Commission GIS - Current Land Use Zoning Map Legend

CITY OF CLEVELAND
Mayor Frank G. Jackson

CLEVELAND CITY PLANNING COMMISSION
Zoning Map Legend

Example: 2F-B1
"2F" (Use District) | "B" (Area District) | "1" (Height District)

USE DISTRICTS

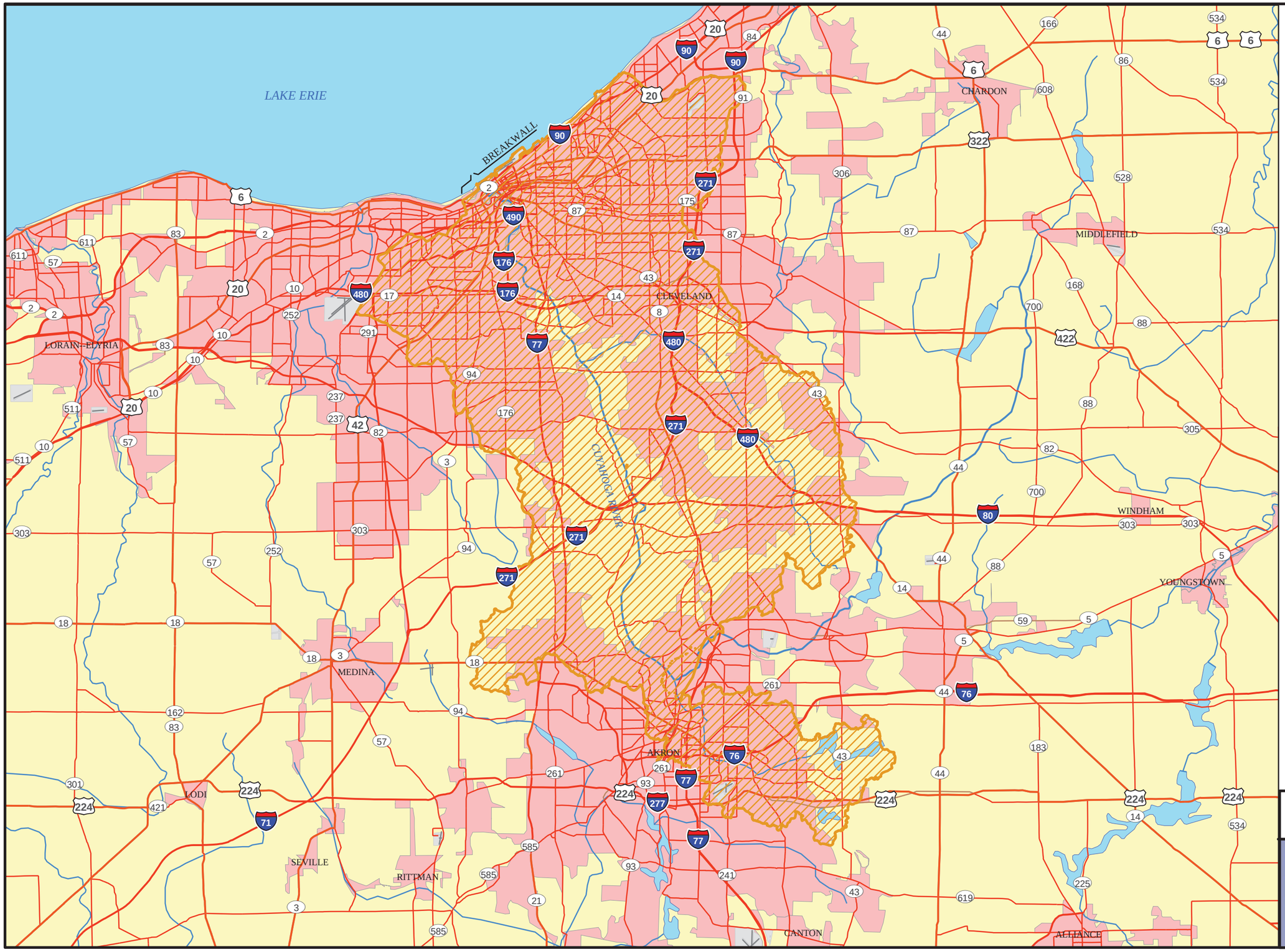
L1F	Limited One Family
1F	One Family
2F	Two Family
RA	Townhouse
LMF	Limited Multi-Family
MF	Multi-Family
MMUD	Midtown Mixed-Use District
DR	Downtown Residential
MH	Manufactured Housing Park
IR	Institutional-Research District
RO	Residence Office
LR	Local Retail Business
UR	University (College) Retail
SC	Shopping Center
LLR	Limited Retail Business
GR	General Retail Business
RI	Residence-Industry
SI	Semi-Industry
GI	General Industry
UI	Unrestricted Industry
P	Parking District

HEIGHT DISTRICTS

District	Height Limit
1	35'
2	60'
3	115'
4	175'
5	250'
6	600'
7	700'
8	800'
9	900'

AREA DISTRICTS

		Minimum Lot Area (Square Feet)			
	Max Gross Floor Area	One-Family	Two-Family	ROW-House	Multi-Family
AA	1/2 x Lot Area	7200			
A	1/2 x Lot Area	4800	9600		
B	1/2 x Lot Area	4800	6000	2400	2400
C	1/2 x Lot Area	4800	6000	2400	NONE
D	1 Lot x Area	4800	6000	2100	NONE
E	1 1/2 x Lot Area	4800	6000	2100	NONE
F	2 x Lot Area	4800	6000	2100	NONE
G	3 x Lot Area	4800	6000	2100	NONE
H	4 x Lot Area	4800	6000	2100	NONE
J	5 x Lot Area	4800	6000	2100	NONE
K	6 x Lot Area	4800	6000	2100	NONE



N
W E
S

Figure 4-5. Cuyahoga River Area of Concern Map

LEGEND

- MAJOR ROADS
- SURFACE WATER
- URBAN AREAS
- EXTENT OF AREA OF CONCERN

NOTE: AREA OF CONCERN BOUNDARY AS APPROVED BY OHIO EPA ON AUGUST 5, 2004.

SOURCE: MODIFIED FROM THE CENTER FOR THE GREAT LAKES, 1989, THE OHIO ENVIROMENTAL PROTECTION AGENCY, 2003, AND ESRI, 2005.

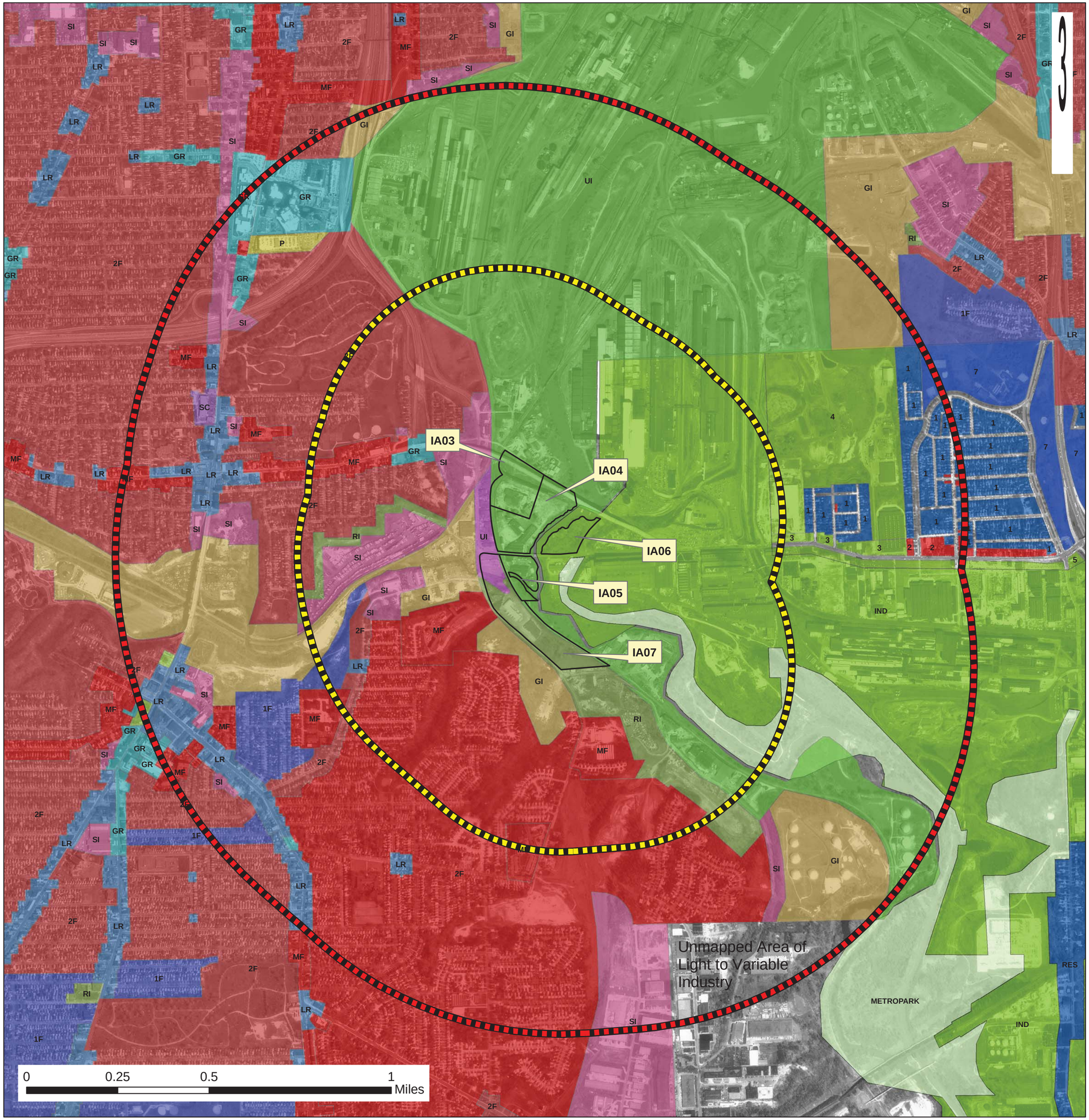
0 2.5 5 Miles

CUYAHOGA RIVER, OHIO
AREA OF CONCERN

Great Lakes National Program Office

EPA

Figure 5-1. Harshaw FUSRAP Current Zoning - ½ and 1-Mile Radius



Harshaw FUSRAP Land Use Assessment

HCC IA Boundaries

HCC Half-Mile Buffer

HCC One-Mile Buffer

Cleveland Zoning (2005)

- General Industry (GI)
- General Retail (GR)
- General Retail Business (GI)
- Limited Multi-Family (LMF)
- Limited Retail Business (LLR)
- Limted One-Family (L1F)
- Local Retail (2F)
- Local Retail Business (GR)
- Local-Retail (LR)
- Mid-Town Mixed Use District (MMUD)
- Multi Family (MF)
- Multi-Family (MF)
- One-Family (1F)
- Parking (P)
- Planned Unit Development (PUD)
- Residence Office (RO)
- Residence-Industry (RI)
- Residence-Office (RO)
- Semi-Industry (LR)
- Shopping Center (SC)
- Townhouse (RA)
- Two-Family (1F)
- University/College Retail (U/C)
- Unlimited Industry (UI)
- Unrestricted Industry (UI)

Newburg Hts. Zoning

- Residential (1)
- Multi Family (2)
- General Industry (3, 4, 5)
- Institutional (6, 7)

Cuyahoga Hts. Zoning

- General Industry
- MetroPark Land
- Retail - Office
- Park
- Residential

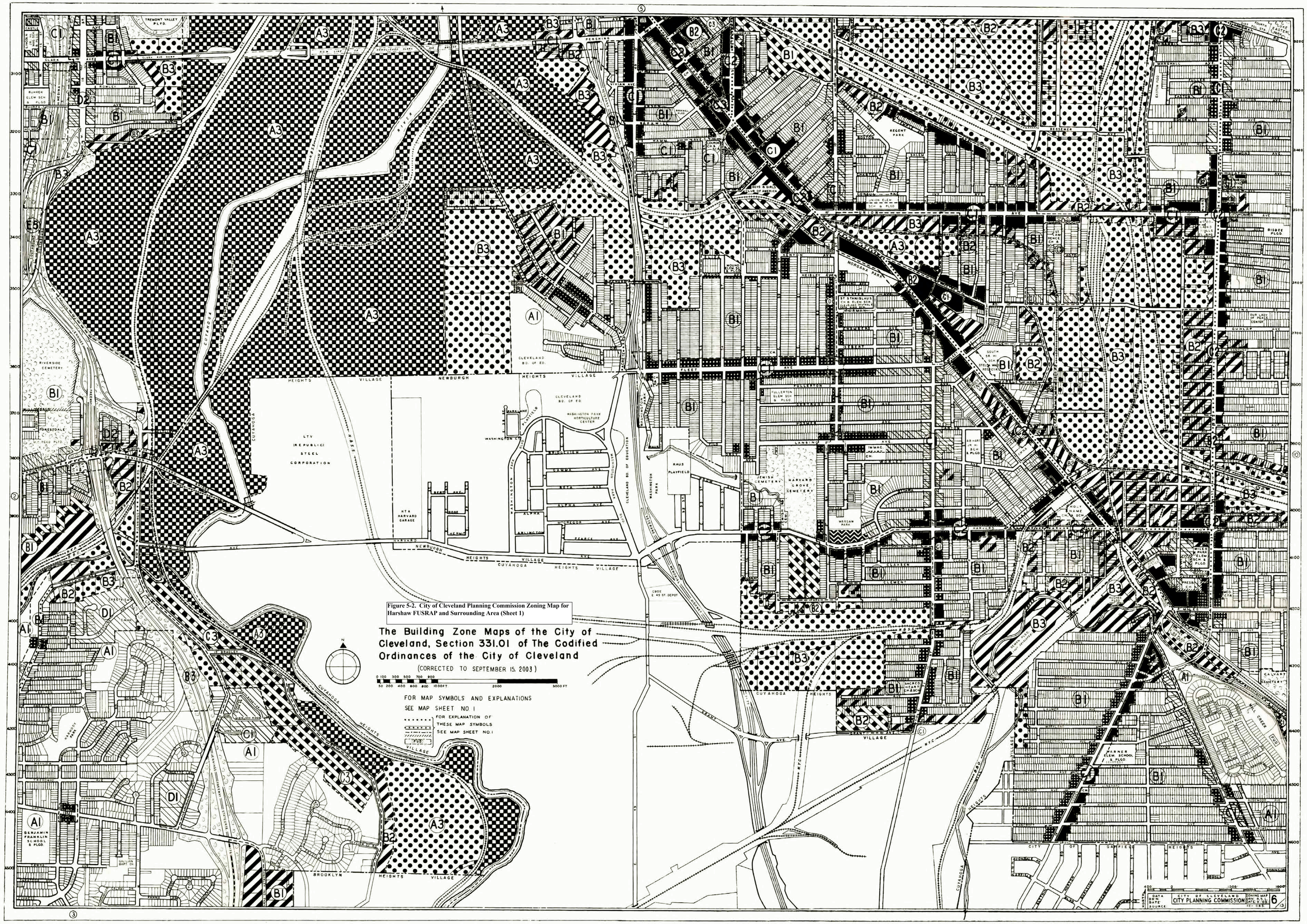


Figure 5-2. City of Cleveland Planning Commission Zoning Map for Harshaw FUSRAP and Surrounding Area (Sheet 1)

Figure 5-2. City of Cleveland Planning Commission Zoning Map for Harshaw FUSRAP and Surrounding Area (Sheet 2)

The Building Zone Maps of the City of Cleveland, Section 331.01 of The Codified Ordinances of the City of Cleveland

(CORRECTED TO SEPTEMBER 15, 2003)

USE DISTRICTS

- LIMITED ONE FAMILY
- (A) ONE FAMILY
- (B) TWO FAMILY
- (RA) TOWNHOUSE
- LIMITED MULTI-FAMILY
- MULTI-FAMILY
- (DR) DOWNTOWN RESIDENTIAL
- (MH) MANUFACTURED HOUSING PARK
- RESIDENCE OFFICE
- LOCAL RETAIL BUSINESS
- (1/2) UNIVERSITY (COLLEGE) RETAIL
- SHOPPING CENTER
- LIMITED RETAIL BUSINESS
- GENERAL RETAIL BUSINESS
- RESIDENCE - INDUSTRY
- SEMI - INDUSTRY
- GENERAL INDUSTRY
- UNRESTRICTED INDUSTRY
- (PI) PARKING DISTRICT

SET-BACK BUILDING LINE INDICATIONS

- 15 — NUMBER INDICATES THE SET-BACK IN FEET FROM STREET RIGHT-OF-WAY LINE
- 40'+ — NUMBER INDICATES THE SET-BACK IN FEET FROM STREET CENTER LINE
- 30'+ — NUMBER WITH + INDICATES SET-BACK IS LINE OF EXISTING BUILDINGS, BUT NOT LESS THAN NUMBER SHOWN

FOR SET-BACK REQUIREMENTS ON STREETS WITHOUT THESE SET-BACK INDICATIONS SEE SECTIONS 357.04 TO 357.07 INCL.

AREA DISTRICTS

	*MAX. GROSS FLOOR AREA	MINIMUM LOT AREA (SQUARE FEET) ONE-FAM.	TWO-FAM.	ROW-HOUSE	MULTI-FAM. (PER DWELLING UNIT)
AA	1/2 LOT AREA	7200			
A	1/2 " "	4800	9600		
B	1/2 " "	4800	6000	2400	2400
C	1/2 " "	4800	6000	2400	NONE
D	1 " "	4800	6000	2100	"
E	1 1/2 " "	4800	6000	2100	"
F	2 " "	4800	6000	2100	"
G	3 " "	4800	6000	2100	"
H	4 " "	4800	6000	2100	"
J	5 " "	4800	6000	2100	"
K	6 " "	4800	6000	2100	"

*APPLIES TO ALL BUILDINGS IN RESIDENCE DISTRICTS AND TO RESIDENCE BUILDINGS IN OTHER DISTRICTS SEE SECTION 355.04

HEIGHT DISTRICTS

1	35 FT.	HEIGHT	LIMIT
2	60 "	"	"
3	115 "	"	"
4	175 "	"	"
5	250 "	"	"
6	600 FT.	HEIGHT	LIMIT
7	700 "	"	"
8	800 "	"	"
9	900 "	"	"

---- AREA & HEIGHT DISTRICT BOUNDARY

(A1) AREA & HEIGHT DISTRICT

MOTOR FREIGHT DEPOT AND TRUCK TERMINAL ENTRANCE OR EXIT PROHIBITED:

(a) ON STREETS WITHIN AREAS AND WITHIN 50 FEET OF AREAS BOUNDED THUS ·····

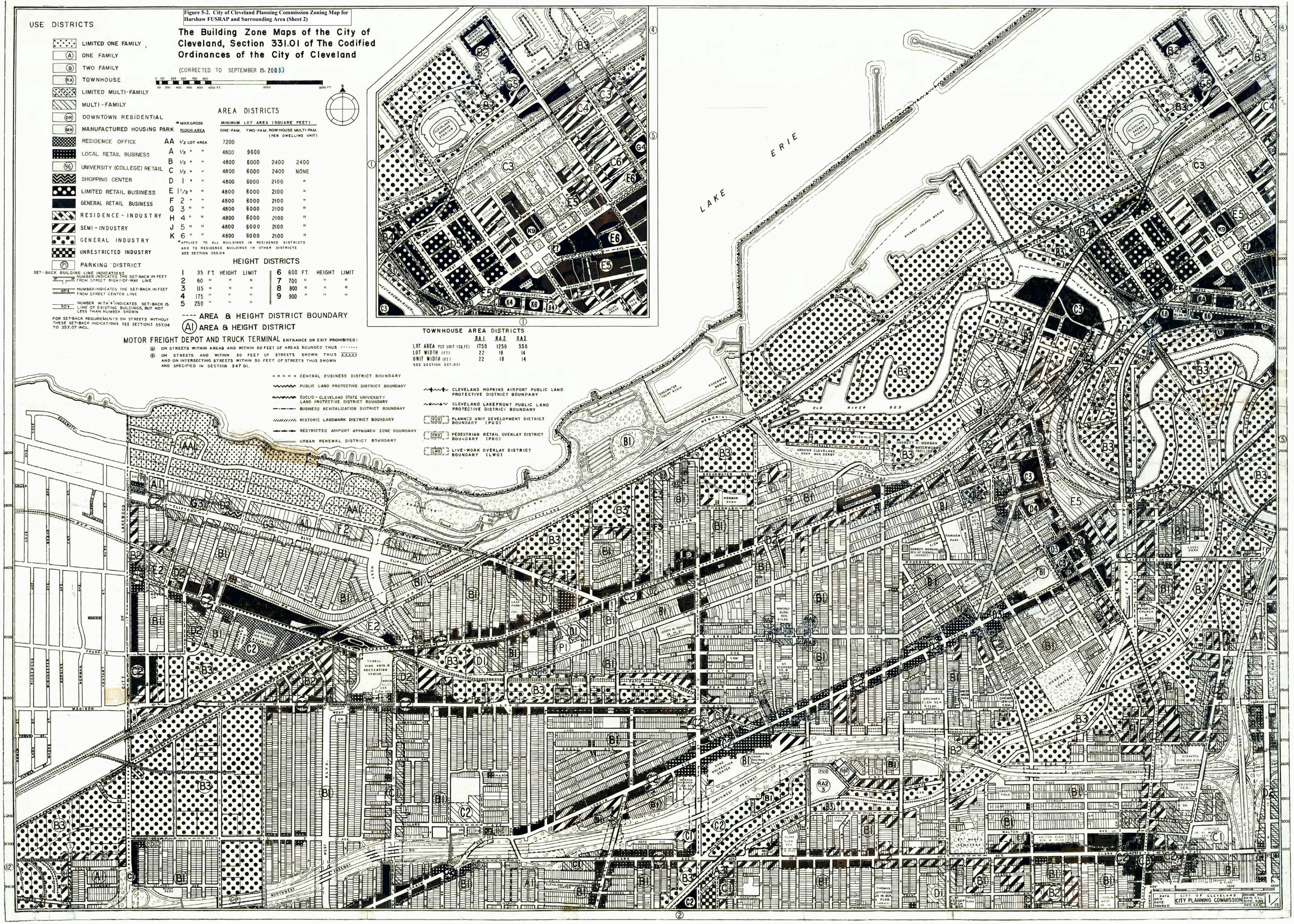
(b) ON STREETS AND WITHIN 50 FEET OF STREETS SHOWN THUS ····· AND ON INTERSECTING STREETS WITHIN 50 FEET OF STREETS THUS SHOWN AND SPECIFIED IN SECTION 347.01.

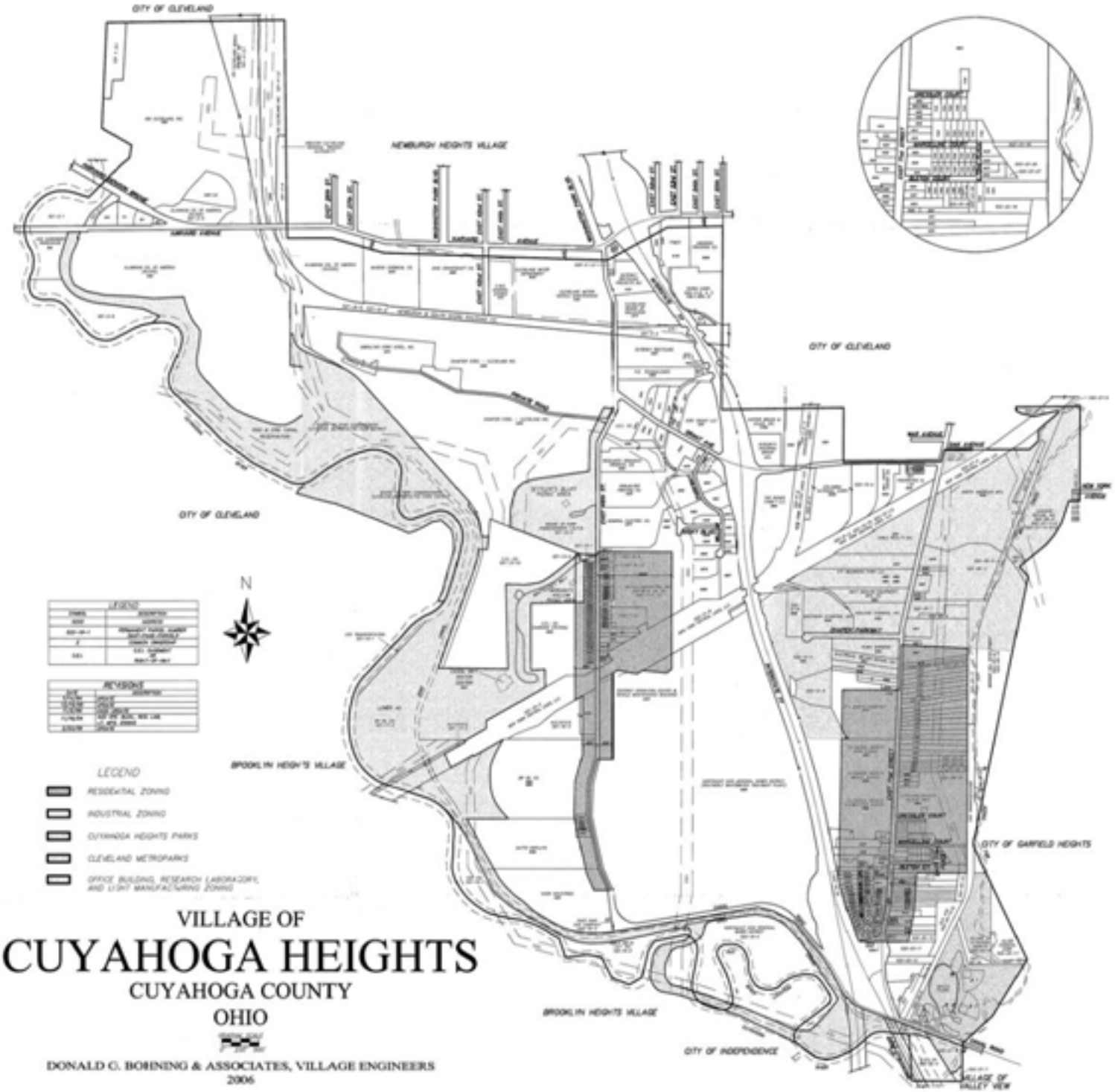
- CENTRAL BUSINESS DISTRICT BOUNDARY
- PUBLIC LAND PROTECTIVE DISTRICT BOUNDARY
- EUCLID - CLEVELAND STATE UNIVERSITY LAND PROTECTIVE DISTRICT BOUNDARY
- BUSINESS REVITALIZATION DISTRICT BOUNDARY
- HISTORIC LANDMARK DISTRICT BOUNDARY
- RESTRICTED AIRPORT APPROACH ZONE BOUNDARY
- URBAN RENEWAL DISTRICT BOUNDARY
- CLEVELAND HOPKINS AIRPORT PUBLIC LAND PROTECTIVE DISTRICT BOUNDARY
- CLEVELAND LAKEFRONT PUBLIC LAND PROTECTIVE DISTRICT BOUNDARY
- (PUD) PLANNED UNIT DEVELOPMENT DISTRICT BOUNDARY (PUD)
- (PRO) PEDESTRIAN RETAIL OVERLAY DISTRICT BOUNDARY (PRO)
- (LWO) LIVE-WORK OVERLAY DISTRICT BOUNDARY (LWO)

TOWNHOUSE AREA DISTRICTS

	RA1	RA2	RA3
LOT AREA PER UNIT (SQ.FT.)	1750	1250	550
LOT WIDTH (FT.)	22	18	14
UNIT WIDTH (FT.)	22	18	14

SEE SECTION 337.031





VILLAGE OF

CUYAHOGA HEIGHTS

CUYAHOGA COUNTY

OHIO

DONALD C. BOHNING & ASSOCIATES, VILLAGE ENGINEERS

2006

Neighborhood Profile

Brooklyn Centre: A Haven for Historic Homes

By [redacted]

Brooklyn Centre, once part of Brooklyn Township, was established in 1818. In 1869, a streetcar line was extended along Pearl Road. The resulting increased traffic flow developed this neighborhood's business district, located at Pearl Road and Denison Avenue. By 1890, Brooklyn Centre was annexed to the City of Cleveland.

Although most residential development occurred between 1900 and 1915, the oldest houses in this neighborhood were built around 1850. Residents have focused on preserving the historic homes on Archwood, Denison, and Mapledale avenues in the Brooklyn Centre Historic District. Portions of Archwood Avenue are listed on the National Register of Historic Places. This area is also designated as a Cleveland Landmark District.

Brooklyn Memorial United Methodist Church on Archwood Avenue, with its striking stained-glass dome center, stands in front of the original 1818 church. Riverside Cemetery, in the northeast part of Brooklyn Centre, has fine views of the Cuyahoga Valley. Dedicated in 1876 by President-elect Rutherford B. Hayes, the cemetery was the burial site for wealthy west-side families.

This near-west-side neighborhood is bordered by Old Brooklyn's Cleveland MetroParks Zoo to the south, Clark-Fulton to the north, and Tremont and Cuyahoga Heights to the east. I-71 cuts through its northern section and Pearl Road/West 25th Street is the north-south axis.

The 15-percent decrease in this neighborhood's population since 1980 nearly matched Cleveland's overall decrease of 16.5 percent. Cleveland's major population decrease occurred between 1980 and 1990; Brooklyn Centre's population decreased mostly between 1990 and 2000.

In 2000, nearly a third of the residents were minorities. Twelve percent were African-American and nearly one-fifth were "Other" or "Two or More Races." Over one-fourth were of Hispanic ethnicity. Only 7 percent were older persons, 5 percentage points below Cleveland's average. These older residents had relatively lower incomes and more received Medicaid compared to Cleveland's averages.

Although the percentage of female-headed families with children was lower than Cleveland's average, child maltreatment rates were higher. Brooklyn Centre's HIV/AIDS rate was higher than Cleveland's average, as were mortality rates for all causes, heart disease, and cancer.

Over half of the residents rented their homes, the same as Cleveland's average. The average residential housing value in 2001 was $45,100 in 2001, lower than Cleveland's average of $54,100. The median age of housing is 96 years, 11 years more than Cleveland's median age.

More information is available in our Social Indicators series: *Education, Employment, and Income; Children and Families; Community Health; Older Persons; Housing;* and *Youth Development.* The reports are available for free from our Website, www.CommunitySolutions.com, as are previous *Planning & Action* neighborhood profiles. For more information, contact [redacted] at [redacted]

Neighborhood history includes information gathered from NeighborhoodLink, a service of The Center for Neighborhood Development, Maxine Goodman Levin College of Urban Affairs, Cleveland State University (www.nhlink.net) and *The Encyclopedia of Cleveland History,* maintained by Case Western Reserve University (http://ech.cwru.edu). ■

Maps and tables on pages 12-15.

[redacted] is a policy and planning associate on The Center for Community Solutions' Research team.

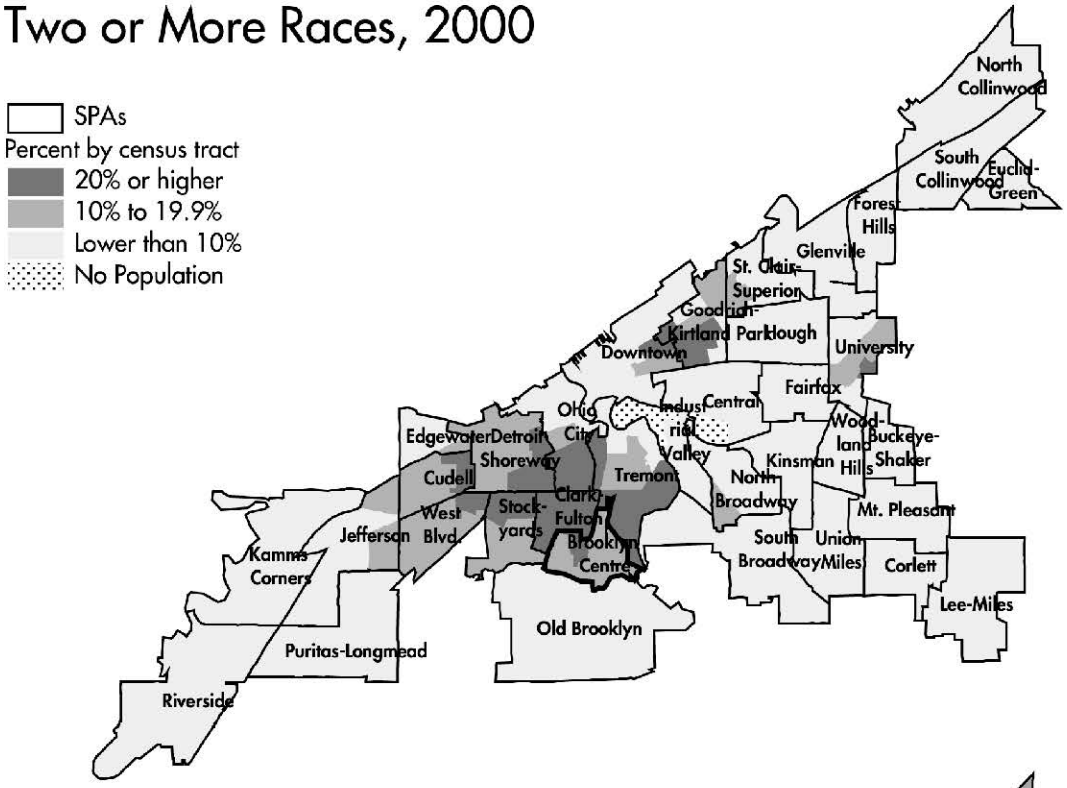
[redacted]

Brooklyn Centre Statistical Planning Area Profile with Comparisons to Cleveland, Suburbs, and Cuyahoga County

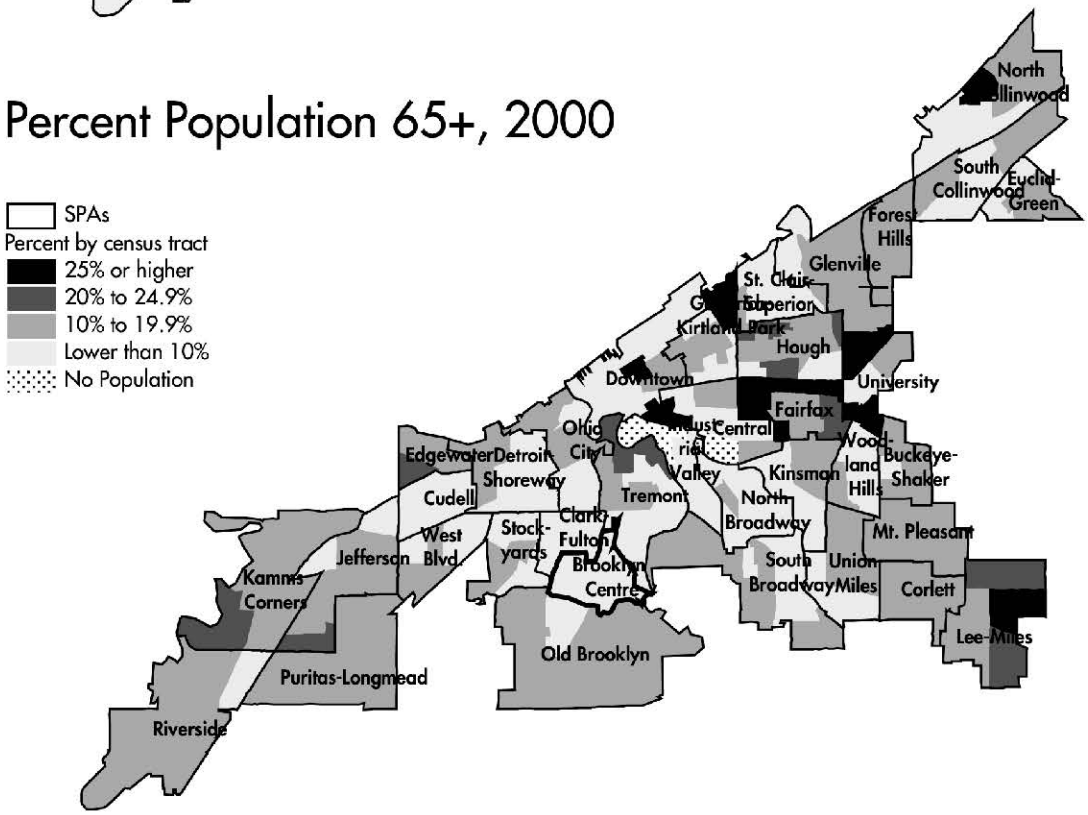
	Brooklyn Centre SPA	Cleveland	All Suburbs	Cuyahoga County
Community Demographics				
Population Trends (1,000s)				
1980	10.8	572.8	925.5	1,498.3
1990	10.2	505.6	906.5	1,412.1
2000	9.2	478.4	915.6	1,394.0
Percent Change				
1980 to 1990	-5.3	-11.7	-2.0	-5.8
1990 to 2000	-10.3	-5.4	1.0	-1.3
1980 to 2000	-15.1	-16.5	-1.1	-7.0
Racial Group Percentage Distribution				
One Race				
White	68.8	41.5	80.9	67.4
Black	12.3	51.0	15.1	27.4
Asian	0.7	1.3	2.1	1.8
Other	14.0	3.9	0.5	1.7
Two or More Races	4.3	2.2	1.4	1.7
Percent Hispanic Ethnicity	25.9	7.3	1.3	3.4
Age Group Percentage Distribution				
Less Than Age 18	31.4	28.5	23.1	25.0
Ages 18 to 64	61.2	59.0	59.7	59.5
Ages 65 and Over	7.3	12.5	17.2	15.6
Socioeconomic Characteristics				
Educational Attainment Percentages, Population 25 and Over				
High School Graduate or More	64.1	69.0	87.5	81.6
Associate's Degree or More	13.4	15.8	37.2	30.4
Percent in Civilian Labor Force (Age 16 and Over)	61.1	57.3	65.0	62.4
Percent Persons below Federal Poverty Level	24.6	26.3	6.3	13.1
Percent Households Ages 65 and Over with Income Less than $15,000	45.1	40.2	22.5	27.6
Percent Medicaid Recipients, January 2004[1]				
Of Total Population	42.1	34.6	10.5	18.6
Of Ages 65 and Over Population	25.7	11.9	5.0	6.9
Children and Families				
Births, 1996 to 2001 Average Annual				
To Females Ages 15 to 44	180	8,387	10,548	18,935
Per 1,000 Females Ages 15 to 44	82.4	76.0	55.5	63.1
To Females Ages 15 to 17	13	634	257	891
Per 1,000 Females Ages 15 to 17	60.8	66.1	14.4	32.5
Child Maltreatment Cases, 2003				
Total	122	4,625	2,106	6,731
Per 1,000 Children Less than 18[1]	43.9	34.3	10.2	19.8
Percent Female-Headed Families with Children	40.7	52.3	22.4	33.4

Cleveland Statistical Planning Areas

Percent Asian, Other Race, or Two or More Races, 2000



Percent Population 65+, 2000



Brooklyn Centre Statistical Planning Area Profile with Comparisons to Cleveland and Cuyahoga County

	Brooklyn Centre SPA	Cleveland	All Suburbs	Cuyahoga County
Health				
Low-Weight Births, 1996 to 2001				
Average Annual	17	964	770	1,725
Per 100 Births	9.4	11.5	7.3	9.1
Infant Deaths, 1997 to 2001[2]				
Average Annual	2	109	71	180
Per 1,000 Births	11.2	13.2	6.8	9.6
HIV/AIDS Prevalence per 100,000 Persons, 2002[3]				
Living AIDS Cases	305.0	242.9	55.9	120.1
Living HIV/AIDS Cases	544.7	383.6	78.4	183.1
Age-Adjusted Mortality Rates per 100,000 Persons, 1997 to 2001 Average[2]				
All Causes	1,216.4	1,142.6	830.3	932.2
Heart Disease	432.6	394.8	288.5	322.4
Coronary Heart Disease	322.8	307.9	222.1	249.2
All Cancer	290.3	260.7	205.2	222.5
Public Safety				
Per 1,000 Juveniles Ages 10 to 17, 2003[4]				
Violent Delinquency Cases	40.5	41.3	16.7	25.9
Property Delinquency Cases	33.5	32.1	21.0	25.2
Per 1,000 Residents, 2003 and 1999[5]				
Property Crimes	53.9	58.0	26.8	37.9
Housing				
Percent Renters	53.2	51.5	29.5	36.8
Percent Tax Delinquent Parcels, 2001	4.8	8.2	2.3	4.0
Percent Vacant	10.4	11.7	5.0	7.4
Value of Residential Housing Parcels, 2001 ($1,000s)	$45.1	$54.1	$133.8	$110.5
Median Age in Years[6]	96	85	49	55
City/County Data				
Unemployment Rate, March 2005[7]	n/a	8.4	n/a	6.4

Note: Data are for year 2000 unless otherwise noted.
[1] Using 2004 population estimates (Medicaid Recipients) and 2003 population estimates (Child Maltreatment) based on 2000 census population to calculate rates; [2] Excludes 1998 data due to problems with data coding; [3] 2002 living HIV and AIDS cases, using 2000 census total population to calculate rates; [4] Based on residence of juvenile; Using 2003 population estimates based on 2000 census to calculate rates [5] 2003 data for Cleveland and SPAs (using 2003 population estimates based on 2000 census),1999 data for All Suburbs and Cuyahoga County (reporting municipalities only, excludes 12 east-side and 7 west-side municipalities); [6] In 2005, based on 2001 Cuyahoga County Auditor Records, [7] Not available at the SPA or All Suburbs level

Sources:

Center for Housing Policy & Research Program, Maxine Goodman Levin College of Urban Affairs, CSU, data from Cuyahoga County Auditor tax billing data files *(Housing: Tax Delinquency, Value of Residential Housing, Median Age)*

Center on Urban Poverty & Social Change, CWRU, using CAN DO, data from:
Cuyahoga County Dept. of Children & Family Services *(Children & Families: Child Maltreatment)*
Cuyahoga County Juvenile Court *(Public Safety 2001: Violent Delinquency, Property Delinquency)*
Cleveland Division of Police *(Public Safety 2001: Property Crimes)*
ODJFS monthly case and individual extract files from CRIS-E *(Socioeconomic Characteristics: Medicaid Recipients)*

Center on Urban Poverty & Social Change, CWRU, data from Cleveland Division of Police; Cuyahoga Regional Information System; FBI Uniform Crime Reports *(Public Safety 2001: Property Crimes for All Suburbs and Cuyahoga County)*

Cleveland Department of Public Health, Office of Biostatistics *(Health: HIV/AIDS Rates)*

Northern Ohio Data and information Services (NODIS), Maxine Goodman Levin College of Urban Affairs, CSU (*Socioeconomic Characteristics: Medicaid Recipients; Children and Families: Child Maltreatment; Public Safety: Violent Delinquency, Property Delinquency, Property Crimes.*

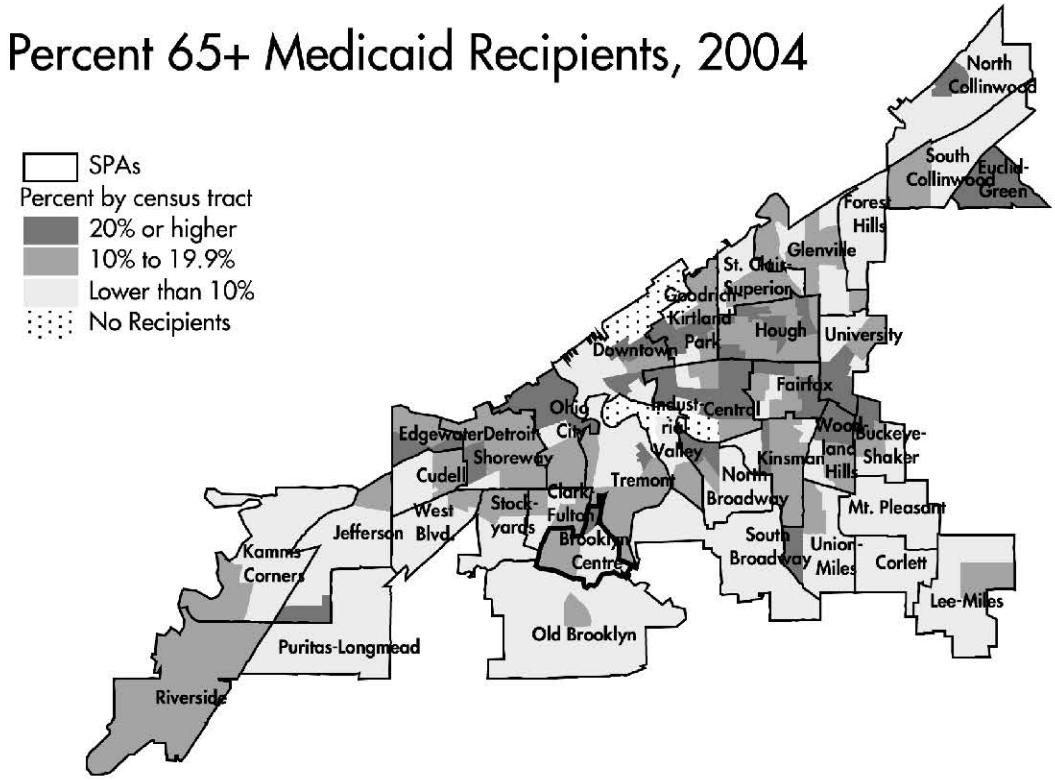
Ohio Dept. of Heath, Office of Vital Statistics, death certificate files *(Health: Infant Deaths, Age-Adjusted Mortality Rates);* birth certificate files *(Children & Families: Births, Teen Births; Health: Low-Weight Births)*

Ohio Dept. of Job and Family Services Website: http://jfs.ohio.gov/ *(City/County Data: Unemployment Rate)*

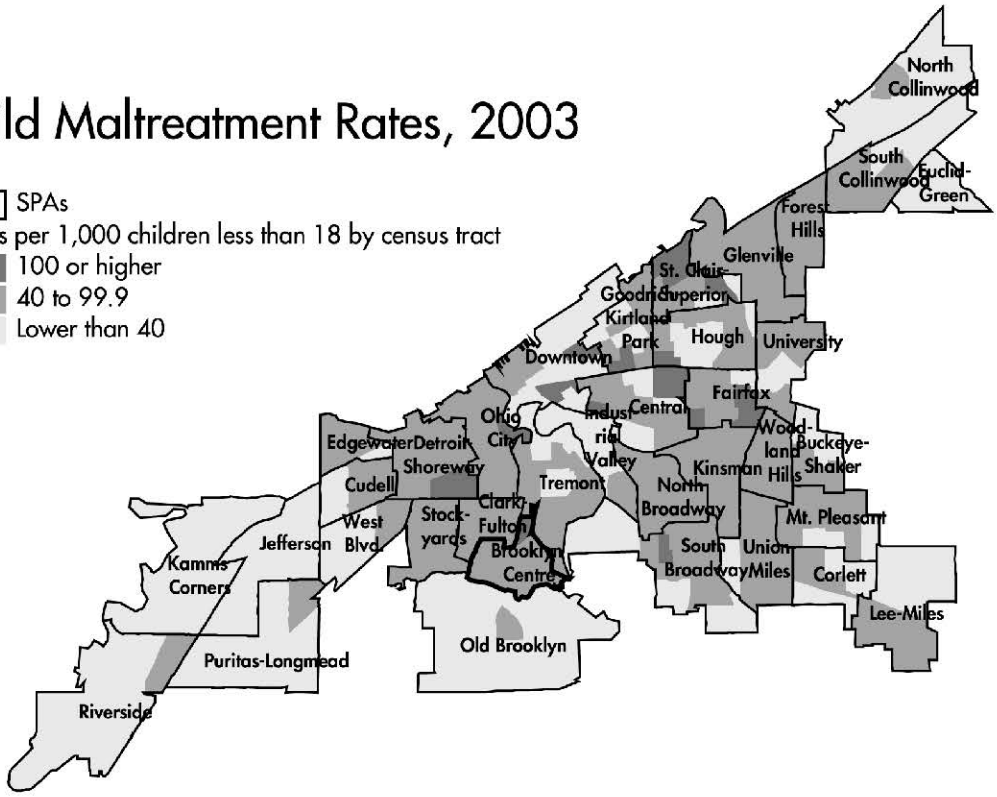
U.S. Census Bureau, Census 2000 Summary File 1, 100-Percent Data *(Community Demographics: All; Socioeconomic Characteristics: Educational Attainment, Civilian Labor Force Rates Ages 16+, Federal Poverty Level, Medicaid Recipients; Children & Families: Birth Rates Females Ages 15-44 and Females Ages 15-17, Child Maltreatment Rates, Female-Headed Families with Children; Health: HIV/AIDS Prevalence Rates, Age-Adjusted Mortality Rates; Housing: Renters, Vacant)*

Cleveland Statistical Planning Areas

Percent 65+ Medicaid Recipients, 2004



Child Maltreatment Rates, 2003



Neighborhood Profile

Old Brooklyn: Gardens and Greenhouses

By [redacted]

Over 200 years ago, Old Brooklyn SPA was known as the hamlet of Brighton, located on a bluff south of the Big Creek Valley at what is now Pearl and Broadview Roads. Farmers came to this area to sell their produce. In 1889, Brighton became South Brooklyn Village, which was annexed to Cleveland in 1905, the same year the Pearl Road streetcar line was extended south across the Big Creek Valley. The area around Schaaf Road was an important market-gardening center for generations. By the 1920s, Old Brooklyn was one of the nation's leading producers of greenhouse vegetables, with over 100 acres under glass. A few greenhouses are still in business there, such as Rosby's and Richardson's.

Brookside Park, located on the northern border of Old Brooklyn's wooded valley, became the permanent home of the Cleveland Zoo in 1916. The Zoo was originally located at Wade Park, but it was displaced by the opening of the Cleveland Museum of Art. Managed by Cleveland MetroParks since 1975, the Zoo is home to 3,000 animals and more than 600 species. The construction of I-71 in the 1960s destroyed a major portion of Brookside Park.

This west-side neighborhood is bordered by Brooklyn Centre and Stockyards SPAs, and the suburbs of Newburgh Heights, Brooklyn Heights, Parma, and Brooklyn. Old Brooklyn is bounded by the Cuyahoga River to the east, Brookpark Road to the south (I- 480 cuts through its southern portion), Ridge Road to the west, and Big Creek Valley to the north.

Old Brooklyn lost 8 percent of its residents since 1980, compared to a loss of twice that in Cleveland overall. Whites comprised 91 percent of Old Brooklyn's residents in 2000, resulting in less racial diversity in this neighborhood than in all suburbs combined, although the percentage of Hispanics was higher. The proportion of persons 65 and over was slightly higher than in Cleveland overall.

Old Brooklyn's socioeconomic, children and families, health, and public safety indicators generally fell between the average city and suburban rates. For instance, this neighborhood's rates for teen births and child maltreatment were half of Cleveland's average rates, yet were double the rates for all suburbs combined.

Old Brooklyn's rates were lower than the suburban average for the percentage of older Medicaid recipients and the rate of juvenile property delinquency cases. However, mortality rates for all causes and all cancers were not far behind Cleveland's averages, and exceeded both the city and suburban averages for heart disease and coronary heart disease. This neighborhood's deaths from heart disease increased from an average of 340 per 100,000 between 1994 and 1998, to an average of 424 per 100,000 between 1997 and 2001.

Of all Cleveland neighborhoods, Old Brooklyn had the fourth highest median family income and the fifth highest value of residential housing in 2000, and the highest percentage of Cleveland's total home improvement loans in 2001. Five percent of housing was vacant in 2000, less than half Cleveland's rate.

More information is available in our Social Indicators series: *Education, Employment, and Income; Children and Families; Community Health; Older Persons; Housing;* and *Public Safety*. The reports are available for free from our Website, www.CommunitySolutions.com, as are previous *Planning & Action* neighborhood profiles. For more information, contact [redacted]

Neighborhood history includes information gathered from NeighborhoodLink, a service of The Center for Neighborhood Development, Maxine Goodman Levin College of Urban Affairs, Cleveland State University (www.nhlink.net) and *The Encyclopedia of Cleveland History,* maintained by Case Western Reserve University (http://ech.cwru.edu).

Maps and tables are on pages 10-13.

[redacted] is a policy and planning associate on The Center for Community Solutions' Research team.

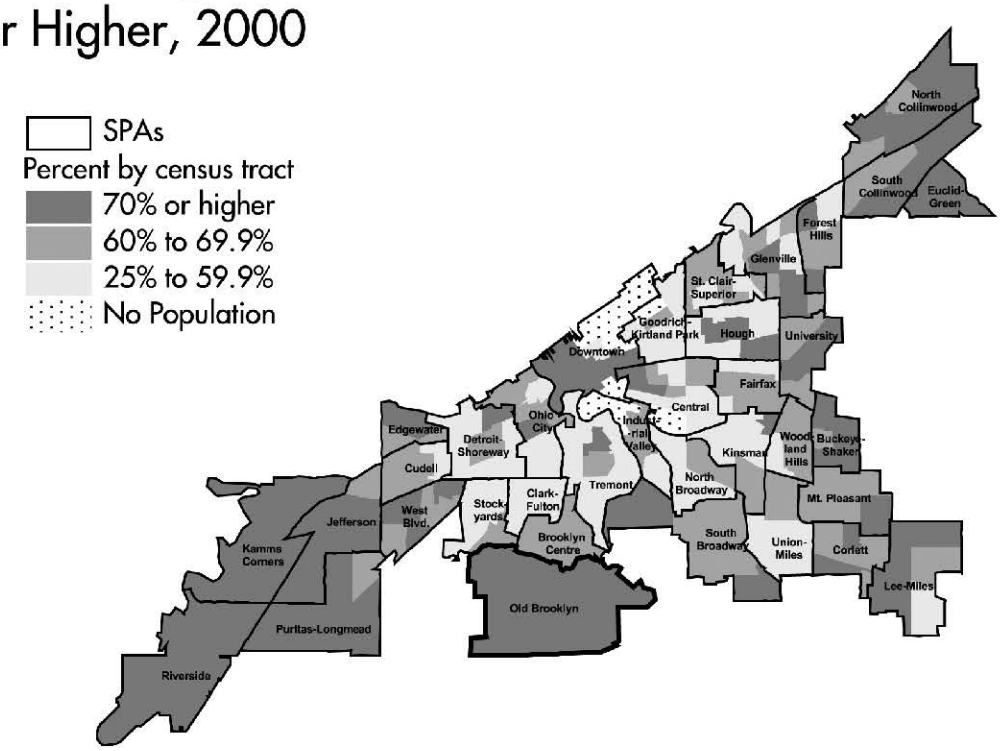
[redacted]

Old Brooklyn Statistical Planning Area Profile with Comparisons to Cleveland, Suburbs, and Cuyahoga County

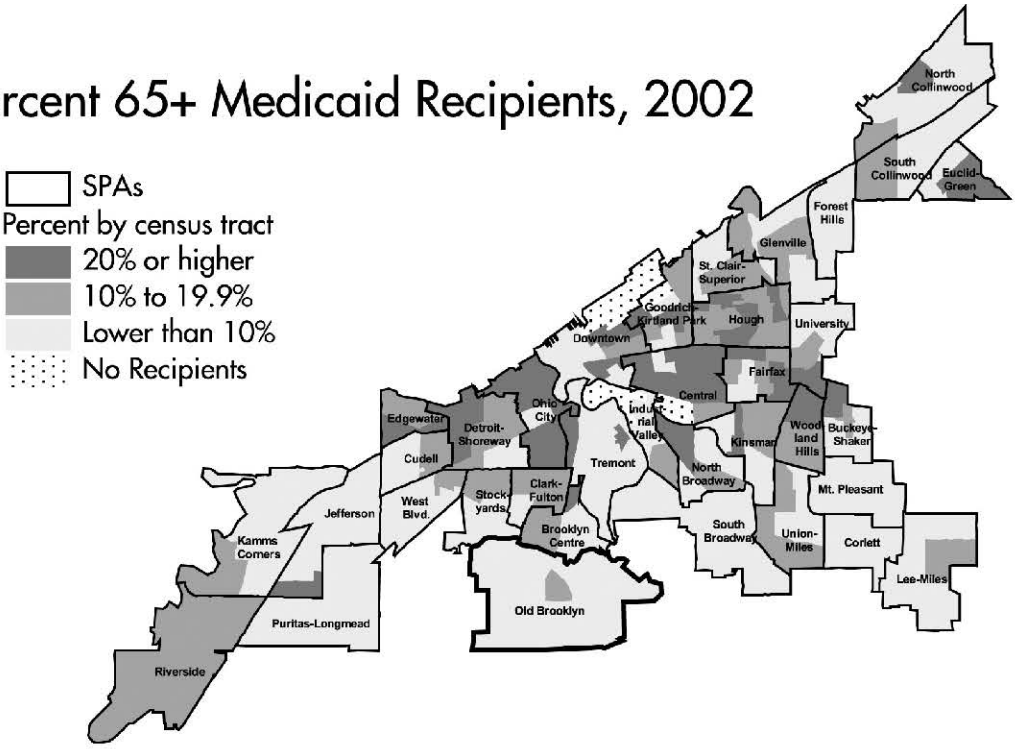
	Old Brooklyn SPA	Cleveland	All Suburbs	Cuyahoga County
Community Demographics				
Population Trends (1,000s)				
1980	37.2	572.8	925.5	1,498.3
1990	35.0	505.6	906.5	1,412.1
2000	34.2	478.4	915.6	1,394.0
Percent Change				
1980 to 1990	-6.1	-11.7	-2.0	-5.8
1990 to 2000	-2.2	-5.4	1.0	-1.3
1980 to 2000	-8.2	-16.5	-1.1	-7.0
Racial Group Percentage Distribution				
One Race				
White	91.4	41.5	80.9	67.4
Black	2.6	51.0	15.1	27.4
Asian	1.2	1.3	2.1	1.8
Other	2.9	3.9	0.5	1.7
Two or More Races	1.9	2.2	1.4	1.7
Percent Hispanic Ethnicity	6.4	7.3	1.3	3.4
Age Group Percentage Distribution				
Less Than Age 18	22.4	28.5	23.1	25.0
Ages 18 to 64	63.1	59.0	59.7	59.5
Age 65 and Over	14.4	12.5	17.2	15.6
Socioeconomic Characteristics				
Educational Attainment Percentages, Population 25 and Over				
High School Graduate or More	78.8	69.0	87.5	81.6
Associate's Degree or More	19.0	15.8	37.2	30.4
Percent in Civilian Labor Force (Age 16 and Over)	64.5	57.3	65.0	62.4
Percent Persons below Federal Poverty Level	11.1	26.3	6.3	13.1
Percent Households Age 65 and Over with Income Less than $15,000	37.0	40.2	22.5	27.6
Percent Medicaid Recipients, October 2002				
Of Total Population	15.3	33.1	9.7	17.7
Of Age 65 and Over Population	4.2	11.0	5.0	6.6
Children and Families				
Births, 1996 to 2001 Average Annual				
To Females Ages 15 to 44	550	8,387	10,548	18,935
Per 1,000 Females Ages 15 to 44	71.3	76.0	55.5	63.1
To Females Ages 15 to 17	14	634	257	891
Per 1,000 Females Ages 15 to 17	30.3	66.1	14.4	32.5
Child Maltreatment Cases, 2001				
Total	194	6,695	2,831	9,526
Per 1,000 Children Less than 18	25.3	49.1	13.4	27.4
Percent Female-Headed Families with Children	24.7	52.3	22.4	33.4

Cleveland Statistical Planning Areas

Percent High School Graduate or Higher, 2000



Percent 65+ Medicaid Recipients, 2002



Old Brooklyn Statistical Planning Area Profile with Comparisons to Cleveland and Cuyahoga County

	Old Brooklyn SPA	Cleveland	All Suburbs	Cuyahoga County
Health				
Low-Weight Births, 1996 to 2001				
Average Annual	42	964	770	1,725
Per 100 Births	7.7	11.5	7.3	9.1
Infant Deaths, 1997 to 2001[1]				
Average Annual	4	109	71	180
Per 1,000 Births	6.8	13.2	6.8	9.6
HIV/AIDS Prevalence per 100,000 Persons, 2002[2]				
Living AIDS Cases	87.8	242.9	55.9	120.1
Living HIV/AIDS Cases	125.8	383.6	78.4	183.1
Age-Adjusted Mortality Rates per 100,000 Persons, 1997 to 2001 Average[1]				
All Causes	1,079.8	1,142.6	830.3	932.2
Heart Disease	424.3	394.8	288.5	322.4
Coronary Heart Disease	329.7	307.9	222.1	249.2
All Cancer	229.4	260.7	205.2	222.5
Public Safety				
Per 100,000 Juveniles Ages 10 to 17, 2001[3]				
Violent Delinquency Cases	2,003	3,851	1,422	2,295
Property Delinquency Cases	1,288	3,491	1,664	2,321
Per 100,000 Residents, 2001 and 1999[4]				
Property Crimes	3,244	5,960	2,680	3,790
Housing				
Percent Renters	34.9	51.5	29.5	36.8
Percent Tax Delinquent Parcels, 2001	2.1	8.2	2.3	4.0
Percent Vacant	5.1	11.7	5.0	7.4
Value of Residential Housing 2001 ($1,000s)	$78.0	$54.1	$133.8	$110.5
Median Age in Years[5]	76	84	48	54
City/County Data				
Unemployment Rate, February 2004[6]	n/a	14.0	n/a	7.6

Note: Data are for year 2000 unless otherwise noted.
[1] Excludes 1998 data due to problems with data coding; [2] 2002 living HIV and AIDS cases, using 2000 census total population to calculate rates; [3] Based on residence of juvenile; [4] 2001 data for Cleveland and SPAs, 1999 data for All Suburbs and Cuyahoga County (reporting municipalities only, excludes 12 east-side and 7 west-side municipalities); [5] In 2004, based on 2001 Cuyahoga County Auditor records; [6] Not available at the SPA or All Suburbs level

Sources:

Center for Housing Policy & Research Program, Maxine Goodman Levin College of Urban Affairs, CSU, data from Cuyahoga County Auditor tax billing data files *(Housing: Tax Delinquency, Value of Residential Housing, Median Age)*

Center on Urban Poverty & Social Change, CWRU, using CAN DO, data from:
Cuyahoga County Dept. of Children & Family Services *(Children & Families: Child Maltreatment)*
Cuyahoga County Juvenile Court *(Public Safety: Violent Delinquency, Property Delinquency)*
Cleveland Division of Police *(Public Safety: Property Crimes)*
ODJFS monthly case and individual extract files from CRIS-E *(Socioeconomic Characteristics: Medicaid Recipients)*

Center on Urban Poverty & Social Change, CWRU, data from Cleveland Division of Police; Cuyahoga Regional Information System; FBI Uniform Crime Reports *(Public Safety: Property Crimes, Cuyahoga County)*

Cleveland Department of Public Health, Office of Biostatistics *(Health: HIV/AIDS Rates)*

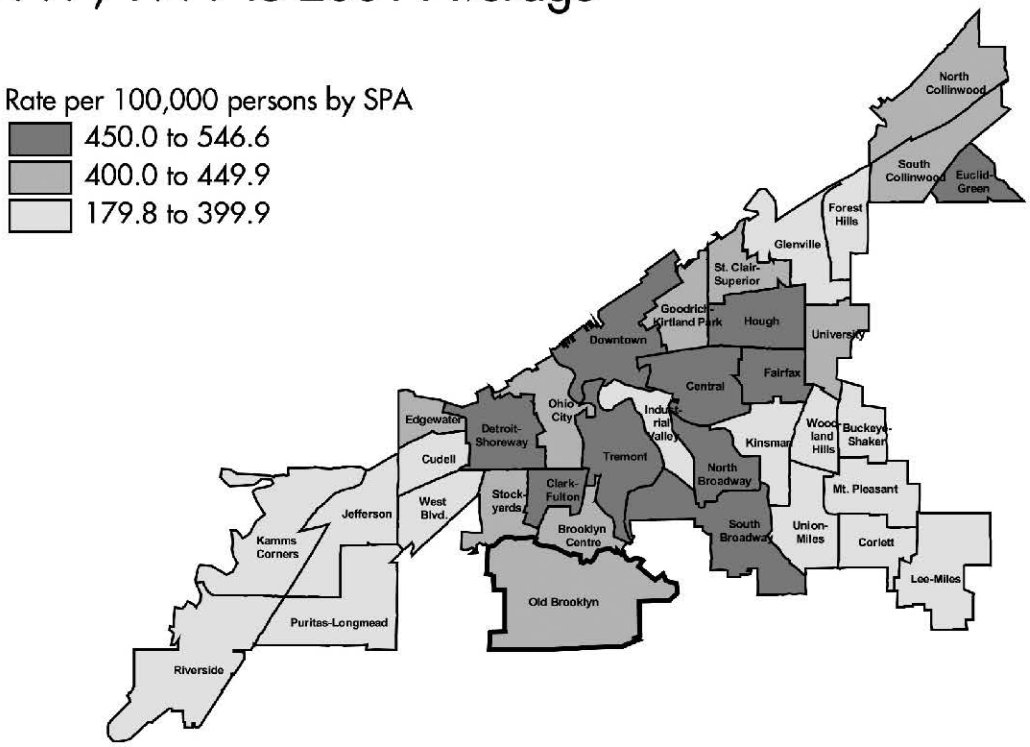
Ohio Dept. of Heath, Office of Vital Statistics, death certificate files *(Health: Infant Deaths, Age-Adjusted Mortality Rates)*; birth certificate files *(Children & Families: Births, Teen Births; Health: Low-Weight Births)*

Ohio Dept. of Job and Family Services Website: www.state.oh.us/odhfs/ *(City/County Data: Unemployment Rate)*

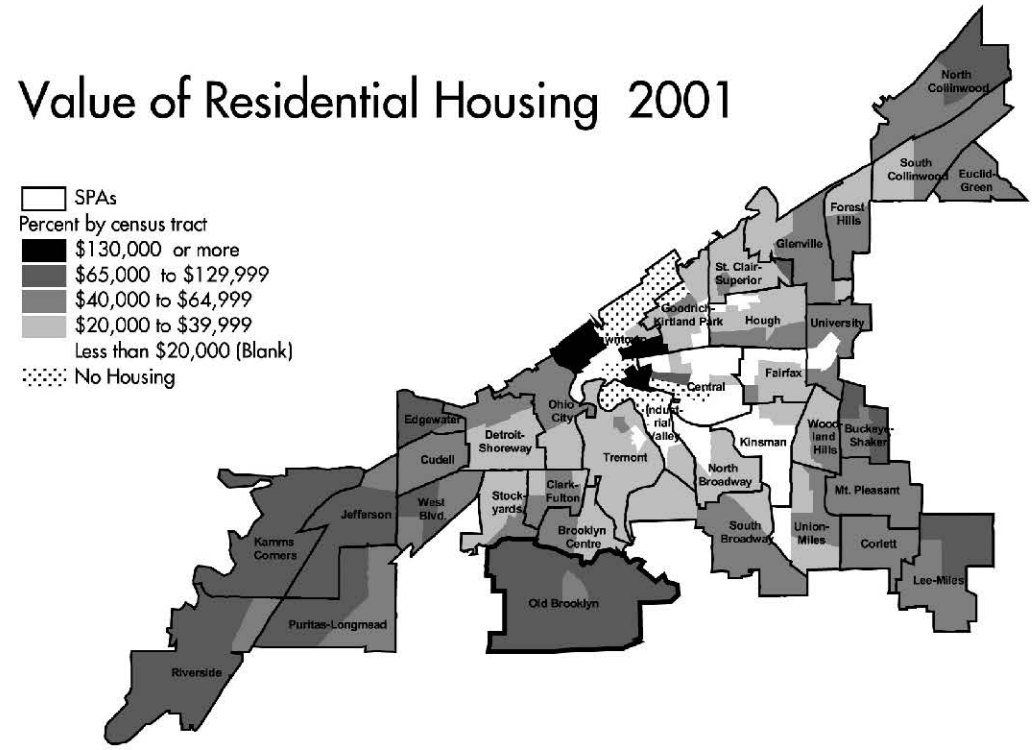
U.S. Census Bureau, Census 2000 Summary File 1, 100-Percent Data *(Community Demographics: All; Socioeconomic Characteristics: Educational Attainment, Civilian Labor Force Rates Ages 16+, Federal Poverty Level, Medicaid Recipients; Children & Families: Birth Rates Females Ages 15-44 and Females Ages 15-17, Child Maltreatment Rates, Female-Headed Families with Children; Health: HIV/AIDS Prevalence Rates, Age-Adjusted Mortality Rates; Housing: Renters, Vacant)*

Cleveland Statistical Planning Areas

Heart Disease Death Rate
1997, 1999 to 2001 Average



Value of Residential Housing 2001



Neighborhood Profile

South Broadway: From Steel Mills to Mill Creek

By [redacted]

South Broadway was originally part of Newburgh Township, one of the earliest settlements in Cuyahoga County. New Englanders first arrived in 1796, attracted to its location on high ground, away from the mosquito-infested Cuyahoga River valley. Also, its proximity to the fast-flowing Mill Creek provided the fresh water and power necessary to support development of the area's first industries. The construction of the Ohio and Erie Canal and the Cleveland and Pittsburgh railroad in the first half of the 19th century led to industrial growth, including the establishment of several steel mills. This, in turn, brought Czech and Polish immigrants seeking jobs. The Poles settled near East 65th and Fleet Avenue, now known as Slavic Village.

South Broadway is a southeast neighborhood with its boundary touching four SPAs (Tremont, Industrial Valley, North Broadway, and Union-Miles) and three suburbs (Newburgh Heights, Cuyahoga Heights, and Garfield Heights). Interstate 77 divides its industrial area to the west and its residential area to the east.

South Broadway reached its peak population in the 1920s. Although there was a 10 percent drop in population between 1980 and 1990, the neighborhood saw a 2.5 percent increase between 1990 and 2000, compared to an overall loss of 5.4 percent in Cleveland. The residents are 76 percent White, 20 percent African-American, and 4 percent Other Race or two or more races.

One in 10 of South Broadway's residents age 25 and older had an Associate's degree or more, lower than Cleveland's 16 percent average and Cuyahoga County's 30 percent average. Nearly half (47.4 percent) of households age 65 and older had incomes of less than $15,000, higher than Cleveland's 40 percent average. Yet the percentage of senior Medicaid recipients was only 4.4 percent, less than half of Cleveland's 10.7 percent average.

Child maltreatment rates in South Broadway were 55 per 1,000 children, higher than Cleveland's average of 49 per 1,000 children. This neighborhood's AIDS/HIV rate was less than half of Cleveland's overall rate, 15.8 and 34.9 per 10,000 persons, respectively. But their heart disease death rate was significantly higher than Cleveland's overall rate.

South Broadway's juvenile and adult property crime rates exceeded Cleveland's averages. Nearly half of the residents rented their homes in 2000. Of those who owned their homes, 16 percent were tax-delinquent in 2000, lower than Cleveland's 18 percent average. Median age of housing is 92 years, 10 years older than Cleveland's median age. But new housing is being built in Mill Creek, one of the largest housing developments in Cleveland. It is located on the site of the former State of Ohio Developmental Center on Turney Road, close to its namesake.

More information is available in our Social Indicators series: *Education, Employment, and Income; Children and Families; Community Health; Older Persons; Housing; and Public Safety.* The reports are available for free from our Website, www.fcp.org, as are previous *Planning & Action* neighborhood profiles. For more information, contact [redacted] Neighborhood history includes information gathered from NHLink, Cleveland Neighborhood Housing Information, www.nhlink.net/neighborhoodtour/. ■

Maps and tables follow on pages 12-15.

[redacted] is a policy and planning associate on the Federation's Research Team.

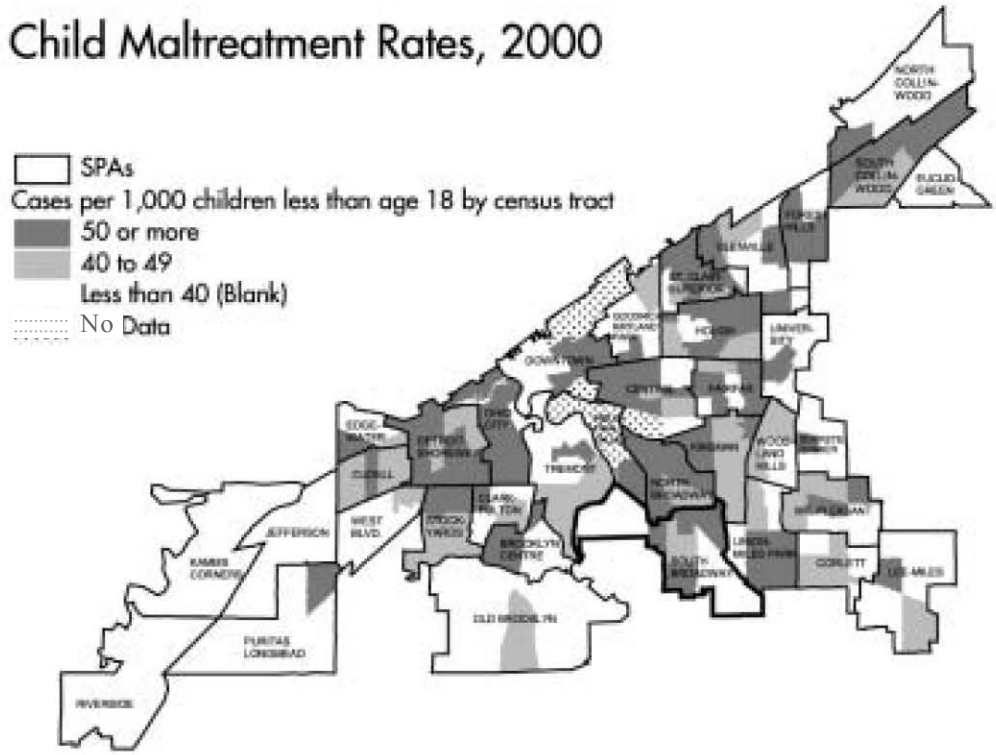
South Broadway Statistical Planning Area Profile with Comparisons to Cleveland and Cuyahoga County

	South Broadway SPA	Cleveland	Cuyahoga County
Community Demographics			
Population Trends (1,000s)			
1980	23.3	572.8	1,498.3
1990	21.0	505.8	1,412.1
2000	21.5	478.4	1,394.0
Percent Change 1980 to 1990	-10.1	-11.7	-5.8
Percent Change 1990 to 2000	2.5	-5.4	-1.3
Racial Group Percentage Distribution			
One Race			
White	75.7	41.5	67.4
Black	20.2	51.0	27.4
Asian	0.3	1.3	1.8
Other	1.5	3.9	1.7
Two or More Races	2.4	2.2	1.7
Percent Hispanic Ethnicity	3.3	7.3	3.4
Age Group Percentage Distribution			
Less Than Age 18	29.2	28.5	25.0
Ages 18 to 64	60.0	59.0	59.5
Age 65 and Older	10.8	12.5	15.6
Average Household Size	2.5	2.5	2.4
Socioeconomic Characteristics			
Educational Attainment Percentages, Population 25 and Older			
High School Graduate or More	66.1	69.0	81.6
Associate's Degree or More	9.5	15.8	30.4
Labor Force Participation Rate	60.9	57.3	62.4
Percent Below Federal Poverty Level	23.4	26.3	13.1
Percent Households Age 65+			
With Income Less Than $15,000	47.4	40.2	27.6
Percent Medicaid Recipients, April 2002			
Of Total Population	31.2	32.2	17.0
Of Age 65 and Older Population	4.4	10.7	6.5
Children and Families			
Births			
To Females Age 15-44	372	8,007	18,841
Per 1,000 Females Age 15-44	75.3	73.5	63.6
Child Maltreatment Cases, 2001			
Total	345	6,695	9,526
Per 1,000 Children Less Than 18	55.0	49.1	27.4
Percent Female Head of Household With Children	21.4	26.5	15.7

CLEVELAND STATISTICAL PLANNING AREAS

Households 65+ with Income Less than $15,000, 2000

Child Maltreatment Rates, 2000



South Broadway Statistical Planning Area Profile with Comparisons to Cleveland and Cuyahoga County

	South Broadway SPA	Cleveland	Cuyahoga County
Health			
Low-Weight Births	46	896	1,701
Low-Weight Births per 100 Births	12	11	9
Infant Deaths	6	105	178
Infant Deaths per 1,000 Births	16	13	9
AIDS/HIV Cases per 10,000 Persons, 2001			
Living AIDS Cases	8.4	21.8	11.2
Living HIV Cases	7.5	13.1	6.5
Total Living AIDS/HIV Cases	15.8	34.9	17.7
Age-Adjusted Mortality Rates per 100,000 Persons, 1994-1998 Averages			
All Causes	1,041	1,056	957
Heart Disease	405*	365	335
Coronary Heart Disease	317	284	260
All Cancer	238	249	231
Public Safety			
Per 1,000 Juveniles Ages 10-17, 1999			
Violent Delinquency Cases	28.2	33.1	21.8
Property Delinquency Cases	42.8	38.7	27.8
Per 1,000 Residents, 1999			
Property Crimes	65.3	57.6	37.9**
Housing			
Percent Renters	48.9	51.5	36.8
Percent Tax Delinquent Parcels	15.7	18.1	9.7
Median Age in Years	92	82	52
City/County Data			
Unemployment Rate, March 2003	n/a***	12.9	6.9

* Significant difference from county at the 95 percent confidence interval.
** Reporting municipalities only (excludes 12 east-side and 7 west-side municipalities).
*** Not available at the SPA level.
Note: Data are for year 2000 unless otherwise stated.

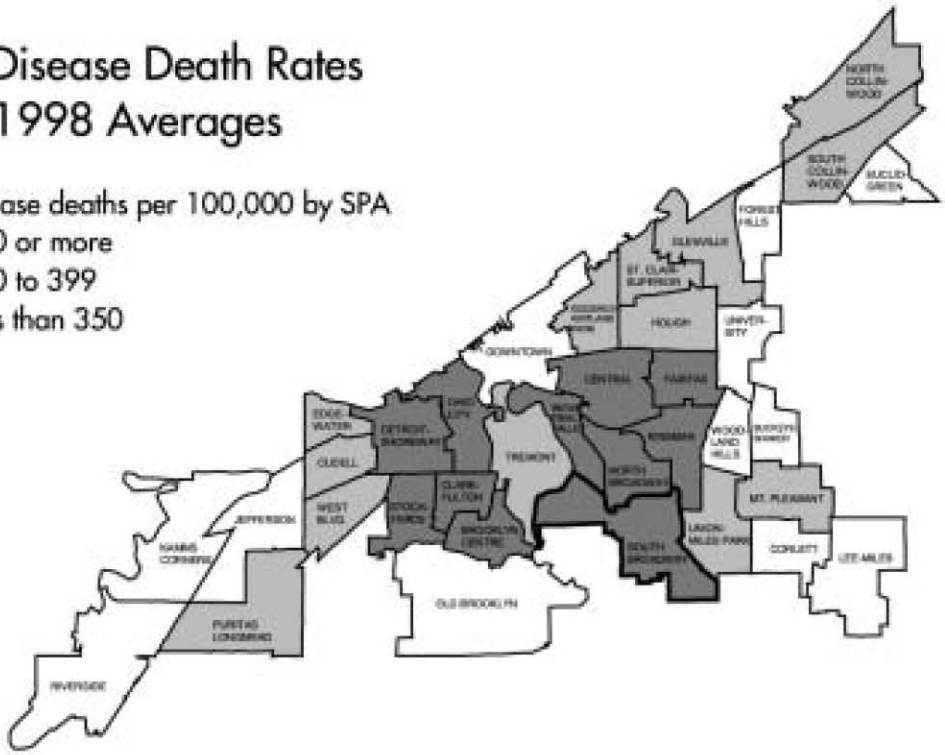
Sources:
Center on Urban Poverty & Social Change, CWRU, using CAN DO, data from:
Cuyahoga County Dept. of Children & Family Services *(Children & Families: Child Maltreatment)*
Cuyahoga County Juvenile Court *(Public Safety: Violent Delinquency, Property Delinquency)*
ODH Vital Statistics Division *(Children & Families: Births; Health: Low-Weight Births, Infant Deaths)*
ODJFS monthly case and individual extract files from CRIS-E *(Socioeconomic Characteristics: Medicaid Recipients)*
Center on Urban Poverty & Social Change, CWRU, data from Cleveland Division of Police; Cuyahoga Regional Information System; FBI Uniform Crime Reports *(Public Safety: Property Crimes)*
Claritas *(Health: Age-Adjusted Mortality Rates)*
Cleveland Department of Public Health, Office of Biostatistics *(Health: AIDS/HIV Rates)*
Levin College of Urban Affairs, CSU, data from Cuyahoga County Auditor tax billing data files *(Housing: Tax Delinquency, Median Age)*
Ohio Dept. of Heath Statistical Analysis Unit, death certificate files *(Health: Age-Adjusted Mortality Rates)*
Ohio Dept. of Job and Family Services Internet Website: www.state.oh.us/odhfs/ *(City/County Data: Unemployment Rate)*
U.S. Census Bureau, Census 2000 Summary File 1, 100-Percent Data (*Community Demographics: All; Socioeconomic Characteristics: Educational Attainment, Federal Poverty Level, Medicaid Recipients; Children & Families: Birth Rates Females Age 15-44, Child Maltreatment Rates, Female Head of Household with Children; Housing: Renters)*
U.S. Census Bureau, Census 2000 Summary File 3, Sample Data (*Socioeconomic Characteristics: Labor Force Participation Rate, Percent Households Age 65+ with income less than $15,000)*

CLEVELAND STATISTICAL PLANNING AREAS

Heart Disease Death Rates 1994-1998 Averages

Heart disease deaths per 100,000 by SPA

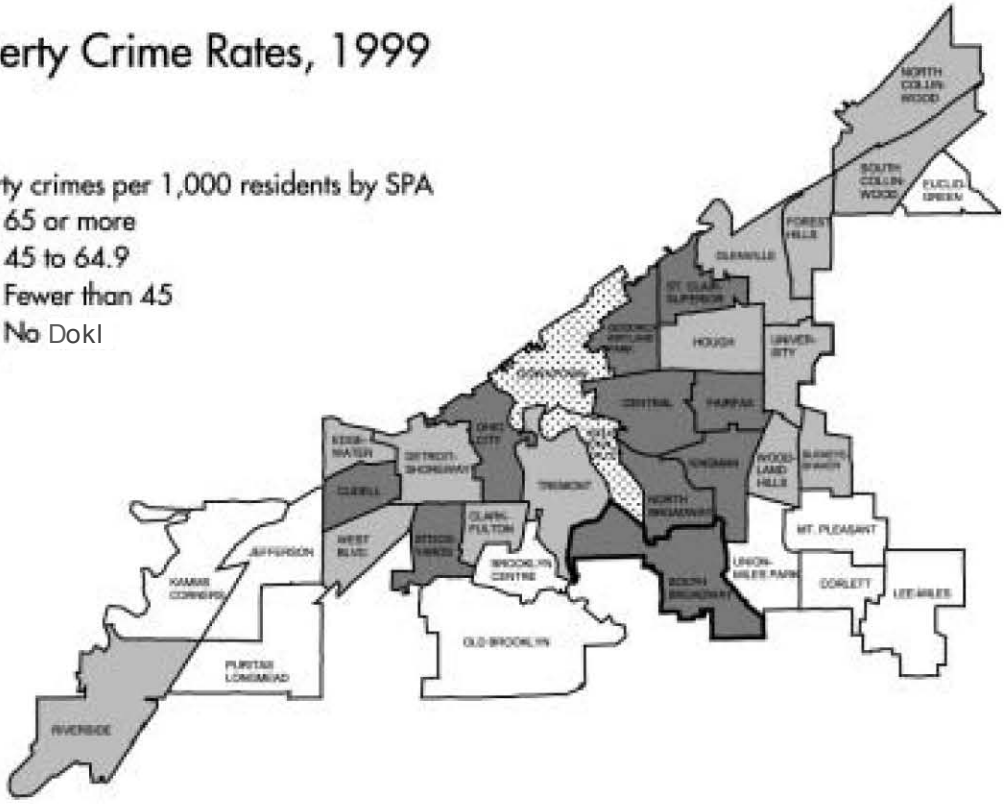
- 400 or more
- 350 to 399
- Less than 350



Property Crime Rates, 1999

Property crimes per 1,000 residents by SPA

- 65 or more
- 45 to 64.9
- Fewer than 45
- No Dokl



Neighborhood Profile

Tremont: In Transition

By [redacted]

Tremont was once known as University Heights, in honor of Cleveland University, the city's first University. Several street names date back to this period, such as Professor Avenue. It was later known as Lincoln Heights, to recognize the two Union Army camps that were located in this neighborhood during the Civil War. Lincoln Park, on West 14th Street, is a reminder of this time. Scenic Cuyahoga River views and the university attracted prosperous residents to Tremont in the latter half of the 19th century. The opening of the central Viaduct in 1888 provided the first direct link across the river to Downtown. This in turn brought Eastern European immigrants seeking housing close to jobs in the fledgling steel industry. Tremont has 25 churches, the largest concentration in Cleveland. The older churches reflect the ethnic diversity of this period.

Tremont is a west side neighborhood that is now isolated from much of the rest of Cleveland by I-71, I-90, I-490, rail lines, and the Cuyahoga River valley. The lower half of this neighborhood, south of Clark Avenue and east of I-71, is mostly heavy industry. Tremont's crooked eastern border is shaped by the Cuyahoga River, with the Industrial Valley on the other side.

In 1920, the area had nearly 36,000 residents, but by 1980, after the highways had been built, it was down to 10,200. A 20 percent decline since then left the area with a population of 8,200 in 2000. The residents are 61 percent White, 20 percent African-American, and 13 percent Other Race; nearly one-fourth claim Hispanic ethnicity. Thirty-eight percent were living below the federal poverty level ($18,104 for a family of four in 2001). Tremont's AIDS/HIV rate is more than double Cleveland's overall rate, 77.2 and 34.9 per 10,000 persons, respectively.

Sixty-eight percent of Tremont residents rent their home. Of those who own their homes, 16 percent were tax-delinquent in 2000, lower than Cleveland's 18 percent average. The median age of housing is 112 years, much older than Cleveland's median age of 82 years. Lately, new housing projects are revitalizing the neighborhood, and the unique mix of architectural styles and proximity to Downtown has attracted young professionals and artists. Tremont is now a destination for entertainment, art, and dining.

More information is available in our Social Indicators series: Children and Families, Community Health, Older Persons, Housing, and Public Safety. The reports are available for free from our Website, www.fcp.org, as are previous *Planning & Action* neighborhood profiles. For more information, contact [redacted] at [redacted] Neighborhood history was gathered from NHLink, Cleveland Neighborhood Housing Information, www.nhlink.net/neighborhoodtour/. ■

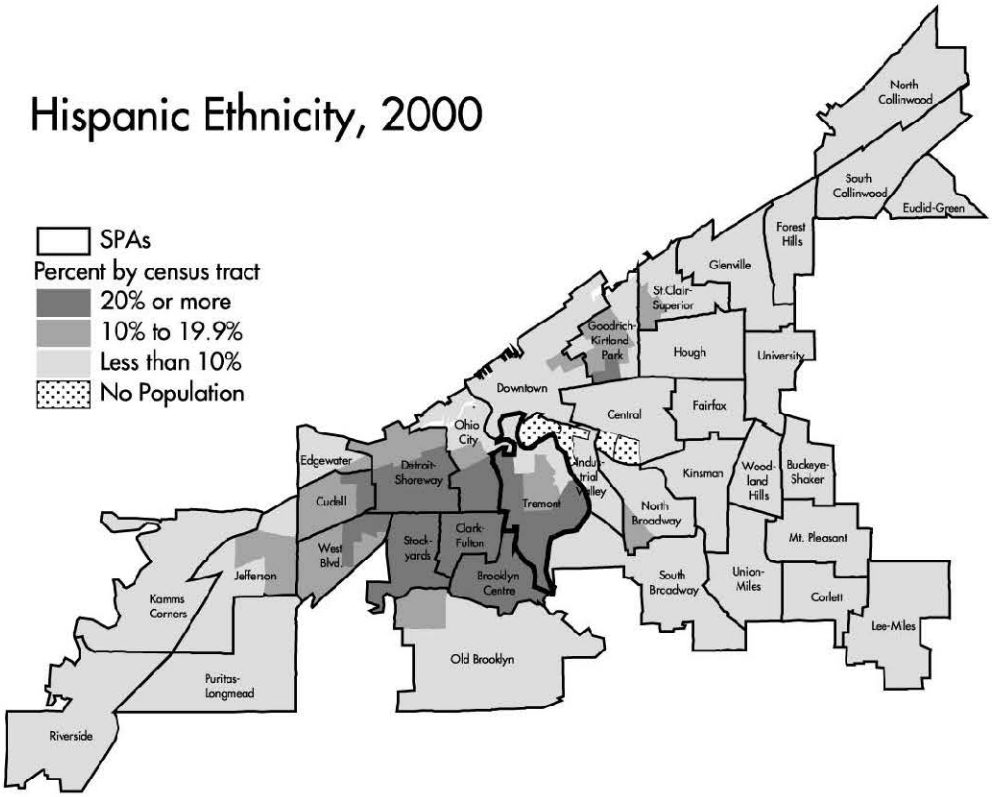
Maps and tables follow on pages 10-13.

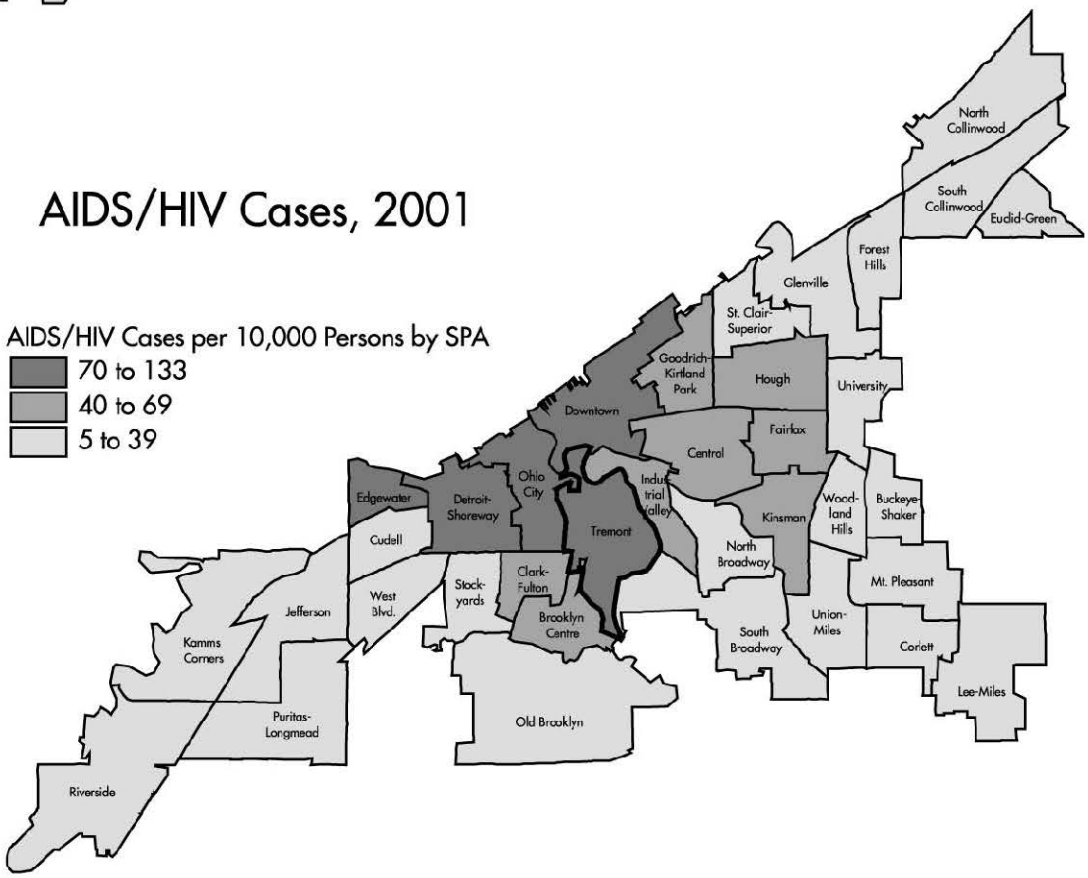
[redacted] is a policy and planning associate on the Federation's Research team.

Tremont Statistical Planning Area Profile with Comparisons to Cleveland and Cuyahoga County

	Tremont SPA	Cleveland	Cuyahoga County
Community Demographics			
Population Trends (1,000s)			
1980	10.2	572.8	1,498.3
1990	8.9	505.8	1,412.1
2000	8.2	478.4	1,394.0
Percent Change 1980 to 1990	-13.2	-11.7	-5.8
Percent Change 1990 to 2000	-7.8	-5.4	-1.3
Racial Group Percentage Distribution			
One Race			
White	61.4	41.5	67.4
Black	19.7	51.0	27.4
Asian	1.2	1.3	1.8
Other	13.2	3.9	1.7
Two or More Races	4.4	2.2	1.7
Percent Hispanic Ethnicity	23.2	7.3	3.4
Age Group Percentage Distribution			
Less Than Age 18	29.5	28.5	25.0
Ages 18 to 64	60.5	59.0	59.5
Age 65 and Older	10.0	12.5	15.6
Average Household Size	2.5	2.5	2.4
Socioeconomic Characteristics			
Educational Attainment Percentages, Population 25 and Older			
High School Graduate or More	60.5	69.0	81.6
Associate's Degree or More	18.6	15.8	30.4
Percent Below Federal Poverty Level	37.6	26.3	13.1
Percent Households Age 65+			
With Income Less Than $15,000	45.8	40.2	27.6
Percent Medicaid Recipients, April 2002			
Of Total Population	40.0	32.2	17.0
Of Age 65 and Older Population	13.2	10.7	6.5
Children and Families			
Births			
To Females Age 15-44	160	8,007	18,841
Per 1,000 Females Age 15-44	85	74	64
Child Maltreatment Cases, 2001			
Total	141	6,695	9,526
Per 1,000 Children Less Than 18	58.7	49.1	27.4
Percent Female Head of Household With Children	23.4	26.5	15.7

CLEVELAND STATISTICAL PLANNING AREAS





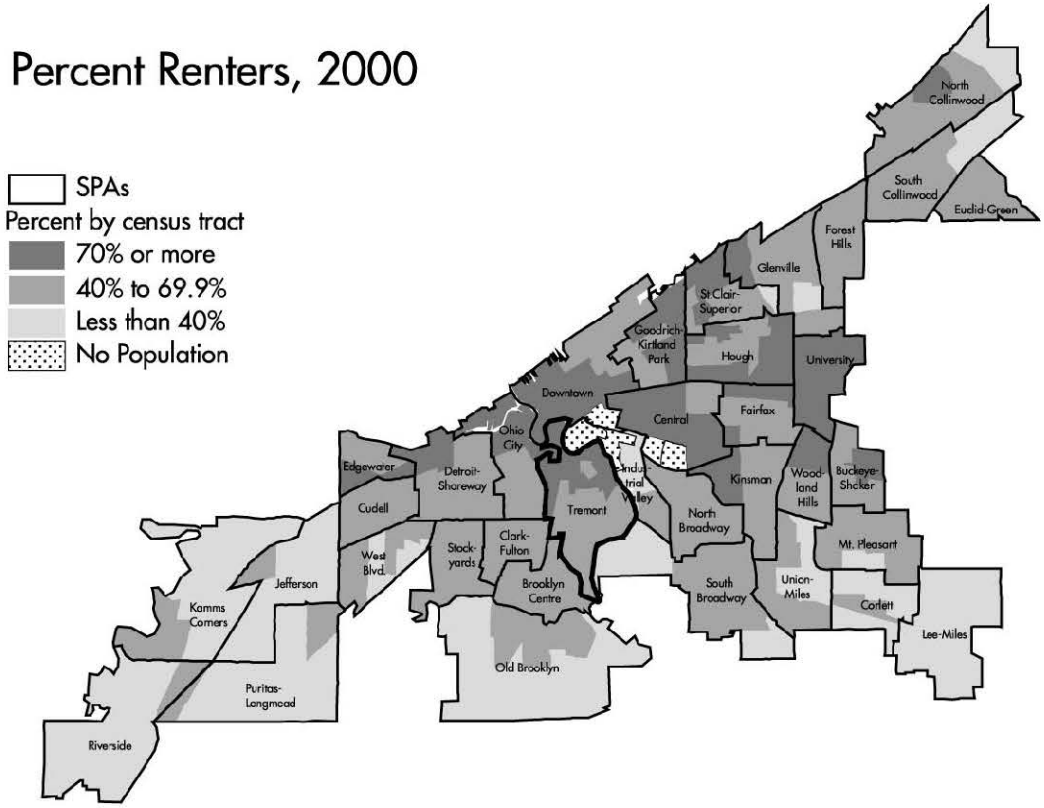
Tremont Statistical Planning Area Profile with Comparisons to Cleveland and Cuyahoga County

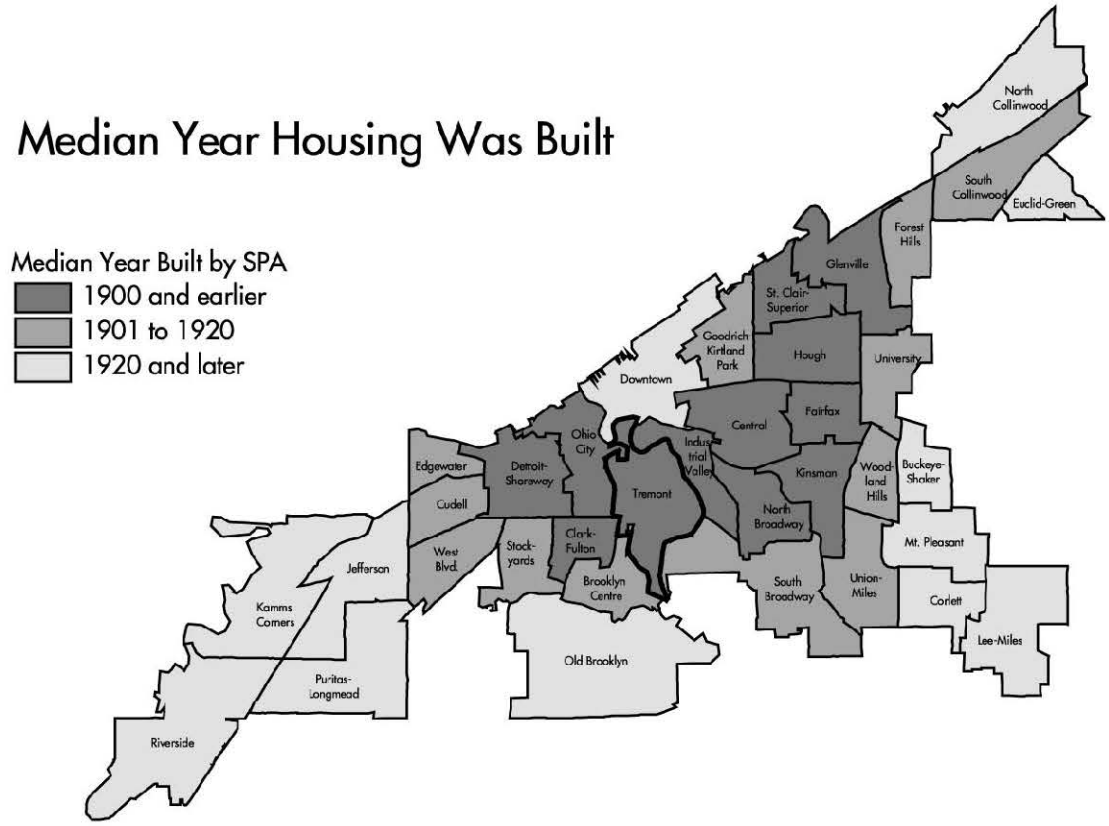
	Tremont SPA	Cleveland	Cuyahoga County
Health			
Low-Weight Births	20	896	1,701
Low-Weight Births per 100 Births	13	11	9
Infant Deaths	4	105	178
Infant Deaths per 1,000 Births	25	13	9
AIDS/HIV Cases per 10,000 Persons, 2001			
Living AIDS Cases	47.8	21.8	11.2
Living HIV Cases	29.4	13.1	6.5
Total Living AIDS/HIV Cases	77.2	34.9	17.7
Age-Adjusted Mortality Rates per 100,000 Persons, 1994-1998 Averages			
All Causes	1,050	1,056	957
Heart Disease	390	365	335
Coronary Heart Disease	304	284	260
All Cancer	202	249	231
Public Safety			
Per 1,000 Juveniles Ages 10-17, 1999			
Violent Delinquency Cases	32.8	33.1	21.8
Property Delinquency Cases	28.7	38.7	27.8
Per 1,000 Residents, 1999			
Property Crimes	60.4	57.6	37.9*
Housing			
Percent Renters	68.0	51.5	36.8
Percent Tax Delinquent Parcels	15.5	18.1	9.7
Median Age in Years	112	82	52
City/County Data			
Unemployment Rate, December, 2002	n/a**	10.4	5.5

* Reporting municipalities only (excludes 12 east-side and 7 west-side municipalities).
** Not available at the SPA level.
Note: Data are for year 2000 unless otherwise stated.

Sources:
Center on Urban Poverty & Social Change, CWRU, using CAN DO, data from:
Cuyahoga County Dept. of Children & Family Services (Children & Families: Child Maltreatment)
Cuyahoga County Juvenile Court (Public Safety: Violent Delinquency, Property Delinquency)
ODH Vital Statistics Division (Children & Families: Births; Health: Low-Weight Births, Infant Deaths)
ODJFS monthly case and individual extract files from CRIS-E (Socioeconomic Characteristics: Medicaid Recipients)
Center on Urban Poverty & Social Change, CWRU, data from Cleveland Division of Police; Cuyahoga Regional Information System; FBI Uniform Crime Reports (Public Safety: Property Crimes)
Claritas (Health: Age-Adjusted Mortality Rates)
Cleveland Department of Public Health, Office of Biostatistics (Health: AIDS/HIV Rates)
Levin College of Urban Affairs, CSU, data from Cuyahoga County Auditor tax billing data files (Housing: Tax Delinquency, Median Age)
Ohio Dept. of Heath Statistical Analysis Unit, death certificate files (Health: Age-Adjusted Mortality Rates)
Ohio Dept. of Job and Family Services Internet Website: www.state.oh.us/odhfs/ (City/County Data: Unemployment Rate)
U.S. Census Bureau, Census 2000 Summary File 1, 100-Percent Data (Community Demographics: All; Socioeconomic Characteristics: *Educational Attainment, Federal Poverty Level, Medicaid Recipients; Children & Families: Birth Rates Females Age 15-44, Child Maltreatment Rates, Female Head of Household with Children; Housing: Renters)*

CLEVELAND STATISTICAL PLANNING AREAS





Connecting Cleveland
2020 Citywide Plan[1]

The Connecting Cleveland 2020 Citywide Plan is the comprehensive plan for the future of Cleveland and its neighborhoods. It seeks to create great neighborhoods by creating "connections" between people and places and opportunities.

Creating connections means more than developing buildings. It means developing people and developing communities as well. It means linking the "physical" and the "social" in order to create a community that is truly viable and sustainable.

The *Connecting Cleveland 2020 Citywide Plan* proposes not only to build houses but to build neighborhoods - vibrant neighborhoods, safe neighborhoods. It is a plan that proposes not only to create shopping centers but to create mixed-use "town centers" that can become the focus of community life. And it is a plan that proposes not only to create jobs but to make job opportunities available to all Clevelanders.

The *Connecting Cleveland 2020 Citywide Plan* lays out a practical vision to achieve its goals through a strategy that builds on the city's unique assets and the assets in each of its diverse neighborhoods.
The *Connecting Cleveland 2020 Citywide Plan* replaces the *Cleveland Civic Vision 2000 Citywide Plan* as Cleveland's adopted "general plan." It was prepared through a process that engaged thousands of Clevelanders in community meetings and focus groups. The plan is also part of a broader initiative that incorporates plans for Cleveland's waterfront and downtown.

Cleveland 2020...

…a national leader in biomedical technology and information technology - with connections to the Cleveland Clinic, University Hospitals, Case Western Reserve University, NASA and other world-class innovators

...a center for advanced manufacturing - a national model for connecting new technologies to traditional industries

...a community with connections to good jobs for all residents and connections to the education and training demanded by those jobs

...a city with an accessible lakefront and riverfront, connected to waterfront neighborhoods and unique recreation opportunities

...a city of vibrant urban neighborhoods, with mixed-use districts and live-work spaces that attract creative and entrepreneurial people from across the region and the nation

…a community where racial, ethnic and social diversity is not simply tolerated but is embraced and celebrated in every neighborhood as one of Cleveland's greatest assets

…a city known for safe neighborhoods that are family-friendly and senior friendly, connecting all residents to the conveniences of urban living

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[1] A reproduction of the text from the Connecting Cleveland 2020 Citywide Plan has been included to allow for accessibility purposes. The original version of the Connecting Cleveland 2020 Citywide Plan follows this text.

…a mecca for the arts and culture, with world-renowned institutions like the Cleveland Orchestra and the Cleveland Museum of Art joined by a vital local arts scene and public art in neighborhoods throughout the city

…a model for healthy living, with walkable neighborhoods, bike routes, ecological design, and community partnerships to provide recreation opportunities to Clevelanders of all ages, incomes, and ability levels

...a pioneer in improving public education through partnerships to provide resources based on the needs of students rather than the wealth of communities

The Connecting 2020 Citywide Plan presents this vision of Cleveland's future, along with the actions that can be taken today to ensure that the vision will become reality.

The *Connecting Cleveland* 2020 *Citywide Plan* is more than a vision for Cleveland's future. It is also a "kit of tools" for use in implementing the plan, this year, next year and each year during the life of the plan. Among the plan's tools are:

- a future land use map that sets a pattern for development throughout the city
- recommendations for updates to the City's zoning map and zoning code
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- proposals for development of contemporary shopping centers and industrial and office parks
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- policy recommendations for an array of new and updated programs for development and community services.

connecting people and places

The *Connecting Cleveland 2020* Citywide Plan is a plan about connections between people and places and opportunities. A great city is not merely a collection of buildings. It is a place of connections. At its simplest a connection can be a bike path that connects a neighborhood to the waterfront or a bus line that connects people to jobs. At its most fundamental, a connection can be a shared space - an urban plaza, a neighborhood park, a community institution or even a coffee shop - that connects people to one another in a way that creates a sense of "place" and a sense of belonging - that elusive but enduring thing that we call "community."

Other connections link people to the diverse opportunities available in a city - opportunities that for some city residents are so close but yet have remained just out of reach. These are connections to education, social services, jobs, health care, shopping, entertainment, the arts and culture.
Finally, in an economy that is increasingly regional and global, there are the ever-more important connections between the neighborhood, the city, the region and the world.

building on assets

Great neighborhoods and great cities are vibrant places that draw people to them because of the wonderful things they have to offer - because of their "assets."

Cleveland has assets that make it the envy of cities everywhere - from its location on a "great lake," to its unparalleled national transportation access, to its world-renowned cultural, medical and educational institutions.

Every neighborhood in Cleveland has its unique assets as well. Some of these assets are readily apparent, like the West Side Market in Ohio City, Karamu House in Fairfax, or the family-oriented housing in neighborhoods like Lee-Harvard and Kamm's Corners. Other assets are somewhat hidden - overlooked even by many local residents - and need to be enhanced and publicized, like League Park in Hough or the Big Creek Valley in Old Brooklyn.

The Connecting Cleveland 2020 Citywide Plan is an "asset-based" plan that seeks to build on the unique assets of Cleveland and each of its neighborhoods as the foundation for renewed growth and prosperity.

regenerating land & buildings

Almost any Clevelander can see the city's challenges. The *Connecting Cleveland 2020 Citywide* Plan asks Clevelanders to look beyond the challenges, to view the city and its neighborhoods through a new lens, bringing into focus the incredible opportunities for rebirth that are now blurred by the shadow of the city's challenges. "Cleveland re-imagined" can be a city where challenges have been transformed into opportunities.

- Contaminated “brownfield” sites can become opportunities for contemporary large-scale redevelopment.
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re-imagining places

More and more Americans are tiring of “sprawl.” They are tired of living in communities with so little character that it is difficult to distinguish one from another. They are tired of living in communities where there is nowhere to walk. Many long for the time when neighbors gathered together at town centers - shopping, working, learning, playing, praying and living, as members of a community.

Ironically, developers are now trying to recreate the traditional urban town center in the midst of freeway-dominated suburbs. Although these developments succeed in some respects, they also testify to the fact that "there's nothing like the real thing!" Cleveland has the real thing - architecturally distinctive, walkable, mixed-use "places" that grew organically from roots that tap deep into the lifeblood of the city.

The *Connecting Cleveland 2020 Citywide Plan* advocates that Cleveland enhance these mixed-use urban districts - connecting them to public transit and bikeways - and preserve their distinctive architecture as its principal strategy for creating competitive places in every city neighborhood.

creating communities of choice

With each passing year people are becoming more mobile. Technology and income have freed many Americans, particularly the most talented and best educated, to "leave home" and follow their desires to places that offer what they seek in employment and lifestyle. "Communities of choice" for these individuals have replaced "communities of necessity."

The *Connecting Cleveland 2020 Citywide Plan* recognizes that if Cleveland is to grow and prosper in the 21st century, Cleveland must "reverse the brain drain" and become competitive in attracting and retaining the mobile individual. Cleveland and its neighborhoods must become communities of choice.

Just as important to Cleveland's future, however; is providing more choices for those Clevelanders who today have too few choices. This was the "mantra" of Cleveland's groundbreaking 1975 Policy Planning Report. Sadly, twenty years later, the need is just as great. Far too many Clevelanders remain trapped in "communities of necessity" - trapped by poverty, unemployment, discrimination, disability and inadequate education. The *Connecting Cleveland 2020 Citywide Plan* recognizes that Cleveland will never achieve true greatness until all Clevelanders are able to live in "communities of choice."

celebrating Cleveland's diversity

Recent statistics show that America's most prosperous cities are those that attract talented individuals of all races, nationalities and lifestyles. These are cities where diversity is welcomed and celebrated. Cleveland is a city with a rich history of diversity. *The Connecting Cleveland 2020 Citywide Plan* proposes that Cleveland fully embrace its diversity, cultivate it, nurture it and market it as a key element of its revitalization strategy.

Cleveland also offers a tremendous diversity of housing types, from single-family to townhouse to "live-work" to high-rise apartments. While many families with children seek opportunities to own single-family houses, many young professionals and seniors are seeking quality rental housing. As the central city of a major metropolitan area, Cleveland can offer the diversity of housing necessary to be truly competitive in attracting all segments of the population.

Finally, Cleveland's size enables it to offer a diversity of opportunities for employment, education, worship, recreation shopping and culture. Cleveland's challenge is to make these opportunities available to the all segments of its diverse population, regardless of race, nationality, income, age *or* disability.

building for today and tomorrow

The *Connecting Cleveland* 2020 *Citywide Plan* seeks to recreate Cleveland as a city that meets the needs of the present without compromising the ability of future generations to meet their own needs. In other words, the plan seeks to create a “sustainable" Cleveland.

A sustainable Cleveland is a city that conserves natural resources so that they are plentiful in the future. A sustainable Cleveland is a city that provides educational and employment opportunities to current

residents in order to ensure economic prosperity for future generations. A sustainable Cleveland is city that provides opportunities for healthful living to all citizens.

The *Connecting Cleveland* 2020 *Citywide Plan* proposes to achieve its goals for sustainability through actions such as the following:

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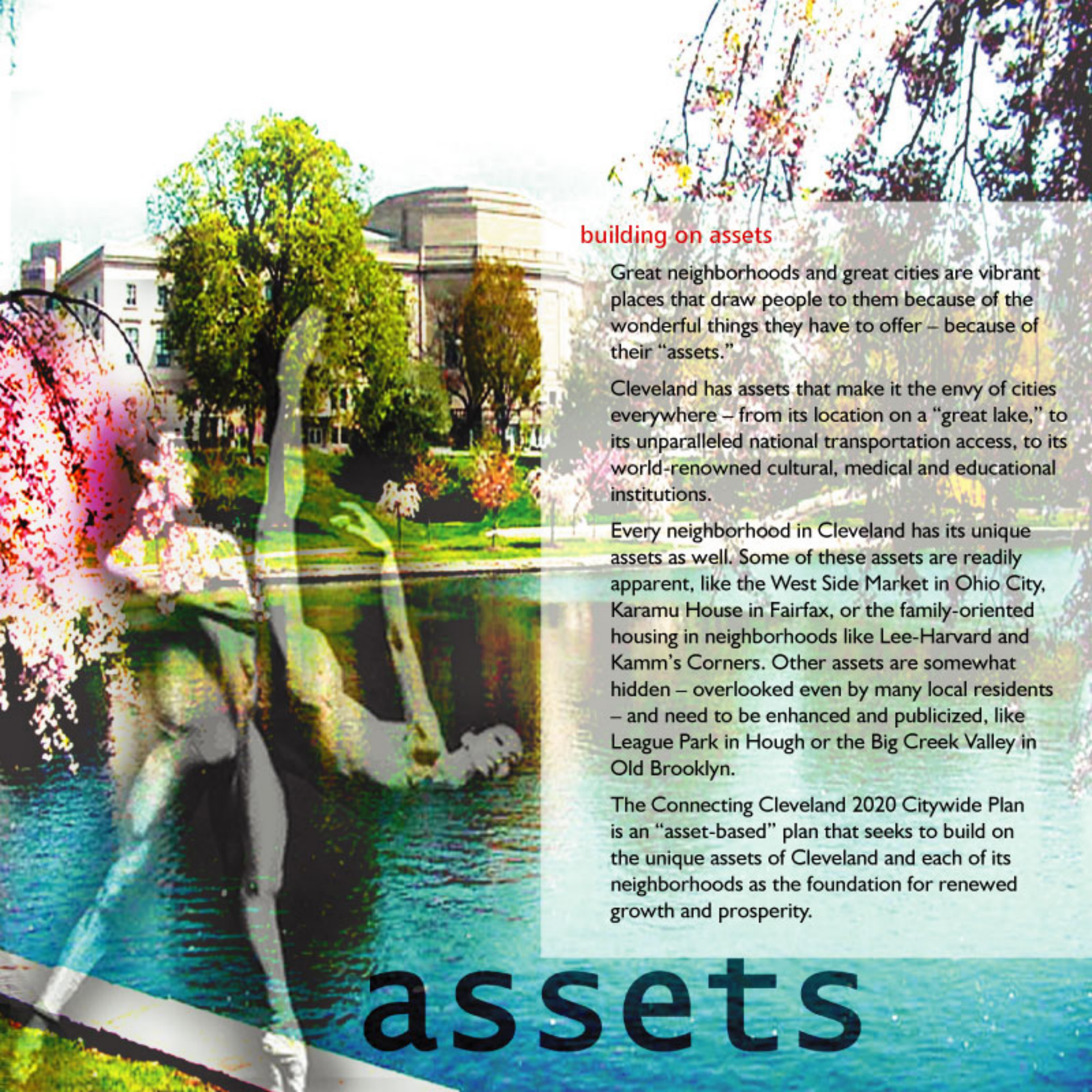

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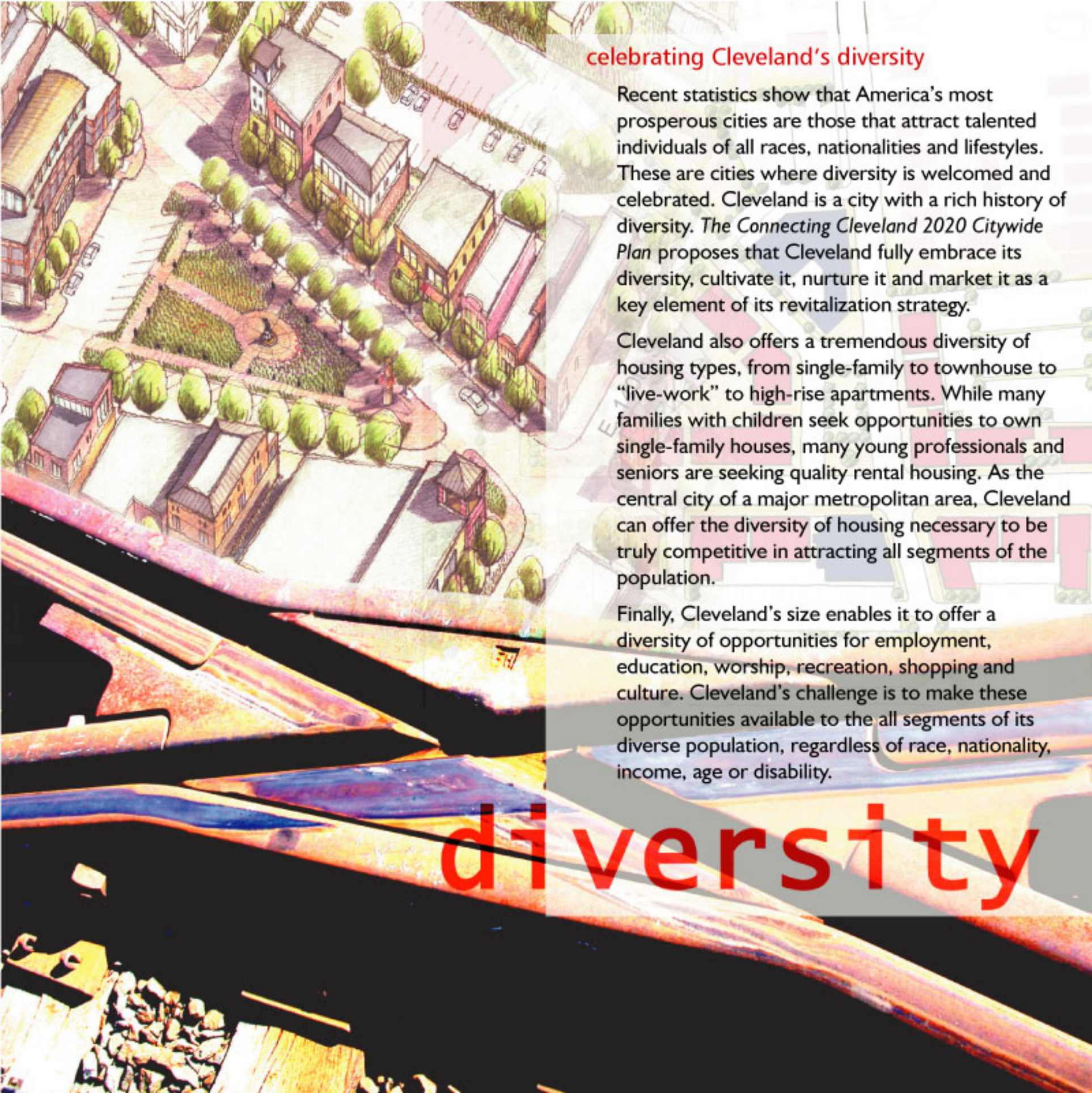

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diversity

sustainability

building for today and tomorrow

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Figure 7-1. City of Cleveland Planning Commission GIS - Current Land Use

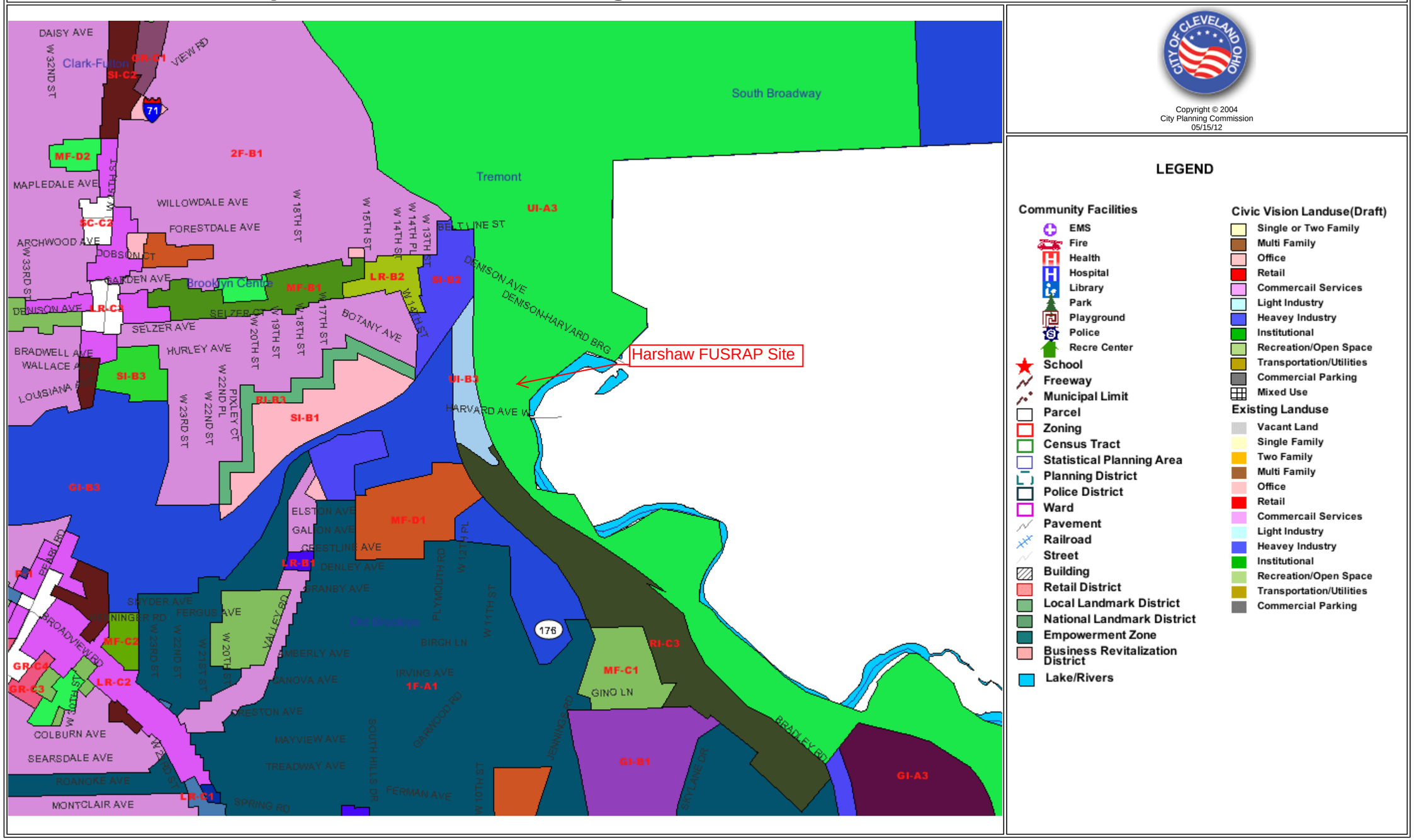
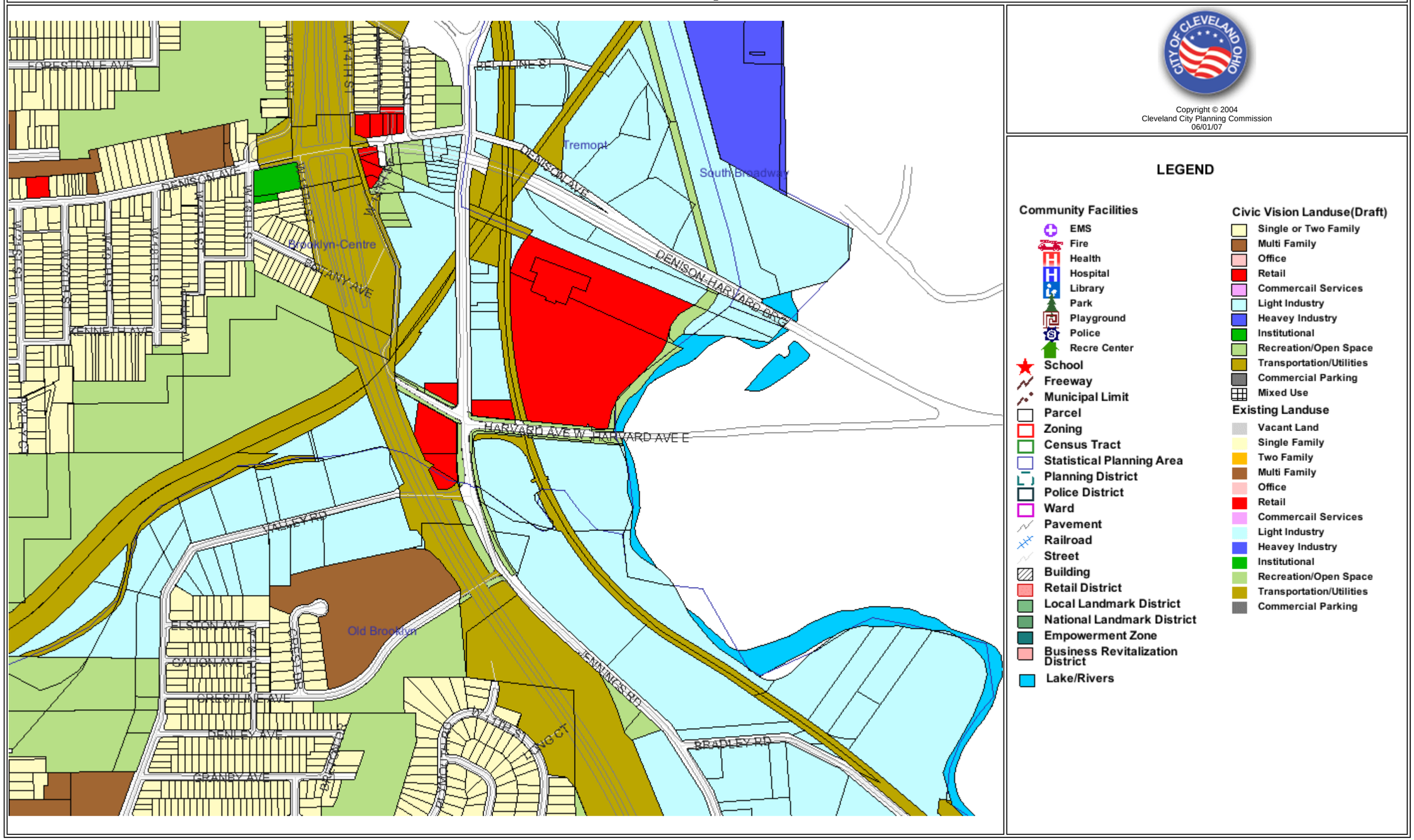


Figure 7-2. **Harshaw FUSRAP Proposed 2020 Land Use**



Village of Cuyahoga Heights

Master Plan

June, 2002

Revised December, 2007

Prepared by the Cuyahoga County Planning Commission

VILLAGE OF CUYAHOGA HEIGHTS
MASTER PLAN COMMITTEE

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Revised December, 2007
(Chapter 7, Focus Area 6, as outlined in
Village Council Resolution 2006-142, effective August 9, 2006)

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VILLAGE OF CUYAHOGA HEIGHTS
MASTER PLAN

June, 2002

Revised December, 2007
(Chapter 7, Focus Area 6, as outlined in
Village Council Resolution 2006-142, effective August 9, 2006)

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CHAPTER ONE

STRATEGIC PLANNING GOALS AND PRIORITIES

INTRODUCTION

One of the most important elements in the development of a master plan is the formulation of community goals. Goals are broadly worded statements that express a vision of what a community desires to be in both the short-term and long-term. The goals act as a guide for future decision making, providing broad direction to the Village Council, which is responsible for adopting land use controls such as zoning regulations; the Planning Commission, which administers the planning and zoning regulations; and the courts, which must judge the fairness and reasonableness of the regulations. In addition, the goals are a method through which the private sector, such as landowners, developers and business owners, can know the intentions of the Village and be guided accordingly.

Based upon the input received from Master Plan Committee members at a meeting on May 31, 2001, a series of five categories of community goals have been drafted. These goals, along with more detailed community planning objectives and policies, will be incorporated into various sections of the master plan.

These goals should be carefully reviewed by the elected officials of Cuyahoga Heights and the community-at-large. Understanding the goals and arriving at a general agreement now will greatly assist Cuyahoga Heights in guiding later sections of this project, such as exploring options for future development.

ECONOMIC DEVELOPMENT

- ✓ Broaden the industrial base of the Village.
- ✓ Revitalize or replace existing industrial facilities that are currently underutilized or vacant, including environmental remediation as needed.
- ✓ Diversify economic activity in the Village by encouraging, at appropriate locations, uses such as offices, research space, and flex-space.
- ✓ Enhance the economic opportunities available in the vicinity of the Grant Avenue and Harvard Avenue interchanges of I-77.
- ✓ Promote the locational advantages and business opportunities of Cuyahoga Heights with respect to proximity to downtown Cleveland, University Circle, Cleveland Hopkins International Airport, the Cuyahoga Valley National Park, and Cleveland Metroparks' Ohio & Erie Canal Reservation.
- ✓ Identify and address the land use and traffic issues of East 49th Street south of the railroad bridge.
- ✓ Identify modifications to the current Village Planning and Zoning Code regulations, including use districts and supplemental regulations such as signage, parking, landscaping, buffers, riparian zones, and hillside protection to accomplish the planning goals.
- ✓ Identify modifications to the current Village Zoning Map to accomplish the planning goals.

HOUSING

- ✓ Analyze the potential of creating new housing options to serve specific portions of the population of the Village, such as families with children, empty nesters, and senior citizens.
- ✓ Ensure that homeowners and landlords are able to keep their residential properties in good condition.
- ✓ Maintain and improve the homeownership rate in the Village.

RECREATION

- ✓ Provide park and recreational opportunities to meet the needs of residents.

ENVIRONMENTALLY SENSITIVE AREAS

- ✓ Protect environmentally sensitive areas such as steep slopes, wetlands, watercourses, and floodplains from inappropriate alterations or development.
- ✓ Ensure that new development does not have a negative environmental impact such as flooding or erosion.

PUBLIC FACILITIES

- ✓ Ensure that a high level of Village services are maintained, and facilitate the delivery of these services, when appropriate, through the renovation, expansion, or relocation of facilities.

CHAPTER TWO

DEMOGRAPHICS

INTRODUCTION

Demographic analysis is an essential part of a comprehensive plan for a community. Identification of the current demographic and socio-economic characteristics occurring in the Village of Cuyahoga Heights, communities surrounding Cuyahoga Heights, and the Cleveland metropolitan region are vital, both for understanding the community and providing information that can be utilized for making policy decisions.

This chapter provides a profile of Cuyahoga Heights, examining information such as population and housing characteristics, educational attainment, school enrollment, income statistics, and employment characteristics. Past trends for selected data are included where applicable. For comparison purposes, data is also presented for Cuyahoga County and the nearby communities of Brooklyn Heights, Garfield Heights, Independence, Newburgh Heights, and Valley View.

LOCATION

The Village of Cuyahoga Heights is located in the southcentral portion of Cuyahoga County, approximately six miles from downtown Cleveland (***Map 2-1***). The Village is bounded on the north by Newburgh Heights and Cleveland, on the east by Cleveland and Garfield Heights, on the south by Independence and Valley View, and on the west by Brooklyn Heights and Cleveland.

Cuyahoga Heights has excellent access to major arterial roads, interstate highways, and airports. The main north-south streets through Cuyahoga Heights are Canal Road, East 49th Street, and East 71st Street. The main east-west streets are Grant Avenue and Harvard Avenue. Interstate 77 access is available directly at the Harvard Avenue and Grant Avenue interchanges, as well as the northbound ramp at the base of East 71st Street. Interstate 480 access is available at Rockside Road, which is about two miles from Grant Avenue.

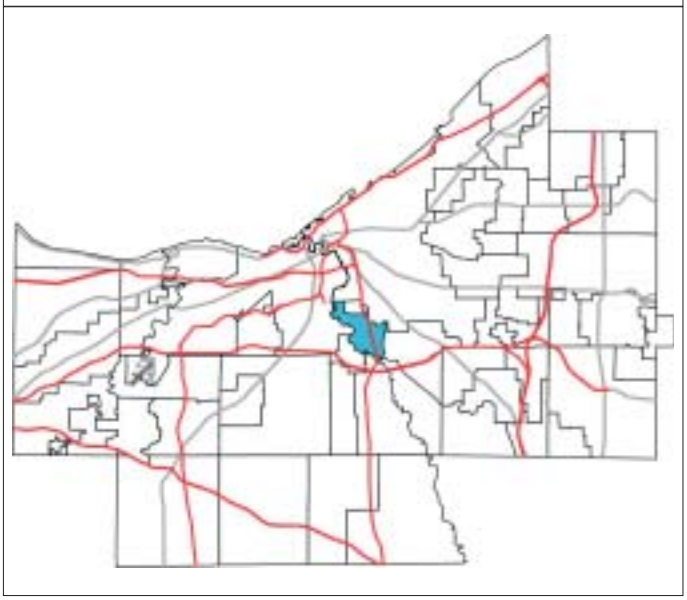
From the Grant Avenue interchange of I-77, it is approximately twelve miles to the Ohio Turnpike and approximately thirteen miles to Cleveland Hopkins International Airport, with almost the entire route via interstate highways.

HOUSEHOLD AND POPULATION CHARACTERISTICS

Population Change

Cuyahoga Heights has always had a relatively small population, reaching its peak population of 866 in 1970. By 2000, the population had declined 30% to 599. The current population of about 600 is slightly less than the population of the Village in 1940 (***Appendix 2-A***). The situation of having a lower population in 2000 than in 1970 is also shared by the surrounding communities of Garfield Heights and Newburgh Heights, as well as Cuyahoga County. These declines are a reflection of the national pattern of smaller family sizes, as well as an increase in the number of one-person households due to changes in marriage/divorce patterns and longer life spans. These factors contribute to the overall loss of population in a community, even though the number of households may remain stable or actually increase.

Map 2-1, Community Map, Cuyahoga Heights, Ohio



In contrast, the 2000 populations of Brooklyn Heights and Independence have returned to about the same number of persons in 1970 after declining in the intervening decades. Valley View has had steady growth over the past sixty years, and has about 50% more persons in 2000 than in 1970. These communities also followed the pattern of fewer persons in each household, however new home construction brought residents into the community at a faster pace.

Due to the recent release of the U.S. Census data, population projections are currently under revision and are not available at the present time.

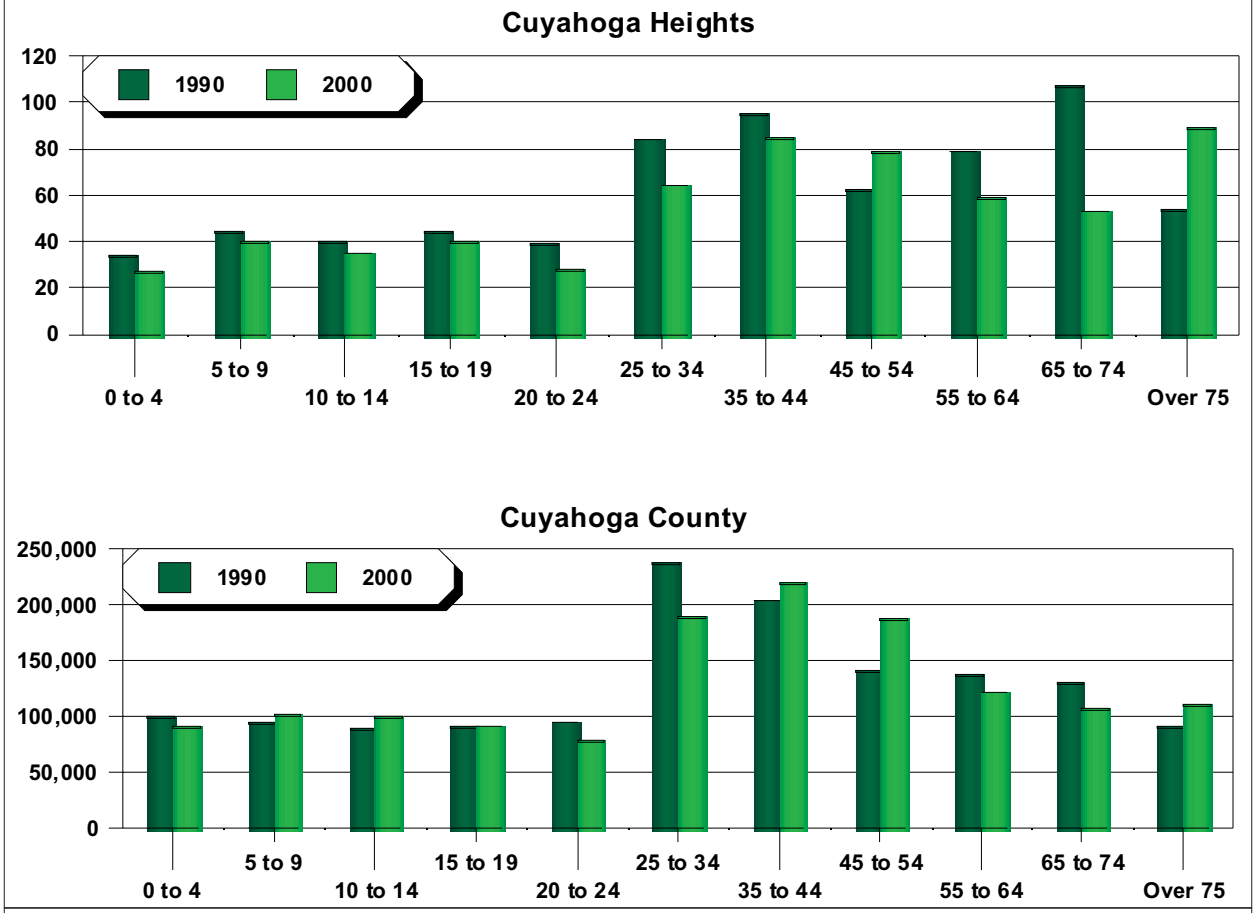
Age and Sex Composition

The rise in life expectancy and the aging "baby boom generation" — those persons born after World War II through 1965 — have affected the increase in the median age over the last several decades at both the national and local levels. In Cuyahoga Heights, the median age rose from 40.6 in 1990 to 42.4 in 2000. In comparison, the median age countywide was 34.9 in 1990 and 37.3 in 2000.

Exhibit 2-1 and ***Appendix 2-B*** shows the population of Cuyahoga Heights and Cuyahoga County by age group for 1990 and 2000. Over this time period, only the 45-54 and 75+ age groups in Cuyahoga Heights gained population. In particular, the 75+ age group increased in number by 65%. More age groups gained population in Cuyahoga County from 1990 to 2000, including 5-9, 10-14, 35-44, 45-54, and 75+.

Of the 599 persons in Cuyahoga Heights recorded in the 2000 Census, 312 persons were female (53%)

Exhibit 2-1, Age Composition, Cuyahoga Heights and Cuyahoga County, 1990 and 2000



Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 1A (P012)); 2000 (DP-1).

and 287 were male (47%). These ratios are also the same when considering all persons age eighteen years and over. The ratio changes for persons age 65 years and over however, with 84 of the 142 persons (59%) being female.

Number of Households and Household Size

Although the population in Cuyahoga Heights declined by about 13% during the 1990's, the number of households remained almost steady. In 1990, there were 682 persons and 268 households. In 2000, there were 599 persons and 261 households. The differences in these changes are a reflection of larger trends, including the tendency toward small family sizes and the growing number of one-person households. During the same, period, the population of Cuyahoga County declined about 1%, but the number of households increased about 1%.

The average household size in Cuyahoga Heights declined from 2.54 persons per household in 1990 to 2.30 persons per household in 2000. A similar trend existed for Cuyahoga County, with the average household size of 2.46 persons in 1990 declining to 2.39 persons in 2000. For families, the 1990 and 2000 Census results for both Cuyahoga Heights and Cuyahoga County were about three persons per family.

In terms of household size, about one-half of all households in Cuyahoga Heights in 1990 were comprised two or three persons, which is similar to the figure for Cuyahoga County (***Appendix 2-C***). In addition, in 1990 one-person households comprised about one-quarter all households in Cuyahoga Heights, compared to 30% in Cuyahoga County. Similar data from the 2000 Census has not yet been released.

Household Type

The U.S. Census defines family household as ". . . a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption."

In 2000, of the 261 households in Cuyahoga Heights, 160 (61%) were family households (***Appendix 2-D***). Of these family households, 115 comprised married couples, 38% of whom had children under the age of eighteen. In addition, there were 45 single heads of households, one-half of whom had children under the age of eighteen. The remaining 101 households were considered nonfamily households, where the householder lived alone or with nonrelatives. Generally, when compared to Cuyahoga Heights in 2000, Cuyahoga County had a similar profile of households.

When the 1990 and 2000 data are compared, two trends in Cuyahoga Heights are evident. The number of family households declined from 198 to 160, and conversely, the number of nonfamily households rose from 70 to 101. A similar situation occurred in Cuyahoga County as a whole.

In 2000, households with one or more persons age 65 or older represented 40% of all households in Cuyahoga Heights, compared to 28% of all households in Cuyahoga County.

Race

Over time, Cuyahoga Heights has been a relatively racially homogenous community. According to the 2000 Census, more than 98% of the population was white (588 persons). Asian was the next most numerous race represented, with seven persons (1% of the population). Four persons responded to the Census that their lineage was two or more races.

Place of Birth

As of 2000, 84% of Cuyahoga Heights residents (503 persons) were born in the State of Ohio. Another 10% (58 persons) were born elsewhere in the United States, and 6% (38 persons) were foreign born.

HOUSING CHARACTERISTICS

Housing Type

The housing stock in Cuyahoga Heights is primarily comprised of single-family homes (***Exhibit 2-2*** and ***Appendix 2-E***). According to the 2000 Cen-

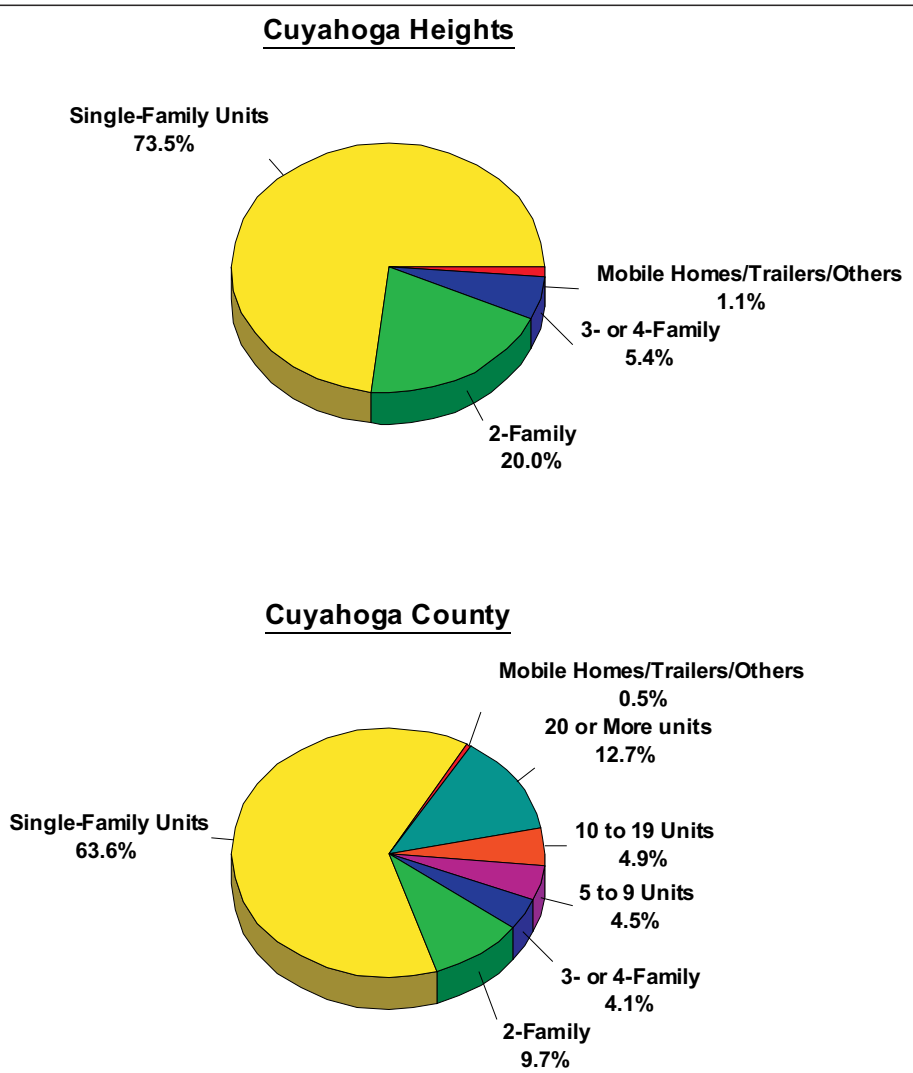
sus, 74% of all housing units were single-family. About 20% of the housing units are located in two-family structures, and about 5% of the housing units are located in structures with three or four units. Garfield Heights, Newburgh Heights, and Cuyahoga County as a whole have a significant mixture of single-family, two-family, and multi-family structures. In comparison, more than 95% of all housing units in Brooklyn Heights, Independence, and Valley View are single-family.

Number of Rooms

The 2000 Census reported that the median number of rooms for housing units in Cuyahoga Heights was 5.9 rooms, which are defined as living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, enclosed porches suitable for year-round use, and lodger's rooms.

This figure was similar to the median number of rooms in Newburgh Heights (5.5 rooms), Cuyahoga County (5.6 rooms) and Garfield Heights (5.7 rooms). In contrast the median number of rooms was larger in Brooklyn Heights (6.8 rooms),

Exhibit 2-2, Housing Type, Cuyahoga Heights and Cuyahoga County, 2000



Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 2000 (DP-4).

Independence (6.8 rooms), and Valley View (7.0 rooms).

In addition, the variety of home sizes is limited in Cuyahoga Heights. More than 60% of the homes have either five or six rooms, while only one-quarter of the homes have seven or more rooms. A diversified mix of homes with various numbers of rooms broadens the appeal of the housing stock to various segments of the population.

New Residential Construction

According to the Cuyahoga County Auditor's Office, during the period 1990-1999, three single-family homes were constructed in Cuyahoga Heights. During the same period, nearby communities reported varying levels of single-family home construction, including Newburgh Heights (1), Brooklyn Heights (51), Garfield Heights (66), Valley View (97), and Independence (326) (***Exhibit 2-3***).

Age of the Housing Stock

Generally, the housing stock in Cuyahoga Heights is older than in Cuyahoga County as a whole. According to the 2000 Census, 46% of the housing units in Cuyahoga Heights were built in 1939 or earlier, compared to 29% of all housing units in Cuyahoga County. A more detailed discussion of the age of the housing stock can be found in Chapter 3, *Land Use, Building Construction Dates* section.

Housing Occupancy and Ownership Status

The 2000 Census showed that of the total housing units in Cuyahoga Heights, 96% were occupied and 4% were vacant (***Appendix 2-F***). These rates were similar for Cuyahoga Heights based on the 1990 Census.

For the 2000 Census, of the 268 occupied housing units, 199 (74%) were owner-occupied and 69 (26%) were renter-occupied. There were no changes in the percentages of owner-occupied and renter-occupied units from the 1990 Census (***Appendix 2-F***). In contrast, Cuyahoga County as a whole showed an owner-occupancy rate just over 60%.

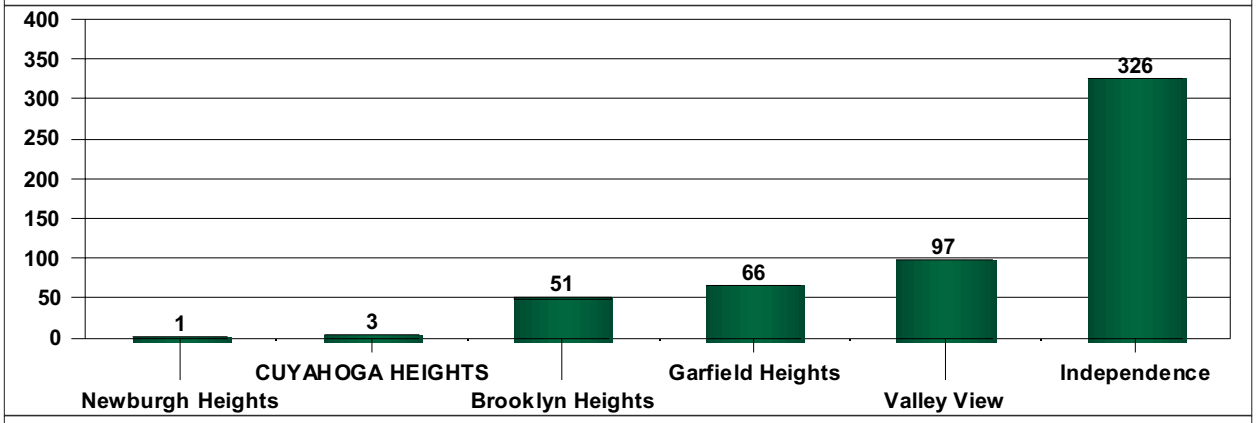
Home Sale Prices

Existing Single-Family Home Sales

The Housing Policy Research Program at Cleveland State University compiles data on an ongoing basis concerning the real estate market for existing single-family homes in Cuyahoga County (***Appendix 2-G***). Due to the low number of existing single-family home sales annually, it is only possible to make general statements about real estate market trends.

During the period 1992 through 2001, there were only two to seven sales of single family homes in Cuyahoga Heights annually. Brooklyn Heights, Newburgh Heights, and Valley View, fluctuated

Exhibit 2-3, Single-Family Home Construction, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1990-1999



Source: Cuyahoga County Auditor's Office

in the 10 to 35 annual sales range. Independence was in the 65 to 90 annual sales range, and Garfield Heights was in the 375 to 530 annual sales range.

The median is defined as the middle number in a series. Therefore, the median sale price is the amount at which 50% of all sale prices are lower and 50% of all sale prices are higher. It is reasonable to conclude that the median sale price of existing single-family homes in Cuyahoga Heights is rising at a rate similar to Cuyahoga County as a whole. Due to the limited number of annual sales however, it is not possible to make year-by-year comparisons. For example, a steady trend in the real estate market in Cuyahoga Heights is that the median sale price rose above $100,000 for the first time in 1997 and has stayed above that level through 2001, ranging from about $102,000 to $135,000. For comparison, during the period 1999 through 2001, the median sale price of an existing single-family home was generally in the $70,000's in Newburgh Heights, $80,000's in Garfield Heights, $100,000's in Cuyahoga County as a whole, $120,000's in Brooklyn Heights, $170,000's to $190,000's in Independence, and $150,000's to $220,000's in Valley View.

When examined by price category, existing homes sales in Cuyahoga Heights are occurring in a moderate price range (***Appendix 2-H***). For the period 1999-2001, 70% of sales were in the $85,000-$150,000 range. The following are results for the same period for nearby communities:

- ✓ 50% of sales in Newburgh Heights were in the $65,000-$85,000 range
- ✓ almost 70% of sales in Garfield Heights were in the $65,000-$105,000 range
- ✓ 45% of sales in Cuyahoga County were in the $65,000-$125,000 range
- ✓ 80% of sales in Brooklyn Heights were in the $105,000-$200,000 range
- ✓ 60% of sales in Independence were in the $150,000-$250,000 range
- ✓ 50% of sales in Valley View were above $200,000

Exhibit 2-4, Median Contract Rent, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1990 and 2000

Area	1990	2000	Percent Change
Cuyahoga Heights	**$304**	**$508**	**67.1%**
Brooklyn Heights	$386	$676	75.1%
Garfield Heights	$352	$555	57.7%
Independence	$402	$621	54.5%
Newburgh Heights	$240	$509	112.1%
Valley View	$361	$711	97.0%
Cuyahoga County	$321	$541	68.5%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 1A (H032)); 2000 (DP-4).

Single-Family Homes - New Construction

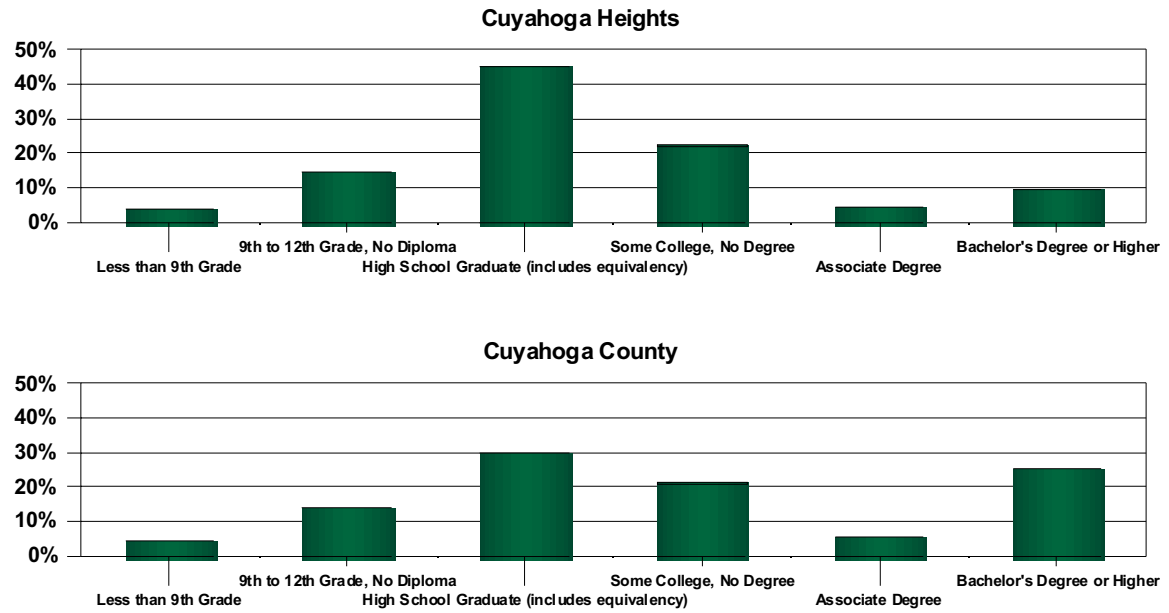
The Housing Policy Research Program at Cleveland State University also compiles data on an ongoing basis concerning the real estate market for new single-family homes in Cuyahoga County (***Appendix 2-I***). Due to the low number of new single-family home sales annually, it is only possible to make general statements about real estate market trends.

Cuyahoga Heights had only one new single-family home constructed during 1999-2001, which was in the $65,000-$85,000 price range. In nearby communities, Brooklyn Heights and Newburgh Heights had no new homes constructed, and Valley View had six. Garfield Heights had 41 new single-family homes built during 1999-2001, of which 75% were in the $105,000-$200,000 price range. Independence had 35 new homes built during the same period, with about one-third in the $125,000-$150,000 price range and about 40% in the over $250,000 price range. Finally, 1,223 new single-family homes were built in Cuyahoga County during 1999-2001, with more than one-quarter in the $150,000-$250,000 price range and over one-third in the over $250,000 range.

Contract Rent

The median monthly contract rent in Cuyahoga Heights in 2000 was $508 (***Exhibit 2-4***). The median in Cuyahoga Heights was similar to the figure for Newburgh Heights, Garfield Heights, and Cuyahoga County as a whole. In Brooklyn Heights, Independence, and Valley View, the monthly con-

Exhibit 2-5, Educational Attainment, Persons Age 25 or Older, Cuyahoga Heights and Cuyahoga County, 2000



Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 2000 (DP-2).

tract rent was $100-$200 higher than in Cuyahoga Heights.

EDUCATIONAL CHARACTERISTICS

Educational Attainment

A comparison of the 1990 and 2000 U.S. Censuses showed that the educational attainment levels for residents in Cuyahoga Heights are comparable to those of Cuyahoga County as a whole (***Exhibit 2-5*** and ***Appendix 2-J***).

As of 2000, 45% of all Cuyahoga Heights residents age 25 years or older had graduated from high school, which is above the Cuyahoga County level of 30%. Conversely, as of 2000, just under 10% of Cuyahoga Heights residents had earned a bachelor's degree or higher, which is below the Cuyahoga County level of 25%.

From 1990 to 2000, the number of residents with less than a ninth grade education or some high school education but no diploma declined in both Cuyahoga Heights and Cuyahoga County from over one-in-four residents to less than one-in-five residents.

School Enrollment

The Cuyahoga Heights School District comprises the communities of Brooklyn Heights, Cuyahoga Heights, and Valley View. Total district enrollment has been steady, with current enrollment just below 800 (***Exhibit 2-6)***. This enrollment level, which is approximately 10% to 15% below the levels of the mid- to late-1970's, indicates that the current school facilities will likely continue to handle the student population.

Exhibit 2-6, Cuyahoga Heights School District, School Enrollment, 1997-1998 to 2000-2001

School Year	School Enrollment	Change	
		#	%
1997-1998	772	--	--
1998-1999	792	20	2.6%
1999-2000	794	2	0.3%
2000-2001	791	-3	-0.4%

Source: Ohio Department of Education, Interactive Local Report Card.

According to the 2000 Census, about 57% of the students in kindergarten through grade twelve lived in Valley View, about 30% of students lived in Brooklyn Heights, and about 13% of students lived in Cuyahoga Heights.

INCOME AND EMPLOYMENT CHARACTERISTICS

Income

During the 1990's, the income of households in Cuyahoga Heights and nearby communities increased at a rate faster than inflation. In addition, household incomes and family incomes in Cuyahoga Heights were higher than the incomes in Garfield Heights, and Newburgh Heights, as well as Cuyahoga County as a whole, but lower than in Brooklyn Heights, Independence, and Valley View (***Exhibit 2-7***).

Household income refers to all of the households in a community, including households having only one person. In 1989, the median household income in Cuyahoga Heights was $30,234. By 1999 that figure had risen to $40,625. By adjusting the 1989 Cuyahoga Heights figure for inflation, the 1999 figure is $1,385 above the amount that would be expected due to inflation. Nearby communities also outpaced inflation over the ten-year period, reaching a range of $2,000 to $5,500 in household income by 1999.

Family income includes only households where a head of household lives with one or more persons who are related to the head of household by birth, marriage, or adoption. Family income figures are higher than household incomes, due to the frequency of two wage earners in the same households. In 1989, the median family income in Cuyahoga Heights was $32,917. By 1999 that figure had risen to $54,167. By adjusting the 1989 Cuyahoga Heights figure for inflation, the 1999 figure is $11,445 above the amount that would be expected due to inflation. Nearby

Exhibit 2-7, Median Household Income and Median Family Income, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1989 and 1999

Area	Median Household Income		Gain Above Inflation, 1989-1999	
	1989	1999	Dollar Amount	Percent
Cuyahoga Heights	**$30,234**	**$40,625**	**$1,385**	**3.5%**
Brooklyn Heights	$35,385	$47,847	$1,922	4.2%
Garfield Heights	$28,694	$39,278	$2,037	5.5%
Independence	$40,716	$57,733	$4,889	9.3%
Newburgh Heights	$24,621	$37,409	$5,454	17.1%
Valley View	$45,703	$64,063	$4,747	8.0%
Cuyahoga County	$28,595	$39,168	$2,056	5.5%
Area	**Median Family Income**		**Gain Above Inflation, 1989-1999**	
	1989	**1999**	**Dollar Amount**	**Percent**
Cuyahoga Heights	**$32,917**	**$54,167**	**$11,445**	**26.8%**
Brooklyn Heights	$40,238	$62,424	$10,201	19.5%
Garfield Heights	$34,322	$47,557	$3,012	6.8%
Independence	$46,682	$65,059	$4,472	7.4%
Newburgh Heights	$28,636	$42,131	$4,965	13.4%
Valley View	$49,018	$71,080	$7,461	11.7%
Cuyahoga County	$35,749	$49,559	$3,162	6.8%

Note: A ten-year inflation factor of 1.297861 was applied to the 1989 figures in order to adjust them to the equivalent 1999 level (U.S. Census Bureau, Public Information Office, May 20, 2002, *Note Concerning Consumer Price Index (CPI-U-RS) Values in the 1990 Demographic Profile, Tables DP-3, Footnote 4, and in Table DP-4, Footnote 6.*

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 3A (General Profiles)); 2000 (DP-3).

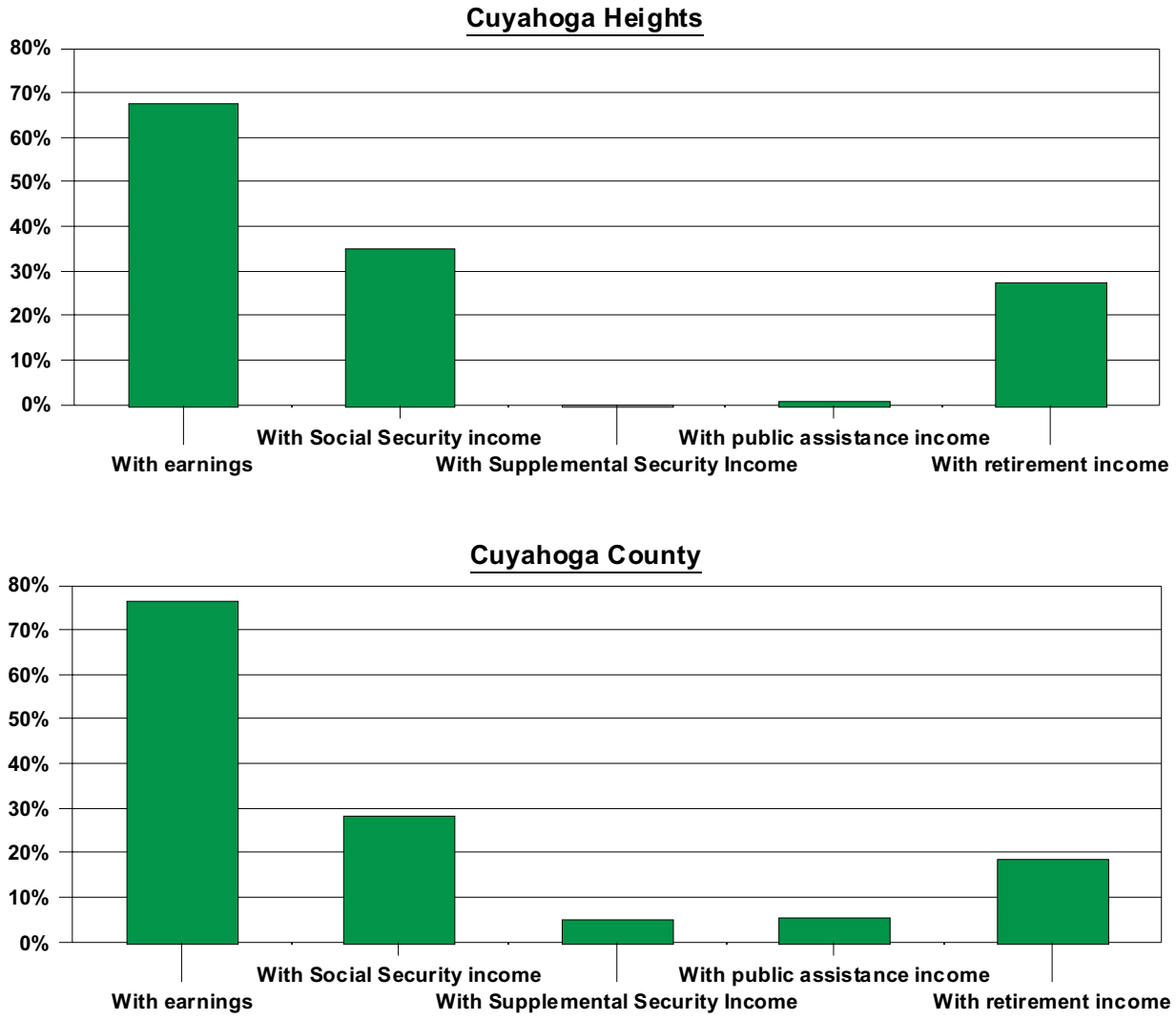
communities also outpaced inflation over the ten-year period, reaching a range of $3,000 to $10,000 in family income by 1999.

Source of Income

When compared to Cuyahoga County as a whole, a lower percentage of Cuyahoga Heights households have earnings as a source of income, and a higher percentage of households have Social Security and retirement benefits as sources of income. According to the 2000 U.S. Census, 68% of all households in Cuyahoga Heights received income in 1999 from earnings, compared to 76% of all Cuyahoga County residents (***Exhibit 2-8*** and ***Appendix 2-K)***.

In addition, 35% of households in Cuyahoga Heights received Social Security income during 1999, compared to 28% of households countywide. The level of households with retirement income was also higher in Cuyahoga Heights (27%) than for all Cuyahoga County households (18%). As part of 1999 income, less than 1% of

Exhibit 2-8, Source of Income, Cuyahoga Heights and Cuyahoga County, 1999



Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 2000 (DP-3).

Cuyahoga Heights households received public assistance, compared to 5% households countywide.

Employment Status

The potential labor force in Cuyahoga Heights in 2000, which included all persons age 16 years and older, consisted of 491 persons, of which 283 (58%) were part of the civilian labor force. The remaining 208 persons were not in the labor force, which included students, homemakers, retirees, and those persons not actively seeking employment.

More than 96% of the civilian labor force (272 persons) was employed, a higher percentage than Cuyahoga County as a whole (94%). Of the total civilian labor force of Cuyahoga Heights, 54% were men and 46% were women.

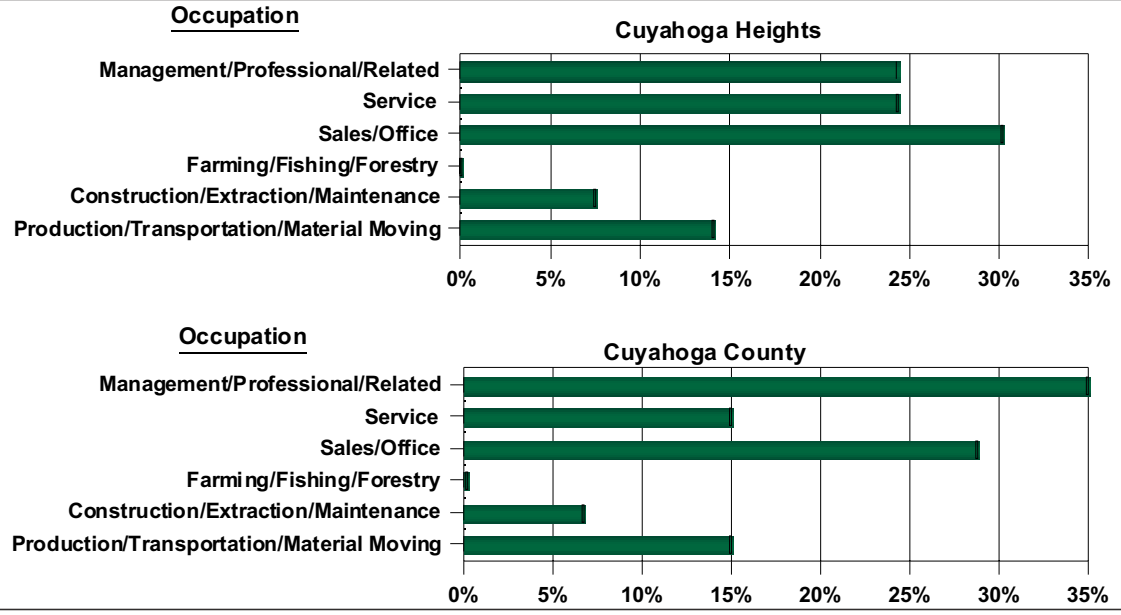
As of the 2000 Census, the unemployment rate in Cuyahoga Heights was 3.9%, which compared favorably to Brooklyn Heights (1.4%), Independence (2.1%), Valley View (2.2%), Garfield Heights (5.9%), and Newburgh Heights (6.3%),

Occupational Composition,

The occupational composition of residents of Cuyahoga Heights shows similarities and differences to that of Cuyahoga County residents as a whole (***Exhibit 2-9*** and ***Appendix 2-L***). The categories in which Cuyahoga Heights residents were most frequently employed in 2000 were sales and office occupations; management, professional, and related occupations; and service occupations. These categories were also the most frequent countywide, as well as production, transportation, and material moving occupations.

Compared to all residents countywide in 2000, a lower percentage of Cuyahoga Heights residents were employed in management and professional occupations, and a higher percentage of Cuyahoga Heights residents were employed in service occupations.

Exhibit 2-9, Occupations of Employed Persons Age 16 and Over, Cuyahoga Heights and Cuyahoga County, 2000



Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 2000 (DP-3).

APPENDIX TWO

Appendix 2-A, Population Change, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1940-2000

Area	Population							Percent Change	
	1940	1950	1960	1970	1980	1990	2000	1940-1970	1970-2000
Cuyahoga Heights	**674**	**713**	**796**	**866**	**739**	**682**	**599**	**28.5%**	**-30.8%**
Brooklyn Heights	496	931	1,449	1,527	1,653	1,450	1,558	207.9%	2.0%
Garfield Heights	16,989	21,662	38,455	41,417	34,938	31,739	30,734	143.8%	-25.8%
Independence	1,815	3,105	6,868	7,034	6,607	6,500	7,109	287.5%	1.1%
Newburgh Heights	3,830	3,689	3,512	3,396	2,678	2,310	2,389	-11.3%	-29.7%
Valley View	753	998	1,221	1,422	1,576	2,137	2,179	88.8%	53.2%
Cuyahoga County	1,217,250	1,389,532	1,647,895	1,720,835	1,498,400	1,412,140	1,393,978	41.4%	-19.0%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1940-2000

Appendix 2-B, Age Composition, Cuyahoga Heights and Cuyahoga County, 1990 and 2000

Age Groups	Population			
	Cuyahoga Heights			
	1990		2000	
	Number	Percent	Number	Percent
0-4	34	5.0%	27	4.5%
5-9	44	6.5%	40	6.7%
10-14	40	5.9%	35	5.8%
15-19	44	6.5%	40	6.7%
20-24	39	5.7%	28	4.7%
25-34	84	12.3%	64	10.7%
35-44	95	13.9%	85	14.2%
45-54	62	9.1%	79	13.2%
55-64	79	11.6%	59	9.8%
65-74	107	15.7%	53	8.8%
75+	54	7.9%	89	14.9%
Total	**682**	**100.0%**	**599**	**100.0%**
Age Groups	**Cuyahoga County**			
	1990		**2000**	
	Number	**Percent**	**Number**	**Percent**
0-4	100,293	7.1%	90,996	6.5%
5-9	95,303	6.7%	101,372	7.3%
10-14	89,843	6.4%	99,235	7.1%
15-19	90,162	6.4%	89,960	6.5%
20-24	94,679	6.7%	77,515	5.6%
25-34	238,040	16.9%	188,873	13.5%
35-44	203,606	14.4%	219,449	15.7%
45-54	140,952	10.0%	187,601	13.5%
55-64	138,196	9.8%	121,816	8.7%
65-74	130,507	9.2%	107,327	7.7%
75+	90,559	6.4%	109,834	7.9%
Total	**1,412,140**	**100.0%**	**1,393,978**	**100.0%**

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 1A (P012)); 2000 (DP-1).

Appendix 2-C, Household Size, Cuyahoga Heights and Cuyahoga County, 1990

Number of Persons	Cuyahoga Heights Households		Cuyahoga County Households	
	Number	Percent	Number	Percent
1 person	65	24.3%	169,946	30.2%
2 persons	99	36.9%	174,220	30.9%
3 persons	43	16.0%	91,826	16.3%
4 persons	30	11.2%	73,471	13.0%
5 persons	19	7.1%	34,130	6.1%
6 persons	10	3.7%	12,520	2.2%
7 or more persons	2	0.7%	7,130	1.3%
Total	**268**	**100.0%**	**563,243**	**100.0%**

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990, (STF 1A (P027)).

Appendix 2-D, Household Type, Cuyahoga Heights and Cuyahoga County, 1990 and 2000

	Cuyahoga Heights			
	1990		2000	
	#	%	#	%
Total Households	**268**		261	
Family Households	**198**	**73.9%**	160	61.3%
Married Households	**152**	**76.8%**	115	71.9%
Married Households with Children Under 18	**60**	**39.5%**	44	38.3%
Single Head of Household	**46**	**23.2%**	45	28.1%
Single Head of Households with Children Under 18	**15**	**32.6%**	23	51.1%
Nonfamily Households	**70**	**26.1%**	101	38.7%
Households with Persons 65 and Over	**109**	**40.7%**	106	40.6%
	Cuyahoga County			
	1990		**2000**	
	#	**%**	**#**	**%**
Total Households	563,243		571,457	
Family Households	370,083	65.7%	354,615	62.1%
Married Households	267,353	72.2%	242,389	68.4%
Married Households with Children Under 18	116,900	43.7%	102,182	42.2%
Single Head of Household	102,730	27.8%	112,226	31.6%
Single Head of Households with Children Under 18	60,339	58.7%	60,839	54.2%
Nonfamily Households	193,160	34.3%	216,842	37.9%
Households with Persons 65 and Over	160,760	28.5%	155,959	27.3%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 1A (P016 and P024/025)); 2000 (DP-1).

Appendix 2-E, Housing Type, Cuyahoga Heights and Cuyahoga County, 2000

Area	Total Housing Units	Total Single-Family Units		Detached Single-Family Units		Attached Single-Family Units		Units in 2-Family Structures		Units in 3 or 4 Family Structures	
		#	%	#	%	#	%	#	%	#	%
Cuyahoga Heights	**280**	**206**	**73.6%**	**199**	**71.1%**	**7**	**2.5%**	**56**	**20.0%**	**15**	**5.4%**
Brooklyn Heights	649	620	95.5%	615	94.8%	5	0.8%	23	3.5%	0	0.0%
Garfield Heights	13,000	10,427	80.2%	10,141	78.0%	286	2.2%	1,033	7.9%	102	0.8%
Independence	2,424	2,374	97.9%	2,360	97.4%	14	0.6%	26	1.1%	8	0.3%
Newburgh Heights	1,157	614	53.1%	567	49.0%	47	4.1%	416	36.0%	107	9.2%
Valley View	691	667	96.5%	661	95.7%	6	0.9%	16	2.3%	4	0.6%
Cuyahoga County	616,903	392,564	63.6%	354,973	57.5%	37,591	6.1%	59,729	9.7%	25,309	4.1%

Area	Total Housing Units	5 to 9 Units in Structure		10 to 19 Units in Structure		20 or More Units in Structure		Mobile Homes, Trailers, Others	
		#	%	#	%	#	%	#	%
Cuyahoga Heights	**280**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**3**	**1.1%**
Brooklyn Heights	649	0	0.0%	0	0.0%	0	0.0%	6	0.9%
Garfield Heights	13,000	428	3.3%	570	4.4%	53	0.4%	293	2.3%
Independence	2,424	0	0.0%	0	0.0%	0	0.0%	16	0.7%
Newburgh Heights	1,157	17	1.5%	3	0.3%	0	0.0%	0	0.0%
Valley View	691	0	0.0%	0	0.0%	0	0.0%	4	0.6%
Cuyahoga County	616,903	27,640	4.5%	30,125	4.9%	78,267	12.7%	3,214	0.5%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 2000 (DP-4).

Appendix 2-F, Housing Occupancy Status, Cuyahoga Heights and Cuyahoga County, 1990 and 2000

Area	Total Housing Units	Occupied		Vacant		Owner- Occupied		Renter- Occupied	
		#	%	#	%	#	%	#	%
1990									
Cuyahoga Heights	**278**	**268**	**96.4%**	**10**	**3.6%**	**199**	**74.3%**	**69**	**25.7%**
Cuyahoga County	604,538	563,243	93.2%	41,295	6.8%	349,057	62.0%	214,186	38.0%
2000									
Cuyahoga Heights	**277**	**261**	**94.2%**	**16**	**5.8%**	**195**	**74.7%**	**66**	**25.3%**
Cuyahoga County	616,903	571,457	92.6%	45,446	7.4%	360,980	63.2%	210,477	36.8%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 1A (H001, H002, and H003)); 2000 (DP-4).

Appendix 2-G, Existing Single-Family Homes, Median Sale Price and Number of Sales, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1992-2001

Area	Median Sale Price										Change 1992-2001	
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	$	%
Cuyahoga Heights	**$94,450**	**$49,500**	**$76,000**	**$73,500**	**$98,000**	**$110,000**	**$110,000**	**$120,000**	**$101,800**	**$135,000**	**$40,550**	**42.9%**
Brooklyn Heights	$79,250	$100,000	$99,000	$135,000	$98,000	$150,000	$109,900	$116,950	$128,500	$122,000	**$42,750**	**53.9%**
Garfield Heights	$64,500	$66,000	$69,000	$73,000	$75,000	$79,000	$80,000	$83,900	$87,050	$90,500	**$26,000**	**40.3%**
Independence	$117,450	$135,750	$147,650	$144,500	$140,500	$162,000	$165,000	$177,000	$179,450	$191,500	**$74,050**	**63.0%**
Newburgh Heights	$52,500	$48,500	$50,000	$48,250	$65,500	$56,500	$70,000	$80,000	$75,000	$71,150	**$18,650**	**35.5%**
Valley View	$166,000	$128,000	$167,500	$192,500	$183,000	$222,500	$186,500	$183,500	$153,000	$229,000	**$63,000**	**38.0%**
Cuyahoga County	$82,500	$83,900	$85,000	$87,500	$91,500	$95,000	$100,000	$102,000	$107,500	$111,000	**$28,500**	**34.5%**
Area	**Number of Sales**										**Total**	
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001		
Cuyahoga Heights	**6**	**2**	**3**	**3**	**3**	**3**	**5**	**7**	**5**	5	**42**	
Brooklyn Heights	18	29	21	18	17	23	19	18	15	15	**193**	
Garfield Heights	377	402	443	425	427	426	478	529	498	483	**4,488**	
Independence	64	70	72	67	63	65	93	77	80	73	**724**	
Newburgh Heights	23	19	34	28	32	24	17	21	24	14	**236**	
Valley View	24	22	22	10	15	15	8	15	17	13	**161**	
Cuyahoga County	14,289	15,080	15,868	15,118	15,818	15,987	18,113	18,112	16,753	16,805	**161,943**	

Source: Housing Policy Research Program, The Urban Center, Maxine Levin College of Urban Affairs, Cleveland State University, 1992-2001.

Appendix 2-H, Existing Single-Family Homes, Sales by Price Category, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1999-2001

Area	Less Than $45,000	$45-65,000	$65-85,000	$85-105,000	$105-125,000	$125-150,000	$150-200,000	$200-250,000	Greater Than $250,000	Total
Cuyahoga Heights	**0**	**1**	**2**	**3**	**6**	**3**	**2**	**0**	**0**	**17**
Brooklyn Heights	0	3	2	3	18	8	12	2	0	48
Garfield Heights	79	151	466	564	194	42	14	0	0	1,510
Independence	0	4	1	2	12	40	93	44	34	230
Newburgh Heights	6	12	34	13	0	1	0	0	0	66
Valley View	1	2	2	2	7	3	5	15	8	45
Cuyahoga County	5,154	4,424	7,634	8,195	7,407	6,342	6,360	2,657	3,497	51,670
Area	**Less Than $45,000**	**$45-65,000**	**$65-85,000**	**$85-105,000**	**$105-125,000**	**$125-150,000**	**$150-200,000**	**$200-250,000**	**Greater Than $250,000**	**Total**
Cuyahoga Heights	**0.0%**	**5.9%**	**11.8%**	**17.6%**	**35.3%**	**17.6%**	**11.8%**	**0.0%**	**0.0%**	**100.0%**
Brooklyn Heights	0.0%	6.3%	4.2%	6.3%	37.5%	16.7%	25.0%	4.2%	0.0%	100.0%
Garfield Heights	5.2%	10.0%	30.9%	37.4%	12.8%	2.8%	0.9%	0.0%	0.0%	100.0%
Independence	0.0%	1.7%	0.4%	0.9%	5.2%	17.4%	40.4%	19.1%	14.8%	100.0%
Newburgh Heights	9.1%	18.2%	51.5%	19.7%	0.0%	1.5%	0.0%	0.0%	0.0%	100.0%
Valley View	2.2%	4.4%	4.4%	4.4%	15.6%	6.7%	11.1%	33.3%	17.8%	100.0%
Cuyahoga County	10.0%	8.6%	14.8%	15.9%	14.3%	12.3%	12.3%	5.1%	6.8%	100.0%

Source: Housing Policy Research Program, The Urban Center, Maxine Levin College of Urban Affairs, Cleveland State University, 1999-2001.

Appendix 2-I, New Construction of Single-Family Homes, Sales by Price Category, Cuyahoga Heights, Selected Communities, and Cuyahoga County, 1999-2001

Area	Less Than $45,000	$45-65,000	$65-85,000	$85-105,000	$105-125,000	$125-150,000	$150-200,000	$200-250,000	Greater Than $250,000	Total
Cuyahoga Heights	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Brooklyn Heights	0	0	0	0	0	0	0	0	0	0
Garfield Heights	0	3	2	4	9	13	9	0	1	41
Independence	0	3	2	0	4	11	1	1	13	35
Newburgh Heights	0	0	0	0	0	0	0	0	0	0
Valley View	0	1	1	2	0	0	1	0	1	6
Cuyahoga County	0	99	90	74	81	124	168	162	425	1,223
Area	**Less Than $45,000**	**$45-65,000**	**$65-85,000**	**$85-105,000**	**$105-125,000**	**$125-150,000**	**$150-200,000**	**$200-250,000**	**Greater Than $250,000**	**Total**
Cuyahoga Heights	**0.0%**	**0.0%**	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**100.0%**
Brooklyn Heights	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Garfield Heights	0.0%	7.3%	4.9%	9.8%	22.0%	31.7%	22.0%	0.0%	2.4%	100.0%
Independence	0.0%	8.6%	5.7%	0.0%	11.4%	31.4%	2.9%	2.9%	37.1%	100.0%
Newburgh Heights	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Valley View	0.0%	16.7%	16.7%	33.3%	0.0%	0.0%	16.7%	0.0%	16.7%	100.0%
Cuyahoga County	0.0%	8.1%	7.4%	6.1%	6.6%	10.1%	13.7%	13.2%	34.8%	100.0%

Source: Housing Policy Research Program, The Urban Center, Maxine Levin College of Urban Affairs, Cleveland State University, 1999-2001.

Appendix 2-J, Educational Attainment, Persons Age 25 or Older, Cuyahoga Heights and Cuyahoga County, 1990 and 2000

Area	Persons 25 Years of Age or Older	Less than 9th Grade		9th to 12th Grade, No Diploma		High School Graduate (includes equivalency)		Some College, No Degree		Associate Degree		Bachelor's Degree or Higher	
		#	%	#	%	#	%	#	%	#	%	#	%
1990													
Cuyahoga Heights	**467**	**44**	**9.4%**	**91**	**19.5%**	**209**	**44.8%**	**79**	**16.9%**	**6**	**1.3%**	**38**	**8.1%**
Cuyahoga County	943,924	72,536	7.7%	172,761	18.3%	291,883	30.9%	169,957	18.0%	46,969	5.0%	189,818	20.1%
2000													
Cuyahoga Heights	**432**	**16**	**3.7%**	**63**	**14.6%**	**194**	**44.9%**	**98**	**22.7%**	**20**	**4.6%**	**41**	**9.5%**
Cuyahoga County	936,148	41,967	4.5%	129,995	13.9%	281,264	30.0%	198,044	21.2%	49,465	5.3%	235,413	25.1%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 3A (P057)); 2000 (DP-2).

Appendix 2-K, Source of Income, Cuyahoga Heights and Cuyahoga County, 1999

Source of Income	Cuyahoga Heights		Cuyahoga County	
	Number	Percent	Number	Percent
With earnings	**182**	**67.7%**	437,375	76.5%
With Social Security income	**94**	**34.9%**	161,939	28.3%
With Supplemental Security Income	**0**	**0.0%**	27,722	4.8%
With public assistance income	**2**	**0.7%**	30,050	5.3%
With retirement income	**74**	**27.5%**	104,655	18.3%

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 2000 (DP-3).

Appendix 2-L, Occupations of Employed Persons, Age 16 and Over, Cuyahoga Heights and Cuyahoga County, 1990 and 2000

Occupation	Cuyahoga Heights					
	1990		2000		Change 1990-2000	
	#	%	#	%	#	%
Management, professional, related occupations	**49**	**16.3%**	**66**	**24.3%**	**17**	**34.7%**
Service occupations	**71**	**23.6%**	**66**	**24.3%**	**-5**	**-7.0%**
Sales and office occupations	**88**	**29.2%**	**82**	**30.1%**	**-6**	**-6.8%**
Farming, fishing, and forestry occupations	**4**	**1.3%**	**0**	**0.0%**	**-4**	**-100.0%**
Construction, extraction, and maintenance occupations	**31**	**10.3%**	**20**	**7.4%**	**-11**	**-35.5%**
Production, transportation, and material moving occupations	**58**	**19.3%**	**38**	**14.0%**	**-20**	**-34.5%**
Total	**301**	**100.0%**	**272**	**100.0%**	**-29**	**-9.6%**
Occupation	**Cuyahoga County**					
	1990		**2000**		**Change 1990-2000**	
	#	**%**	**#**	**%**	**#**	**%**
Management, professional, related occupations	176,564	28.0%	220,939	34.8%	44,375	25.1%
Service occupations	80,681	12.8%	94,542	14.9%	13,861	17.2%
Sales and office occupations	217,686	34.6%	181,884	28.7%	-35,802	-16.4%
Farming, fishing, and forestry occupations	3,661	0.6%	606	0.1%	-3,055	-83.4%
Construction, extraction, and maintenance occupations	60,224	9.6%	42,211	6.7%	-18,013	-29.9%
Production, transportation, and material moving occupations	90,696	14.4%	94,237	14.9%	3,541	3.9%
Total	**629,512**	**100.0%**	**634,419**	**100.0%**	**4,907**	**0.8%**

Source: Census of Population, U.S. Department of Commerce, Bureau of the Census, 1990 (STF 3A (General Profiles, Labor Force and Commuting)); 2000 (DP-3).

CHAPTER THREE

LAND USE

LAND USE INVENTORY

This section will outline the evolution of land use patterns in the Village of Cuyahoga Heights, as well as the natural features of the community. Specific historical information has been obtained from atlases, maps, and publications. For the 2001 data, land usage was determined through the use of Cuyahoga County Auditor's Office records, aerial photographs, and a field survey conducted by Cuyahoga County Planning Commission staff.

LAND USE EVOLUTION

Cuyahoga Heights was originally part of Newburgh Township and later Newburgh Heights. In the early 20th century farms began to be subdivided for residential neighborhoods, particularly north of Harvard Avenue, and residents differed in their views of the future of the community. An election in 1918 resulted in the creation of Cuyahoga Heights out of a portion of Newburgh Heights. The residential area remained as Newburgh Heights, and the agricultural and industrial area became Cuyahoga Heights.

The land uses in 1938 illustrate the dual intent of the community to pursue both agriculture and industry (***Exhibit 3-1***). About 60% of the total 2,000-plus acres in the Village had been developed as of 1938 (1,264 acres). The three largest land uses were industrial (451 acres), institutional/utilities/parks/public open space (335 acres - primarily the Southerly Wastewater Treatment Plant), and agriculture (177 acres). These three land use types totalled 45% of all acreage within the Village.

During the past sixty years, the continued expansion of the metropolitan area and the construction of the freeway system have had significant impacts on Cuyahoga Heights in terms of development (***Exhibit 3-1*** and ***Map 3-1***). As of 2001, the percentage of all land within the Village that had been developed rose to almost 88%. Industrial land uses remained the largest category, about 750 acres. The next largest land use was parks/recreation (320 acres - primarily the Cleveland Metroparks Ohio & Erie Canal Reservation), followed by utilities (276 acres - primarily the Southerly Wastewater Treatment Plant). These three land use types totalled two-thirds of all acreage within the Village. In contrast, during the past sixty years agricultural land uses dropped to zero.

BUILDING CONSTRUCTION DATES

A review of the construction dates of existing buildings illustrates how residential and industrial uses developed by decade during the 20th century (***Exhibit 3-2***). For residences, one-third of the existing houses were built between 1900 and 1939. The major period of home construction occurred immediately after World War II, when 60% of the existing houses were built during the 1940's through the 1960's. There has been very little housing construction in the Village since 1970.

Industrial development also began in the early decades of the 20th century, and about 16% of the existing industrial buildings were constructed during the period 1900-1939. The primary period of industrial construction was the 1950's and 1960's, when one-half of the existing industrial structures were built. In the last generation, industrial construction has continued at a moderate rate, with over one-quarter of all existing industrial structures having been built since 1970.

The aging building stock of the Village presents several issues. The repair needs of houses must be continuously addressed in order to prevent code violations and keep the housing stock attractive in the real estate market for incoming purchasers. In addition, a lack of new housing or housing options to meet the needs of aging residents means that some residents will not remain–or can not remain– in the Village.

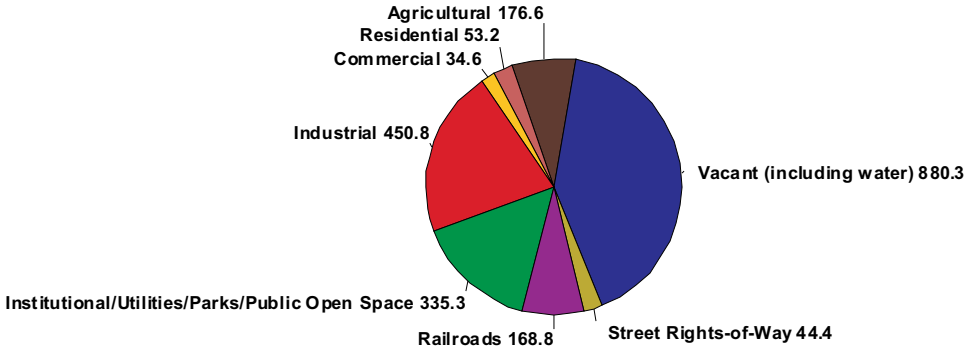
Aging industrial buildings are subject to market obsolescence due to factors such as repair needs; inadequate loading areas, parking, and vehicle circulation; low ceilings; inflexible interior layout; or specialized previous uses that make adaptation to new uses difficult. The only option to address obsolete industrial buildings is demolition and replacement, a process that may be com-

Exhibit 3-1, Land Use, Cuyahoga Heights, 1938 and 2001

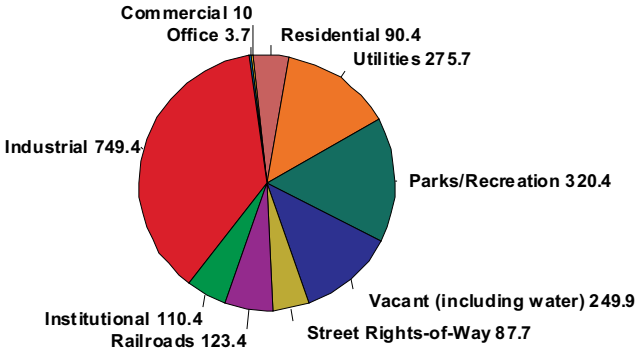
Land Use	1938			2001		
	Acreage	Percent of Developed Acreage	Percent of Total Acreage	Acreage	Percent of Developed Acreage	Percent of Total Acreage
Agricultural	176.6	14.0%	8.2%	0.0	0.0%	0.0%
Residential	53.2	4.2%	2.5%	90.4	5.1%	4.5%
Commercial	34.6	2.7%	1.6%	10.0	0.6%	0.5%
Office	0.0	0.0%	0.0%	3.7	0.2%	0.2%
Industrial	450.8	35.7%	21.0%	749.4	42.3%	37.1%
Institutional/Utilities/Parks/Public Open Space	335.3	26.5%	15.6%			
Parks/Recreation				320.4	18.1%	15.9%
Institutional (including government, schools, and cemeteries)				110.4	6.2%	5.5%
Utilities				275.7	15.6%	13.6%
Railroads	168.8	13.4%	7.9%	123.4	7.0%	6.1%
Street Rights-of-Way	44.4	3.5%	2.1%	87.7	5.0%	4.3%
Total Developed Acreage	1263.7	100.0%	58.9%	1771.1	100.0%	87.6%
Vacant (including water)	880.3		41.1%	249.9		12.4%
Total Acreage	2144.0		100.0%	2021.0		100.0%

Total Acreage figures vary slightly due to different data sources.
Ohio & Erie Canal Reservation acreage (293.9) is estimated.
Street Rights-of-Way acreage for 2001 is estimated.

Sources: Population 1930-1940, W.P.A. Projects 17191 and 18246, Regional Association of Cleveland; Cuyahoga County Planning Commission, 2001

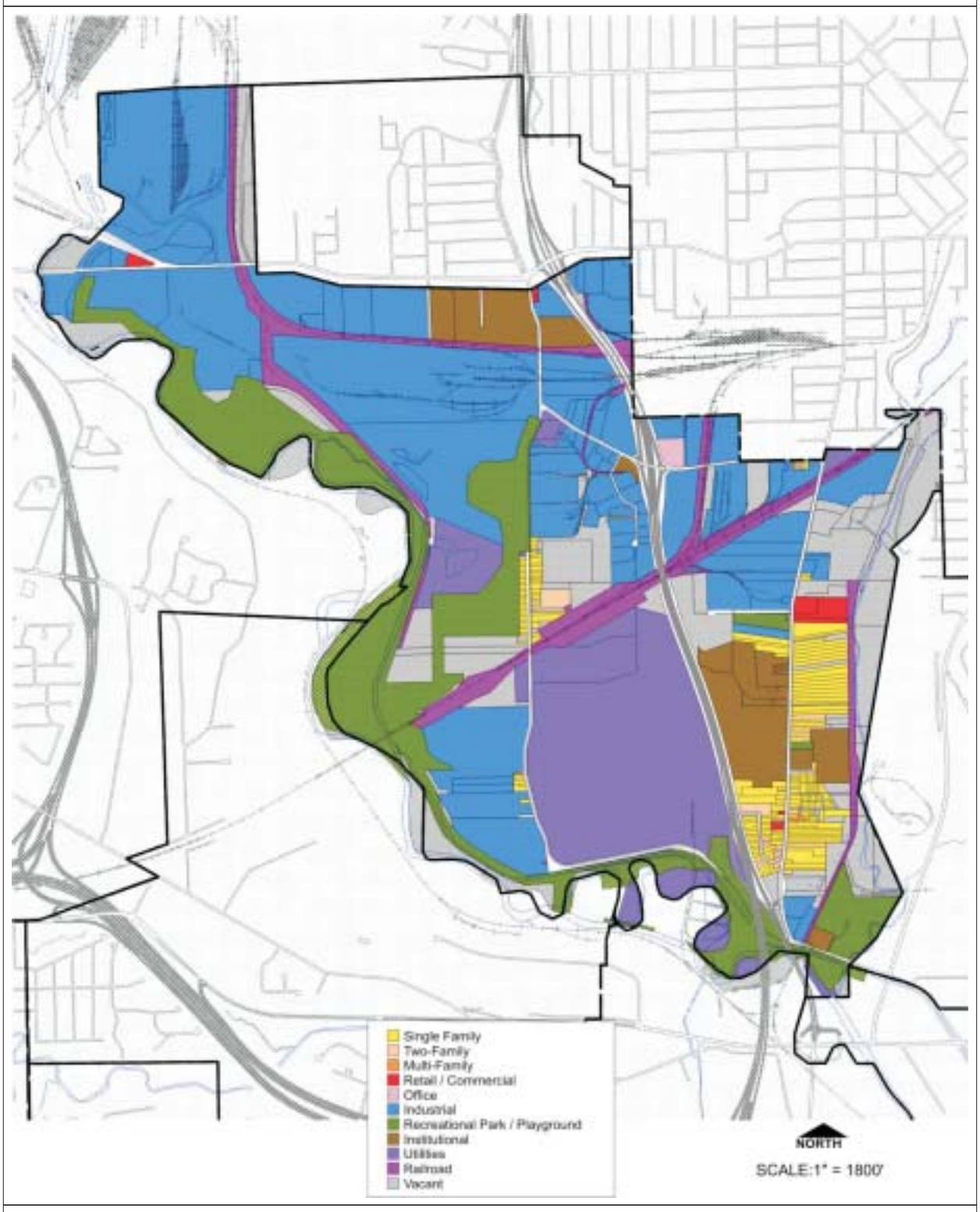


1938



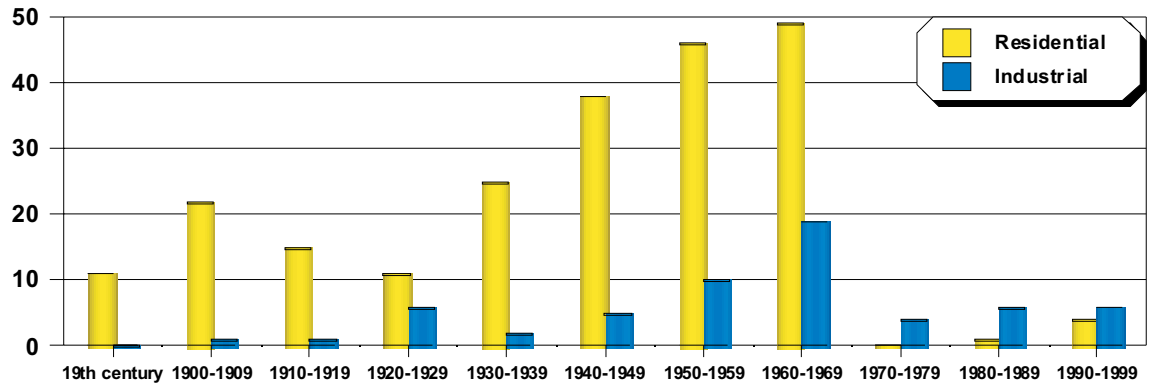
2001

Map 3-1, Land Use, Cuyahoga Heights, 2001



Source: Cuyahoga County Planning Commission.

Exhibit 3-2, Building Construction Dates, Cuyahoga Heights



Date of Construction	Number of Existing Buildings	
	Residential	Industrial
19th century	11	0
1900-1909	22	1
1910-1919	15	1
1920-1929	11	6
1930-1939	25	2
1940-1949	38	5
1950-1959	46	10
1960-1969	49	19
1970-1979	0	4
1980-1989	1	6
1990-1999	4	6
Total	**222**	**60**

Sources: Cuyahoga County Auditor's Office, 2001

plicated by the need to environmentally remediate buildings or surrounding acreage. In addition, the improvements in the freeway system over the past forty years also mean that industrial uses may not be the most appropriate solution for property that is now located adjacent to freeway interchanges.

NATURAL FEATURES

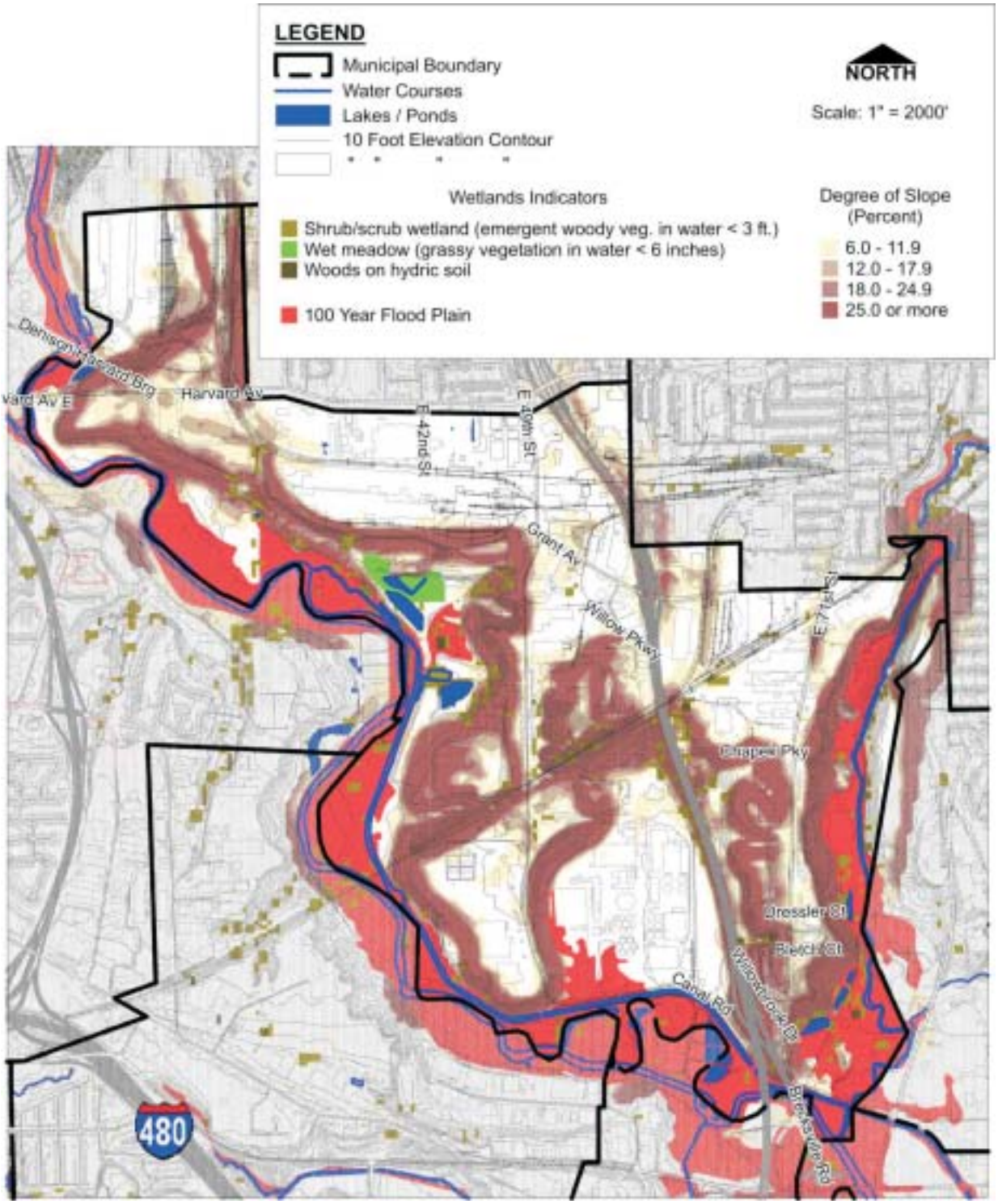
Floodplains

A floodplain is the relatively flat area or low land adjoining the channel of a river or stream which has been–or may be–covered by flood water. Floodplains are an important part of the stormwater management system. During periods of heavy or continuous rain, floodplains hold water that may otherwise flow to flood developed areas.

Map 3-2 shows areas considered floodplains by the Federal Emergency Management Agency, as provided by the Ohio Department of Natural Resources. The federal government utilizes a standard of measurement known as the 100-year floodplain, which is defined as the land area that has a one percent chance of being covered by flood water in any given year. Floodplains are regulated by the U. S. Army Corps of Engineers and the Federal Emergency Management Agency. Local regulations are outlined in Chapter 1466, *Flood Damage Prevention*, Building and Housing Code of the Codified Ordinances of Cuyahoga Heights.

Due to the topography of Cuyahoga Heights, the floodplains are confined to the areas adjacent to the two watercourses in the village. Along Mill Creek, the area prone to flooding is generally vacant bottomland, as well as Bacci Park and its vicinity. Along the Cuyahoga River, the area prone to flooding is generally vacant bottomland owned by various private industrial owners, or the Northeast Ohio Regional Sewer District. Much of this land is now part of the Cleveland Metroparks Ohio & Erie Canal Reservation. In general, flooding situations are not likely to cause significant property damage to structures.

Map 3-2, Natural Features, Cuyahoga Heights



Sources: Wetlands: Ohio Department of Natural Resources, Ohio Wetlands Inventory, 1987

Floodplain: Ohio Department of Natural Resources/FEMA, 1994

Slope: U.S. Geologic Survey, Digital Elevation Model (7.5 Minute Quadrangle)

Finally, the 100-year floodplain boundaries were revised by the Federal Emergency Management Agency, effective July 19, 2001. There are only minor changes between the 2001 boundaries and the 1981 boundaries, which was when the previous set of floodplain maps was issued. There is however, a noticeable increase in the base flood elevations between the 1981 and 2001 maps. For example, the base flood elevation in the vicinity of Bacci Park is five feet higher on the 2001 map. The base flood elevation is about four feet higher in the vicinity of the Southerly Wastewater Treatment Plant; about two feet higher in the vicinity of the CSX railroad trestle over the valley; and one to two feet higher in the vicinity of the CanalWay Center and Alcoa property. The base flood elevation is at the same level at old Harvard Avenue.

Wetlands

Wetlands are transitional areas between open water and dry land. The loss or degradation of wetlands can lead to serious consequences, including increased flooding when these natural water storage areas have been reduced in size or eliminated; species decline, extinction, or deformity; and decline in water quality. According to the 1994 report of the Ohio Wetlands Task Force, Ohio has lost more than 90% of its original wetland areas. Therefore, protecting remaining wetland areas is important. Development that impacts wetlands is regulated through the U.S. Army Corps of Engineers.

Wetland types range from lands that constantly have standing water to areas that only infrequently have standing water, such as portions of woods or fields. The length of time that standing water is present is the controlling factor in determining the type of plant and animal communities living in wetlands. Even when standing water is not present, wetlands can be identified by the type of soil and plants that are present.

Map 3-2 shows general areas considered to be wetlands, as provided by the Ohio Department of Natural Resources. Due to the steep topography of Cuyahoga Heights, the wetlands are generally confined to areas adjacent to Mill Creek and the Cuyahoga River or along the wooded slopes of the valleys. Although these areas would not be generally suitable for construction of buildings, activities such as filling would have an impact.

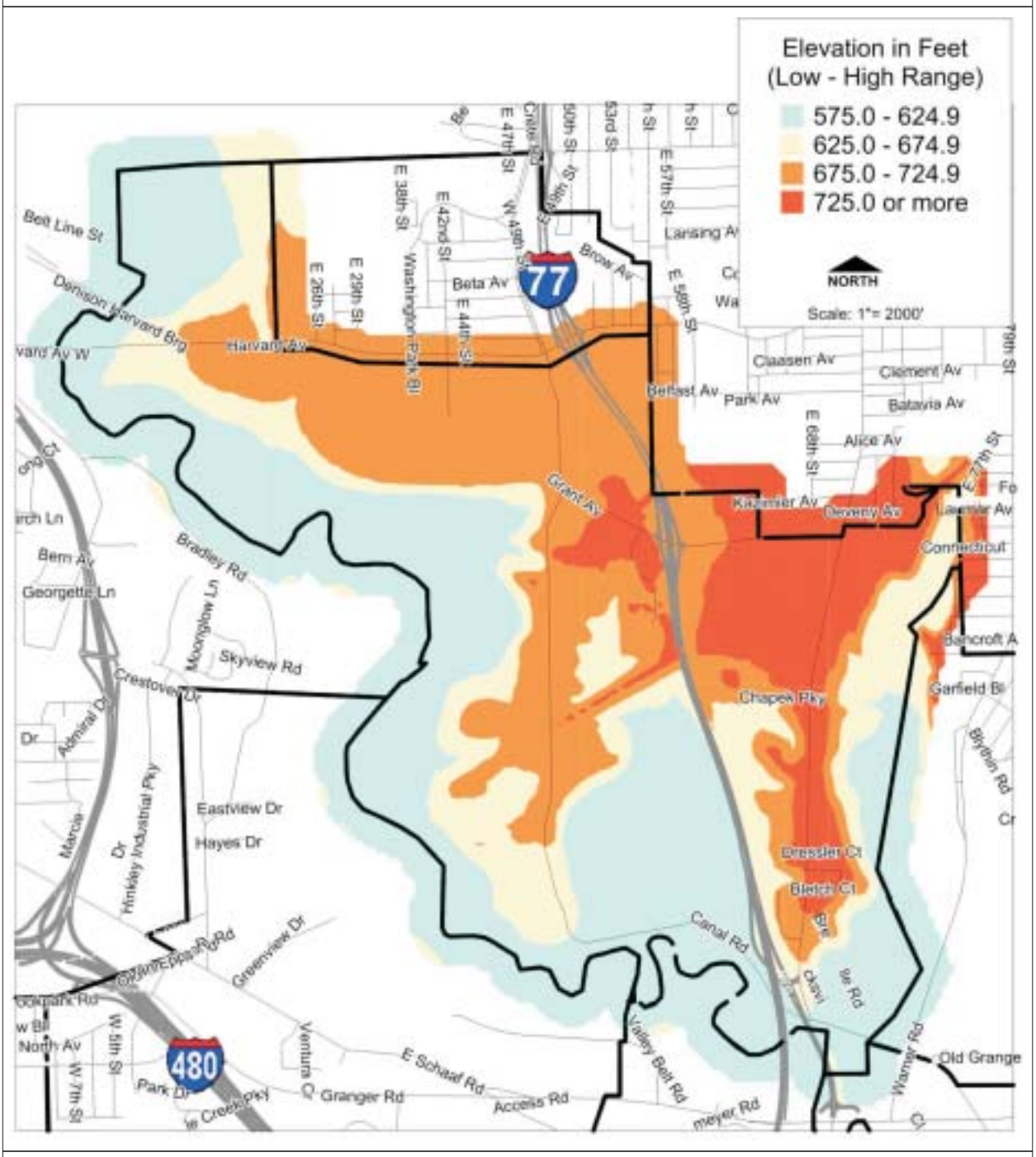
It is important to note that Map 3-2 provides general locations of areas that may be wetlands. Site specific verification of wetland conditions is required for development projects. In addition, new development within the village, as well as new development that has occurred upstream of Cuyahoga Heights in the watershed of the Cuyahoga River, may have changed the extent of the general wetland areas.

Steep Slopes

Steep slopes are generally defined as land with a slope of 12% or more. Areas of steep slopes usually have higher site preparation costs due to additional engineering work and construction such as cutting, filling, erosion control, and slope reinforcement. The numerous steep slopes in Cuyahoga Heights are part of the Cuyahoga River Valley and the Mill Creek Valley. ***Map 3-2*** shows topography changes in ten-foot increments, as provided by the U.S. Geologic Survey. The closer together that the topographic lines are arranged, the steeper the slope. This data does not reflect fill activities that have occurred in the past generation, such as the landfill west of Willow Parkway.

In terms of elevation, the highest portion of the village is the area along East 71st Street and Grant Avenue east of I-77 (***Map 3-3***). The terrain then drops steadily 100 to 150 feet into the Cuyahoga River and Mill Creek Valleys.

Map 3-3, Elevation, Cuyahoga Heights



Source: U.S. Geologic Survey, Digital Elevation Model (7.5 Minute Quadrangle)

CHAPTER FOUR

ECONOMIC DEVELOPMENT AND MARKET ANALYSIS

INTRODUCTION

The industrial sector is the most important component of the economy of Cuyahoga Heights. The retention and expansion of this sector, as well as selected broadening into areas such as office uses, are important to maintaining the economic viability of the Village.

This chapter examines trends and conditions in terms of the regional market and looks at how those relate on a local level. The existing inventory of industrial establishments in Cuyahoga Heights is profiled, including square footage, property tax delinquency, and property currently for sale or lease. The amount of recent new commercial, office, and industrial space that has been developed in the area is reviewed, and the most recent traffic counts for both total vehicles and trucks is examined. The final section includes a listing of economic development incentives and programs that are available within Cuyahoga Heights.

Development and redevelopment strategies for specific industrial locations and corridors will be addressed in Chapter 7, *Alternative Development Plans.*

CURRENT REGIONAL CONDITIONS AND TRENDS

Industrial Market

Layoffs, weak manufacturing sectors, and failed technology companies have not significantly affected the national industrial market vacancy rate. The national industrial vacancy rate declined to 5.9% during the fourth quarter, 2000, dropping below 6% for the first time since 1985 (Grubb & Ellis, 2001). In the Cleveland area, overall industrial space vacancy at the end of 2000 was 8.9%, rising to 10.9% at the end of the second quarter, 2001. In the section of the metropolitan area that includes Cuyahoga Heights, which extends from the I-77/I-480 vicinity southward along the I-77 corridor to Summit County, the overall industrial space vacancy at the end of 2000 was 9.3%, rising to 13.0% at the end of the second quarter, 2001 (Colliers International, 2001). There has been a decline in the need for manufacturing and distribution space across a broad spectrum of industries, as demand for production has slowed and inventory levels have risen. It is anticipated that vacancy rates will not rise dramatically from the current levels. Specifically for Cuyahoga Heights, there is also the issue of the ongoing viability of the local steel industry.

For the near term, the Cleveland industrial market is predicted to have reduced activity and basically flat rents. Demand for industrial space however, is closely linked to larger economic trends such as retail sales, international trade flows, and manufacturing output, as opposed to employment growth (Grubb & Ellis, 2001). Fully developed communities such as Cleveland and inner ring suburbs have had a more difficult time attracting and retaining industries which favor large, single-story plant layouts and easily accessed interstate locations.

New industrial construction completed during 2000 in the Cleveland area totalled 1.9 million square feet. Speculative building projects are almost nonexistent, reflecting the conservative approach of local developers and lenders to have tenant agreements in place prior to construction. The majority of the new construction in the Cleveland area has involved buildings of 50,000 square feet or less (Colliers International, 2001).

Average asking industrial lease rates for metropolitan Cleveland range from $5.39 per square foot for warehouse-distribution to $9.62 per square foot for research and development-flex space (Grubb & Ellis, 2001). An estimate for average asking lease rates for warehouse-distribution space in the portion of the metropolitan area that includes Cuyahoga Heights is about $4.50 per square foot (Colliers International, 2001).

A number of mergers, acquisitions, and bankruptcies in the metropolitan area have created excess industrial floor space, which may lower asking rental rents. In addition, reductions in lease rates and sale prices are beginning to be more prevalent, as a direct response to the slow economy. Similar to new construction, the majority of leasing of existing

buildings is occurring in the 50,000 square feet and under category.

Office Market

The office market vacancy rates, both nationally and for the metropolitan Cleveland area, are basically stable. At the end of 2000, the national vacancy rate was 10.4%, compared to 13.8% for the Cleveland area. At the end of the second quarter, 2001, the vacancy rate for metropolitan Cleveland was 14.0%. In the section of the metropolitan area that includes Cuyahoga Heights, which extends from the I-77/I-480 vicinity southward along the I-77 corridor to Summit County, the overall office space vacancy at the end of 2000 was 18.1%, decreasing to 17.1% at the end of the second quarter, 2001 (Colliers International, 2001).

In the near term, the 40 million square foot Cleveland office market shows little movement, with only a moderate demand for existing space, limited new construction, steady vacancy rates, and stable asking lease rates. Sublease opportunities continue to be a problem in the market, as some tenants have downsized or moved and given back significant portions of leased space. The vacancy rates listed above do not include occupied, but available, sublease space (Colliers International, 2001).

For the future, developers continue to have an optimistic view of the Cleveland area market, with almost one million square feet of planned construction. Some of this proposed construction has been delayed however, while developers wait to secure tenants prior to construction (Colliers International, 2001).

The lease rate for office space is influenced by whether the building is classified as either A, B, or C, which relates to design and functionality, year of construction, and building location:

- ✓ Class A buildings are usually new or only a few years old, with state-of-the-art functionality and architectural design, infrastructure, life safety, and mechanical systems. These buildings are also located in the most sought-after areas and typically command the highest rents.
- ✓ Class B buildings are usually highly functional, well-located facilities more than ten years old. These buildings generally have a less desirable design and infrastructure than Class A buildings, although a well-located Class B building can be renovated and reclassified as an A.
- ✓ Class C buildings are more than 25 years old and have not been renovated. Class C buildings are functionally and architecturally obsolete, located in less desirable areas, and have the lowest rents of the three classes. It is not likely that a Class C building could be rehabilitated to A status, regardless of its location.

Current average asking office lease rates for the metropolitan area of Cleveland are $23.65 per square foot per year for Class A space and $17.45 per square foot per year for Class B space (Grubb & Ellis, 2001). An estimate for average asking office lease rates for space in the portion of the metropolitan area that includes Cuyahoga Heights is about $22.00-23.00 for Class A office space, $18.00-$19.00 for Class B office space, and about $15.00 for Class C office space (Colliers International, 2001).

New Construction

Within the past five years, there has been a variety of new commercial, office, and industrial/warehouse construction in Cuyahoga Heights and nearby communities. ***Exhibit 4-1*** provides detailed information for the years 1996 through 2000. In the industrial/warehouse category, although Cuyahoga Heights has not had as many individual projects as other communities such as Garfield Heights or Valley View, the total construction valuation of almost $28 million has been the highest. The data also shows that in the office category, Brooklyn Heights, Garfield Heights, and Independence have had 19 new projects valued at almost $96 million. These three communities share the same locational attributes as Cuyahoga Heights, and it may be possible in the future to encourage office development at strategic locations in the Village.

Exhibit 4-1, New Construction, Commercial, Office and Industrial Space, Cuyahoga Heights and Selected Communities, 1996-2000

	Commercial		Office		Industrial/Warehouse	
	Number of Permits	Construction Valuation	Number of Permits	Construction Valuation	Number of Permits	Construction Valuation
Cuyahoga Heights	0	$0	0	$0	6	$27,845,000
Brooklyn Heights	0	$0	3	$2,398,000	5	$2,760,000
Garfield Heights	2	$3,134,540	7	$4,804,000	20	$17,581,348
Independence	3	$29,333,000	9	$88,769,000	0	$0
Newburgh Heights	not provided					
Valley View	2	$13,400,000	0	$0	23	$25,637,764

SOURCE: Building Departments of each community

LOCATIONAL FACTORS AFFECTING BUSINESS DISTRICTS

Locational factors, such as easy access to freeways and railroads, the presence of major arterial streets, high traffic volume, and established markets for the products offered, have been important in the development and growth of business districts. Cuyahoga Heights has these assets.

Accessibility

Cuyahoga Heights enjoys good access to major arterial roads, interstate highways, and airports. The main north-south roads are East 49th Street and East 71st Street. The main east-west arterial route is Grant Avenue. Harvard Avenue, part of which is not located in Cuyahoga Heights, serves a significant industrial district within the community. Interstate 77 access is directly available at the Brecksville Road (northbound only), Grant Avenue, and Harvard Avenue interchanges. Interstate 480 access is available via Interstate 77 or via Granger Road to East 98th Street/Transportation Boulevard. From the Grant Avenue interchange of Interstate 77, it is approximately 5 miles to downtown Cleveland, approximately 13 miles to the Ohio Turnpike and approximately 11 miles to Cleveland Hopkins International Airport, with the entire route via interstate highways.

Several existing Greater Cleveland Regional Transit Authority routes serve Cuyahoga Heights. Routes 10, 16 and 50 serve Harvard Avenue. Route 10 utilizes East 93rd Street, Woodhill Road, and East 105th Street to Lake Shore Boulevard. Route 16 uses East 55th Street and terminates near Cuyahoga Community College. Route 50 continues two directions. To the west, the route utilizes Pearl Road, Memphis Avenue, and West 117th Street, ending at the Gold Coast in Lakewood. To the east, the route uses Harvard Avenue and East 116th Street, terminating in University Circle. In addition, the 77F route provides limited "reverse commute" service on Grant Avenue west of Interstate 77, East 49th Street south of Grant Avenue, and Canal Road. This service includes two southbound buses in the morning and two northbound buses in the afternoon. Finally, Community Circulator Bus Route 805, which serves the Slavic Village area of Cleveland, also includes East 71st Street as far south as the Cuyahoga Heights Village Hall as part of its route.

Traffic Volume

Total Vehicles

The major intersections in Cuyahoga Heights carry a significant amount of traffic. The *2000 Cuyahoga County Engineer's Office Annual Report of Intersection Vehicle Counts* contains twenty-four hour estimates of total vehicle volume, showing the three most recent counts. The dates of the most recent intersection counts in Cuyahoga Heights range from 1993 to 2000.

The most heavily traveled intersections involve the Interstate 77 interchanges (***Map 4-1***). For example, the various segments of Harvard Avenue between Washington Park Boulevard and East 55th Street carry between 17,000 and 25,000 vehicles per day. The Brecksville Road/East 71st Street interchange carries about 18,000 vehicles per day, and the Grant Avenue interchange has about 12,000 vehicles per

day. Intersections with lower vehicle counts include Grant Avenue/East 71st Street (9,500 vehicles), Harvard Avenue/Harvard-Denison Bridge (9,000 vehicles), Canal Road/East 71st Street (7,500 vehicles), and Grant Avenue/East 49th Street (6,500 vehicles).

Exhibit 4-2 provides greater detail for the traffic counts by displaying the number of vehicles traveling on various segments of streets. Overall, the Village shows situations of both rising and declining traffic counts. For example, comparing the most recent count to the third most recent count shows traffic increases along Grant Avenue at East 49th Street, Interstate 77, and East 71st Street, as well as the vicinity of Canal Road and East 71st Street. On Harvard Avenue, traffic has increased east of the freeway interchange, but has dropped dramatically west of the interchange all the way to Jennings Road. The variations in traffic trends from the 1980's to the present are primarily attributable to changes in employment locations within Cuyahoga Heights and nearby areas in surrounding communities.

Trucks

Trucks are also a major component of the total vehicles in Cuyahoga Heights. The *2000 Cuyahoga County Engineer's Office Annual Report of Intersection Vehicle Counts* contains twenty-four hour estimates of truck volume, showing the three most recent counts. The dates of the most recent intersection counts in Cuyahoga Heights range from 1993 to 2000. In this report, truck traffic is listed as the "percent of all vehicles." This percentage can be multiplied by the vehicle volume count to convert it to an estimated number of trucks.

Exhibit 4-3 provides greater detail for the truck counts by displaying the estimated number of trucks traveling on various segments of streets. Roughly, about 17% of all traffic in the Village is trucks. Similar to total vehicles, the Village shows situations of both rising and declining truck counts.

Generally, the most heavily traveled intersections for trucks involve the Interstate 77 interchanges. For example, the various segments of Harvard Avenue between Washington Park Boulevard and East 55th Street carry 3,500-4,500 trucks per day (about 15%-25% of all vehicles). The Grant Avenue interchange has about 2,000 trucks per day (about 15%-20% of all vehicles). Intersections with lower truck counts include Grant Avenue/East 71st Street (900-1,000 trucks per day, about 10% of all vehicles), Grant Avenue/East 49th Street (800-1,500 trucks, about 15%-25% of all vehicles), Old Harvard Avenue (800-900 trucks, about 30% of all vehicles), and Canal Road/East 71st Street (400-700 trucks, about 6%-9% of all vehicles).

Comparing the most recent count to the third most recent count shows truck increases along Grant Avenue at East 49th Street, Interstate 77, and East 71st Street. On Harvard Avenue, truck traffic has increased significantly east of the freeway interchange, but has dropped dramatically in the vicinity of old Harvard to Jennings Road. As with total vehicles, the variations in truck traffic trends from the 1980's to the present are primarily attributable to changes in employment locations within Cuyahoga Heights and nearby areas in surrounding communities.

EXISTING INDUSTRIAL AND OFFICE SPACE INVENTORY

Overall, there are approximately 72 manufacturing, warehouse/storage, and office properties in Cuyahoga Heights. These structures occupy approximately 11.5 million square feet of space (***Exhibit 4-4***). As of September, 2001, a total of 12 properties with about 1 million square feet of space is actively on the market for sale or lease, representing about 9% of all space. This percentage is relatively consistent with the regional real estate market information discussed earlier, however it does not take into consideration vacant space or chronically underutilized space that is not on the market. In addition, there are 34 non-residential parcels within the Village that are delinquent in the payment of property taxes.

Exhibit 4-5 displays specific information about the properties currently available for sale or lease. Generally, entire properties are available, reflecting the one tenant status of many buildings. One of the

Map 4-1, Twenty-four Hour Vehicle Volume Counts, by Intersection, Cuyahoga Heights

SOURCE: Cuyahoga County Engineer (Most recently available counts shown)

Exhibit 4-2, Twenty-four Hour Vehicle Volume Counts, Cuyahoga Heights

Major Street/ Minor Street	Station #	Twenty-Four Hour Vehicle Volume Count						Change Between Most Recent and Second Most Recent		Change Between Most Recent and Third Most Recent	
		Most Recent Volume		Second Most Recent Volume		Third Most Recent Volume					
		Vehicle Volume	Date	Vehicle Volume	Date	Vehicle Volume	Date	#	%	#	%
Canal Road											
east of East 71st Street	360	9,929	07/20/94	8,344	07/22/86	6,125	03/08/83	1,585	19.0%	3,804	62.1%
west of East 71st Street	360	3,770	07/20/94	4,214	07/22/86	2,646	03/08/83	-444	-10.5%	1,124	42.5%
East 49th Street											
north of Grant Avenue	1141	5,036	04/16/96	6,497	07/24/91	6,189	07/16/87	-1,461	-22.5%	-1,153	-18.6%
south of Grant Avenue	1141	5,550	04/16/96	6,047	07/24/91	4,780	07/16/87	-497	-8.2%	770	16.1%
north of Harvard Avenue	100	6,948	05/31/00	8,415	09/01/93	7,927	07/31/89	-1,467	-17.4%	-979	-12.4%
south of Harvard Avenue	100	7,024	05/31/00	9,465	09/01/93	7,708	07/31/89	-2,441	-25.8%	-684	-8.9%
East 71st Street											
north of Canal Road	360	7,486	07/20/94	5,188	07/22/86	4,997	03/08/83	2,298	44.3%	2,489	49.8%
north of Grant Avenue	93	10,098	04/19/96	8,644	07/31/89	8,767	07/22/86	1,454	16.8%	1,331	15.2%
south of Grant Avenue	93	8,000	04/19/96	5,772	07/31/89	8,029	07/22/86	2,228	38.6%	-29	-0.4%
north of I-77 ramp	1655	2,857	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
south of I-77 ramp	1655	4,717	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Grant Avenue											
east of East 49th Street	1141	6,334	04/16/96	5,515	07/24/91	5,726	07/16/87	819	14.9%	608	10.6%
west of East 71st Street	93	8,964	04/19/96	7,662	07/31/89	8,096	07/22/86	1,302	17.0%	868	10.7%
east of I-77 east ramp	1509	12,758	04/18/96	12,627	07/16/87	11,361	07/16/84	131	1.0%	1,397	12.3%
west of I-77 east ramp	1509	12,256	04/18/96	10,860	07/16/87	10,136	07/16/84	1,396	12.9%	2,120	20.9%
east of I-77 west ramp	1510	12,481	04/17/96	10,529	07/16/87	10,184	07/16/84	1,952	18.5%	2,297	22.6%
west of I-77 west ramp	1510	10,038	04/17/96	7,885	07/16/87	7,708	07/16/84	2,153	27.3%	2,330	30.2%
Harvard Avenue											
west of East 49th Street	100	14,405	05/31/00	23,430	09/01/93	24,242	07/31/89	-9,025	-38.5%	-9,837	-40.6%
east of East 49th Street	100	19,145	05/31/00	29,630	09/01/93	26,818	07/31/89	-10,485	-35.4%	-7,673	-28.6%
west of East 55th Street	212	21,791	09/03/93	21,449	08/16/90	18,234	07/16/87	342	1.6%	3,557	19.5%
eastbound acr. Harv-Den Bridge	625	11,963	06/26/00	17,385	08/31/92	22,371	08/16/90	-5,422	-31.2%	-10,408	-46.5%
westbound on "Old" Harvard	625	2,857	06/26/00	4,473	08/31/92	5,411	08/16/90	-1,616	-36.1%	-2,554	-47.2%
east of Jennings Road	1132	3,126	06/04/99	3,891	07/07/92	6,304	08/01/89	-765	-19.7%	-3,178	-50.4%
west of Washington Park Blvd.	185	15,434	08/31/93	28,309	07/31/89	30,134	07/23/86	-12,875	-45.5%	-14,700	-48.8%
east of I-77 east ramp	1508	27,728	09/02/93	22,358	08/16/90	22,618	07/16/87	5,370	24.0%	5,110	22.6%
west of I-77 east ramp	1508	28,024	09/02/93	23,348	08/16/90	26,960	07/16/87	4,676	20.0%	1,064	3.9%
east of I-77 west ramp	1507	19,872	05/31/00	27,724	09/02/93	23,335	08/16/90	-7,852	-28.3%	-3,463	-14.8%
west of I-77 west ramp	1507	20,570	05/31/00	31,126	09/02/93	26,551	08/16/90	-10,556	-33.9%	-5,981	-22.5%
Interstate 77											
entering northbound at East 71	1655	2,790	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
exiting northbound at East 71	1655	1,366	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
exiting northbound at Grant	1509	6,941	04/18/96	5,944	07/16/87	5,727	07/16/84	997	16.8%	1,214	21.2%
entering northbound at Grant	1509	3,261	04/18/96	2,475	07/16/87	2,134	07/16/84	786	31.8%	1,127	52.8%
exiting southbound at Grant	1510	2,773	04/17/96	2,895	07/16/87	2,206	07/16/84	-122	-4.2%	567	25.7%
entering southbound at Grant	1510	8,067	04/17/96	5,870	07/16/87	4,850	07/16/84	2,197	37.4%	3,217	66.3%
exiting northbound at Harvard	1508	8,075	09/02/93	7,297	08/16/90	9,919	07/16/87	778	10.7%	-1,844	-18.6%
entering northbound at Harvard	1508	4,932	09/02/93	3,644	08/16/90	4,533	07/16/87	1,288	35.3%	399	8.8%
exiting southbound at Harvard	1507	5,404	05/31/00	4,017	09/02/93	3,615	08/16/90	1,387	34.5%	1,789	49.5%
entering southbound at Harvard	1507	9,443	05/31/00	11,904	09/02/93	10,697	08/16/90	-2,461	-20.7%	-1,254	-11.7%

Source: *Cuyahoga County Engineer's Office Annual Report of Intersection Vehicle Counts*, Cuyahoga County Engineer's Office, 2000

Exhibit 4-3, Twenty-four Hour Truck Volume Counts, Cuyahoga Heights

Major Street/Minor Street	Station #	Twenty-Four Hour Truck Volume Count									Change Between Most Recent and Second Most Recent		Change Between Most Recent and Third Most Recent	
		Most Recent Truck Volume			Second Most Recent Truck Volume			Third Most Recent Truck Volume						
		Estimated Number	% Of All Vehicles	Date	Estimated Number	% Of All Vehicles	Date	Estimated Number	% Of All Vehicles	Date	#	%	#	%
Canal Road														
east of East 71st Street	360	695	7%	07/20/94	1,001	12%	07/22/86	613	10%	03/08/83	-306	-30.6%	83	13.5%
west of East 71st Street	360	339	9%	07/20/94	548	13%	07/22/86	344	13%	03/08/83	-209	-38.1%	-5	-1.4%
East 49th Street														
north of Grant Avenue	1141	806	16%	04/16/96	650	10%	07/24/91	866	14%	07/16/87	156	24.0%	-61	-7.0%
south of Grant Avenue	1141	1,166	21%	04/16/96	665	11%	07/24/91	1,004	21%	07/16/87	500	75.2%	162	16.1%
north of Harvard Avenue	100	417	6%	05/31/00	421	5%	09/01/93	317	4%	07/31/89	-4	-0.9%	100	31.5%
south of Harvard Avenue	100	1,686	24%	05/31/00	1,893	20%	09/01/93	848	11%	07/31/89	-207	-10.9%	838	98.8%
East 71st Street														
north of Canal Road	360	449	6%	07/20/94	623	12%	07/22/86	500	10%	03/08/83	-173	-27.9%	-51	-10.1%
north of Grant Avenue	93	909	9%	04/19/96	605	7%	07/31/89	526	6%	07/22/86	304	50.2%	383	72.8%
south of Grant Avenue	93	880	11%	04/19/96	577	10%	07/31/89	642	8%	07/22/86	303	52.5%	238	37.0%
north of I-77 ramp	1655	57	2%	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
south of I-77 ramp	1655	425	9%	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Grant Avenue														
east of East 49th Street	1141	1,520	24%	04/16/96	882	16%	07/24/91	1,260	22%	07/16/87	638	72.3%	260	20.7%
west of East 71st Street	93	986	11%	04/19/96	766	10%	07/31/89	729	9%	07/22/86	220	28.7%	257	35.3%
east of I-77 east ramp	1509	2,169	17%	04/18/96	1,389	11%	07/16/87	1,591	14%	07/16/84	780	56.1%	578	36.4%
west of I-77 east ramp	1509	2,206	18%	04/18/96	1,303	12%	07/16/87	1,318	13%	07/16/84	903	69.3%	888	67.4%
east of I-77 west ramp	1510	2,122	17%	04/17/96	1,790	17%	07/16/87	1,528	15%	07/16/84	332	18.5%	594	38.9%
west of I-77 west ramp	1510	2,008	20%	04/17/96	1,577	20%	07/16/87	1,310	17%	07/16/84	431	27.3%	697	53.2%
Harvard Avenue														
west of East 49th Street	100	3,601	25%	05/31/00	4,920	21%	09/01/93	3,151	13%	07/31/89	-1,319	-26.8%	450	14.3%
east of East 49th Street	100	4,403	23%	05/31/00	5,630	19%	09/01/93	3,218	12%	07/31/89	-1,226	-21.8%	1,185	36.8%
west of East 55th Street	212	2,615	12%	09/03/93	2,359	11%	08/16/90	1,459	8%	07/16/87	256	10.8%	1,156	79.3%
eastbound acr. Harv-Den Bridge	625	2,153	18%	06/26/00	2,782	16%	08/31/92	3,132	14%	08/16/90	-628	-22.6%	-979	-31.2%
westbound on "Old" Harvard	625	800	28%	06/26/00	1,387	31%	08/31/92	1,461	27%	08/16/90	-587	-42.3%	-661	-45.2%
east of Jennings Road	1132	907	29%	06/04/99	1,128	29%	07/07/92	1,639	26%	08/01/89	-222	-19.7%	-733	-44.7%
west of Washington Park Blvd.	185	2,315	15%	08/31/93	4,246	15%	07/31/89	3,013	10%	07/23/86	-1,931	-45.5%	-698	-23.2%
east of I-77 east ramp	1508	4,159	15%	09/02/93	2,683	12%	08/16/90	2,262	10%	07/16/87	1,476	55.0%	1,897	83.9%
west of I-77 east ramp	1508	4,764	17%	09/02/93	3,269	14%	08/16/90	2,966	11%	07/16/87	1,495	45.7%	1,798	60.6%
east of I-77 west ramp	1507	3,974	20%	05/31/00	4,436	16%	09/02/93	3,734	16%	08/16/90	-461	-10.4%	241	6.4%
west of I-77 west ramp	1507	4,731	23%	05/31/00	5,291	17%	09/02/93	4,514	17%	08/16/90	-560	-10.6%	217	4.8%
Interstate 77														
entering northbound at East 71	1655	363	13%	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
exiting northbound at East 71	1655	55	4%	07/20/94	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
exiting northbound at Grant	1509	1,319	19%	04/18/96	773	13%	07/16/87	859	15%	07/16/84	546	70.7%	460	53.5%
entering northbound at Grant	1509	815	25%	04/18/96	470	19%	07/16/87	512	24%	07/16/84	345	73.4%	303	59.2%
exiting southbound at Grant	1510	666	24%	04/17/96	666	23%	07/16/87	375	17%	07/16/84	-0	-0.0%	290	77.5%
entering southbound at Grant	1510	1,210	15%	04/17/96	939	16%	07/16/87	825	17%	07/16/84	271	28.8%	386	46.8%
exiting northbound at Harvard	1508	1,131	14%	09/02/93	1,459	20%	08/16/90	1,389	14%	07/16/87	-329	-22.5%	-258	-18.6%
entering northbound at Harvard	1508	1,036	21%	09/02/93	692	19%	08/16/90	771	17%	07/16/87	343	49.6%	265	34.4%
exiting southbound at Harvard	1507	1,243	23%	05/31/00	844	21%	09/02/93	795	22%	08/16/90	399	47.3%	448	56.3%
entering southbound at Harvard	1507	1,511	16%	05/31/00	1,548	13%	09/02/93	1,605	15%	08/16/90	-37	-2.4%	-94	-5.8%

Source: *Cuyahoga County Engineer's Office Annual Report of Intersection Vehicle Counts*, Cuyahoga County Engineer's Office, 2000

largest facilities on the list at almost 300,000 square feet of space, the former Cotton Club plant, is currently under contract for sale to a new owner. The lease asking rates, ranging from about $3.00-$4.25 per square foot, are somewhat below the current average rate for the area of $4.50 per square foot noted by Colliers International, which is due at least in part to the age of the buildings in Cuyahoga Heights.

Exhibit 4-6 contains a detailed list of the 24 parcels–either with buildings or vacant land–that are currently delinquent on a total of $708,565 in property taxes. This information does not indicate whether a property owner is not making payments at all or has arranged a repayment schedule to clear the delinquency. The three largest delinquent amounts involve LTV Steel ($521,653), Standard Oil Company or BP ($33,824), and two parcels owned by NR Company ($24,877).

Exhibit 4-4, Industrial and Office Space Inventory, Cuyahoga Heights, 2001

Street	Number of Properties (Square Feet)	Total Floor Space (Square Feet)	Floor Space Available for Lease or Sale (Square Feet)	Percent	Property Tax Delinquency	
					Number of Properties	Amount
Chapek Parkway	1	138,331	0	0.0%	0	$0
East 49th Street (north of railroad overpass)	8	2,656,784	0	0.0%	3	$283,907
East 49th Street (south of railroad overpass)	3	458,748	297,595	64.9%	2	$54,864
East 71st Street (Grant Ave. to Chapek Pkwy.)	10	1,165,672	94,300	8.1%	1	$8,605
Grant Avenue (east of I-77)	6	826,725	175,945	21.3%	0	$0
Grant Avenue (west of I-77)	10	453,544	184,300	40.6%	4	$16,178
Grant Parkway	1	50,292	0	0.0%	0	$0
Harvard Avenue (east of I-77)	3	271,744	150,000	55.2%	0	$0
Harvard Avenue (east of I-77 - rear)	1	255,357	0	0.0%	0	$0
Harvard Avenue (west of I-77)	13	4,689,653	19,620	0.4%	1	$3,726
Nikky Boulevard	1	22,560	0	0.0%	0	$0
Willow Parkway	15	500,735	69,300	13.8%	0	$0
Other Locations	not applicable	not applicable	not applicable	not applicable	23	$15,536
Total	72	11,490,145	991,060	8.6%	34	$382,816

Source: Cuyahoga County Auditor's Office, July, 2001; Cuyahoga County Planning Commission, August, 2001

Exhibit 4-5, Property for Sale or Lease, Non-Residential Parcels, Cuyahoga Heights, August, 2001

Ref	Parcel	Address	Land Use	Status	Space Available (Square Feet)		Asking Terms
E	521 18 007	4922 East 49 St.	Food/Drink Processing	Sale/under contract	297,595	100% of property	$5,995,000 - asking price
F	522 10 018	4540 East 71 St.	Heavy Industry (Cuy. Foundry)	Lease	60,000	100% of property	$1.00 - $1.25/sf - improvements needed
F	522 10 018	4540 East 71 St.	Light Industrial (AFLAC)	Lease	17,800	100% of property	$4.00/sf
G	522 10 019	4558-80 East 71 St.	Light Industrial	Lease	16,500	20% of property	$5.00/sf -warehouse; $10.00/sf - office (gross)
D	522 07 005	5301 Grant Ave.	Light Industrial	Lease	184,300	100% of property	not provided
I	522 01 006	5711 Grant Ave.	Office	Sale	35,945	100% of property	not provided
H	522 01 005	6551 Grant Ave.	Light Industrial	Lease	140,000	43% of property	$3.25/sf
K	521 05 004	550 Harvard Ave.	Truck Terminal	Sale or Lease	19,620	100% of property	$9,000/month (about $5.50/sf)
J	522 03 001	5300 Harvard Ave.	Light Industrial	Sale or Lease	150,000	100% of property	$3.00/sf or $2,800,000 purchase
A	522 08 036	4540 Willow Pkwy.	Light Industrial	Sale or Lease	25,000	100% of property	$4.50/sf or $937,500 purchase
B	522 08 039	4582 Willow Pkwy.	Light Industrial	Lease	35,300	100% of property	$4.25/sf
C	522 08 032	4501 WIllow Pkwy.	Light Industrial	Lease	9,000	25% of property	$3.50/sf
				Total	**991,060**		

Source: Cuyahoga County Planning Commission

Exhibit 4-6, Property Tax Delinquency, Non-Residential Parcels, Cuyahoga Heights

Parcel	Address	Land Use	Amount of Delinquent Property Tax	Owner	City of Tax Mailing Address
521 01 001	Harvard Ave	Heavy Industry	$521,653	LTV Steel	Cuyahoga Heights Ohio
521 11 012	East 49 St.	Vacant Land	$66	Board Of Park Commissioners	Cuyahoga Heights, Ohio
521 11 014	East 49 St.	Vacant Land	$104	Board Of Park Commissioners	Cleveland Ohio
521 16 004	4700 East 49 St.	Light Industrial	$3,279	Northeast Ohio Regional Sewer District	Cleveland Ohio
521 12 002	4300 East 49 St.	Vacant Land	$18,539	United States Steel Corp. (AS&W Corp.)	Cuyahoga Heights, Ohio
521 13 013	East 49 St.	Vacant Land	$2,653	Board Of Park Commissioners	Cleveland Ohio
521 16 002	4850 East 49 St.	Bulk Oil Storage Facility	$25,504	Standard Oil Co.	Chicago, Illinois
521 17 002	4850 East 49 St.	Vacant Land	$3,729	Standard Oil Co.	San Antonio, Texas
521 18 007	4922 East 49 St.	Light Industrial	$23,962	NR Co.	Maple Heights, Ohio
521 18 012	East 49 St.	Vacant Land	$915	NR Co.	Maple Heights, Ohio
521 18 013	4922 East 49 St.	Food/Drink Processing	$993	Cotton Club Bottling Company	Maple Heights, Ohio
522 02 008	4950 Harvard Ave.	Light Industrial	$4,591	BP Exploration & Oil, Inc.	Cuyahoga Heights Ohio
522 07 005	5307 Grant Ave.	Light Industrial	$15,226	5307 Grant LLC	Cleveland Ohio
522 08 041	Willow Pkwy.	Vacant Land	$14	Newburgh & South Shore RR	Cuyahoga Heights, Ohio
522 09 007	4521 Willow Pkwy.	Light Industrial	$6,956	Victory Tube Co.	Cuyahoga Heights, Ohio
522 11 009	4747 East 49 St.	Utility	$70,683	Northeast Ohio Regional Sewer District	Cleveland Ohio
522 12 001	East 71 St. (near I-77)	Vacant Land	$1,451	New York Central RR	Cuyahoga Heights, Ohio
522 18 006	4972 East 71 St.	Party Center	$2,368	Lodge No. 16 24 67 Corp.	Cuyahoga Heights, Ohio
522 19 001	East 71 St.	Vacant Land	$407	P P Properties, Inc.	Cuyahoga Heights, Ohio
522 24 016	5000 East 71 St.	Vacant Land	$189	General Chemical Corp.	Parsippany, New Jersey
522 24 027	East 71 St. (Rear)	Vacant Land	$731	Warner Hill Development Co.	East Palestine, Ohio
522 25 006	East 71 St. (Rear)	Vacant Land	$1,367	Warner Hill Development Co.	East Palestine, Ohio
522 25 007	East 71 St. (Rear)	Vacant Land	$1,376	Warner Hill Development Co.	East Palestine, Ohio
522 26 012	East 71 St. (Rear)	Vacant Land	$1,809	Warner Hill Development Co.	East Palestine, Ohio
	24	**Total**	**$708,565**		

Source: Cuyahoga County Auditor's Office, April, 2002

ECONOMIC DEVELOPMENT INCENTIVES AND PROGRAMS

There are a number of business incentives and programs that are available to businesses in Cuyahoga Heights through the Cuyahoga County Department of Development and the State of Ohio.

Cuyahoga County Department of Development

As a member of the Cuyahoga Urban County, Cuyahoga Heights, and businesses located in or moving to Cuyahoga Heights, are eligible to receive technical assistance and/or participate in any of the following programs offered by the Cuyahoga County Department of Development.

Storefront Renovation Program

The Storefront Renovation Program assists businesses and property owners with interior and exterior improvements to their buildings through low interest loans, as well as grants for architectural services. This program is funded through Federal Community Development Block Grant Funds. Commercial buildings must be 1) located in designated Improvement Target Areas (ITA's) within Cuyahoga Urban County communities, or 2) qualify individually, based upon a point scoring system administered by the Cuyahoga County Department of Development, as having significant repair needs. (Note: Cuyahoga Heights has no ITA's. Buildings would be eligible to qualify individually).

Eligible *exterior improvements* include brick re-pointing and cleaning, painting, roof replacement, window and door replacement, and awning installation. The cost for signage may be included when the signage is affixed to the structure and building code improvements are made. Up to 20% of the total project cost may be applied to improvements to parking lots and sidewalks.

Interior improvements that are permitted include code items, such as electrical, plumbing, heating, and structural repairs.

Program Financing

Grants for architectural services are not to exceed $2,000 or 8% of material and labor costs.

Loans of up to $75,000 per parcel are made at negotiated, below prime, fixed interest rates for twelve years with monthly payments beginning six months after the loan closing.

Economic Development Loan Program

The Economic Development Loan Program provides low-interest loans to qualified businesses for business expansion for the purpose of creating additional jobs for Cuyahoga County residents and stimulating expansion of the community's tax base. This program is funded through Federal Community Development Block Grant Funds.

Business Financing

- ✓ This program offers long term, fixed-rate financing at interest rates lower than conventional financing. The interest rate could be as low as 4%. This provides a lower debt service on overall financing and decreases the cash flow burden. The program fills a financing gap by attracting private investment that would not have ordinarily occurred.

- ✓ Loans can be approved from a minimum of $35,000 to a maximum of $350,000. Loans do not exceed 40% of the total project cost. Loan terms are typically five to seven years on equipment, and up to fifteen years on land and buildings.

- ✓ Loans are used for fixed asset financing, such as acquisition of land, buildings, capital machinery and equipment, and construction, expansion, or conversion of facilities. Loans can also be used for infrastructure work related to business development, such as installation of an access road. Loans can not be used to refinance debt, purchase inventory, pay other non-capital costs, or for speculative projects.

- ✓ Loans may be used with other private and public funds. The County will take a subordinated collateral position to a bank provided there is adequate collateral (up to 90% Loan to Value ratio).

Business Requirements

- ✓ For-profit commercial, retail, industrial, or service businesses that expand or move to Cuyahoga County qualify for consideration if they are registered to do business in Ohio.

- ✓ Within three years of the loan closing, businesses are required to create one new, full-time, permanent job for every $35,000 loaned.

- ✓ The business must provide a minimum of 10% equity. The business owner or majority stockholder must provide a personal guarantee for the loan amount.

- ✓ A majority of the jobs created must be available to lower income persons, as defined by the federal government. The business must execute a first source hiring agreement with Cuyahoga County's Department of Work & Training.

Program Requirements

- ✓ When loan funds are used for construction, federal prevailing wage rates must be paid and an environmental review by the Cuyahoga County Department of Development must be conducted. The business must include qualified minority and female providers of services, materials, and equipment in its procurement process.

Competitive Municipal Grant Program

The Cuyahoga County Department of Development allocates some of the Federal CDBG funds it receives to Cuyahoga Urban County communities for eligible community development activities through the Competitive Municipal Grant Program.

Benefits

- ✓ This program enables local communities to tailor development activities to local needs.

- ✓ Funds can be used for a variety of activities, such as infrastructure improvements, community fa-

cility renovation, and neighborhood service programs.

- ✓ Up to $150,000 is awarded to a community on a competitive basis.

Eligibility

- ✓ Activities must benefit low-and moderate-income households, eliminate or prevent conditions of slums and blight, or meet another urgent community development need.

Program Requirements

- ✓ An application must be completed and submitted prior to the annual submission deadline.
- ✓ The community must conduct a public hearing to obtain citizen input and adopt a resolution authorizing submission of the application.

Application Ranking

When ranking applications, the Cuyahoga County Department of Development considers a number of factors, including:

- ✓ Leverage other public and private funds,
- ✓ Have a high ratio of direct beneficiaries to project cost,
- ✓ Include minority and women's business enterprise participation,
- ✓ Include municipal assurances of affirmative action in fair housing,
- ✓ Include proactive measures that remove barriers to affordable housing,
- ✓ Have demonstrated a capacity to properly administer the grant,
- ✓ Have a high level of citizen interaction in the planning process, and
- ✓ Contains a long term, permanent improvement that is measurable and sustainable.

Cuyahoga County Brownfields Redevelopment Fund

Administered by the Cuyahoga County Department of Development, the Brownfields Redevelopment Fund is specifically designed to overcome environmental barriers to reuse and obtain full use of underutilized commercial/industrial properties. This program, which became operational in 1999, is funded by a partnership that includes the Board of Cuyahoga County Commissioners, the State of Ohio, local governments, and private lending and philanthropic institutions.

Benefits

- ✓ Clean up and reuse of property will create and/or retain jobs.
- ✓ Up to $1 million is awarded per project.
- ✓ For loans made on properties for which the local government hold title, Cuyahoga County will subsidize a specific percentage of the project costs. For Cuyahoga Heights, the subsidy is 30%.
- ✓ Funds can be used for a variety of activities, including property appraisals, land acquisition, site clearance, demolition, and Phase I and II environmental testing, remediation, and costs associated with obtaining a Covenant Not to Sue under the Ohio Voluntary Action Program if such a covenant is sought.

Eligibility

- ✓ Sites with prior commercial or industrial usage which are eligible for the Voluntary Action Program (VAP) of the State of Ohio qualify for the program.
- ✓ Locations with housing, no prior development, or solid waste facilities do not qualify.

Program Requirements

- ✓ Eligible applicants are local governments of Cuyahoga County, Cuyahoga County, nonprofit community development corporations, and private developers/businesses.

State of Ohio Incentives and Programs

Community Reinvestment Area Designation

Community Reinvestment Areas are designated areas in which property owners can receive tax incentives in the form of tax exemptions on eligible new investments. The designation allows local officials to encourage new investment and revitalization of the building stock of the community, specifically targeting commercial, industrial, and/or residential property.

A municipality may designate an exemption of up to 100% of the assessed value of real property improvements for up to 15 years on new construction; up to twelve years on major renovation projects of at least $5,000 for commercial, industrial, and residential properties of three or more units; and up to ten years on major renovation projects of at least $2,500 for residential properties of one or two units. Under specific circumstances involving commercial and/or industrial properties, local board of education approval of the exemption is required. The tax incentives involve only new investment in real property; existing taxable property remains taxable at the current level.

At least thirteen communities in Cuyahoga County offer Community Reinvestment Area designations. Communities with Community Reinvestment Areas located in proximity to Cuyahoga Heights include:

- ✓ Brooklyn: various abatement percentages for various number of years in specific areas, with various eligibility combinations of new construction and/or renovation for residential, commercial, and/or industrial property
- ✓ Cleveland: various combinations of abatement percentages and number of years citywide for residential new construction and renovation
- ✓ Parma: 100% abatement citywide for residential, commercial, and/or industrial property; eight years for new construction and five years for renovation
- ✓ Valley View: 75% abatement citywide for commercial and industrial new construction and renovation, with the number of years based upon the number of full-time jobs created.

Ohio Enterprise Zone Program

Enterprise zones are designated areas in which businesses can receive tax incentives in the form of tax exemptions on eligible new investments. The designation allows local officials to negotiate individually with businesses to encourage new investment and serve as an economic development tool. To be eligible, a business must agree 1) to retain or create employment, and 2) establish, expand, renovate, or occupy a facility located in an Enterprise Zone. Any type of business, except retail, may receive incentives. Communities work with the Cuyahoga County Department of Development to finalize an application for the creation of a zone, and the Board of County Commissioners petitions the State of Ohio to make the designation. This program is administered by the Office of Tax Incentives of the Ohio Department of Development.

Businesses may receive up to a 75% exemption of the assessed value of real property improvements and/or personal property for up to 10 years. Businesses are also eligible for state franchise tax benefits through this program. The tax incentives involve only new investment in real or personal property; existing taxable property remains taxable at the current level. Companies must finalize an Enterprise Zone Agreement prior to project initiation and should apply to the municipality or the county for local property tax exemptions.

At least fifteen communities in Cuyahoga County offer Enterprise Zone certifications, including Cuyahoga Heights. Communities with Enterprise Zone certifications located in proximity to Cuyahoga Heights include:

Bedford: entire community.
Bedford Heights: most of community.
Cleveland: most of community.
Garfield Heights: entire community.
Maple Heights: entire community.
Oakwood: most of community.
Solon: western portion of community.
Valley View: entire community.

Relationship to Personal Property Taxes

The personal property tax is a tax levied annually by the State of Ohio. It is often referred to as the "inventory" tax, although that is not its official name. Personal property is defined as every tangible thing which is owned, except real property. Tangible personal property includes machinery and equipment, furniture and fixtures, small tools, supplies, and inventory held for manufacture or resale (Real property is defined as land, growing crops, all buildings, structures, improvements, and fixtures on the land). The value of the personal property is determined by the business filing the return, based upon requirements of the Ohio Revised Code and the Ohio Administrative Code, as well as rulings and guidelines set forth by the Ohio Department of Taxation.

The personal property tax rate is the same as the real property tax rate. Therefore, communities with high rates for real property taxes will also have correspondingly high personal property tax rates. The only way to reduce the tax owed by a business is through the State of Ohio's Enterprise Zone program, under which a community can abate a specified portion of the personal property tax due for a specified number of years on specified items, such as the purchase of new equipment.

166 Direct Loan

This program provides loans to companies for land and building acquisition, expansion or renovation, and equipment purchases. Preference is given to industrial projects. This program is administered by the Office of Financial Incentives of the Ohio Department of Development. Businesses may receive up to 30% of total eligible fixed costs ($1 million maximum, $350,000 minimum), although a higher loan amount or modified loan terms may be granted in distressed areas of the state. Companies receive two-thirds of the prime rate, fixed for five to fifteen years. In order to be eligible, companies must show repayment and management capabilities and must create or retain one job for every $15,000 received.

166 Regional Loan Program

Similar to the Direct Loan Program, the 166 Regional Loan Program provides loans to companies for land and building acquisition, expansion or renovation, and equipment purchases, as well as for other project-related soft costs. The program targets state financial assistance to industrial companies for smaller projects and is administered by the Office of Financial Incentives of the Ohio Department of Development. The regional program funds between 30% to 40% of total eligible fixed costs up to $350,000, and features a negotiable interest rate for a term of five to fifteen years. As in the 166 Direct Loan Program, companies must show repayment and management capabilities, but must create or retain one job for every $35,000 received. Locally determined fees may also apply.

Buckeye Fund Loan Program

The Buckeye Fund blends the 166 Direct Loan with the Ohio Enterprise Bond Fund programs and provides up to 75% of any one project's total fixed asset costs. This program is administered by the Office of Financial Incentives of the Ohio Department of Development. Owner-occupied companies which are engaged in commerce, manufacturing, research and development, or distribution are eligible to receive dollars in which to acquire land and buildings, renovate existing buildings, acquire new and/or used machinery and equipment, and for other project-related soft costs.

Companies must create or retain one job per $35,000 received within three years after project completion. A non-refundable application fee of $1,500 is required as well as additional service fees.

Business Development (412) Account

This program makes grant dollars available for job creation and retention and provides funds to induce companies to move forward in a project in a community where the investment would not otherwise have occurred. Dollars are available for infrastructure improvements, on-site or off-site, including water, sewer, road, and rail improvements. The program is administered by the Office of Business Development of the Ohio Department of Development, and companies must coordinate with a Business Development Representative to apply for this funding.

Companies primarily engaged in manufacturing, research and development, high technology, corporate headquarters, and distribution are eligible to apply. All other public and private sources of financing must be considered before the use of 412

funding is considered. Each project must create or retain jobs.

Issue 1 (Clean Ohio Fund)

This program, which will start in 2002, will provide grants for various projects such as remediating brownfields, preserving farmland, building hiking trails or bikeways, and other environmental projects in Ohio. Approximately $200 million for conservation projects and $200 million to clean up brownfields is available statewide over several years. Dollars will be distributed to each county in the state and further among the state's 19 public works districts. Conservation projects will be administered by the Ohio Department of Natural Resources after selection by a local committee, while brownfields projects will be governed by the respective Ohio Public Works Commission's local Public Works Integrating Committee. Local communities, counties, and non-profit organizations are eligible to apply.

Linked Deposit Program

This program is a mechanism for financing certain projects via a private lending institution. It helps to create and retain jobs, while providing fixed assets and working capita for small businesses. The program is administered by the Public Affairs Office, Treasurer of the State. Companies receive a fixed rate 3% below the current lending rate for a term of two years, with a possible extended term approved by the financial institution. Businesses must have an Ohio headquarters and no divisions out of state; must create one job for every $25,000 received; have 150 or less employees; and operate as a nonfranchised company. The borrowing entity must also be the same entity saving and/or creating jobs.

Mini Loan Guarantee Program

This program provides a loan guarantee for fixed assets and equipment to be used to start up or expand existing small businesses. It is administered by the Office of Minority Financial Incentives of the Ohio Department of Development. This program helps to increase the work force and encourages business development and/or growth through low interest rates. Companies must have fewer than 25 employees to be eligible for this program, and businesses owned by minorities and women are targeted. Projects of $100,000 or less can be financed through this program for up to 10 years.

Minority Direct Loans, Ohio Department of Development

This program provides loans for the purchase or improvement of fixed assets for state-certified minority-owned businesses. This program is administered by the Office of Minority Financial Incentives of the Ohio Department of Development. It encourages growth of both small, minority- and women-owned businesses in Ohio. This program provides loans of up to 40% of the total project cost at a fixed rate of 4.5% for up to fifteen years. Companies must be certified as minority business enterprises, have equity, and demonstrate repayment ability and management capacity. Businesses must also create one job for every $35,000 received and must be at least 51% minority-owned and controlled.

Ohio Enterprise Bond Fund

This program provides long-term, fixed rate, tax-exempt and taxable bonds for financially healthy industrial and commercial businesses that are creating jobs in Ohio. This program is administered by the Office of Tax Incentives of the Ohio Department of Development. A minimum of $1 million and maximum of $10 million may be used for acquiring land and buildings, new construction, renovation, acquiring machinery and equipment, and project-related soft costs.

A non-refundable application fee of $1,500 is required, as well as a $20,000 commitment. Companies must also submit an application and provide a mandatory 10% owner cash equity and one-year debt service reserve.

Ohio Export Tax Credit

Businesses may receive a non-refundable franchise tax credit for exporting their products or services into the international marketplace. Corporate or individual taxpayers who increase Ohio payroll or Ohio capital expenditures are also eligible for this tax credit. This program is administered by the International Trade Division of the Ohio Department of Development. Businesses must complete and attach the Tax Export form to their annual income or franchise tax filing. The credit is based on the aver-

age increase in export sales during the two years prior to the year in which the credit is claimed. Businesses may claim a 10% credit of pre-tax profit from an increase in export sales, as long as either Ohio payroll or property values increase by 10% over the previous three years. Increases less than 10% receive a proportionately reduced credit.

Ohio Industrial Training Program

This program provides orientation, training for new or current workers and instructors, management techniques training, statistical process control training, and linkage with related programs. Administered by the Office of Industrial Training of the Ohio Department of Development, this program provides up to 50% of funding for orientation, training, and management programs. Improved labor/management relations, job creation and retention, and an better educated workforce are the benefits of this program.

Businesses must be a manufacturing or manufacturing-related company and must apply through one of the twelve statewide offices in order to become eligible for this highly competitive program.

Ohio Job Creation Tax Credit

Businesses receive state and municipal tax credits that minimize capital expenditures which encourage business retention and expansions within the state. This program is administered by the Office of Tax Incentives of the Ohio Department of Development. Businesses are required to create at least 25 new, full-time jobs within three years of operation and to maintain operations at the project site for twice the term of the credit. On new, full-time employees, businesses receive a refundable tax credit against corporate franchise/income tax withheld.

Companies should fill out an application and consult with a Business Development Representative or Governor's Regional Economic Development Representative during the application and approval process. Companies must also appear before the Ohio Job Creation Tax Credit Authority when its project is being reviewed by the Authority.

Ohio Manufacturing Machinery & Equipment Investment Tax Credit

Companies receive a non-refundable corporate franchise tax credit or an individual tax credit on purchases of qualified new or retooled machinery and equipment located in Ohio. This program is administered by the Office of Tax Incentives of the Ohio Department of Development. This program encourages expansion of existing business operations and supports additional investment in the state. Businesses may receive a 7.5% tax credit on machinery and equipment investment, increased up to 13.5% in a designated "Priority Investment Area."

A "notice of intent" form with the Office of Tax Incentives is required for participation in this program, and the credit is based on the amount of the investment in excess of the company's base three-year annual average.

Pollution Prevention Loan Program

This program assists manufacturing businesses with the acquisition or renovation of machinery and/or equipment for the prevention of pollution. Administered by the Office of Financial Incentives of the Ohio Department of Development, this program provides between $25,000 to $350,000, covering up to 75% of eligible costs. The participation of a private lender is required, and 10% owner equity is mandatory to participate in the loan program. Businesses must demonstrate job retention as a result of the project.

Research and Development Sales Tax Exemption

This program provides a sales tax exemption for machinery and equipment used in research and development. It is administered by the Technology Division of the Ohio Department of Development. Companies are encouraged through this financial incentive to produce and perfect the technologies and products of the future. Qualified research includes "pure" research (scientific or technological inquiry and experimentation in the physical science) and "directed" research (research conducted to design, create, or formulate new or better products, equipment, or manufacturing processes).

Companies must complete the required certification form from the State of Ohio and submit it to the vendor at the time of the machinery or equipment purchase.

Roadwork Development 629

This program makes grant dollars available for public roadway improvements, including engineering work. Funds should act as a catalyst for additional development and revitalization of affected communities and serve as an inducement for a project to take place in a community where it would not have otherwise occurred. This program is administered by the Office of Business Development of the Ohio Department of Development.

Local governments must coordinate with a Business Development Representative, and all other public and private sources of financing must be considered before the use of 629 funding is considered. Companies primarily engaged in manufacturing, research and development, high technology, corporate headquarters, and distribution are eligible to apply.

Scrap Tire Loan & Grant Program

This program provides dollars for the acquisition of land and buildings, new construction, renovation of existing buildings, acquisition or renovation of machinery and/or equipment. All projects must have a focus on the recycling of scrap tires. This program is administered by the Office of Financial Incentives of the Ohio Department of Development.

Companies may receive from $50,000 to $250,000, not to exceed 30% of eligible costs for projects. Applicants that meet certain criteria may be eligible for limited grant funding. A private lender is required, and 10% owner equity is mandatory to participate in the loan program.

SBA 504 Loan Program,

This loan program is available to small businesses, as defined by the Small Business Administration. Dollars are issued for the acquisition of land and buildings, new construction, renovation, acquisition of machinery and equipment, and for other project-related soft costs. The program is coordinated by the Ohio Statewide Development Corporation and is part of the Fixed Asset Lending Programs. Manufacturing, commercial, and retail businesses may receive a minimum of $50,000 and up to $750,000 for projects, not to exceed 40% of the eligible project costs. Companies are required to pay a $500 application fee and must create one job per $35,000 granted within two years after the project starts.

Tax Increment Financing

This program administered by the Office of Tax Incentives of the Ohio Department of Development permit service payments-in-lieu of real property taxes to finance public infrastructure improvements. Up to 75% of the value of real property taxes within the designated area can be exempted for up to ten years. Typically, notes or bonds are used to finance the specified project. Counties, municipalities, and townships are eligible to apply, but must, by resolution or ordinance, declare improvements to a parcel of real property located within its jurisdiction to be a public purpose.

Urban & Rural Initiative Grant Program

This program provides grants for land acquisition, infrastructure improvements, renovation of existing buildings, and for brownfield site remediation. Grants range from $500,000 to $1 million depending on the population of the area in which the eligible applicant is located. The program is administered by the Office of Business Development of the Ohio Department of Development.

Counties, municipalities, and townships, as well as nonprofit economic development organizations and community improvement corporations, are eligible to apply. A $500 application fee is required and grantees must comply with Ohio's prevailing wage rates for construction, renovation, and installation as determined by the Ohio Bureau of Employment Services. Review and approval is required from several entities within the Ohio Department of Development for grant dollars.

Voluntary Action Program

This program encourages redevelopment of contaminated sites by providing substantial real and/or personal tangible property tax incentives. It is administered by the Office of Tax Incentives of the Ohio Department of Development. A municipality may grant a property tax exemption of up to 100%

for up to ten years on the value of real and/or personal tangible property improvements.

The business or property owner must have participated in the Ohio Environmental Protection Agency's Voluntary Action Program and received a "Covenant Not to Sue." The business or property owner must apply to the appropriate municipality or the county, receive approval, and execute a formal incentive agreement in order to participate.

Water Pollution Control Loan Fund (WPCLF)

This program provides financial and technical assistance to protect and improve the quality of Ohio's rivers, streams, lakes, and other water resources. The WPCLF offers below-market interest rate loans including long-term loans (up to 20 years) at the standard rate, short term loans (up to five years) at a reduced rate for small construction projects, loans for planning and design, and a minimum interest rate loan for communities of high economic need. The WPCLF program also offers interest rate discounts for special activities such as municipal compliance maintenance, water conservation, and construction of non-conventional technologies.

The Division of Environmental and Financial Assistance (DEFA), within the Ohio Environmental Protection Agency, manages the program. To be considered for WPCLF financing, the proposed activity must result in a water quality benefit. A community must have the technical expertise and managerial capability needed to plan, design, and build the proposed project or hire an engineering firm to assist with planning, design and construction supervision. A nomination/application form is required.

CHAPTER FIVE

PUBLIC FACILITIES, INFRASTRUCTURE, AND RECREATION

INTRODUCTION

The first portion of this chapter will inventory the existing public buildings within the Village. The infrastructure section will discuss the current condition of the street, water, and sewer networks and outline scheduled improvements. The final section will inventory the existing parks within the Village.

INVENTORY OF EXISTING PUBLIC BUILDINGS

Village Hall - 4863 East 71st Street

The Village Hall was built in 1953 on a parcel about 3.5 acres in size. The building is about 18,100 square feet in size and houses the Village administrative offices. The adjacent Village swimming pool was built in 1956, with two splash pools added more recently.

The Master Plan Committee has indicated the Village Hall facility is satisfactory for the Village's needs. Current efforts include minor interior improvements and changes to improve space efficiency.

The Village Engineer has indicated that the swimming pool facility is in satisfactory condition and no major capital improvements are planned.

John Bohdan Service Center - 7200 Canal Road

This 22,482 square foot structure serves as a garage and maintenance facility for the service and recreation departments. The original building, 12,790 square feet in size and built in 1977, was expanded by 9,692 square feet in 1997.

One project planned at the service center is the relocation of the road salt bin to a location northwest of the service garage. This project, with an estimated cost of $70,000, has not been scheduled for a specific year.

Fire Station - 5480 Grant Avenue

The fire station and police station occupy a parcel about 1.6 acres in size. The fire station, built in about 1931, is approximately 11,680 square feet in size. The Village Engineer has indicated that the fire station is in satisfactory condition and no major improvements are planned.

Police Station - 5480 Grant Avenue

The police station, built in 1961, is 6,970 square feet in size including garages. The Village has determined that the police station, due to its small size and layout, no longer meets the needs of the community. In February, 2001, R.C.U. Architects, Inc. completed a study for the Village concerning the police station, analyzing the current and future needs of the department for space and functions. The architects also examined the physical condition of the building and building code issues. The report estimated that a new facility with three-hour holding cells (no jail facility) should have about 13,800 square feet, with a construction cost estimate of $1.8 million-$2.0 million. In contrast, a new facility with a five-day jail facility should have about 15,300 square feet, with a construction cost estimate of $2.0 million-$2.3 million. Expansion/renovation of the existing facility was estimated at $1.7 million-$2.0 million.

In terms of possible locations, the architects documented the advantages and disadvantages of expansion/renovation at the present site, as well as three other locations within the Village: 5309 Grant Avenue (across the street from the present facility), East 71st Street (adjacent to the connection to Route 21 North), and East 71st Street (behind Village Hall on the swimming pool site). The report recommended construction of a new police station on East 71st Street adjacent to the connection to Route 21 North, due to the visibility of the site and creation of an anchor for the southern entrance into the Village near residences, schools, and Village Hall.The Master Plan Committee has indicated that the Village intends to move forward with the plan when a site is selected and

a financing plan is finalized, although no specific timetable has been set. When the new police facility is complete, the current building could be examined for reuse for other Village administrative needs and/or community uses.

INVENTORY OF EXISTING INFRASTRUCTURE

The overall condition of the roads, culverts, bridges, waterlines, and sewer system in Cuyahoga Heights, as rated by the Village Engineer, is shown in ***Exhibit 5-1***. The sections of the infrastructure in the community that are most in need of repair include approximately less than one center line mile of roads, four culverts, 8,000 linear feet of waterlines, and 1,000 linear feet of storm sewers.

Capital improvements scheduled during the years 2002-2004 by the Cuyahoga County Engineer's Office consist of four road and bridge projects totaling almost $4.8 million (***Exhibit 5-2***). Three of the projects involve Harvard Avenue, while one project involves Grant Avenue. In addition, the Village has scheduled two capital improvement projects for 2002, totaling $540,000. One project is the resurfacing of East 42nd Street, and the other project is sewer work on Bletch Court.

One sewer issue in the Village, which is currently being examined, deserves additional description because of its possible impact on future economic development. The properties on Grant Avenue east of the railroad overpass are served by a combined sewer, which means that stormwater and wastewater are removed as part of one pipe. At times, this area under the railroad overpass has problems with flooding and pavement undermining.

This combined sewer discharges to another sewer north of Grant Avenue, known as the Burke Brook Culvert, which flows northward to the Cuyahoga River. Under the Newburgh & South Shore Railroad tracks, north of Copper & Brass Sales, Inc., the pipe changes from 54 inches in diameter to 36 inches in diameter. During periods of sudden, heavy rain, the smaller pipe can not handle the volume of water it receives from the larger pipe. The result is water flowing down the slope on the west side of Copper & Brass Sales, Inc. onto Interstate 77, as well as water backing up in the 54-inch pipe, leading to flooding along Grant Avenue. The Village Engineer has indicated that the local district office of the Ohio Department of Transportation is reviewing the situation as it relates to the freeway.

In order to reduce or eliminate the flooding problems along Interstate 77 and Grant Avenue, it is recommended that a joint sewer project be undertaken with the Ohio Department of Transportation, the Northeast Ohio Regional Sewer District, and the Village of Cuyahoga Heights to review the condition and capacity of the Burke Brook Culvert and to replace sections of the sewer as needed to increase capacity. An application for State Issue 2 funding would have broad support, because the flooding condition affects Interstate 77 in addition to Grant Avenue.

The Cuyahoga County Engineer has scheduled resurfacing of Grant Avenue from East 49th Street to East 71st Street in 2003. The road project will probably be completed before the sewer project has been completed. Nevertheless, the existing condition of the sewers along Grant Avenue should be investigated by videotape inspection before the Grant Avenue resurfacing project, so that any new pavement will not be disturbed by sewer repairs. Permanently solving the flooding problem on Grant Avenue is crucial to having the appropriate infrastructure in place to encourage investment in properties.

PARK AND RECREATION FACILITY INVENTORY

There are a total of six parks, outdoor recreation areas, and indoor recreation facilities in Cuyahoga Heights. Bacci Park, the facilities at Village Hall, and Klima Gardens are owned and maintained by the Village. Settlers Bluff Picnic Area occupies land owned by American Steel & Wire Corporation and is maintained by Cleveland Metroparks. The indoor and outdoor facilities at the high school and elementary school are owned and maintained by the

Exhibit 5-1, Infrastructure Conditions, Cuyahoga Heights, 2001

Component	Replacement Cost	Repair Cost	Units	Condition				
				Excellent	Good	Fair	Poor	Critical
Roads	$12,200,000	$3,700,000	7.2 center line miles	0.5	3.2	2.8	0.7	0.0
Bridges	$0	$0	0	0	0	0	0	0
Culverts	$900,000	$500,000	7	0	0	3	4	0
Water Distribution	$4,200,000	$800,000	39,200 linear feet	200	3,000	28,000	8,000	0
Wastewater Collection	$9,200,000	$2,000,000	47,000 linear feet	1,000	23,000	23,000	0	0
Stormwater Collection	$1,800,000	$400,000	13,000 linear feet	0	2,000	10,000	1,000	0
Total	**$28,300,000**	**$7,400,000**						

Infrastructure Condition Rating System

Excellent - No repair required.

Good - Infrastructure still functioning as originally intended but may require some minor repairs and/or upgrading to meet current design standards.

Fair - Infrastructure still functioning as originally intended but requires repairs to continue functioning as originally intended and/or to meet current design standards.

Poor - Infrastructure contains a major deficiency and will require repair to continue functioning as originally intended and/or upgrade to meet current design standards.

Critical - Infrastructure item either not functioning as originally intended or is not functioning at all times and will require significant upgrade to meet current design standards.

Source: Cuyahoga Heights Engineer

Exhibit 5-2, Three-Year Capital Improvement Plan, Cuyahoga County Engineer, Cuyahoga Heights, 2002-2004

Location	Project	Source of Funding	2002	2003	2004
Harvard Avenue (West Community Line to Harvard-Denison Bridge)	Resurface	Cuyahoga County Engineer Cuyahoga Heights	$266,600		
Bletch Court (entire length)	Combined sewer connector	Cuyahoga Heights	$500,000		
East 42nd Street (entire length)	Resurface	Cuyahoga Heights	$40,000		
Harvard Avenue Bridge No. 82 (Bridge over Cuyahoga River)	Rehabilitation	Federal		$1,162,000	
Grant Avenue (East 49 Street to East 71 Street)	Resurface	Federal Cuyahoga County Engineer		$1,848,000	
Harvard-Denison Bridge No. 83 (entire length of high level bridge)	Rehabilitation	Federal Cuyahoga County Engineer			$1,501,500
Total			**$806,600**	**$3,010,000**	**$1,501,500**

Source: Cuyahoga County Engineer, September 2001; Cuyahoga Heights Engineer, October, 2001

Cuyahoga Heights Board of Education. The final park is the Cleveland Metroparks Ohio & Erie Canal Reservation, which includes slightly less than 300 acres in Cuyahoga Heights that are managed through lease agreements and easements. Excluding the Metroparks Reservation, the remaining parks and outdoor facilities occupy approximately 32.9 acres. The facilities are well maintained. An itemization of facilities at each location is contained in ***Exhibit 5-3***.

The National Recreation and Park Association (NRPA) is an organization that undertakes research and recommends guidelines for the quantity, types, and design of recreation facilities located in parks (*Recreation, Park and Open Space Standards and Guidelines*, 3rd ed., 1987). The Village parks compare favorably to these national guidelines. For example, the NRPA recommends a total of 6.25-10.5 acres of park and recreation land for every 1,000 residents. Currently in Cuyahoga Heights, the five local parks and recreation facilities would be acceptable for a population of about 3,000 to 5,000 residents. Not included in this calculation is the Metroparks Canal Reservation with its Ohio & Erie Canal Towpath Trail, which runs the length of Cuyahoga Heights and is used by many residents and employees.

Recommendations

- ✓ Repair the basketball backboards and rims at the elementary school and Village Hall.
- ✓ Replace the grass under the play equipment at Klima Gardens to a base material of rubber chips or wood chips.
- ✓ Replace the swing set seats at Settlers Bluff, which are currently missing.
- ✓ Test older playground equipment at the elementary school, Klima Gardens, Settlers Bluff, and Village Hall for lead paint content.
- ✓ Replace older playground equipment at the elementary school, Klima Gardens, Settlers Bluff, and Village Hall with desired new equipment.

Exhibit 5-3, Park and Recreation Facility Inventory, Cuyahoga Heights, 2001

Location	Bacci Park	High School/ Elementary School	Klima Gardens	Settlers Bluff Picnic Area	Village Hall	Total
	Canal Road	East 71st Street	East 71st Street	East 49th Street	East 71st Street	
Acreage (approximate)	21.3	not applicable	4.5	5.5	1.6	**32.9**
Facilities						
Ball Field	2	1	0	1	0	**4**
Basketball Court	0	4	0	0	1	**5**
Bocci Ball Court	0	0	2	0	0	**2**
Fitness Center	0	1	0	0	0	**1**
Football Field	0	1	0	0	0	**1**
Horseshoe Pit	0	0	2	0	0	**2**
Jogging Track	0	1	0	0	0	**1**
Open Field	0	1	1	1	0	**3**
Pond	1	0	0	0	0	**1**
Soccer Field	1	0	0	0	0	**1**
Swimming Pool	0	1	0	0	1	**2**
Splash Pools	0	0	0	0	2	**2**
Tennis Court	0	0	0	0	0	**0**
Volleyball Court	0	0	1	0	0	**1**
Trails	No	No	No	Yes	No	**--**
Playground Facilities						
Base Material	Wood Chips	Rubber Chips	Grass	Sand/Pea Gravel	Rubber Chips	**--**
Balance Beam	0	0	0	1	0	**1**
Monkey Bars	0	3	1	0	1	**5**
Play Structure	1	2	0	1	1	**5**
Slide	0	2	0	0	0	**2**
Spring Animals	0	0	1	0	4	**5**
Swing Set	0	0	1	1	2	**4**
Other Facilities						
Benches	14	0	1	1	4	**20**
Bleachers	3	0	0	0	0	**3**
Bicycle Racks	0	0	0	0	1	**1**
Boardwalk	1	0	0	0	0	**1**
Drinking Fountains	3	0	0	2	0	**5**
Grills	2	0	0	8	0	**10**
Parking Areas	Yes	Yes	Yes	Yes	Yes	**--**
Pavilions	3	0	1	1	1	**6**
Picnic Tables	18	0	11 (visible outdoors)	15	4	**48**
Restrooms	Yes	High School	Yes	Yes	Yes	**--**

Source: Cuyahoga County Planning Commission, October, 2001

CHAPTER SIX

OHIO AND ERIE CANAL NATIONAL HERITAGE CORRIDOR

OHIO & ERIE CANAL NATIONAL HERITAGE CORRIDOR

This section summarizes the projects and impacts for Cuyahoga Heights that involve the Ohio & Erie Canal National Heritage Corridor, Cuyahoga Valley National Park, Ohio & Erie Canal Reservation of Cleveland Metroparks, Ohio & Erie Canal Scenic Byway, and the Cuyahoga Valley Scenic Railroad.

Background

The Ohio & Erie Canal, which opened for commercial navigation in 1832, was the first inland waterway to connect the Great Lakes at Lake Erie with the Gulf of Mexico via the Ohio and Mississippi Rivers. The Ohio & Erie Canal was part of a canal network in Ohio that was one of America's most extensive and successful systems during a period in history when canals were essential to the growth of the United States. In addition, the Ohio & Erie Canal spurred economic growth in Ohio that lifted the state from near bankruptcy to the third most economically prosperous state in just twenty years.

North Cuyahoga Valley Corridor Concept Plan

In 1992, the Cuyahoga County Planning Commission (CPC) published the *North Cuyahoga Valley Corridor Concept Plan*, which examined the Ohio & Erie Canal, Cuyahoga River Valley, and adjacent neighborhoods from the northern boundary of the Cuyahoga Valley National Park (CVNP) at Rockside Road to Lake Erie at downtown Cleveland. The report emphasized the Cuyahoga Valley as a unifying element in the metropolitan area, replacing the traditional perception of the valley as an east-west dividing line.

The national significance of the valley is clear:

> The lower Cuyahoga Valley has been one of the main physical features of the region for thousands of years. It has been the location for villages, encampments, and burial sites of prehistoric cultures, including the mound builders. In the mid-18th century, it became important in French and British fur trading. Both Benjamin Franklin and George Washington predicted a preeminent role for the Valley in the westward expansion of America due to its size and location. Settlement by New Englanders began in the 1790's, and the mouth of the river was selected by Moses Cleaveland as the location for the principal city of the Connecticut Western Reserve.
>
> Successive technological advances in the 19th century brought a canal, railroads, and shipping. With the benefits of a geographic location midway between extensive deposits of natural resources, access to land and transportation networks, and the evolution of interrelated industries such as oil, chemicals, and paint; sewing machines and clothing; and iron, steel, fasteners, machine tools, automobiles, and shipbuilding, the lower Cuyahoga Valley emerged as the setting for one of the most significant examples of industrialization and urbanization in America.

The *Concept Plan* presented projects under the six main topics of economic development, heritage education, transportation, recreation, open space, and environmental policy statements. Several projects have an impact on Cuyahoga Heights.

> Identification of locations and economic incentives to retain and expand existing light industry and attract new industrial development, such as various areas in Cuyahoga Heights.
>
> Emphasis of the need for a steady long-term commitment of funds to ensure proper construction and maintenance of the essential infrastructure resources of the area, such as the major streets in Cuyahoga Heights.
>
> Creation of a bicycle transportation network extending through the Cuyahoga Valley, to take advantage of opportunities to explore the distinctive lake, river, and canal environments, the industrial and engineering heritage of the Valley, and the architecture and history of Cleveland

neighborhoods and suburban communities. *This network is the existing and future segments of the Ohio & Erie Canal Towpath Trail and its neighborhood linkages.*

Preservation of tracts of land in the vicinity of Cuyahoga Heights as a habitat preservation area. *This project is the new Cleveland Metroparks Ohio & Erie Canal Reservation.*

Showcasing the 45-foot waterfall on Mill Creek with the addition of observation decks. *Cleveland Metroparks has undertaken this project and is currently working with other partners to create a trail linking the Mill Creek waterfall with Garfield Park Reservation. In addition, a bikeway connection is being considered that would link Garfield Park Reservation in Garfield Heights to the Towpath Trail.*

Extension of the Cuyahoga Valley Scenic Railroad excursion train into downtown Cleveland. *The route for this project involves the railroad track immediately to the west of the Cuyahoga River. The project continues under negotiation with CSX.*

National Heritage Corridor Designation

The Ohio & Erie Canal National Heritage Corridor received official federal designation from the U.S. House of Representatives and the U.S. Senate on October 4, 1996, and President Clinton signed the legislation on November 12, 1996.

The Ohio & Erie Canal is one of a few Heritage Corridors designated in the country, following the Illinois & Michigan Canal in Illinois, the Blackstone River Valley in Massachusetts and Rhode Island, and the Delaware & Lehigh Navigation Canal in Pennsylvania.

The federal legislation cites four purposes for the designation:

- ✓ to preserve and interpret significant historic and cultural lands, waterways, and structures within the corridor;
- ✓ to encourage economic development;
- ✓ to provide a management framework to assist the state, local communities, and nonprofit organizations in preparing and implementing a corridor management plan, as well as develop policies and programs to preserve and interpret the cultural, historic, natural, recreation, and scenic resources of the corridor; and
- ✓ to authorize the Secretary of the Interior to provide financial and technical assistance to the state, local communities, and nonprofit organizations in preparing and implementing a corridor management plan.

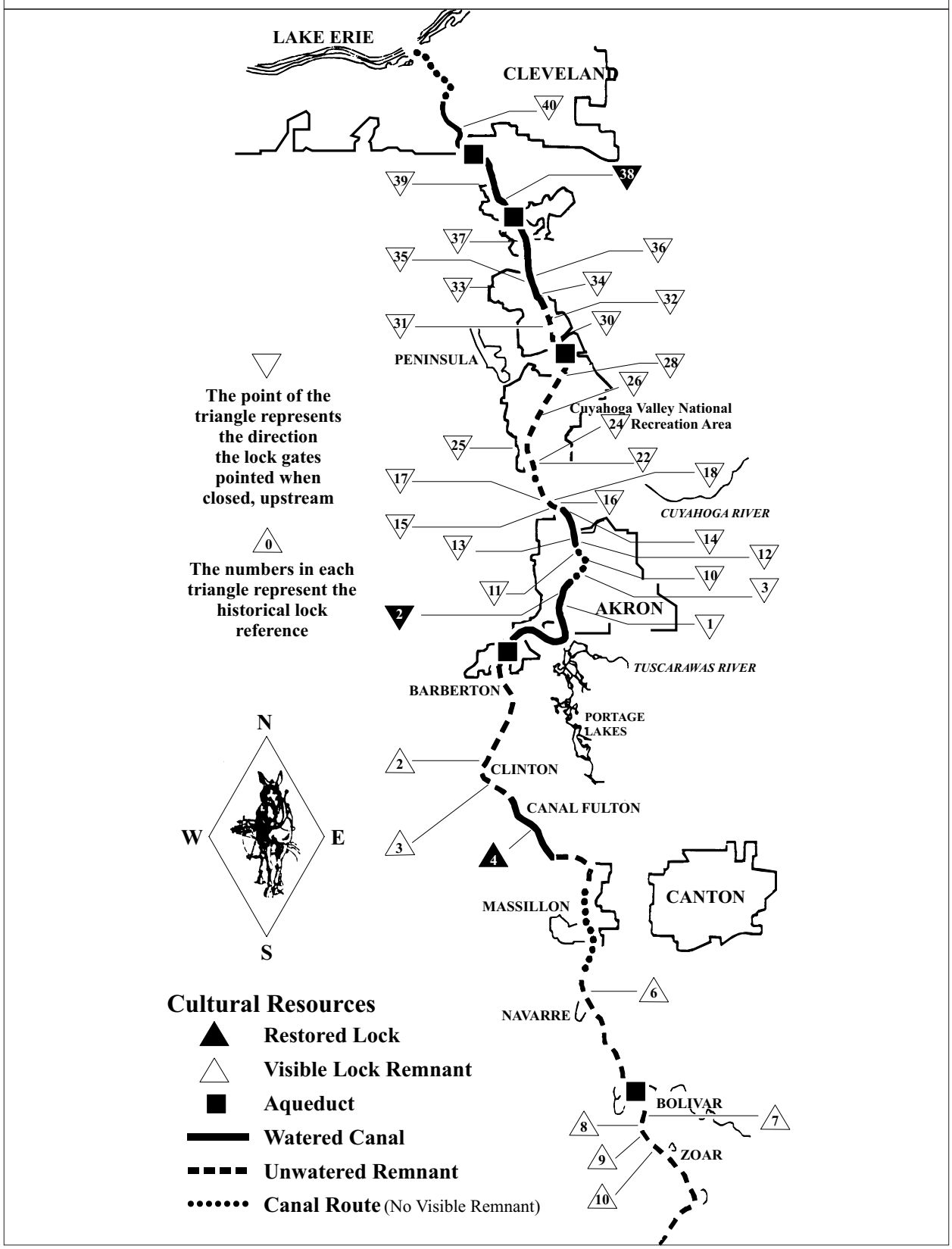
The boundaries of the corridor generally follow the route of the Ohio & Erie Canal from Cleveland to Dover, through the Cuyahoga and Tuscarawas River valleys (***Map 6-1***). The route of the Ohio & Erie Canal includes the metropolitan areas of Cleveland and Akron, the Cuyahoga Valley National Park, canal towns such as Clinton and Canal Fulton, the Tuscarawas River valley, and rural communities such as Bolivar and Zoar. This is an area where four million people live within sixty miles of the Corridor.

The creation of the National Heritage Corridor does not impose regulations on local communities. In addition, the designation does not create an owned and operated unit of the National Park Service. The intent of the National Heritage Corridor is to provide recognition and influence in order to foster cooperative effort and leverage funds.

The Ohio & Erie Canal National Heritage Corridor legislation permits annual funding of up to $1 million in federal funds, to be matched at least 1:1 by state, local, and/or private funds. A total of $10 million in federal funding is available over the life of the corridor legislation, which expires on September 30, 2012.

The legislation established the Ohio & Erie Canal Association as the management entity responsible for 1) ensuring that the management plan is prepared (which was approved by the U.S. Department

Map 6-1, Ohio & Erie Canal National Heritage Corridor



of the Interior in 2000); 2) assisting communities and organizations to voluntarily develop policies and programs within the heritage corridor; and 3) overseeing the expenditure of federal funds. The Association is a new nonprofit organization recently formed through a collaboration between two existing nonprofit organizations, the Cleveland-based Ohio Canal Corridor and the Akron-based Ohio & Erie Canal Corridor Coalition.

In addition, the legislation established a 21-member volunteer advisory committee, the Ohio & Erie Canal National Heritage Corridor Committee, to provide advice and technical assistance to the Ohio & Erie Canal Association. Members of this Committee represent the corporate community, tourism, historic preservation, park districts, county planning agencies, local communities, state government, and the National Park Service.

Scenic Byway Designation

During 1996 the Ohio Department of Transportation announced that the Ohio & Erie Canal Scenic Byway had been designated as the first official Scenic Byway in Ohio. In June, 2000, the route was designated by the Federal government as a National Scenic Byway. The route focuses on the path of the canal for approximately 110 miles, from its original northern terminus in downtown Cleveland to Dover, Ohio. The route traverses all or part of four counties: Cuyahoga, Summit, Stark, and Tuscarawas.

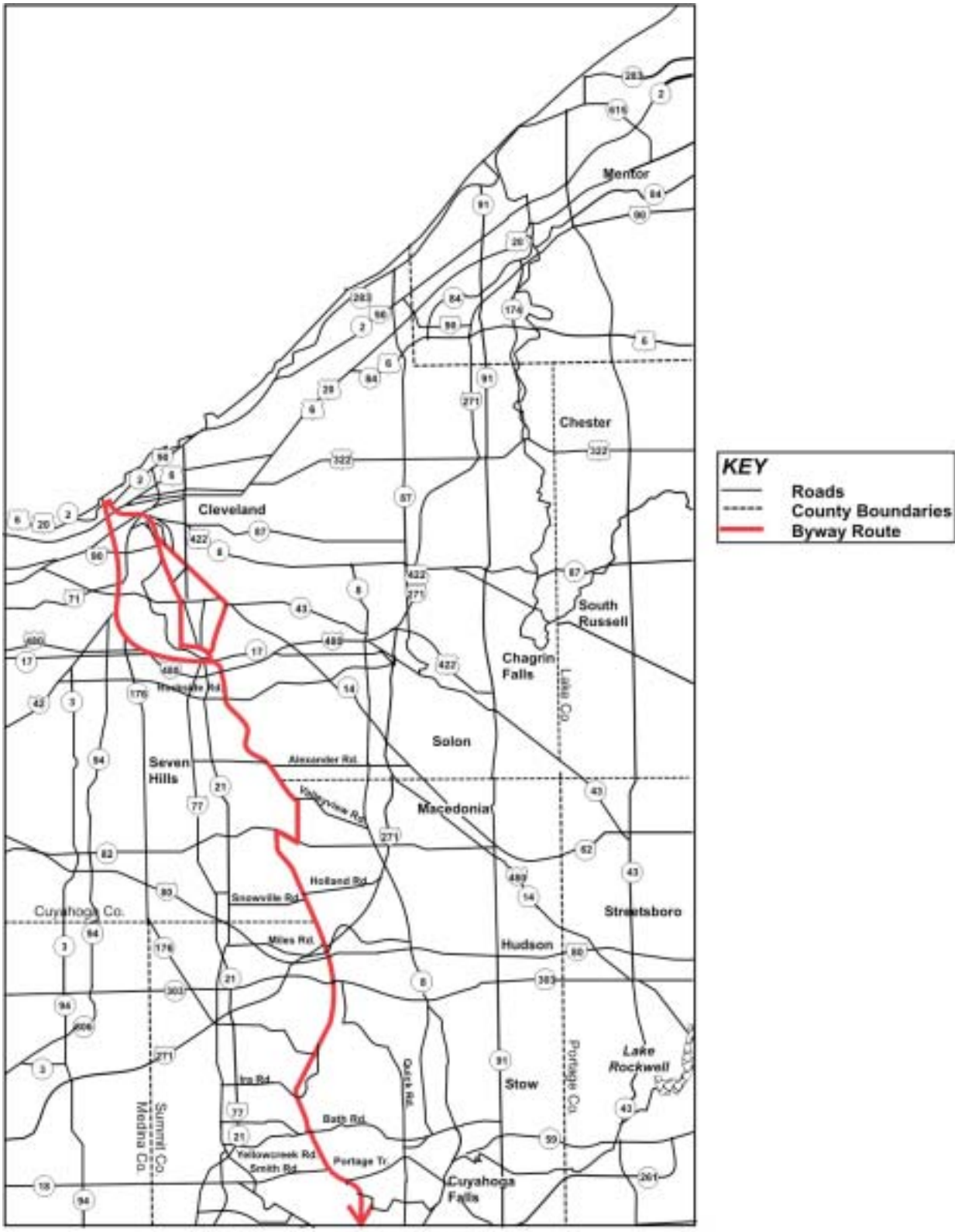
The application process for the scenic byway designations was managed by the Ohio & Erie Canal Scenic Byway Task Force. This group includes the membership of the four county engineers, four county planning agencies, the National Park Service, Cuyahoga Valley Communities Council, Ohio Canal Corridor, and the Ohio & Erie Canal Corridor Coalition. The Task Force also received input from an Advisory Council, whose 100-plus members represented a variety of community interests from throughout the byway route.

The byway utilizes a combination of state routes, county roads, and local roads (***Maps 6-2A*** and ***6-2B***). Within Cuyahoga County several routes are used, which form a loop. Coming northward, the byway is located on Canal Road as it enters Cuyahoga County from Summit County. The byway continues northward on Canal Road until it splits into three separate routes to highlight the connection between the Ohio & Erie Canal, the Cuyahoga River Valley, and the different ethnic urban neighborhoods that abut the valley. The separate routes all reach the same terminus, the original outlet of the Ohio & Erie Canal at downtown Cleveland, which was located on the east bank of the Cuyahoga River approximately under the Detroit-Superior Bridge. The Central Route continues northward on Canal Road, East 49th Street, and Independence Road toward downtown Cleveland. The Eastern Route splits from Canal Road at Warner Road, utilizing Warner Road and Broadway Avenue to reach downtown Cleveland. The Western Route splits from Canal Road at Granger Road, utilizing Granger Road, Schaaf Road, Broadview Road, and Pearl Road/West 25th Street to reach downtown Cleveland.

Scenic byway designation offers an opportunity for a community such as Cuyahoga Heights to promote and protect its unique relationship to the Ohio & Erie Canal, Cuyahoga River Valley, and Mill Creek Valley through tourism, economic development, and resource conservation. A byway may be described as roads that provide an enjoyable and relaxing experience for drivers. In addition, the route highlights scenic, historic, natural, cultural, recreational, and/or archaeological qualities of an area. The benefits of scenic byway designation include new tourism opportunities, identification on official highway maps, state and national marketing and promotion, economic and community development opportunities, and possibly additional funding for maintenance of the scenic byway route.

An example of the benefits of designation has already occurred. In the late 1990's, the Federal Highway Administration awarded the State of Ohio $400,000. Of this total, the Ohio Department of Transportation used $160,000 to manage its scenic byway program. The remaining $240,000 was awarded to the Task Force through the Summit County Engineer's Office. These funds were matched by a total of $60,000 from the four county engineers' offices, for a grand total of $300,000. These funds are being used to create a visitors map

Map 6-2A, Ohio & Erie Canal Scenic Byway (Northern Section)



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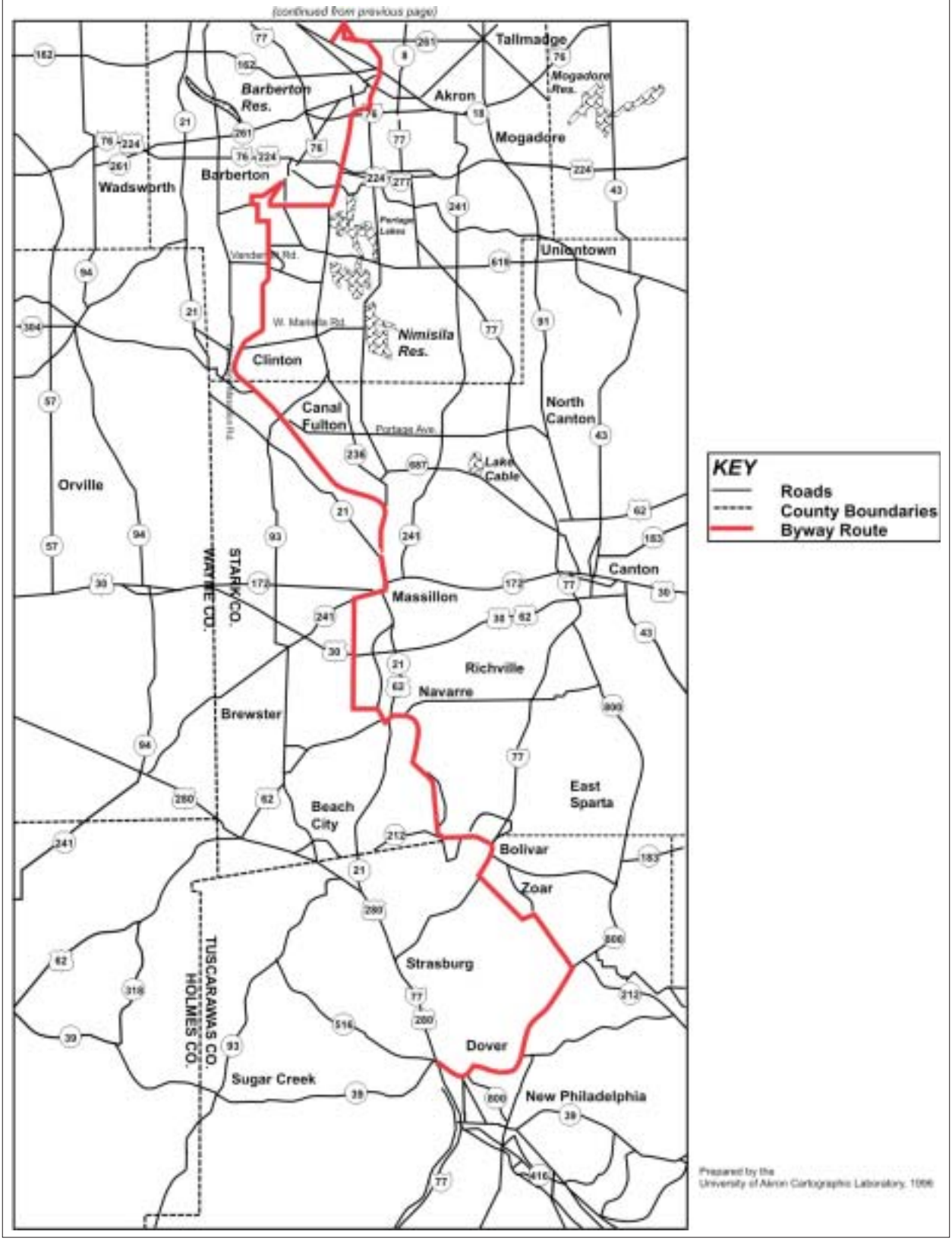
Map 6-2B, Ohio & Erie Canal Scenic Byway (Southern Section)



and guide for the byway, as well as to design, fabricate, and install signage marking the byway route through the four counties and 37 communities. The maps and signs are anticipated to be in place during 2002. The purpose of using the funds for these two projects is to bring public exposure to the byway by guiding visitors along the route, as well as to specific destinations.

Cleveland Metroparks - Ohio & Erie Canal Reservation

Overview

The Ohio & Erie Canal Reservation, opened in August, 1999, was established by Cleveland Metroparks as its fourteenth reservation (***Map 6-3***). Several hundred acres of land along the Ohio & Erie Canal and the Cuyahoga River in the communities of Valley View and Cuyahoga Heights are managed through lease agreements and easements. Major property owners have cooperated to make their land available for park/recreation facilities, cultural and historic interpretation, and wildlife management include the Aluminum Company of America (ALCOA), Birmingham Steel (formerly American Steel & Wire), BP America, FirstEnergy (formerly Cleveland Electric Illuminating Company), the Northeast Ohio Regional Sewer District (NEORSD), and the State of Ohio. The activities within the reservation focus on trails, picnicking, wildlife management, urban fishing opportunities in the canal, and outdoor education programs.

Canal Reservation All Purpose Trail

One of the highlights of the new reservation is the extension of the Ohio & Erie Canal Towpath Trail. The current trail in the Cuyahoga Valley National Park (CVNP) extends for approximately 22 miles from Akron northward to Rockside Road. During 2000, the Towpath Trail in the CVNP attracted approximately 1.3 million users.

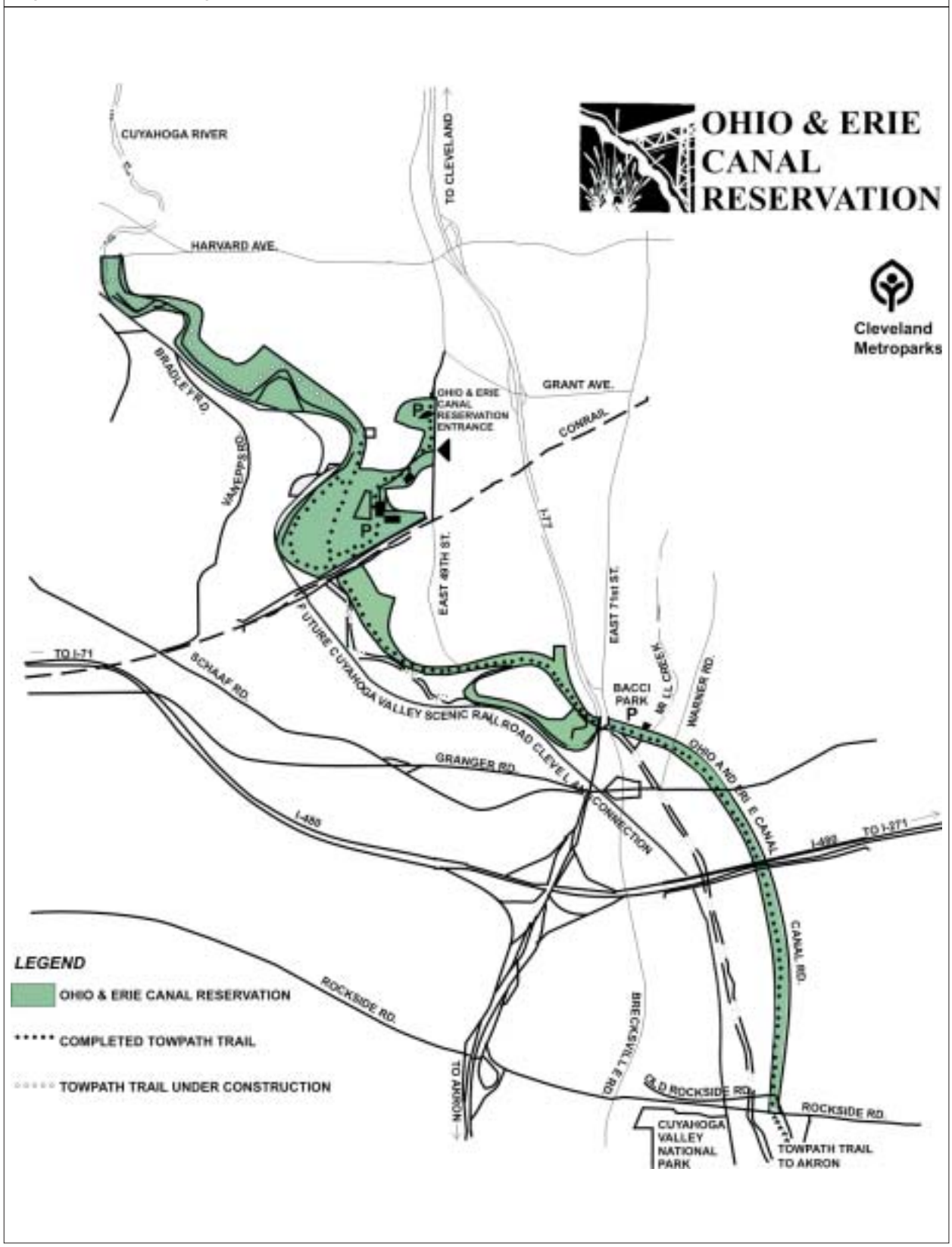
In 1998-99, Metroparks constructed an additional 4.5 mile segment of ten-foot wide paved trail from Rockside Road northward to the area below Birmingham Steel (formerly American Steel & Wire) in Cuyahoga Heights (approximately East 49th Street and Grant Avenue). The $2.3 million project was funded through the federal Intermodal Surface Transportation Efficiency Act (ISTEA-Surface Transportation Program, Enhancement Program) and Cleveland Metroparks. Overall, the Canal Reservation had about 163,000 trail users during 2000, which was just its first full calendar year of operation. In 2002, the Metroparks opened approximately 1.6 miles of trail, leading from the current terminus of the trail northward to Harvard Avenue, where a parking area of less than ten spaces has been added on the south side of the street. This $1.7 million project includes the trail, restoration of eroded canal banks, overlooks, a footbridge, a boardwalk, wayfinding signage, interpretive graphics, and other amenities.

Regional Connections to Canal Reservation Trail

The trail in the Ohio & Erie Canal Reservation is also part of a much larger bikeway plan. At some point in the future, Cleveland Metroparks intends to undertake an additional segment to link the Harvard Avenue vicinity to the Cleveland Metroparks Zoo. Long-term plans are also being formulated to complete the trail route to downtown Cleveland by continuing northward from the Harvard/Jennings area past LTV Steel and through the Tremont neighborhood of Cleveland to reach the Flats. The Cuyahoga County Planning Commission led a study completed in early 2002, that outlined appropriate, specific alignment and design alternatives, as well as cost considerations. At the Flats, the Towpath Trail route would intersect with the Cleveland Lakefront Bikeway, a partially completed bikeway that will eventually connect Edgewater Park on the west side with the Flats, downtown Cleveland, and the east side locations of Gordon Park, the Cultural Gardens, University Circle, Bratenahl, and Wildwood Park. The western section of the Lakefront Bikeway is scheduled to be implemented during 2003.

To the south of the existing Towpath Trail in the CVNP, various agencies and organizations are working to create a continuous bikeway that would extend beyond Zoar, Ohio. Zoar Village, a 19th century utopian community with an extensive grouping of architecturally and historically significant buildings, is also near the southern endpoint for the National Heritage Corridor. Finally, planning is also underway for a

Map 6-3, Cleveland Metroparks - Ohio & Erie Canal Reservation



cross-state bikeway, the Ohio-to-Erie Trail, with the anticipated endpoints being Cincinnati and Cleveland. The National Heritage Corridor route being implemented from Zoar to Cleveland is anticipated to be the preferred route through northeast Ohio.

Cuyahoga Valley Scenic Railroad

The Cuyahoga Valley Scenic Railroad (CVSR), formerly the Cuyahoga Valley Line Railroad, began operations in 1975. During the mid-1980's, the track utilized by the CVSR was purchased by the National Park Service. The rail line was originally constructed from Cleveland to Akron in the late 19th century, as the first north-south route through the Cuyahoga Valley. The rail line, from Rockside Road in Independence to Howard Street in Akron, was listed on the National Register of Historic Places in 1985. The CVSR operates first-generation diesel locomotives and streamlined passenger coaches. CVSR maintains a regular schedule of trips, utilizing stops in Akron, near Stan Hywet Hall & Gardens, near Hale Farm & Village, Peninsula, Boston Store, Station Road Bridge, Canal Visitors Center, and the northern terminus of the line just south of Rockside Road in Independence. Access to the station in Independence is via Canal Road to Old Rockside Road in Valley View.

The CVSR operates special seasonal, holiday, and educational trips in addition to its regular 20-mile and 52-mile excursions. The total ridership of about 85,000 in 1999 rose to more than 100,000 during 2000. The long-range plan for the CVSR includes extension of the line southward to Canton and northward to downtown Cleveland.

Development Impacts

Traffic Impact

The recreation and heritage projects in the vicinity of Cuyahoga Heights, such as the Cleveland Metroparks Canal Reservation, the Towpath Trail, and the Scenic Byway, will all make use of Canal Road/East 49th Street as a main north-south travel route. Although not all traffic will utilize the entire length or same portion of Canal Road or East 49th Street, an overall traffic increase should be anticipated.

For example, the three entrances or parking areas associated with the Metroparks Canal Reservation were used by more than 148,000 vehicles during 2000 (***Exhibit 6-1***). The main park entrance, Whittlesey Way on East 49th Street, was used by 84,000 vehicles during 2000. This figure represents about a 4% increase in vehicles above the most recent traffic count of 5,550 for East 49th Street south of Grant Avenue, which was conducted by the Cuyahoga County Engineer in 1996.

For the Metroparks, vehicle counts peaked in 2000 during the four months of May through August, when 47% of all traffic occurred, or the equivalent of about 570 vehicles per day. In comparison, the lowest vehicle counts in 2000 occurred in January, February, November, and December, when 19% of all traffic occurred, or the equivalent of about 235 vehicles per day.

The number of vehicles that will use Canal Road/East 49th Street as part of the Scenic Byway is difficult to estimate at this time, although the overall impact should be substantially less than the traffic generated by the Metroparks Canal Reservation. For example, if the Central Route of the Scenic Byway, which uses Canal Road/East 49th Street in Cuyahoga Heights, eventually generates 10,000 vehicles per year, the estimated average number of vehicles per hour of daylight, year round, would be about two. As with the traffic generated by the Metroparks Canal Reservation, the number of vehicles would be expected to vary due to the season of the year and day of the week.

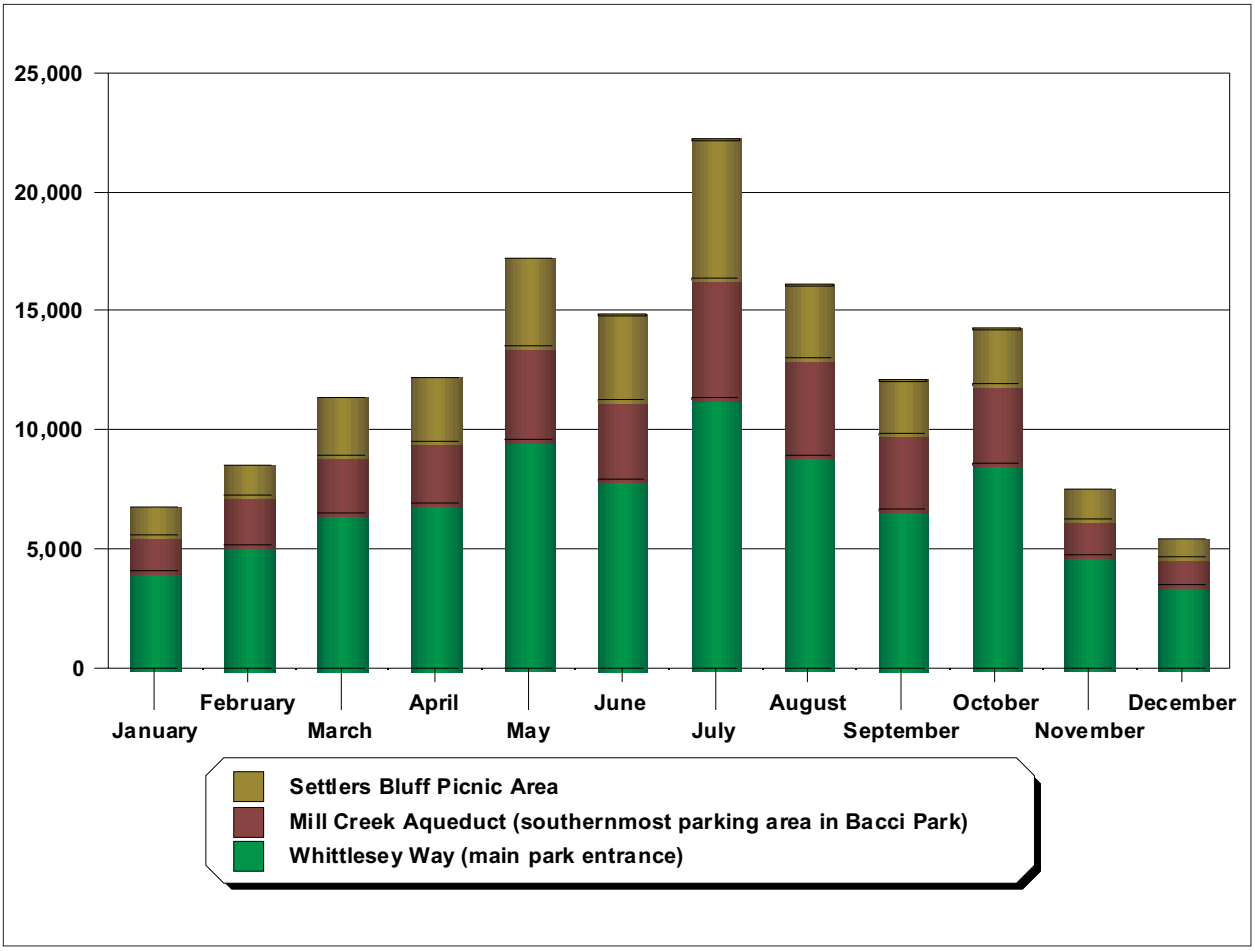
Potential Development Impact

The future presence of the Cleveland Metroparks Canal Reservation, the Towpath Trail, and the Cuyahoga Valley Scenic Railroad, all at Harvard Avenue near the Cuyahoga River and Jennings Road, may create development opportunities for Cuyahoga Heights and Cleveland properties located near these activities. The potential plans are discussed in more detail in Chapter 7, *Alternative Development Plans*.

Exhibit 6-1, Metroparks Canal Reservation, Vehicle Count, 2000

	Whittlesey Way (main park entrance)	Mill Creek Aqueduct (southernmost parking area in Bacci Park)	Settlers Bluff Picnic Area	Vehicle Total by Month
January	4,119	1,480	1,188	6,787
February	5,145	2,107	1,299	8,551
March	6,474	2,456	2,449	11,379
April	6,907	2,614	2,693	12,214
May	9,626	3,928	3,669	17,223
June	7,890	3,414	3,539	14,843
July	11,366	5,013	5,870	22,249
August	8,901	4,157	3,059	16,117
September	6,676	3,150	2,276	12,102
October	8,632	3,290	2,325	14,247
November	4,735	1,534	1,240	7,509
December	3,487	1,195	701	5,383
Vehicle Total by Location	**83,958**	**34,338**	**30,308**	**148,604**

Source: Cleveland Metroparks, October, 2001



CHAPTER SEVEN

ALTERNATIVE DEVELOPMENT PLANS

INTRODUCTION

Within Cuyahoga Heights are areas of special interest because of the potential for future development or redevelopment. For these specific areas, more detailed analyses have been conducted in order to assess the impacts and benefits of possible development options. The areas studied are listed below and illustrated on ***Map 7-1***.

Focus Area 1: Harvard Avenue at Old Harvard Avenue

Focus Area 2: East 49th Street South of BP Oil

Focus Area 3: East 49th Street North of Railroad Embankment

Focus Area 4: Grant Avenue Corridor West of I-77

Focus Area 5: Grant Avenue Corridor East of I-77

Focus Area 6: East 71st Street South of Chapek Parkway

FOCUS AREA 1: HARVARD AVENUE AT OLD HARVARD AVENUE

Introduction

This focus area includes several parcels extending westward from the Y-shape intersection of Harvard Avenue, Old Harvard Avenue, and the Harvard-Denison Bridge. The western limit of the focus area is property owned by LTV Steel.

The purpose of this analysis is to review potential development alternatives for the parcels, which are currently underutilized.

Property Ownership

The focus area includes four parcels totaling approximately 5.7 acres (***Exhibit 7-1***).

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the parcels were industrial or vacant land. For example, CJ Rogers Transport owned one parcel beginning about 1930. Today, the parcels are either industrial or commercial in use (***Exhibit 7-2***).

Zoning

All of the parcels are zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as well as retail, wholesale, commercial, and warehouse uses.

Traffic Counts

Traffic counts conducted by the Cuyahoga County Engineer's Office show that the number of total vehicles and trucks are decreasing on Old Harvard Avenue. One factor contributing to the decline is the recent opening of the Jennings Freeway.

The most recent traffic counts for Old Harvard Avenue, conducted in 1999 and 2000, counted approximately 3,000 vehicles in a 24-hour period. Just under 30% of the total vehicles were trucks. The 1999 and 2000 vehicle counts are about 50% below the counts recorded in 1989 and 1990, while the truck counts decreased about 45% during the same period. The closure of LTV Steel, which has occurred since the most recent counts, will likely reduce future counts further. Detailed traffic count information is displayed in Chapter 4, *Economic Development and Market Analysis*.

Development Alternatives

Considering the current surrounding land uses and freeway access, one possible alternative is to redevelop the parcels for more efficient **office and/or light industrial uses**.

A second alternative is to have the parcels purchased by an organization or agency, remove the existing buildings, and convert the parcels into a wooded area. The purpose of this alternative would be to serve as a **natural area** leading to the Towpath Trail at the Cuyahoga River and the future potential rail stop for the Cuyahoga Valley Scenic Railroad.

Map 7-1, Focus Areas, Cuyahoga Heights

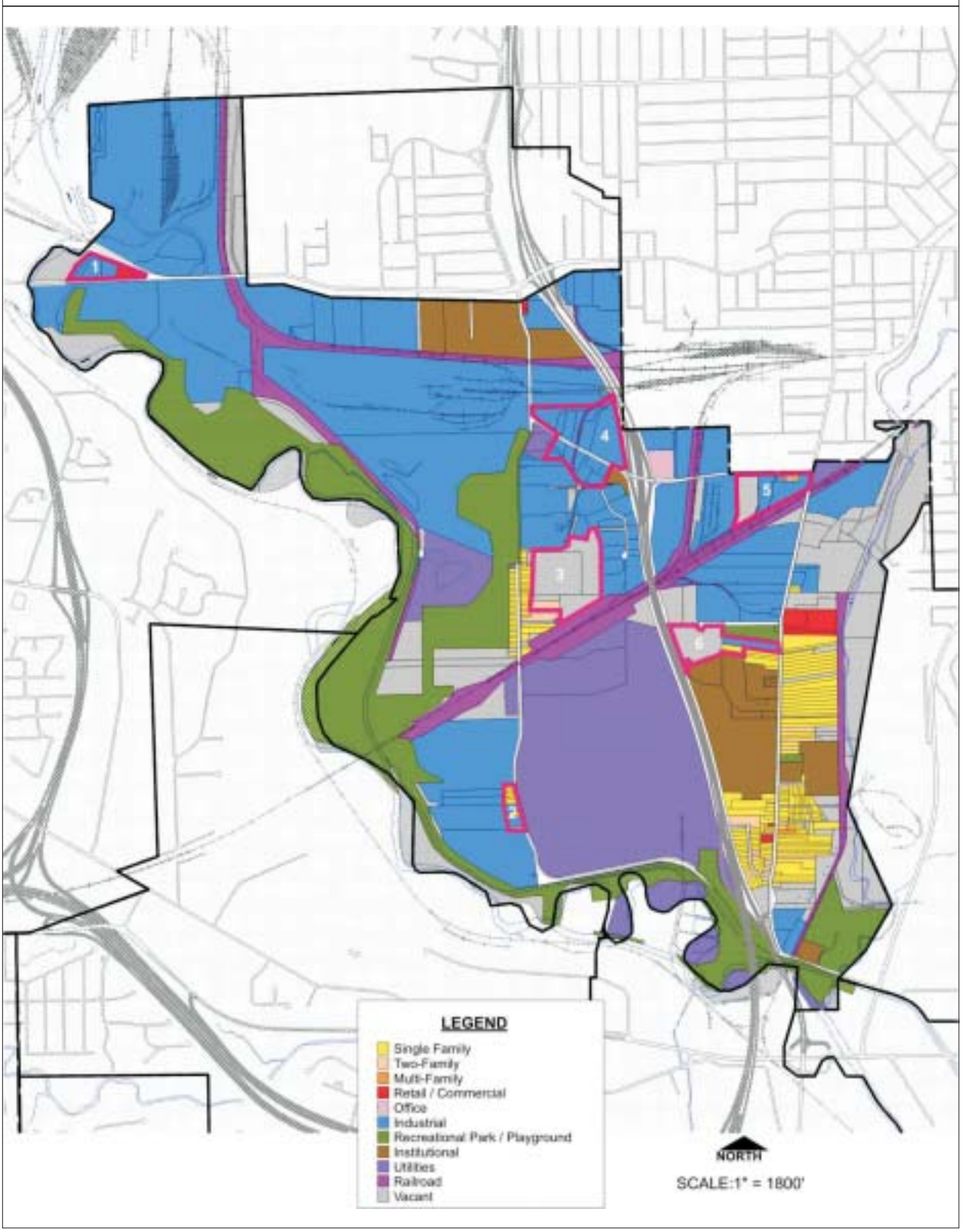


Exhibit 7-1, Focus Area 1, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Occupant	Building Date	Acreage	Estimated Market Value
901 Harvard Avenue	521-02-004	Tritsraolis Investments	2-19/86	vacant Mr. Hero	1969	0.28	$275,000
811 Harvard Avenue	521-02-003	Stephen & Clara Buriss	1-24/84	Ajax Bituminous Paving	1920	1.03	$66,714
711 Harvard Avenue	521-02-007	Ajax Bituminous Paving	8-6/80	Specialized Construction	1983 and 1990	1.64	$355,000
619 Harvard Avenue	521-02-005	Ajax Bituminous Paving	11-6/92	vacant CJ Rogers Transport	1953	2.73	$135,000
					Total	**5.68**	**$831,714**

Sources: Cuyahoga County Auditor's Office, April 2002; Village of Cuyahoga Heights

Exhibit 7-2, Focus Area 1, Land Use

Source: Cuyahoga County Engineer's Office, 1999

Office/Light Industrial Alternative

If the parcels were redeveloped, the area could support a 31,900 square foot light industrial building, along with a three story office building with a footprint of 6,000 square foot (18,000 square feet). This example of new development would total 49,900 square feet (***Map 7-2***).

Parking standards used for the above conclusion are two parking spaces per 1,000 square feet of industrial space and four parking spaces per 1,000 square feet of office space.

The proposed development would generate approximately $72,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $4,000 in revenue generated by the current businesses (***Exhibit 7-3***). After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $15,000, plus about $27,600 in property tax revenue to the school district.

There are several reasons why a small office building may be a better choice for the east end of the area than a second light industrial building. First, the proximity of the site to two freeways, I-77 at Harvard Avenue and the recently completed Jennings Freeway at Harvard/Denison provides excellent access to the site. Second, if any office development is preferred, it may be better to locate it on the high end of the site, where there is good visibility for the building and a major intersection. Finally, an architecturally interesting building of several stories in height with attractive landscaping would serve to create a visual focal point for the area. This type of building would likely have multiple tenants such as small companies or professional firms. A small deli or restaurant might be a possible first floor tenant.

It is estimated that the proposed new development would generate slightly over 400 vehicle trips per day. These new trips would increase vehicle traffic on Old Harvard Avenue about 15% above the 1999/2000 levels, but traffic would remain below the 1992 levels.

Streetscape Improvements

As part of any development of this focus area, Old Harvard Avenue should be upgraded with streetscape improvements that include street trees on both the north and south sides of the street, along with a five-foot wide sidewalk on the north side of the street. The creation of a pedestrian path along Old Harvard Road will make it possible for employees of Alcoa and other nearby companies to more easily and safely reach the Towpath Trail.

Natural Area Alternative

A second alternative is to have the parcels purchased by a nonprofit organization or public agency, remove the existing buildings, and convert the parcels into a wooded area. The purpose of this alternative would be to serve as a natural area leading to the Towpath Trail at the Cuyahoga River and the future potential rail stop for the Cuyahoga Valley Scenic Railroad. The parcels would not have any trails, picnic areas, parking area, or visitor facilities. The parcels would be revegetated and returned to a natural wooded area.

This alternative would emphasize the transition between the industrial uses on Harvard Avenue and the natural areas along the Cuyahoga River. The alternative would not produce tax revenue however, because there would be no employees on the site, and the parcels would become tax exempt for property taxes.

Streetscape Improvements

The streetscape discussion outlined in the Office/Light Industrial Alternative would also apply to this alternative.

FOCUS AREA 2: EAST 49TH STREET SOUTH OF BP OIL

Introduction

This focus area includes seven residential parcels located on the west side of East 49th Street, generally in front of the former Cotton Club Bottling Company facility. The residential parcels are separated by two driveways that serve the industrial plant.

Map 7-2, Focus Area 1, Development Alternative

Exhibit 7-3, Focus Area 1, Development Impact Analysis

Focus Area 1: Old Harvard Avenue at Harvard/Denison Bridge	Alternative 1	Alternative 2	Alternative 3
	Light Industry and Office	Passive Green Space	Existing Conditions
Site Characteristics			
Total Site Acreage	5.68	5.68	5.68
Total Site Square Footage	247,421	247,421	247,421
Building footprint (sq ft) - light industry	31,900	-	-
Number of stories - light industry	1	-	-
Total building square footage - light industry	31,900	-	12,338
Building footprint (sq ft) - office	6,000	-	-
Number of stories - office	3	-	-
Total building square footage - office	18,000	-	-
Number of dwelling units	-	-	-
Potential land value of site	$388,800	$388,800	$388,800
Potential building value of site - light industry	$1,636,470	-	$442,914
Potential building value of site - office	$1,376,100	-	-
Total potential value of site	$3,401,370	$388,800	$831,714
Total number of residents	-	-	-
Total number of employees	118	-	6
Environmental Impacts			
Sewage Flow (gallons/day)	9,670	-	774
Water Consumption (gallons/day)	11,244	-	900
Solid Waste Production (tons/day)	0.1420	-	0.0083
Traffic: trips generated per weekday	421	-	75
Revenues			
Estimated avg annual employee income - light industry	$29,970	-	$29,970
Estimated avg annual employee income - office	$47,020	-	-
Median household income	-	-	-
Income tax revenues - Village	$66,767	exempt	$2,697
Property Tax Revenues - Village	$5,258	exempt	$1,286
Property Tax Revenues - School	$27,640	exempt	$6,759
Total Village Revenues	$72,025	-	$3,983
Expenditures			
Cost to provide services*	$56,968	-	$2,960
NET FISCAL IMPACT - VILLAGE	**$15,057**	**$0**	**$1,023**

*Municipal service expenditure categories include general government, public safety, public health and welfare, public works, statutory and unclassified (special reserve funds), and recreation.

The purpose of this analysis is to review potential development alternatives for the residential parcels.

Property Ownership

The focus area includes seven residential parcels totaling approximately 1.9 acres, plus approximately 0.8 acres of land that is part of the acreage of the large industrial plant (***Exhibit 7-4***).

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the parcels were residential surrounded by vacant land. The former Cotton Club Bottling Plant was built in 1954, and the BP Oil facility was built in 1954 and 1957 (***Exhibit 7-5***).

Exhibit 7-4, Focus Area 2, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Building Date	Acreage	Estimated Market Value
4880 East 49th St.	521-18-002 and 003 and 014	Sheryl Lemiec	10-1/75	1940	0.29	$101,514
4884 East 49th St.	521-18-011	Charles Rini	2-13/70	1920	0.24	$81,800
4886 East 49th St.	521-18-004	Irma Schab	7-26/62	1962	0.21	$99,714
4888 East 49th St.	521-18-005	James and Lois Henley	10-7/81	1913	0.11	$72,714
4890 East 49th St.	521-18-006	NR Company	10-28/70	1940	0.44	$94,200
4912 East 49th St.	521-18-008	Pedrag & Zivka Pejanovic	6-25/93	1941	0.22	$80,714
4922 East 49th St.	521-18-007 and 009	NR Company	7-14/53 and 9-24/53	1954	est. 0.84	est $29,100
4936 East 49th St.	521-18-010	NR Company	2-18/72	vacant land	0.36	$17,000
				Total	**2.71**	**$576,756**

Sources: Cuyahoga County Auditor's Office, April 2002

Exhibit 7-5, Focus Area 2, Land Use

Source: Cuyahoga County Engineer's Office, 1999

Zoning

Along this section of East 49th Street, the first 200 feet of land are zoned Residential (Chapter 1246), which allows a specific list of uses: single-family houses, two-family houses, churches, schools, libraries, municipal buildings, playgrounds, and parks.

Traffic Counts

Traffic counts conducted by the Cuyahoga County Engineer's Office show that the number of total vehicles and trucks are relatively steady on East 49th Street south of Grant Avenue.

The total number of vehicles for each of the three most recent counts (1996, 1991, and 1987) have been in the 5,000 - 6,000 range. At the time of the same three counts, the number of trucks varied from about 700 - 1,100, representing about 10% - 20% of all vehicles.

On East 49th Street south of Grant Avenue there are a number businesses and facilities that generate traffic, such as several factories, the BP Oil facility, the Northeast Ohio Regional Sewer District facility, and the vacant Cotton Club Bottling Plant. It is not possible to determine, based on the available data, the exact vehicle counts at the parcels in this focus area. In addition, traffic counts in the vicinity will change again when the Cotton Club plant obtains a new tenant. Detailed traffic count information is displayed in Chapter 4, *Economic Development and Market Analysis*.

Development Alternative

If the vicinity of the focus area is not considered suitable in the long-term for a small group of houses surrounded by industrial and public utility uses, the most likely redevelopment option for the residential parcels would be as **light industrial uses or office uses**.

Light Industrial Alternative

If the parcels were redeveloped, the area could support a total of about 38,600 square feet of light industrial space, divided into buildings of approximately 21,000 square feet and 17,600 square feet (***Map 7-3***). The overall acreage of the area, 2.71 acres, would have a building coverage of approximately 33%, which is consistent with a commonly used standard of 30% - 35%.

Building setback standards used for the above conclusion are 30 feet for the front, as measured from the edge of the road right-of-way, and 10 feet for the side and rear, as measured from the property lines of adjacent owners.

The proposed buildings were placed at the northern and southern ends of the focus area for the benefit of the large industrial property owner in the rear. The proposed placement of new buildings will maximize the street visibility for the rear property, as well as allow for improvements to the current industrial driveway configuration.

Parking standards used for the above analysis are two parking spaces per 1,000 square feet of industrial space for the northern building (42 spaces) and about 2.4 spaces per 1,000 square feet of industrial space for the southern building (43 spaces).

The proposed redevelopment would consolidate the two existing driveways leading to the industrial complex in the rear into one driveway with a 50-foot right-of-way and two lanes of pavement totaling 28 feet in width. Driveways for the two proposed buildings would be directly from East 49th Street.

The present property owner of the rear industrial plant, NR Company, currently owns about 60% (1.64 acres) of the total 2.71 acres in the focus area. The parcels owned by NR Company include all the land needed for the southern building except for one property situated in the proposed parking lot (521-18-008). For the northern building, NR Company owns the land that would be occupied by the proposed parking lot (521-18-007 and 521-18-006).

The proposed development would generate approximately $38,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $2,300 in revenue generated by the current residences (***Exhibit 7-6***). After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $7,500, plus about

Map 7-3, Focus Area 2, Light Industrial Development Alternative

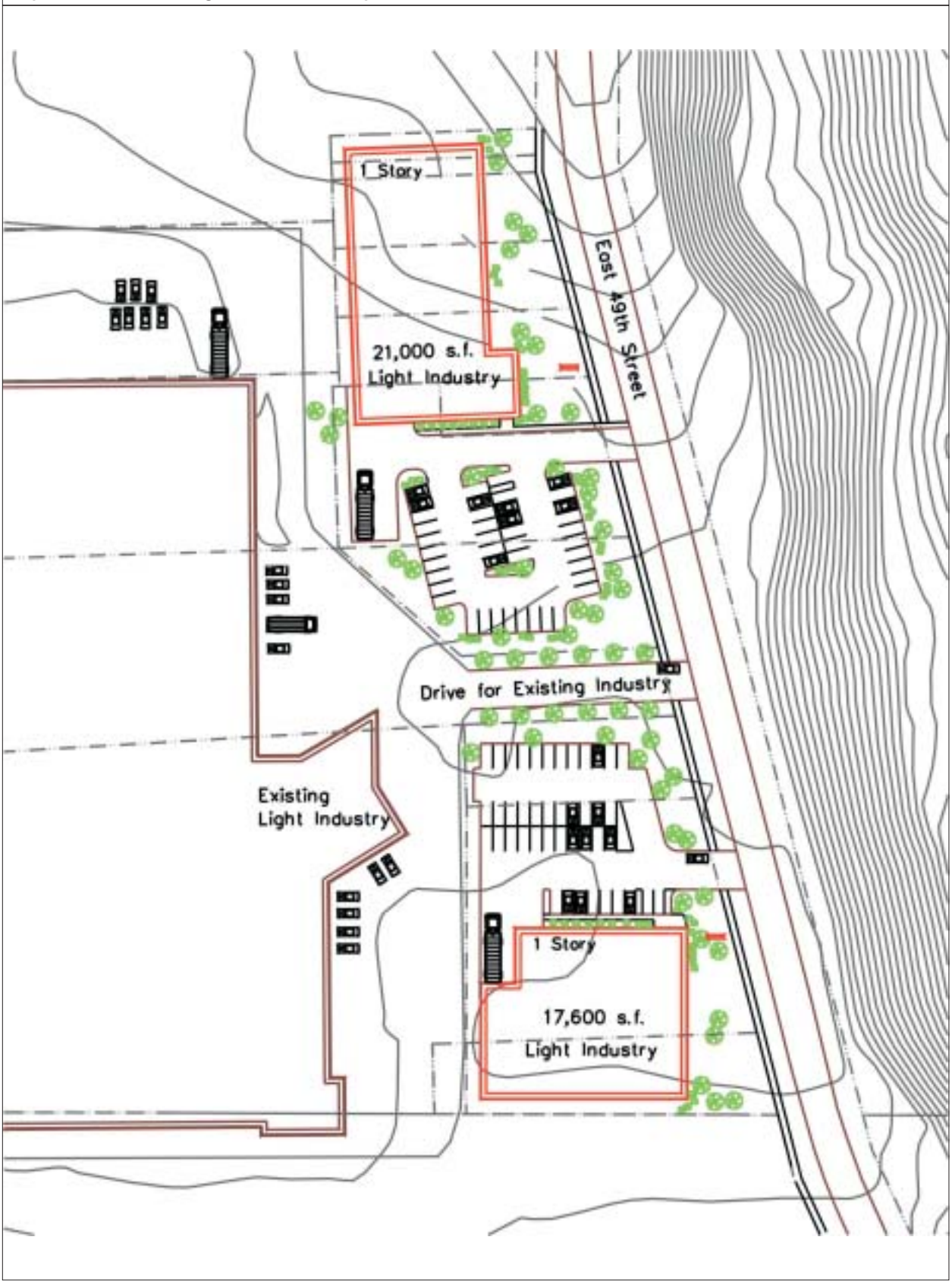


Exhibit 7-6, Focus Area 2, Development Impact Analysis

Focus Area 2: E. 49th Street, west side, south of BP Oil facility	Alternative 1	Alternative 2	Alternative 3
	Light Industry	Office	Existing Conditions
Site Characteristics			
Total Site Acreage	2.71	2.71	2.71
Total Site Square Footage	118,252	118,252	118,252
Building footprint (sq ft)	38,600	19,000	-
Number of stories	1	2	-
Total building square footage	38,600	38,000	-
Number of dwelling units	-	-	6
Potential land value of site	$176,150	$176,150	$137,614
Potential building value of site	$1,980,180	$2,905,100	$422,142
Total potential value of site	$2,156,330	$3,081,250	$559,756
Total number of residents	-	-	14
Total number of employees	77	114	-
Environmental Impacts			
Sewage Flow (gallons/day)	9,959	3,039	910
Water Consumption (gallons/day)	11,580	3,534	1,400
Solid Waste Production (tons/day)	0.1065	0.1140	0.0245
Total trips generated per day: weekday	269	418	57
Revenues			
Estimated avg annual employee income	$29,970	$47,020	-
Median household income	-	-	$41,995
Income tax revenues - Village	$34,705	$80,404	$1,470
Property Tax Revenues - Village	$3,333	$4,763	$865
Property Tax Revenues - School	$17,522	$25,038	$4,484
Total Village Revenues	$38,038	$85,167	$2,335
Expenditures			
Cost to provide services*	$30,554	$56,239	$5,538
NET FISCAL IMPACT - VILLAGE	**$7,484**	**$28,928**	**-$3,203**

*Municipal service expenditure categories include general government, public safety, public health and welfare, public works, community development, recreation, and debt service.

$17,500 in property tax revenue to the school district.

It is estimated that the proposed new development would generate about 270 vehicle trips per day. These new trips would increase vehicle traffic on East 49th Street south of Grant Avenue about 5% above the 1996 level, but traffic would remain below the 1991 level.

Office Alternative

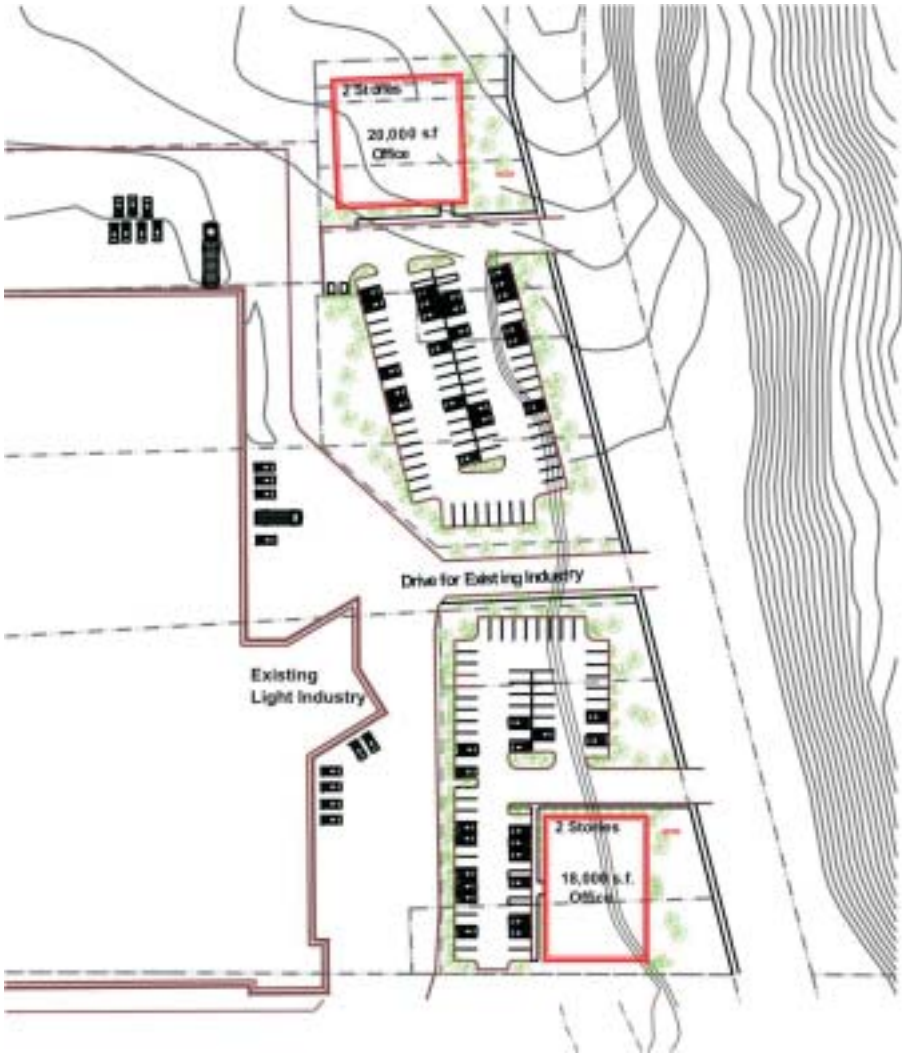
If the parcels were redeveloped, the area could support a total of about 38,000 square feet of office space, divided into two-story buildings of approximately 20,000 square feet and 18,000 square feet (***Map 7-4***). The overall acreage of the area, 2.71 acres, would have a building coverage of approximately 16%.

Building setback standards used for the office alternative are similar to the light industrial alternative.

The proposed buildings were placed at the northern and southern ends of the focus area for the benefit of the large industrial property owner in the rear. The proposed placement of new buildings will maximize the street visibility for the rear property, as well as allow for improvements to the current industrial drive configuration.

Parking standards needed for the office alternative are higher than for the light industrial alternative.

Map 7-4, Focus Area 2, Office Development Alternative



The office analysis includes four parking spaces per 1,000 square feet of office space for the northern building (82 spaces) and southern building (72 spaces).

Similar to the light industrial alternative, the existing driveways for the industrial complex would be consolidated, and the proposed office buildings would have driveways directly from East 49th Street. The present property owner of the rear industrial plant, NR Company, currently owns the majority of the property that would be neded for the proposed development.

The proposed development would generate approximately $85,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $2,300 in revenue generated by the current residences (Exhibit 7-6). After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $29,000, plus about $25,000 in property tax revenue to the school district.

It is estimated that the proposed new development would generate about 420 vehicle trips per day. These new trips would increase vehicle traffic on East 49th Street south of Grant Avenue about 10% above the 1996 level, rising to about the 1991 level.

FOCUS AREA 3: EAST 49TH STREET NORTH OF RAILROAD EMBANKMENT

Introduction

This focus area includes a number of parcels located behind the residences on the east side of East 49th Street, north of the railroad embankment. The focus area extends east and north to the existing light industrial properties.

The purpose of this analysis is to review potential development alternatives for the parcels, which are currently vacant land.

Property Ownership

The focus area includes five parcels totaling just under 27 acres (***Exhibit 7-7***).

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the parcels were vacant land. A United States Geological Survey map of the same period shows that the area was a ravine about 50 to 60 feet in depth. It appears that the ravine drained to the south, and that the natural drainage pattern was disrupted by the construction of the railroad embankment in the early 20th century. More recently, the ravine has been filled (***Exhibit 7-8***).

Several of the parcels were owned during the 1940's through 1960's by National Smelting and later Apex Smelting. More recently, the area has been filled. Prior to any construction on the site, environmental and engineering testing should be conducted to verify that there are no environmental hazards and that the land is suitable as a building site.

Zoning

Along this section of East 49th Street, the first 1,000 feet of land are zoned Residential (Chapter 1246), which allows a specific list of uses: single-family houses, two-family houses, churches, schools, libraries, municipal buildings, playgrounds, and parks.

Parcel 522-08-004, which occupies the northern and eastern portion of the focus area, including the CEI easement area, is zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as well as retail, wholesale, commercial, and warehouse uses.

Traffic Counts

Traffic counts conducted by the Cuyahoga County Engineer's Office show that the number of total vehicles and trucks are relatively steady on East 49th Street south of Grant Avenue.

The total number of vehicles for each of the three most recent counts (1996, 1991, and 1987) have been in the 5,000 - 6,000 range. At the time of the same three counts, the number of trucks varied from about 700 - 1,100, representing about 10% - 20% of all vehicles.

On East 49th Street south of Grant Avenue there are a number businesses and facilities that generate traffic, such as several factories, the BP Oil facility, the Northeast Ohio Regional Sewer District facility, and the vacant Cotton Club Bottling Plant. In addition, traffic counts in the vicinity will change again when the Cotton Club plant obtains a new tenant. Detailed traffic count information is displayed in Chapter 4, *Economic Development and Market Analysis*.

Landfill

The land area in this focus area is primarily a former landfill operated by the family. The site is most commonly known as the Nicky Boulevard Landfill, although other names over time include the Apex Smelting Site and the J&L Steel Disposal Site. The landfill was in operation before 1968, and operations ceased in 1988. The landfill was officially closed in accordance with Ohio Environmental Protection Agency (OEPA) rules in January, 1999, when the agency issued the Closure Certification Approval Letter.

Due to the fact that this landfill operated prior to the establishment of OEPA, no certainties can be provided regarding materials that may have been buried at the site by the current owner or previous owners. In addition, it is unknown at this time if the

Exhibit 7-7, Focus Area 3, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Building Date	Acreage	Estimated Market Value
East 49th St.	522-08-004	Boyas Excavating Inc.	9-16/70	vacant land	9.16	$280,600
East 49th St.	522-08-026	Boyas Excavating Inc.	9-16/70	vacant land	11.65	$356,800
4569 East 49th St.	522-11-001	Boyas Excavating Inc.	4-11/77	vacant land	1.04	$5,400
4603 East 49th St.	522-11-002	Walter Attewell	8-21/51	vacant land	1.45	$31,320
East 49th St.	522-11-010	Boyas Excavating Inc.	9-14/70	vacant land	3.66	$90,800
				Total	**26.96**	**$794,020**

Sources: Cuyahoga County Auditor's Office, April 2002

Exhibit 7-8, Focus Area 3, Land Use

Source: Cuyahoga County Engineer's Office, 1999

site has a potential for methane or leachate problems.

In addition, any construction activity on a landfill needs to be approved through a specific OEPA approval process known as *Rule 13*. To date, no *Rule 13* permit has been approved for construction of an "occupied building" on top of a landfill. *Rule 13* permits have been approved for items such as the construction of roads, parks, golf courses, and "unoccupied buildings" (such as concession stands). The Boyas property under development in Garfield Heights received a *Rule 13* permit that is within the latter category. The actual buildings planned for that development will not be located directly above fill material.

Due to the regulatory requirements, future development of the landfill in this focus area will depend upon an analysis of the landfill contents, assessment of potential problems, and development of appropriate solutions. A second potential option, depending upon the cost and logistics, would be to complete excavate and remove the existing landfill material and replace it with clean fill.

Development Alternatives

Considering the current surrounding land uses and the large size of the focus area, a mixed use development would be a productive solution.

One possible alternative would be to redevelop the parcels for single-family and two-family detached housing directed at an "active adult" market, meaning adults age 55 and over. This alternative would also include an assisted living facility, as well as one light industrial building.

A second alternative would be to redevelop the parcels for single-family and two-family detached housing without an assisted living facility, and still include several light industrial buildings.

Active Adult Housing/Assisted Living/Light Industrial - Alternative 1

If the parcels were redeveloped in this manner, the area could support 69 detached housing units, an assisted living facility with 116 units, and 26,500 square feet of light industrial space (***Map 7-5***). The CEI easement of electric transmission towers occupies approximately three acres, meaning that the available developable land is about 24 acres.

Active Adult Housing

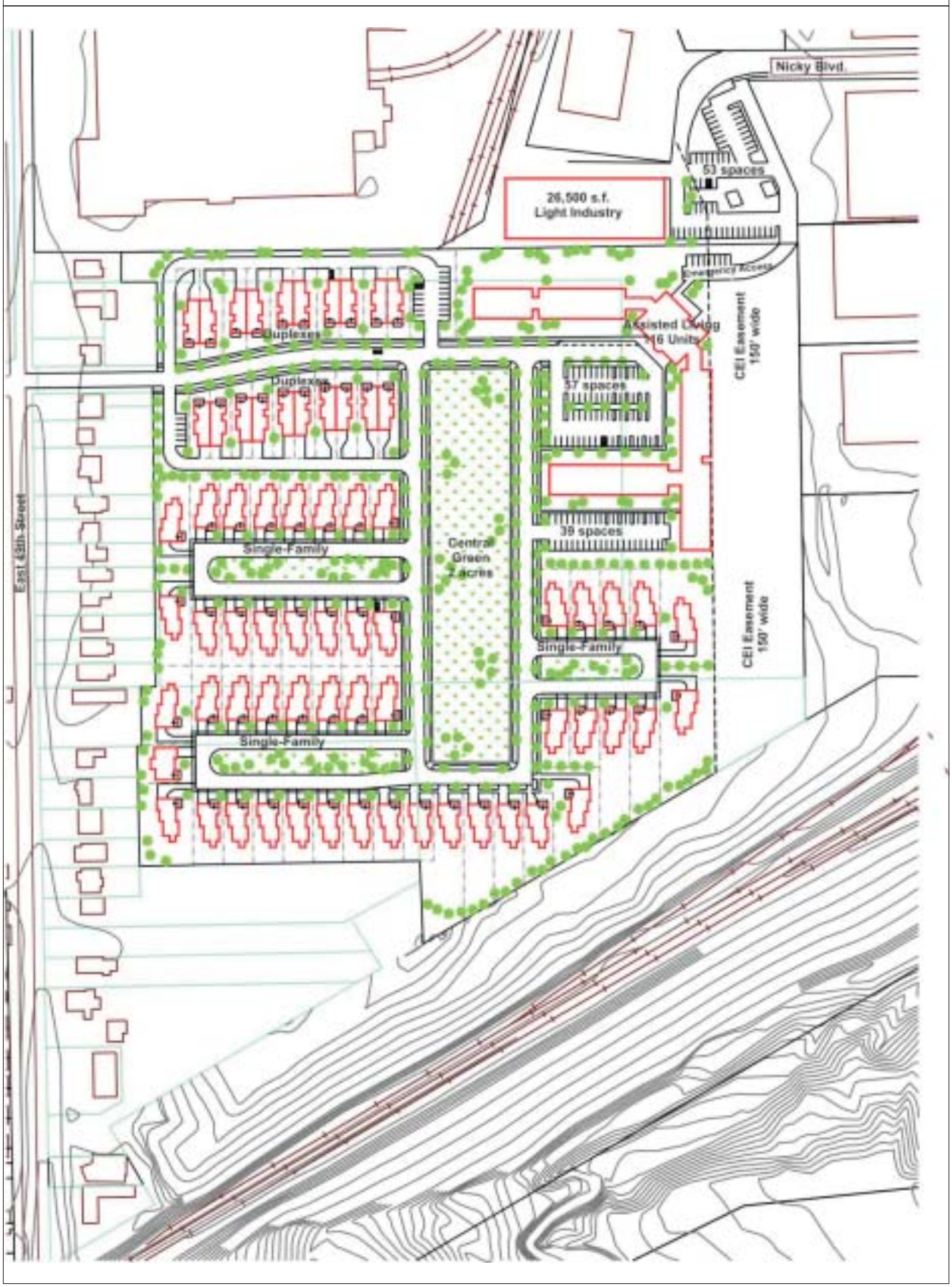
The housing occupies approximately 16 acres. It includes 49 single-family units of about 1,500 square feet, and 10 side-by-side two-family structures (20 units) of about 1,300 square feet each. All units would be one story or one-and-one-half stories in height, have front porches, and have an attached two-car garage. The square footage for the garage would be in addition to the living space. ***Map 7-5*** illustrates single-family lots that are 50 feet wide and 110 feet deep. The two-family structures are on lots 35 or 39 feet wide and varying from 108 to 150 feet in depth. All houses are situated at least 250 feet from the railroad track on the embankment.

The physical arrangement of the housing development would create a pedestrian friendly neighborhood. For example, the proposed short streets of houses would be oriented around a two-acre central green. The entire development would have five-foot wide sidewalks, in order to encourage walking within the neighborhood and as a connection to the Metroparks Canal Reservation across the street. The two-family homes, located along the entrance drive, would have their driveway access from the rear. Guest parking would be provided near the two-family homes, and the twenty-four foot wide streets would also be wide enough to allow guest parking at the single-family homes.

The single-family homes would be priced at approximately $160,000, and each unit in the two-family homes would be priced at about $120,000. At the above selling prices, a single-family home could be afforded by a household with an income of at least $64,000, and a two-family home could be afforded by a household with an income of at least $45,000. If a household could make a larger than normal downpayment, such as using part or all of the proceeds from the sale of a current residence, then the needed annual income would be lower.

As part of a required monthly fee charged to each household, a management company would be responsible for services such as exterior building

Map 7-5, Focus Area 3, Development Alternative 1



maintenance, landscaping maintenance, and snow removal.

Housing for Older Persons
The federal Fair Housing Act prohibits discrimination on the basis of familial status. The Act lists three exemptions in which housing may legally exclude families with children: 1) State and federal elderly housing programs; 2) Housing solely occupied by persons age 62 and over; and 3) Housing for persons age 55 and over.

The Fair Housing Act definition of housing for persons age 55 and over was amended by the Housing for Older Persons Act of 1995. Housing intended, and operated, for occupancy by persons age 55 and over is exempt from the familial status provisions of the Fair Housing Act if:

1. At least 80% of the occupied units are occupied by at least one person age 55 years or older;

2. The housing development publishes and adheres to policies and procedures that demonstrate the intent to offer housing for persons age 55 years and older; and

3. The housing development complies with rules issued by the federal government for verification of occupancy.

Active Adult Housing - Definition
The real estate marketing name for cluster housing intended for persons age 55 and over (no children permitted) is Active Adult.

Active Adult Housing Developments in Northeast Ohio
The following three items are examples of Active Adult housing developments. In each of these developments, residents pay a monthly fee for upkeep of any common facilities such as a clubhouse, recreation facilities, and grounds care. The presence of activities and facilities directed toward persons age 55 and older is an important component of complying with the federal regulations.

Exhibit 7-9, Greenbriar at River Valley, Seneca Model, North Royalton, Ohio

Greenbriar at River Valley, North Royalton, Ohio. This is a gated community of about 55 lots built by U.S. Home Corporation bordering the Rocky River. The development offers detached single-family homes priced in from $179,950 to $225,700. There are a total of five floor plans that can be built as one-story ranches or two-story homes, ranging from 1,300 to 2,100 square feet in size. The homes have three or four bedrooms (all with the master bedroom downstairs), two full bathrooms, and two car garages. Some homes have lower-level walkouts, with balconies on the upper level to provide views (***Exhibit 7-9***).

Amenities include a 7,000 square foot clubhouse with health club, spa, pool, tennis, bocci courts, computer lab, resident lounge, and an on-site activities director. The development also includes jogging/walking trails.

The development has been ranked as one of the 100 Best Master-Planned Communities in America by Where to Retire magazine.

The development is located on Bennett Road, just south of Drake Road. The telephone number is 440.230.0675. Images of the model homes are available on the U.S. Home Corporation website, Click on "Active Adult Communities" on the home page. The site provides information on Active Adult developments by U.S. Home in eleven states.

Athenian Village, North Royalton, Ohio. This development is part of a combination independent living, assisted living, and nursing facility campus built by Gaitanaros Healthcare Enterprises.

The independent living development offers two-unit buildings divided by a garage. The 64 homes are priced from $158,500 to about $225,000. There are a total of four models, all built as one-story homes, with variations created through options and upgrades. The size ranges from 1,250 to just under 1,500 square feet in size. The homes have

two bedrooms, two full bathrooms, and one car garages (***Exhibit 7-10***).

Amenities include the use of the exercise and dining facilities at the nursing home, jogging/walking trails, and a playground for use by grandchildren.

The development is located on West 130th Street, south of Sprague Road, roughly opposite Whitney Road. Images of the development and homes are available on the Gaitanaros website, Click on "Athenian Village" on the home page.

Exhibit 7-10, Athenian Village, North Royalton, Ohio

Exhibit 7-11, Avenbury Lakes, Red Admiral Two Family Home, Avon, Ohio

Avenbury Lakes, Avon, Ohio. This is a private community built by Scaletta Development Corporation in Avon. The 146-acre development offers 349 cluster homes priced at $177,900 to $269,900. About 45% of the total site has been reserved as open space, including ponds, woods, and wetlands (***Exhibit 7-11***).

Amenities include a 10,000 square foot clubhouse, indoor and outdoor swimming pools, tennis, community garden, putting green, and trails.

The development has been received at least nine awards, including the 2000 top award for the best condominium or cluster home community in Northern Ohio from both the Home Builders Association of Greater Cleveland and the North Coast Building Industry.

The development is located on Jaycox Road, north of Detroit Road. The telephone number is 440.937.9300. Images of the development and homes are available on the Scaletta Development Corporation website, Click on "Avenbury Lakes" on the home page.

Assisted Living Facility

Map 7-5 illustrates a two-story assisted living facility with 116 total units situated on about four acres. An assisted living facility is a setting in which each resident has a small private apartment, but utilizes the services and facilities offered to assist them with activities of daily living. For example, meals would be served in a main dining room, and staff would handle housekeeping and laundry duties, as well as provide services such as transportation to medical appointments. A nurse would also be on duty to assist with duties such as ensuring that each resident is taking the proper dose of their medications on schedule. A regular schedule of activities, as well as field trips, are also provided. A community room within the facility could also be utilized by residents of the entire neighborhood for activities or family gatherings.

The proposed assisted living facility is shown with parking equal to about one space per unit. Although most residents will not own an automobile, the parking needs to accommodate employees and visitors. In addition, an emergency access drive is also provided from Nicky Boulevard to the rear of the facility. This rear drive would improve access to the emergency medical squad located at the fire station and also serve as a delivery entrance for vehicles such as food service.

Light Industrial

Finally, ***Map 7-5*** shows a 26,500 square foot light industrial building at the end of Nicky Boulevard, with associated parking, located on about two acres. Similar to the way in which the 150-foot wide CEI easement would serve as a buffer between the proposed housing and the rear of the existing light industrial buildings on Willow Parkway, this proposed light industrial building at the end of Nicky Boulevard could create an attractive transition between industrial and housing uses.

Parking standards used for the proposed development were two spaces per 1,000 square feet of industrial space. In addition, the parking area would

Exhibit 7-12, Focus Area 3, Development Impact Analysis - Alternatives 1 and 2			
Focus Area 3: E. 49th Street, East Side, North of Railroad Overpass	**Alternative 1**	**Alternative 2**	**Alternative 3**
	Mixed Use	**Mixed Use**	**Existing Conditions**
Site Characteristics			
Total site acreage	26.96	26.96	26.96
Total site square footage	1,174,378	1,174,378	0
Total industrial building square footage	26,500	26,500	-
Number of dwelling units	185	81	-
Total potential value of site	$21,022,138	$14,435,699	
Total number of residents	237	142	0
Number of school-aged children	0	13	
Total number of employees	103	53	0
Environmental Impacts			
Sewage Flow (gallons/day)	25,476	16,051	0
Water Consumption (gallons/day)	32,475	22,125	0
Solid Waste Production (tons/day)	0.575	0.321	0
Total trips generated per day: weekday	674	659	0
Revenues			
Income tax revenues - Village	$49,567	$43,674	0
Property Tax Revenues - Village	$32,481	$22,297	$1,279
Property Tax Revenues - School	$169,627	$115,836	$6,695
Total Village Revenues	$82,048	$65,971	$1,279
Expenditures			
Cost to provide services*	$138,221	$75,542	0
NET FISCAL IMPACT - VILLAGE	**-$56,173**	**-$9,571**	**$1,279**

*Municipal service expenditure categories include: general government, pubic safety, public health and welfare, public works, community development, recreation and debt service.

accommodate the bases of two CEI transmission towers, as well as space for the emergency access drive leading to the rear of the assisted living facility.

Economic Impact

As part of determining the economic impact of the proposed development, several assumptions have been made concerning the income sources of residents, and thus whether they would be paying the Village income tax. Any changes in these assumptions would affect potential revenues. For the assisted living facility, it is assumed that no residents would be earning wages. Due to the fact that the single-family and two-family units would be occupied by persons age 55 and over, it is assumed that 50% of the residents would be earning wages and 50% would not be earning wages.

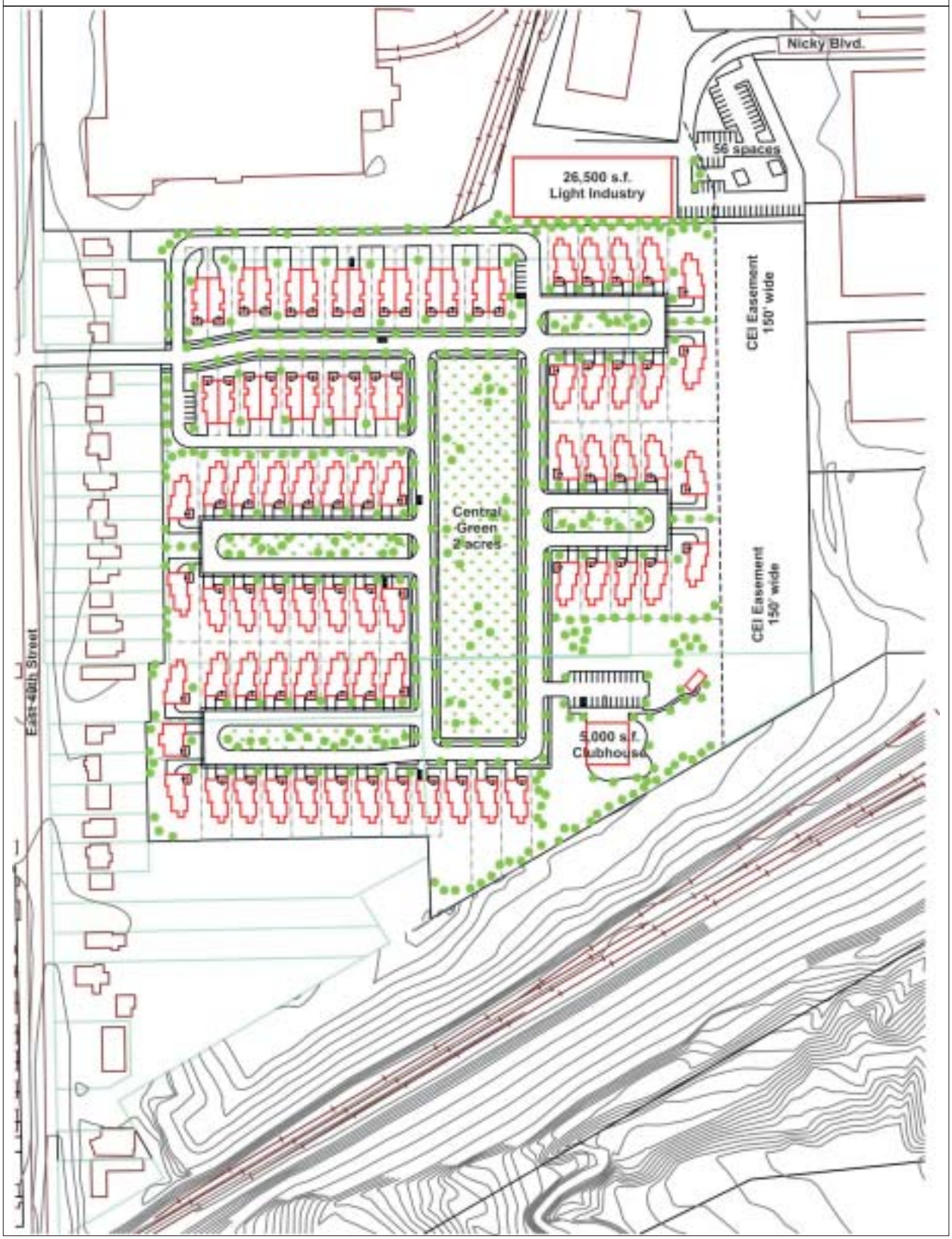
The proposed development would generate approximately $82,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $1,300 in revenue generated by the current vacant land (***Exhibit 7-12***). After estimating the cost of providing services to the new development, it is anticipated that the annual net fiscal impact to the Village would be a negative $56,000, however there would be an additional $169,600 in annual property tax revenue to the school district.

It is estimated that the proposed new development would generate slightly under 700 vehicle trips per day. These new trips would increase vehicle traffic on East 49th Street about 13% above the 1996 level and about 3% over the 1991 level.

Cluster Housing/Light Industrial - Alternative 2

If the parcels were redeveloped in this manner, the area could support 81 detached housing units and 26,500 square feet of light industrial space (***Map 7-6***). The CEI easement of electric transmission towers occupies approximately three acres, mean-

Map 7-6, Focus Area 3, Development Alternative 2



ing that the available developable land is about 24 acres.

Cluster Housing

The housing occupies approximately 18 acres. It includes 57 single-family units of about 1,500 square feet, and 12 side-by-side two-family structures (24 units) of about 1,300 square feet each.

Many of the characteristics of the development would be similar to Alternative 1, such as building height, front porches, attached two-car garages, and lot size. The same pedestrian friendly neighborhood would also be created, with a central green and sidewalks.

As in Alternative 1, the single-family homes would be priced at approximately $160,000, and each unit in the two-family homes would be priced at about $120,000. At the above selling prices, a single-family home could be afforded by a household with an income of at least $64,000, and a two-family home could be afforded by a household with an income of at least $45,000. If a household could make a larger than normal downpayment, such as using part or all of the proceeds from the sale of a current residence, then the needed annual income would be lower.

As part of a required monthly fee charged to each household, a management company would be responsible for services such as exterior building maintenance, landscaping maintenance, and snow removal.

As part of Alternative 2, a 5,000 square foot clubhouse is included as part of the housing development. This building, with kitchen facilities, an outdoor pavilion, and outdoor space situated on about two acres, could be utilized by residents of the entire neighborhood for activities or family gatherings. Scheduling and maintenance would be the responsibility of the management company.

One significant difference from Alternative 1 is that these units would not be restricted to persons age 55 and over. A development of this type however, is likely to attract "empty nesters" in that age bracket, as well as younger couples with no children, and individuals. Another type of household that could be attracted to these units is single parents with child. In Alternative 2, it is estimated that the housing development could have approximately 30 - 35 children.

Light Industrial

As in Alternative 1, ***Map 7-6*** shows a 26,500 square foot light industrial building at the end of Nicky Boulevard, with associated parking, located on about two acres, which could be used to create an attractive transition between industrial and housing uses. The parking standards are the same as outlined in Alternative 1, and the parking area would accommodate the bases of two CEI transmission towers.

Economic Impact

As part of determining the economic impact of the proposed development, an assumption has been made concerning the income sources of residents, and thus whether they would be paying the Village income tax. Any changes in this assumption would affect potential revenues. Due to the fact that the single-family and two-family units would not be restricted to age 55 and over, it is assumed that 100% of the residents would be earning wages.

The proposed development would generate approximately $66,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $1,300 in revenue generated by the current vacant land (***Exhibit 7-12***). After estimating the cost of providing services to the new development, it is anticipated that the annual net fiscal impact to the Village would be about a negative $9,500, however there would be an additional $115,800 in annual property tax revenue to the school district.

It is estimated that the proposed new development would generate about 650 vehicle trips per day. These new trips would increase vehicle traffic on East 49th Street about 11% above the 1996 level and about 2% over the 1991 level.

FOCUS AREA 4: GRANT AVENUE (I-77 TO EAST 49TH STREET)

Introduction

This focus area includes thirteen industrial parcels located on both the north and south sides of Grant Avenue from I-77 to East 49th Street.

The purpose of this analysis is to review the potential alternative of encouraging the entire redevelopment of the focus area into office space.

Property Ownership

The focus area contains thirteen industrial parcels totaling approximately 25 acres (***Exhibit 7-13***). On the north side of Grant Avenue, eight parcels total approximately 18 acres of land, while on the south side of Grant Avenue, five parcels total about seven acres. Twelve of the parcels are located on Grant Avenue, and one parcel is located on Willow Parkway.

Land Use

Cuyahoga County Auditor's records indicate that the parcels began to develop with industrial uses during the 1920's. The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the area was fully developed as an industrial area by that date (***Exhibit 7-14***).

Zoning

All of the parcels are zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as well as retail, wholesale, commercial, and warehouse uses.

Traffic Counts

The most recent traffic count, done in 1996, showed approximately 10,000 vehicles on Grant Avenue immediately west of I-77. These vehicles would have been traveling to and from destinations on Grant Avenue, Willow Parkway, and East 49th Street. At the time of the same count, the number of trucks was approximately 2,000, representing about 20% of all vehicles.

Exhibit 7-13, Focus Area 4, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Estimated Market Value
North Side				
5301 Grant Ave.	522-07-005 and 006	5301 Grant LLC	1-26/2000	$ 2,638,200
5207 Grant Ave.	522-07-002	Legacy Property Investments	1-12/1997	$ 590,600
5209 Grant Ave.	522-07-009	5301 Grant LLC	1-26/2000	$ 40,914
Grant Ave.	522-07-001	Newburgh & South Shore	11-24/1986	not available
5201 Grant Ave.	522-06-019	Precision Investment Group	1-21/2000	$ 461,714
5171 Grant Ave.	522-06-017	Laurel Realty Co.	11-8/1962	$ 930,000
4919 Grant Ave.	522-06-018	Eldon Kabb	10-1/1986	$ 390,000
4911 Grant Ave.	522-06-001to 004	Alfra Corporation	10-12/1971	$ 738,914
Estimated Market Value - North Side				$ 5,790,342
Estimated Acreage - North Side: 18.0				
South Side				
4400 Willow Pkwy.	522-08-022	3D Real Estate Partners, Inc.	7-29/1998	$ 344,314
5350 Grant Ave.	522-07-004	Allen E. Jordan	11-17/1986	$ 150,600
5324 Grant Ave.	522-07-007 and 008	Detroit-Pittsburgh Motor Freight, Inc.	1-19/1978	$ 190,000
5200 Grant Ave.	522-06-013	Balon Management Co.	6-27/1985	$ 265,800
5150-80 Grant Ave.	522-06-014	Frederick J. Spann	5-26/1981	$ 273,000
Estimated Market Value - South Side				$ 1,223,714
Estimated Acreage - South Side: 7.0				

Source: Cuyahoga County Auditor's Office, April 2002

Exhibit 7-14, Focus Area 4, Land Use

Source: Cuyahoga County Engineer's Office, 1999

Reviewing the traffic counts from the East 49th Street end of Grant Avenue illustrates a lighter traffic pattern. The most recent traffic count, done in 1996, showed approximately 6,300 vehicles on Grant Avenue immediately east of East 49th Street. At the time of the same count, the number of trucks was approximately 1,500, representing about 25% of all vehicles.

Detailed traffic count information is displayed in Chapter 4, *Economic Development and Market Analysis*.

Brownfields

Based upon state and federal databases, as displayed in the Cuyahoga County Planning Commission's online Brownfields Geographic Information System, there are several properties within the focus area that may have environmental issues. Underground storage tanks are probably located on 5213, 5301, and 5324 Grant Avenue. It is unclear whether the tanks have a leakage problem. In addition, current or former occupants of buildings at 5171, 5201, and 5207 Grant Avenue either used, disposed of, or released into the environment federally regulated substances as part of their production processes. These situations are not necessarily a violation of federal regulations, but are simply a report that handling of specific federally regulated substances occurred.

Development Alternative

The area is currently a mix of light industrial, warehouse, and truck terminal uses. These uses developed during the 1920's through 1960's, before and during the time period when the Willow Freeway existed, which predated its upgrade to Interstate 77.

Although businesses continue to occupy the buildings, the area exhibits a number of physical characteristics that hinder efficient function. Grant Avenue contains two lanes of pavement as part of a 60-foot public right-of-way, and widening is not feasible due to the location of front walls of buildings at or near the edge of the right-of-way. The location of loading areas in the front portions of some buildings create difficult truck turning movements. The original parcel configuration was arranged in coordination with a railroad spur of the Newburgh & South Shore Railway, which has only minimal service today. In addition, economic weakness in the area is illustrated by the fact that as of July, 2001, owners of four of the thirteen parcels in the focus area were delinquent in the payment of property taxes.

Due to the issues outlined above, a potentially viable redevelopment option would be **office use**. The industrial uses were built before the development of the interstate highway system and therefore, before an interstate interchange was constructed at Grant Avenue. The insertion of the highway is a reason to re-evaluate the land uses that are appropriate for the area.

If the parcels were redeveloped, the area could support a total of about 421,500 square feet of office space, using buildings with various number of stories and footprints of approximately 10,000 - 20,000 square feet each (***Map 7-7***). The total square footage of the proposed buildings ranges from 32,000 - 80,000 square feet. This range would provide flexibility to attract tenants seeking several thousand square feet to an entire building, while keeping the overall size of spaces within the range that is attractive in the northeast Ohio office market. There are, of course, many variations to this specific scheme that would be feasible.

This proposal suggests building heights varying from two to five stories in order to accomplish several goals. First, the tallest buildings, suggested for five stories, would be located closest to the freeway. The tall buildings would create visibility for the development from the freeway and also make efficient use of the most valuable parcel. In addition, there would be the opportunity to create a restaurant on the first floor of a building, similar to the Cooker Bar & Grille on the first floor of the Crown Centre office building in Independence. Moving west along Grant Avenue toward East 49th Street, the buildings would gradually decrease to a height of two stories. This lower height is more appropriate for the East 49th Street end of the street because it is similar to the height of the adjacent light industrial buildings along East 49th Street. The lower height buildings would also provide an attractive transition between the taller buildings and the natural areas of the Metroparks Reservation in the Cuyahoga River Valley.

To facilitate development in sections over time, the proposed office development was arranged using some of the existing parcel lines. For example, the property at the northwest corner of Grant Avenue and the I-77 interchange was proposed for two office buildings. Overall, eight parcels on the north side of Grant Avenue could be redeveloped as three sections, and five parcels on the south side of Grant Avenue could be redeveloped as two sections (***Map 7-7)***.

As part of the redevelopment, it is recommended that the right-of-way width for Grant Avenue be increased from 60 feet to 80 feet. The conversion from industrial to office uses would increase traffic, and additional right-of-way would make it possible to install left turn lanes at specific locations or a continuous middle turning lane. Even with three lanes of pavement, there would be adequate room to provide a sidewalk on both sides of the street, plus a wide treelawn and street trees. The redevelopment to office use would also significantly increase the number of employees in the area, and a pedestrian connection along Grant Avenue to East 49th Street and the Metroparks Reservation would be an important amenity to employees.

The wider right-of-way should also be combined with the creation of front setback regulations that move the buildings away from the edge of the right-of-way. This would improve vehicular circulation, and enhance the appearance of the area by providing space for landscaping in front of the buildings. For example, on ***Map 7-7***, the buildings are situated approximately 30 - 40 feet behind the edge of the proposed wider right-of-way.

Map 7-7, Focus Area 4, Development Alternative 2

The proposed land use change also means that there would no longer be a need for the railroad spur through the area. ***Map 7-7*** indicates that the narrow corridor of acreage occupied by the railroad was not included as part of the redevelopment of a specific parcel, although it could be incorporated into adjacent parcels.

Parking standards used for the above analysis were four parking spaces per 1,000 square feet of office space, which totaled about 1,676 spaces for the entire area.

The proposed development would generate approximately $947,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $402,000 in revenue generated by the current industrial uses (***Exhibit 7-15***). After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $323,000, plus about $289,000 in property tax revenue to the school district. For the purposes of comparison, the existing uses and proposed uses are analyzed as if occupancy is at 100%.

The analysis indicates that the proposed development may substantially decrease the amount of daily sewage flow and water consumption from present levels. Therefore, the proposed office uses would not put an additional burden on the water and sewer infrastructure.

It is estimated that the proposed new development would generate about 4,600 vehicle trips per day, which would be an increase of 1,500 vehicles above

Exhbit 7-15, Focus Area 4, Development Impact Analysis

Focus Area 4: Grant Avenue, west of I-77	Alternative 1	Alternative 2
	Office	Existing Conditions
Site Characteristics		
Total Site Acreage	25	25
Total Site Square Footage	1,089,000	1,089,000
Industrial Space (sq ft)	0	365,144
Number of employees	0	730
Warehouse Space (sq ft)	0	90,692
Number of employees	0	116
Office Space (sq ft)	421,500	12,801
Number of employees	1,265	38
Potential land value of site	$2,433,686	-
Potential building value of site	$33,130,774	-
Total potential property value (land and building)	$35,564,460	$7,014,057
Environmental Impacts		
Sewage Flow (gallons/day)	33,712	98,313
Water Consumption (gallons/day)	39,200	114,317
Solid Waste Production (tons/day)	1.265	1.1382
Total trips generated per day: weekday	4,641	3,136
Revenues		
Estimated avg annual employee income	$47,020	various
Income tax revenues - Village	$892,205	$391,722
Property Tax Revenues - Village	$54,972	$10,028
Property Tax Revenues - School	$288,997	$52,717
Total Village Revenues	**$947,177**	**$401,749**
Expenditures		
Cost to provide services*	$624,059	$365,637
NET FISCAL IMPACT - VILLAGE	**$323,118**	**$36,112**

*Municipal service expenditure categories include general government, public safety, public health and welfare, public works, community development, recreation, and debt service.

the present uses. These new trips would increase vehicle traffic on Grant Avenue east of East 49th Street about 25% above the 1996 level.

FOCUS AREA 5: GRANT AVENUE (I-77 TO EAST 71TH STREET)

Introduction

This focus area includes two separate sections of parcels located on the south side of Grant Avenue from I-77 to East 71st Street.

The purpose of this analysis is to review the potential alternative of new light industrial space as infill development on vacant land owned by Columbia National Corporation, as well as the redevelopment of the Benjamin Moore Company site and adjacent residential properties.

Property Ownership

The focus area contains seven parcels totaling approximately 10.5 acres (***Exhibit 7-16***). The potential Columbia National infill project involves one parcel, while the potential Benjamin Moore project involves one industrial parcel and five residential parcels.

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the area was already developed with industry and homes by that date (***Exhibit 7-17***). Cuyahoga County Auditor's Office records indicate that the specific structures in the focus area were generally built during the 1910's and 1920's.

Zoning

All of the parcels are zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as well as retail, wholesale, commercial, and warehouse uses.

Traffic Counts

The most recent traffic count, done in 1996, showed approximately 12,800 vehicles on Grant Avenue immediately east of I-77. These vehicles would have been traveling to and from destinations on Grant Avenue and East 71st Street. At the time of the same count, the number of trucks was approximately 2,200, representing about 17% of all vehicles.

Reviewing the traffic counts from the East 71st Street end of Grant Avenue illustrates a lighter traffic pattern. The most recent traffic count, done in 1996, showed approximately 9,000 vehicles on Grant Avenue immediately west of East 49th Street. At the time of the same count, the number of trucks was approximately 1,000, representing about 11% of all vehicles.

Detailed traffic count information is displayed in Chapter 4, *Economic Development and Market Analysis*.

Brownfields

Based upon state and federal databases, as displayed in the Cuyahoga County Planning Commission's online Brownfields Geographic Information System, there are no properties within the focus area that are officially listed as having environmental issues. The official listings however, do not necessarily mean that a property is free of environmental problems. For example, a vacant property may not appear on the listings because several of the databases pertain to the use of federally regulated substances as part of current production processes, such as many chemicals. Therefore a property owner may be aware of problems on the site that have been documented by private consultants on behalf of the owner, but the property would not appear on databases of sites with environmental issues.

Development Alternative

The area is currently a mix of industrial and residential uses, which developed from the 1910's onward. Although businesses continue to occupy the buildings, the area exhibits a number of physical characteristics that hinder efficient function. Near the railroad overpass, Grant Avenue contains two lanes of pavement as part of a 60-foot public right-of-way. The railroad overpass can not however, accommodate an additional lane without re-

Exhibit 7-16, Focus Area 5, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Building Date	Acreage	Estimated Market Value
Columbia National Vacant Land						
6700 Grant Ave.	522-10-002	Columbia National Corporation	8-2/1990	vacant land	est 5.5	$ 250,114
Total					**est 5.5**	**$ 250,114**
Benjamin Moore and Houses						
4400 East 71st St.	522-10-005, plus 012 through 014	Benjamin Moore Company	7-25/1918 and later	various	est 4.3	$ 871,000
6914 Grant Ave.	522-10-006	Roylene Woodrick-Sample	4-20/1999	1915	0.11	$ 74,914
6922 Grant Ave.	522-10-008 and 007	Roylene Woodrick-Sample	4-20/1999	1920	0.24	$ 76,514
6926 Grant Ave.	522-10-009	Raymond & Patricia Smosarski	10-1/1969	1910	0.12	$ 67,400
6930 Grant Ave.	522-10-010	Stella Scafaro Trust	3-27/2001	1903	0.12	$ 65,600
7004 Grant Ave.	522-10-011	Bernadette Baracz	8-16/1951	1910	0.12	$ 67,914
Total					**est 5.0**	**$ 1,223,342**

Source: Cuyahoga County Auditor's Office, April 2002

Exhibit 7-17, Focus Area 5, Land Use

Source: Cuyahoga County Engineer's Office, 1999

building. Further east, Grant Avenue contains two lanes of pavement as part of a 50-foot public right-of-way, except near East 71st Street, where a right turn lane onto southbound East 71st Street has been added. Widening the street is not feasible due to the location of front walls of buildings at or near the edge of the right-of-way, as well as the railroad overpass abutments. The location of the building front walls close to the street also creates visibility problems for drivers and difficult truck turning movements.

The focus area currently serves as an industrial district, and it is recommended that the area continue as such, with new development as **light industrial uses**. In addition, the area is not considered suitable in the long-term for the small cluster of houses currently surrounded by industrial utility uses, and future redevelopment should include removal of the homes.

If the parcels were redeveloped, the Columbia National vacant land could support a total of about 80,000 square feet of light industrial space on about 5.5 acres (***Map 7-8***). The Benjamin Moore property and the adjacent homes could support a total of about 70,000 square feet of light industrial space on about 5.0 acres (***Map 7-8***). The new development represents a building coverage of approximately 30% - 32% on the parcels, which is consistent with a commonly used standard of 30% - 35%.

For much of the focus area, the community boundary line between Cleveland and Cuyahoga Heights is the center of Grant Avenue, meaning that the right-of-way is situated in two communities. In its 1991 *Civic Vision 2000 Citywide Plan*, the Cleveland City Planning Commission proposed that the vacant area on the north side of Grant Avenue be developed with industrial uses. During 2002 and 2003, the Cleveland City Planning Commission will be updating this plan.

As part of the redevelopment, it is recommended that the right-of-way width for Grant Avenue be increased from its current 50 and 60 feet to approximately 80 feet. A future increase in the width of the right-of-way, as well as widening of the pavement itself, could occur entirely on the Cuyahoga Heights side of the street or in both communities. For example, the street could be configured to create two extra-wide lanes, to install left turn lanes at specific locations, or to install a continuous middle turning lane. Even with three lanes of pavement, there would be adequate room to provide a sidewalk on both sides of the street, plus a wide treelawn and street trees.

The wider right-of-way should also be combined with the creation of front setback regulations that move the buildings away from the edge of the right-of-way. New development could add 300 employees to the area, plus additional truck traffic. The setback would improve vehicular safety and circulation, as well as enhance the appearance of the area by providing space for landscaping in front of the buildings. For example, on ***Map 7-8***, the buildings are situated approximately 30 - 40 feet behind the edge of the proposed wider right-of-way.

Parking standards used for the above analysis were four parking spaces per 1,000 square feet of office space, which totaled about 190 spaces for the Columbia National vacant land and about 140 spaces for the Benjamin Moore property and adjacent homes.

The proposed Columbia National development would generate approximately $78,700 annually in combined income tax and property tax revenue for the Village, compared to the estimated $350 in revenue generated by the current vacant land (***Exhibit 7-18***). After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $15,200, plus about $35,400 in property tax revenue to the school district.

The proposed redevelopment of Benjamin Moore and the adjacent homes would generate approximately $68,800 annually in combined income tax and property tax revenue for the Village, compared to the estimated $4,100 in revenue generated by the current vacant industrial property and residences (***Exhibit 7-18***). After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $13,200, plus about $30,700 in property tax revenue to the school district.It is estimated that the proposed new developments would generate a

Map 7-8, Focus Area 5, Development Alternative

Exhibit 7-18, Focus Area 5, Development Impact Analysis

Focus Area 5: Grant Avenue, east of I-77	Columbia National Vacant Land		Benjamin Moore and Houses	
	Light Industry	Existing Conditions	Light Industry	Existing Conditions
Site Characteristics				
Total Site Acreage	5.5	5.5	5	5
Total Site Square Footage	239,580	239,580	217,800	217,800
Industrial Space (sq ft)	80,000	0	70,000	105,275
Number of employees	160	0	140	0
Number of dwelling units	0	0	0	10
Total number of residents	0	0	0	21
Potential land value of site	$250,114	$250,114	$193,200	-
Potential building value of site	$4,104,000	0	$3,591,000	-
Total potential property value (land and building)	$4,354,114	$250,114	$3,784,200	$1,223,343
Environmental Impacts				
Sewage Flow (gallons/day)	20,640	0	18,060	1,365
Water Consumption (gallons/day)	24,000	0	21,000	1,866
Solid Waste Production (tons/day)	0.2208	0	0.1932	0.0368
Total trips generated per day: weekday	558	0	488	66
Revenues				
Estimated avg annual employee income	$29,970	0	$29,970	-
Median household income	-	-	-	$41,995
Income tax revenues - Village	$71,928	0	$62,937	$2,450
Property Tax Revenues - Village	$6,730	$348	$5,849	$1,670
Property Tax Revenues - School	$35,381	$1,829	$30,750	$8,777
Total Village Revenues	**$78,658**	**$348**	**$68,786**	**$4,120**
Expenditures				
Cost to provide services*	$63,488	0	$55,552	$8,085
NET FISCAL IMPACT - VILLAGE	**$15,170**	**$348**	**$13,234**	**-$3,965**

*Municipal service expenditure categories include general government, public safety, public health and welfare, public works, community development, recreation, and debt service.

combined total of about 1,050 vehicle trips per day. These new trips would increase vehicle traffic on Grant Avenue west of East 71st Street about 11% above the 1996 level.

FOCUS AREA 6: EAST 71ST STREET SOUTH OF CHAPEK PARKWAY

Note

Information shown in italics *(italics)* reflects the incorporation of Village Council Resolution 2006-142, effective August 9, 2006. Information shown in a strikethrough format ~~(strikethrough)~~ is no longer applicable.

Introduction

This focus area includes several parcels located south and west of Klima Gardens and Chapek Parkway. ~~The purpose of this analysis is to review a potential housing development alternative for the parcels.~~

Property Ownership

The focus area includes all or part of four parcels totaling approximately 13.2 acres (***Exhibit 7-19***).

All or part of several more parcels have been added to the focus area, generally extending the boundaries to the north and west edges of St. Mary's Cemetery and extending westward to I-77 (Exhibit 7-19 not updated).

Exhibit 7-19, Focus Area 6, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Building Date	Acreage	Estimated Market Value
west end Chapek Pkwy.	522-12-004	3320 Woodland Ave Ltd	8-12/98	vacant land	est 9.40	$ 393,400
4664 East 71st St.	522-13-007 & 019	Electric Welder Repair, Inc.	5-16/83	1953	2.77	$ 352,314
4668 East 71st St.	522-13-008	William & Robert Baumann	10-27/81	vacant land	0.69	$ 7,700
4680 East 71st St.	522-13-018	Alan & Mary Lou Kalish	7-20/2000	vacant land	0.34	$ 5,800
Total					**est 13.20**	**$ 759,214**

Sources: Cuyahoga County Auditor's Office, April 2002

Note: Exhibit not revised.

Exhibit 7-20, Focus Area 6, Land Use

Source: Cuyahoga County Engineer's Office, 1999

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the parcels were vacant land. A United States Geological Survey map of the same period shows a slope about 60 to 70 feet in height located on the south side of Chapek Parkway and extending southward toward the cemetery. At some point in the past, fill material extended the top of the slope to the west and south. More recently, additional fill material has been added at the terminus of Chapek Parkway (***Exhibit 7-20***).

Zoning

The focus area is zoned Office Building, Research Laboratory and Light Manufacturing (Chapter 1249).

~~The focus area is zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as well as retail, wholesale, commercial, and warehouse uses.~~

Traffic Counts

Traffic counts conducted by the Cuyahoga County Engineer's Office show that the number of total vehicles and trucks has fluctuated on East 71st Street south of Grant Avenue.

The total number of vehicles for each of the three most recent counts (1996, 1989, and 1986) has been in the 6,000 - 8,000 range. At the time of the same three counts, the number of trucks varied from about 600 - 900, representing about 10% of all vehicles.

Development Alternative

The evolution of land uses on East 71st Street south of Chapek Parkway has resulted in the presence of adjacent land uses consisting of a community recreation facility, a small industrial use, and residences. ~~All of these parcels are zoned Industrial (Chapter 1248).~~ Furthermore, fill material being added in the vicinity of the terminus of Chapek Parkway will make additional acreage available for development. ~~This area is also zoned Industrial (Chapter 1248).~~

In 2006, "the Master Plan Committee determined that having an Alternative Development Plan for residential structures was not appropriate for land on East 71st Street south of Chapek Parkway due to the unknown composition of the underlying soil as a result of the area previously being a landfill" (Resolution 2006-142).

This position was endorsed by the Planning and Zoning Commission and Village Council. Resolution 2006-142 makes the following revision to the master plan:

"Considering the current surrounding land uses, it is recommended that existing homes on East 71st Street all be zoned residential. Chapek Parkway shall be developed as an economic hub and zoned Office Building, Research Laboratory and Light Manufacturing use district"

Map 7-9 has not been revised to reflect the expanded boundaries of the focus area or the potential arrangement of office, research, and/or light manufacturing structures. Similar examples of building density exist in the discussions for Focus Areas 1, 2, 4, 5, 7, and 8.

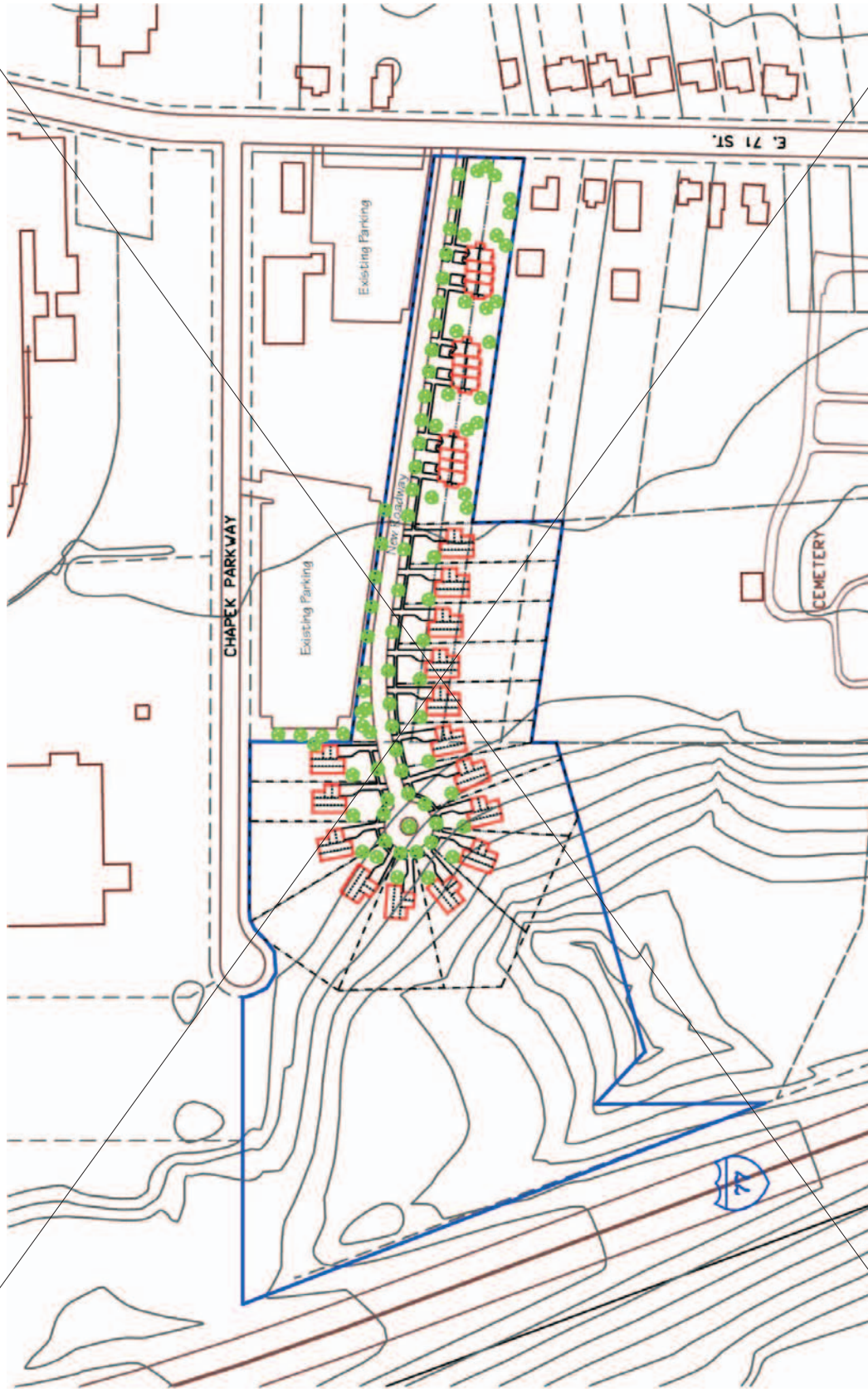
~~Considering the current surrounding land uses, it is recommended that a limited amount of new housing development be created in the focus area (***Map 7-9***). The entire focus area is approximately 13.2 acres in size.~~

New Street

Due to the southward and westward expansion of the focus area, a new access drive or street from Chapek Parkway will probably be needed. Its location will be determined when development proposals are reviewed.

~~As part of the proposed development, a cul-de-sac would be created to serve the new housing. The roadway would replace the small industrial building located at 4664 East 71st Street. This new street would allow Chapek Parkway to be used solely for access to the Klima Gardens parking lot and the industrial properties on that street. The proposed right-of-way would be 50 feet in width, which would include two lanes of pavement. A sidewalk~~

~~Map 7-9, Focus Area 6~~



~~would serve the new homes and connect to East 71st Street. It is suggested that the new street be situated as far north as possible, which would provide the maximum amount of distance from the street to the house at 4668 East 71st Street. In addition, the proposed road is situated off-center within the right-of-way, which would provide a more generous depth of treelawn for the proposed townhomes and the easternmost single-family homes. The proposed right-of-way occupies a total of about 1.3 acres.~~

~~**Townhouses**~~

~~Along the south side of the new street, it would be possible to develop approximately 12 townhouses arranged in several small groups on a total of about 1.1 acres. The first group of units could be set back sufficiently from East 71st Street to provide a buffer to the house at 4668 East 71st Street. The townhouse units would be approximately 1,600 square feet in size and would be priced at about $130,000. At this selling price, the home could be afforded by a household with an annual income of at least $52,000.~~

~~In order to assure exterior maintenance of the buildings and grounds, a management company would be responsible for services such as exterior building maintenance, landscaping maintenance, and snow removal. A required monthly fee should be charged to each household.~~

~~It is estimated that the townhouse development could have approximately two children residing there.~~

~~**Single-Family Homes**~~

~~Near the end of the new street, it would be possible to develop approximately 15 single-family homes on a total of about 5.1 acres. The proposed homes would occupy the area at the end of Chapek Parkway that has already been filled. The homes could be arranged to take advantage of the views to the west across the Cuyahoga River valley, but be set back from the edge of the slope so as not to be highly visible from below. A possible guide for the development of these properties could be the Shady Ridge Lane development in Brooklyn Heights, which is off Schaaf Road.~~

~~The single-family homes would be approximately 2,400 square feet in size and would be priced at about $225,000. At this selling price, the home could be afforded by a household with an annual income of at least $90,000.~~

~~It is estimated that the single-family home development could have approximately seventeen children.~~

Vacant Land Adjacent to I-77

The contours of the land between the end of Chapek Parkway and I-77 continue to change due to grading and the addition of clean fill. The area includes an access road from Chapek Parkway to the two billboards adjacent to the freeway, which allows vehicles to inspect and service the billboards. When filling and grading is complete, this area should be revegetated in order to correct the present erosion and water runoff problems.

~~Between the rear property lines of the proposed single-family homes at the end of the cul-de-sac and I-77 is approximately 5.7 acres of land. This area is situated below the current area of fill. The area includes an access road from Chapek Parkway to the two billboards adjacent to the freeway, which allows vehicles to inspect and service the billboards. Due to the poor access and proximity to freeway noise, this area would not be considered buildable. This area should be revegetated in order to correct the present erosion and water runoff problems.~~

Economic Impact

Exhibit 7-21 has not been revised to reflect the development impact of office, research, and/or light manufacturing structures. Similar examples of the development impact of office and light industrial buildings exist in the discussions for Focus Areas 1, 2, 4, 5, 7, and 8.

~~The proposed development would generate approximately $15,000 annually in combined income tax and property tax revenue for the Village, compared to the estimated $3,900 in revenue generated by the current properties (***Exhibit 7-21***). After estimating the cost of providing services to the new development, it is anticipated that the annual net fiscal impact to the Village would be about a negative $7,000; however, there would be a net gain of about~~

~~$43,700 in annual property tax revenue to the school district above the current level.~~

~~It is estimated that the proposed new development would generate about 200 vehicle trips per day more than the current uses. These new trips would not have a significant impact on the amount of vehicular traffic on East 71st Street.~~

~~**Exhibit 7-21, Focus Area 6, Development Impact Analysis**~~

Focus Area 6	Townhouses	Single-Family Homes	Vacant Land Adjacent to I-77	Develop-ment Total	Existing Conditions
Site Characteristics					
Total site acreage	1.1	5.1	5.7	**11.9**	13.2
Total site square footage	47,916	222,156	248,292	**518,364**	574,992
Total industrial building square footage	0	0	0	**0**	16,000
Number of dwelling units	12	15	0	**27**	0
Total potential value of site	$1,560,000	$3,811,111	$79,800	**$5,450,911**	$759,214
Total number of residents	21	36	0	**57**	0
Number of school-aged children	2	17	0	**19**	0
Total number of employees	0	0	0	**0**	6
Environmental Impacts					
Sewage Flow (gallons/day)	1,365	2,340	0	**3,705**	774
Water Consumption (gallons/day)	2,100	3,600	0	**5,700**	900
Solid Waste Production (tons/day)	0.037	0.063	0	**0.100**	0.008
Total trips generated per day: weekday	70	144	0	**214**	20
Revenues					
Income tax revenues - Village	$2,940	$3,676	0	**$6,616**	$2,697
Property Tax Revenues - Village	$2,409	$5,886	$123	**$8,419**	$1,174
Property Tax Revenues - School	$12,497	$30,530	$639	**$43,667**	$6,169
Total Village Revenues	**$5,350**	**$9,562**	**$123**	**$15,035**	**$3,871**
Expenditures					
Cost to provide services*	$8,076	$13,844	0	**$21,920**	$2,381
NET FISCAL IMPACT - VILLAGE	**-$2,726**	**-$4,282**	**$123**	**-$6,885**	**$1,490**

Note: The proposed right-of-way for the new street would occupy about 1.3 acres, which represents the difference between Development Total (11.9 acres) and Existing Conditions (13.2 acres).

CHAPTER EIGHT

FINAL DEVELOPMENT PLAN

INTRODUCTION

The Final Development Plan connects the results of discussions with the Master Plan Committee, as well as the content of each chapter of the master plan, to the community goals and priorities developed at the beginning of the project (Chapter 1). The following narrative illustrates the continuity of thought that exists from the formulation of priorities, to the creation of conceptual ideas, through detailed analysis of potential development plans, as well as plans that would improve the quality of life for Village residents.

Note

Information shown in italics *(italics)* reflects the incorporation of Village Council Resolution 2006-142, effective August 9, 2006. Information shown in a strikethrough format ~~(strikethrough)~~ is no longer applicable.

ECONOMIC DEVELOPMENT

> *The goals emphasize broadening the industrial base of the Village by revitalizing or replacing existing industrial facilities, diversifying economic activity by encouraging the development of other uses such as office space, and capitalizing on the locational advantages of the I-77 interchanges.*

The infrastructure analysis (Chapter 5) discusses the sewer problem that causes flooding along Grant Avenue east of I-77, the need for a review in the near future of the condition and capacity of the combined sewer, and the need to implement a permanent solution to this complex problem in order to have the appropriate infrastructure in place to encourage property investment.

The Focus Areas (Chapter 7) provide detailed information on the potential economic impact of the development or redevelopment of specific tracts of land.

Focus Area 1 reviewed the revitalization of the triangular shaped point of land located between old Harvard Avenue and the east end of Harvard-Denison Bridge. The plan illustrated the possibilities of replacing the existing buildings with approximately 18,000 square feet of office space in a three-story building, plus about 32,000 square feet of light industrial space.

Focus Area 2 considered the replacement of the houses located on East 49th Street in front of the large industrial complex at 4922 East 49th Street. The plan illustrated the possibility of developing two buildings with a total of about 39,000 square feet of light industrial space, or two two-story buildings with a total of about 38,000 square feet of office space. Both options also included enhancements to the entrance to the rear industrial complex.

Focus Area 3 outlined a potential new housing development on vacant land and a former landfill roughly bounded on the west by East 49th Street, the north by Nicky Boulevard, the east by Willow Parkway, and the south by the railroad embankment. As part of the development concept, the plan illustrated one new light industrial building of approximately 26,500 square feet located at the northeast corner of the development site at the terminus of Nicky Boulevard.

Focus Area 4 described the complete redevelopment of both sides of Grant Avenue from I-77 to East 49th Street. As market forces allow, the industrial buildings would be replaced with office buildings, which would capitalize on the I-77/Grant Avenue interchange location for these new uses. To take greater advantage of the freeway location, the buildings nearest the freeway would be four- and five-stories in height, reducing to two-stories near East 49th Street. The plan outlined the possibility of over 420,000 square feet of office space spread over eight buildings.

Focus Area 5 reviewed the potential for additional light industrial development on the south side of Grant Avenue east of the railroad overpass. The plan illustrated approximately 80,000 square feet of light industrial space on the vacant parcel owned by Columbia National, and about 70,000 square feet of light industrial space on the parcel

currently occupied by Benjamin Moore and five houses.

~~Focus Area 6 outlined a potential new housing development on land south and west of Chapek Parkway and Klima Gardens. Access for the proposed development would be from a new cul-de-sac from East 71st Street. The new housing could include both townhouses and single-family homes.~~

Due to concerns about the existing soil conditions south of Chapek Parkway as a location for new housing, Focus Area 6 was changed in 2006 to an area for potential development of office, research, and light industrial buildings extending to the south and west of Chapek Parkway. Although specific details such as the number and size of future buildings are not known at this time, similar examples of building density and economic impact exist in the discussions for Focus Areas 1, 2, 4, 5, 7, and 8.

HOUSING

The goals focus on analyzing the potential of creating new housing options to serve specific portions of the population of the Village, such as families with children, empty nesters, and senior citizens.

Focus Area 3 outlined two options for creating new housing within the Village on vacant land and a former landfill roughly bounded on the west by East 49th Street, the north by Nicky Boulevard, the east by Willow Parkway, and the south by the railroad embankment. One development option included a total of 59 single-family and ten side-by-side two-family detached houses directed at an "active adult" market, meaning adults age 55 and over. The houses would be about 1,300 square feet. This plan also included a 116-unit assisted living facility.

The second development option included a total of 57 single-family and twelve side-by-side two-family detached houses. The target market for this option would be one-person or two-person households, such as single persons or couples whose grown children are on their own ("empty nesters"). The single-family houses would be about 1,500 square feet and the units in the two-family homes would be about 1,300 square feet.

The pricing for the homes would be similar for both options, approximately $160,000 for the single-family homes and $120,000 for units in the two-family homes. As part of a required monthly fee charged to each household, a management company would be responsible for services such as exterior building maintenance, landscaping maintenance, and snow removal. Finally, the development of new for-sale housing will also increase the overall homeownership rate within the Village.

~~Focus Area 6 described the potential for developing new housing on land south and west of Chapek Parkway and Klima Gardens. The area for the proposed development would include removal of one small industrial building, vacant industrial land, and part of the rear of several residential properties~~.

~~As part of the proposed development, a cul-de-sac would be created to serve the new housing. The roadway would replace the small industrial building facing East 71st Street. This new street would allow Chapek Parkway to be used solely for access to the Klima Gardens parking lot and the industrial properties on that street. The proposed right-of-way would be 50 feet in width, which would include two lanes of pavement, as well as a sidewalk. In addition, the new street could be situated to provide the maximum amount of distance from the houses on East 71st Street.~~

~~In terms of new housing, along the south side of the new street, it would be possible to develop approximately twelve townhouses arranged in several small groups. The townhouse units would be approximately 1,600 square feet in size and would be priced at about $130,000. In order to assure exterior maintenance of the buildings and grounds, a management company would be responsible for services such as exterior building maintenance, landscaping maintenance, and snow removal. A required monthly fee should be charged to each household.~~

~~Near the end of the new street, it would be possible to develop approximately fifteen single-family~~

~~homes. The homes could be arranged to take advantage of the views to the west across the Cuyahoga River valley, but be set back from the edge of the slope so as not to be highly visible from below. A possible guide for the development of these properties could be the Shady Ridge Lane development in Brooklyn Heights, which is off Schaaf Road. The single-family homes would be approximately 2,400 square feet in size and would be priced at about $225,000.~~

RECREATION

The goals emphasize providing park and recreational opportunities to meet the needs of residents.

The recreation inventory and analysis (Chapter 5) notes that for a community of its size, the Village parks compare favorably in quantity, type and design to the national guidelines published by the National Recreation and Park Association (NRPA).

Chapter 6 summarizes projects and impacts for Cuyahoga Heights that involve the Ohio & Erie Canal National Heritage Corridor, the Cuyahoga Valley National Park, Cleveland Metroparks Ohio & Erie Canal Reservation, the Ohio & Erie Canal Scenic Byway, and the Cuyahoga Valley Scenic Railroad. The Metroparks Reservation and its Towpath Trail offer outstanding park and recreation opportunities for both residents and employees within the Village. As future development is undertaken, particularly in Focus Areas 1, 3, and 4 (Chapter 7), connections should be made from the new development directly to these amenities. In addition, the Village should market these features to potential developers, who in turn should market them to their potential office tenants, light industrial tenants, and homebuyers.

ENVIRONMENTALLY SENSITIVE AREAS

The goals emphasize the protection of environmentally sensitive areas such as steep slopes, wetlands, watercourses, erosion prone locations, and floodplains.

The Land Use analysis (Chapter 3) includes specific discussions and maps of natural features, including floodplains, wetlands indicators, and steep slopes, which can be used as a guide for future development.

The placement of buildings and parking areas in the new development proposed for Focus Area 1 (Chapter 7) takes into consideration the sloping nature of the site. In addition, a greenspace for employees is included on the west end of the property, adjacent to the wooded slope.

PUBLIC FACILITIES

The goals relate to maintaining a high level of Village services, as well as the renovation, expansion, or relocation of facilities when appropriate

The infrastructure and public facility analysis (Chapter 5) summarizes the issues concerning a potential new police station, and provides the details for a sewer improvement project to solve the flooding problems along Grant Avenue and Interstate 77. The timing of this sewer project is important, due to the fact that the Cuyahoga County Engineer has scheduled the same section of Grant Avenue for resurfacing in 2003.

Long-term economic development on Grant Avenue, both west and east of Interstate 77, should include improvements to the public right-of-way. Focus Areas 4 and 5 (Chapter 7), recommend improvements such as increasing the width of the overall right-of-way. This action is particularly important west of Interstate 77, where the appearance of the area, as well as the traffic demands of future office development, may benefit from a third lane of pavement, landscaping in the right-of-way, and sidewalks to connect to the nearby Metroparks Canal Reservation.

CHAPTER NINE

STRATEGIC MANAGEMENT PLAN

INTRODUCTION

This chapter discusses implementation strategies to carry out the recommendations outlined within the master plan. In order for Cuyahoga Heights to successfully reach its goals, it will require an ongoing, concerted effort by the local elected officials, board and commission members, and citizens.

ADOPT THE MASTER PLAN

The formal adoption of the master plan by the Village is a basic step to the successful implementation of the policies and recommendations of this document. The formal adoption of the plan enables the Village Council and Planning & Zoning Board to make decisions on issues based upon clearly stated long-range goals and policies that have formal support.

The master plan also serves as a practical, working guide. For example, near-term decisions on specific issues and situations can be made within the framework of long-term goals. For example, local officials should look to the master plan for guidance when making decisions such as amendments to the zoning code, review of development proposals, and capital improvement projects.

REVIEW THE MASTER PLAN PERIODICALLY

A master plan should not be viewed as a one-time effort or permanent document. This document was created to provide guidance to address current issues. A master plan should be one part of a continuous planning process. This plan attempts to forecast future changes in the Village, but unforseen economic, technological, and social conditions are valid reasons for future amendments to the master plan. Proposed amendments to the master plan should be considered whenever elements of the plan become unworkable due to unanticipated changes in the community. In addition, the master plan should be reviewed in its entirety every five to seven years to determine if changes to the plan are warranted.

CREATE PUBLIC AWARENESS OF THE MASTER PLAN

Distribution of the master plan is critical to ensuring its success. At a minimum, copies of the plan should be available to the Mayor, Building Department, Village Engineer, Village Council, and the Planning & Zoning Board. In addition, copies should be available to businesses, residents, and landowners. A copy could also be placed on deposit at the Cuyahoga County library branch most often patronized by Cuyahoga Heights residents. Ultimately, the effectiveness of the plan depends upon the extent to which it is read, understood, used, and respected.

AMEND THE ZONING CODE AND MAP

The Village's Planning and Zoning Code and zoning map form the legal basis for regulating development. A well organized, comprehensive, and up-to-date code improves the zoning administration process, addresses some of the current development issues, and should result in better quality development.

General changes to the zoning code should include:

- ✓ creation of a separate use chapter to permit office building development, as outlined in the Focus Area discussions (Chapter 7);
- ✓ creation of a separate use chapter to permit an assisted living facility, as outlined in one of the alternatives for Focus Area 3 (Chapter 7);
- ✓ creation of a separate use chapter to address land uses such as parks, schools, cemeteries, and public buildings;

- ✓ revision of Chapter 1246 (Residence Districts) in order to accommodate the type of potential new housing development outlined in Focus Areas 3 and 6 (Chapter 7), or creation of new regulations to accommodate those types of residential development;

- ✓ creation of regulations concerning parking, landscaping, and buffers, as noted in the Focus Area discussions (Chapter 7);

- ✓ creation of a provision within the parking regulations to grant authority to the Planning & Zoning Board to require an applicant to provide a traffic impact study for a proposed project, which would be reviewed by both the Village Engineer and the Planning & Zoning Board;

- ✓ creation/revision of stormwater management regulations to meet the new federal requirements administered by the U.S. Environmental Protection Agency that will go into effect on March 10, 2003;

- ✓ removal of obsolete language; and

- ✓ revision of the zoning map for the Village to reflect current land use patterns and accommodate the development proposals outlined on the focus area discussions.

RECOMMENDATIONS BY CHAPTER

Chapter 4 - Economic Development and Market Analysis

Hire a part-time or full-time economic development professional to work with property owners and Village officials to address the needs of existing businesses, market existing properties to potential tenants, and to work with developers on new development projects. The person hired could either be an in-house employee, or a commercial real estate specialist retained through a private firm. Nearby communities that are competitors to Cuyahoga Heights, such as Brooklyn Heights, Garfield Heights, and Independence, all have persons who fill this capacity for their communities. An economic development specialist whose purpose is to represent the interests of the Village and market the opportunities that are available in the Village announces that the community is serious about economic development. In addition, the economic development specialist can work with county and state staff to effectively use the economic development incentives and programs that are available, such as those outlined in Chapter 4. For more information on economic development specialist positions at various communities in Cuyahoga County, see Exhibit 9-A in the appendix at the end of this chapter.

Join the First Suburbs Consortium. As an older, fully developed community that shares many of the concerns and issues of the First Suburbs Consortium (FSC) communities, Cuyahoga Heights may be interested in exploring membership in this organization. FSC is a council of governments currently consisting of fourteen Cuyahoga County communities located adjacent to or near the City of Cleveland. Among its projects, the FSC works to change state policies and practices that have promoted development on "greenfields" and outmigration of businesses and residents from urban core communities, while virtually ignoring the impact on older communities. FSC has rapidly become an influential organization within the statewide political scene. The website for FSC is www.firstsuburbs.org.

Chapter 5 - Public Facilities, Infrastructure and Recreation

Public Buildings

Continue to finalize a site and financing plan for the **new police station**.

When the new police facility is complete, **examine the current police facility for potential reuse** for other Village administrative needs and/or community uses.

Infrastructure

Inspect the sewers on Grant Avenue east of Interstate 77 prior to the Cuyahoga County Engi-

neer's scheduled 2003 road resurfacing project, and make any needed repairs.

Work with the Ohio Department of Transportation and the Northeast Ohio Regional Sewer District to **review the condition and capacity of the Burke Brook Culvert**, as well as the flooding issues on the adjacent section of Interstate 77. The current condition and capacity issues of this sewer contribute to the flooding problems along Grant Avenue east of Interstate 77.

Submit an application through the State Issue 2 program to replace sections of the Burke Brook Culvert to increase capacity and relieve flooding. An application for this project may have broad support, because the flooding problem directly affects an interstate highway. The application would be made to the District One Public Works Integrating Committee (DOPWIC) for funding

Parks

Implement the following work items at recreation locations:

- ✓ Repair the basketball backboards and rims at the elementary school and Village Hall.
- ✓ Replace the grass under the play equipment at Klima Gardens to a base material of rubber chips or wood chips.
- ✓ Replace the swing set seats at Settlers Bluff, which are currently missing.
- ✓ Test older playground equipment at the elementary school, Klima Gardens, Settlers Bluff, and Village Hall for lead paint content.
- ✓ Replace older playground equipment at the elementary school, Klima Gardens, Settlers Bluff, and Village Hall with desired new equipment.

Chapter 6 - Ohio & Erie Canal National Heritage Corridor

Cuyahoga Heights is situated at the center of a number of recreation and open space resources that are important on the metropolitan, regional, and national levels. The following items summarize the various designations and activities.

The Village should continue to have an ongoing working relationship with the Ohio & Erie Canal Association, which is the overall management entity for the National Heritage Corridor, as well as Ohio Canal Corridor, which is the primary non-profit organization in the north end of the corridor. The website for the Ohio & Erie Canal National Heritage Corridor is www.canalwayohio.org. The website for Ohio Canal Corridor is www.ohiocanal.org.

Ohio & Erie Canal Scenic Byway

This driving route through the National Heritage Corridor has been designated as a scenic byway at both the national level by the Federal Highway Administration and at the state level by the Ohio Department of Transportation. In Cuyahoga Heights, the byway includes Canal Road/East 49th Street as part of its route. Visitor route maps will be available and signage marking the route will be installed in mid-2002. Signage locations have been coordinated with the Village. Route maps will be available at the Cleveland Metroparks Canalway Center. More information on the scenic byway can be obtained at www.canalwayohio.org and www.byways.org.

Cleveland Metroparks - Ohio & Erie Canal Reservation

This park was officially opened in the summer of 1999. One of the highlights of the new reservation is the paved all-purpose trail situated on the towpath of the Ohio & Erie Canal. As of 2002, the trail will be open to old Harvard Avenue. Within the next three to six years, it is anticipated that the trail will be completed to downtown Cleveland. Eventually, this trail will become part of a bikeway network extending the length of the National Heritage Corridor, and in a larger project, part of the Ohio-to-Erie cross-state bikeway. More information on the Canal Reservation is available at www.clmetparks.com.

Cuyahoga Valley Scenic Railroad

The scenic railroad has steadily increased its ridership each year. In the near future the line will extend to Canton. When that project is complete, the railroad would like to create a boarding stop in the vicinity of old Harvard Avenue. Until the long-term goal of providing service into downtown Cleveland is accomplished, the station at Old Rockside Road will continue to be the main station at the north end of the railroad. More information on the Cuyahoga Valley Scenic Railroad is available at www.cvsr.com.

Development Impacts - Traffic

The recreation and heritage projects involving the Metroparks Canal Reservation, the Towpath Trail, and the Scenic Byway will all make use of Canal Road/East 49th Street as a main north-south travel route. Although the increase in traffic is not likely to be heavy enough to be of concern, the Village should continue to work with Cleveland Metroparks to monitor the situation.

Chapter 7 - Focus Areas

Please refer to the six specific focus area discussions in Chapter 7.

APPENDIX NINE

Exhibit 9-A. Survey of Municipal Departments Engaging in Economic Development Acitivities, Selected Communities in Cuyahoga County

City	Contact Person	Staff Capacity/Percent of Staff Time Devoted to Economic Development Activities	Type of Economic Development Focus	General Activities
Bedford 2000 Population: 14,214	**Position is Vacant at this Time/Department to be Reorganized** City of Bedford 65 Columbus Road Bedford, OH 44146 Phone: (440) 232-1600			
Bedford Heights 2000 Population: 11,375	Mr. Tony Provenzale, Director Department of Economic Development City of Bedford Heights 5661 Perkins Road Bedford Heights, OH 44146 Phone: (440) 786-3240	- Director (50% of time) - Two part time positions	Industrial	Ombudsman. Liaison to the Chamber of Commerce. Provide outreach and information to businesses. Meet informally and on a rotating basis with all businesses. Compile and distribute information on state and local programs to businesses. Administer jobs program.
Berea *2000 Population: 18,970*	Mr. Cyril Kleem, Administrator Ms. Linda Marginian, Program Coordinator Department of Community Development City of Berea 11 Berea Commons Berea, OH 44017 Phone: (440) 826-5802	- Administrator - Program Coordinator - Events Coordinator	Commercial Industrial Office Retail Residential	Focus is on business retention, expansion, and recruitment as well as community development. Administer Enterprise Zone, CRA, and Tax Abatement programs. Administer "Action Line" database of citizen complaints; track resolution of complaints. Promote "Keep Berea Beautiful". Work with Downtown Berea and area merchants on promotional events, such as the Harvest Fest, Sidewalk Sales, Kids Fest and other events to draw people to Berea. Administer commercial programs that provides new merchants with a rebate on lease payments for a given amount of time and provide grants for streetscape and signage improvements, up to a given amount. Administer housing programs that provide residents with a 20% rebate, up to $1,000, to improve their homes.
Cleveland Heights * *2000 Population: 49,958*	Ms. Kim Steigerwald, Assistant Director Department of Planning and Development City of Cleveland Heights 40 Severance Circle Cleveland Heights, OH 44118 Phone: (216) 291-4857	- Assistant Director (90% of time) - Commercial District Coordinator (95% of time) - Development Planner (10% of time)	Commercial Office	Administer the Commercial Revolving Loan and the Storefront Renovation Programs utilizing CDBG funds. Continually inventory/track available commercial and office space within the City. Network with merchant associations and act as a liaison between merchants and the City. Facilitate/promote development. Publish Business Review, a publication advertising commercial and office vacancies in the City. The publication is distributed to over 1,200 people, including realtors and brokers on a quarterly basis. Work with developers to facilitate projects.

Exhibit 9-A (continued)

City	Contact Person	Staff Capacity/Percent of Staff Time Devoted to Economic Development Activities	Type of Economic Development Focus	General Activities
Euclid * *2000 Population: 52,717*	Mr. Robert Gliha, Assistant Director Department of Community Services and Economic Development City of Euclid 585 East 222nd Street Euclid, OH 44123 Phone: (216) 289-8147	- Director - Assistant Director - 2 staff persons	Commercial Industrial	Promote industrial/commercial development through the storefront renovation, tax abatement, CRA, and Enterprise Zone programs. Grantwriting. Program implementation. Liaison to the Chamber of Commerce, State of Ohio, departments, and businesses. Developed a web site promoting the City and the economic development opportunities available to businesses.
Fairview Park *2000 Population: 17,572*	Mr. James Kennedy, Director Department of Public Service and Economic Development City of Fairview Park 20777 Lorain Road Fairview Park, OH 44126 Phone: (440) 356-4412	- Director (65%+ of time) - Economic Development Coordinator (60% to 75% of time)	Commercial Office Retail	Focus is on business retention, expansion, and recruitment. Assist new businesses. Provide outreach to businesses. Provide/distribute promotional and program information. Prepare grant applications. Process tax abatement applications. Inventory/track available commercial/office space. Network with state and local officials, developers, real estate brokers, etc. Involved in city-related acquisition and redevelopment of property. Promote the County Department of Development programs to businesses. Implement streetscape projects. Administer the Summer Exterior Maintenance Program, which surveys the exterior condition of all residences.
Garfield Heights *2000 Population: 30,734*	Ms. Noreen Kuban, Economic Development Director Department of Economic Development City of Garfield Heights 5407 Turney Road Garfield Heights, OH 44125 Phone: (216) 475-5484	- Director - Building Inspector (part time - 20 hours) - Legal Secretary (part time)	Commercial Industrial	Undertake grantwriting, implementation of grants, and public hearings for grants. Two staff members are officers with the Chamber of Commerce. Serve as a liaison between the City and area businesses. Inventory businesses and track in-migration and out-migration of businesses. Promote both City programs and County Department of Development programs to businesses. Undertake storefront inspections.
Independence *2000 Population: 7,109*	Ms. Tricia Kontak, Executive Assistant to the Mayor Mayors Office of Economic Development City of Independence 6800 Brecksville Road Independence, OH 44131 Phone: (216) 524-4131	- Executive Assistant to the Mayor	Office	Focus is on business retention, expansion, and attraction. Monitor businesses on Rockside Road. Undertake marketing, outreach, and promotion strategies. Work with brokers and developers.
Lakewood * *2000 Population: 56,646*	Mr. Frank Pietravoia, Director Mr. Jeff Rink, Assistant Director Department of Planning and Development City of Lakewood 12650 Detroit Avenue Lakewood, OH 44107 Phone: (216) 529-6634	- Director (50% - 60% of time) - Assistant Director (80% of time) - Administrative Assistant (40% of time)	Commercial Industrial Office Residential	Focus is on business retention, expansion, and recruitment. Provide one-on-one outreach to businesses as well as coordination with the Chamber of Commerce. Inventory/track available commercial and office space within the City as well as business issues and needs. Network with and act as a liaison between businesses and the City. Promote/facilitate development. Provide/promote information on available programs to businesses. Grantwriting.

Exhibit 9-A (continued)

City	Contact Person	Staff Capacity/Percent of Staff Time Devoted to Economic Development Activities	Type of Economic Development Focus	General Activities
Maple Heights *2000 Population: 26,156*	Ms Martine M. DiVito, Manager Department of Economic Development City of Maple Heights 5353 Lee Road Maple Heights, OH 44137 Phone: (216) 587-9041	- Director (80% of time) - Occasional part-time assistance	Commercial Industrial Office Residential	Coordinate City projects. Provide outreach, coodination, and facilitation of information on available programs to businesses. Provide technical assistance to businesses. Serve as a liaison between the public and the private sector.
Olmsted Falls *2000 Population: 7,962*	Ms. Rosanne Jones, Director Department of Economic Development City of Olmsted Falls 26100 Bagley Road Olmsted Falls, OH 44138 Phone: (440) 235-5550	- Director (part time - 20 hours+)	Commercial Industrial Office	Both the Mayor and the Economic Development Director are City representatives on the Joint Economic Development District Committee and on the Chamber of Commerce. Prepare grant applications for city projects. Liaison for the traffic study. Involved in city-related land acquisition, land disposition, leasing, and development projects. Will be providing assistance with promotion and expansion of existing businesses, as well as with the attraction of new businesses.
Parma * *2000 Population: 85,655*	Mr. Michael McGinty, P.E., Director Department of Community Development City of Parma 6901 West Ridgewood Drive Parma, OH 44129 Phone: (440) 845-8444	- Director (varies)	Commercial Industrial Office Residential	Perform a variety of administrative, technical, and professional duties in the preparation and implementation of economic development plans, programs, and services. Plan, develop, and manage programs and and strategies designed to attract and retain businesses within the City. Work with small "Mom and Pop" businesses to ensure they remain viable. Also focus on the attraction and retention of residents to the City, as well as maintaining and improving the quality of homes through the use various local and county programs.
Solon *2000 Population: 21,802*	Ms. Peggy Weil, Economic Development Manager Department of Planning and Development City of Solon 34200 Bainbridge Road Solon, OH 44139 Phone: (440) 349-6327	- Manager (100% of time) - Secretary (part time)	Commercial Industrial Office	Perform a variety of administrative, technical, and professional duties in the preparation and implementation of economic development plans, programs, and services. Plan, develop, and manage programs and strategies designed to attract and retain businesses within the City. Maintain databases of available building inventories, available sites and buildings, area businesses, and other information (utilities, taxes, zoning, transportation, community services, financing tools,etc.). Prepare promotional material. Manage the Business Visitaion and Enterprize Zone programs.
Strongsville *2000 Population: 43,858*	Mr. Eugene P. Magocky, Director Department of Economic Development City of Strongsville 18688 Royalton Road Strongsville, OH 44136 Phone: (440) 238-5720	- Director (100% of time) - Secretary (part time)	Industrial	Focus is on industrial development, including retention, expansion, and recruitment. Provide/distribute promotional information on the City, as well as information on economic development programs. Respond to interested developers and businesses. Complete necessary reports for State and County economic development programs, such as the tax abatement program. Attend all related City and economic development committee meetings.

Exhibit 9-A (continued)

City	Contact Person	Staff Capacity/Percent of Staff Time Devoted to Economic Development Activities	Type of Economic Development Focus	General Activities
Warrensville Heights *2000 Population: 15,109*	Mr. Brad D. Sellers, Community Liaison Director Department of Economic Development City of Warrensville Heights 4301 Warrensville Center Road Warrensville, OH 44128 Phone: (216) 518-2774	- Community Liaison Director (100% of time) - Economic Development Director (100% of time)	Commercial Industrial Office Residential	Focus is on commercial, industrial, and residential development and redevelopment. Prepare grant applications for economic development activities, infrastructure projects, senior and youth services, etc. Provide/distribute promotional information on the City, as well as information on economic development programs and incentives. Provide outreach to area businesses with an emphasis on the attraction of new businesses and the retention of current businesses.
Westlake *2000 Population: 31,719*	Mr. Robert Parry, Director Department of Planning and Economic Development City of Westlake 27216 Hilliard Boulevard Westlake, OH 44145 Phone: (440) 871-3300	- Director (10%+ of time) - Assistant Director (10%+ of time)	Industrial Office Retail	Provide/distribute promotional information on the City, as well as information on economic development programs and incentives. Inventory/track/distribute information on available land and building space. Administer Community Reinvestment Area (CRA), Enterprise Zone, and Industrial Revenue Bond programs. Staff to the Commercial Improvement Corporation board, the Community Reinvestment Area Housing Council, and the Tax Incentive Revenue Council. Market City and available programs at trade shows and through publications.

*City is an "entitlement" and thus receives Community Development Block Grant (CDBG) fuding directly from the U.S. Department of Housing and Urban Development (HUD).

NOTE: Information for the City of Cleveland and the Cuyahoga County Department of Development was not included due to the large scale of their economic development departments.

Village of Cuyahoga Heights

Master Plan Addendum

March, 2004

Prepared by the Cuyahoga County Planning Commission

VILLAGE OF CUYAHOGA HEIGHTS
MASTER PLAN COMMITTEE

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George M. Suhy, Council Representative
Oliver Vaccher, Council Representative
Carl Casavecchia, Community Resident
Rick Centa, Community Resident

VILLAGE OF CUYAHOGA HEIGHTS
MASTER PLAN
ADDENDUM

March, 2004

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ADDENDUM

FOCUS AREA 7
AND
FOCUS AREA 8

INTRODUCTION

The Village of Cuyahoga Heights Master Plan Committee, working with the staff of the Cuyahoga County Planning Commission, completed the *Master Plan* in June, 2002. As a follow-up to that work, the Village Council requested that two additional Focus Area plans be developed for existing industrial properties on East 71st Street, south of Grant Avenue.

This addendum to the June, 2002 *Master Plan* includes two Focus Areas. Area 7 covers the west side of East 71st Street, south of Grant Avenue. Area 8 covers the east side of East 71st Street, south of Grant Avenue. The most current available information sources have been used in this addendum, such as 2002 aerial photographs and 2004 parcel data. For purposes of continuity however, the development impact analyses use the same data sources that were used in the 2002 plan.

FOCUS AREA 7: EAST 71ST STREET, SOUTH OF GRANT AVENUE, WEST SIDE

Introduction

This focus area includes all or part of three properties located on the west side of East 71st Street. The purpose of this analysis is to review the potential to create new light industrial space by redeveloping the existing industrial buildings on two parcels, and utilizing the vacant rear portion of another parcel.

Property Ownership

The focus area contains three parcels totaling approximately 21.5 acres ***(Exhibit 1)***. The area for possible redevelopment, totaling about 16.5 acres, involves the Sable Realty, Inc. parcel, occupied by Voyale Corp. and several additional small industrial firms, and the unoccupied Cuyahoga Foundry Co. parcel. The vacant land for possible development, the rear portion of the Cuyahoga Heights Business Park parcel, totals about 5 acres.

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the area was already developed with industry. Cuyahoga County Auditor's Office records indicate that the specific structures in the focus area date as far back as the 1910's ***(Exhibit 2)***.

Zoning

All of the parcels are zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as well as retail, wholesale, commercial, and warehouse uses.

Traffic Counts

The most recent traffic count, done in 1996, showed approximately 8,000 vehicles on East 71st Street south of Grant Avenue. At the time of the same count, the number of trucks was approximately 880, representing about 11% of all vehicles.

Detailed traffic count information is displayed in 2002 *Master Plan*, Chapter 4, *Economic Development and Market Analysis*.

Brownfields

Based upon state and federal databases, as displayed in the Cuyahoga County Planning Commission's online Brownfields Geographic Information System, there are no properties within the focus area that are officially listed as having environmental issues. The official listings however, do not necessarily mean that a property is free of environmental problems. For example, a vacant property may not appear on the listings because several of the databases pertain to the use of federally regulated substances as part of current production processes, such as many chemicals. Therefore a property owner may be aware of problems on the site that have been documented by private consultants on behalf of the owner, but the property would not appear on databases of sites with environmental issues.

Exhibit 1, Focus Area 7, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Building Date	Acreage	Estimated Market Value
4510 East 71st St.	522-10-016 & 017	Sable Realty Inc.	9-17/2001	1914	10.60	$ 904,500
4530 East 71st St.	522-10-018	Cuyahoga Foundry Co.	4-26/1920	n/a	5.97	$ 660,200
4560 East 71st St.	522-10-019	Miop Inc.	7-11/2000	n/a	4.94*	$ 230,700
Total					**21.51**	**$ 1,795,400**

n/a = not available

*acreage and estimated market value reflects only the vacant rear portion of the property.

Source: Cuyahoga County Auditor's Office, January 2004.

Exhibit 2, Focus Area 7, Land Use

Source: Airphoto USA, copyright 2002.

Development Alternative

The area is currently a series of industrial buildings, which developed from the 1910's onward. The Sable Realty, Inc. parcel, occupied by Voyale Corp. and several other small industrial firms, contains about 225,000 square feet of floor space. In contrast, the Cuyahoga Foundry Co. parcel contains about 84,600 square feet of floor space, which has been unoccupied for a lengthy period of time and may be difficult to renovate to current market standards.

The focus area currently serves as an industrial district, and it is recommended that the area continue as such, with new development as **light industrial uses**.

If the Sable Realty, Inc. and Cuyahoga Foundry Co. parcels were redeveloped, they could support a total of about 182,000 square feet of light industrial space on about 16.5 acres ***(Map 1)***. The vacant land on the rear portion of the Miop, Inc. property could support about 75,000 square feet of light industrial space on about five acres. All of this development combined would equal about 257,000 square feet of space on 21.5 acres.

The new development represents a combined building coverage of approximately 25% on the Sable Realty and Cuyahoga Foundry parcels and about 34% on the rear portion of the Miop parcel. These percentages are consistent with a commonly used standard of 30% - 35% building lot coverage.

Currently, the higher elevation of East 71st Street in relation to the parcels, as well as the triangular shape of the area caused by the adjacent railroad line, creates an unusual access situation. A single driveway located on the Cuyahoga Foundry parcel serves both that parcel and the south and east sides of the buildings on the Sable Realty parcel. A second access point to East 71st Street is situated at the northern edge of the Sable Realty parcel, which serves the northwest portion of the complex of buildings and is the main entrance for the businesses located on the property. For any future redevelopment, these two access points can remain at their current locations.

The overall redevelopment of the Sable Realty and Cuyahoga Foundry parcels would be facilitated if the parcels were under common ownership, which would permit the greatest flexibility and efficiency in terms of the number, location, and size of new structures, parking areas, and loading docks. There are several active businesses on the Sable Realty parcel however, and redevelopment is not feasible unless these businesses relocate or cease operations. By itself, the Cuyahoga Foundry parcel is too narrow to redevelop with a building of significant size.

There are several options available for the development of the rear portion of the Miop parcel. For example, the project could be undertaken on its own with some minor changes to building size and parking requirements, because access to East 71st Street is available through the parking lot of the existing building. The land could also be developed as a phase of a larger project immediately to the north, with access provided through the reconfigured parcels.

Parking standards used for the above analysis were about two parking spaces per 1,000 square feet of industrial space, which totaled about 365 spaces for the Sable Realty and Cuyahoga Foundry parcels and about 153 spaces for the rear portion of the Miop parcel.

The properties in the focus area currently generate an estimated $20,800 in income and property tax revenue for the Village. It should be noted that this revenue estimate is based upon an estimate of 40 full-time equivalent jobs at the Sable Realty property, which would include Voyale Corporation and several additional small industrial businesses. This estimate was derived by counting vehicles on the property and in the parking area on the east side of East 71st Street identified for Voyale employee parking. The counting was done from the public right-of-way in the early afternoon of Thursday, March 25, 2004. The proposed development would generate approximately $252,800 annually in combined income tax and property tax revenue for the Village ***(Exhibit 3)***. After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $48,900, plus about

$114,300 in property tax revenue to the school district.

It is estimated that the proposed new development would generate about 1,800 vehicle trips per day, which is similar to the vehicle trips generated by the existing development.

Map 1, Focus Area 7, Development Alternative

Source: Cuyahoga County Planning Commission

Exhibit 3, Focus Area 7, Development Impact Analysis

Focus Area 7: East 71st Street, south of Grant Avenue, west side	Light Industry	Existing Conditions
Site Characteristics		
Total site acreage	21.5	21.5
Total site square footage	936,540	936,540
Industrial space (sq ft)	257,000	309,600
Number of employees	514	40
Potential land value of site	$887,000	-
Potential building value of site	$13,184,100	-
Total potential property value (land and building)	$14,071,100	$1,795,400
Environmental Impacts		
Sewage flow (gallons/day)	66,300	5,200
Water consumption (gallons/day)	77,100	6,000
Solid waste production (tons/day)	0.7093	0.0552
Total trips generated per day: weekday	1,791	139
Revenues		
Estimated avg annual employee income	$29,970	$29,970
Income tax revenues - Village	$231,069	$17,982
Property tax revenues - Village	$21,750	$2,775
Property tax revenues - School	$114,342	$14,589
Total Village Revenues	**$252,818**	**$20,757**
Expenditures		
Cost to provide services*	$203,956	$15,872
NET FISCAL IMPACT - VILLAGE	**$48,862**	**$4,885**

*Municipal service expenditure categories include: general government, public safety, public health and welfare, public works, community development, recreation, and debt service.

Source: Cuyahoga County Planning Commission

FOCUS AREA 8: EAST 71ST STREET, SOUTH OF GRANT AVENUE, EAST SIDE

Introduction

This focus area includes all or part of ten properties located on the east side of East 71st Street, extending from just south of North American Manufacturing Co. through the Hillside Party Center. The purpose of this analysis is to review the potential to create new light industrial space by redeveloping the existing outdoor storage areas, three small industrial buildings, two houses, and a party center. The focus area is separated into two sections by a vacant ravine.

Property Ownership

The focus area contains all or part of ten parcels totaling approximately 23.6 acres ***(Exhibit 4)***.

Land Use

The 1948 generalized land use map of Cuyahoga County in the possession of the Cuyahoga County Planning Commission shows that the area was generally vacant land, although industrial uses were located immediately to the north in proximity to railroad tracks. Cuyahoga County Auditor's Office records indicate that the specific structures in the focus area generally date from the 1950's through the 1970's ***(Exhibit 5)***.

Zoning

All of the parcels are zoned Industrial (Chapter 1248), which allows a variety of industrial uses, as

Exhibit 4, Focus Area 8, Parcel Data

Address	Parcel Number	Owner	Date of Transfer	Building Date	Acreage	Estimated Market Value
4455 East 71st St.	522-26-006	North American Mfg. Co.	1-1/91	vacant land	1.78	$ 39,800
4455 East 71st St.	522-26-004	Sable Realty Inc.	9-17/2001	n/a	3.12	$ 245,400
n/a	522-26-003	Sable Realty Inc.	9-17/2001	n/a	12.50	$ 324,700
4535 East 71st St.	522-26-010	Alexander Berkes	12-1/1981	1949	0.44	$ 156,500
4545 East 71st St.	522-26-002	Paul Carlisle, Trustee	9-4/1984	1951/1978	1.70	$ 177,000
4567 East 71st St.	522-26-011	Joel and Leonard Liptak	4-26/1994	1983	1.05	$ 365,400
4579 East 71st St.	522-26-001	Douglas Pallini	6-22/1973	1871	0.19	$ 72,000
4585 East 71st St.	522-26-013	Sable Realty Inc.	6-22/1995	1958	0.20	$ 90,100
4617 East 71st St.	522-25-018	Ar-kater Inc	3-4/1976	1953/1962	1.71	$ 586,000
4617 East 71st St.	522-25-003	Hillside Reclamation, Inc.	7-11/1975	vacant land	4.08	$ 82,400
Total					**23.65**	**$ 2,139,300**

n/a = not available.

Source: Cuyahoga County Auditor's Office, January 2004.

well as retail, wholesale, commercial, and warehouse uses.

Traffic Counts

The most recent traffic count, done in 1996, showed approximately 8,000 vehicles on East 71st Street south of Grant Avenue. At the time of the same count, the number of trucks was approximately 880, representing about 11% of all vehicles.

Detailed traffic count information is displayed in 2002 *Master Plan*, Chapter 4, *Economic Development and Market Analysis*.

Brownfields

Based upon state and federal databases, as displayed in the Cuyahoga County Planning Commission's online Brownfields Geographic Information System, there are no properties within the focus area that are officially listed as having environmental issues. The official listings however, do not necessarily mean that a property is free of environmental problems. For example, a vacant property may not appear on the listings because several of the databases pertain to the use of federally regulated substances as part of current production processes, such as many chemicals. Therefore a property owner may be aware of problems on the site that have been documented by private consultants on behalf of the owner, but the property would not appear on databases of sites with environmental issues.

Exhibit 5, Focus Area 8, Land Use

Source: Airphoto USA, copyright 2002.

Development Alternative

The focus area consists of mostly level to somewhat sloping land situated on the rim of the Mill Creek Valley. The area is a combination of outdoor industrial storage, small industrial businesses, a party center, and several homes. Several parcels are less than one acre in size, while several larger parcels extend down the wall of the valley to the old B&O Railroad right-of-way or Mill Creek.

The focus area is currently a mix of land uses that do not coexist well, such as industrial buildings and outdoor storage in proximity to residences. In addition, the outdoor industrial storage that occupies much of the acreage of the focus area emphasizes that the land is underutilized and could be directed toward a higher use. The focus area is zoned for industrial use, and it is recommended that the area continue as such, with new development planned to create a unified **light industrial district**.

One zoning change is recommended. Permanent parcel 522-25-008 (4651 East 71st Street) is currently zoned Industrial (Chapter 1248). It is recommended that this parcel be rezoned to Residential (Chapter 1246). This rezoning would make the land use of the parcel, which is a house built in the 1950's, conform to its zoning classification.

If the parcels were redeveloped, they could support a total of about 214,000 square feet of light industrial space on about 16.9 acres ***(Map 2)***. The new development represents a building coverage of approximately 29%, which is consistent with a commonly used standard of 30% - 35% building lot coverage.

Unlike the situation for parcels on the west side of East 71st Street, the topography creates only minimal access issues on the east side of the street. The major curb cut leading to the industrial storage areas, which also provides a second access route to North American Manufacturing, can remain at its current location for any future development. At other locations, curb cuts can be relocated to best serve any new buildings, parking, and loading areas.

Due to the size and configuration of the largest group of parcels, the overall redevelopment could be conducted as a series of individual projects, with each project needing only all or part of several parcels in order to proceed. There are several active employers in the focus area, including small industrial shops and a party center. As properties are sold for redevelopment purposes, these businesses should be assisted to find suitable alternate space in the Village if that is their desire.

Parking standards used for the above analysis were about two parking spaces per 1,000 square feet of industrial space, which totaled about 430 spaces for the entire focus area.

The properties in the Focus Area currently generate an estimated $26,400 in income and property tax revenue for the Village. The proposed development would generate approximately $210,900 annually in combined income tax and property tax revenue for the Village ***(Exhibit 6)***. After estimating the cost of providing services to the new development, it is anticipated that the net fiscal impact to the Village would be about $41,000, plus about $974,000 in property tax revenue to the school district.

It is estimated that the proposed new development would generate about 1,500 vehicle trips per day, which would represent less than a 20% increase from the most recent traffic count levels on East 71st Street in 1996.

Map 2, Focus Area 8, Development Alternative

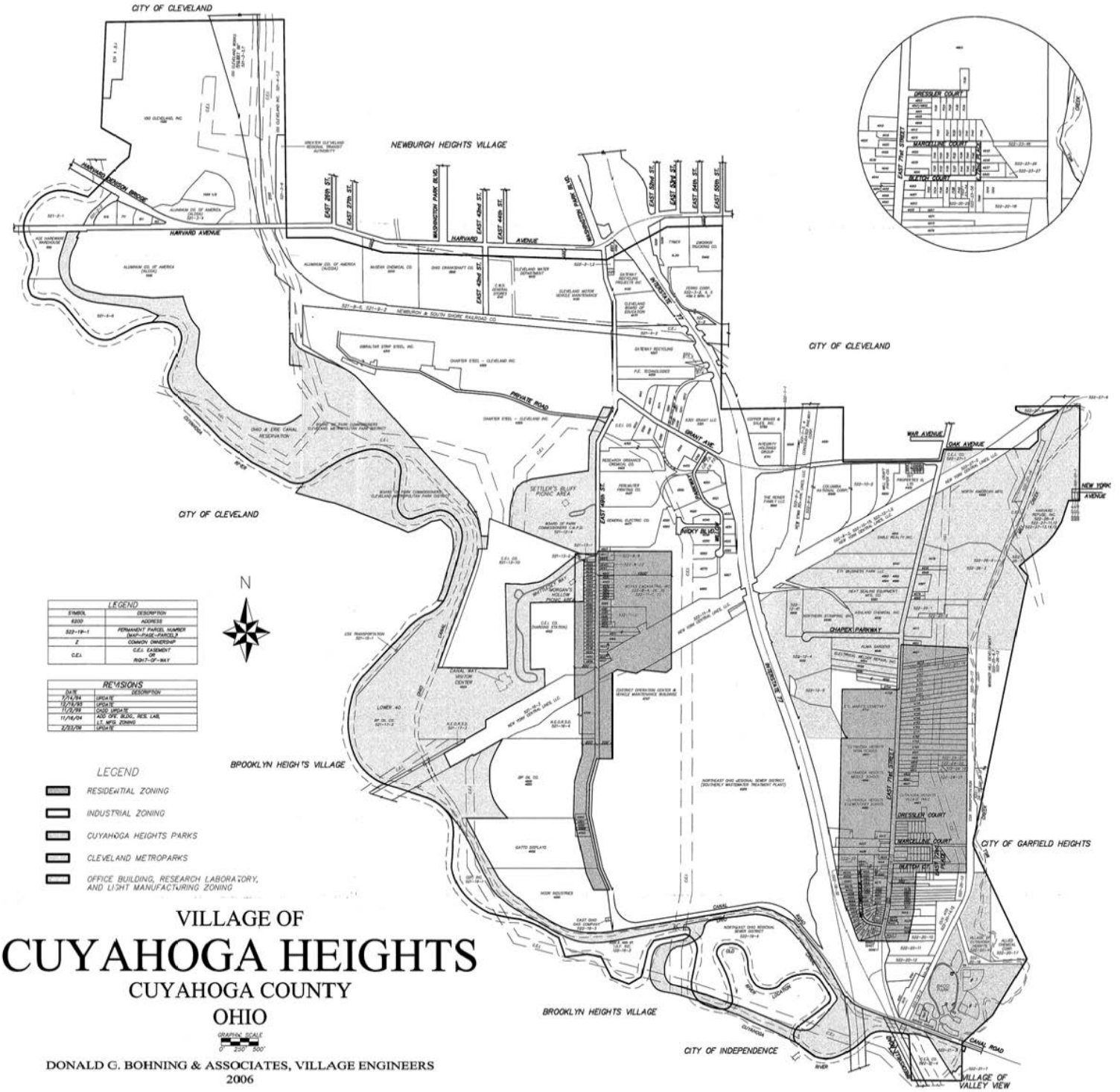
Source: Cuyahoga County Planning Commission

Exhibit 6, Focus Area 8, Development Impact Analysis

Focus Area 8: East 71st Street, south of Grant Avenue, east side	Light Industry	Existing Conditions
Site Characteristics		
Total site acreage	16.9	23.6
Total site square footage	736,164	1,028,016
Industrial space (sq ft)	214,000	40,200
Number of industrial employees	428	40
Commercial space (sq ft)	0	10,364
Number of commercial employees (full-time equivalent)	0	15
Number of dwelling units	0	2
Total number of residents	0	4
Potential land value of site	$955,000	-
Potential building value of site	$10,978,200	-
Total potential property value (land and building)	$11,933,200	$2,139,300
Environmental Impacts		
Sewage flow (gallons/day)	55,200	6,400
Water consumption (gallons/day)	64,200	8,000
Solid waste production (tons/day)	0.5906	0.0772
Total trips generated per day: weekday	1,491	380
Revenues		
Estimated avg annual employee income (industrial)	$29,970	$29,970
Estimated avg annual employee income (commercial)	-	$16,930
Median household income	-	$41,995
Income tax revenues - Village	$192,407	$23,051
Property tax revenues - Village	$18,445	$3,301
Property tax revenues - School	$96,969	$17,356
Total Village Revenues	**$210,853**	**$26,352**
Expenditures		
Cost to provide services*	$169,831	$24,810
NET FISCAL IMPACT - VILLAGE	**$41,022**	**$1,542**

*Municipal service expenditure categories include: general government, public safety, public health and welfare, public works, community development, recreation, and debt service.

Source: Cuyahoga County Planning Commission

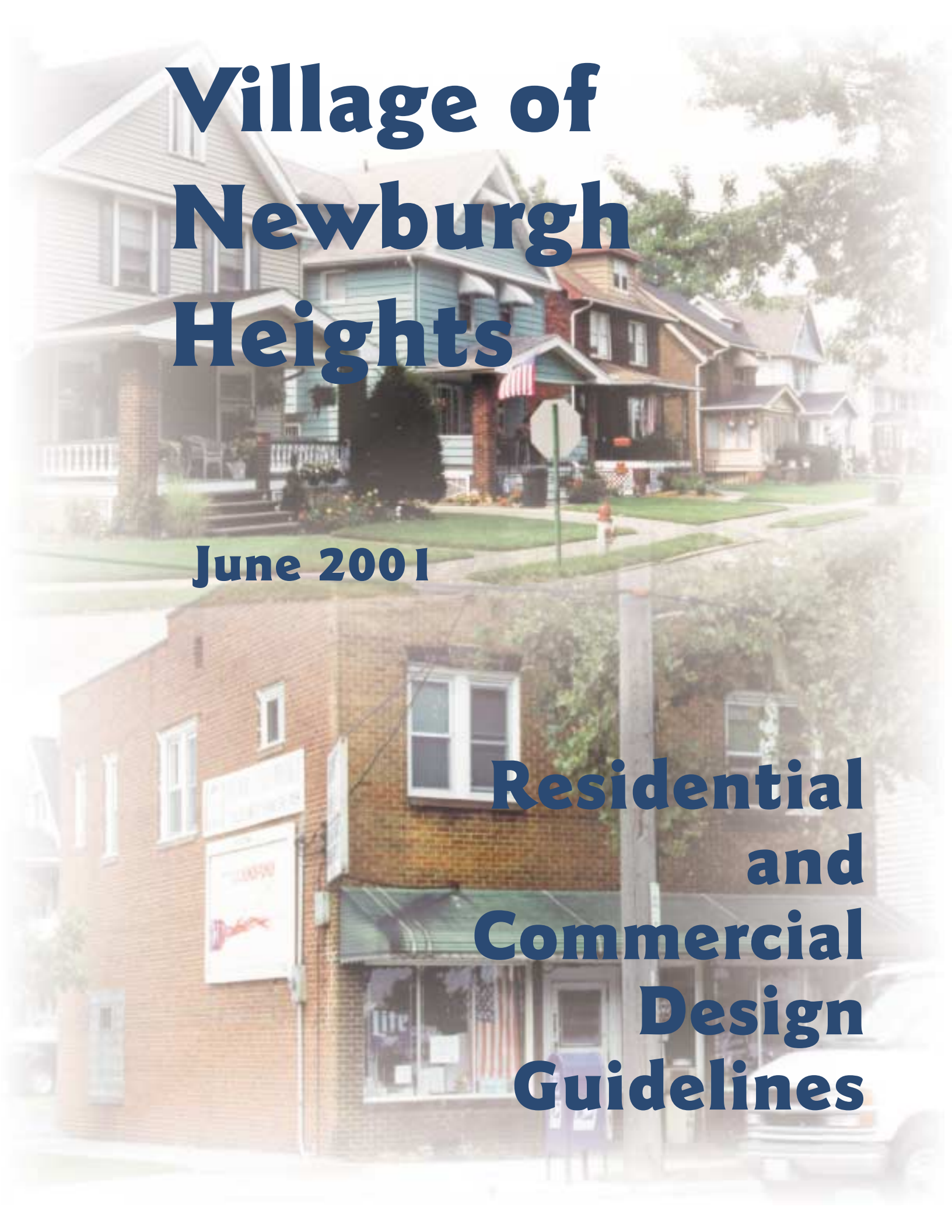


LEGEND	
SYMBOL	DESCRIPTION
8200	ADDRESS
522-19-1	PERMANENT PARCEL NUMBER (MAP-PAGE-PARCEL)
Z	COMMON OWNERSHIP
C.E.I.	C.E.I. EASEMENT OR RIGHT-OF-WAY

REVISIONS	
DATE	DESCRIPTION
7/14/94	UPDATE
12/13/99	UPDATE
11/2/06	OHIO UPDATE
11/16/04	ADD OFC. BLDG., RESE. LAB, LT. MFG. ZONING
3/23/06	UPDATE

Village of Newburgh Heights

June 2001



Residential and Commercial Design Guidelines

Village of Newburgh Heights
Residential and Commercial Design Guidelines

June, 2001

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INTRODUCTION

Design guidelines are architectural standards for residential and commercial building alterations and new construction. The guidelines serve a two-fold purpose: 1) they ensure that the architectural integrity of existing structures is maintained, 2) they ensure that the design elements of proposed alteration or construction projects are compatible with the existing building styles in the surrounding neighborhood.

Newburgh Heights' design guidelines will be used as a set of standards by the Village's Architectural Review Board (ARB) in their consideration of applications submitted from the public to alter or construct a residential or commercial building. Use of the guidelines by the ARB will ensure that decisions are based on a clear set of standards, and not influenced by the preferences of Board members. The guidelines also serve as a resource for residential and commercial property owners in helping them to preserve and maintain their property. As one of the oldest communities in Cuyahoga County, Newburgh Heights' homes possess architectural features that are of historic and aesthetic significance. It has been demonstrated in communities across the country that preservation of historic features and better coordination of neighborhood architecture through tools such as design guidelines helps to maintain property values, and can enhance community identity and pride.

The Newburgh Heights design guidelines have been divided into two sections: residential and commercial. The first section on residential guidelines will cover architectural styles in Newburgh Heights, and will then present information on the maintenance of different architectural elements of existing residential properties. The guidelines will then cover the topic of new residential construction. The second section, which covers commercial guidelines, will focus on recommendations for Harvard Avenue commercial and industrial properties.

RESIDENTIAL GUIDELINES

Predominant Architectural Styles Of Newburgh Heights Homes

Table 1 summarizes some of the important structural and architectural characteristics of Newburgh Heights' residential buildings. The Village is largely comprised of single-family (64%) and two-family (35%) homes. The most common exterior material found in Newburgh Heights homes is aluminum or vinyl siding (61%), followed by wood (23%) and brick (12%).

Just over 80% of Newburgh Heights' existing housing stock was constructed prior to 1940–largely between the years 1910 and 1929. This is significant because the post-WWII era signifies the beginning of a new period in American architectural history. While the first half of the twentieth century is characterized, in large part, by revivals of traditional European and Colonial American architectural styles, the 1950's and 1960's witnessed the emergence of new styles such as the ranch and the split-level. In the 1970's and 1980's, another contemporary style emerged, where individual houses were characterized by the adaptation of a combination of historical details to more current construction methods and materials. Following are descriptions of the most common residential architectural styles found in Newburgh Heights.

Table 1
Newburgh Heights Residential Building Characteristics

Year Built	Number of Buildings	%
1909 or Earlier	38	4.9%
1910-1919	294	37.7%
1920-1929	320	41.1%
1930-1939	20	2.6%
1940-1959	70	9.0%
1960-1979	32	4.1%
1980-1989	0	0.0%
1990-1997	1	0.1%
Unknown	4	0.5%
Total	***779***	***100.0%***
NUMBER OF STORIES		
1	68	8.7%
1.5	187	24.0%
2	519	66.6%
Unknown	5	0.6%
Total	***779***	***100.0%***
EXTERIOR WALL MATERIAL		
Wood	179	23.0%
Wood/Brick	9	1.2%
Brick	90	11.6%
Aluminum/Vinyl	473	60.7%
Asbestos Shingle	17	2.2%
Composition Siding	2	0.3%
Stucco	1	0.1%
Other	1	0.1%
Unknown	7	0.9%
Total	***779***	***100.0%***
TYPE OF STRUCTURE		
Single-Family	502	64.4%
Two-Family	261	33.5%
Three-Family	15	1.9%
Other	1	0.1%
Total	***779***	100.0%
ROOF MATERIAL		
Asphalt	754	96.8%
Slate	17	2.2%
Wood Shake	1	0.1%
Composition	1	0.1%
Not Known	6	0.8%
Total	***779***	100.0%

SOURCE: Cuyahoga County Auditor's Office

Vernacular Double ("duplex")

Vernacular Double ("duplex")

The style of double home found in Newburgh Heights is similar to that found throughout Cleveland and its older, inner-ring suburbs. Ninety-seven percent of Newburgh Heights' doubles were built prior to 1940. The original characteristics of the vernacular double in Newburgh Heights include:

- ✓ Vertical orientation of the housing units, with one above the other, as opposed to a side-by-side orientation.
- ✓ Identical floor plan in each unit.
- ✓ Identical window placement on first and second story.
- ✓ Front-facing gabled main roof.
- ✓ Front porches that span the full width of the front of the house on both the first and second floor
- ✓ Closed, clapboard railings on porches or baluster railings
- ✓ Second floor porch covered by a low-pitched, front-facing gabled roof

The most common exterior alteration to duplex homes in Newburgh Heights is made to the front porch. Examples of typical alterations include: enclosure of front porch, removal of front porch, alteration of pillars or railings, or alteration of second-floor porch roof.

Bungalow

Bungalows were popularized in the U.S. during the first three decades of the twentieth century–although certain prominent elements of the bungalow style are also evident in many post-WWII homes. The most common characteristics of bungalows include:

Bungalow

- ✓ one and one-half story height
- ✓ sweeping, low-pitched gabled roof with overhanging eaves; gable can be front-facing or side-facing
- ✓ full- or half-width front porch, commonly sheltered by extension of main roof structure if gable is side-facing
- ✓ square-shaped wooden or brick support columns on front porch
- ✓ second-floor dormer windows

American Foursquare

American Foursquare

Foursquare style houses were built primarily between 1900 and 1925. They are easily recognized by the following characteristics:

- ✓ two full stories with almost square dimensions
- ✓ symmetrical placement of windows on front facade
- ✓ front entrance typically located in center of house, although sometimes can be off-center
- ✓ low-pitched, pyramidal roof
- ✓ front porch which can span either full- or partial-width of house (full-width is more common)
- ✓ dormers with hipped roofs

Romantic Revival

Although sometimes more difficult to distinguish, romantic revival homes, built predominantly during the first half of the twentieth century, are a common fixture in the architectural landscape of Newburgh Heights and other communities in the region. Distinguishing characteristics of romantic revival homes include:

Romantic Revival

- ✓ cross-gabled roof
- ✓ exterior material usually consisting of brick, stone, or masonry veneer on a wood frame
- ✓ diversity in window type–for example the front facade of a house may have a casement window, a double-hung window, and a rounded-arch window
- ✓ stone or brick pattern detailing around windows and doors

Homestead

Homestead

Most homestead houses were built in the early 1900's. The typical style of the homestead house, built in the early twentieth century or later, is the result of an architectural evolution which traces its roots back to colonial homes of the 1700's. Characteristics of the twentieth century homestead house include:

- ✓ two-and-a-half story height
- ✓ rectangular floor plan
- ✓ front-gabled roof
- ✓ minimal amount of exterior detailing
- ✓ front porch which is typically full-width

Post-WWII

In Newburgh Heights, the most common post-WWII homes are the ranch, the "contemporary" style referred to earlier, which consists of a mixture of historical architectural elements, and a style modeled after traditional New England Cape Cod houses.

Ranch

Newburgh Heights ranch homes are easily identified by the following characteristics:

- ✓ one-story height
- ✓ almost square dimensions
- ✓ low-pitched, pyramidal roof

Contemporary

Contemporary, post-WWII homes are more difficult to classify because they might display a mixture of architectural features. Some common possible attributes of the contemporary post-WWII style include:

- ✓ two-story height
- ✓ no front porch
- ✓ aluminum or vinyl siding exterior, which can span the entire house, or is commonly combined with brick covering the first story of the home.

Post-World War II Ranch

Cape Cod, built after WWII

Based upon the traditional New England Cape Cod style, the contemporary "suburban" Cape Cod found throughout Newburgh Heights and other communities in the area is identified by the following characteristics:

- ✓ one-and-a-half story height
- ✓ cross-gabled roof, with gable flush to left or right side of house
- ✓ first floor window configuration of picture window and double-hung window flanking front entrance

Post-World War II Contemporary

Post-World War II Cape Cod

Preservation and Alterations

Exterior Material

Siding

If possible, retain and preserve the home's original siding. Deteriorated siding materials should be repaired or replaced with materials similar to those used in the original construction of the home. Covering traditional siding materials such as wood and brick with synthetic siding materials such as aluminum or vinyl siding, asbestos or asphalt shingles, or artificial stone and brick veneer is strongly discouraged. Aesthetically, installation of artificial siding on older homes (pre-World War II) almost always results in a loss of architectural detail–a process which alters the style and historic character of the house. Additionally, artificial siding can promote the deterioration of the original material it covers, as the impermeability of synthetic materials traps moisture and does not allow for circulation of air beneath.

Exposed window frames

Artificial siding can be removed, and original wood siding restored. In the case of homes installed with vinyl or aluminum siding, the most common types of artificial siding found in Newburgh Heights, the condition of the original wood siding underneath is dependent upon many factors, including the quality of the new siding materials used and utilization of proper installation procedures.

Should it be determined that installation of artificial siding is necessary, siding which most closely imitates the appearance of the original siding should be chosen. Vinyl siding with wood-grained pattern is not appropriate, as real wood siding has a smooth finish. Siding should not cover the wood frame bordering windows or doors, nor should it cover any other original architectural detailing of the exterior of the home as these are important architectural features.

Existing homes which have already been sided with artificial materials should be properly maintained. Siding should be washed, and any deteriorated or damaged portions should be replaced immediately. Artificial siding, particularly aluminum, will eventually need to be painted and this process will increase the maintenance responsibilities associated with the material.

Masonry

Stone and brick are among the most durable of building materials, but they are also susceptible to certain wearing effects with age. The natural color of the stone or brick can fade slightly, and soot and dirt can accumulate on their surfaces. The fading process is viewed by many to be a beautification process which results in improved harmonization between the colors of the buildings and the surrounding natural environment.

If soot and dirt have accumulated on the surface of the stone or brick, wash with low-pressure water, mild detergents, and soft-bristled brushes. Never clean by blasting, as this process can seriously erode the protective, hard outer surface of the masonry material and accelerate its deterioration. Additionally, the blasting process leaves behind a roughened surface which accumulates dirt and pollutants much faster than the original surface.

Stone and brick should not be painted, as the resulting surface is neither as attractive nor as durable as the original, unpainted version. Once masonry has been painted, it is very difficlt to restore it to its original appearance. Painting masonry transforms a durable, attractive, low-maintenance surface into a less durable, less attractive, high-maintenance surface.

At some point, the mortar between bricks and other masonry material may require repair. Areas where the mortar has cracked or is missing should be repointed. In choosing the proper mortar to use for repointing, select mortar which matches the color of the original. Prepare samples of the mortar and allow them to dry to ensure that they match the original color. Additionally, choosing a mortar with the correct ingredient composition is crucial. Replacement mortar should be softer than

the bricks, and no harder than the original mortar. Mortar is not an adhesive for bricks. It serves to absorb the expansion and contraction of masonry during freezing and thawing periods. The appropriate mortar for masonry in most Newburgh Heights homes, given the average age of the housing stock, is probably a mortar with low or no portland cement content. Mortars of high portland cement content are harder than brick, and in this situation the masonry will crack as it, rather than the mortar, yields to seasonal adjustments. The mortar in older Newburgh Heights homes is primarily composed of lime and sand.

Doors and Windows

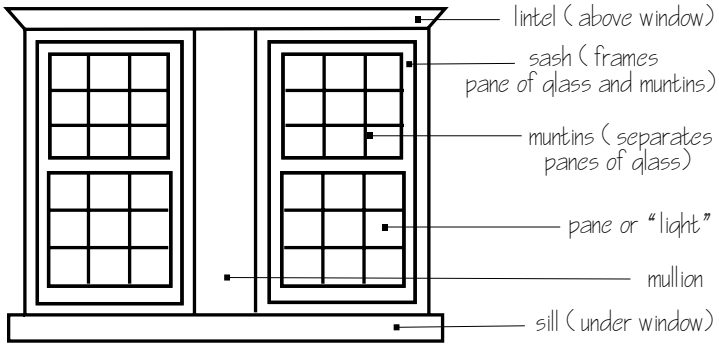
The front door serves as a focal point of the facade of a home. Certain styles of homes have distinct types of doors which are appropriate to the original architecture of the house. Doors on older homes were intended to stylistically complement the surrounding exterior detailing. Therefore, one should always try to retain the original door, frame, trim, surrounding fixtures and windows, and porch structure.

If a replacement door is necessary, the new door should match the original as closely as possible in material, size and style. This includes any panels or windows that were present in the original door. Most contemporary door designs are not appropriate to homes built in the late 19th and early 20th centuries. If a storm door is desired, it should be of simple design with a large glass pane that reveals as much of the door behind it as possible.

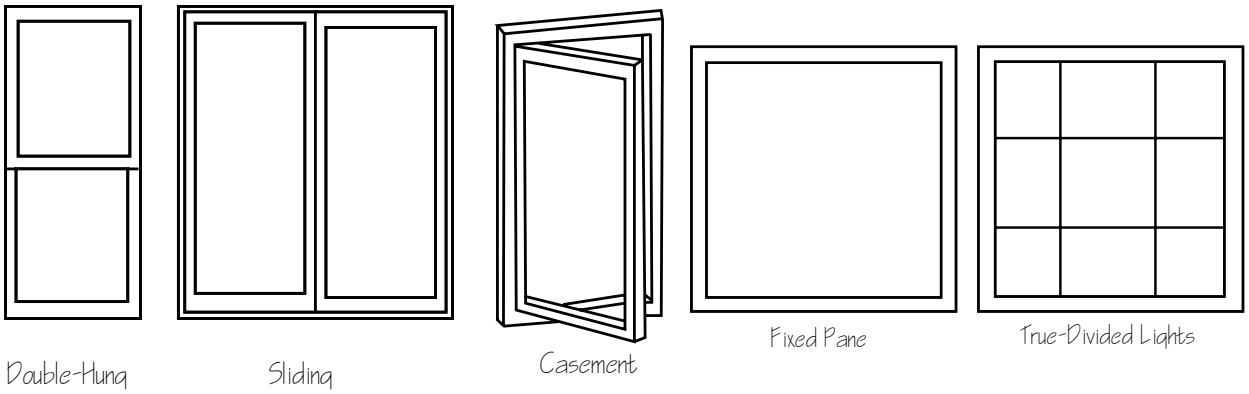
Windows are one of the most important architectural elements of the facade of a house. They allow light and glimpses of activity from the interior of a home to spill forth onto the street, enhancing the sense of community and safety for passers-by. The decorative elements of windows, such as the sash, muntins, and sill, as well as the wood or masonry materials that surround them, are designed to complement the exterior detailing of the home.

A window's style (double-hung, casement, etc.), orientation, placement, and size in proportion to other windows and the entire frontage of the house are of equal architectural significance.

Retain and repair, whenever possible, the original windows and their components. If replacement is necessary, replace with windows which duplicate the original window's material, style, orientation, placement, size, and decorative elements. Windows made of synthetic materials, such as vinyl or metal, or which have simulated features such as snap-in muntins, are strongly discouraged on homes built prior to World War II. Most homes of this era possess double-hung windows framed in wood with glass that is either a single pane, or "true-divided lights." Windows with true-divided lights are made up of smaller individual panes of glass, separated by muntins.



Components of windows



Types of window styles

Window with true-divided lights

Sliding window installed on the first floor appears architecturally inconsistent with the other windows on the front facade, which are double-hung.

The standardized designs and synthetic materials found in most contemporary, manufactured windows lack the detailing and general aesthetic qualities imparted by traditional wood or metal materials which are stylistically appropriate to windows of homes built during the first part of the twentieth century.

Shutters should not be added to windows unless they were an original feature of the house. Original shutters should be retained and repaired. If replacement shutters are necessary, they should be made of wood and the same style as the original. Shutters should be large enough so that if they were closed, they would cover the entire window area.

Enlarging or reducing the size of window openings, or changing their orientation, is strongly discouraged. The original size and orientation of window openings are specifically appropriate to the original architecture of the house. When the orientation and/or size of window openings is altered, the house's appearance is compromised in that new openings now look out of proportion to both the remaining original windows and to the amount of wall space on the exterior of the home.

Alteration of second floor window configuration has disturbed the balance between wall space and window space on the front of the home.

Porches

Front porches are an important feature of Newburgh Heights homes. As a transitionary space between the private interior of a home and the public sidewalk and street, the porch has served as the traditional space from which people can interact with neighbors and people passing by, or as a comfortable vantage point from which to observe the

activity of the neighborhood. The front porch is an architectural symbol of the word "community."

Porch balustrade

The original features of the porch, including the foundation, steps, roof (shape and pitch), railing, lattice, trellises and columns should be retained and repaired. Permanently removing the front porch is strongly discouraged. For homes which were designed and built with porches, the porch is essential to the house's architectural integrity, and its removal renders it visually incomplete.

Porches of Newburgh Heights

Porch columns and railings are the elements which are most commonly repaired, altered or replaced. When replacing these items, it is important to choose columns which are of the same style, material and dimensions as the original. When replacing the railing, choose balusters and caprails of the same style, size and material as the original. If it is not possible to obtain replacement balusters that have the same detailing as the original, the most important characteristics to be observed in achieving consistency with original are diameter, height, and material. For example, replacing a wood railing with one made of material such as wrought iron is strongly discouraged. When installing a new railing, maintain the same spacing between balusters that was present in the porch's original railing.

Non-original balustrade looks architecturally inconsistent with the house.

An original feature on many porches in Newburgh Heights, especially on duplex homes, is the presence of a wood-sided, completely closed railing area. These types of porch features should also be maintained as close to the original as possible in terms of repair and replacement. Replacement of this feature with a "rail and baluster"system is strongly discouraged, as this represents an alteration of one of the original architectural features of the home.

Enclosure of second floor porch has disturbed the structural and visual balance of the home. The second story dominates and looks out of proportion to the first story.

Enclosing the front porch is strongly discouraged. A front porch is designed as an open structure that serves as a link from the outdoors to the interior of the home. Permanently enclosing it with siding and windows transforms it into a room of the house, and such an addition is not compatible with home's original architectural scheme.

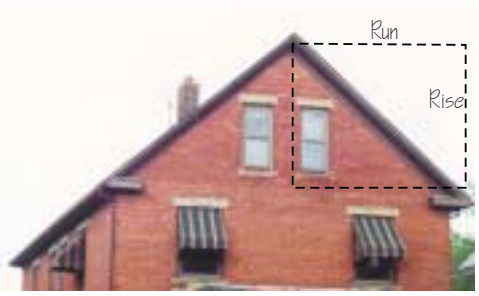
Roof shape: front-facing gable

Roofs

Although widely recognized for its structural function, a roof is a definitive architectural feature of a house. The composition, color, texture and shape of the roofing material, as well as the shape and pitch of the roof, play a dominant role in establishing the house's character. Most homes in Newburgh Heights most likely had roofs originally made of wood shingles or slate, given the time period in which the majority of them were built. However, currently, just over 96% of Newburgh Heights homes have asphalt roofs.

If the home does possess its original roof, it is strongly recommended that it be retained and repaired as needed, rather than replaced. Although more contemporary materials such as asphalt might be cheaper to install, they are typically less durable than many of the traditional roofing materials used on homes. For example, a slate roof of top quality material and flashing is estimated to last forty to sixty years with minimal maintenance, while the average lifetime of an asphalt roof is typically ten to twenty years. The original roof may still exist under subsequent layers of new roofing.

Roof shape: side-facing gable



Roof pitch = RISE / RUN

Roof Pitches

When repairing isolated sections of a roof, whether it be the original roof or a replacement roof, make certain that the replacement tiles match the existing, surrounding tiles in material composition, style, size and color.

If installing a new roof, it is important to choose materials that resemble traditional materials which were probably used on the home, such as substitutes for slate. Roof material color should be harmonious with siding and trim colors. The Cuyahoga County Archives have old appraisal cards for all houses in the County dating from the mid-1950's. Most of these appraisal cards have photos of the homes which could provide evidence of many of the home's original features.

The roof's original shape and pitch should also be maintained. Construction of new dormers should be carefully considered so as to not compromise the original design of the house. If a dormer is added, its size should be in scale with the overall size of the roof, its siding and roofing materials should match those on the rest of the house, and its window should be consistent with the existing windows on the house in style, orientation and material. Other alterations, such as roof decks, vents, skylights and mechanical and electrical equipment should be installed so that they

are not visible from the street. Skylights should protrude no more than six inches above the surface of the roof.

When repairing or replacing a roof, make certain to preserve or replace any original roof-mounted architectural features such as dormers, cupolas, cornices, brackets, chimneys, and cresting.

Other Exterior Features: Chimneys, Gutters and Downspouts

Existing brick chimneys should not be removed or covered with a cementitious coating. If portions of the original chimney exist, it is recommended that it be rebuilt in a manner consistent with the original design. Repairing or rebuilding portions of the chimney should follow the same recommendations outlined in the earlier section on repair of masonry.

Gutters and downspouts should be regularly cleaned and kept in good condition. Downspouts should be inconspicuously located on the exterior of the house and be compatible in color with that of the exterior of the home. Downspouts should also always run vertically; orienting downspouts diagonally across roof planes and walls is strongly discouraged. For a more tranditional appearance, half-round gutters are avaiable in a variety of materials, such as galvanized metal that can be repainted to match the house, or copper.

Residential Design Guidelines: Additions And New Construction

The structural and architectural features of individual homes collectively create an architectural pattern on a street. New homes built within well-established neighborhoods, a process known as "infill construction," should be designed to harmonize with the existing homes in the neighborhood in order to maintain this pattern.

Additions

An addition should be constructed so that it maintains the architectural integrity of the home. The roof of the addition should have the same general shape and pitch as that of the main structure. The color and composition of the materials on the roof of the addition should also match those of the roof on the main structure.

The "massing" of a structure describes its three-dimensional shape. It takes into account a house's width, height, depth, and roof shape. An addition should be smaller than the main structure in its massing. The material of the addition should match that of the existing structure, However, if the main structure is made of brick, siding the addition with wood or vinyl is acceptable.

The windows of the addition should be similar in style (i.e. orientation, type) and materials to those of the existing structure. For example: installing sliding windows on an addition where the existing structure has only double-hung windows is discouraged; similarly, installing double-hung windows with snap-in muntins on an addition where the main structure has windows with true-divided lights is also discouraged.

Elements of the addition, such as the window and foundation, should align in their height with those of the main structure. The material composition and color of the foundation should also match that

of the main structure. Other architectural features of an addition, such as dormers, should be compatible in style and materials with those of the main structure.

New Construction

Dimensions and Site Placement

The height and width, along with the setback and amount of space between homes establishes the architectural "rhythm" of a street. Newburgh Heights' zoning regulations have established minimum setbacks for every street in the Village. The minimum setback is defined as the minimum required distance between the street right-of-way and the front edge of a building structure. In Newburgh Heights, this distance is measured from the edge of the sidewalk to the front of the house. New construction should be placed in line with the setback established by existing homes on the street. Additionally, although it is not currently regulated by the Village, new construction should also observe an imaginary "maximum" setback, established by the average maximum distance that the front edges of existing homes on the street have been placed from the sidewalk.

Setback: The home at center has been set back much further than the rest of the homes on the street. On approach, the lot appears vacant and has left a disruptive void in the uniform setback line established by other houses.

The space between homes in Newburgh Heights, called the "side yard," is also regulated by zoning code. The minimum width of one side yard is three feet, while the minimum width of both side yards together, located on either side of the house, must equal at least ten feet. For example, if a side yard on one side of a house is three feet, the side yard on the other side of the house must be at least seven feet wide. Therefore, as long as the two measurements together meet the minimum requirements, home builders have some flexibility in the planned widths of side yards. New construction should observe any pattern in side yard width that is present for existing homes on a street. If, for example, most homes on a street have five-foot side yards, the new home should also plan for side yards of five feet each.

The massing of new construction should be compatible with the massing of existing homes on the street. If the massing of a new home is much greater than that of other homes on the street, the scale of the structure can be reduced using sensitive design treatments such as overhangs, facade ornaments, dormers, slight changes in roof slope, and setback.

Height: The one-story house at center looks out of place on the street comprised predominately of two-story homes.

The height of the new home should be similar to that of existing homes on the street. For example, constructing a one-story, ranch-style house on a street consisting of two-story homestead style homes disrupts the established pattern of height on the street. *Map 1*, which shows the

number of stories of residential, commercial and public buildings in the Village, illustrates some of the current height patterns within Newburgh Heights' residential neighborhoods. Note that there appears to be greater consistency in height within the neighborhoods of the central and eastern portions of the Village, as compared to the neighborhoods of the western section.

The foundation of a new home should be comparable in height to those of existing homes on the street, as well.

Building Elements

If the existing houses on a street have been built with a particular type of exterior material, new construction should use the same type of material, or one that looks identical to it. *Map 2*, which shows the exterior wall material of Newburgh Heights' residential, commercial and public buildings, highlights some of the apparent patterns in exterior building material that currently exist within the Village's residential neighborhoods. The majority of homes throughout Newburgh Heights have either vinyl or wood siding, with most of the brick homes concentrated in the neighborhoods located north of Beta Avenue and east of E. 42nd Street.

The shape and pitch of a new home's roof should harmonize with the roofline pattern created by other homes on the street. The roof of the new home should be compatible in both shape and pitch with the roofs of the existing homes in the neighborhood.

Roofline Pattern

Prominent roof features such as dormers and chimneys should be similar in style to others on the street.

The orientation of windows on the new house should be similar to that of the windows of surrounding houses. For example, if most homes have vertically oriented windows, then the new house should also have vertically oriented windows. Window openings should also be placed so that they are indicative of the position of the floor levels on a home.

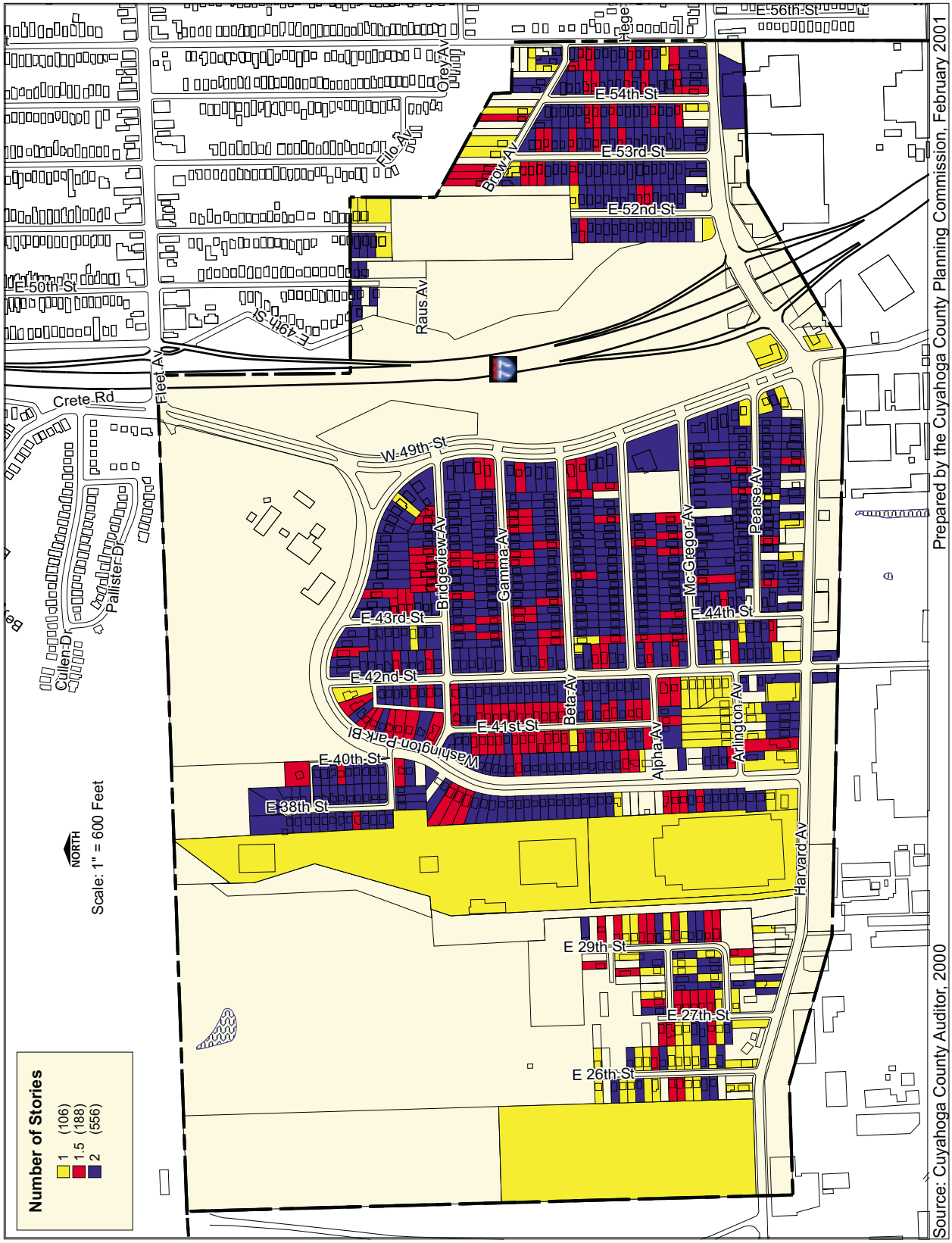
The ratio of window to solid wall space on the facade of the home should be similar to that of other houses.

If most houses on a street have porches, the newly constructed home should also have a porch.

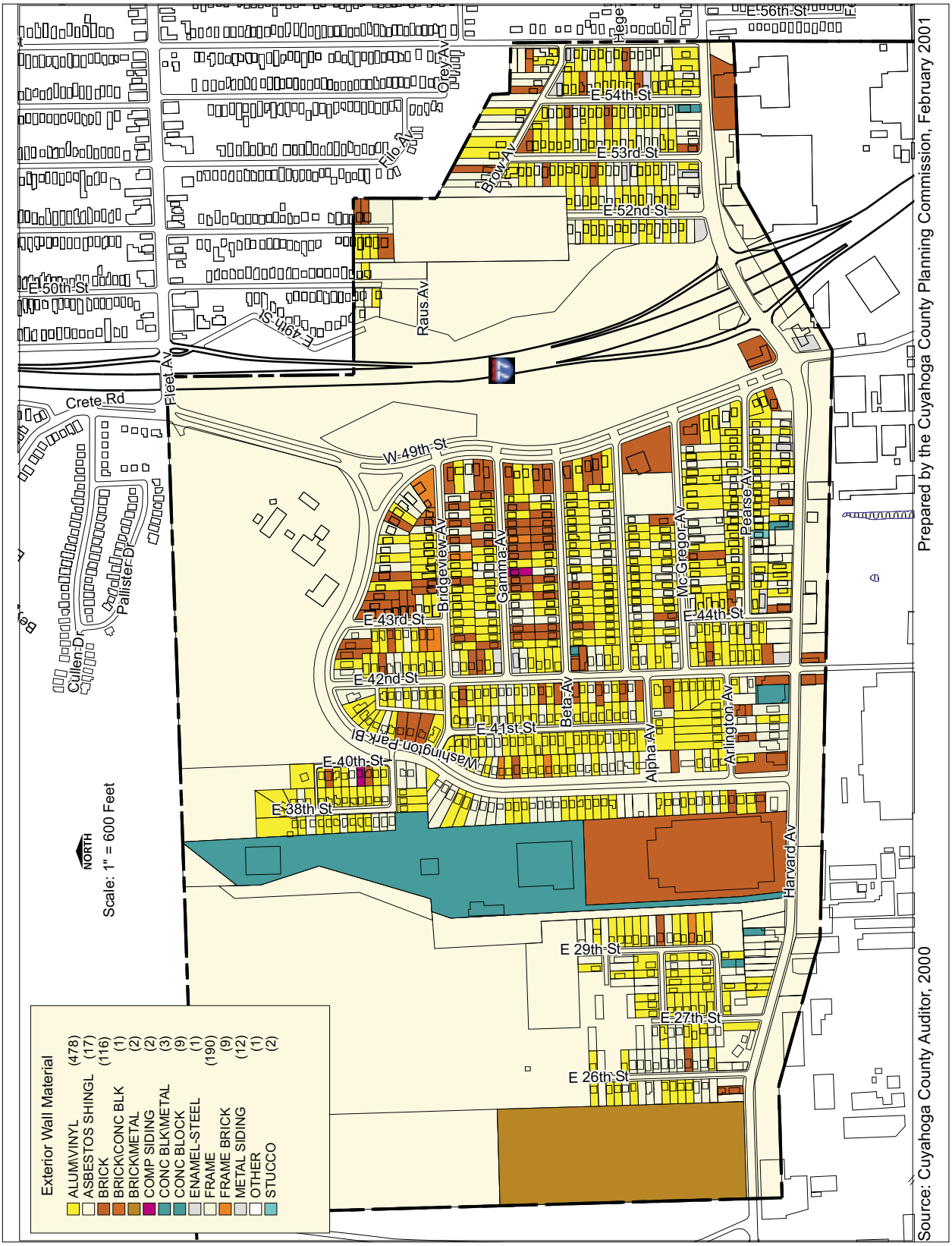
The new home's porch should have comparable setback, height, width and depth dimensions, as well as roof shape and pitch, as the porches of surrounding homes. On a wooden porch, all exterior architectural porch elements should be painted. The use of transparent stain is discouraged for aesthetic reasons.

New construction should observe the location of the main entryway on the existing homes of a street. If most homes have the main entrance parallel to the street on the front facade, new construction should place the entrance in the same location. The dimensions of the entryway should be simi-

Map 1: Newburgh Heights Building Heights



Map 2: Newburgh Heights Building Exterior Wall Material



lar to that of entryways on other homes on the street. More contemporary trends in housing design, such as taller entryways, are not compatible with the pre-WWII architectural styles that dominate Newburgh Heights' residential landscape.

Garages

Garages should be built in the same location as those of the existing homes on the street. For example, if existing homes on the street have been built with detached garages placed to the left side of the house in the rear, the construction of the garage for the new home should observe this layout as well. Attached, front-facing garages should always be slightly recessed from the front of the main structure.

The exterior wall and roof materials and roof pitch of the garage should be the same as that of the home.

Trees planted decades ago have grown to form an important part of the street's visual pattern.

Landscaping

All new construction should be landscaped with lawn and shrubs planted along the foundation of the home. Landscaping should equal or exceed the quality and density of landscaping of existing homes on the street. Careful consideration should be given to the selection of species and placement of shrubs. Plant materials should be selected and located in areas such that they will not encroach upon one another or the residential structure once they have matured.

Older neighborhoods, such as that of Washington Park Boulevard, often had trees planted on front lawns or tree lawns at the time the neighborhood was developed, or soon thereafter. Over the years, these trees have matured in size and have come to form an integral part of a street's rhythm. In neighborhoods where there exists a clear pattern of mature trees planted on front lawns or tree

In their maturity, trees originally planted too close to the front of the house now encroach upon and obscure the home's facade.

lawns, a 2.5- to 3-inch caliper tree of the same or compatible species should be planted in a similar location on the property or tree lawn of the newly constructed home.

HARVARD AVENUE COMMERCIAL DISTRICT DESIGN GUIDELINES

Background and Purpose

As an arterial road which runs through Newburgh Heights' commercial district and is served by an I-77 interchange, Harvard is a frequent route for people who are traveling within and passing through the community. According to a year 2000 traffic count conducted by the Cuyahoga County Engineer's office, in the course of a twenty-four hour period, over 14,000 cars traveled on the portion of Harvard Road immediately west of E. 49th Street[1]. In short, Harvard Avenue is probably the most heavily traveled and highly visible corridor within the Village of Newburgh Heights.

The "commercial district" referred to throughout these guidelines is that portion of Harvard Avenue between E. 27th Street and E. 55th Street.

Currently, the property lining Harvard Avenue, particularly that on the north side of the street, is comprised of several different land use activities, including industrial, light industrial, commercial, and residential. Newburgh Heights' most recent master plan recommends the redevelopment of the north side of Harvard Avenue into a more consistent commercial/retail district. Future conversion of properties currently used for residential space into commercial space, along with revitalization and redevelopment of existing commercial buildings will increase the capacity of the Village's local economy to serve the local demand for retail and services by residents and improve the tax base[2]. As part of the commercial redevelopment of Harvard Avenue, the Master Plan recommends establishing commercial design guidelines in order to improve the image and appearance of commercial buildings along the street. In a fashion similar to the guidelines for Newburgh Heights' residential areas, the commercial design guidelines establish a set of architectural standards toward achieving a more cohesive, visual identity for Harvard Avenue, and, alternatively, discouraging design which is architecturally incompatible with that of the surrounding district.

Just over half of the smaller (non-industrial) commercial properties along Harvard Avenue were built between 1910 and 1950, with construction of the remaining half occurring at various points in time throughout the last five decades. Additionally, many of the commercial buildings built prior to 1980 have experienced some type of exterior renovation. These renovations have been undertaken using a variety of construction methods, materials, and elements of architectural style. The construction and renovation of commercial buildings along Harvard Avenue throughout the course of almost an entire century, with very little attention to coordination of architectural design has resulted in a complete lack of visual cohesion within the district.

1 Cuyahoga County Engineer. *Cuyahoga County Report of Intersection Vehicle Counts*. May 31, 2000.

2 Village of Newburgh Heights. *Comprehensive Community Development Plan*. June, 1997.

East 42nd Street, Newburgh Heights

Coventry Road, Cleveland Heights

Mayfield Road, Little Italy in Cleveland

Examples of early twentieth-century commercial architecture in Cuyahoga County

As applied to an older, inner-ring suburb developed largely during the first half of the twentieth century, these guidelines recommend re-establishing the appearance of the Harvard Avenue commercial district according to design principles frequently used in commercial districts of older communities within Cuyahoga County during that time period. Some examples of such buildings still exist in Newburgh Heights along Harvard Avenue and E. 42nd Street, and in nearby communities such as Cleveland (the Little Italy neighborhood), Lakewood and Cleveland Heights. These were typically two-story buildings that originally had retail on the first floor and apartments on the second, with a brick exterior accented by stone, tile or patterned-brick detailing. The site placement of the structures within these older commercial districts made efficient use of shorter street blocks and shallow lots, such as those found along Harvard Avenue, by setting the buildings close to one another and to the right-of-way.

The first part of the commercial design guidelines for Harvard Avenue briefly discusses recommendations for rehabilitation and preservation of some of the existing buildings within the district which were built during the early part of the twentieth century, and are considered representative of the general design standards that should be incorporated into new construction. Such buildings can serve as local landmarks in establishing a visual identity for the district.

The second part of the guidelines will cover recommendations for existing and new commercial and industrial buildings along Harvard Avenue on the following topics: building elements, signage, site layout, landscaping, and storage areas and equipment.

Recommendations For Preservation Of Existing Commercial Buildings

Several buildings along Harvard Avenue are exemplary of the type of commercial building design recommended within these guidelines. The Brown's Food Market Building at 5301 Harvard Avenue and the Halfway Building at 4601 Harvard Avenue display some of the typical architectural characteristics which will be recommended for new construction. Built in 1920 and 1922, respectively, the Village should consider rehabilitation and restoration of such buildings to set the tone for commercial construction proposed in the future.

The Halfway Building, 4601 Harvard Avenue

Restoration can be accomplished through careful removal of artificial veneers or other exterior materials installed after the buildings were constructed, thoroughly cleaning the brick exteriors through power washing, and cleaning and repairing any other original exterior architectural features. On some buildings the original storefront display windows have either been filled in, altered in size, or replaced with inappropriate styles. The display windows should either be reinstalled or expanded to their original dimensions and placement. If wood or synthetic siding has been installed as framing to windows, it should be removed and replaced with masonry materials. These buildings can then be linked in appearance to new construction along Harvard Avenue through the addition of signage, landscaping, awnings, and lighting which is similar in style to that of new commercial construction.

Brown's Food Market, 5301 Harvard Avenue

All commercial buildings in Newburgh Heights are eligible for low interest loans to finance exterior and interior renovations through the Cuyahoga County Department of Development's Storefront Renovation Program.

Design Guidelines for Existing and New Commercial and Industrial Buildings

Building Elements

Exterior Material

As shown in the illustrations above, small-scale commercial buildings constructed just after the turn of the twentieth century typically had exterior walls composed of brick or, quite often, brick accented by patterns of stone or tile. It is recommended that new commercial construction along Harvard also use traditional-sized brick as the façade's predominant exterior material. Use of tiles, stone, or pre-cast concrete to create decorative patterns throughout the building's facade is strongly encouraged. Decorative patterns can also be achieved through installing patterns of brick which is a different color from that of the rest of the building's exterior, by alternating the orientation of the bricks, or by creating texture through bricks which are set slightly raised above or recessed below the exterior wall surface.

Examples of tile and pre-cast stone (concrete) set in brick

Industrial Building

Industrial buildings should also preferably use brick for the building's exterior. Industrial buildings with brick exteriors also exist along Harvard Avenue, such as the Cleveland Railway Company Building at 5400 Harvard Avenue.

Use of "jumbo"-sized bricks, split-faced concrete, or excessive amounts of glass as exterior material is strongly discouraged.

Roof and Cornice

It is recommended that the rooflines of new commercial construction be predominantly horizontal. Incorporating raised parapets which are squared or rounded into the roofline can also add character to the building. The parapet is that portion of an exterior wall built above the roof's surface. Exterior walls should be capped by coping made of stone or pre-cast concrete. The use of a cornice installed below and parallel to the roofline can also add decorative emphasis to the building's roofline. No portion of the roof, or mechanical equipment installed on the roof, should be visible from the street.

Windows

Ample window space along small commercial storefronts is essential to the creation of a lively and interesting visual environment within any commercial district. It is recommended that street-side walls devote twenty to forty percent of the wall area per story to window space. At street-level, the maximum amount of glass is preferred in order to provide an interesting commercial vista for both pedestrians and motorists. Commercial proprietors—particularly of retail establishments—are strongly encouraged to provide as unobstructed a view into the interior of their store as possible. It

is recommended that street-level windows have a base height (the distance between the finished grade and the bottom member of the window frame) of no more than two feet, and a header height of at least eight feet above the finished grade. The head is the uppermost member of the window frame.

Rounded, raised parapets

Where two or more storefronts or commercial establishments occupy a single building, the base and the header heights, and style of the street-level windows should match. For buildings greater than one story in height, the style, orientation, materials, height, and placement pattern of upper-story windows should also match.

A pre-cast cornice installed just below the roofline adds architectural detail to the building's exterior.

Bordering the bases of windows with a stone or concrete sill is strongly encouraged as it adds architectural character to the building's facade. Correspondingly, the headers of windows should also be bordered by a stone, concrete, or patterned brick lintel to enhance the architectural detail of the commercial structure.

In cases where display windows are not feasible due to building function or safety, a simulated transparent window which imitates the appearance of a display window is an acceptable substitute. A simulated window can be created by constructing a wood frame within the window opening, which is covered on both the interior and exterior side with plywood or drywall. The frame can be filled with insulation. The exterior window face is painted a dark gray or black and fitted with plate glass or a similar transparent material.

Awnings

Installation of awnings is strongly encouraged, as they are both functional and add architectural character to small commercial and industrial buildings. They provide protection from the sun, thus reducing cooling costs, and give temporary shelter to customers entering or leaving the building.

Throughout the district, awnings made of fabric are preferred. Aluminum awnings are strongly discouraged. Awnings should be installed to fit the existing framing of windows and entrances, and should be hung no higher than the top of the display window. At street-level, the awning should be no lower than seven feet above the finished grade. It should also be placed no higher than one foot below the building cap (on a one-story building) or the sill of the upper-story windows (on buildings of two or more stories). Backlit awnings are strongly discouraged.

Entrances

Entrances to commercial buildings should face the street, and preferably be located on the front facade of the building. They should be clearly identifiable to customers through the use of signage, awnings, and/or planters. A pleasant and accessible approach from public sidewalks and parking areas is an important design feature. In short, customers should be able to quickly and clearly see the path they should take to walk to the entry door.

Recessed entryways, a common design feature of small commercial buildings built in the early part of the twentieth century, are strongly encouraged. In commercial storefronts which incorporate recessed entryways, a recess of at least two feet is recommended. Doors made of solid material are strongly discouraged; entryways should be made of the maximum amount of glass possible. If a glass entryway is not possible, a glass substitute mounted on a dark security panel is an acceptable alternative.

Entryways and the area immediately surrounding should be designed to comply with the standards established in the Americans with Disability Act Accessibility Guidelines.

Lighting

In general, signs, entryways, addresses and parking lots should be lit and clearly visible at night. The scale of light fixtures should fit the scale and style of the building, and the function to which the particular fixtures are applied. For example, a small residential style fixture is not suitable for attachment to a commercial building. Likewise, a series of large fixtures suitable for parking lot lighting is also not appropriate for commercial buildings. The amount of light produced by the fixtures is critical. Inadequate lighting fails to identify the building at night while a blaze of glaring light is unattractive and makes signs hard to read at night.

Lighting for parking areas should be designed so that it does not glare into adjacent properties or into the right-of-way. It should be related to the parking lot's design and circulation, and should also be compatible with the scale of adjacent buildings.

Signs

Signs are one of the most noticeable features of the streetscape. Well-designed signs can add color and character to the street and identity to businesses. However, uncoordinated signage in commercial districts can cause visual confusion of the streetscape due to excessive or inadequate size and lack of compatibility with architecture and neighboring signs. Although complete uniformity can be uninteresting, coordination of certain elements of signage is necessary for a unified commercial district.

Specific information on sign definitions, requirements and regulations can be found in Chapter 1173 of the Planning and Zoning Codified Ordinances of Newburgh Heights.

On commercial and retail properties, Newburgh Heights Zoning Code prohibits the use of certain types of signs, including: animated signs, balloons used as advertising devices, banners (except as temporary signs with a permit), billboards, flashing signs, mansard signs, pennants/streamers/spinners, portable signs, roof signs, searchlights and spotlights, three dimensional objects, paper posters, and pole signs (except at freeway-oriented automotive services stations).

Wall, window, awning, canopy, and monument signs are permitted, while neon tubing signs and projecting signs may be permitted upon review by the Planning and Zoning Commission.

Signs should be compatible with the architectural style and the proportions of the building to which they are attached. Sign color should complement the building and, if present, awning colors. By regulation, the total number of colors on a sign shall be limited to four (1173.07b).

All types of signs should respect the visibility requirements and design of signage of the neighboring storefronts. The competition that can occur between businesses located near one another for visibility is distracting. A signage design that allows for visibility of all signs is paramount. Signs for commercial tenants in multi-storefront building should be placed in similar locations and have similar dimensions. By ordinance, the style of a sign shall be generally consistent throughout the particular building or block involved, and, if seen in a series, the signs should have a continuity of design (1173.07a,b). Continuity of design can be achieved through coordination of characteristics such as style or type, dimension, size and type of lettering, and use of complementary colors.

Lettering and symbols on all signage must be large and clear enough to be visible to both pedestrian and automobile traffic. However, lettering should not exceed the size necessary for effective advertising. Excessive size can visually overpower the streetscape. Simple and easy to read lettering and symbols have the dual benefit of fitting in with other signage on the street and presenting a clear message to customers.

Toward the goal of building a more visually cohesive identity for the Harvard Avenue commercial district, these guidelines recommend the use of wall signs on commercial buildings, or signs comprised of individual lettering placed directly on the storefront's façade. The wall signs can be lit by an external source, or silhouetted by backlighting. "Light box" signs are discouraged.

Light Box Sign

Although the Village's sign ordinances limit the protrusion of wall or panel signs to a maximum of 12 inches, it is strongly encouraged that the sign protrude as little as possible from the storefront facade. By ordinance, the maximum size of all permanent signs is limited to the lesser of 120 square feet, or 1.5 times the width of the building. Although specific dimensions for wall signs are not regulated by ordinance, these design guidelines recommend a height of two feet. A sign of this height accommodates lettering which is 18 inches high. According to *The Sign User's Guide* published by the Institute of Signage Research, 18-inch lettering is readable at distances of up to 450 feet[3].

3 Claus, Karen E. and James Clause. *The Sign User's Guide: A Marketing Aid*. Cincinnati: ST Publications, 1988.

Signage in the building's transom areas

Signage in building's lintel area

Awning signs

The recommended placement for a wall sign is within the transom area immediately above the entryway and display windows, or on the lintel area which, on a one-story building is below the building cap, or on a two-story building, separates the first from the second story. The sign should be centered relative to the display windows in multi-tenant buildings, or relative to the entryway in single storefront buildings. Businesses on the second or third floor can be identified by signs attached to or painted on the windows. Signs should also be placed no higher than one foot below the building cap (on a one-story building) or sill of second-story windows. They should also not extend beyond the width of the existing display windows.

If used, monument signs made of stone, concrete or brick are preferred. The text and graphic elements on the sign can be externally lit or internally illuminated. If internally illuminated, it is recommended that only the text and graphic elements should be lit, and the background should be opaque. The area around the base of the sign should be landscaped with plant material that is low enough in height so as not to obstruct the view of the sign.

For awning signs, letters are typically placed on the valance. Light colored lettering on a solid, dark-color background is most visible. The size and style of lettering should be in scale with the storefront, and similar to that of adjacent storefronts. Information printed on awnings should include the business name and address.

Although only permitted by review, if used, it is recommended that projecting signs protrude no more than four feet from the storefront façade. The projecting sign should not extend above the building cap or below the top of the display window.

As with commercial/retail buildings, wall and window, awning, and monument signs are permitted for use on industrial buildings. The regulations governing the characteristics of industrial property signs are similar to those of commercial buildings with the exception of the allowed maximum area of the sign. For industrial buildings, the maximum allowed area is the lesser of 2.5 times the width of the building, or 175 square feet.

Since industrial buildings are typically set back further from the road, visibility is of critical importance. Lettering should be in clear contrast to its background. The style and color of the sign and its lettering should complement that of all other businesses in the Harvard Avenue District.

Site Layout

Height

By ordinance, commercial buildings along Harvard Avenue are limited to three stories, which shall not exceed a total maximum building height of thirty-five feet from the finished grade line to the highest part of a wall or the main roof (1141.06).

Setback

The recommended minimum setback for commercial/retail buildings along Harvard Avenue is ten feet. It is also strongly encouraged that commercial/retail buildings observe a maximum setback of no more than twenty feet in order to maintain a more consistent setback line across all buildings along the street. For industrial properties, the recommended minimum setback is 20 feet, with a recommended maximum setback of forty feet. Frequent variation in building setback creates disruptive gaps in the line of building placement. Where setback differences do occur due to variations in building design, size, and parking requirements, a consistent setback line can be simulated along Harvard through the use of landscaping and/or fencing placed along the front edge of the property.

Fencing made of decorative metal, or low walls made of brick or brick accented by concrete or tile is recommended. Chain link fence placed along any public right-of-way is strongly discouraged. The recommended maximum height for fencing or walls along public right-of-ways is 3 feet for commercial establishments and six to eight feet for industrial buildings.

A low wall made of brick and decorative metal

The fundamental purpose of the setback area is to provide a safety buffer between the buildings and right-of-way, and to preserve the necessary lines of site for pedestrians and motorists entering and leaving parking lots. However, because of the lack of opportunity along Harvard for streetscape enhancement within the public right-of-way, the setback area of commercial buildings and parking lots also provides a valuable opportunity for landscaping, and therefore should be considered an element of beautification in the overall streetscape of the district.

Parking

The recommended location of off-street parking for Harvard Avenue commercial and industrial properties is at the side or the rear of the building. By ordinance, side lots must be set at least five

feet from an adjacent building. With parking placed to the side or in the rear, storefronts can be brought closer to the right-of-way, contributing to a more active and interesting streetscape.

Convenience-type businesses tend to prefer to locate off-street parking in the front of the building. Although not preferred, off-street parking located in front of the building is permitted. By ordinance, front parking lots of commercial buildings must be set back at least six feet from the right-of-way, to allow sufficient area for required landscaping. Additionally, front setback areas for side and front parking lots must be landscaped in order to partially screen parking areas from pedestrians and motorists (1141.09[1]). Landscaping of parking lots should follow the guidelines outlined in the next section.

Any parking lot containing more than 6,000 square feet of area or twenty or more vehicular parking spaces shall also provide interior landscaping. Section 1141.09[2] outlines the specific requirements of landscaping within parking lots that fall into this category. Along Harvard Avenue, this ordinance would apply mostly to industrial properties. Trees are particularly effective at breaking up large parking areas, helping to screen poles and wires, and in providing shade to keep buildings and cars cooler.

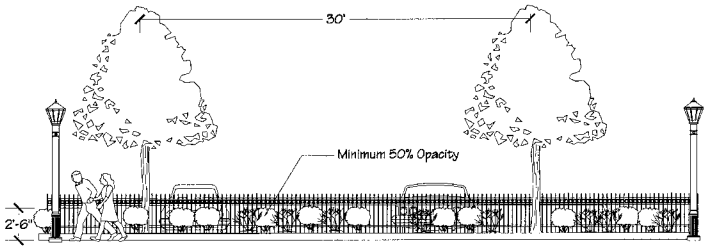
Landscaping

Simple landscaping of individual commercial and industrial properties is essential to creating a visually pleasant commercial district. Landscaping helps to soften and beautify the paved environment of urban commercial areas such as that of Harvard Avenue. Additionally, when employed effectively, strategically designed landscaping can also clearly define where to drive, park, and walk.

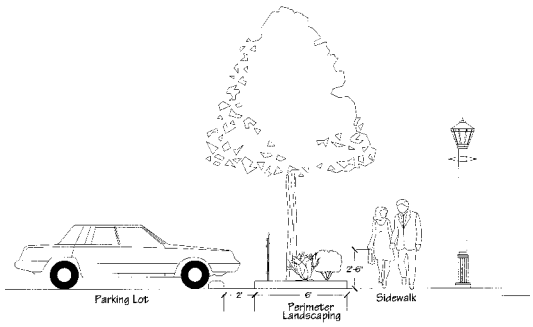
As previously mentioned, new commercial construction along Harvard Avenue should make efficient use of the required building and parking setback areas for landscaping. Given the limited size of most lots along Harvard Avenue, it is important to choose plant materials which are in scale to the amount of available area, and to the building to which they correspond. Shrubs, ground cover, and flowers are smaller-scale plants appropriate for planting in areas of limited size. The size of chosen plant materials when fully mature should also be considered, so that they do not eventually overcrowd their space.

By regulation, landscaping of commercial and industrial parking lots should provide a "visual screen" of at least fifty percent opacity, up to a height of two and a half feet throughout the year (1125.10a,1145.10a). Opacity is defined as a degree of obscuration of light[4]. The higher the percentage, the greater the density of the landscaping. Except where it serves as a buffer between residential and commercial properties, landscaping should be designed and planted in such a way that it does not create a dense "wall" which obstructs the view of businesses and activity along Harvard. Landscaping should *partially* screen and beautify–not completely block out and visually isolate

4 Moskowitz, Harvey S. and Carl G. Lindbloom. *The New Illustrated Book of Development Definitions*. New Brunswick, NJ: Center for Urban Policy Research, 1993.



Perimeter Parking Lot Landscaping
Street View



Perimeter Parking Lot Landscaping
Cross-Section

commercial properties. The recommended effect can be achieved by choosing a variety of plant materials which are different in texture and height. For example, using a combination of deciduous and evergreen trees or shrubs diversifies the look of the landscape and prevents the creation of a completely opaque and monotonous wall in front of a building or parking lot. Plants should be spaced apart and can be staggered, as opposed to placing them in horizontal rows, in order to give the landscaping a more natural and interesting look.

Building Landscaping

Many existing buildings along Harvard Avenue have been constructed at the building line, with no setback and limited or no off-street parking. In these situations, opportunity for landscaping is limited. Plant material placed in containers or window boxes is an option for landscaping storefronts with limited or no planting area. The containers should complement or match the commercial building's exterior material.

Parking Lot Landscaping

The selection of plant materials should also be coordinated across businesses within the district in order to achieve greater visual consistency along the streetscape.

Finally, maintenance of landscaping is of critical importance. Unkempt plants, trees and landscape areas can become a hazard to pedestrians, obstruct motorists' views, and become receptacles for trash.

At left, mechanical equipment is completely exposed to public view

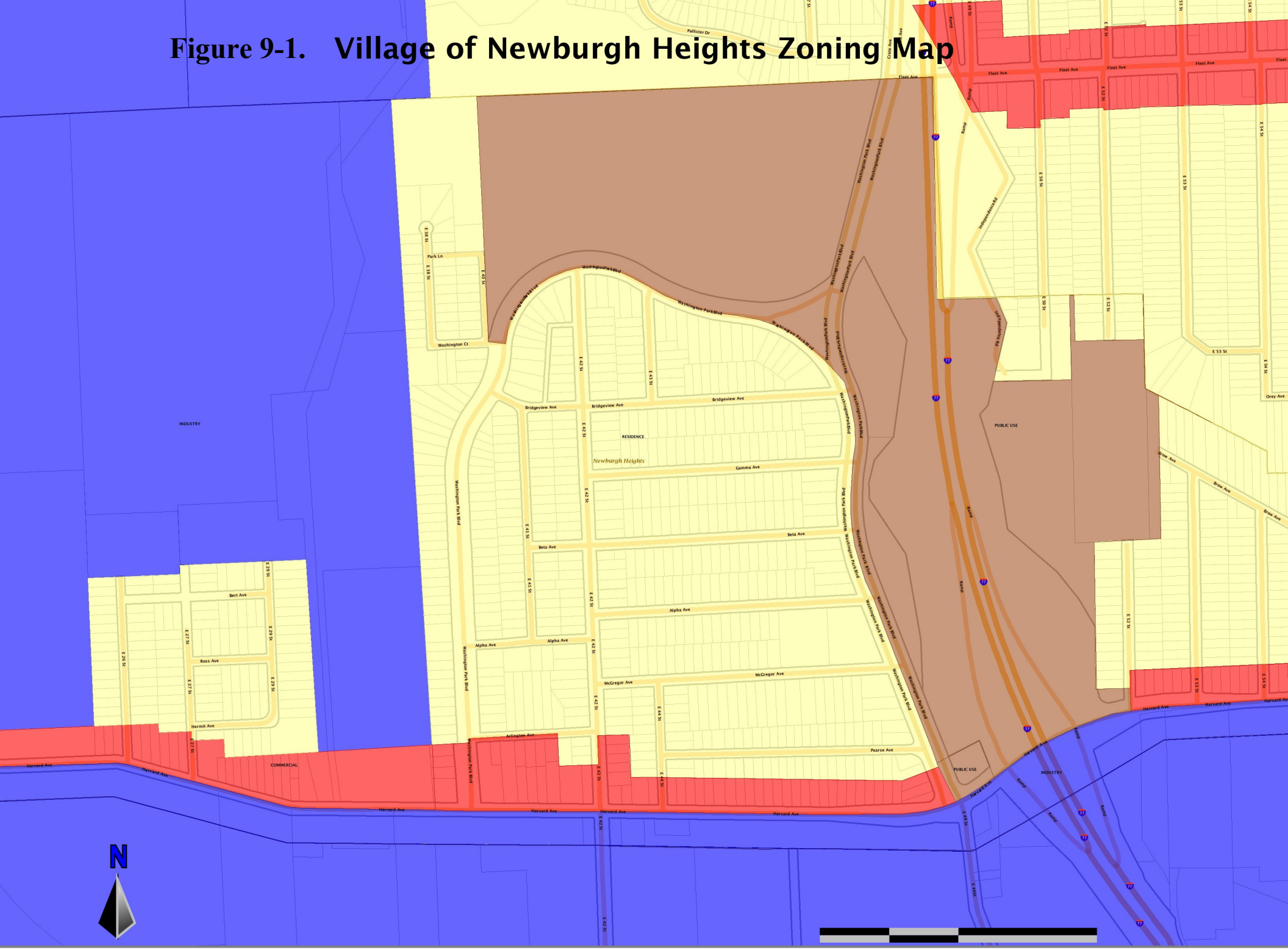
Storage Areas and Equipment

Trash containers, storage areas, mechanical units, and other equipment located on the exterior of the building should not be exposed to public view. Such areas should always be located in the rear of the building, and should be screened by walls or dense fencing, preferably accompanied by landscaping. Dense landscaping, alone, may provide sufficient screening for smaller storage areas and pieces of equipment. If the design and size of the building permits, mechanical and other equipment can be situated on the building's roof, located far enough from any edge so that it is completely hidden from public view. Alternatively, new construction can incorporate into the design a recessed area in the rear of the building for trash containers, storage areas, mechanical units, and other equipment.

Walls or fencing which screen dumpsters, storage areas, and equipment that are located in the rear of the building should be compatible with the exterior material of the main building. If walls are selected to provide the screening, three of the four walls should be of the same material as that of the main building. Fencing should preferably be made of wood. Use of chain link fence woven with material is strongly discouraged.

Although located in the front of the building, the exterior material of the walls of this trash storage area matches that of the main building. The enclosure is well constructed so that it completely hides the trash dumpster located inside.

Figure 9-1. Village of Newburgh Heights Zoning Map



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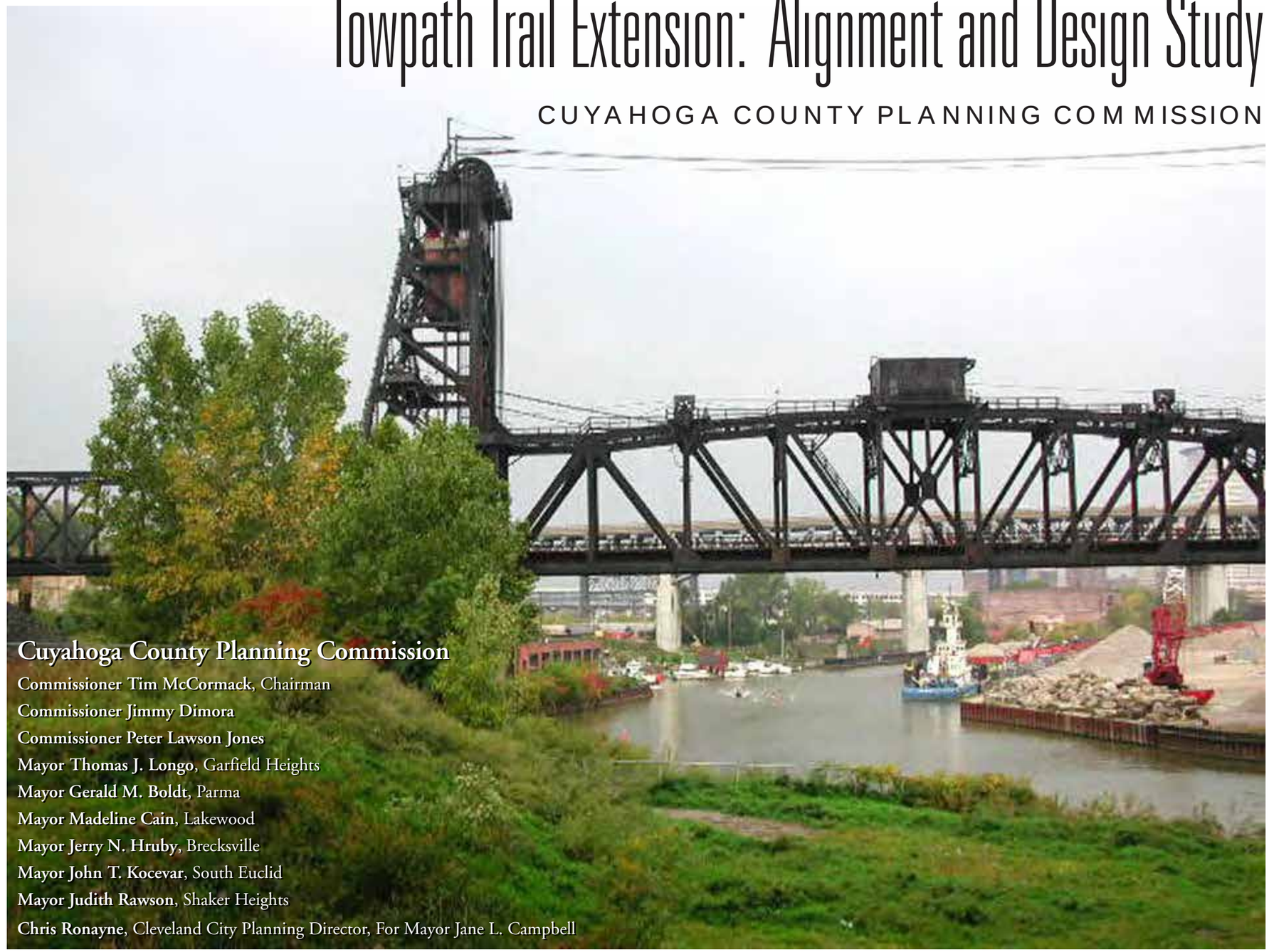
Towpath Trail Extension: Alignment and Design Study

CUYAHOGA COUNTY PLANNING COMMISSION



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Project Background and Significance

The Towpath Trail has become a defining feature in the Cuyahoga Valley landscape. Constructed 175 years ago as part of the Ohio & Erie Canal, it was a simple dirt path on which to lead animals pulling canal boats. When the economically unprofitable canal finally ceased to be used after the 1913 flood, the towpath survived as a silent witness to an earlier era.

The rediscovery of the towpath began with the establishment of the Cuyahoga Valley National Recreation Area (now Cuyahoga Valley National Park) in 1974 as a unit of the National Park Service. One of the major projects completed by the National Park Service was the conversion of approximately 20 miles of the towpath into a shared use trail. The success of this segment of towpath, which has over 1.7 million users per year, has sparked a campaign to extend the Towpath Trail to over 100 miles as a continuous journey through the federally designated Ohio & Erie National Heritage Corridor. In addition, the heritage corridor trail will serve as the northeast Ohio section of the State of Ohio's planned Ohio to Erie Trail.

Cleveland Metroparks has completed additional segments of the Towpath Trail in its Ohio & Erie Canal Reservation, situated immediately north of the Cuyahoga Valley National Park. Approximately six miles of trail have been completed, and the northern terminus of the Towpath Trail is now at old Harvard Avenue.

In 1999, the Cuyahoga County Planning Commission (CPC) published *Linking the Corridor: A Plan for the Towpath Trail in the North Cuyahoga Valley Corridor.* This document is a guide plan for the future design and construction of the approximately five-mile long trail segment from the Metroparks Reservation at old Harvard Avenue to downtown Cleveland at the proposed Canal Basin Park, which will incorporate the original terminus of the Ohio & Erie Canal with the Cuyahoga River. The plan includes an inventory of existing conditions and resources within the study area; an examination of route alternatives, their feasibility, and impacts; and implementation strategies.

Alignment & Design Study

Since the 1999 publication of *Linking the Corridor*, a conceptual plan prepared by the Cuyahoga County Planning Commission for the final Towpath Trail segment into downtown Cleveland, additional issues and studies have emerged which have influenced the Towpath Trail project. The issues and studies have included, but have not been limited to, the dissolution of LTV Steel, the potential revitalization of the Cuyahoga Metropolitan Housing Authority's (CMHA) Riverview Estates and Valleyview Estates, the potential redevelopment of the Scranton Road Peninsula by Forest City Enterprises, the Ohio Department of Transportation's Cleveland Innerbelt study, and the City of Cleveland's Flats Transportation Study.

During 2001 and 2002, CPC assembled $225,000 in funds from the Ohio & Erie Canal Association, Cuyahoga County Board of Commissioners, City of Cleveland, Cleveland Metroparks, The Cleveland Foundation, and The George Gund Foundation for the purpose of retaining a team of consultants to conduct an Alignment & Design Study. This study provided engineering and design services to refine the concepts, route alternatives, and most appropriate responses to the issues of probable construction cost, opportunity to further goals of community redevelopment, ability to be implemented, public safety, aesthetics, and usage.

Vision Statement

As part of the Ohio & Erie Canal National Heritage Corridor, the extension of the Towpath Trail in Cleveland will weave a ribbon of green space from Canal Basin Park in the Flats to the Canal Reservation at Harvard Avenue. This multipurpose trail will be an extraordinary recreational amenity highlighting Cleveland's industrial river valley and serving its surrounding neighborhoods. It will also be a major environmental reclamation effort capable of stimulating new economic development all along the industrial corridor.

The Towpath Trail Extension honors the innovative spirit that shaped Cleveland's history, from its early and prolonged transportation and industrial prominence, through the pivotal period when the national environmental movement emerged from its burning river, to the current partnership-based revitalization of neighborhoods, the Flats, and downtown Cleveland.

To the future, the Towpath Trail marks the threshold of re-invention: rebuilding a competitive economic center in a distinctive setting based upon the principles of sustainable development; illuminating the industrial grandeur and its significance; enhancing a vital, working, Cuyahoga River; offering a regional recreational amenity; and improving the quality of life by delivering people to the water's edge, where they have not been in generations.

Cuyahoga River near Harvard Avenue

Scranton Peninsula

PROJECT DATA:
Length of trail: 6 miles
Acres in trail corridor: 40 acres
Acres of potential park land associated with corridor: 200 acres

Alignment

The preferred alignment for the segment of the Towpath Trail from old Harvard Avenue to Canal Basin Park is off-road, which is the same as the current sections of trail in the Cuyahoga Valley National Park and the Cleveland Metroparks Canal Reservation. The trail would be ten-feet wide and paved with asphalt. Wherever feasible, the goal is to have the trail as part of a swath up to fifty-feet wide that would provide an area for environmental improvements, landscape improvements, and, where needed, buffers and safety measures for adjacent property owners. The preferred alignment of the trail will co-exist with existing land uses. It does not result in the replacement of any existing businesses or housing.

The proposed trail would also offer opportunities to explore two of the best physical features of the valley: the river's edge and its vistas. Areas suitable for river edge access include both south and north of old Harvard Avenue, the west river bank of the former LTV property upstream of the head of navigation, in the vicinity of the I-490 bridge, the Scranton Road Peninsula, Irishtown Bend, and below Tower City Center. In terms of vistas, the trail would take advantage of the hillside between Holmden Avenue and Tremont Playfields, the abandoned West 4th Street right-of-way, and particularly along University Road in Tremont, where a promenade would be created overlooking the valley and the downtown skyline. The changes in elevation that trail users would experience all occur at a 5% grade or less.

It is anticipated that the alignment of the Towpath Trail would also add value to other projects focusing on economic development, neighborhood revitalization, and quality of life. For example, the trail would increase daytime activity by both individuals and families in areas such as Old Brooklyn, Tremont, Ohio City, Flats, Warehouse District, Gateway, and Public Square, which would mean additional customers for retail and eating establishments. In addition, the trail would provide access to new housing on the rim of the valley, as well as to two Cuyahoga Metropolitan Housing Authority estates, both of which have been planned for major redevelopment.

Furthermore, the Cuyahoga Valley Scenic Railroad, the Midwest Railway Foundation, and the Western Reserve Rowing Foundation all have projects planned in proximity to the trail. An exciting focal point that may evolve is in the vicinity of the I-490 bridge, where the trail, new rowing foundation boathouse, scenic railroad bridge crossing of the river, railway foundation roundhouse and rolling stock restoration, excursion boat landing site, and public access to the riverbank have the potential to interconnect. A proposed river's edge park featuring two Hulett Ore Unloaders is likely to be situated in proximity to the Towpath Trail. Finally, the proposed stop for the Cuyahoga Valley Scenic Railroad at old Harvard Avenue, adjacent to the trail, could facilitate a one-mile trail and tram connection to the Cleveland Metroparks Zoo, which has over one million visitors annually.

Creating linkages is an important aspect of the Towpath Trail. In addition to the preferred alignment of the main trail, the plan recommends connectors to all the Cleveland neighborhoods on the east and west sides of the Cuyahoga River Valley, along with the communities of Newburgh Heights and Cuyahoga Heights. In Cleveland, these neighborhood connectors form a network by becoming part of Cleveland's citywide bicycle plan. At downtown Cleveland, connections are also made to the Lakefront Bikeway and the shore of Lake Erie.

The Towpath Trail would also serve as a catalyst for various public improvements. For example, the trail would traverse Tremont Playfields, where the current park uses could be expanded. The trail would also result in improvements to adjacent streets, such as University Road, Carter Road, Riverbed Street, and a proposed road to reconnect the south end of Quigley Road with the north end of Jennings Road.

Length and Cost Estimate

- The preferred alignment for the Towpath Trail, using the alignment in the Flats of the Scranton Peninsula to Canal Basin Park via the Carter Road Bridge, is six miles. About one quarter of the route is currently in public ownership.
- The alignment in the Flats of the Scranton Peninsula to Canal Basin Park via Irishtown Bend adds one additional mile.
- Design and Construction estimates includes soft costs (contingency, mobilization and demobilization, bonds and insurances, general conditions, and professional design services), visitor services, trail lighting, wayfinding signage, and environmental regeneration activities necessary for trail construction. Interpretive exhibits are included as part of Trailheads.

Future Trail Loops - Design and Construction Costs

Vicinity of Big Creek confluence with Cuyahoga River - $1,570,000 (0.6 miles)

ISG to I-490 via the west river bank and West 3rd Street - $7,760,000 (2.2 miles)

Estimated Cost of Supplemental Projects

South of Harvard to Harvard-Denison Bridge

Old Harvard Avenue Streetscape - $360,000

Cuyahoga Valley Scenic Railroad station and parking area at Old Harvard Avenue - $2,170,000

Harvard-Denison Bridge to ISG

Environmental Regeneration Project on Cuyahoga River east bank - $290,000

ISG to I-490

ISG Trailhead and Interpretive Center - $1,730,000

Overlook Location between Holmden and Clark Avenues - not determined

Tremont Playfields Trailhead and Improvements - $1,000,000

Tremont Playfields Amphitheater/Festival Site - $2,620,000

Overlook at former Clark Avenue and West 3rd Street Terminus - $220,000

Midwest Railway Foundation - West 3rd Street Roundhouse Interpretive Center and Trailhead - not determined

Environmental Regeneration Project on Cuyahoga River east bank - $730,000

I-490 to Scranton Peninsula

Multi-Modal Connector at vicinity of I-490 Bridge - not determined

New Jefferson Avenue Bridge over Cuyahoga River - not determined

Jefferson Avenue Riverbank Overlook - not determined

Kingsbury Run Environmental Regeneration and Conservation Area - $2,070,000

Connection from Tremont Ridge to Cuyahoga River - not determined

Tremont Bend Riverwalk north of Innerbelt Bridge - not determined

Scranton Peninsula to Canal Basin Park via Carter Road Bridge

No Items

Scranton Peninsula to Canal Basin Park via Irishtown Bend

Irishtown Bend Archeological Project - $100,000

SEGMENT OF PREFERRED ALIGNMENT	TRAIL DESIGN AND CONSTRUCTION	TRAILHEADS LOCATION	TOTAL
South of Harvard to Harvard-Denison Bridge	$1,360,000	$120,000 Old Harvard Ave.	$1,480,000
Harvard-Denison Bridge to ISG	$730,000	none	$730,000
ISG to I-490	$7,820,000	$280,000 I-490	$8,100,000
I-490 to Scranton Peninsula	$9,990,000	$990,000 Tremont Ridge	$10,980,000
SUBTOTAL	**$19,900,000**	**$1,390,000**	**$21,290,000**
Scranton Peninsula to Canal Basin Park via Carter Road Bridge*	$2,240,000	none	$2,240,000
Scranton Peninsula to Canal Basin Park via Eagle Avenue Bridge*	$3,540,000	none	$3,540,000
Scranton Peninsula to Canal Basin Park via Irishtown Bend	$17,980,000	none	$17,980,000
TOTAL	**$22,140,000 - $41,420,000**	**$1,390,000**	**$23,530,000 - $42,810,000**
Estimated Land Acquisition			$1,000,000 - $5,000,000
GRAND TOTAL	**$22,140,000 - $41,420,000**	**$1,390,000**	**$24,530,000 - $47,810,000**

*The Carter Road Bridge route is an interim alignment. The long-term preferred alignment uses the Eagle Avenue Bridge. Approximately 80% of the value of the Carter Road Bridge route will be incorporated into the Eagle Avenue Bridge route.

Environmental Regeneration

One emphasis of the Towpath Trail, beyond its use for transportation and recreation, is a strategy for the environmental regeneration of the surrounding landscape. Over the generations of urban development and industrial use, the natural systems of hillsides, wetland pockets, ground water, soil profiles and conditions, and surface drainage have been overlooked in favor of manufacturing production and the movement of goods by water, rail, and road. The development of a trail through this landscape brings the opportunity to refocus attention on the natural systems of the river valley. The vision is for a co-existence between the natural systems and the industrial land uses, where the two are viewed as related infrastructure working in partnership. The trail provides the framework for exploration and experimentation of effective methods to reintroduce natural systems objectives.

On average, the trail is planned as a fifty-foot wide linear "ribbon" through the valley, totalling approximately 40 acres. In some locations the area would be limited to the land necessary to construct the trail, meaning a fourteen-foot right-of-way (ten feet of paved trail, plus two feet on each side). In other locations, there is the opportunity to include additional land and protect it as greenspace through projects such as the ecological restoration of hillsides, soil enhancements, improvements to drainage patterns, and constructed and enhanced wetland pockets of over 200 acres. Examples of these locations include the hillsides between the former LTV Steel and Clark Avenue, the abandoned West 4th Street right-of-way, and the hillside along University Road. This linear ribbon and associated areas would represent the core area within which to implement an environmental regeneration program of over 200 acres.

Additional regeneration opportunities, beyond the trail "ribbon," have been identified for selected areas of land that are unbuildable, vacant, or underutilized, as well as areas for creation or restoration of riparian buffers and natural edges along the river channel. Locations that fit these categories include the former Harshaw Chemical facility on old Harvard Avenue, the east and west banks of the Cuyahoga River upstream of the head of navigation, the Kingsbury Run confluence with the river, the west bank of the Cuyahoga River in the vicinity of I-490, the east edge of the Scranton Peninsula along the river, and the Irishtown Bend hillside. These areas could be woven with the trail to form a greenway of reclaimed natural areas along the river valley.

The range of environmental regeneration strategies is broad. For example, phytoremediation techniques would utilize plants and trees to improve the natural condition of riverbanks and clean groundwater as it migrates to the river. In addition, biological filters could be attached to the drainage outfalls of highways and bridges to remove salt and other impurities before the water is released on the ground. Finally, the traditional metal bulkhead lining the Cuyahoga River channel could be modified in some locations to provide opportunities for aquatic habitat enhancement.

In conjunction with site-specific improvement projects, environmental regeneration strategies need to be incorporated into the maintenance and management programs of the land users of the river valley. The strategies would also offer opportunities for extensive educational programs and partnering efforts with volunteer and community organizations.

Abandoned West 4th Street Right of Way

Near I-490

Visitor Services and Interpretative Opportunities

As part of the Towpath Trail, locations for visitor services and interpretive exhibits have been recommended. The proposed sites along the length of the trail include various combinations of facilities such as parking, restrooms, shelters, rest stops, interpretation, and wayfinding signage to promote circulation along the main trail and with neighborhood connectors. The visitor services and interpretation locations are situated along the route to maximize their potential through grouping with complimentary amenities and to provide an appropriate distance between activity areas. Some facilities will be needed as part of the construction of the Towpath Trail, while other facilities will not be needed until supplemental projects are undertaken.

The content of the wayside exhibits will be based on both the natural and cultural history of the valley. The Cuyahoga Valley National Park and the Cleveland Metroparks Canal Reservation both illustrate the range of exhibit types that are possible. Potential interpretive themes include successive transportation systems, such as the canal, railroads, shipping, and highways; bridge engineering; immigrants and neighborhood settlement patterns; innovation in industrial fields such as oil, chemicals, and paint, as well as iron, steel, fasteners, machine tools, automobiles, and shipbuilding; and the role of the lower Cuyahoga River Valley in the national environmental movement. In addition, selected parts of the former LTV Steel/West Side Works have the opportunity to be incorporated into the trail and public improvement program. Several small administrative buildings along the former LTV entry drive have the potential to be reused for visitor services and indoor interpretation of the steel story. As an unusual companion piece, a collection of furnaces and mill buildings dating as far back as the 1910's and clustered near the Clark Avenue overlook at the southern terminus of West 3rd Street create a complete narrative of steel production for visitor interpretation and experience, much like the examples in the Ruhr Valley of Germany.

Finally, and importantly, the proposed Canal Basin Park and its vicinity include the only visible remains of the 1820's Ohio & Erie Canal north of old Harvard Avenue. This area will become a focal point of the northern end of the Ohio & Erie Canal National Heritage Corridor and will incorporate the Towpath Trail.

Looking south across Settler's Landing toward proposed Canal Basin Park area

Public Art Plan

The development of the Towpath Trail and its various amenities create an excellent opportunity for the integration of art into the project. For example, public art may be used as a device through which to interpret the rich heritage and stories of the valley, as a method to create a sense of place, and as a way to enhance the physical improvements.

The most ambitious and significant public art proposal is the design of a new, movable pedestrian river crossing for the trail. Through an international competition, a signature piece of design could be created that carries the Cuyahoga River Valley's famous bridge design legacy into a third century. The bridge is proposed to link the east and west bank of the river from approximately the Nautica Stage (west bank) to the original outlet of the Ohio & Erie Canal into the Cuyahoga River at the proposed Canal Basin Park (east bank). In addition to serving Towpath Trail users, the bridge would be a safer method for pedestrians in the Flats to cross the river instead of using the Center Street Bridge, and it would be located adjacent to the Regional Transit Authority's Settler's Landing stop on the Waterfront Line.

Another public art opportunity is lighting, which would serve the trail and create a continuous ribbon of light visible from higher vantage points in surrounding neighborhoods, high level bridges, and downtown Cleveland. In addition, north of old Harvard Avenue, the Towpath Trail is unable to follow the original route of the Ohio & Erie Canal on the east side of the Cuyahoga River because it is situated under railroads and manufacturing complexes. To visually represent the canal, art pieces such as pylons mounted with flags or illumination could be used to trace the original canal route.

Additional opportunities for incorporating art into the project include the under sides of high level bridges, retaining walls, pavement, and fencing. Another avenue for artist involvement is in the environmental regeneration component of the trail, an area in which several international artists are pursuing art that involves reclamation technologies.

Implementation and Phasing Overview

As each section of the Towpath Trail in Cuyahoga County has been completed over the past ten years, public expectations for the completion of the trail to downtown Cleveland and the lakefront have grown. This project represents the final link, and the groundwork for implementation is well underway. Public agencies are integrating the trail into public improvement and redevelopment projects, partnerships are emerging, and the private sector has begun to respond with development projects.

A diverse constituency has endorsed the project as an important recreational, neighborhood revitalization, and quality of life amenity for the metropolitan area, including Cuyahoga County, City of Cleveland, Cleveland Metroparks, National Park Service, Ohio Canal Corridor, Ohio & Erie Canal Association, various local development corporations and nonprofit organizations, and the Greater Cleveland Real Estate Organizations, an umbrella entity representing fourteen real estate industry groups. A recent article by *Plain Dealer* columnist Joe Frolik, as part of that newspaper's continuing "A Quiet Crisis" series, noted that "the old towpath promises to become a cornerstone attraction for the young professionals and entrepreneurs this region needs to attract—and a model of cooperation for leaders in and out of government."

It is anticipated that creative partnering will be the vehicle for implementation, and that the specifics of these partnerships will evolve as the project moves forward. Implementation will involve a series of distinct activities including securing property, acquiring funding, final design and construction documents, construction, operation and maintenance, community involvement, and stewardship. The roles of the various partners will evolve and change over time and in response to the specific circumstances of each project. Consequently, a central group to coordinate, advocate and in some cases initiate various activities will be utilized.

It is recognized that implementation will need to be phased over time, estimated at three to six years. The rate of progress will primarily depend upon property assemblage, the securing of financial resources, and construction timetables.

Securing Property

Although a significant portion of the trail and linear "ribbon" is within public or institutional control, some parcels are in private ownership. The primary objective will be to work with all property owners in a cooperative manner to secure land donations or easements that will enable public access through properties via the multi-purpose trail. Additionally, cooperation will be sought with property owners to conserve and protect associated natural features. Efforts will be made to eliminate or minimize the need for land purchases.

Based upon the positive discussions with property owners, it is anticipated that the preferred alignments can be implemented as illustrated in this study. The trail alignments do not require the relocation of any existing businesses or housing.

A nonprofit organization partner(s) will be utilized to facilitate tax considerations for property owners. It is anticipated that title to property needed for the trail will be held by Cuyahoga County.

Holden Avenue looking east

Former LTV West Side Works

Cuyahoga River near West 3rd Street

Funding

To date, funds from public agencies, foundations, and nonprofit organizations have been utilized for the project. Due to the project cost, it is assumed that multiple funding sources will be required to realize the full vision of this plan. For example, some aspects of the project may be most effectively served through use of funds from specific state or federal sources. Other components may be able to be completed through the ongoing capital improvement programs of the Cuyahoga County Engineer or City of Cleveland, or funding sources available through the Northeast Ohio Areawide Coordinating Agency (NOACA). Finally, as multiple projects begin to be implemented simultaneously, such as the main trail, neighborhood trail connections, and supplemental projects, it will be desirable to strategically coordinate the various funding requests.

Construction

The Cuyahoga County Engineer's Office will oversee construction document preparation, bidding, and construction. Actual construction is likely to occur over several construction seasons. Once construction is complete, the Engineer's Office will transfer day-to-day operation and maintenance responsibilities to another entity.

Operation and Maintenance

Early in the planning process for trail construction, the selection of the organization(s) that will operate and maintain the trail network should be made. A prompt commitment for day-to-day responsibilities will enable the management entity to begin coordination with the Cuyahoga County Engineer's Office at the earliest possible time.

There are several entities that could be considered for all or part of this role. For example, several of the local partners, such as Cleveland Metroparks, National Park Service, City of Cleveland, ParkWorks, and Ohio Canal Corridor currently operate and/or manage public use recreational facilities and open space in the metropolitan area.

Community Support

Many organizations and agencies have been very active in promoting the heritage corridor concept and working for its protection and improvement, dating back to the 1980's. Over the years, the number of organizational and individual supporters has grown steadily, creating a network of effective advocates for community involvement, education programs, interpretive opportunities, and physical improvement projects on behalf of the heritage corridor.

There is also substantial support for the broader goal of rediscovering the river and lakefront in Greater Cleveland. Mayor Richard Daley of Chicago recently asserted that there is only one significant difference between his city and Cleveland: "Chicago embraced the lakefront and river, and Cleveland turned its back to them." In response, the Leadership Cleveland Class of 2002 authored an article outlining their views on economic development strategies for the metropolitan area, noting

Harvard-Denison Bridge Underpass

the importance of "bike paths, beaches and open space along Lake Erie and the Cuyahoga River. Our water can attract tourism, and it can be a driver of business. Our water will—with Northeast Ohioans' support—bring new life to this region."

This continued effort and support at all levels remains crucial for the realization of the Towpath Trail Extension and supplemental projects.

Stewardship

The Towpath Trail Extension project area is brimming with distinctive cultural and natural resources. The stewardship of these resources will be critical to the ongoing success of the Towpath Trail as a heritage, recreational, and environmental amenity.

The Environmental Regeneration section of the study offers solutions for addressing many of the environmental issues of the area. These strategies can improve areas intended to remain as open space and be used in coordination with development projects. In turn, environmental regeneration should be one of the ongoing interpretive themes for the valley.

Although environmental regulations exist at the state and federal levels through agencies such as the Army Corps of Engineers and the Environmental Protection Agency, local initiatives, particularly within the City of Cleveland, will have a major influence on the future of the natural and built environments in the project area and adjacent neighborhoods. Existing or future ordinances, programs, and guidelines need to address issues such as protection of environmentally sensitive areas, retention of neighborhood character, and encouragement of economic development in a manner compatible with both the neighborhoods and the natural environment.

Cuyahoga River near Innerbelt Bridge

Original bed of Ohio & Erie Canal under Columbus Road at Sherwin-Williams

Steering Committee

As part of this study, the Cuyahoga County Planning Commission (CPC) established a Steering Committee, whose role was to provide perspective to CPC concerning issues relevant to the accomplishment of the overall project. The CPC would like to thank the Steering Committee members for their contributions.

PUBLIC AGENCIES

City of Cleveland Planning Commission, Martin Cader, George Cantor, and Linda Henrichsen
Cleveland Metroparks, Steve Coles, Chief of Planning
Cuyahoga County Engineer, Lenora M. Lockett, P.E., Transportation/Planning Engineer
National Park Service, Dave Humphrey, Chief, Technical Assistance & Prof. Services Div., Cuyahoga Valley National Park

NONPROFIT ORGANIZATIONS

Ohio Canal Corridor, Tim Donovan, Executive Director
ParkWorks, Barb Clint, Director, Programs & Special Projects

NONPROFIT DEVELOPMENT CORPORATIONS

Flats Industry, Jim Cox
Flats Oxbow Association, Jim Pressler, Executive Director
Ohio City Near West Development Corporation, John Wilbur, Executive Director
Old Brooklyn Community Development Corporation, Brian Cummins, Executive Director
Tremont West Development Corporation, Emily Lipovan Holan, Executive Director

In addition, CPC would like to thank the property owners, businesspersons, public agencies, elected officials, and nonprofit and neighborhood organizations who provided input during the project.

PROJECT FUNDERS

City of Cleveland
The Cleveland Foundation
Cleveland Metroparks
Cuyahoga County Board of Commissioners
The George Gund Foundation
Ohio & Erie Canal Association

CONSULTANT TEAM

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Environmental Design Group
Parsons Brinckerhoff Ohio
Adache Ciuni Lynn Associates, Inc.
Carol Poh Miller
Cleveland Public Art

WEBSITE

The project plans may be viewed on the website of the Cuyahoga County Planning Commission at http://www.planning.co.cuyahoga.oh.us.

Cuyahoga River looking north from Harvard-Denison Bridge

TOWPATH TRAIL
PROJECT SCOPE

TOWPATH TRAIL ALIGNMENT
TOWPATH TRAIL HEAD
NEIGHBORHOOD CONNECTOR
HISTORIC CANAL ROUTE

LAKE ERIE
PUBLIC SQUARE
FLATS WEST BANK
HOPE MEMORIAL BRIDGE
INNERBELT
I-77
OHIO CITY
I-490
TREMONT
I-71
CLARK AVE.
EITHER/ OR
ISG
ISG
TO SLAVIC VILLAGE
NEWBURGH HEIGHTS
BROOKLYN CENTRE
HARVARD ROAD
TO CLEVELAND METROPARKS
OLD BROOKLYN
CUYAHOGA HEIGHTS

Cuyahoga County Planning Commission web site:
http://planning.co.cuyahoga.oh.us

Towpath Trail web site:
http://planning.co.cuyahoga.oh.us/projects/towpath.html

schmidlcopelondparkerstevens

Base Map and Aerial Information Prepared by:
Photogrammetric Methods,
Aerocon Photogrammetric Solutions, Inc.,
and the Cleveland Regional Geodetic Society,
for the Cuyahoga County Engineer, April 1993.

TOWPATH TRAIL EXTENSION
ALIGNMENT PLAN
Cuyahoga County Planning Commission

CONSULTANT TEAM
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Environmental Design Group
Adache Ciuni Lynn Associates, Inc.
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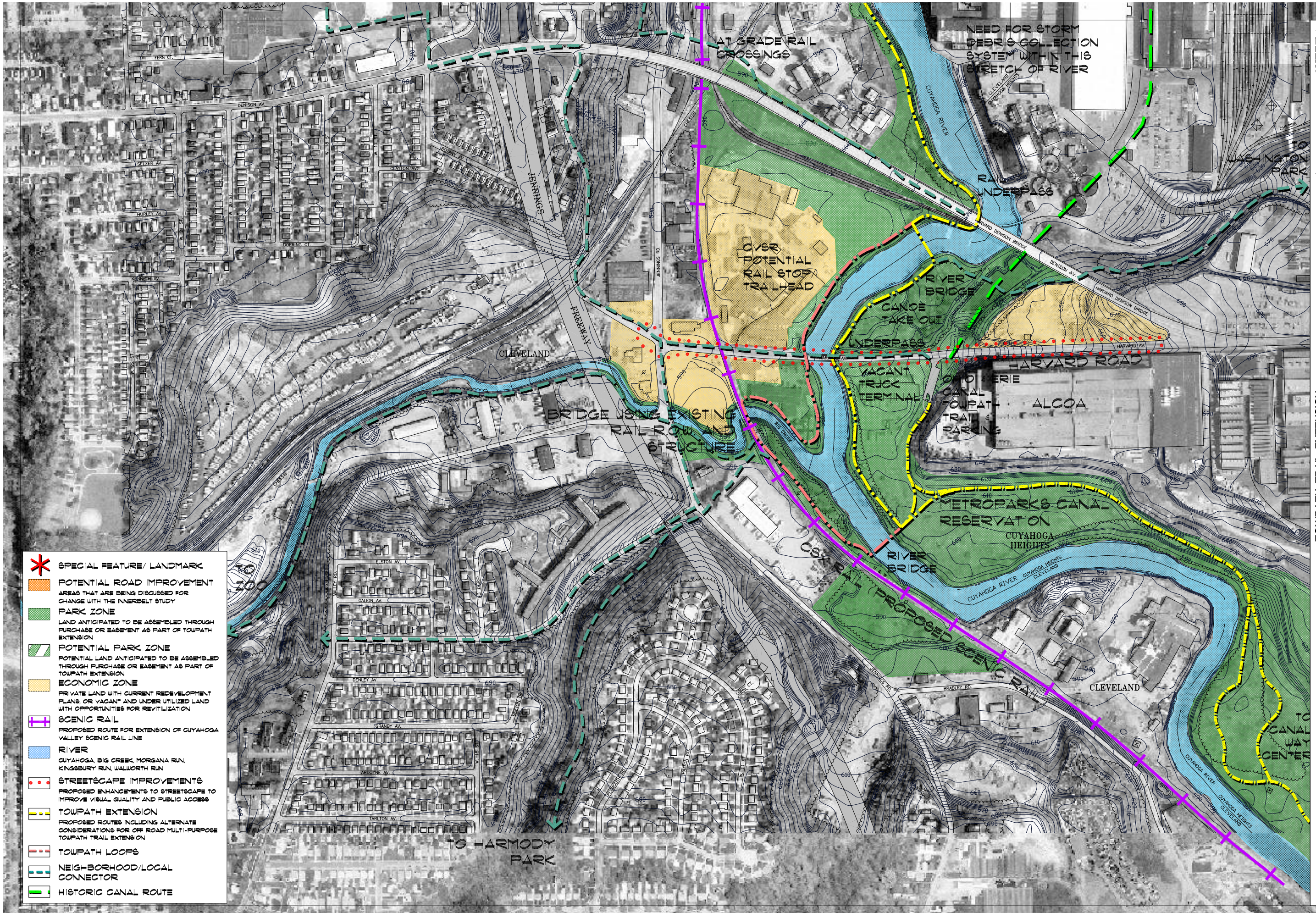
Carol Poh Miller

North
0' 250' 500'

PROJ. NO. 0160.00
DATE September 19, 2002



SHEET 1

North

0' 200'

PROJECT NO. 0160.00
DATE September 27, 2002

CONSULTANT TEAM
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Environmental Design Group
Adelante Cultural Landscapes, Inc.
Prime Engineering
Carol Poh Miller

TOWPATH TRAIL EXTENSION

ALIGNMENT PLAN

Cuyahoga County Planning Commission

Base Year and Aerial Information Prepared by:
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Photogrammetric Mapping Services, Inc.
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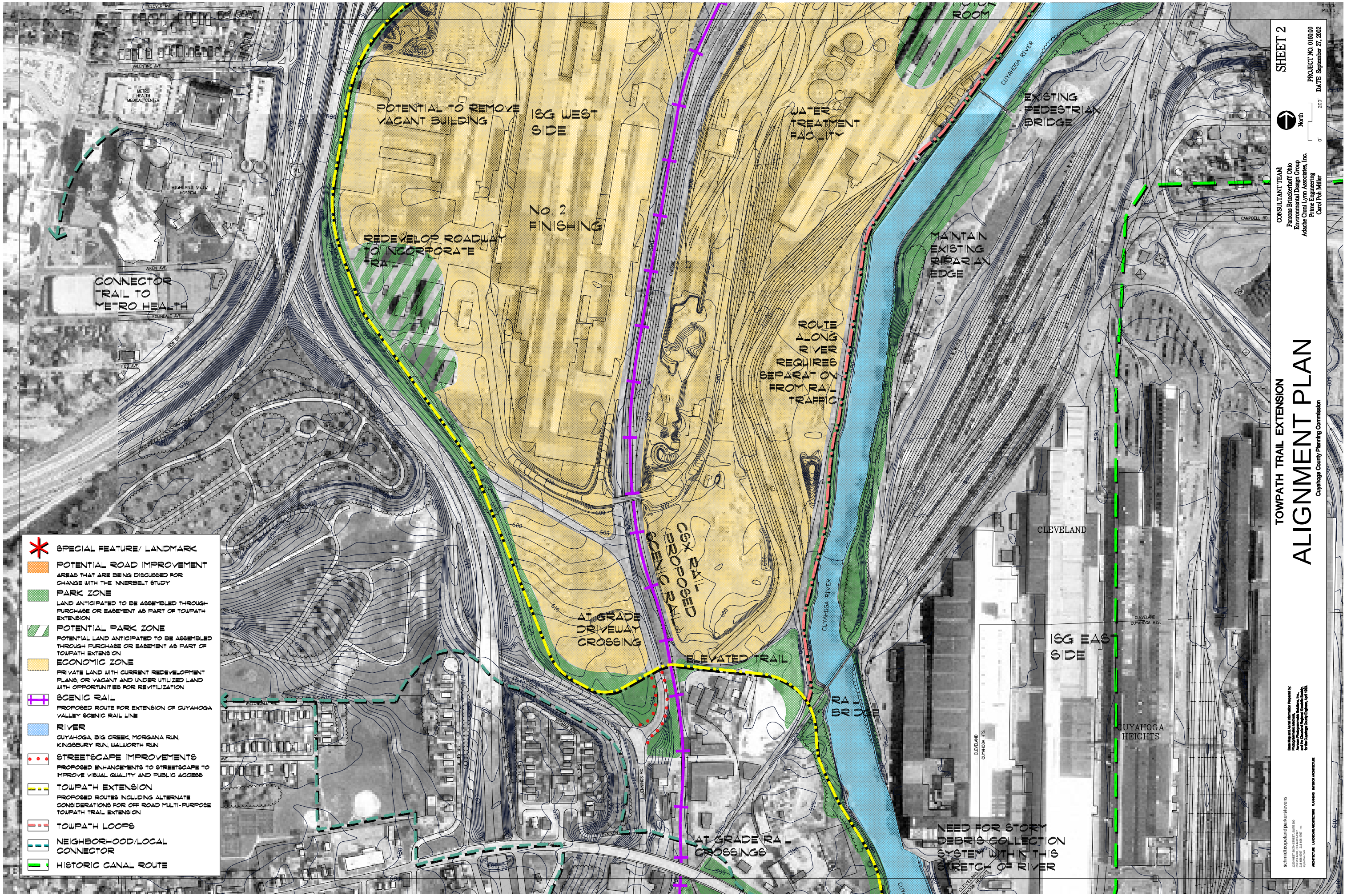
POTENTIAL TO REMOVE VACANT BUILDING
ISG WEST SIDE
WATER TREATMENT FACILITY
EXISTING PEDESTRIAN BRIDGE
No. 2 FINISHING
REDEVELOP ROADWAY TO INCORPORATE TRAIL
MAINTAIN EXISTING RIPARIAN EDGE
CONNECTOR TRAIL TO METRO HEALTH
ROUTE ALONG RIVER REQUIRES SEPARATION FROM RAIL TRAFFIC
CSX RAIL
PROPOSED SCENIC RAIL
AT GRADE DRIVEWAY CROSSING
ELEVATED TRAIL
RAIL BRIDGE
ISG EAST SIDE
CLEVELAND
CUYAHOGA HEIGHTS
AT GRADE RAIL CROSSINGS
NEED FOR STORM DEBRIS COLLECTION SYSTEM WITHIN THIS STRETCH OF RIVER
CUYAHOGA RIVER
METRO HEALTH MEDICAL CENTER
HIGHLAND VIEW HOSPITAL
CLOVER AVE.
VALENTINE AVE.
AIKEN AVE.
EGLINDALE AVE.
TITUS AVE.
WILLOWBANK AVE.
JENNINGS RD.
CAMPBELL RD.
CLEVELAND CUYAHOGA HTS.
SPECIAL FEATURE/ LANDMARK
POTENTIAL ROAD IMPROVEMENT
AREAS THAT ARE BEING DISCUSSED FOR CHANGE WITH THE INNERBELT STUDY
PARK ZONE
LAND ANTICIPATED TO BE ASSEMBLED THROUGH PURCHASE OR EASEMENT AS PART OF TOWPATH EXTENSION
POTENTIAL PARK ZONE
POTENTIAL LAND ANTICIPATED TO BE ASSEMBLED THROUGH PURCHASE OR EASEMENT AS PART OF TOWPATH EXTENSION
ECONOMIC ZONE
PRIVATE LAND WITH CURRENT REDEVELOPMENT PLANS, OR VACANT AND UNDER UTILIZED LAND WITH OPPORTUNITIES FOR REVITILIZATION
SCENIC RAIL
PROPOSED ROUTE FOR EXTENSION OF CUYAHOGA VALLEY SCENIC RAIL LINE
RIVER
CUYAHOGA, BIG CREEK, MORGANA RUN, KINGSBURY RUN, WALLWORTH RUN
STREETSCAPE IMPROVEMENTS
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TOWPATH LOOPS
NEIGHBORHOOD/LOCAL CONNECTOR
HISTORIC CANAL ROUTE
SHEET 2
PROJECT NO. 0150.00
DATE September 27, 2002
North
0'
200'
CONSULTANT TEAM
Parsons Brinckerhoff Ohio
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Adams Outdoor Advertising, Inc.
Prime Engineering
Carol Poh Miller
TOWPATH TRAIL EXTENSION
Cuyahoga County Planning Commission
ALIGNMENT PLAN
Base Map and Aerial Information Prepared by:
Photogrammetric Mapping,
Photogrammetric Mapping Services, Inc.
and the Cleveland Regional Geodetic Survey
for the Cuyahoga County Engineer, April 1995.
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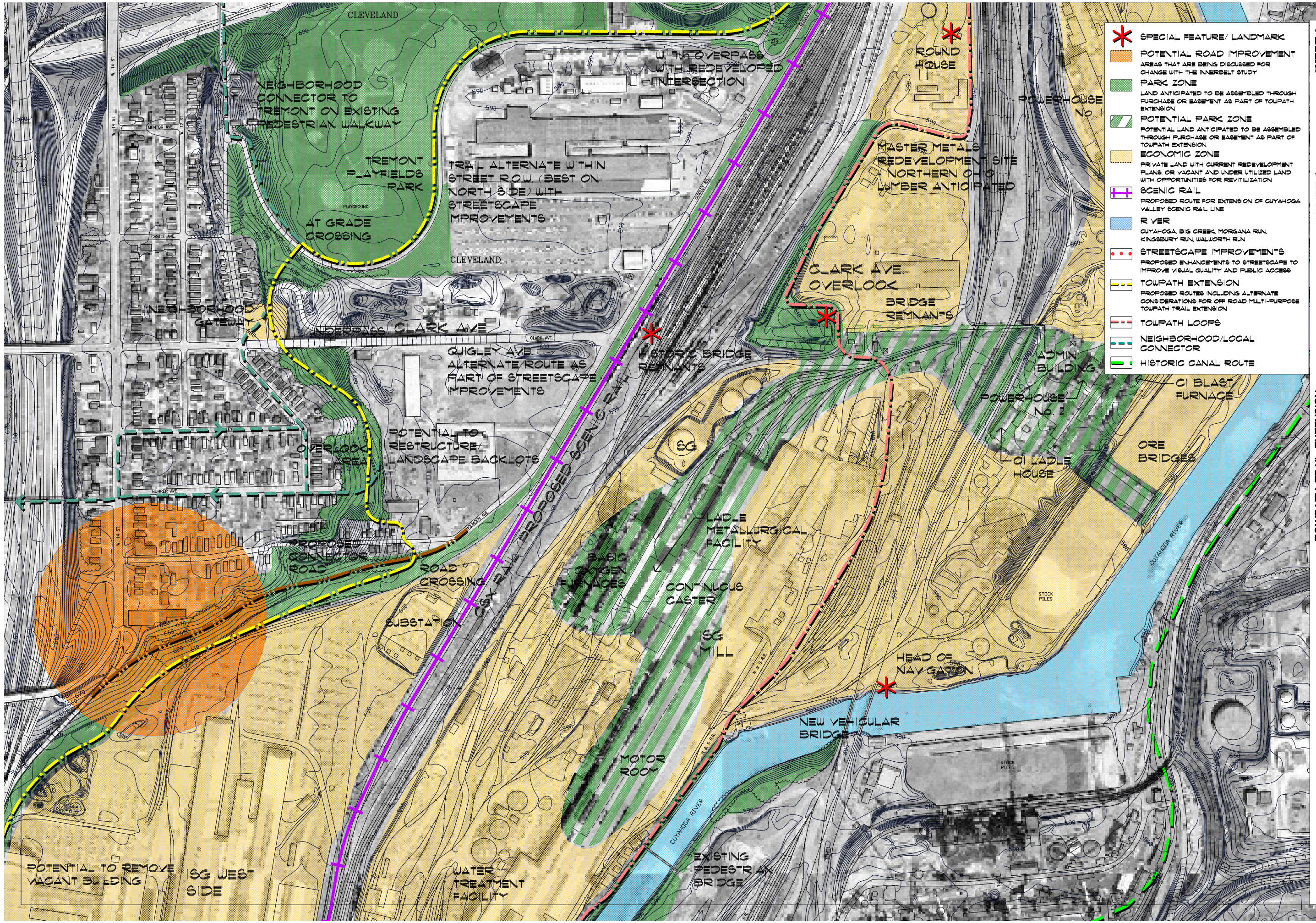
CLEVELAND
NEIGHBORHOOD CONNECTOR TO TREMONT ON EXISTING PEDESTRIAN WALKWAY
TREMONT PLAYFIELDS PARK
PLAYGROUND
AT GRADE CROSSING
W. 14 ST.
MENTOR AVE.
CASTLE AVE.
NEIGHBORHOOD GATEWAY
UNDERPASS CLARK AVE
CLARK AVE.
QUIGLEY AVE ALTERNATE ROUTE AS PART OF STREETSCAPE IMPROVEMENTS
POTENTIAL TO RESTRUCTURE/ LANDSCAPE BACKLOTS
OVERLOOK AREA
BUHRER AVE.
PROPOSED CONNECTOR ROAD
ROAD CROSSING
SUBSTATION
CSX RAIL
PROPOSED SCENIC RAIL
TRAIL ALTERNATE WITHIN STREET R.O.W. (BEST ON NORTH SIDE) WITH STREETSCAPE IMPROVEMENTS
W. 117th OVERPASS WITH REDEVELOPED INTERSECTION
QUIGLEY RD.
HISTORIC BRIDGE REMNANTS
ISG
BASIC OXYGEN FURNACES
LADLE METALLURGICAL FACILITY
CONTINUOUS CASTER
ISG MILL
MOTOR ROOM
N & S R.R.
CLEVELAND RIVER
POTENTIAL TO REMOVE VACANT BUILDING
ISG WEST SIDE
WATER TREATMENT FACILITY
EXISTING PEDESTRIAN BRIDGE
NEW VEHICULAR BRIDGE
HEAD OF NAVIGATION
STOCK PILES
CLARK AVE. OVERLOOK
BRIDGE REMNANTS
MASTER METALS REDEVELOPMENT SITE NORTHERN OHIO LUMBER ANTICIPATED
ROUND HOUSE
POWERHOUSE No. 1
POWERHOUSE No. 2
ADMIN BUILDING
CI BLAST FURNACE
CI LADLE HOUSE
ORE BRIDGES
CUYAHOGA RIVER
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NEIGHBORHOOD/LOCAL CONNECTOR
HISTORIC CANAL ROUTE
SHEET 3
PROJECT NO. 0160.00
DATE September 27, 2002
North
0' 200'
CONSULTANT TEAM
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Carol Poll Miller
TOWPATH TRAIL EXTENSION
ALIGNMENT PLAN
Cuyahoga County Planning Commission
Base Map and Aerial Information Prepared by:
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Aerial Photogrammetric Mapping
Based on Photography Flown on April 1, 1996
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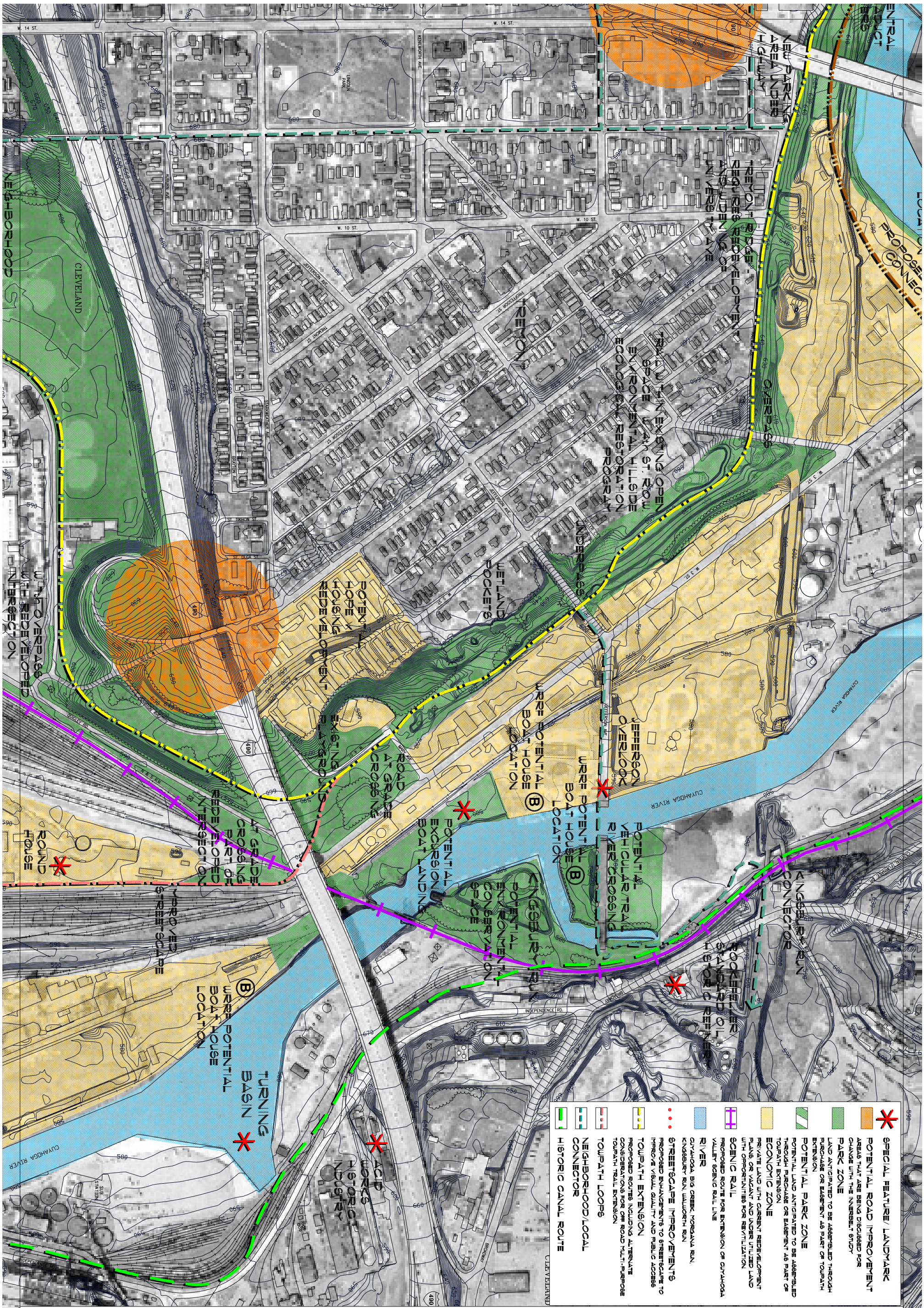

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Base Map and Aerial Information Prepared by:
Photogrammetric Methods,
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TOWPATH TRAIL EXTENSION

ALIGNMENT PLAN

Cuyahoga County Planning Commission

CONSULTANT TEAM
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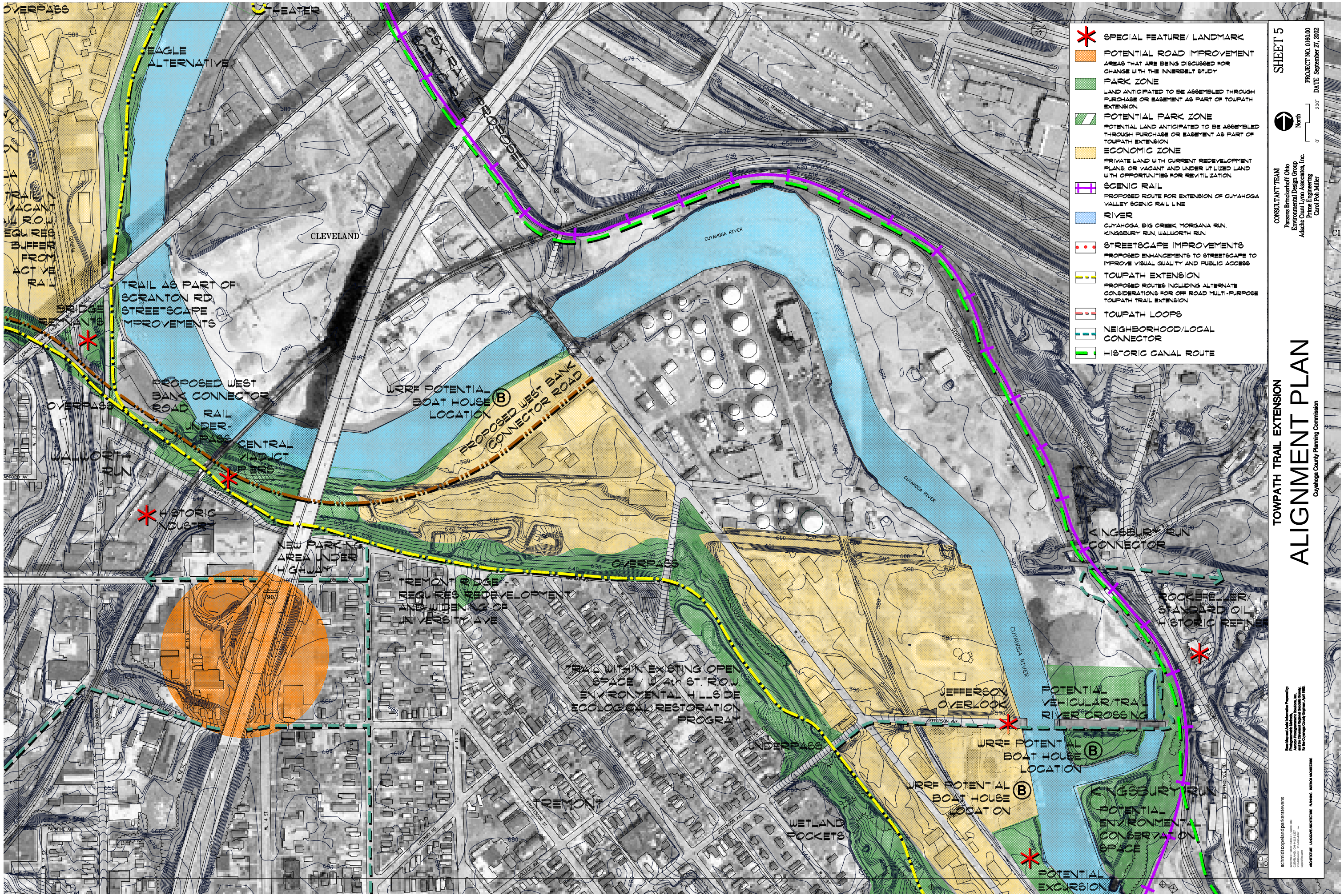
North

0' 200'

SHEET 4

PROJECT NO. 0160.00
DATE September 27, 2002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NEIGHBORHOOD/LOCAL CONNECTOR
HISTORIC CANAL ROUTE
SHEET 5
PROJECT NO. 0160.00
DATE September 27, 2002
North
0'
200'
CONSULTANT TEAM
Parsons Brinckerhoff Ohio Environmental Design Group
Adache Chuni Lynn Associates, Inc.
Prime Engineering
Carol Poh Miller
TOWPATH TRAIL EXTENSION
Cuyahoga County Planning Commission
ALIGNMENT PLAN
Base Map and Aerial Information Prepared by Photogrammetric Services, Inc. Photogrammetrists, Surveyors, Mapping Consultants and the Cleveland Regional Geodetic Survey, in the Cuyahoga County Engineer's April 1995.
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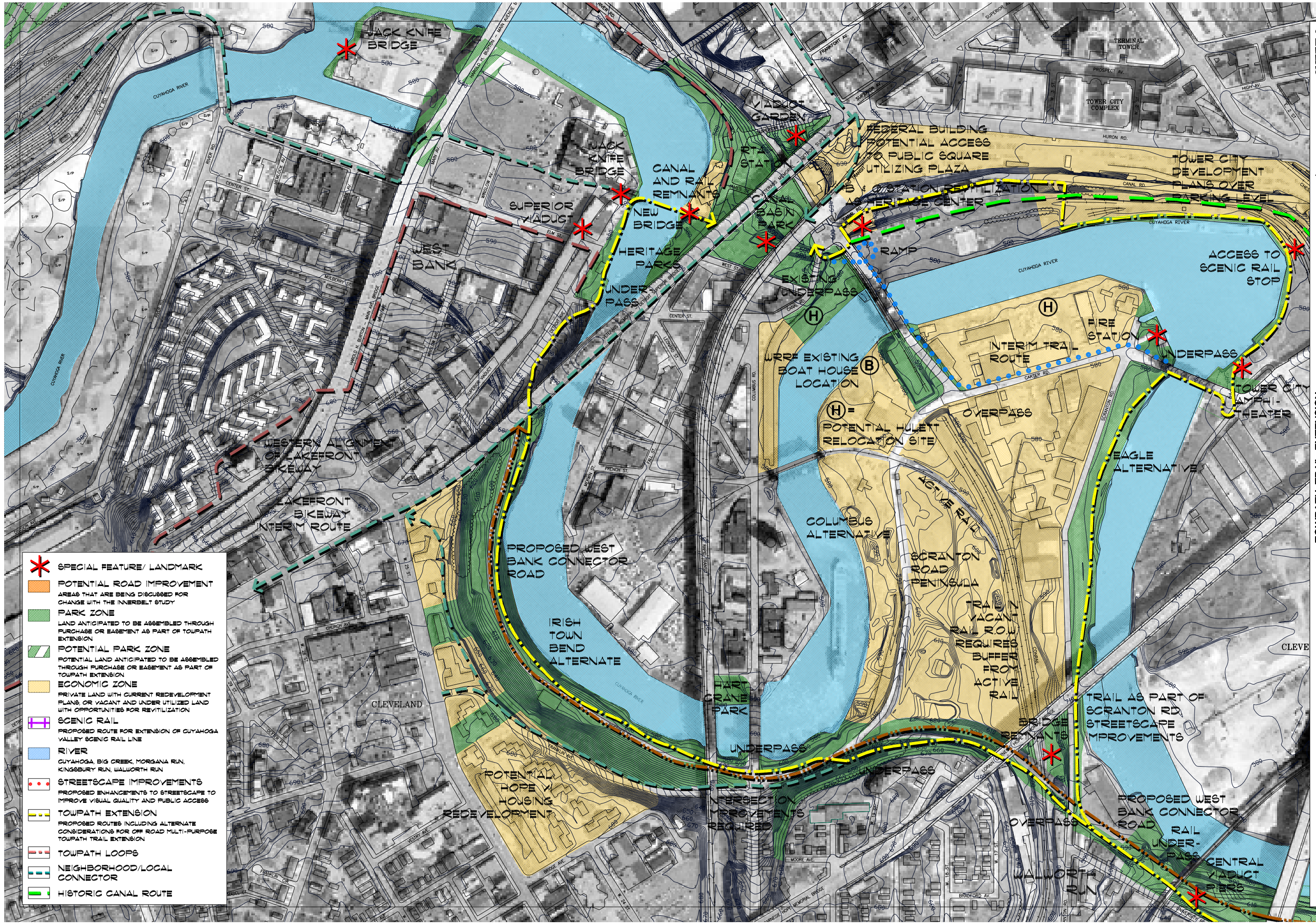
ARCHITECTURE LANDSCAPE ARCHITECTURE PLANNING INTERIOR ARCHITECTURE
OVERPASS
THEATER
EAGLE ALTERNATIVE
CSX RAIL CORRIDOR PROPOSED
CLEVELAND
TRAIL AS PART OF SCRANTON RD. STREETSCAPE IMPROVEMENTS
BRIDGE REMNANTS
PROPOSED WEST BANK CONNECTOR ROAD
RAIL UNDER-PASS
CENTRAL VIADUCT PIERS
WALWORTH RUN
HISTORIC INDUSTRY
NEW PARKING AREA UNDER HIGHWAY
WRRF POTENTIAL BOAT HOUSE LOCATION
PROPOSED WEST BANK CONNECTOR ROAD
OVERPASS
TREMONT RIDGE - REQUIRES REDEVELOPMENT AND WIDENING OF UNIVERSITY AVE
TRAIL WITHIN EXISTING OPEN SPACE / W. 4th ST. R.O.W. ENVIRONMENTAL HILLSIDE ECOLOGICAL RESTORATION PROGRAM
UNDERPASS
TREMONT
WETLAND POCKETS
CUYAHOGA RIVER
JEFFERSON OVERLOOK
POTENTIAL VEHICULAR/TRAIL RIVER CROSSING
WRRF POTENTIAL BOAT HOUSE LOCATION
WRRF POTENTIAL BOAT HOUSE LOCATION
KINGSBURY RUN
POTENTIAL ENVIRONMENTAL CONSERVATION SPACE
POTENTIAL EXCURSION
KINGSBURY RUN CONNECTOR
ROCKEFELLER STANDARD OIL HISTORIC REFINERY



SHEET 6

North

0' 200'

PROJECT NO. 0160.00
DATE: September 27, 2002

CONSULTANT TEAM
Parsons Brinckerhoff Ohio
Environmental Design Group
Adache Cuni Lynn Associates, Inc.
Prime Engineering
Carol Poh Miller

TOWPATH TRAIL EXTENSION
ALIGNMENT
Cuyahoga County Planning Commission

Base Map and Aerial Information Prepared by: Photogrammetric Services, Photogrammetric Mapping, Inc. and the Cleveland Regional Geodetic Survey, of the Cuyahoga County Engineer, April 1999.

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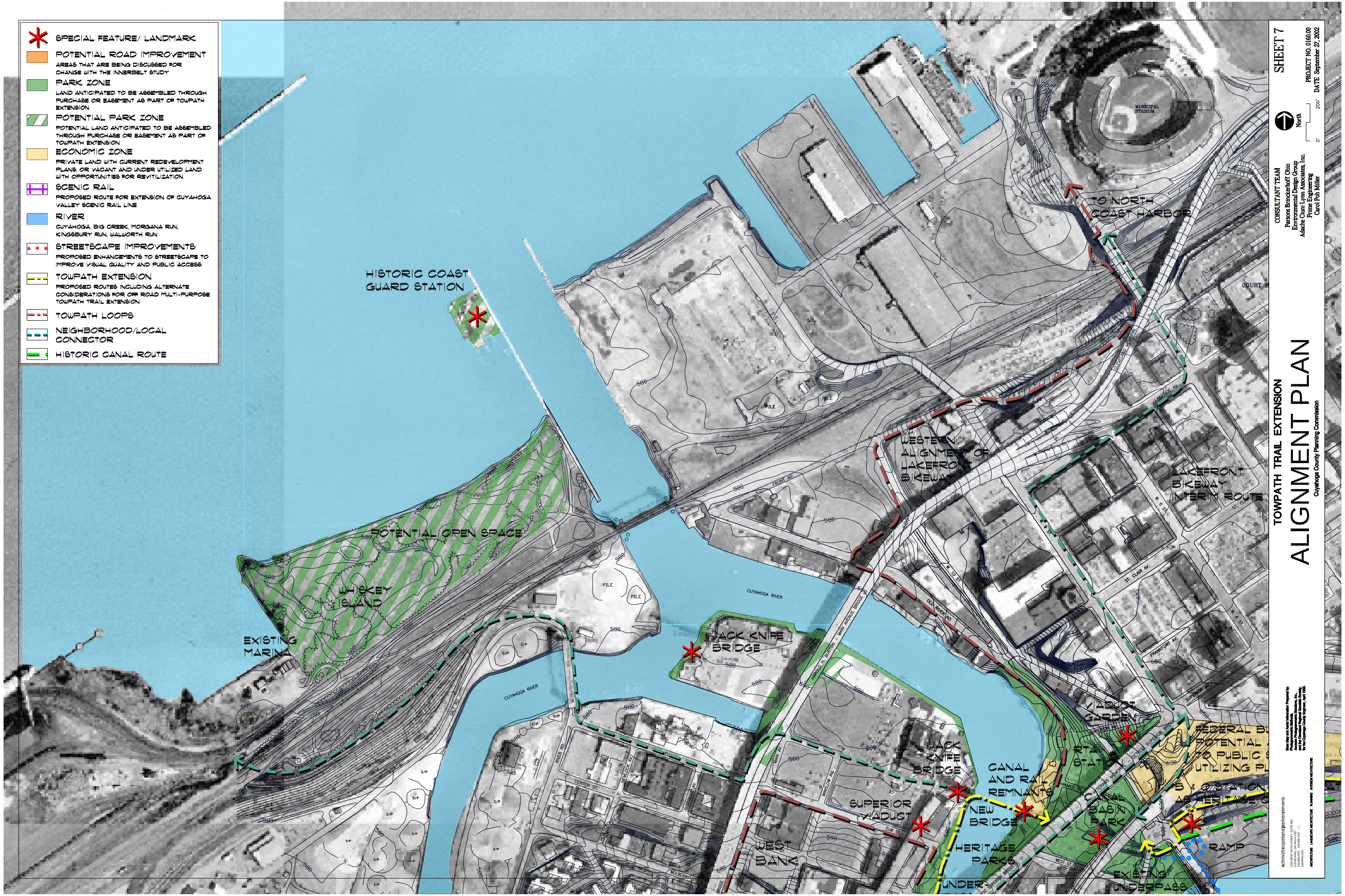
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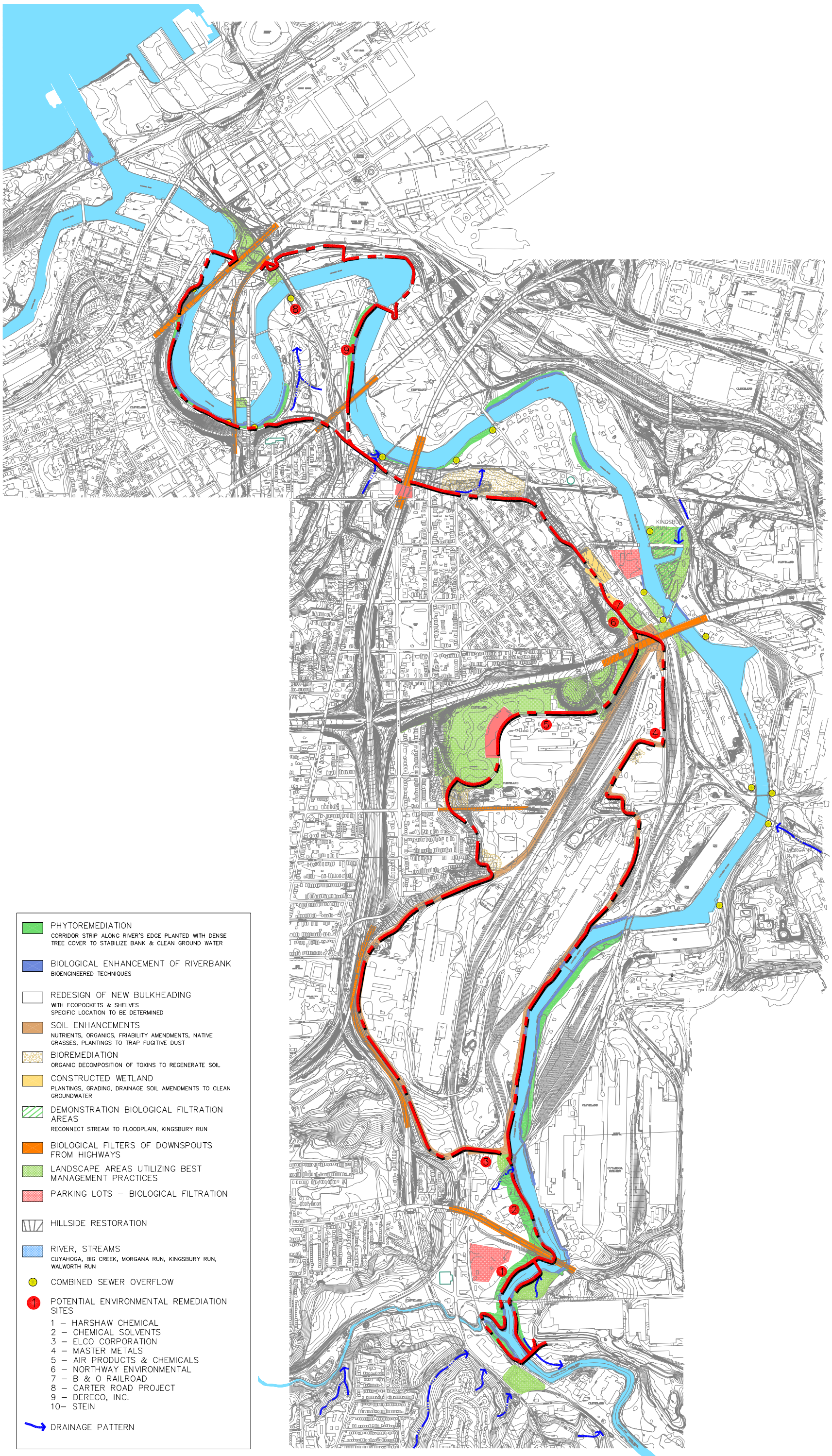
TOWPATH LOOPS
NEIGHBORHOOD/LOCAL CONNECTOR
HISTORIC CANAL ROUTE
HISTORIC COAST GUARD STATION
POTENTIAL OPEN SPACE
WHISKEY ISLAND
EXISTING MARINA
CUYAHOGA RIVER
JACK KNIFE BRIDGE
WESTERN ALIGNMENT OF LAKEFRONT BIKEWAY
LAKEFRONT BIKEWAY INTERIM ROUTE
TO NORTH COAST HARBOR
MUNICIPAL STADIUM
VIADUCT GARDEN
CANAL AND RAIL REMNANTS
NEW BRIDGE
SUPERIOR VIADUCT
WEST BANK
HERITAGE PARKS
UNDER-
CANAL BASIN PARK
RAMP
EXISTING UNDERPASS
FEDERAL BU
POTENTIAL
TO PUBLIC S
UTILIZING PL
CONSULTANT TEAM
Parsons Brinckerhoff Ohio
Environmental Design Group
Adache Cluni Lynn Associates, Inc.
Prime Engineering
Carol Poh Miller
North
0'
200'
SHEET 7
PROJECT NO. 0160.00
DATE September 27, 2002
TOWPATH TRAIL EXTENSION
ALIGNMENT PLAN
Cuyahoga County Planning Commission
schmidtcopelandpartnersstevens
ARCHITECTURE LANDSCAPE ARCHITECTURE PLANNING INTERIOR ARCHITECTURE



PHYTOREMEDIATION
CORRIDOR STRIP ALONG RIVER'S EDGE PLANTED WITH DENSE TREE COVER TO STABILIZE BANK & CLEAN GROUND WATER

BIOLOGICAL ENHANCEMENT OF RIVERBANK
BIOENGINEERED TECHNIQUES

REDESIGN OF NEW BULKHEADING
WITH ECOPOCKETS & SHELVES
SPECIFIC LOCATION TO BE DETERMINED

SOIL ENHANCEMENTS
NUTRIENTS, ORGANICS, FRIABILITY AMENDMENTS, NATIVE GRASSES, PLANTINGS TO TRAP FUGITIVE DUST

BIOREMEDIATION
ORGANIC DECOMPOSITION OF TOXINS TO REGENERATE SOIL

CONSTRUCTED WETLAND
PLANTINGS, GRADING, DRAINAGE SOIL AMENDMENTS TO CLEAN GROUNDWATER

DEMONSTRATION BIOLOGICAL FILTRATION AREAS
RECONNECT STREAM TO FLOODPLAIN, KINGSBURY RUN

BIOLOGICAL FILTERS OF DOWNSPOUTS FROM HIGHWAYS

LANDSCAPE AREAS UTILIZING BEST MANAGEMENT PRACTICES

PARKING LOTS – BIOLOGICAL FILTRATION

HILLSIDE RESTORATION

RIVER, STREAMS
CUYAHOGA, BIG CREEK, MORGANA RUN, KINGSBURY RUN, WALWORTH RUN

COMBINED SEWER OVERFLOW

POTENTIAL ENVIRONMENTAL REMEDIATION SITES
1 – HARSHAW CHEMICAL
2 – CHEMICAL SOLVENTS
3 – ELCO CORPORATION
4 – MASTER METALS
5 – AIR PRODUCTS & CHEMICALS
6 – NORTHWAY ENVIRONMENTAL
7 – B & O RAILROAD
8 – CARTER ROAD PROJECT
9 – DERECO, INC.
10– STEIN

DRAINAGE PATTERN

schmidtcopelandparkerstevens
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CLEVELAND, OH 44113–1327
216–696–6767 216–696–4767

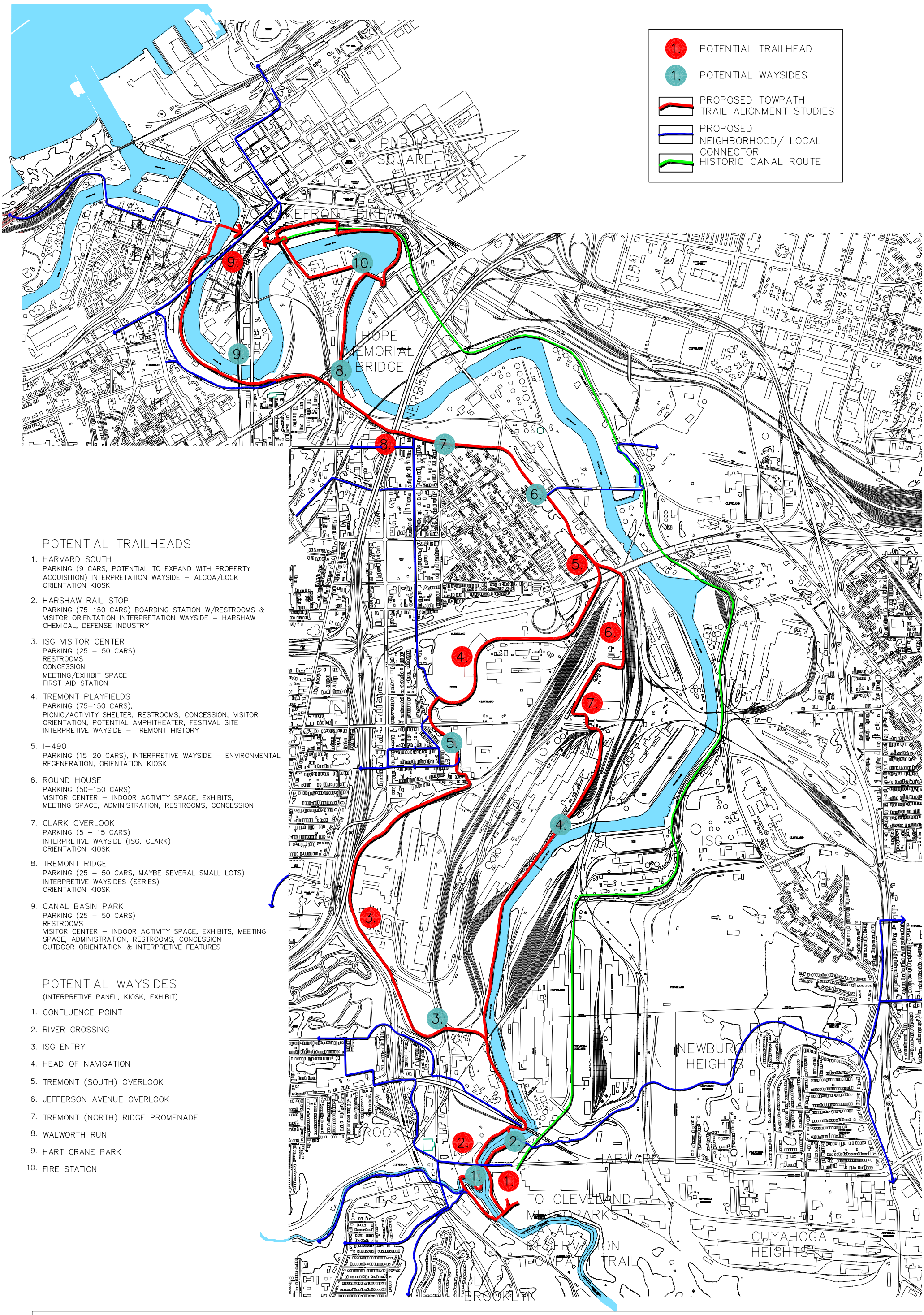
Base Map and Aerial Information Prepared by:
Photogrammetric Methods,
Aerocon Photogrammetric Solutions, Inc.,
and the Cleveland Regional Geodetic Society,
for the Cuyahoga County Engineer Apr. 199?

TOWPATH TRAIL EXTENSION

ENVIRONMENTAL REGENERATION PLAN

CONSULTANT TEAM
Parsons Brinckerhoff Ohio
Environmental Design Group
Adache Ciuni Lynn Associates, Inc.

North



POTENTIAL TRAILHEADS

1. HARVARD SOUTH
   PARKING (9 CARS, POTENTIAL TO EXPAND WITH PROPERTY ACQUISITION) INTERPRETATION WAYSIDE – ALCOA/LOCK ORIENTATION KIOSK
2. HARSHAW RAIL STOP
   PARKING (75–150 CARS) BOARDING STATION W/RESTROOMS & VISITOR ORIENTATION INTERPRETATION WAYSIDE – HARSHAW CHEMICAL, DEFENSE INDUSTRY
3. ISG VISITOR CENTER
   PARKING (25 – 50 CARS)
   RESTROOMS
   CONCESSION
   MEETING/EXHIBIT SPACE
   FIRST AID STATION
4. TREMONT PLAYFIELDS
   PARKING (75–150 CARS),
   PICNIC/ACTIVITY SHELTER, RESTROOMS, CONCESSION, VISITOR ORIENTATION, POTENTIAL AMPHITHEATER, FESTIVAL SITE
   INTERPRETIVE WAYSIDE – TREMONT HISTORY
5. I–490
   PARKING (15–20 CARS), INTERPRETIVE WAYSIDE – ENVIRONMENTAL REGENERATION, ORIENTATION KIOSK
6. ROUND HOUSE
   PARKING (50–150 CARS)
   VISITOR CENTER – INDOOR ACTIVITY SPACE, EXHIBITS, MEETING SPACE, ADMINISTRATION, RESTROOMS, CONCESSION
7. CLARK OVERLOOK
   PARKING (5 – 15 CARS)
   INTERPRETIVE WAYSIDE (ISG, CLARK)
   ORIENTATION KIOSK
8. TREMONT RIDGE
   PARKING (25 – 50 CARS, MAYBE SEVERAL SMALL LOTS)
   INTERPRETIVE WAYSIDES (SERIES)
   ORIENTATION KIOSK
9. CANAL BASIN PARK
   PARKING (25 – 50 CARS)
   RESTROOMS
   VISITOR CENTER – INDOOR ACTIVITY SPACE, EXHIBITS, MEETING SPACE, ADMINISTRATION, RESTROOMS, CONCESSION
   OUTDOOR ORIENTATION & INTERPRETIVE FEATURES

POTENTIAL WAYSIDES

(INTERPRETIVE PANEL, KIOSK, EXHIBIT)

1. CONFLUENCE POINT
2. RIVER CROSSING
3. ISG ENTRY
4. HEAD OF NAVIGATION
5. TREMONT (SOUTH) OVERLOOK
6. JEFFERSON AVENUE OVERLOOK
7. TREMONT (NORTH) RIDGE PROMENADE
8. WALWORTH RUN
9. HART CRANE PARK
10. FIRE STATION

schmidtcopelandparkerstevens
1220 WEST SIXTH STREET, SUITE 300
CLEVELAND, OH 44113–1327
216–696–6767 216–696–4767
ARCHITECTURE LANDSCAPE ARCHITECTURE PLANNING INTERIOR ARCHITECTURE

Base Map and Aerial Information Prepared by: Photogrammetric Methods, Aerocon Photogrammetric Solutions, Inc., and the Cleveland Regional Geodetic Society, for the Cuyahoga County Engineer, April 1993.

TOWPATH TRAIL EXTENSION

POTENTIAL TRAILHEADS

Cuyahoga County Planning Commission

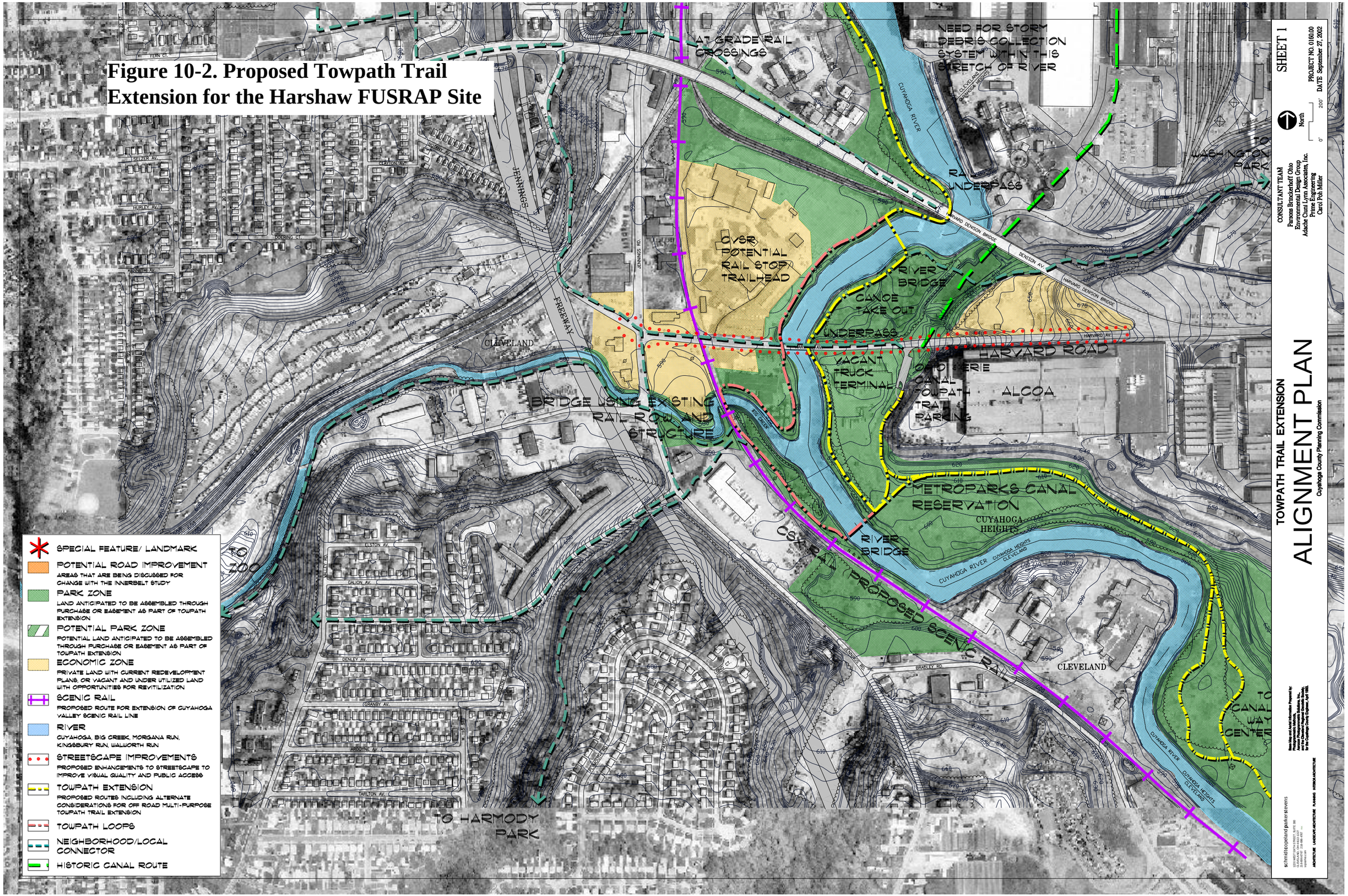
CONSULTANT TEAM
Parsons Brinckerhoff Ohio
Environmental Design Group
Adache Ciuni Lynn Associates, Inc.
Prime Engineering
Carol Poh Miller

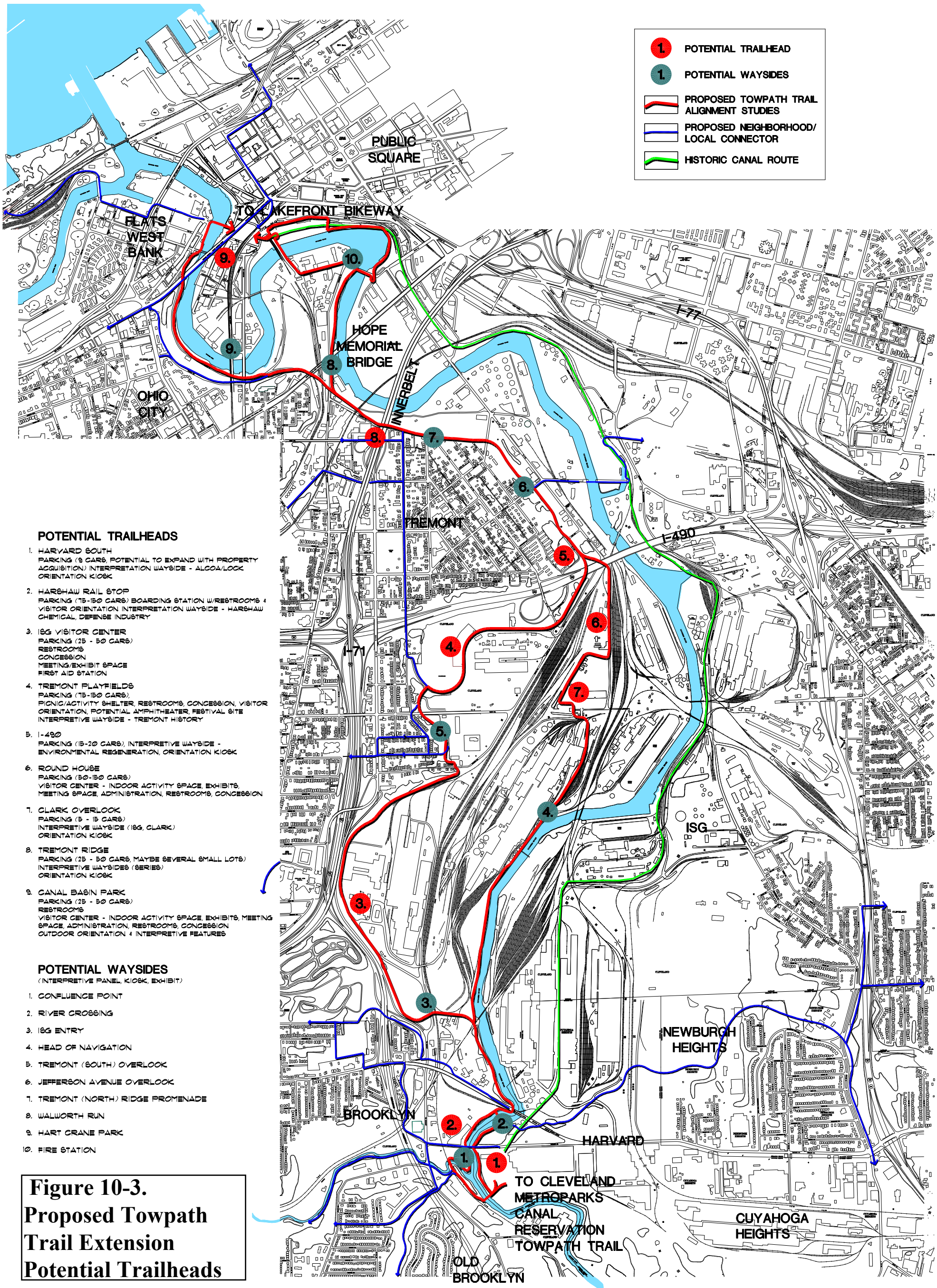
North
0' 250' 500'

PROJ.
DATE Septem

Figure 10-1. Proposed Towpath Trail Extension Alignment Plan 2007 Update - Entire Trail

Figure 10-2. Proposed Towpath Trail Extension for the Harshaw FUSRAP Site





POTENTIAL TRAILHEADS

1. HARVARD SOUTH
   PARKING (9 CARS, POTENTIAL TO EXPAND WITH PROPERTY ACQUISITION) INTERPRETATION WAYSIDE - ALCOA/LOCK ORIENTATION KIOSK
2. HARSHAW RAIL STOP
   PARKING (75-150 CARS) BOARDING STATION W/RESTROOMS & VISITOR ORIENTATION INTERPRETATION WAYSIDE - HARSHAW CHEMICAL, DEFENSE INDUSTRY
3. ISG VISITOR CENTER
   PARKING (25 - 50 CARS)
   RESTROOMS
   CONCESSION
   MEETING/EXHIBIT SPACE
   FIRST AID STATION
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   PARKING (75-150 CARS),
   PICNIC/ACTIVITY SHELTER, RESTROOMS, CONCESSION, VISITOR ORIENTATION, POTENTIAL AMPHITHEATER, FESTIVAL SITE INTERPRETIVE WAYSIDE - TREMONT HISTORY
5. I-490
   PARKING (15-20 CARS), INTERPRETIVE WAYSIDE - ENVIRONMENTAL REGENERATION, ORIENTATION KIOSK
6. ROUND HOUSE
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   VISITOR CENTER - INDOOR ACTIVITY SPACE, EXHIBITS, MEETING SPACE, ADMINISTRATION, RESTROOMS, CONCESSION
7. CLARK OVERLOOK
   PARKING (5 - 15 CARS)
   INTERPRETIVE WAYSIDE (ISG, CLARK)
   ORIENTATION KIOSK
8. TREMONT RIDGE
   PARKING (25 - 50 CARS, MAYBE SEVERAL SMALL LOTS)
   INTERPRETIVE WAYSIDES (SERIES)
   ORIENTATION KIOSK
9. CANAL BASIN PARK
   PARKING (25 - 50 CARS)
   RESTROOMS
   VISITOR CENTER - INDOOR ACTIVITY SPACE, EXHIBITS, MEETING SPACE, ADMINISTRATION, RESTROOMS, CONCESSION
   OUTDOOR ORIENTATION & INTERPRETIVE FEATURES

POTENTIAL WAYSIDES

(INTERPRETIVE PANEL, KIOSK, EXHIBIT)

1. CONFLUENCE POINT
2. RIVER CROSSING
3. ISG ENTRY
4. HEAD OF NAVIGATION
5. TREMONT (SOUTH) OVERLOOK
6. JEFFERSON AVENUE OVERLOOK
7. TREMONT (NORTH) RIDGE PROMENADE
8. WALWORTH RUN
9. HART CRANE PARK
10. FIRE STATION

Figure 10-3. Proposed Towpath Trail Extension Potential Trailheads

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ARCHITECTURE LANDSCAPE ARCHITECTURE PLANNING INTERIOR ARCHITECTURE

Base Map and Aerial Information Prepared by: Photogrammetric Methods, Aerocon Photogrammetric Solutions, Inc., and the Cleveland Regional Geodetic Society, for the Cuyahoga County Engineer, April 1993.

TOWPATH TRAIL EXTENSION
POTENTIAL TRAILHEADS
Cuyahoga County Planning Commission

CONSULTANT TEAM
Parsons Brinckerhoff Ohio
Environmental Design Group
Adache Ciuni Lynn Associates, Inc.
Prime Engineering
Carol Poh Miller

North
0' 250' 500'

PROJ. NO. 0160.00
DATE September 27, 2002

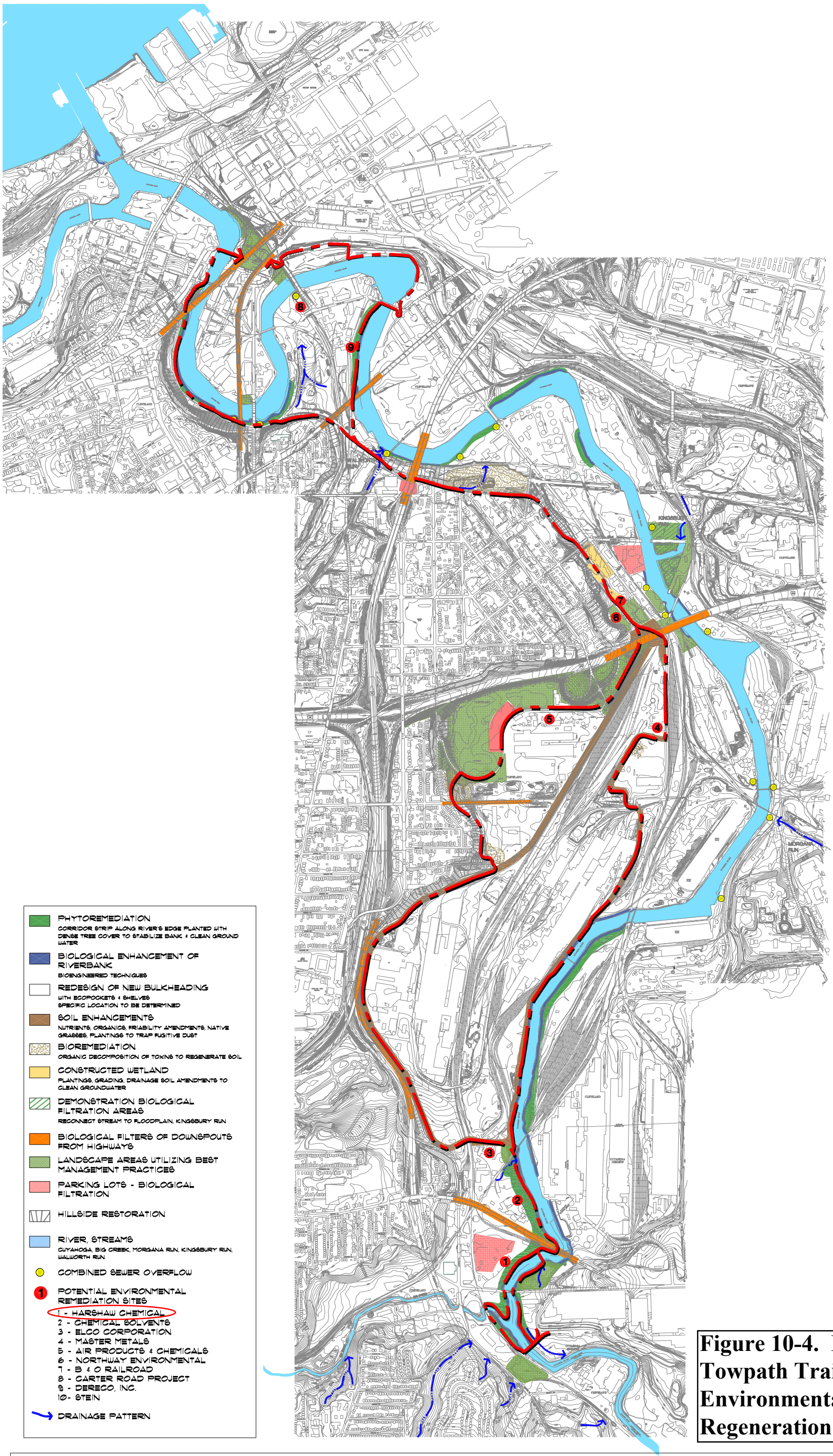

Figure 10-4. Proposed Towpath Trail Extension Environmental Regeneration Plan

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CLEVELAND, OH 44113-1327
216-696-6767 216-696-4767
ARCHITECTURE LANDSCAPE ARCHITECTURE PLANNING INTERIOR ARCHITECTURE

Base Map and Aerial Information Prepared by:
Photogrammetric Methods,
Aerocon Photogrammetric Solutions, Inc.,
and the Cleveland Regional Geodetic Society,
for the Cuyahoga County Engineer, April 1993.

TOWPATH TRAIL EXTENSION
ENVIRONMENTAL REGENERATION PLAN
Cuyahoga County Planning Commission

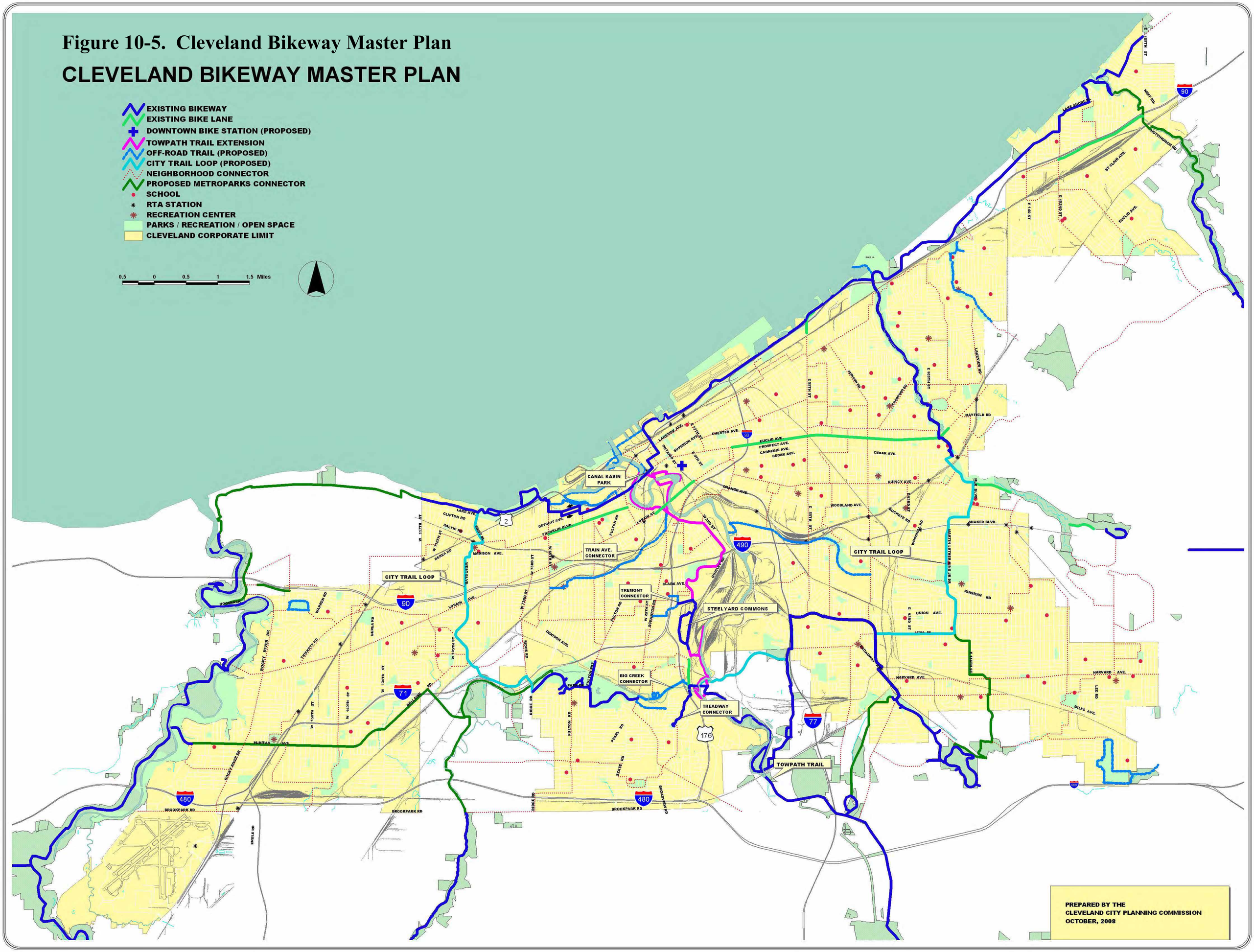
CONSULTANT TEAM
Parsons Brinckerhoff Ohio
Environmental Design Group
Adache Ciuni Lynn Associates, Inc.
Prime Engineering
Carol Poh Miller

North
0' 250' 500'

PROJ. NO. 0160.00
DATE Sept 27, 2002

Figure 10-5. Cleveland Bikeway Master Plan

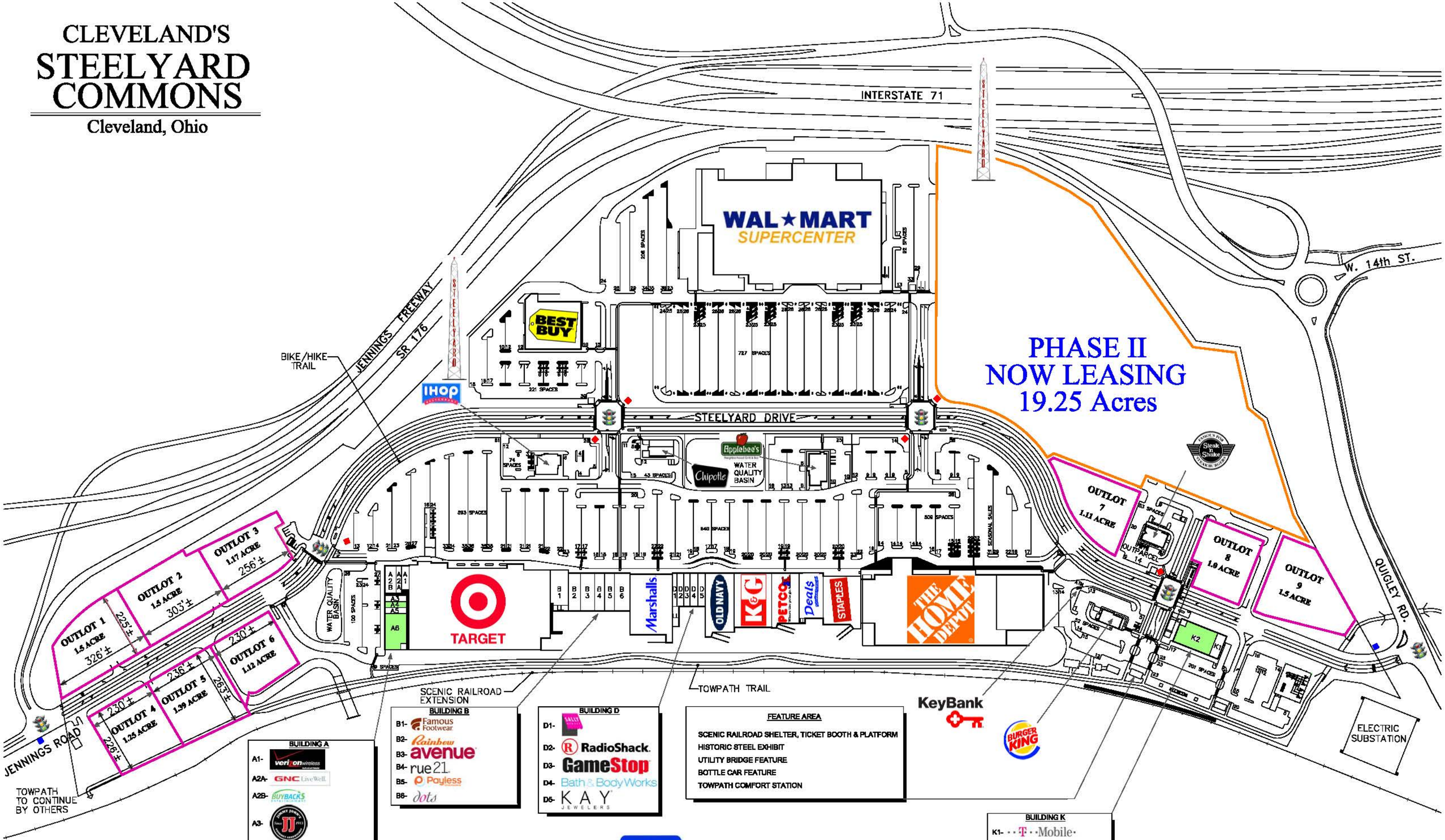
CLEVELAND BIKEWAY MASTER PLAN



PREPARED BY THE
CLEVELAND CITY PLANNING COMMISSION
OCTOBER, 2008

CLEVELAND'S STEELYARD COMMONS

Cleveland, Ohio



Site Plan

0 80 160 320

SCALE: 1" = 160'

DATE: 02-02-10

CHAPTER 5
MANAGEMENT POLICIES

The OCMP is a long-range program for protection and management of our coastal resources. It is a prospective and progressive program. Full implementation of the OCMP begins with the adoption of the program document and evolves through state and local implementation of its enforceable policies and other management measures. As indicated in the previous chapter on program organization, the OCMP relies on action and oversight by local jurisdictions and state agencies for ensuring consistency with coastal management policies.

Coastal management policies promote the wise management of those land and water uses having direct and significant impacts upon the Lake Erie coastal area. Certain policies focus upon the protection of significant natural areas, such as wetlands, that embody the unique values of the Ohio coast. Other policies have been established in an effort to simplify governmental procedures and foster agency cooperation regarding coastal activities. These management policies are sufficiently specific, comprehensive and enforceable to enable Ohio to implement a program of rational development and resource protection for the Lake Erie coastal area. Ohio's management policies are essential to provide the specific guidance needed by the state and its local jurisdictions to undertake the OCMP cooperatively.

Managed Coastal Activities

The OCMP does not affect all activities and projects in the coastal area. Only those activities considered to have a direct and significant impact on the coastal lands, waters and resources are identified as managed activities. "Direct and significant impact" is defined as the result of any action causing or likely to cause (1) changes in the manner in which land, water or other coastal resources are used, (2) changes in the environmental quality of coastal resources, or (3) limitations on the range of uses of coastal resources. The state will consider potential individual and cumulative impacts of such uses on coastal waters.

The management approach of the OCMP addresses the potential impacts of coastal activities on coastal resources rather than the general land uses, such as agriculture, water-dependent commercial development and port operation, with which certain coastal activities are associated. Land use planning and controls such as zoning are the responsibility of local governments. The OCMP encourages local governments to exercise their responsibilities and may also provide funding assistance for the development of port and waterfront master plans. When such plans are adopted as the basis for local land-use decisions and local regulatory controls, they facilitate decision making by the state of Ohio regarding, for instance, whether the state may lease areas of Lake Erie waters and submerged lands to local government or a private littoral property owner for particular uses or developments.

Policy Development

As stated earlier, the State of Ohio has an effective existing regulatory framework for managing coastal area activities. This structure forms the basis of OCMP authorities and policies. To build upon that framework and determine the manner in which such policies would be prioritized, integrated and reinforced with nonenforceable policies, a coastal management policy development process was initiated. The first step in this process was the identification of issues and concerns that were compiled from many sources, including local governments, waterfront industries, ports, local planning agencies, interested citizens, the Coastal Resources Advisory Council, and state and federal agencies. Preceding ODNR's public hearings, meetings and solicitation of written comments on the OCMP document, there had been extensive organized participation by the general public, local jurisdictions and public and special interest groups in policy development. The state's early efforts to develop a coastal program are described in Chapter 2.

Many recommendations from these studies and ODNR's public participation efforts have become policy through subsequent amendments to Ohio's coastal law, ODNR rulemaking and policy development. Other recommendations continue to shape program implementation and enhancement. The OCMP adopts the assumptions of the Lake Erie Shore Area Redevelopment Task Force, and presents in this chapter policies for resource protection, management and development that are reflective of these assumptions. Those assumptions are:

- Benefits to be derived from Lake Erie and its shore are dependent upon the continued improvement of water quality in coastal area waters.

- The shoreline is a finite resource.

- Multiple use of the resource as a whole is inherently in the public interest.

- Competition for use of shoreline areas and coastal waters is increasing.

- Limitations on government revenues require more examination of user fees and public/private partnership initiatives.

With the above assumptions in mind, the State of Ohio's policies have been organized and prioritized with continued input from the general public, local jurisdictions, state, federal and regional agencies, independent organizations and public and special interest groups. As a result, ODNR has identified the following priority coastal management issues, not in order of priority:

- **Water resources and watersheds.**

- **Coastal land use and development.**

- **Coastal habitat, wetlands and natural areas.**

- **Coastal flooding and erosion.**

- **Recreational opportunities.**

- **Fisheries and wildlife resources**.

Activities at the state and local level directed toward accomplishing the above-stated ends will be of highest priority for funding under OCMP administration funding.

Organization of this Chapter

This chapter presents the coastal management policies that address the above-listed priority issues and additional policies organized in the same way under major issue topics. Each topic is introduced by a brief summary of concerns regarding the issue. Specific policies for achieving the coastal management objectives related to the issue are described.

The framework for implementation and the authorities responsible for such implementation are outlined in the text that follows each list of policies under the heading: Authorities and Administration. All policies document existing statutory authority, current governmental programs or established state policy. Additional information regarding coastal area resources, the boundaries of the coastal area, policies, rules and other details of the coastal management program are found in Volume II, Appendices.

In the OCMP, policies are classified as enforceable and enhancement policies as follows:

1. An enforceable policy is regulatory and legally binding. It mandates that certain requirements be satisfied prior to the initiation of a specific activity in the coastal region. Such a policy has statutory authority based upon provisions of the Ohio Revised Code. Enforceable policies are binding for federal consistency purposes, pursuant to Section 307 of the CZMA. Enforceable policies are underlined in the text of this chapter and are followed by the appropriate Revised Code citation in parentheses.

2. An enhancement policy provides guidance or preferences regarding certain activities, but is not legally binding. It may be a formal state policy or recommendation, or statute with discretionary authority.

Taken together, these two types of policies offer a clear view of the content of the OCMP. They specifically show who will be affected by the OCMP, in what fashion and when. The policies provide a clear sense of direction and predictability for decision makers who must address coastal issues in their daily work.

COASTAL EROSION AND FLOODING

Uses Subject to Management

- Construction or redevelopment of permanent structures in Lake Erie coastal erosion areas.
- Construction of erosion control structures.
- Development in coastal and riverine flood hazard areas.
- Construction of dams, dikes and levees for flood control.

Erosion

Erosion along the Ohio shore of Lake Erie is a serious problem, requiring increased attention and effective action by the state. Each year, nearly 1.6 million tons of material is eroded along Ohio's lakeshore, with significant and far-reaching implications for public safety, health and welfare. Record-high lake levels in the early 1970s and again in the mid 1980s caused extensive damage to residential, commercial, industrial and agricultural property. Beaches were inundated by high lake levels and eroded by waves, leaving structurally unprotected bluffs more vulnerable to wave erosion. Erosion of dikes and barrier beaches exacerbated wetland loss, negatively affecting coastal wildlife populations, overall water quality and the natural capacity of the environment to absorb flood waters.

Of the estimated 1.6 million tons of material eroded along the shore each year, only about 20 percent is sand-sized sediment that remains along the shoreline. The remainder is fine-grained sediment that disperses in the lake, increasing water turbidity and sedimentation rates. Increased turbidity reduces recreational opportunities and increases treatment costs for public water supplies. Increased sedimentation disrupts valuable aquatic habitats, hurting fishery resources and the commercial and recreational fishing industries they support.

The effects of erosion on the Ohio shore of Lake Erie have been documented by the Division of Geological Survey. Field studies examined the modern physical setting (e.g., shore stratigraphy, shore relief, shore orientation, beach width, nearshore slopes, nearshore sediment, wave climate) and cultural setting (e.g., land use, shore protection structures) that influence the rate of shore erosion and recession, both temporally and geographically. Historical charts and aerial photographs document temporal changes in the physical and cultural settings.

A century ago, sand beaches fronted most reaches of the Ohio shore of Lake Erie. Along the high-bluffed shore east of Cleveland, the beach was used as a roadway by settlers coming to Ohio. Today, many beaches have been eroded. Where beaches remain, they are narrow and segmented and provide little natural protection from erosion. In their place are numerous (approximately 4,000) erosion control structures built to protect urban development.

The shore of Lake Erie varies considerably in relief and composition. Eastward from Toledo to Huron, the shore consists of low-relief clay banks, sandy barrier beaches, or armor-stone dikes, except for the rock-bound shore in the Marblehead-Catawba Island area. From Huron to Conneaut, the shore consists of 20-to 65-foot-high bluffs of till and/or bedrock. Easily eroded materials (sand, clay and till) make up about 75 percent of the Ohio lakeshore.

The two principal erosion processes are wave erosion and mass wasting (Carter, Benson and Guy, 1981; Carter and Guy, 1988). Most wave erosion occurs during spring and fall storms, when the greatest amount of wave energy is expended along the shore. The amount of mass wasting of the upper bluff material is largely dependent upon the frequency and amount of wave erosion at the bluff toe. As the bluff toe erodes, the profile steepens, inducing mass wasting in the upper bluff.

Although much of the Ohio lakeshore is composed of materials easily eroded by waves, erosion rates vary over time and from place to place. Natural factors such as shore composition, beach distribution, nearshore depths, storm frequency, lake level and shoreline orientation contribute to these variations. Man-made erosion control structures and offshore disposal of sand dredged from harbors also contribute to these variations and often aggravate existing or create new erosion problems.

The OCMP recognizes that along some reaches, erosion control structures have slowed erosion with minimal apparent adverse impact, while along many other reaches, armoring the shore has been detrimental. Despite adverse impacts associated with some erosion control structures they are an integral part of the Ohio lakeshore. Without them, many of the buildings located near the bluff edge would now face an even greater threat from erosion. The OCMP promotes proper design of new erosion protection structures and recognizes the benefits of nonstructural erosion control measures and combinations of structural and nonstructural measures. Recognizing the merits of nonstructural erosion control measures, Ohio has selected five shoreline properties "otherwise protected" by public ownership as additions to the federal Coastal Barrier Resources System (CBRS), thereby protecting the existing natural barriers and the adjoining aquatic and upland habitats. This brings to 10 the number of units in the CBRS. The "otherwise protected" areas are Sheldon Marsh, Old Woman Creek, Kelleys Island North Pond, Mentor Marsh/Headland Dunes and Arcola Creek. These areas will help demonstrate the value of natural barriers and nonstructural shoreline stabilization measures designed to mimic, enhance or restore natural stabilization systems.

For many years, numerous agencies, organizations and experts have warned that continued exposure of public and private investments to the risk of natural hazards, including coastal erosion, has widespread deleterious impacts upon state, local and national economies. Despite erosion and flooding risks, more than 85 percent of Ohio's shorelands are developed, and development is expected to continue.

Erosion-related damages on the Great Lakes were estimated at $290 million in 1985 and 1986 (DeCooke) and at $9 million in 1985 in Lake County, Ohio. Losses cited by the Lake County Planning Commission include loss of real estate structures, real estate value, private protection

expenditures, public protection expenditures and loss of real estate tax revenues, all typical losses suffered by the public and by private individuals when development is exposed to erosion risks.

Without exception, those who warned of the consequences have repeatedly urged that the most effective and fiscally responsible means to ameliorate losses to public and private investment is to encourage the location of development out of harm's way. Guiding development outside risk areas reduces costs to the general public through higher insurance premiums, direct emergency reimbursements or low-cost loans for damages, and replacement of public infrastructure.

Under the OCMP, identification of Lake Erie coastal erosion areas and control of new permanent structures through state or local permits will improve decisions by shoreland property owners and developers (see Policy 1). The coastal erosion area program will reduce property damage through hazard avoidance. In addition, proposed erosion control measures will be reviewed to help ensure their effectiveness and to eliminate or minimize potential adverse impacts on coastal processes and the adjacent lakeshore (see criteria under Policies 1 and 2). And lastly, by designating units of the federal Coastal Barrier Resources System as Special Management Areas (see Chapter 6) the OCMP is promoting the protection of other natural features along the coast and promoting the use of nonstructural measures for erosion control where practicable.

Erosion is a natural process that never will be eliminated entirely. Despite the obvious hazards and the knowledge of potential for erosion, construction has continued within known high-risk erosion areas. Erosion control structures are not feasible or cost effective in some areas along the shoreline. Other management approaches involving building and zoning regulations must be considered. Basic coastal erosion area information must be provided to developers and potential shorefront owners. More importantly, they must use such information to make intelligent decisions. Increased efforts are needed to provide this information and to offer management assistance. Pursuant to Ohio's Coastal Management Act of 1988, preliminary maps identifying land anticipated to be lost to erosion over a 30-year period have been distributed to local jurisdictions for public inspection. Coastal erosion areas were identified according to uniform and well-established scientific protocol, in accordance with administrative rules adopted in 1991 and substantively amended in 1996. A permit for construction, erection or redevelopment of any permanent structure within a coastal erosion area will be required in accordance with the Coastal Management Act. Construction will be allowed within such areas with provision for effective erosion control measures. The expected outcome is to encourage wiser choices regarding development in coastal erosion areas, creating an incentive to develop further from the shore.

Flooding

The destructive capacity of lake and riverine flooding in Ohio's Lake Erie coastal area has also been observed and documented. A 1977 ODNR report, *Coastal Hazards: Erosion, Recession and Flooding*, outlines the causes and effects of flooding and describes the critical nature of the area where lake and riverine flood waters meet. Previous studies have detailed the results and damages from particular occurrences on a localized basis. In addition, the U.S. Geological Survey in 1974 prepared a series of maps of flood prone areas for the entire Ohio Lake Erie basin at the request of

the 89th Congress as expressed in House Document 465. These maps are on file with the U.S. Geological Survey and ODNR's Division of Water. The U.S. Army Corps of Engineers prepared a *Report on Great Lakes Open-Coast Flood Levels* in 1977 and a *Revised Report on Great Lakes Open-Coast Flood Levels* in 1988. Both studies were prepared for the Federal Emergency Management Agency (FEMA), which, in administering the National Flood Insurance Program (NFIP), provides detailed flood hazard information to all designated and participating communities.

While the areas subject to flooding are reasonably well known, the timing and occurrence of such flooding along the lake is highly unpredictable, often resulting from sudden storms and short-term fluctuations in barometric pressure. More predictable flooding along rivers and streams takes place in the spring when rainfall and snowmelt occur, the ground is either saturated or frozen, and runoff is high. Ice jams also compound the flooding problem at these times.

In the late 1960s, direct flood damages in Ohio averaged $20 - $25 million annually. Today, annual damages have escalated to more than $100 million and are expected to rise even further. Again, despite the availability of data that recommends the contrary, development has continued to occur on Lake Erie's flood hazard areas. One reason for this is that many people mistakenly believe that federal expenditures on flood control devices have eliminated the possibility of severe flood damages. Although such structures have prevented some damage, they cannot offer complete protection against all floods. Furthermore, the federal government will not finance projects that cost more to build than the value of properties they are designed to protect. Flood damages also increase when flood protection structures interfere with the free flow of water. Water backs up or is diverted onto properties that were previously flood free. Paved and built-over areas and the loss of natural protective systems like wetlands compound flooding by concentrating rainwater runoff that results in an increase in floodwaters.

The shortcomings of a flood protection policy based solely upon physical structures have become apparent. The current trend is to focus on nonstructural alternatives such as floodplain regulations, flood proofing, wetland preservation, stream management and public acquisition of floodplain lands. Although such strategies can reduce potential flood damages, they are often difficult to implement. This difficulty is primarily due to a confusing combination of building codes, zoning regulations and NFIP Standards that, at times, contradict one another and result in enforcement problems. Public administrators have lacked a unified management plan that coordinates the various activities of agencies with responsibilities pertaining to floodplain management.

POLICY 1 – LAKE ERIE COASTAL EROSION AREA MANAGEMENT

IT IS THE POLICY OF THE STATE OF OHIO TO MINIMIZE THREATS TO HUMAN SAFETY AND PROPERTY DUE TO LAKE ERIE-RELATED EROSION WHILE PROTECTING THE FUNCTIONS OF NATURAL SHORE FEATURES BY:

A. DELINEATING THE BOUNDARIES OF LAKE ERIE COASTAL EROSION AREAS (O.R.C. 1506.06 AND O.A.C. 1501:6-10 THROUGH 1501:6-13);

B. ADMINISTERING AND ENFORCING A PERMIT PROGRAM FOR CONSTRUCTION ACTIVITIES IN LAKE ERIE COASTAL EROSION AREAS (O.R.C. 1506.07, O.A.C. 1501:6-21 THROUGH 1501:6-28);

C. REQUIRING OWNERS OF PROPERTY IN LAKE ERIE COASTAL EROSION AREAS TO NOTIFY BUYERS OF THE LAND'S STATUS PRIOR TO ANY TRANSACTION (O.R.C. 1506.06(F)); AND

D. ENCOURAGE STRATEGIC RETREAT WHERE NATURAL FUNCTIONS OF BLUFFS, DUNES AND COASTAL BARRIERS CAN BE MAINTAINED EFFECTIVELY AND SELECTIVE FORTIFICATION TO PROTECT EXISTING DEVELOPMENT VULNERABLE TO LONG-TERM RAPID EROSION.

Authorities and Administration

Pursuant to O.R.C. 1506.06 and 1506.07, ODNR will administer a permit system for construction, erection and redevelopment of permanent structures within Lake Erie coastal erosion areas. The purpose of this management approach is to promote wise decision making with respect to the location of permanent structures and thereby reduce risk and loss to private property, public infrastructure and natural protective features. It is intended that property owners will increasingly choose to locate structures outside coastal erosion areas as a result of this action. In cases where construction does occur within the coastal erosion areas, protection measures consistent with OCMP policies and review criteria will be provided.

The management strategy entails two components authorized by the Ohio Coastal Management Law: (1) identification of Lake Erie coastal erosion areas (O.R.C. 1506.06) and (2) administration of the permit program within those areas (O.R.C. 1506.07). Policies 1.A. and 1.B. below set forth the authorities as they will exist during program implementation. ODNR made a final identification of coastal erosion areas in 1998. The Lake Erie shoreline will be reviewed again within 10 years to reassess and update the designated coastal erosion areas.

Based on the preliminary identification of Lake Erie coastal erosion areas released September 30, 1996, the extent of coastal erosion areas in each county is estimated to be as follows: Lucas - 7 miles, Ottawa - 24 miles, Sandusky - 4 miles, Erie - 17 miles, Lorain - 14 miles, Cuyahoga - 12 miles, Lake - 24 miles, Ashtabula - 21 miles. Approximately 55 percent of the Ohio mainland

coastline was preliminarily designated within preliminary Lake Erie coastal erosion areas. These numbers may change in response to objections filed by lakefront property owners.

A. To minimize erosion damages, ODNR was directed to identify coastal erosion areas on Lake Erie (O.R.C. 1506.06). These areas represent the land likely to be lost to shore erosion within the next 30 years if no additional approved erosion control measures are implemented. The delineation of coastal erosion areas is based upon scientific analysis of shore recession conducted by ODNR's Division of Geological Survey. The methodology was developed based upon many years of experience dealing with coastal erosion along Lake Erie and consultation with the public, local authorities and the coastal programs of other Great Lakes states. An external working group assisted with revisions to the rules in 1995. The rules governing the identification of Lake Erie coastal erosion areas are contained in O.A.C. 1501:6-10 through 1501:6-13 (see Appendix G). The mapping and tabulation of data for the preliminary identification of coastal erosion areas were completed according to the procedures described in those administrative rules. Shoreland property owners and local governments were notified that property or territory may lie in a coastal erosion area, in accordance with the procedures discussed above.

B. Construction, erection or redevelopment of any permanent structure within a coastal erosion area requires a permit from the Director of ODNR (O.R.C. 1506.07). A permanent structure is defined as any residential, commercial, industrial, institutional or agricultural building, any manufactured home as defined in O.R.C. 4501.01, or any addition to such a structure if it exceeds 500 square feet at ground level, and any septic system that receives sewage from a single-family, two-family, or three-family dwelling. Recreational vehicles as defined in O.R.C. 4501.01 are not included (O.A.C. 1501-6-21). Final rules for enforcing the permit system in Lake Erie coastal erosion areas are included in Appendix H. These rules were officially filed with the Joint Committee on Agency Rule Review (JCARR) in July, 1995 and refiled by ODNR in final form in June, 1996.

   Permits will be issued only when the site is or will be protected by an effective erosion control measure – structural, nonstructural or a combination of the two – that is approved by the Director OR if the following criteria are met:

   1. The permanent structure will be movable or will be situated as far landward as applicable zoning resolutions or ordinances permit; and

   2. The applicant will suffer exceptional hardship if the authorization is not given.

   As indicated above, a person may seek authorization to build or redevelop within a coastal erosion area by installing an effective erosion control measure to protect the proposed new permanent structure or by demonstrating that existing erosion control measures will be effective. ODNR will assess whether any proposed erosion control measures are effective in protecting the permanent structure without causing or contributing to unacceptable adverse

effects on the shore, littoral zone or coastal processes. Erosion control measures will be evaluated in terms of the following, as specified in O.A.C. 1501-6-24:

- Potential individual or cumulative impact, including any adverse effects on sand resources and coastal processes;
- Potential for accelerating erosion along the adjacent shoreline;
- Stability of the existing or proposed slope;
- The effectiveness of existing erosion control measures at the proposed site and along the adjacent shoreline;
- The integrity of the existing or proposed erosion control measure, its appurtenances and its component materials; and
- The effectiveness of proposed structural and/or nonstructural measures to protect the permanent structure.

Each permit application must be reviewed on its own merits. Potential applicants are encouraged to initiate preapplication consultation by contacting ODNR's Office of Coastal Management.

Erosion control measures typically require a permit from the State of Ohio under O.R.C. 1521.22, a permit from the U.S. Army Corps of Engineers (COE) pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, and a Section 401 Water Quality Certification from Ohio EPA under O.R.C. 6111.03(O) and 6111.03(P). In addition, a submerged lands lease is required from the State of Ohio if any erosion control measure extends into the waters or onto the lands underlying the waters of Lake Erie (O.R.C. 1506.11 and O.A.C. 1501-6-1 through 1501-6-6). Therefore, a variety of factors, in addition to those noted above, are also considered during comprehensive and coordinated review by ODNR and Ohio EPA. These include, but are not limited to, impacts on water quality, fish and wildlife, and public uses such as navigation, water commerce and recreation. See Policy 12 Wetlands and Appendix K for a detailed description of the relevant criteria and coordinated review process with respect to Section 10/404 Permits and Section 401 Water Quality Certifications. See Policy 16 Public Trust Lands and Appendix L for details regarding protection of the public trust during review of proposed structures.

(NOTE: ODNR's comprehensive review of any proposed activity that is subject to a permit requirement as described in Policy 2 [O.R.C. 1521.22] will incorporate evaluation of the first five factors described above, whether or not the structure is proposed to protect a new permanent structure.)

Any construction activities within a Lake Erie coastal erosion area may be stopped by director's order if they are found to be in violation of O.R.C. 1506.07. Unauthorized construction activities are subject to a civil penalty (O.R.C. 1506.09) or a fine (O.R.C. 1506.99).

The law allows municipal corporations and counties to adopt coastal erosion area ordinances and resolutions. ODNR can provide model zoning regulations to assist local jurisdictions in the adoption of coastal erosion area ordinances or resolutions. Counties are authorized to enact coastal erosion areas standards as part of the local building code by O.R.C. 307.37. A permit from ODNR's director "is not required within the territory of any county or municipal corporation that has adopted and is enforcing a Lake Erie coastal erosion area resolution or ordinance within its zoning or building regulations if the resolution or ordinance has been reviewed by the Director . . . and meets or exceeds the standards established under division (B) of this section" (O.R.C. 1506.07(c)(1)).

If local controls are approved by the Director of ODNR as meeting or exceeding standards established by ODNR (O.A.C. 1501:6-21 through 28), then the county or municipality will be the permitting authority for construction projects in the coastal erosion areas. The Director of ODNR retains the authority to review the local implementation and enforcement of local standards every two years. If the director determines that the local standards are inadequately enforced, permitting authority reverts back to ODNR for the territory of the affected county or municipal corporation.

Even with local implementation of coastal erosion area regulations, a landowner will still be required to apply for a permit from the Corps of Engineers and ODNR for the construction of any erosion control structures on Lake Erie. The OCMP has developed a consolidated permit application form and procedure so that an applicant may submit one application package to ODNR to obtain ODNR approvals.

C. No residential property owner who has been informed that his or her holdings are located in a coastal erosion area shall sell or transfer any interest in the property without providing written notice to the purchaser or grantee explaining that the land is included in a coastal erosion area (O.R.C. 1506.06(F)). Such notice is to be provided on the property disclosure form for transfer of residential real property, in accordance with O.R.C. 5302.30.

D. Ohio's Lake Erie shore is highly developed, and the realities of significant preexisting economic investment must be recognized. In coastal erosion areas where the existing level of development is substantial, continued stabilization may be prudent to protect life and property. ODNR will focus its funding efforts (see Policy 5) upon appropriate comprehensive projects in such areas, if a demonstrated statewide or regional public benefit will result. Where practicable and advantageous, ODNR encourages the use of nonstructural techniques in conjunction with or instead of structural controls. Within areas where it would be more effective to maintain the natural functions of beaches, dunes, bluffs and littoral zones, or where construction would measurably increase erosion elsewhere, construction and related shore protection will be discouraged and relocation facilitated. In its administration of its authorities, and in the provision of financial and technical assistance for erosion control projects and coastal erosion management, ODNR will emphasize and encourage strategic retreat and selective fortification.

POLICY 2 – SHORE EROSION CONTROL

IT IS THE POLICY OF THE STATE OF OHIO TO PROMOTE SOUND DECISIONS REGARDING CONTROL OF SHORE EROSION BY:

A. ISSUING PERMITS FOR CONSTRUCTION OF SHORELINE EROSION CONTROL STRUCTURES (O.R.C. 1521.22);

B. PROVIDING TECHNICAL ASSISTANCE TO THE PUBLIC ON SHORELINE EROSION CONTROL STRUCTURES (O.R.C. 1521.29); AND

C. DEVELOPING A PLAN FOR THE CONTROL OF SHORE EROSION AND MAKING THE PLAN AVAILABLE TO THE PUBLIC (O.R.C. 1521.29).

Authorities and Administration

A. Any person planning to construct a beach, groin or other structure that will arrest or control erosion, wave action or inundation along or near the Ohio shore of Lake Erie must first submit plans and specifications to ODNR for review in accordance with O.R.C. 1521.22. Plans and specifications for erosion control structures along or near the shore will be reviewed in accordance with coastal engineering standards specific to the proposed structure. A permit to construct the structure will be issued by ODNR if the proposed structure will comply with applicable laws and rules; is consistent with the policies of the Ohio Coastal Management Program, and is of sound coastal engineering design. Administrative rules for the administration, implementation and enforcement of this authority will be developed and adopted as needed by ODNR.

   A submerged lands lease is required if the proposed shoreline erosion control structure will extend into the waters or onto the lands underlying the waters of Lake Erie (O.R.C. 1506.11 and O.A.C. 1501-6-1 through 1501-6-06). In addition, a U.S. Army Corps of Engineers Section 10/404 permit and Ohio EPA Section 401 Water Quality Certification normally are required. Because these authorizations are also required for construction in Lake Erie, factors in addition to sound coastal engineering design are considered during comprehensive and coordinated review by ODNR and Ohio EPA. These factors include, but are not limited to, impact on water quality, fish and wildlife, fish and wildlife habitat, and public uses such as navigation, water commerce and recreation. See Policy 12 Wetlands and Appendix K for a detailed description of the relevant criteria and coordinated review process with respect to Section 10/404 Permits and Section 401 Water Quality Certifications. See Policy 16 Public Trust Lands and Appendix L for details regarding protection of the public trust.

B. ODNR encourages property owners to spend ample time and effort in the initial planning phase of a shoreline erosion control project. Consideration should be given to all potential means to control shore erosion, including nonstructural and structural measures and a combination of both. Design of a shoreline erosion control project must be based on the site-specific conditions, the desired level of erosion protection, and the effects of the project on the regional shore area. Consideration also should be given to the design and construction of coordinated

erosion control projects among adjacent property owners. Properly designed and coordinated shoreline erosion control projects have the potential to be more effective, less disruptive to natural processes and less costly than individual projects.

C. The Chief of the Division of Water of ODNR, in cooperation with the Division of Geological Survey, is authorized by O.R.C. 1521.29 to prepare a shore erosion prevention plan and to develop a program to provide technical assistance to the public. The Division of Geological Survey publishes and updates reports on Lake Erie shore erosion and flooding. These reports contain technical data on physical setting, coastal processes and shore recession, and general recommendations on shore protection. The Chief of the Division of Water and the Division of Geological Survey shall work collectively to prepare a shore erosion prevention plan and develop a program to provide technical assistance to the public.

POLICY 3 – FLOODPLAIN MANAGEMENT

IT IS THE POLICY OF THE STATE OF OHIO TO MINIMIZE FUTURE FLOOD DAMAGES AND PREVENT POTENTIAL LOSS TO EXISTING DEVELOPMENT IN COASTAL FLOODPLAINS BY:

A. REQUIRING ALL COUNTIES AND MUNICIPALITIES WITH COASTAL FLOOD HAZARD AREAS TO PARTICIPATE IN THE NATIONAL FLOOD INSURANCE PROGRAM OR TO ADOPT ORDINANCES MEETING OR EXCEEDING PROGRAM STANDARDS (O.R.C. 1506.04 AND O.A.C. 1501:22-1-01 THROUGH 1501:22-1-08);

B. REQUIRING THAT ANY STATE FUNDED OR FINANCED DEVELOPMENT LOCATED WITHIN THE 100-YEAR FLOODPLAIN COMPLY WITH THE FLOODPLAIN MANAGEMENT CRITERIA OF THE NATIONAL FLOOD INSURANCE PROGRAM. ANY STATE AGENCY HAVING REGULATORY JURISDICTION THAT PREEMPTS THE AUTHORITY OF POLITICAL SUBDIVISIONS TO REGULATE DEVELOPMENT IN FLOODPLAINS SHALL ENSURE THAT BEFORE GRANTING A LICENSE, PERMIT, OR OTHER AUTHORIZATION, THE DEVELOPMENT COMPLIES WITH THE NATIONAL FLOOD INSURANCE PROGRAM CRITERIA (O.R.C. 1521.14);

C. REQUIRING THAT NO STATE FINANCIAL ASSISTANCE IN CONNECTION WITH A FLOOD DISASTER SHALL BE DISBURSED TO OR WITHIN ANY COUNTY OR MUNICIPALITY THAT DOES NOT COMPLY WITH THE FLOODPLAIN MANAGEMENT CRITERIA OF THE NATIONAL FLOOD INSURANCE PROGRAM (O.R.C. 1521.14); AND

D. REQUIRING THAT ALL STATE AGENCY AND POLITICAL SUBDIVISIONS, PRIOR TO EXPENDITURE OF FUNDS FOR CONSTRUCTION OF BUILDINGS, STRUCTURES, ROADS, BRIDGES, OR OTHER FACILITIES IN LOCATIONS THAT MAY BE SUBJECT TO FLOODING OR FLOOD DAMAGE, NOTIFY AND CONSULT WITH THE DIVISION OF WATER AND SHALL FURNISH SUCH INFORMATION AS THE DIVISION MAY REASONABLY REQUIRE IN ORDER TO AVOID THE UNECONOMIC, HAZARDOUS OR UNNECESSARY USE OF FLOODPLAINS IN CONNECTION WITH SUCH FACILITIES (O.R.C. 1521.14).

Authorities and Administration

A. O.R.C. 1506.04 mandates that all communities with coastal flood hazard areas designated under the Flood Disaster Protection Act of 1973 (P.L. 93-234) must either participate in the NFIP or enact regulations that meet or exceed the standards required for such participation (O.R.C. 1506.04). These standards are set forth in O.A.C. 1501:22-1-01 through -08 (see Appendix I). The law further states that, if the Director of ODNR determines that a county or municipality is in violation of this requirement, the director may request that the Attorney General bring an action for appropriate relief against the noncompliant community. The director may also

request that an action be brought against any developer conducting a development activity in a designated flood hazard area within a county or municipal jurisdiction not in compliance with O.R.C. 1506.04. Table 1 lists all communities in the coastal area with such identified floodplain areas and indicates their participation in the NFIP. All Ohio coastal area communities with identified floodplain areas either participate in the NFIP, or have adopted floodplain management ordinances which comply with the standards of that program.

Nonparticipation in the NFIP results in restrictions on federal or federally related financing within the flood hazard areas. Most importantly, nonparticipating community residents will not be eligible to purchase flood insurance, no federal grants or loans for buildings within flood hazard areas will be made and most forms of federal disaster assistance will not be available following flood disasters. ODNR is the designated state agency responsible for coordinating floodplain management activities with federal, state and local governments (O.R.C. 1521.03(C) and (D)). Local communities will be given assistance in developing acceptable floodplain management regulations by the ODNR's Division of Water.

Local governments may grant variances to their floodplain regulations only when the strict enforcement of such regulations due to physical conditions of the land would cause undue hardship for landowners. Requests for relief from local floodplain regulations must be made to the locally designated variance body. Variances granted by local governmental units must conform to state law and the intent of federal laws and programs, including the NFIP where applicable.

B. State agencies that undertake, fund or finance developments located in floodplain areas must ensure that such projects or activities are consistent with the NFIP standards (O.R.C. 1521.14). This requirement extends to activities permitted by state agencies where state law preempts local governments from setting flood damage prevention standards. O.R.C. 1521.14 further stipulates that the state develop flood damage reduction standards that shall be consistent with the floodplain management criteria of the NFIP. ODNR provides technical assistance and guidance to state agencies to ensure that such projects meet these criteria. The Director of ODNR may request the Attorney General to bring civil action for injunctive relief against any state agency that violates the statute (O.R.C. 1521.14).

C. O.R.C. 1521.14 requires that state disaster funds in connection with a flood be withheld from a "noncompliant" community until the community takes action to establish or re-establish compliance. A community is considered "noncompliant" if it either does not participate in the NFIP or has not adopted local floodplain regulations that are consistent with that program. All Ohio coastal communities are listed as compliant by the State of Ohio.

D. As provided in O.R.C. 1521.14, all departments and agencies of the state, and local governmental units, prior to expenditure of funds for, or construction of buildings, structures, roads, bridges or other facilities in locations that may flood, shall notify and consult with the Division of Water to avoid unwise floodplain use. Recommended Division of Water floodplain regulation criteria are based on a 100-year level of flood protection for most developments. However, certain critical developments, which if flooded would create an added dimension to a potential flood disaster, need to be protected to the 500-year flood.

TABLE 1

Table 1 has been removed so that outdated information is not provided to readers of this Document. In order to view the most complete and accurate list of communities participating in the National Flood Insurance Program, please visit the ODNR Division of Water's website at www.ohiodnr.com/water.

POLICY 4 – FLOOD PROTECTION AND MITIGATION

IT IS THE POLICY OF THE STATE OF OHIO TO PROMOTE EFFECTIVE FLOOD PROTECTION BY:

A. REGULATING THE DESIGN AND CONSTRUCTION OF DAMS, DIKES AND LEVEES, AND INSPECTING THEIR USE AND OPERATION (O.R.C. 1521.06 et seq.);

B. CONDUCTING DETAILED STUDIES AND INVESTIGATIONS OF ALL FACTORS RELATING TO FLOODS AND FLOOD PROTECTION;

C. ESTABLISHING CONSERVANCY DISTRICTS WHERE LOCALLY DESIRED; AND

D. PROMOTING THE PROTECTION AND RESTORATION OF WETLANDS FOR FLOODWATER STORAGE.

Authorities and Administration

A. The Chief of the Division of Water in ODNR requires construction permits for new dams, dikes and levees and makes periodic inspections of existing dams, dikes and levees pursuant to O.R.C. 1521.06 et seq. While the construction, permitting and inspection authorities include flood protection structures, the law applies to all types of dams, dikes and levees, regardless of purpose.

   All dams, dikes and levees constructed in Ohio and not exempted by O.R.C. 1521.062 or the Chief of the Division of Water shall be inspected periodically to assure that continued operation and use of the dam, dike or levee does not constitute a hazard to life, health or property (O.R.C. 1521.062). The chief shall order the owner of the dam, dike or levee to perform repairs or other measures necessary to safeguard life, health or property. Owners of dams, dikes and levees subject to O.R.C. 1521.062 are required to secure approval of plans to repair, improve, alter or remove a dam, dike or levee.

B. ODNR's Division of Water is authorized to conduct detailed studies and investigations of all factors relating to flood and flood protection in the state as funds are appropriated; and to cooperate with the U.S. government and with any political subdivision of the state in planning and constructing flood protection works (O.R.C. 1521.03).

C. Conservancy districts can be established along the shoreline for the purpose of constructing flood protection measures. A conservancy district is a political subdivision formed in accordance with O.R.C. 6101.05 by local landowners to address a common water and/or erosion problem. Once formed, a conservancy district is a political subdivision of the state; however, affected lands remain under private ownership unless actually purchased by the district for project development or maintenance purposes.

D. An important function of wetlands is the temporary storage of floodwater and a resulting reduction in peak flows. Therefore, protection and restoration of wetlands is a desirable nonstructural approach to lessening the dangers and damages of flooding. The State of Ohio is committed to protecting and enhancing existing wetlands, restoring degraded wetlands and developing new ones. The OCMP uses a variety of authorities and mechanisms to accomplish wetland preservation, as discussed in Policy 12.

POLICY 5 – SHORE EROSION AND FLOOD HAZARD MITIGATION ASSISTANCE

IT IS THE POLICY OF THE STATE OF OHIO TO ASSIST LAKE ERIE COASTAL COMMUNITIES EXPERIENCING FLOODING AND SHORE EROSION PROBLEMS TO MINIMIZE FUTURE DAMAGES BY:

A. ADMINISTERING FUNDS FOR PROTECTION OF LAKE ERIE SHORES AND WATERS (O.R.C. 1521.23); AND

B. PROVIDING TECHNICAL INFORMATION AND ASSISTANCE FOR ADDRESSING EROSION AND FLOOD HAZARD CONCERNS (O.R.C. 1521.29 AND 1521.13).

Authorities and Administration

A. ODNR administers the state permit and lease fund that consists of monies derived from the granting of permits and leases under O.R.C. 1505.07 for the removal of sand, gravel, stone, gas, oil and other substances from and from under the bed of Lake Erie and from applications for construction permits submitted under O.R.C. 1521.22 (O.R.C. 1521.23). The department administers the fund for, among other purposes, protection of Lake Erie shores and waters, the investigation and prevention of erosion. Funds may be used to partially fund erosion protection projects. ODNR may enter into agreements with counties, municipal corporations, townships, park boards and conservancy districts or any other state departments or divisions for the purpose of protecting publicly owned littoral property by constructing and maintaining projects to prevent, correct and arrest erosion along the shore of Lake Erie and in any rivers that are connected with the lake, and any other watercourses that flow into the lake (O.R.C. 1521.24).

The state also may provide financial assistance for the construction of conservation works of improvement for flood and erosion projects. The Director of ODNR, upon recommendation by the Ohio Soil and Water Conservation Commission, is authorized to enter into agreements with boards of county commissioners to cost-share in improvements constructed by the county for a soil and water conservation district. The state share shall be paid from funds appropriated for such purposes and shall not exceed 50 percent of the nonfederal cost of the project (O.R.C. 1515.16).

ODNR coordinates the state role in the U.S. Natural Resources Conservation Service P.L. 83-566 Watershed Program (16 U.S.C. 1001 et seq.), which provides assistance to local communities, agencies and landowners in the planning and development of adequate flood control, storage and farm land drainage projects. The state may provide technical assistance to aid local agencies in meeting nonfederal obligations (O.R.C. 1521.03).

B. Technical information and assistance is available from several sources. ODNR's Division of Water provides public information on flooding and flood mitigation; coordinates determinations of community eligibility for NFIP; and directs communities and homeowners to other available sources of assistance. ODNR administers a technical assistance program on shore erosion protection for local governments and property owners (O.R.C. 1521.29). The Office of Coastal

Management provides technical information on the design of shore erosion control structures. The Division of Geological Survey provides site-specific information on geologic setting, geologic processes, shore recession rates and shore protection measures.

The Ohio Emergency Management Agency (OEMA) is responsible for disaster preparedness, operations and recovery. The agency provides local governments with assistance in designing emergency management plans and training programs and coordinating response to disasters with the FEMA and other state agencies. OEMA is also the lead on mitigation grants and planning for support of mitigation project funding.

The Ohio Sea Grant Program arranges workshops on site conditions and available options for real estate professionals, appraisers, coastal property owners and local government officials. Fact sheets have been developed on Lake Erie erosion topics. Additional technical assistance is available on coastal erosion causes, erosion abatement alternatives and homeowner options. Site visits are coordinated with groups of property owners.

WATER QUALITY

Uses Subject to Management

- Activities involving public water supplies, to ensure that a sufficient and safe public water supply is available for the population along Lake Erie.

- Activities involving any process, system, or practice that may be a source of water quality degradation.

- Activities causing nonpoint or diffuse source of water pollution.

- Activities addressed by Remedial Action Plans (RAPs) for Ohio's four International Joint Commission-designated Areas of Concern (AOCs), the Maumee, Black, Cuyahoga and Ashtabula Rivers.

- Activities affecting ground water.

One of the most serious problems that adversely affects the Ohio coastline is the pollution of Lake Erie and its tributaries. Water pollution has greatly accelerated the Lake's natural eutrophication process. Even without human interference, however, Lake Erie would be considerably more eutrophic than other Great Lakes due to its shallowness, relative warmth, and the high fertility of the surrounding basin's soils. The two factors of human activities and local, natural conditions, have resulted in a Lake Erie characterized by excessive plant nutrients, over-abundant plankton and algae populations, extensive areas with low levels of dissolved oxygen, areas with high quantities of toxic chemicals and diminished fisheries.

By the 1960s and early 1970s, water quality had become so poor that nearly the entire hypolimnion (lowermost layer of colder water in a thermally-stratified lake) of the central basin was devoid of oxygen during summer months. Massive algal blooms were common in the western basin. However, in recent years, the water quality of Lake Erie has improved. Almost all beaches have reopened, and fish populations are rebounding. Evidence documents that nutrient enrichment of the lake and oxygen depletion in the central basin have decreased. Algal blooms once prevalent in the western basin have been nonexistent in recent years. Since 1970, open lake phytoplankton abundance has decreased and species composition has shifted more toward that of mesotrophic lakes.

Toxics, however, remain a serious concern. Tumors have been found on fish in several of Lake Erie's tributaries. Although most Lake Erie fish pose no health risk for the majority of people, Maumee Bay catfish should not be eaten, and limitations on consumption of other species are advised. There are 42 sites in the Great Lakes basin designated as AOCs by the International Joint Commission (IJC). AOCs are specific areas that suffer from severe environmental degradation that has negatively impacted water quality and has limited beneficial uses of the area. Four such areas have been designated in Ohio: the lower reaches of the Maumee River, the Black River, the Cuyahoga River and the Ashtabula River.

Nutrient enrichment, particularly from phosphorus, presented a water quality problem needing specific attention. More than 78 percent of this nutrient originates from nonpoint sources such as agriculture, livestock waste, urban runoff, on-site disposal systems and the atmosphere. Sewage treatment plants are the second major source of phosphorus, contributing approximately 20 percent. High nutrient levels have far-reaching consequences, including foul-tasting drinking water and reduced fish populations. Sewage treatment facilities are being improved with expenditures of more than $1 billion in the Lake Erie basin. The goal of reducing the average phosphorus concentration of certain targeted municipal wastewater treatment facilities has nearly been achieved.

Many Lake Erie tributaries deliver heavy sediment loads to Lake Erie. ODNR estimates of sediment loads for Ohio's portion of Lake Erie indicate that roughly 2 million tons are derived annually from tributaries and 1.6 million tons from the shoreline. Fined-grained sediments from certain watersheds clog shipping channels, damage fish habitat, complicate water supply treatment, contribute to nutrient enrichment and adversely affect recreational use of the lake. In Ohio alone, the U. S. Army Corps of Engineers spends approximately $10 million annually to dredge an estimated 2 million cubic yards of sediments from the shipping channels and harbors of Lake Erie.

In 1972, Congress amended the Federal Water Pollution Control Act (FWPCA P.L. 92-500, 33 U.S.C. 1251 et seq., renamed the Clean Water Act in 1977), establishing as its objective the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. This includes the national goals of eliminating the discharge of pollutants into navigable waters; wherever attainable, achieving safe water quality levels for fish, shellfish, wildlife and recreational users, and eliminating the discharge of toxic pollutants in toxic amounts. Further, the governments of the United States and Canada entered into the Great Lakes Water Quality Agreement (GLWQA) in the same year. The agreement provides for the restoration and enhancement of water quality in the Great Lakes system. Similar to the FWPCA, the GLWQA and its subsequent revisions called for the prohibition of toxic discharges in toxic amounts and for the virtual elimination of the discharge of all persistent toxic substances. Inherent in both the FWPCA and the GLWQA was the development of coordinated planning processes, the development of best management practices and the utilization of the best available technologies for controlling pollution.

As required by the Great Lakes Water Quality Agreement and the Great Lakes Critical Programs Act of 1990 amending the Clean Water Act, a lake-wide management plan (LaMP) is being developed for Lake Erie. The main purpose of the LaMP is to assess and reduce the impacts and loadings of toxics into the lake, but it will address other sources of stress to Lake Erie as well. Some of these other issues include the impacts of exotic species, loss of habitat and nutrient dynamics.

Under the leadership of U.S. EPA and Environment Canada, Ohio, as the lead state, has been working with a binational group of state, federal and provincial agencies to develop the Lake Erie LaMP. The geographic boundaries will include the lake proper, nearshore, bays and river mouths. The institutional structure of the LaMP consists of a Management Committee (senior managers), a technical work group, public forum and several subcommittees to address specific issues. The LaMP is currently working to complete a beneficial use impairment assessment, calculate loads and potential sources of the Lake Erie critical pollutants, develop ecosystem objectives and promote and solicit public review and participation.

A Status Report highlighting the progress of the LaMP thus far is available in hard copy or on the Lake Erie LaMP web site. Most of the background support documents are also available on the web site. There are many programs that already focus on improving and restoring Lake Erie. The LaMP will work with the existing programs and identify the additional actions needed to restore all beneficial uses to the lake.

A beneficial use impairment assessment is currently under way to assess which of the 14 beneficial uses listed in the Great Lakes Water Quality Agreement are impaired. An initial LaMP report is scheduled for completion in March, 1997.

POLICY 6 – WATER QUALITY

IT IS THE POLICY OF THE STATE OF OHIO TO MAINTAIN AND IMPROVE THE QUALITY OF THE STATE'S COASTAL WATERS FOR THE PURPOSE OF PROTECTING THE PUBLIC HEALTH AND WELFARE AND TO ENABLE THE USE OF SUCH WATERS FOR PUBLIC WATER SUPPLY, INDUSTRIAL AND AGRICULTURAL NEEDS, AND PROPAGATION OF FISH, AQUATIC LIFE AND WILDLIFE BY:

I. ASSURING ATTAINMENT OF STATE WATER QUALITY STANDARDS AND OTHER WATER QUALITY RELATED REQUIREMENTS (O.A.C. 3745-1) THROUGH:

A. CONTROLLING DISCHARGES INTO WATERS OF THE STATE BY REQUIRING PERMITS TO CONSTRUCT FACILITIES AND BY ESTABLISHING AND ENFORCING EFFLUENT LIMITATIONS UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES, SECTION 402 CWA, O.R.C. 6111.03);

B. ADMINISTERING A PERMIT SYSTEM TO CONTROL INJECTION WELL DRILLING IN COMPLIANCE WITH THE "SAFE DRINKING WATER ACT" AND THE CWA (O.R.C. 6111.043 AND 6111.044);

C. REGULATING DISCHARGE OF DREDGE OR FILL MATERIAL INTO SURFACE WATERS INCLUDING WETLANDS IN ACCORDANCE WITH SECTION 401 OF THE CLEAN WATER ACT (O.R.C. 6111.03);

D. ESTABLISHING UNIFORM REGULATIONS REGARDING SOLID WASTE DISPOSAL SITES AND FACILITIES (O.R.C. 3734.02 AND 3734.05);

E. PROHIBITING THE SALE OR DISTRIBUTION FOR SALE OF PHOSPHORUS-CONTAINING HOUSEHOLD LAUNDRY DETERGENTS IN THE LAKE ERIE BASIN (O.R.C. 6111.10);

F. PREPARING A STATE WATER QUALITY MANAGEMENT PLAN TO ASSESS TECHNICAL NEEDS FOR POLLUTION CONTROL AND INSTITUTIONAL MECHANISMS TO ENFORCE CONTROLS (O.R.C. 6111.41 AND 6111.42); AND

G. ADMINISTERING A STATE REVOLVING LOAN FUND PROGRAM TO PROVIDE FINANCIAL ASSISTANCE FOR PUBLICLY OWNED WASTEWATER TREATMENT FACILITIES AND THE IMPLEMENTATION OF NONPOINT SOURCE POLLUTION MANAGEMENT PROGRAMS (O.R.C. 6111.03, 6111.036, 6111.037 AND 6121.03).

II. COORDINATING, THROUGH THE LAKE ERIE COMMISSION, STATE AND LOCAL POLICIES AND PROGRAMS PERTAINING TO LAKE ERIE WATER QUALITY; REVIEWING, AND MAKING RECOMMENDATIONS CONCERNING, THE DEVELOPMENT AND IMPLEMENTATION OF POLICIES, PROGRAMS AND ISSUES FOR LONG-TERM, COMPREHENSIVE PROTECTION OF LAKE ERIE WATER RESOURCES AND WATER QUALITY THAT ARE CONSISTENT WITH THE GREAT LAKES WATER QUALITY AGREEMENT AND GREAT LAKES TOXIC SUBSTANCES CONTROL AGREEMENT (O.R.C. 1506.21).

III. USING THE LAKE ERIE PROTECTION FUND (LEPF) TO ESTABLISH A FIRM SCIENTIFIC BASE FOR IMPLEMENTING A BASINWIDE SYSTEM OF WATER QUALITY MANAGEMENT FOR LAKE ERIE AND ITS TRIBUTARIES; SUPPORTING RESEARCH TO IMPROVE THE SCIENTIFIC KNOWLEDGE ON WHICH LAKE ERIE AQUATIC RESOURCE PROTECTION POLICIES ARE BASED (O.R.C. 1506.23).

Authorities and Administration

I. State Water Quality Standards

The State of Ohio is committed to maintaining and improving the quality of its coastal waters. Ohio EPA is the agency responsible for ensuring that state water quality standards are met. All water quality standards, enforcement procedures and authorities of Ohio EPA have been approved by the USEPA as being consistent with federal water quality goals established by the Clean Water Act (CWA). Ohio EPA adopted water quality standards and implementation procedures under the Great Lakes Initiative (GLI) on October 16, 1997. These rules became effective on October 31, 1997. USEPA determined that, with one exception, Ohio has adopted requirements consistent with the GLI. The one exception relates to procedures for determining reasonable potential and establishing water quality based effluent limitations for whole effluent toxicity (OAC 3745-33-07(B)). Effective September 5, 2000, the requirements of Paragraphs C.1 and D of Procedure 6 in Appendix F of the federal GLI regulation (40 CFR Part 132 shall apply to discharges within the Lake Erie drainage basin in Ohio.

Water quality standards set forth in O.A.C. Chapter 3745-1 establish minimum requirements for all surface waters of the state. Water quality standards consist of two parts: designated uses and numerical or narrative criteria designed to protect the uses. The water quality use designations are assigned to protect reproducing populations of fish, plants, and associated vertebrate and invertebrate organisms. Lake Erie itself is designated as Exceptional Warmwater Habitat, Superior High Quality Water, Public Water Supply, Agricultural and Industrial Water Supply, and Bathing Waters (O.A.C. 3745-1-31). Tributaries within the coastal area are designated for various uses as indicated in Table 2.

TABLE 2 - TRIBUTARY DESIGNATIONS

Stream Segment (in coastal area)	Use Designations												
		Aquatic Life Habitat						Water Supply			Recreation		
	SRW	WWH	EWH	MWH	SSH	CWH	LRW	PWS	AWS	IWS	BW	PCR	SCR
Maumee River													
- I-75 to confluence with Maumee Bay		∀							*	*		*	
- Perrysburg Bridge to I-75	*	*							*	*		*	
- remaining segment within coastal area		*							*	*		*	
Portage River		*							*	*		*	
Toussaint River		*							*	*		*	
Sandusky River													
- Fremont Sewage Treatment Plant to confluence with Muskellunge Creek		∀							*	*		*	
- remaining segment within coastal area		*							*	*		*	
Huron River													
- East Branch/West Branch confluence to Lake Erie		+			+				+	+		+	
- bordering Dupont Marsh	+	+			+				+	+		+	
Old Woman Creek													
- Estuary	∀	*							*	*		*	
- within boundaries of Old Woman Creek NERR	∀	*							*	*		*	
- remaining segment within coastal area		*							*	*		*	
Vermilion River			*		∀				*	*		*	
Black River		+			+				+	+		+	
Rocky River	+	+			+				+	+		+	

+ = based on results of biological field assessment performed by Ohio EPA;
* = based on 1978 Water Quality Standards;
o = based on justification other than the results of a biological field assessment performed by Ohio EPA;

Stream Segment (in coastal area)	**Use Designations**												
		Aquatic Life Habitat						Water Supply			Recreation		
	SRW	WWH	EWH	MWH	SSH	CWH	LRW	PWS	AWS	IWS	BW	PCR	SCR
Cuyahoga River													
- Entirety of ship channel (Newburgh and South Shore (N&SS) RR bridge (RM 5.6) to mouth, including the old river channel)*										+		+	
- remaining segment within coastal area		+							+	+		+	
Chagrin River	*	+			+				+	+		+	
Grand River		*			∀				*	*		*	
Ashtabula River		+			∀					+		+	
Conneaut Creek			+		+				+	+		+	

*June-Jan -- Limited Resource Water; Feb-May -- Fish Passage

SRW = State Resource Water; WWH = Warmwater Habitat; EWH = Exceptional Warmwater Habitat; MWH = Modified Warmwater Habitat; SSH = Seasonal Salmonid Habitat; CWH = Coldwater Habitat; LRW = Limited Resource Water; PWS = Public Water Supply; AWS = Agricultural Water Supply; IWS = Industrial Water Supply; BW = Bathing Water; PCR = Primary Contact Recreation; SCR = Secondary Contact Recreation.

O.A.C. 3745-l-05 outlines the state's antidegradation policy. Existing water uses in Lake Erie and its tributaries shall be maintained and protected, and degradation that would interfere with such uses is prohibited. Antidegradation is applied in situations where there is a requested authorization to increase the discharge of pollutants to a surface water body or otherwise significantly impact the physical habitat of a surface water body. Federal law allows states to permit increased discharges of pollutants up to the safe environmental levels (i.e., up to the water quality based requirements) provided that: 1) Federal technology requirements are still met; 2) there is public involvement in the decision-making process; and 3) the increased discharge is needed to accommodate important social or economic development.

A. Permits to Install and NPDES Enforcement

1. The Ohio EPA is authorized by O.R.C. 6111.03 to issue permits for the discharge of conventional pollutants, toxic pollutants, and nutrients to waters of the state, and the disposal or utilization of sewage sludge pursuant to the National Pollutant Discharge Elimination System (NPDES, Section 402, CWA) consistent with the State Water Quality Management Plan (Section 208, CWA). Limits set for permit issuance are based on Technical Support Documents (TSDs) that compile all background material for the planning regions and Water Quality Based Effluent Limit (WQBEL) reports that use the TSDs, toxicity test results and Wasteload Allocations (WLAs).

2. The Ohio EPA monitors, through monthly operating reports submitted by permitted dischargers, the quality of effluent discharged, tracks compliance with NPDES permits, and takes enforcement action against entities when necessary (O.R.C. 6111.03).

3. “Permits-to-install” (PTI) are issued for construction of new or expanded wastewater treatment facilities, sewers, and for disposal of sludge from wastewater treatment facilities (O.A.C. 3745-42-02).

4. Ohio EPA administers and enforces the publicly owned treatment works pretreatment program in accordance with the CWA pursuant to O.R.C. 6111.03. This allows the agency to apply and enforce pretreatment standards contained in O.A.C. 3745-3; approve or deny requests for publicly-owned pretreatment programs and oversee or implement such programs; and set the terms and conditions of permits as necessary to achieve compliance with O.R.C. Chapter 6111.

5. Ohio EPA regulates the discharge of toxics into publicly owned treatment works or waters of the state through NPDES permits. It may take enforcement action when necessary and enforces National Municipal Policy to ensure compliance by permittees with water quality standards as mandated by the 1981 amendments to the CWA (O.R.C. Chapter 6111). Ohio EPA recommends, identifies and assesses the impact of controls for the discharge of toxic materials to protect the public health and the environment from effects due to toxic chemical exposures via surface waters of the state.

6. The director may "issue, modify, or revoke orders to prevent, control, or abate water pollution" by requiring the construction of new disposal systems or modifying existing ones pursuant to O.R.C. 6111.03(H)(2). This refers to all sewage system and waste treatment works including all pipes, conduits, etc. used to conduct or collect a waterborne sewage or other waste to a point of disposal or treatment. Further, the director may modify terms or conditions of a permit consistent with the CWA to require the maximum use of technology furthering the elimination of wastes into waters of the state (O.R.C. 6111.031).

B. Injection Well Drilling Regulation

Ohio EPA administers a program established under O.R.C. 6111.043 and 6111.044 to regulate the injection of wastes into waters of the state. Class 1, 4 and 5 injection wells are regulated by Ohio EPA. When the director reviews permits under the program, the director must find before issuing a permit that the activity will comply with the CWA, the "Safe Drinking Water Act" and the State Clean Water Act (O.R.C. 6111). Unless otherwise authorized by the director, "no person shall drill a new well or convert an existing well for the purpose of injecting sewage, industrial wastes, or other wastes, without having obtained an injection well drilling permit issued by the director of environmental protection" (O.R.C. 6111.043 and O.A.C. Chapter 3745-34).

C. Section 401 Water Quality Certification

Any activity that requires a federal permit pursuant to Section 404 of the CWA or Section 10 of the Rivers and Harbors Act of 1899, or any other federal permit or license for an activity that may result in any discharge into navigable waters, must be consistent with the state's water quality standards (O.R.C. 6111.03). Rules that, in part, set forth criteria for Section 401 Water Quality Certification are contained in O.A.C. Chapter 3745-32 (See Appendix K for the entire text.) Policy 12 further describes OCMP policy on regulation of activities affecting wetlands through the 401 process.

D. Regulation of Solid Waste Disposal Facilities

Ohio EPA has established uniform regulations throughout the state governing solid waste disposal sites and facilities and requires issuance of licenses from local boards of health for disposal sites (O.R.C. s 3734.02 and 3734.05). Detailed plans for such sites, facilities and methods of operation must be approved by the Director of Ohio EPA prior to issuance of any permit (O.R.C. 3734.02). See Policy 31 for further details.

E. Regulation of Phosphorus-containing Detergent

Within the State Water Quality Management Plan, Ohio EPA has developed the Ohio Phosphorus Reduction Strategy for Lake Erie to quantify phosphorus loadings into Lake Erie from Ohio, and to identify those mechanisms that, if properly implemented, would reduce such loadings. Pursuant to the strategy, Ohio prohibits the sale and distribution for

sale of household laundry detergents containing more than 0.5 percent by weight of phosphorus in all Ohio counties in the Lake Erie watershed (O.R.C. 6111.10).

F. State Water Quality Management Planning

Ohio EPA prepares a State Water Quality Management Plan under provisions of the CWA, Sections 205(j), 208, 303 and 604(b). The plan is used to assess technical needs for pollution control and to identify institutional mechanisms necessary to enforce controls. It is a compilation of various reports addressing a number of issues related to protecting and improving Ohio's water quality. The plan incorporates reports that are prepared by Areawide Planning Agencies established under Section 208 and that address water quality management needs in their areas. It also includes the Phosphorus Reduction Strategy, 305(b) Water Quality Inventory, the Nonpoint Source Assessment and Nonpoint Source Management Plan, and Remedial Action Plans (RAPs) and others.

G. Funding Publicly Owned Wastewater Treatment Systems and Nonpoint Source Pollution Controls (O.R.C. 6111.037).

As the designated lead agency, Ohio EPA is authorized to administer the Water Pollution Control Loan Fund (O.R.C. 6111.036, 6111.037), in conjunction with the Ohio Water Development Authority (OWDA). This fund was established pursuant to the CWA of 1987 to provide financial assistance for publicly owned wastewater treatment systems and nonpoint source pollution controls. Provisions require the state to match every five federal dollars with one dollar from its own funds. The Water Pollution Control Loan Fund statute authorizes state funding of the program (O.R.C. 6111.036). Financial assistance from the fund is limited to projects appearing on a priority list that is prepared by the Director of Ohio EPA and that ranks projects principally on the basis of relative water quality and public health benefits and financial need of the applicant.

OWDA is responsible for certain financial matters pertaining to the State Revolving Loan Fund Program. These duties include distributing funds to contractors and receiving loan payments from communities, issuing revenue bonds, and offering financial advice. The loan payback period may not exceed 20 years, and interest rates are set by Ohio EPA through a public participation process. The revolving fund may use bonds issued upon the incoming interest payments of the initial loans to provide additional funding for future wastewater treatment projects. OWDA is also authorized to make loans and issue bonds unrelated to the State Revolving Loan Fund Program to raise the necessary local share of financing for these projects (O.R.C. 6121.03 and 6121.04).

II. Lake Erie Commission

The Lake Erie Commission plays a key role in ensuring coordination of state and local policies and programs pertaining to Lake Erie water quality. The commission makes recommendations concerning the development and implementation of policies and programs for long-term, comprehensive protection of Lake Erie water resources and water quality consistent with the Great Lakes Water Quality Agreement and Great Lakes Toxic Substances Control Agreement.

The commission, described in Chapter 4, operates under a work plan developed with public input and holds meetings quarterly. Meetings and records of the commission are open to the public. The broad-based representation on the commission and interaction with the public and interest groups facilitated by the agencies and the Ohio Lake Erie Office help to ensure the development of sound resource protection policies and the promotion of environmentally sustainable economic development.

III. Lake Erie Protection Fund

The Lake Erie Protection Fund (LEPF) is supported by payments from the Great Lakes Protection Fund (GLPF), the Lake Erie license plate program, Erie . . . Our Great Lake credit card program, donations and bequests. The GLPF, a regional trust fund established by the Great Lakes states, divides one-third of its net earnings among member states in proportion to their respective contributions.

Ohio uses these funds in grants to advance the goals of the Toxic Substances Control Agreement, the OCMP and the Great Lakes Water Quality Agreement. The Lake Erie Commission prepares and publishes a Lake Erie protection agenda describing proposed uses and priorities of the protection fund for succeeding state fiscal years. The Commission also regularly publishes a State of the Lake Report that documents the state's progress, deficiencies and goals in managing its Lake Erie resources. The Commission solicits proposals for water quality and ecosystem change research, monitoring, aquatic habitat restoration, coastal management initiatives implementation and other activities consistent with these goals.

(**NOTE**: Nonpoint sources of pollution such as construction site, mine and agricultural runoff also degrade water quality. Such sources are addressed in Ohio's Nonpoint Source Management Program, as explained in Policy 8. Regulations enforced by Ohio EPA to prevent and reduce water pollution resulting from airborne pollutants as well as from solid, infectious and hazardous wastes are detailed in Policies 30 and 31, respectively.)

POLICY 7 – ENVIRONMENTAL CONTAMINANTS: PREVENTION AND EMERGENCY RESPONSE

IT IS THE POLICY OF THE STATE OF OHIO TO PREVENT AND/OR MINIMIZE TO THE GREATEST EXTENT POSSIBLE, DAMAGES TO THE PUBLIC HEALTH, SAFETY AND WELFARE, AND TO THE ENVIRONMENT FROM CONTAMINANTS BY:

A. REQUIRING OWNERS OF FACILITIES SUBJECT TO O.R.C. CHAPTER 3750, EMERGENCY PLANNING, TO COMPLY WITH THE STATE'S RIGHT TO KNOW AND SPILL/RELEASE REPORTING LAWS; AND

B. PROVIDING FOR EMERGENCY RESPONSE TO ALL APPROPRIATE SPILLS WITH A COORDINATED AND PLANNED EFFORT MAXIMIZING RESOURCES AND MINIMIZING ENVIRONMENTAL DAMAGE (O.R.C. CHAPTERS 6111, 3734, 3704, 6109 AND 3750).

Authorities and Administration

Ohio's State Emergency Response Commission (SERC) is authorized to coordinate emergency planning efforts (O.R.C. Chapter 3750). SERC accomplishes this through administration by Ohio EPA's Division of Air Pollution Control (DAPC). Pursuant to O.R.C. 3745.01, Ohio EPA administers "the laws pertaining to chemical emergency planning, community right-to-know, and toxic chemical release reporting." The director "shall adopt rules in accordance with Chapter 119 of O.R.C. that are consistent with and equivalent in scope, content, and coverage to, and no more stringent than the Emergency Planning and Community Right-to-Know Act of 1986" 42 U.S.C.A. 11001 (O.R.C. 3750.02) and 42 U.S.C.A. 11023 (O.R.C. 3751.02).

A. The State of Ohio strives to prevent accidental releases of environmental contaminants and to minimize their effects when they do occur by enforcing O.R.C. Chapter 3750 Emergency Planning. The specific requirements of the Emergency Planning and Community Right-to-Know Act of 1986 (also known as SARA Title III) and the corresponding Ohio Revised Code provisions include four basic reporting requirements, as follows:

1. Owners of facilities with extremely hazardous substances (360 chemicals listed by U.S. EPA) must identify themselves and participate in emergency planning (O.R.C. 3750.05).

2. Owners of facilities identified must report all spills or releases of substances covered by Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or by SARA (O.R.C. 3750.06).

3. Owners of identified facilities must provide to Ohio EPA (1) a Material Safety Data Sheet and (2) a list of chemicals stored and their human health hazard (O.R.C. 3750.07).

4. Owners must complete a Facility Identification form, Chemical Inventory form and Facility map (O.R.C. 3750.08).

As provided in O.A.C. Chapters 3750-20, 3750-25 and 3750-30, a facility must comply with O.R.C. Chapter 3750 when all of the following conditions are met:

1. The facility is subject to the OSHA Hazard Communication Standard;

2. The facility stores a Hazardous Chemical and/or an "Extremely Hazardous Substance" (EHS): and

3. A quantity in storage of one of these Hazardous Chemicals or Extremely Hazardous Substances is in excess of the "Threshold Quantity" (TQ).

Oil releases are addressed under O.R.C. 3750.06 and the CWA, as amended 33 U.S.C. 1251 et seq. The federal Spill Prevention Control and Counter-measure program and related regulations for oil storage facilities provide directions to industries to plan their response to any possible spillage from their facilities (40 CFR 112). Preventive engineering, such as containment dikes, were also called for to prevent spills from reaching waterways.

B. SARA Title III directs communities and industries to work together in developing response plans and procedures for hazardous spills. Local emergency planning committees (LEPCs) of each emergency planning district are required to "prepare and submit ... a chemical emergency response and preparedness plan for the district" to SERC (O.R.C. 3750.04). Within the coastal area, each of the nine counties is a separate emergency planning district. These local "Hazardous Materials Emergency Management Plans" include an identification of local hazardous facilities and routes used to transport hazardous materials, emergency response procedures, evacuation plans, and a list of response personnel and equipment.

   The Ohio Emergency Management Agency (Ohio EMA) coordinates local plan development and makes recommendations to SERC, which is responsible for final approval or disapproval (O.R.C. 3750.02). Plans have been prepared for all nine coastal counties. As of June 1995, plans for Ashtabula, Lake, Cuyahoga, Lorain, Wood, Ottawa, Erie, Lucas and Sandusky counties have been reviewed, and the Commission has concurred with them.

   Ohio EPA's Division of Emergency and Remedial Response (DERR) follows the National Contingency Plan (NCP) guidance for spill response and cleanup. To facilitate spill reporting, Ohio EPA operates a toll-free 24-hour telephone number. DERR investigates reported releases and provides local governments with telephone assistance in evaluating incidents and in directing the responsible party's cleanup efforts. DERR also coordinates efforts to assure compliance with cleanup levels and disposal methods.

POLICY 8 – NONPOINT SOURCE POLLUTION

IT IS THE POLICY OF THE STATE OF OHIO TO CONTROL NONPOINT SOURCE WATER POLLUTION IN ORDER TO REDUCE SEDIMENT, NUTRIENTS AND OTHER POLLUTANTS AND OTHERWISE IMPROVE THE WATER QUALITY OF LAKE ERIE AND ITS TRIBUTARIES, THUS REDUCING DAMAGE TO AQUATIC HABITATS AND LOWERING COSTS OF WATER TREATMENT AND CHANNEL DREDGING, BY USING A BROAD ARRAY OF STATE AND LOCAL AUTHORITIES TO REGULATE AND MANAGE THE CONTRIBUTING SOURCES AND ACTIVITIES.

Authorities and Administration

The State of Ohio manages and regulates activities that contribute to nonpoint source pollution through a complex but coordinated array of institutional mechanisms and authorities. A complete analysis of these mechanisms and authorities and how they operate to achieve stated goals and comply with federal regulations is contained in the Ohio Nonpoint Source Management Plan. Eight major sources of nonpoint source contaminants are addressed by this program, and the roles and responsibilities of all agencies and organizations involved with implementation are described therein.

The State of Ohio developed the Nonpoint Source Management Program document pursuant to Section 319 of the CWA. The program was developed in 1988 and updated in 1992 and 1999 by ODNR under an agreement with Ohio EPA. (The 1993 update was never approved by U.S. EPA.) A 1999 program upgrade was developed and approved by U.S. EPA to enable Ohio to receive supplemental 319 funding. The program specifies Best Management Practices for the eight major sources of nonpoint pollutants: agriculture, hydromodification/habitat modification, land disposal, mining, oil field wastes, silviculture, urban runoff and construction site erosion and a section addressing specific ground water issues. Section 319 funds are allocated based on the program's recommendations and policies. Funds have been used to initiate local watershed treatment and aquatic restoration and protection projects. Promoting public awareness about nonpoint pollution issues has been identified as critical to the future success of pollution control projects and programs and is therefore a major program goal. State funds have been appropriated to ODNR and Ohio State University Extension to help implement local nonpoint projects.

The State of Ohio developed the Coastal Nonpoint Pollution Control Program (CNPCP) Plan and submitted it in September 2000 to NOAA and U.S. EPA for their review. The CNPCP is based upon and expands the existing statewide Ohio Nonpoint Source Management Program and will be integrated as part of the existing Ohio Coastal Management Program. Section 6217 of CZARA directs states to develop Coastal Nonpoint Pollution Control Programs to be implemented through changes to the state coastal management plan and the state nonpoint source management plan. REALM held several initial meetings in 1993 to begin coordinating program development and implementation through cooperation with a Division of Surface Water (Ohio EPA) Σ Division of Soil and Water Conservation (ODNR) team. However, the OCMP has decided to focus its primary efforts on core program development. Changes to CZARA are anticipated to allow additional time for states now developing core coastal management programs to develop their coastal nonpoint

source pollution programs. Pending this change, the OCMP intends to initiate development of the coastal nonpoint program following federal approval of the OCMP core program. Key aspects of the program are the development of additional enforceable authorities, where needed, and provision for public involvement and education in all phases of the program. Details of this program and a narrative discussing Ohio's Nonpoint Source Management Program are provided in Appendix J.

Ohio has received conditional approval of the Ohio Coastal Nonpoint Pollution Control Program, administered by ODNR, Division of Soil and Water Conservation on June 04, 2002. This conditional approval included conditions that need to be met within one year and conditions that need to be met within 2 years. The one year conditions on enforceable policies and mechanisms of the Ohio Coastal Nonpoint Pollution Control Program Plan were met by submitting a Legal Opinion to the National Oceanic and Atmospheric Administration in letter form on June 04, 2003. The “two year” conditions require that Ohio have in place programs and policies that will result in implementation of specific coastal nonpoint program management measures.

POLICY 9 – POTABLE WATER SUPPLY

IT IS THE POLICY OF THE STATE OF OHIO TO ENSURE THAT A SAFE SUPPLY OF WATER IS AVAILABLE FOR PRIVATE, COMMUNITY, INDUSTRIAL, AGRICULTURAL AND COMMERCIAL USES ALONG LAKE ERIE BY:

A. ADMINISTERING THE STATE SAFE DRINKING WATER ACT (O.R.C. CHAPTER 6109);

B. SUPERVISING THE DESIGN, CONSTRUCTION, AND OPERATION OF PUBLIC WATER SUPPLY TREATMENT AND DISTRIBUTION SYSTEMS (O.R.C. 6109.07); AND

C. REGULATING PRIVATE WATER SYSTEMS (O.R.C. 3701.344, O.A.C. 3701-28)

Authorities and Administration

A. The Ohio Environmental Protection Agency is the principal water quality regulatory agency over public water systems in Ohio and is the state administrator of P.L. 93-523, the Safe Drinking Water Act and its Amendments 42 U.S.C. 300(f) et seq. Ohio EPA's Division of Drinking and Ground Waters derives its authority from the State Safe Drinking Water Act, O.R.C. Chapter 6109. The statute does not apply to public water systems that meet all of the following criteria:

1. Consist only of distribution and storage facilities and do not have any collection and treatment facilities;

2. Obtain all of their water from, but are not owned or operated by, a public water system;

3. Do not sell water to any person; and

4. Are not carriers that convey passengers in interstate commerce.

The Division of Drinking and Ground Waters oversees compliance with and monitoring of maximum contaminant levels (MCLs) for public drinking water. Primary standards have been established for contaminants, including toxic chemicals, that have been shown to directly affect the health of consumers (O.A.C. 3745-81). Secondary standards have been established for contaminants that may cause economic or aesthetic impacts but that have not been shown to directly affect the health of consumers (O.A.C. 3745-82). Additional treatment is required if any contaminant exceeds a primary standard. All new public water systems, and existing systems making changes in their source of water, must provide treatment to meet the secondary standards for iron and manganese if they would otherwise exceed the secondary standards. Public water systems are encouraged to meet the other secondary standards. Appropriate enforcement actions are taken for failure to meet requirements of the Safe Drinking Water Act.

B. The Ohio EPA Division of Drinking and Ground Waters reviews plans and issues plan approval for construction or substantial improvement of public water systems. Installation of or substantial changes to a water system requires the approval of Ohio EPA based on requirements of the State Safe Drinking Water Act and the rules adopted thereunder.

The division also has primary responsibility for on-site survey inspections of public water systems and maintains a laboratory certification program for commercial, private, state and industrial facilities conducting biological and/or chemical analysis on potable water.

C. The Ohio Department of Health (ODH) and local health departments regulate private water supply systems in accordance with rules promulgated by the Public Health Council of the State of Ohio (O.R.C. 3701.344, O.A.C. 3701-28). Those water systems that regularly serve fewer than 15 service connections and do not regularly serve an average of at least 25 individuals daily at least 60 days out of the year are subject to regulation. A private water supply system includes any well, spring, cistern, pond or hauled water. In the event that the Director of ODH determines that a public health district is not properly enforcing the private water system rules, ODH will enforce the private water supply system program in that district. The ODH also investigates private water supply systems for potential contamination at the request of the local health department. Additionally, the ODH implements and enforces the registration of private water systems contractors (O.R.C. 3701.344, O.A.C. 3701-28).

POLICY 10 – AREA OF CONCERN REMEDIAL ACTION PLANS

IT IS THE POLICY OF THE STATE OF OHIO TO COORDINATE THE DEVELOPMENT AND IMPLEMENTATION OF REMEDIAL ACTION PLANS FOR OHIO'S FOUR LAKE ERIE BASIN AREAS OF CONCERN AS IDENTIFIED IN THE INTERNATIONAL JOINT COMMISSION'S (IJC) REPORTS ON GREAT LAKES WATER QUALITY.

Authorities and Administration

In 1974, the Water Quality Board of the International Joint Commission (IJC) began identifying problem areas along the Great Lakes in its reports on Great Lakes water quality. By 1981, many of the problems caused by conventional pollutants had been alleviated by improvements in effluent treatment by both municipal and industrial dischargers. However, persistent environmental quality problems remained in many areas. In 1985, to address the problems at these locations, the IJC requested that the jurisdictions (states and provinces) prepare Remedial Action Plans (RAPs) for each of their Areas of Concern (AOCs). This request became a requirement of the Great Lakes Water Quality Agreement in 1987 and a statutory requirement under the Great Lakes Critical Programs Act amendment 33 U.S.C. 1268 to the 1990 CWA.

The Ohio EPA is responsible for the preparation of RAPs for four AOCs identified as highly polluted sites along the Lake Erie shoreline. These areas are the lower Maumee, Black, Cuyahoga and Ashtabula Rivers and harbors. RAPs are the framework to provide a systematic and comprehensive ecosystem approach to restore these areas to beneficial use and to track the effectiveness of remedial activities as they are implemented.

RAPs are to be developed with significant local community involvement. Development/implementation teams include representatives from local, state and federal government agencies, elected officials, industry and business, special interest groups, academia and the general public. Ohio's four RAPs have established active community RAP teams. Stage 1 RAP reports, identifying the impaired uses and sources of pollution, have been completed for all four AOCs.

All of the RAP groups are beginning to develop Stage 2 RAP reports that will recommend remedial actions, identify responsible parties and search for sources of funding. The major task of the Stage 2 process is to accomplish implementation of the identified remedial actions. Where possible, identified remedial actions are already being implemented. More information on RAPs for AOCs is provided in Chapter 6, Special Management Areas.

POLICY 11 – GROUND WATER

IT IS THE POLICY OF THE STATE OF OHIO TO PROMOTE THE PROTECTION AND MANAGEMENT OF OHIO'S GROUND WATER RESOURCES BY:

A. REGULATING ACTIVITIES AND ENFORCING RULES REGARDING THE CONSTRUCTION AND OPERATION OF WATER SUPPLY AND WASTE-WATER DISPOSAL SYSTEMS (O.R.C. 3701.04, 3701.344, 3718.02, 6111.03, 6109.07, AND O.A.C. 3701-28, 3701-29, 3745-9);

B. REGULATING UNDERGROUND HAZARDOUS AND PETROLEUM MATERIALS STORAGE FACILITIES AND ABOVE-GROUND HAZARDOUS WASTE STORAGE (O.R.C. 3737.87, 3737.88, 3737.881, 3737.882 AND O.A.C. 1301:7-9 AND 3745-54);

C. REGULATING OIL, GAS, COAL AND MINERAL OPERATIONS (O.R.C. CHAPTER 1509, 1513 AND 1514, O.R.C. 1509.22);

D. REGULATING SUBSURFACE INJECTION OF BRINE AND OTHER WASTES ASSOCIATED WITH OIL AND GAS OPERATIONS (O.R.C. 1509.22);

E. PREPARING GROUND WATER POLLUTION POTENTIAL MAPS; AND

F. COORDINATING STATE ACTIVITIES REGARDING GROUND WATER ISSUES.

Authorities and Administration

A. & B.

The Ohio Department of Health (ODH), Ohio EPA, and the State Fire Marshal administer the state's ground water programs relating to water quality concerns. All three bodies implement permitting, monitoring and planning activities and provide technical assistance to local governments.

ODH is authorized to administer programs, monitor water quality, and enforce compliance with regulations pertaining to private water systems under the authority of the Public Health Council in O.R.C. 3701.344 and O.A.C. 3701-28. ODH regulates onsite household and small flow sewage treatment systems as required in O.R.C. 3718.02 and O.A.C. 3701-29.

Ohio EPA has general supervisory power over public water supplies pursuant to O.R.C. 6111.03 and O.A.C. 3745-81 through 3745-99. Construction or installation plans for a public water system must be approved by Ohio EPA in compliance with requirements of the Safe Drinking Water Act (O.R.C. 6109.07 and O.A.C. 3745-91). State standards for the location, construction, operation, and modification of wells are set forth in O.A.C. Chapter 3745-9. Ohio EPA also administers wastewater disposal programs and regulates hazardous and nonhazardous materials management and

disposal. Ohio EPA's Division of Drinking and Ground Waters implements the ground water protection requirements of the CWA (O.R.C. 6111.03); manages the state's Underground Injection Control program which regulates the types and amounts of waste that can be injected into underground geologic formations (O.A.C. 3745-34); monitors ground water quality , and manages and works to achieve voluntary participation in Ohio's Wellhead Protection Program (O.A.C. 3745-91).

Ohio EPA enforces the state's ground water protection standard (O.A.C. 3745-54-92) that provides that the owners and operators of facilities that treat, store or dispose of hazardous waste must comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under O.A.C. 3754-54-93 detected in the ground water from a regulated unit do not exceed the concentration limits under O.A.C. 3745-54-94 in the uppermost aquifer underlying the waste management area beyond the point of compliance under O.A.C. 3745-54-95 during the compliance period under O.A.C. 3745-54-06.

The State Fire Marshal (Ohio Department of Commerce) has responsibility for regulating underground storage tanks in Ohio, through its Bureau of Underground Storage Tank Regulation (BUSTR) (O.R.C. 3737.87 and O.A.C. 1301-7-9), in accordance with the Resource Conservation and Recovery Act (RCRA, 40 C.F.R. 280). O.A.C. 1301-7-9 establishes performance standards, design and construction standards, financial responsibility, a listing of regulated substances and operating requirements.

C. ODNR regulates oil, gas, coal and industrial mineral extraction (see Policies 36 and 38).

D. The Division of Mineral Resources Management, ODNR, administers a permit program for subsurface injection and other brine management activities that specifically prohibits contamination of surface and underground waters (O.R.C. 1509.22).

E. ODNR's Division of Water has prepared 67 county ground water pollution potential maps that illustrate the relative vulnerability of ground water to contamination. Of the 67 maps, 28 are for counties located completely or partially within the Lake Erie watershed. The maps evaluate the major geologic and hydrogeological factors that affect ground water vulnerability. These factors are combined with hydrogeologic settings to produce color-coded maps with ground water pollution potential information. Each map is accompanied by a report that includes general geologic and hydrologic information. Planners, managers and local officials can use the maps and reports to evaluate potential for contamination from various pollution sources and thereby direct land- use activities to appropriate areas. Water quality protection, monitoring and cleanup efforts also can be facilitated through use of pollution potential maps.

F. The State of Ohio has a comprehensive ground water policy, the Ohio Ground Water Protection & Management Strategy. State agencies with regulatory and programmatic jurisdiction over ground water, i.e., Ohio EPA, Ohio Department of Health (ODH), Ohio Department of Agriculture (ODA), Ohio Department of Transportation (ODOT) and ODNR, prepared the strategy with the assistance of federal agencies, regional planning agencies, citizen's groups, and business and professional associations working through a Ground Water Task Force. State agencies are responsible for implementing the initiatives of the strategy. The strategy directs

limited state resources to priority needs and emphasizes proper development and protection and management of the ground water resources.

The ground water strategy contains six principal initiatives, each of which includes program recommendations:

1. Controlling sources of ground water contamination;

2. Assessing Ohio's ground water;

3. Coordinating agency activities;

4. Targeting critical areas;

5. Regional and local ground water protection and management; and

6. Education, training, research and technology transfer.

The state agencies listed above, and the Department of Development, the Public Utilities Commission of Ohio (PUCO) and the Bureau of Underground Storage Tank Regulation in the Department of Commerce, formed the State Coordinating Committee on Ground Water (SCCGW) to promote exchange of agency information and coordination of programs and activities. The SCCGW meets on a regular basis and is developing a Comprehensive Ground Water Protection and Management Plan and a State Management Plan for Pesticides. Technical standards for well construction and sealing have been developed by the SCCGW.

ECOLOGICALLY SENSITIVE RESOURCES

Uses Subject to Management

- Activities involving the filling, dredging or alteration of wetlands and special aquatic sites.
- Activities affecting natural areas, nature preserves, wildlife habitat areas and areas of exceptional ecological significance.
- Activities threatening rare and endangered plant and animal species.
- Activities involving the introduction or propagation of exotic species.

Wetlands

Wetlands are considered a critical natural resource in Ohio because they serve many beneficial natural functions and are greatly diminished throughout the state relative to the original extent of wetlands in Ohio. The U.S. Fish and Wildlife Service's *Report to Congress, Wetlands Losses in the United States Σ1780s to 1980s* (Dahl, T.E., 1990), estimated Ohio's loss at 90 percent of an original 5 million acres. In pre-settlement times, nearly 300,000 acres of marshes spread from the Great Black Swamp of northwest Ohio eastward along Lake Erie. Conversion of Lake Erie marshes and coastal wetlands to other uses has continued. A Division of Wildlife (DOW) inventory showed a 45 percent decline in acreage from 1954 to the mid-1970s. Since that time, however, losses have been partially offset as a result of increased state and federal regulatory authority (Sections 401 and 404, CWA) and more aggressive acquisition and restoration efforts of recent years. Today, an estimated 33,000 acres of wetlands remain within the coastal management area.

The Ohio Wetlands Priority Conservation Plan published by ODNR in 1988 identified the following threats to remaining wetlands:

Agricultural drainage – Losses attributable to drainage improvement projects involve both direct conversion and incidental results of stream and drainage system modification. Thousands of acres of low-lying coastal marshes have been diked and drained for farming, although some are flooded in fall for waterfowl. Such areas are not irreversibly converted to nonwetland uses. In fact, some of these areas have reverted to marsh by landowner design or by the encroachment of higher lake levels.

Development – Ohio's lacustrine and adjacent palustrine wetlands are threatened by the construction of marinas and waterfront developments such as condominiums and resort communities. This is particularly critical in the Lake Erie region, where unprecedented development and economic growth is occurring because of the area's attractiveness for outdoor recreation and tourism and its quality of life amenities. It is extremely difficult to quantify such losses, because many are piecemeal losses, partial habitat alterations and secondary and cumulative effects upon wetlands.

Mounting pressure exists to convert diked (and sometimes pumped) wetlands in cropland use to nonagricultural and nonwater dependent uses such as residential, recreational and resort development. This can represent an even greater threat to wetlands than agricultural use because such development is irreversible and is often adjacent, or in close proximity, to other marshland. Secondary and cumulative impacts of such development are serious concerns.

Nonpoint Source Pollution – The degradation of wetlands through nonpoint source pollution is more difficult to assess and manage. Ohio EPA and ODNR have developed the state's Nonpoint Source Assessment and Management Plan, which in 1988 identified hydrologic/habitat modification activities as the principal nonpoint source threat to wetlands in Ohio. Ohio's 1993 Statewide Comprehensive Outdoor Recreation Plan (SCORP) reaffirmed this.

Secondary impacts on off-site or "downstream" wetlands are a serious concern with respect to many large-scale earth disturbing developments and activities. Inadequate erosion control and stormwater runoff control measures can result in the downstream siltation of aquatic habitats including wetlands.

No comprehensive study has been conducted since 1989, and there is no concrete evidence to suggest that dramatic changes have occurred in either the nature or extent of these threats. One possible exception is that marina development has declined significantly since the late 1980s. However, as stated earlier, losses are being slowed by regulatory and other protective efforts, and a decline in the rate of loss is occurring. As of 1997, it is difficult to quantitatively assess this change in loss rate, but it is important to do so. The OCMP, through program administration funding, intends to improve tracking of individual and cumulative losses and restorations to assess and monitor the status and trends of coastal wetlands. The recently developed Ohio Wetlands Strategy includes a proposal for a biennial report to assess and summarize status and trends, including all enforcement actions.

The outlook for coastal wetlands reflects positive trends in statewide wetlands conservation. The Ohio EPA protects wetlands by including the term wetlands in the Ohio Water Quality Standards and Section 401 Regulations and Permit Procedures. The acquisition and protection of coastal area wetlands has been enhanced by increasing partnership projects for wetlands acquisition and restoration developed among public, private and independent agencies and organizations.

To aid wetlands regulation, monitoring and enforcement, acquisition and protection strategies, and other planning and management activities for wetlands conservation in Ohio, a statewide wetlands inventory has been developed. Managed by ODNR's Division of Wildlife (DOW), it is a remotely sensed inventory from satellite imagery. It has been designed to be used by resource managers, agricultural interests, local and regional agencies and other public and private interests for a wide variety of wetlands related purposes. The inventory has been completed for all nine coastal area counties and shows approximately 33,000 acres of wetlands within Ohio's coastal management area. About one-half of that acreage is either publicly owned and managed or is owned and managed by hunting clubs and nonprofit conservation organizations, as follows:

Ownership		Wetland Acreage	Total Acreage Owned
ODNR			
Parks and Recreation		1,400	5,653
DNAP		1,200	1,849
DOW	4,500	6,762	
USFWS (Ottawa NWR)		5,350	8,316
The Nature Conservancy		133	770
Hunting Clubs		4,300	8,000
TOTAL		16,883	31,350

In 1993 and 1994, the DOW completed the Mallard Club and Pickerel Creek wetland restoration projects and broke ground on the Metzger Marsh restoration project. These projects will add nearly 2,400 acres of viable wetlands along the Lake Erie coast.

Several thousand acres of former wetlands in the coastal region exist in productive or marginally productive agricultural status. Some of these areas have high potential for restoration and management as habitat for migratory waterfowl, other wetland-dependent fish and wildlife, and rare species of plants and animals. Ohio is situated in the Lower Great Lakes-St. Lawrence River Joint Venture region of the North American Waterfowl Management Plan (NAWMP) developed by agreement between Canada and the United States in 1986. Lake Erie Marshes is a focus area of the NAWMP in which thousands of acres of coastal area wetlands are being protected, restored and enhanced through the cooperative efforts of the U.S. Fish and Wildlife Service, Division of Wildlife and other public, private and independent organizations. More than 650 acres of privately owned previously drained coastal area wetlands have been restored through DOW cost-sharing projects with farmers and other landowners. Restoration projects within NAWMP focus areas and joint venture boundaries receive the highest priority.

Diking of many coastal wetlands is essential for their survival, because it is usually the only means of protecting wetlands whose landward advance during periods of high lake levels is restricted by inland development. Maintenance and reconstruction of dikes is a continual, expensive and necessary task, especially during periods of high water. In addition to units of the Ottawa National Wildlife Refuge and several state wildlife areas, privately owned diked marshes are an important component of Ohio's coastal wetland resource base. Diked marshes require expensive maintenance and carefully planned water level management and other controls to maintain fish and wildlife habitat values and overall productivity. Many benefits important to the general public interest are realized by the active management of these wetlands.

Natural Areas and Endangered Species

Early explorers of the Lake Erie region described vast areas of wetlands, upland hardwood forests and miles of sandy beaches. Development proceeded quickly until very little of the shore had escaped human impact. Efforts to protect the remnants started late and have met with only limited success in recent years due to high land costs, limited funds and conflicting ideas on appropriate land use. Presently, Ohio's coastal area has within its boundary six designated state nature preserves: Mentor Marsh, Headlands Dunes, DuPont Marsh, Lakeside Daisy and Sheldon Marsh, which are managed by ODNR's Division of Natural Areas and Preserves, as well as Old Woman Creek, managed by ODNR's Division of Wildlife. The Nature Conservancy and the Cleveland Museum of Natural History are also involved in acquisition and/or management of several natural areas in the coastal area.

In addition to protecting large, undisturbed sites, it is also important to consider the ecological diversity – the plants, animals and physical features that make up the coastal landscape. The loss of even a few species due to habitat alteration and other environmental disturbances can impair the ecosystem's function and harm recreation, water supply, commercial fish production and overall ecosystem stability. The loss of predator fish species in Lake Erie with subsequent overabundance of other species is a good example. ODNR's Division of Natural Areas and Preserves (DNAP), maintains the state's Natural Heritage Database, which is a repository of information on Ohio's rare plant and animal species and unique natural features.

Continued protection of remaining natural coastal areas and elements of diversity requires an increased understanding of intricate ecosystem relationships and the system's susceptibility to disturbance. More importantly, a firm public commitment and capital improvement funding are needed to preserve such areas in the coastal area.

Exotic Species

The introduction of exotic species, or nonindigenous flora and fauna, to the coastal area environment has been documented since settlement of the region. Since the 1800s, 139 nonindigenous species, mostly plants, have become established in the Great Lakes. Thirteen have substantially affected the region's ecosystem, economically as well as ecologically. Three examples illustrate this problem in Lake Erie:

1. Zebra mussels (*Dreissena polymorpha*) were almost unheard of in the Lake Erie coastal area until 1989. But by the end of the year, zebra mussels had colonized nearly everywhere in Lake Erie. Zebra mussels are being reported from other sites in all of the Great Lakes and are spreading beyond the Great Lakes to other lakes and rivers. Zebra mussels originated from the Caspian region of western Russia and spread throughout Europe with the construction of canals and increased shipping. Their invasion into the Great Lakes appears to have occurred due to the discharge of freshwater ballast by one or more transoceanic ships. Zebra mussel infestation in water intake structures for power plants and municipal water treatment plants causes significant reductions in pumping capabilities. Recreation is affected due to extensive deposits of zebra mussel shells on Lake Erie

beaches. Cooling water inlets on boat engines can become clogged. Ecological and human health impacts are possible because the filter feeding zebra mussels can rapidly accumulate organic pollutants within their tissues. This may have implications for human consumption of fish and waterfowl. Clearer water resulting from the mussels' cleansing ability may cause rapid aquatic weed growth and declining zooplankton levels, thus further disrupting the food chain. Zebra mussel pollutant uptake and food chain relationships are currently being studied.

2. Purple loosestrife (*Lythrum salicaria*) has become a major pest in Lake Erie coastal area marshes. This is a significant problem for protecting and managing many wetland areas that provide important resting and feeding areas for migratory waterfowl and habitat for other marsh-dependent fish and wildlife species. This plant invades marshes and grows in profusion, creating a monoculture habitat to the detriment of wildlife and other plants and plant communities. Purple loosestrife is only one example of problems with nonindigenous flora. However, many habitats and plant associations suffer from the presence of weed species. Protecting the integrity of natural areas and nature preserves can require intensive management to maintain desired natural conditions.

3. The common carp (*Cyprinus carpio*) is another problem species. Carp were apparently introduced into Ohio waters in the Cincinnati area and around Fremont in the Lake Erie coastal area in the late 1800s. Carp are often present in great numbers and may contribute to turbidity problems, adversely affecting the germination and growth of aquatic plants and interfering with the spawning success of other species of fish.

Through the coastal management program, ODNR will be increasing the state's efforts, working with other Great Lakes states and public and private interests to develop, adopt and enforce policies that will help prevent the invasion and spread of exotic species.

POLICY 12 – WETLANDS

IT IS THE POLICY OF THE STATE OF OHIO TO PROTECT, PRESERVE AND MANAGE WETLANDS WITH THE OVERALL GOAL TO RETAIN THE STATE'S REMAINING WETLANDS, AND, WHERE FEASIBLE, RESTORE AND CREATE WETLANDS TO INCREASE THE STATE'S WETLANDS RESOURCE BASE BY:

A. REGULATING ACTIVITIES IN WETLANDS THROUGH THE ENFORCEMENT OF OHIO WATER QUALITY STANDARDS FOR ANY ACTIVITY THAT MAY RESULT IN ANY DISCHARGE INTO WETLANDS AND OTHER WATERS OF THE STATE (O.R.C. 6111.03(O), O.R.C. 6111.03(P), O.A.C. 3745-1-05, 3745-1-50 TO 54 AND 3745-32);

B. REGULATING ACTIVITIES IN ISOLATED WETLANDS THROUGH THE ENFORCEMENT OF STATE ISOLATED WETLAND PERMITS (O.R.C. 6111.02, 6111.021, 6111.022, 6111.023, 6111.024, 6111.025, 6111.026, 6111.027, 6111.028, and 6111.029);

C. PROVIDING LEADERSHIP AND TAKING ACTION TO MINIMIZE ADVERSE EFFECTS TO WETLANDS IN CARRYING OUT ODNR RESPONSIBILITIES, AND, TO THE EXTENT ALLOWED BY LAW, AVOIDING UNDERTAKING CONSTRUCTION, PERMITTING ACTIVITIES, OR PROVIDING FINANCIAL ASSISTANCE FOR CONSTRUCTION THAT MAY DIRECTLY OR SECONDARILY DEGRADE OR DESTROY THE NATURAL AND BENEFICIAL FUNCTIONS OF WETLANDS (ODNR DIRECTIVE - WETLANDS);

D. ACQUIRING WETLANDS OR INTEREST IN WETLANDS AND THE BUFFER LANDS THAT MAY BE NEEDED FOR THEIR PROTECTION; RESTORING AND MANAGING PREVIOUSLY CONVERTED OR DEGRADED WETLANDS; AND PROVIDING ASSISTANCE TO PRIVATE OWNERS FOR WETLANDS RESTORATION AND MANAGEMENT;

E. COOPERATING WITH THE OLD WOMAN CREEK NATIONAL ESTUARINE RESEARCH RESERVE, THE OHIO SEA GRANT COLLEGE PROGRAM AND OTHER INSTITUTIONS IN EDUCATION AND RESEARCH. THE STATE WILL ENCOURAGE WETLANDS RESEARCH AND PRIORITIZE FUNDING ASSISTANCE FOR RESEARCH THAT ENHANCES COASTAL MANAGEMENT; AND

F. PROVIDING INFORMATION ON WETLANDS RESOURCES AND TECHNICAL ASSISTANCE TO ORGANIZATIONS AND INDIVIDUALS REQUESTING HELP IN WETLANDS CONSERVATION PROJECTS; AND

G. DEVELOPING A STATEWIDE WETLAND RESTORATION AND MITIGATION STRATEGY.

Authorities and Administration

A. All coastal area wetlands fall within the jurisdiction of the U.S. Army Corps of Engineers (COE) in regulating activities under the Rivers and Harbors Act of 1899 (Section 10) and/or the CWA (Section 404). The scope of the state's authority under Section 401 of the CWA and Ohio water pollution control laws is coterminous with that of the COE and covers all surface waters within the coastal area, including wetlands. However, state water pollution control law extends the state's authority to require a state water quality certification for all applicants for any federal license or permit to conduct any activity that may result in any discharge into the waters of the state (O.R.C. 6111.03(P)). "Waters of the state" include wetlands (O.A.C. 3745-32-01(N)). "Wetlands" are defined in state regulations as "areas where the water table is at, near, or above the land surface long enough each year to support the growth of water dependent vegetation and to result in the formation of characteristic wet soil types. These include marshes, swamps, bogs and similar areas" (O.A.C. 3745-32-01(O)).

Ohio has developed wetland water quality standards (See Appendix K). This rule-making was a joint effort of Ohio EPA and the ODNR. The basic structure of the wetland standards is to assign one designated use to all jurisdictional wetlands. Under OAC 3745-1-53, all of these surface water bodies receive the “wetland” use designation. The OAC Rule 3745-1-51 also contains narrative criteria, composed of goal statements that support the wetland use designation. Numeric chemical criteria for the wetland use, in OAC Rule 3745-1-52, apply to point source discharges. Those discharges are held to the warmwater habitat aquatic life use chemical criteria. For wetland discharges this criteria needs to be met at the Aend of pipe≅.

The wetland antidegradation provisions found in OAC Rule 3745-1-54, have a tiered system of protection. A wetland under review is placed into one of three antidegradation categories. These categories are based on a wetland’s relative functions and values, sensitivity to disturbance, rarity and the ability to adequately mitigate for its loss through wetland restoration or creation.

Category 1 wetlands are those which support minimal wetland functions. Wetlands assigned to Category 1 do not provide critical habitat for threatened or endangered species or contain rare, threatened or endangered species. Category 1 wetlands are likely to be hydrologically isolated, have low species diversity, be dominated by non-native species in the plant community and have no significant wildlife habitat or use. Category 1 wetlands would have limited potential for reestablishment of lost wetland functions. Typical Category 1 wetlands would include wetlands that are acidic ponds created on mined lands, those wetlands that have little or no plants, and wetlands that are hydrologically isolated and comprised primarily of invasive, opportunistic plant species such as purple loosestrife *(Lythrum salicaria*), reed canary grass *(Phalaris arundinacea)* and giant reed *(Phragmites australis).*

Category 2 wetlands are those which support moderate hydrological, habitat, recreational and other wetland functions. Wetlands assigned to Category 2 are likely to be dominated by native species but generally would not have habitat for rare, threatened or endangered species.

Category 2 wetlands could be wetlands that are degraded but still have a reasonable potential for reestablishing lost wetland functions.

Category 3 wetlands are those that support superior wetland functions. Wetlands assigned to Category 3 would typically have high levels of biodiversity, a high proportion of native species or other high functional values. Category 3 wetlands might include wetlands which contain or provide habitat for threatened or endangered species, high quality forested wetlands, including old growth forested wetlands, mature forested riparian wetlands, vernal pools and wetlands which are scarce regionally or statewide including bogs and fens.

OAC Rules, 3745-1-05 and 3745-1-54, establish criteria for determining when the Director of Ohio EPA can allow a lowering of water quality in wetlands and what is appropriate mitigation for those impacts. OAC Rule 3745-1-05 identifies Category 1 wetlands as Limited Resource Waters and Category 2 and Category 3 wetlands as General High Quality Waters.

In order for an applicant to impact a Category 1 wetland the applicant must show that alternatives to impacting the wetland have been considered. Unavoidable wetland impacts must be minimized by replacing the storm water and some water quality functions on-site. The impacted Category 1 wetlands must then be mitigated for at a ratio of one and a half acres of wetland mitigation for every acre of wetland destroyed (1.5:1). This mitigation can occur anywhere within the same U.S. Army Corps of Engineers District. Ohio is divided into four of these districts which are based on drainage areas.

Category 2 wetlands require that the applicant has considered all alternatives to their destruction. For unavoidable impacts the applicant must demonstrate that they have minimized the acreage of wetland impacts. The applicant must then demonstrate that the proposed lowering of water quality is necessary for important social and economic development. Applicants must demonstrate that they can successfully mitigate for their project by restoring or creating wetlands of equal or higher quality than those being impacted. Approved wetland impacts must be mitigated on-site (within a one mile radius) if there exists a high likelihood of success for such an endeavor. If the applicant can demonstrate that on-site mitigation is not practicable then mitigation can occur anywhere within the same watershed, of a grouping of thirty-seven watersheds comprising Ohio. Mitigation ratios for Category 2 wetland impacts range from 1.5:1 to 2.5:1, with higher ratios required for off-site mitigation and for replacement of forested wetlands.

Approved impacts to Category 3 wetlands must meet all of the demonstrations required for impacts to Category 2 wetlands. Additionally, for Category 3 wetland impacts to be approved, the applicant must show that there is a public need for their project. Again, approved impacts must be mitigated for by restoration or creation of wetlands of equal or higher quality then those being impacted. Mitigation ratios for Category 3 wetlands range from 2:1 to 3:1 with higher ratios for off-site mitigation and for impacts to forested systems.
OAC Rule 3745-1-54 also singles out a subset of Category 3 wetlands, those that are scarce either regionally or statewide, where only temporary disturbances of water quality can be

authorized. This subset includes such wetland ecosystems as bogs, fens and other wetland systems that are high quality and rare.

OAC Rule, 3745-1-05 allows the Director to designate surface waters with outstanding ecological or recreational values as Outstanding National Resource Waters. Amendments to OAC Rule 3745-1-05 address review requirements for some wetlands designated Outstanding National Resource Waters. Disturbances to the water quality of wetlands and other surface waters designated as Outstanding National Resource Waters can only be authorized if they are short-term.

As well as providing mitigation for impacted Category 2 and Category 3 wetlands, the applicant must always replace the storm water and some water quality functions on-site. Peak post-development rates of surface runoff cannot exceed peak pre-development surface runoff rates on the project site. Retention or detention structures built on-site to accommodate this requirement must also incorporate chemical water quality improvement measures to the maximum extent practicable.

All approved wetland mitigation projects must be protected in perpetuity and are subject to a five year monitoring program under OAC Rule 3745-1-54. The monitoring includes information on hydrology, plants, soils and chemical water quality. The monitoring includes submittal of an annual report by the applicant and a third year site visit by Ohio EPA staff. The applicant is responsible to undertake any recommendations made by Ohio EPA to improve the mitigation wetlands. At the end of the five year monitoring period, if they can show that the mitigation is successful, the applicant is released from any further monitoring requirements.

The discharge of dredged or fill material or the creation of any obstruction or alteration is prohibited in wetlands unless the Director, Ohio EPA, determines that the activity will (1) not interfere with the attainment or maintenance of water quality standards, and (2) not result in a violation of any applicable provision of the CWA, including: (a) effluent limitations described in Section 301; (b) water quality related effluent limitations as described in Section 302; (c) water quality standards and implementation plans as described in Section 303; (d) national standards of performance as described in Section 306; or (e) toxic and pretreatment effluent standards as described in Section 306. Notwithstanding an applicant's demonstration that these criteria are met, the director may deny an application for a Section 401 certification if the director finds that the discharge or obstructions or alterations will result in adverse long- or short-term impact on water quality (O.A.C. 3745-32-05).

There are water quality certification exemptions. No Section 401 water quality certification need be obtained if the discharge of dredged or fill material is part of the construction of a federal project specifically authorized by Congress, provided the effects of such discharge are included in an environmental impact statement submitted to Congress prior to the actual discharge (O.A.C. 3745-32-03).

The director may impose terms and conditions as a part of the Section 401 water quality certification that are necessary to ensure compliance with the applicable laws and to ensure adequate protection of water quality (O.A.C. 3745-32-05(C)). Also, prior to the issuance of a water quality certification or prior to, during or after the discharge of dredged or fill material, to ensure adequate protection of water quality, the director may require that the applicant perform various environmental quality tests (O.A.C. 3745-32-05(D)). The director may revoke a Section 401 water quality certification if the director concludes at any time that any applicable laws or regulations have been or are likely to be violated (O.A.C. 3745-32-06). Section 401 certifications are issued, modified, revoked or denied and may be challenged in accordance with the provisions of the rules of procedure of the Ohio EPA, Chapter 3745-47 of the Administrative Code (O.A.C. 3745-32-07). Procedural rules require public notice regarding such Ohio EPA actions; public notice is given when the agency begins consideration of issuance of Section 401 certification.

In reviewing applications for water quality certification, Ohio EPA solicits input from ODNR and the U.S. Fish and Wildlife Service. ODNR may provide comments or data regarding fish and wildlife impacts, biological and other natural resources, and potential effects upon resources or uses of concern to ODNR. Ohio EPA receives and incorporates in its administrative record comments and recommendations submitted by ODNR and the Fish and Wildlife Service to the Corps of Engineers (COE). Comments by ODNR are submitted in part to express the views of the state regarding the conservation of fish and wildlife resources in accordance with the Fish and Wildlife Coordination Act and other applicable laws and regulations.

State authority provides increased protection of wetlands beyond controls over activities under the COE's Section 10/404 permit authority. State law provides that the Director, Ohio EPA may certify or deny certification to any applicant for a federal license or permit to conduct any activity that may result in a discharge into the waters of the state (O.R.C. 6111.03(P)). Further, O.A.C. 3745-32-02 sets forth the specific requirements that a Section 401 water quality certification is required to obtain the following: (1) a permit from the COE pursuant to Section 10 of the Rivers and Harbors Act; (2) a permit from the COE pursuant to Section 404 of the Clean Water Act; (3) a permit from the COE under both Section 10 and 404; and (4) any other federal permit or license that may result in any discharge to waters of the state.

In addition, increased protection of wetlands beyond the scope of the COE's authority is realized through the state's water pollution law and regulations. As an illustration, in December, 1996, the COE published the final rule for the administration of its nationwide permit program regulations. The Corps' permits are not valid until the state certifies that the discharge does not violate the state's water quality standards. Ohio EPA denied water quality certification for nationwide permits 17 – discharges associated with hydropower projects and 21 – surface coal mining activities.
Also, state water quality certification has imposed general and specific conditions on many nationwide general permits. A list of Ohio EPA's water quality certification exceptions to Section 404 Nationwide Permits is provided in Appendix K.

The Environmental Review Appeals Commission (ERAC), an appellate review board, separate and distinct from the Ohio EPA (see Chapter 4, Section 1), has ruled that the director's action of issuing water quality certification to an applicant with the condition that a portion of a wetland not be filled is reasonable and lawful because wetlands are waters of "exceptional ecological significance" within the meaning of O.A.C. 3745-1-05 and are therefore subject to the antidegradation policy of Ohio's water quality standards (EBR 79-42, 8/30/79). This decision construing Ohio EPA regulations has been sustained on appeal to the Franklin County Court of Appeals and the Ohio Supreme Court.

B. Ohio House Bill 231, effective July 17, 2001, mandates regulation of dredge and fill impacts to isolated wetlands and requires appropriate mitigation. Ohio EPA now regulates isolated wetlands deemed non-jurisdictional by the U.S Army Corps of Engineers as a result of SWANCC v. U.S. Army Corps of Engineers (O.R.C. Sections 6111.02, 6111.021, 6111.022, 6111.023, 6111.024, 6111.026, 6111.027, 6111.028, and 6111.029). The law also gave the Director of the Ohio Department of Natural Resources authority to establish a list of approved wetland mitigation banks and to establish and operate wetland mitigation banks under O.R.C. 6111.025. The state isolated wetland permit law and the approved wetland mitigation bank list (August 2001) are included in Appendix K.

C. Above and beyond the state's water pollution control laws, Section 401 implementing regulations and review guidelines, ODNR's Directive on Wetlands (1999 revision to the 1989 Policy Statement) "establishes a framework for the Ohio Department of Natural Resources' (ODNR) planning, land management and development; all regulation and financial assistance; water resources development, nonpoint source management and other cooperative programs, technical assistance and consultation; and external communication of departmental directives, procedures and policies."

ODNR follows this published wetlands directive in providing input to Section 404 permitting by the Corps of Engineers and Section 401 certification actions by Ohio EPA. Implementing provisions of ODNR's wetlands policy includes the following: requiring wetlands conservation measures in the planning of water resources developments and capital improvements projects; prioritizing funding for wetlands acquisition and protection; requiring that ODNR's regulatory programs be administered in a manner that avoids unnecessary wetlands damages and losses; and directing land managing divisions to act affirmatively to preserve and enhance wetlands. (Appendix K contains the full text of ODNR's Directive on Wetlands.)

D. It is the policy of the OCMP to seek increased dedicated public funding for wetlands restoration, enhancement and management. This includes financial assistance such as tax abatements and other incentives for private owners when long-term benefits to the general public interest will be realized. Coastal wetlands are protected by acquisition of land interests under various programs. ODNR has the authority to appropriate property for specific uses and purposes on behalf of any division in the department (O.R.C. 1501.01).

The Division of Natural Areas and Preserves (DNAP) administers the State Nature Preserve Program (O.R.C. 1517.05) to protect and manage outstanding examples of Ohio's natural heritage. Private owners may sell or donate qualifying wetland areas to the division. Alternatively, they may dedicate their wetland properties to the preserve system or maintain these wetlands as natural areas under the Ohio Natural Landmarks Program.

The Division of Wildlife (DOW) protects wetlands by acquiring and managing lands as wildlife areas. DOW has the authority to acquire and manage lands and waters or their surface rights for the specific purpose of fish and wildlife management, preservation, propagation, and protection, nongame recreational pursuits, public fishing and hunting grounds and preservation of the flora and fauna (O.R.C. 1531.06).

ODNR also protects wetlands by acquiring and operating lands as state parks. The Division of Parks and Recreation (DPR) acquires and manages these lands for public protection and use (O.R.C. 1541.02). Similarly, Ohio's park district agencies may acquire lands for the conservation of the natural resources of the state (O.R.C. 1545.11).

Many independent organizations and private interests acquire and protect wetlands. Their management and preservation efforts for various conservation and recreation purposes assure the continued protection of important wetland areas.

The National Wetlands Priority Conservation Plan provides a process for identifying wetlands that should receive priority attention for federal or state acquisition. The 1993 Statewide Comprehensive Outdoor Recreation Plan (SCORP) published by ODNR, REALM, consistent with the National Plan, highlights the importance of wetlands to outdoor recreation. Under this plan, ODNR is increasing funding from a variety of sources for the acquisition and restoration of wetlands. Lake Erie area wetlands are given a high priority in the Ohio Wetlands Priority Conservation Plan due to declining wetland types within the ecoregion, their high degree of public benefit and their vulnerability to development.

Many programs assist coastal wetlands acquisition by ODNR, the U.S. Fish and Wildlife Service, local governments and independent organizations. Coastal wetlands conservation grants (Coastal Wetlands Planning, Protection and Restoration Act, Title III, Public Law 101-646) are utilized by ODNR and DNAP for the acquisition of wetlands and buffer lands at high priority sites (e. g., aquatic habitats associated with coastal barrier land forms). Federal Land and Water Conservation Fund Act grants are used for both state and local wetlands conservation projects. ODNR's Ohio Wetlands Priority Conservation Plan, developed under the SCORP, assigns high priority to the acquisition-protection of coastal area wetlands. In the past ten years, ODNR's Division of Wildlife and its many partners have protected, restored and enhanced approximately 13,000 acres of Lake Erie wetlands under the North American Waterfowl Management Plan (NAWMP). ODNR's DNAP has expanded the Sheldon Marsh State Nature Preserve by 75 acres in the past three years and plans a 311-acre addition to the Mentor Marsh State Nature Preserve with a coastal wetlands conservation grant, supplemented by the state's income tax refund checkoff program.

Wetlands acquisition and restoration projects under the NAWMP are assisted through federal matching funds originating through the North American Wetlands Conservation Act (P.L. 101-233, as amended). The investment is multiplied through the agreements and partnerships entered into by DOW and a variety of conservation organizations, businesses and governmental agencies.

DNAP also cooperates in partnership projects with other agencies and independent organizations and private landowners to acquire, protect and restore wetlands that serve as outstanding examples of Ohio's natural heritage. Wetlands are also being inventoried, restored and enhanced on existing public lands in state parks and other areas.

Public/private partnerships are essential to accomplishing the state's wetlands conservation objectives. The first project in the NAWMP's Lake Erie Marshes focus area, in cooperation with the Winous Point Shooting Club, resulted in the designation of the 2,400-acre Muddy Creek Bay as a waterfowl refuge. This bay is the most concentrated staging area for black ducks on the continent. On a smaller scale, partnership projects for wetlands restoration on private lands are also important. DOW assists landowners with the restoration of small isolated wetlands that are vitally important to waterfowl and other migratory and wetland dependent wildlife. The Lake Erie Marshes focus area of the NAWMP is of the highest priority for restoration projects with private landowners. Through 1995, DOW had assisted in the restoration of more than 650 acres of previously drained privately owned wetlands.

The Division of Soil and Water Conservation works cooperatively with the U.S.D.A. Natural Resources Conservation Service to provide additional incentives for wetland protection on privately owned lands under the federal Wetlands Reserve Program (WRP). The WRP is focused chiefly on wetlands in agricultural production, providing cash payments to property owners for permanent conservation easements on wetland property and cost-sharing for restoration. The DSWC has provided piggy-back funding for the WRP targeted at riparian wetlands. This policy of assisting in paying down the costs of the permanent easement has allowed the state to receive enhanced federal funding for more set-asides. As a result, nearly 3,100 acres of wetlands were protected in the state during the first year of the WRP. Approximately 250 acres were in coastal counties, and the protection of more than 500 additional acres in riparian areas of the Maumee River watershed is expected to enhance water quality in the Lake Erie basin. The Division has set aside nearly $600,000 in NatureWorks funds to expand the use of this program to help achieve the state’s nonpoint source water quality goals.

The OCMP will promote increased financial, technical and cooperative assistance for private owners to promote long-term wetlands protection and management.

E. In partnership with the Ohio Sea Grant College Program, the OCMP strives to increase the usefulness of wetlands research to state and local decision makers and improving coastal management. The Lake Erie Protection Fund program may provide assistance for research and

coastal wetlands restoration projects, with a particular emphasis on projects that may benefit wetlands restoration and management elsewhere in the coastal area and Great Lakes system. Public education and outreach are mutual objectives for which these programs strive to maximize existing resources.

One of the premier locations for wetlands research and education on Lake Erie and the entire Great Lakes is the Old Woman Creek State Nature Preserve and National Estuarine Research Reserve (OWC-NERR). A memorandum of agreement between the OWC-NERR and the OCMP formalizes an institutional linkage intended to maximize the benefits of the use of the OWC-NERR for long-term scientific research, monitoring and educational programs. Assessing the impact of nonpoint sources of pollution in the watershed of the NERR is a high priority for research and is intended to be useful to other geographic locations in the coastal area.

F. A broad network of individuals and institutions provides information and technical assistance on wetland issues ranging from acquisition-protection projects and strategies to mitigation options, research, education, inventorying, and wetlands restoration and development. The OCMP endeavors to maintain effective linkages and networks to maximize the resources that may be devoted for coastal wetland conservation purposes. The Ohio Sea Grant College Program and member institutions provide information generated from wetlands research. Information on wetlands protection through state and federal regulatory authority is readily available from Ohio EPA, Division of Surface Water. ODNR's DOW manages the statewide wetlands inventory and provides a wide range of technical assistance for planning and management purposes. The Lake Erie Geology Group of the Division of Geological Survey also provides technical assistance on the hydrology and geology of coastal wetlands. The OWC-NERR cooperates with the OCMP by interacting to disseminate information on wetlands and related coastal management issues and acting as a clearinghouse for information and policy on coastal management issues. DNAP's Natural Heritage Database inventory may contain information on high-quality wetland communities. This information is available to the public and local government for planning purposes. DNAP may also provide technical assistance on the protection of these areas and on the restoration of natural wetland communities.

G. ODNR & Ohio EPA have secured a U.S. EPA grant to develop a statewide wetland restoration and mitigation strategy. This effort will include identification of high quality wetlands to be designated Outstanding National Resource Waters and to receive the corresponding high level of protection. Undoubtedly, one element of this plan will be an emphasis to restore and protect valuable Lake Erie coastal wetland systems.

POLICY 13 – NATURAL AREAS AND FEATURES

IT IS THE POLICY OF THE STATE OF OHIO TO PRESERVE SIGNIFICANT NATURAL AREAS AND OTHER OUTSTANDING FEATURES OF OHIO'S NATURAL HERITAGE BY:

A. ACQUIRING, DEDICATING AND MANAGING STATE NATURE PRESERVES (O.R.C. 1517.05, 1517.06);

B. MANAGING THE STATE'S NATIONAL ESTUARINE RESEARCH RESERVE PROGRAM;

C. CREATING AND MAINTAINING WILD, SCENIC AND RECREATIONAL RIVERS (O.R.C. 1517.14 THROUGH 1517.18);

D. MAINTAINING AN UP-TO-DATE INVENTORY OF NATURAL AREAS AND OTHER NATURAL FEATURES AND ENCOURAGING THEIR PRESERVATION THROUGH PRIVATE ORGANIZATION PROTECTION EFFORTS AND LOCAL GOVERNMENT REGULATION; AND

E. RECOGNIZING AS NATURAL LANDMARKS PRIVATELY OWNED NATURAL AREAS NOT SCHEDULED FOR ACQUISITION.

Authorities and Administration

A. ODNR, Division of Natural Areas and Preserves (DNAP) administers and operates a system of state nature preserves pursuant to O.R.C. 1517.05. The intent of the system is to preserve through acquisition and dedication natural areas of state or national significance. "'Natural area' means an area of land or water which either retains to some degree or has re-established its natural character, although it need not be completely undisturbed, or has unusual flora, fauna, geological, archaeological, scenic, or similar features of scientific or educational interest" (O.R.C. 1501.01). These areas include, but are not limited to, sites characteristic of Ohio's presettlement landscape types, natural vegetation and geological history.

Dedicated nature preserves are held in trust for the uses and purposes set forth in O.R.C. 1517.05 for the benefit of the people of the state, of present and future generations. They are managed and protected in the manner approved by, and subject to rules established by, the Chief of the DNAP. These preserves shall not be taken for any other use except another public use – after a finding by ODNR of the existence of an imperative and unavoidable public necessity for such other public use and with the approval of the governor (O.R.C. 1517.06).

Potential sites are evaluated for designation by DNAP based on the following internal criteria:

1. Whether the area complements the state's existing preserve program.

2. Whether it is a good representative of the community type that once existed in the region.

3. Whether it contains state or federal endangered flora or fauna.

4. Whether there is evidence of significant human disturbance of the area.

The division cooperates closely with local and national conservation organizations, nonprofit organizations, natural history museums, and universities in locating and identifying areas worthy of preservation. Through the Natural Areas State Income Tax Checkoff Program, the public is able to assist in acquisition and preservation of these natural areas, scenic rivers and endangered species by contributing a portion of its tax refund to the DNAP.

Nature preserves are classified as scientific, interpretive or scenic, with scientific areas being the most restrictive in use and scenic areas being the least restrictive. Preserves are managed for the following uses and purposes:

1. For conducting scientific research;

2. For teaching biology, ecology, natural history, geology, coastal processes and other related subjects;

3. To provide habitats for plant and animal communities;

4. As reservoirs of natural materials;

5. To serve as places of natural interest and beauty;

6. For fostering public visitation and observation of the natural world;

7. To promote understanding and appreciation of the aesthetic, cultural and scientific values of these areas; and

8. To preserve and protect such natural areas from any uses that would destroy their natural or aesthetic conditions. Active recreation, camping and organized sports are prohibited.

B. Ohio's only designated National Estuarine Research Reserve is at Old Woman Creek. The National Estuarine Reserve Research System (NERRS) was established by Section 315 of the Coastal Zone Management Act of 1972, 16 U.S.C. 1461, to provide financial assistance awards on a 50-50 matching basis to coastal states (including Great Lakes) for acquisition, development and operations of estuarine areas as natural field laboratories. These areas are

used primarily for long-term scientific and educational programs that provide information essential to local, regional and national coastal decision making. The Reserve's administrative offices -- designated as the Ohio Center for Coastal Wetland Studies -- are located on-site at Old Woman Creek.

To guarantee long-term protection of Old Woman Creek estuary, and to ensure fulfillment of the goals and objectives of the NERRS Program, the Reserve is managed by the Division of Wildlife as a nature preserve. Budget and policy decisions are made by the chief of Wildlife in coordination with the on-site NERRS Program Administrator and the Chief of the Sanctuaries and Reserves Division (SRD)/National Oceanic and Atmospheric Administration (NOAA)/U.S. Department of Commerce.

C. The Director of ODNR or the director's representative is authorized to create, supervise, operate, protect and maintain wild, scenic and recreational river areas (O.R.C. 1517.14). Areas that possess water conservation, scenic, fish, wildlife, historic or outdoor recreation values may be preserved, and adjacent lands of sufficient width necessary to protect those values may be included. ODNR is responsible for preparing and maintaining plans for the establishment, development, use and administration of these areas as part of comprehensive state plans for water management and outdoor recreation. The department also cooperates with federal wild, scenic and recreational river programs.

ODNR does not, as a result of such designation, restrict land use of property owners within the designated area. However, the Chief of DNAP does participate in watershed-wide planning with federal, state and local agencies to protect the wild, scenic and recreational values of these areas. DNAP administers federal financial assistance for such areas and may expend funds appropriated by the Ohio general assembly for acquisition, protection and maintenance of property (O.R.C. 1517.17). Channel modifications, construction and road building by state agencies and political subdivisions are prohibited within wild, scenic and recreational rivers outside municipal limits without plan approval by the Director of ODNR (O.R.C. 1517.16).

Wild river areas are free of impoundments, inaccessible except by trail, with essentially primitive shorelines and watersheds and unpolluted waters. Scenic river areas are free of impoundments, accessible in places by roads, with largely undeveloped watersheds and primitive shorelines. Recreational river areas are accessible by roads or railroads, have some development along their shorelines, and may have undergone some impoundment or diversion in the past (O.R.C. 1517.16).

Segments of five Lake Erie tributaries have been designated as Scenic Rivers. All designated segments of these rivers (the Chagrin, Grand, Cuyahoga, Sandusky and Maumee) lie outside the proposed Coastal Management boundary. Nevertheless, wise watershed management through implementation of stormwater management techniques and nonpoint source pollution control in these areas has a highly beneficial impact on coastal area water quality. The Scenic Rivers Program cooperates with the Ohio EPA and ODNR's Division of Soil and Water Conservation to encourage watershed protection on designated streams within the basin. (See Appendix J for

additional detail regarding the Scenic Rivers Program's role in nonpoint source pollution control.)

D. DNAP systematically identifies ecologically significant natural areas, communities, species and features to analyze and establish land protection priorities. This information is also provided to planners and government officials for local protection programs and regulations, and to developers to direct development away from sensitive areas.

E. The Ohio Natural Landmark Program is designed to make landowners aware of significant natural features, encourage them to protect these features and provide technical assistance as needed. This is a nonbinding notification and recognition program for owners of natural areas that are not presently scheduled for acquisition. Such areas are then recognized as a part of the registry of natural areas, and technical assistance through DNAP is available to manage them.

POLICY 14 – RARE AND ENDANGERED SPECIES

IT IS THE POLICY OF THE STATE OF OHIO TO PRESERVE AND PROTECT RARE, THREATENED AND ENDANGERED PLANT AND ANIMAL SPECIES TO PREVENT THEIR POSSIBLE EXTINCTION BY:

A. RESTRICTING THE TAKING OR POSSESSION OF NATIVE ANIMAL SPECIES, OR THEIR EGGS OR OFFSPRING, THAT ARE THREATENED WITH STATEWIDE EXTINCTION (O.R.C. 1531.25 AND O.R.C. 1531.99);

B. REGULATING THE TAKING, POSSESSION, REMOVAL, TRANSPORTATION OR SALE OF NATIVE PLANT SPECIES LISTED AS ENDANGERED OR THREATENED WITH EXTIRPATION (O.R.C. 1518.03); AND

C. PROTECTING THE WATERS THAT PROVIDE A HABITAT FOR RARE AND ENDANGERED SPECIES (O.R.C. 6111.03(O), O.R.C. 6111.03(R), O.A.C. 3745-1-05(C).

Authorities and Administration

A. ODNR, Division of Wildlife (DOW) protects fish and wildlife species threatened with statewide extinction under O.R.C. 1531.25. The division, with approval from the Wildlife Council, restricts the taking or possession of native species of wild animals, their eggs, or offspring threatened with statewide extinction. This restriction includes all species on the United States list of endangered fish and wildlife native to Ohio or that migrate within the state. The taking of species threatened with statewide extinction for zoological, educational, scientific or propagation purposes requires a written permit from the Chief of the Division of Wildlife (O.R.C. 1531.25 and O.A.C. 1501:31-23 and 1501:31-25). Any violation of this Section is considered a first degree misdemeanor pursuant to O.R.C. 1531.99.

   Through the Wildlife Diversity Income Tax Checkoff Program, funds are made available to the DOW for protection and management of rare and endangered animals, including habitat purchase and protection and research.

B. ODNR, Division of Natural Areas and Preserves (DNAP), has identified, designated, and listed plants that are native to Ohio that are in danger of extirpation or threatened with becoming endangered (O.R.C. 1518.01 and O.A.C. 1501:18-1). This list includes all species native to Ohio that are listed on the United States list of endangered and threatened plants. The removal or injuring of endangered and threatened plant species without permission from the private property owner or the removal from public property is prohibited (O.R.C. 1518.02). The taking of endangered and threatened plants for botanical, educational, scientific, or for propagation in captivity to preserve the species requires a written permit from the Chief of the DNAP pursuant to O.R.C. 1518.03.

Through the Natural Areas Income Tax Checkoff Program, funds are made available to DNAP for the protection and management of rare and endangered plants, including habitat purchase and protection and research.

C. The Ohio EPA, through the state water quality standards (O.A.C. 3745-1), provides additional protection to aquatic species identified as threatened or endangered. The Antidegradation Policy (O.A.C. 3745-1-05(C)) protects waters of exceptional ecological significance (e.g., waters that provide a habitat for state and federally identified threatened or endangered species). Present ambient water quality in such waters will not be degraded for all substances determined to be toxic or to interfere with any designated use as determined by the Director of Ohio EPA. This authority is used through various permitting actions such as National Pollution Discharge Elimination System (NPDES) permits and Section 401 water quality certifications.

POLICY 15 – EXOTIC SPECIES

IT IS THE POLICY OF THE STATE OF OHIO TO PREVENT INTRODUCTION OF AND CONTROL EXOTIC SPECIES TO PRESERVE THE BALANCE AND DIVERSITY OF NATURAL ECOSYSTEMS OF OHIO'S LAKE ERIE REGION BY:

A. REGULATING THE SALE AND PROPAGATION OF PURPLE LOOSESTRIFE (O.R.C. 927.682);

B. REGULATING THE IMPORTATION, SALE AND POSSESSION FOR PURPOSES OF INTRODUCTION INTO WATERWAYS OF EXOTIC SPECIES OF FISH OR HYBRIDS THEREOF (O.A.C. 1501:31-19-01);

C. ESTABLISHING AND IMPLEMENTING CONTROL MEASURES FOR NON-NATIVE FLORA AS PART OF MANAGEMENT PLANS FOR ODNR-MANAGED PRESERVES AND WILDLIFE AREAS;

D. INFORMING THE PUBLIC REGARDING PROPER PROCEDURES TO PREVENT FURTHER SPREAD OF ZEBRA MUSSELS;

E. CONDUCTING AND SUPPORTING SCIENTIFIC RESEARCH TO ASSIST IN UNDERSTANDING THE EFFECTS OF ZEBRA MUSSELS AND CARP UPON THE LAKE'S ECOLOGY AND TO ASSESS A VARIETY OF MEANS TO CONTROL THE SPECIES; AND

F. PARTICIPATING ON THE GREAT LAKES PANEL ON AQUATIC NUISANCE SPECIES AND CONDUCTING OTHER ACTIVITIES TO SUPPORT AND MAINTAIN CONSISTENCY WITH THE PURPOSES OF THE NONINDIGENOUS AQUATIC NUISANCE SPECIES PREVENTION AND CONTROL ACT OF 1990.

A. The Director of the Department of Agriculture (DOA) prohibits the sale and propagation of purple loosestrife pursuant to O.R.C. э 927.682. No person or governmental entity may sell, offer for sale or plant *Lythrum salicaria* without a permit issued by the director. The director may issue a permit only for controlled experiments and may exempt from the permit requirement any variety demonstrated not to be a threat to the environment (O.R.C. 927.682).

B. The State of Ohio's fishing regulations provide that exotic species of fish or hybrids thereof may not be imported, sold or possessed for the purposes of introduction into any body of water that is connected to or drains into a flowing stream or other body of water that would allow egress of fish into public waters in the state. In addition, the possession and importation of grass carp capable of reproducing is prohibited. Importers and sellers of grass carp are required to certify that all grass carp handled are of the sterile triploid variety and must have prior written

authorization from the Chief of the Division of Wildlife (DOW) to import and sell this variety (O.A.C. 1501:31-19-01).

C. Each preserve and wildlife area managed by ODNR, DOW and DNAP, is governed by a management plan specific to that area. Each plan incorporates a statement of policy regarding treatment of nonnative plant species identified as problems within the preserve or wildlife area. In the coastal area, plants identified include purple loosestrife, garlic mustard, European buckthorn, bush honeysuckle and Hungarian brome. Although Phragmites is a native species, there is the belief in the scientific community that a more aggressive European form exists. This European form of Phragmites is considered to be very invasive, and its ability to out-compete less-invasive native wetland species in recent years has caused this plant to be a problem species for coastal resource managers. Generally speaking, guidelines call for manual removal, burning and treatment with herbicides. Management plans include provision for monitoring and assessment to determine the extent of growth and nature of the disturbance, if any. Management plans are tailored to the specific preserve or wildlife area and prescribe the treatment appropriate for each species depending upon the habitat type, extent of invasion and management goals for the area.

D. Spread of the zebra mussel cannot be prevented entirely, but it can be slowed. Because anglers and recreational boaters inadvertently contribute to transport and spread of the mussel, ODNR informs them of proper procedures for inspecting, draining, washing and drying equipment. Information regarding storage techniques and the use of antifoulants and coatings is also provided.

E. ODNR, DOW is conducting and supporting numerous scientific studies of zebra mussels and carp and their effects on water clarity, pollutant uptake, predator/prey relationships, and other interactions of organisms at various trophic levels. Several methods of control are being investigated, including artificially inducing spawning at inappropriate times. Monitoring for the presence of ruffe and adult and larval sea lamprey has been conducted and will continue. Ruffe has not yet been found in Lake Erie, and sea lamprey have been controlled in the past and are confined to upper reaches of two coldwater streams in the eastern Ohio coastal area. Carp are controlled on DOW-managed areas by drawing down in early summer and placing screens on pump inlets and culverts in diked marshes. Rotenone is used in deep channels to eliminate remaining carp.

F. ODNR, through DOW, participates on the Great Lakes Panel on Aquatic Nuisance Species, which was established to identify Great Lakes priorities and make recommendations to the Aquatic Nuisance Species Task Force. The Task Force was established as a result of the Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) of 1990. The goals of that act are to prevent unintentional introductions; coordinate research; disseminate information; develop and implement environmentally sound control methods; minimize economic and ecological impacts; and establish a research and technology program to benefit state governments. The Great Lakes Panel has been instrumental in establishment of new Coast Guard regulations to stop imports and is assisting in development of research protocol,

educational strategies, and management and research priorities. The State of Ohio also is represented on the panel by the Ohio Sea Grant Program.

Ohio has developed a State Aquatic Nuisance Species Management Plan as called for by NANPCA. The plan is patterned after the Model Comprehensive State Management Plan for the Prevention and Control of Nonindigenous Aquatic Nuisance Species developed through a May 1995 Great Lakes regional workshop funded under Section 308 of the CZMA. The steering committee that developed the plan includes ODNR staff from the Divisions of Wildlife and Natural Areas and Preserves, OCMP staff from REALM and staff from Ohio EPA, Sea Grant, the Lake Erie Office and The Ohio State University. The management plan and first annual work plan were submitted to the National Aquatic Nuisance Species Task Force in late 1996.

PORTS AND SHORE AREA DEVELOPMENT

Uses Subject to Management

- Activities involving the development of submerged lands of Lake Erie.
- Activities involving the dredging and disposal of dredged materials.
- Activities affecting the development of the shore and nearshore waters.
- Activities involving port development, maintenance and expansion.

Dredging

Large vessels traveling the Great Lakes require harbor depths of 28 feet below low water datum. Keeping Ohio's commercial and recreational harbors open to these vessels requires annual dredging by the U.S. Army Corps of Engineers. Dredging involves large quantities of materials that are very costly to remove and may pose environmental problems. Polluted materials must be disposed at approved upland sites or in confined disposal facilities. These facilities are expensive and occupy valuable nearshore habitat. Improved dredging techniques and new methodology for the disposal of dredge materials is vital to the shipping industry.

Residential Development

Lakeshore access, expansive views and other aesthetic considerations make the shore area a desirable place to live. Residential development, primarily single family housing, occupies nearly 45 percent of the 262 miles of Lake Erie shore in Ohio. In some areas near Cleveland, high-rise apartment buildings have been built on the bluffs overlooking the Lake. Neighboring communities face pressure from developers to rezone their lakeshores to allow for more condominiums and high-rise apartments. High-density housing drastically changes the shore's character, limits the options for its future use, and may create unforeseen environmental problems. Local decisions to redevelop the shore to provide high density housing must be considered carefully. Proper plans should be developed and implemented by local governments to reduce the effects of continued residential development on the Lake Erie shore.

Industrial and Commercial Development

A sound, viable and progressive economy is an essential element of the Lake Erie region. The commercial and industrial advantages provided by the lake's economic resources are important to the region and the state. A lakeshore location satisfies two basic industrial location criteria: economic shipping distance for major raw materials including iron ore, coal and limestone; and availability of a large-volume water supply for processing needs.

Approximately 10 percent of the shore is developed by industrial or commercial interests. Many of the lake's tributaries are also heavily developed. However, their harbors, which in the past have been almost exclusively areas of commercial and industrial development, are now undergoing urban waterfront development.

Some developments along the lakeshore are lake-dependent and require actual lakefront access to operate. These include commercial fishing, port facilities, certain mineral extraction industries, large boatworks, shipyards, and marinas. Other developments along Lake Erie require water, but not necessarily lakefront land, as an integral part of their operation. Electrical generating facilities and steel plants are examples of this second group of developments.

Ports

The availability of an inexpensive water-based transportation system has greatly influenced development of cities and industry along the Lake. Commercial ports along Ohio's Lake Erie shore provide a vital link in the state's transportation system and are vital to the local, regional and state economy. The major commercial ports are Ashtabula, Cleveland, Conneaut, Fairport Harbor, Huron, Lorain, Sandusky and Toledo. Major commodities are coal, iron ore, grain, fertilizers, limestone, sand, gravel, salt and stone. A declining industrial base has hurt the ports, yet they have kept pace by diversifying their cargos and seeking new business. Innovative thinking and continued port development should maintain the flow of goods in the coastal area.

POLICY 16 – PUBLIC TRUST LANDS

IT IS THE POLICY OF THE STATE OF OHIO TO PROTECT THE PUBLIC TRUST HELD WATERS AND LANDS UNDERLYING THE WATERS OF LAKE ERIE, PROTECT PUBLIC USES OF LAKE ERIE AND MINIMIZE THE OCCUPATION OF PUBLIC TRUST LANDS FOR PRIVATE BENEFIT BY:

A. REGULATING OFFSHORE DEVELOPMENT AND IMPROVEMENT PROJECTS BY REQUIRING A LEASE FOR THE USE OF SUBMERGED LANDS (O.R.C. 1506.10 AND 1506.11 AND O.A.C. 1501-6-01 THROUGH 1501-6-06);

B. REGULATING RECOVERY OF SUBMERGED ABANDONED PROPERTY THROUGH PERMITS (O.R.C. 1506.32); AND

C. ESTABLISHING AND ENFORCING LAKE ERIE SUBMERGED LANDS PRESERVES (O.R.C. 1506.31).

Authorities and Administration

The waters of Lake Erie and lands underlying them belong to the state as proprietor in trust for the people of the state for the public uses to which they may be adapted, subject to the powers of the United States government, to the public rights of navigation, water commerce and fishery, and to the property rights of littoral owners, including the right to make reasonable use of the waters in front of or flowing past their lands (O.R.C. 1506.10). Ohio's "public trust doctrine" was originally established in 1803 when Section 14, Article III, of the "Northwest Ordinance" gave the new state authority to regulate activities occurring in navigable waters within state boundaries.

The U.S. Supreme Court ruled in Illinois Central Railroad Company v. Illinois 146 US 387 (1892) that the state may not abdicate its control of public trust properties and leave them under private control. Subsequent court decisions have looked with disfavor upon governmental actions that reallocated public uses to those of a select, private party. Several Ohio cases have clarified that the "public use" is to be construed broadly and extended beyond the traditional concepts of commerce, navigation and fishery. Specifically, State ex rel Brown v. Newport Concrete Co. (1975) 44 Ohio App. 2d 121 clarified that public use includes recreation, while State ex rel Squire v. Cleveland (1948) 150 OS 303 asserted that law regarding public use should provide a broad construction of "navigation" and be flexible enough to allow for future, as yet unanticipated, beneficial uses.

A. A lease from the State of Ohio, acting through the Director of ODNR, is required before any improvements may be made on the waters and the land underlying the waters of Lake Erie (O.R.C. 1506.11, O.A.C. 1501-6-01 through 1501-6-06). Although the current shoreline serves as the general baseline for determining which areas require a lease for development, state law also requires a lease of Lake Erie submerged land for filled land that was originally occupied by

the lake's waters. Landowners with such improvements made prior to October 13, 1955 are automatically granted a lease if the developments do not constitute an unlawful encroachment on navigation and water commerce interests. Any additions or improvements upon the existing fill or structures may require a new lease.

ODNR, REALM reviews proposed projects in accordance with the following criteria, established in O.A.C. 1501-06-03, to determine the potential impacts upon Lake Erie and the public's use of Lake Erie:

1. Water Dependency – Generally, an application will not be approved for a nonwater-dependent development or activity.

2. Protection of Environmental Quality – The Director of ODNR may require an Environmental Impact Assessment to determine probable impacts of the activity upon the natural and human environment.

3. Public Recreation – Potential impacts upon the public right of recreation, including present or prospective recreational uses, will be evaluated. Provision for public access may be required as a lease or permit condition depending upon historic use patterns and suitability of the lease site for existing or prospective recreational uses.

4. Relationship to port development, commercial navigation and waterfront development plans – Consideration will be given to compatibility with such plans, sensitivity to preservation and restoration of other coastal features, and importance to the local and regional economy, interstate commerce and other national, state or regional interests.

In addition, as provided in O.A.C. 1501-6-03, consideration will be given to the following:

1. Whether the proposed project will prejudice the littoral rights of any owner of land fronting on Lake Erie.

2. Whether the proposed project conforms to the permitted uses as regulated by the local government, where applicable.

3. Whether any of the public uses (navigation, water commerce and fishery) of the original area would be destroyed or greatly impaired.

4. Whether the diminution of the area of original use would be small compared to the use of the entire area.

5. Whether the area has a history of use including, but not limited to, services rendered to the general public.

In reviewing an application in terms of a project's potential impairment of public rights, ODNR solicits comments and uses, to the maximum extent practicable, the findings of the COE Section 10/404 permit process, and the Section 401 Water Quality Certification by Ohio EPA. This policy allows other state agencies to comment on potential environmental impacts before ODNR issues a submerged lands lease. (Erosion control measures also require a permit pursuant to O.R.C. 1521.22 [see Policy 2]. If proposed in conjunction with erection, construction or redevelopment of a permanent structure within the Lake Erie coastal erosion area, O.R.C. 1506.07 will apply as well.)

All lease agreements contain a reservation to the State of Ohio of all mineral rights and a provision that the removal of any mineral shall be conducted in a manner that does not damage any improvements placed by the littoral owner, lessee or permit holder on the lands. Also, no lease or permit expresses or implies any control of fisheries or wildlife.

Rental payments received from leases entered into on or after March 15, 1989, accrue to the Lake Erie Submerged Lands Fund (O.R.C. 1506.11). From the fund, 50 percent of each rental is paid to ODNR for administration of submerged lands and for the Coastal Management Assistance Grant Program. The other 50 percent of the rental is paid to the municipal corporation, county or port authority with jurisdiction over the area for which the lease was executed. For leases existing prior to March 15, 1989, the total lease rentals are paid directly to the local government until the renewal clauses becomes effective.

Rules for leasing of Lake Erie submerged lands are included in Appendix L.

B. The State of Ohio holds ownership and title to submerged abandoned property in Lake Erie and ODNR administers a permit system for recovery of such property (O.R.C. 1506.33 and 1506.32). See Policy 26 for additional details.

C. In order to provide special protection for significant abandoned property and features in Lake Erie, the Director of ODNR with approval of the Director of OHS may adopt rules to establish Lake Erie submerged lands preserves (O.R.C. 1506.31). See Policy 26 for additional details.

POLICY 17 – DREDGING AND DREDGED MATERIAL DISPOSAL

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE FOR THE DREDGING OF HARBORS, RIVER CHANNELS AND OTHER WATERWAYS AND TO PROTECT THE WATER QUALITY, PUBLIC RIGHT TO NAVIGATION, RECREATION AND NATURAL RESOURCES ASSOCIATED WITH THESE WATERS IN THE DISPOSAL OF THE DREDGED MATERIAL BY:

A. REGULATING, THROUGH THE OHIO ENVIRONMENTAL PROTECTION AGENCY WATER QUALITY CERTIFICATION, THE DISCHARGE OR DISPOSAL OF DREDGED MATERIAL (O.R.C. 6111.03(P) AND O.A.C. 3745-1);

B. REQUIRING A LEASE FOR STATE-ADMINISTERED SUBMERGED LANDS THROUGH THE DEPARTMENT OF NATURAL RESOURCES BEFORE INITIATING THE CONFINED DISPOSAL OF DREDGED MATERIAL IN THE WATERS OR ON LANDS UNDERLYING THE WATERS OF LAKE ERIE (O.R.C. 1506.11);

C. REGULATING COMMERCIAL DREDGING OF MINERAL RESOURCES (O.R.C. 1505.07 AND 1505.99, AND CHAPTERS 1561, 1563, 1565 AND 1567; AND

D. COORDINATING INTERDISCIPLINARY REVIEWS OF DREDGING PROJECTS AT OHIO'S LAKE ERIE PORTS, PROVIDING TECHNICAL AND FUNDING ASSISTANCE TO IMPLEMENT ENVIRONMENTALLY SOUND DREDGING AND DREDGED SEDIMENT MANAGEMENT PRACTICES.

Authorities and Administration

A. The Ohio EPA regulates discharges of dredged materials into Ohio waters through the authority of the Director, Ohio EPA, to certify or deny certification to an applicant for a federal license or permit that the discharge will comply with the CWA (O.R.C. 6111.03(P)). Before any agency or individual disposes of dredged material into Ohio waters, a state water quality certification must be obtained. Water quality certifications are issued, denied or conditioned pursuant to Ohio EPA's review of a COE Section 10/404 permit application or application made directly to Ohio EPA. (See Policy 12 for a more complete description of the 401 water quality certification authority.)

B. Before any improvements are undertaken to develop an in-water confined disposal facility (CDF), the project sponsor must obtain a lease from the ODNR for use of the waters and underlying submerged lands of Lake Erie (O.R.C. 1506.11). The application process and lease/permit criteria are explained in Policy 16.

C. The Director, ODNR, with the approval of the Director, Ohio EPA, the Attorney General, and the Governor, requires a permit or lease for removal of sand and gravel and other mineral resources from the bed of Lake Erie. Permits are issued for terms of not less than one year nor more than 10 years or until the economic extraction of the mineral has been completed. Dredging of sand and gravel must be within certain fixed boundaries that do not conflict with the rights of littoral owners. Pursuant to O.R.C. ϶ 1505.07, no person shall remove sand, gravel, stone or other minerals from or from under the bed of Lake Erie without first having obtained a permit or lease therefor from the Director, ODNR. Whoever violates this law shall be fined not less than $100 and not more than $500 (O.R.C. 1505.99).

D. ODNR cooperates with Ohio EPA, U.S. EPA, the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers (COE), and the local agency or individual in determining the appropriate method and location for disposal of dredged materials. ODNR uses an interdisciplinary resource management approach to the evaluation of dredging and disposal projects. The uniqueness of dredge disposal projects and the variability of environmental conditions in Lake Erie and the coastal area necessitate this approach. The OCMP encourages the development of long-term sediment management plans for harbors and navigation channels where continuing dredging will be necessary to maintain navigation and beneficial and economic uses of these coastal areas.

The U.S. EPA has developed Section 404(b)(1) guidelines for determining the suitability of in-water disposal of dredged or fill material. In developing management mechanisms in the Ohio Nonpoint Source Management Program, ODNR and Ohio EPA recognized that determining the presence and relative concentration of contaminants in dredged material is only one important factor. Predicting the fate of those contaminants in each disposal option and assessing the environmental impacts of each dredged material disposal alternative is even more important. Decisionmaking regarding the management of dredged sediments from harbor areas and navigation channels where major tributaries deliver large quantities of sediments must be made on the basis of which alternatives provide reasonable protection for water quality and aquatic life uses and meet Ohio's objectives for sustaining beneficial human uses of the coastal area.

Management must be flexible. Lake Erie has tremendous variability in substrate conditions, currents, ambient water quality and natural sediment resuspension from location to location. Also, as the levels of pollutants in sediments decline with increased controls of point sources and nonpoint sources, open lake disposal options and methods need to be carefully examined to ensure that natural resources and beneficial uses of Lake Erie are adequately protected. The OCMP will use integrated management to fully explore upland and in-lake sediment reuse options. Traditional in-water confined disposal facilities (CDFs) for dredged sediments eliminate large areas of open water and submerged lands and underwater resources. This results in a major commitment of natural resources and habitat for fish and wildlife to a sediment disposal use.

The OCMP has developed general priorities for the location of dredge disposal sites. Evaluation of all projects depends upon the specific characteristics of the situation and the site.

Areas for the disposal of dredged materials determined not suitable for open-lake disposal, in order of their relative priority are: (1) upland sites and (2) nearshore confined sites.

Except for sand and gravel, the OCMP does not advocate an order of preference among site alternatives for the disposal or use of materials determined suitable for open-lake disposal. Site selection must be examined on a case-by-case basis considering ambient environmental conditions, dredged sediment characteristics and the characteristics of alternative open-lake sites.

The sand- and gravel-sized sediments should be returned to the littoral system downdrift of the point of dredging. Returning to the littoral system all sand and gravel dredged during construction or maintenance of navigation channels, harbors, or marinas located in nearshore areas or in stream mouths will help mitigate more than 150 years of damage to the littoral system caused by ill-conceived practices for disposal of sandy sediments dredged from these channels, basins, and marinas. The historical practice of open-lake disposal, upland disposal, or commercial sale of sandy sediment dredged from channels, harbors, and marinas has contributed to long-term degradation of Ohio's beaches, loss of natural shore protection, and increased erosion. Increased erosion has increased turbidity and sedimentation in nearshore aquatic habitats.

To facilitate return of sandy sediments to the littoral system, ODNR advocates adoption of innovative dredging technologies to bypass sandy sediment to the littoral system downdrift of the harbor, channel, or marina. In addition, ODNR advocates modification of existing harbor structures to capture sand before it enters channels, harbors, or marinas. Capturing sandy littoral sediment before it enters harbors, channels, or marinas would prevent it from becoming unsuitable for nearshore disposal due to mixing with polluted and/or fine-grained sediment.

POLICY 18 – LOCAL LAKESHORE DEVELOPMENT

IT IS THE POLICY OF THE STATE OF OHIO TO ENCOURAGE LOCAL GOVERNMENTS TO PLAN FOR AND CONTROL SHORE DEVELOPMENT TO PROVIDE FOR THE WISE USE OF THE SHORE AND COASTAL RESOURCES BY:

A. PROVIDING PLANNING AND MANAGEMENT ASSISTANCE FOR THE DEVELOPMENT AND IMPLEMENTATION OF COMPREHENSIVE SHORE MASTER PLANS;

B. COLLECTING, ANALYZING AND PUBLISHING RESOURCE DATA THROUGH THE OHIO DEPARTMENT OF NATURAL RESOURCES, OHIO CAPABILITY ANALYSIS PROGRAM, FOR USE BY LOCAL GOVERNMENTS IN THEIR PLANNING AND DECISION-MAKING PROCESSES; AND

C. ASSISTING LOCAL GOVERNMENTS TO PREPARE ORDINANCES AND RESOLUTIONS NECESSARY TO EFFECTIVELY ADMINISTER THESE PLANS.

Authorities and Administration

A. In Ohio, local governments have been constitutionally (Article XVIII, Section 3 of the Ohio Constitution) or legislatively (O.R.C. Chapters 303 and 519) granted the authority and responsibility to plan for and control the development of specific land uses within their respective jurisdictions. The state encourages local governments to exercise this responsibility and authority in the development and implementation of comprehensive lakeshore master plans to provide for the wise use of these important land and water resources. Ideally, local lakeshore plans should:

1. Give high priority to public access, port and other coastal dependent uses over other types of development.

2. Discourage unprotected development and redevelopment in coastal erosion and flood prone areas.

3. Promote improved air and water quality.

4. Guide new development in or adjacent to areas of similar or compatible use.

5. Preserve fish and wildlife habitat and other significant natural areas or features.

6. Maintain prime and specialty agricultural (nursery and viticulture) areas.

7. Preserve historic and archaeological sites and other areas of cultural significance.

8. Use land capability analyses in the planning process.

9. Minimize filling of Lake Erie, especially for nonwater-dependent uses.

B. ODNR conducts investigations and collects data on the natural resources of the coastal area to assure their wise use and development. These efforts include information about soils, ground water, geology, forests, wetlands, floodplains, sediments and other resources and coastal processes. Much of this information is available through the Ohio Capability Analysis Program (OCAP), managed in the Division of Real Estate and Land Management. OCAP is a computer information system containing natural and physical data needed to analyze and present information on the land's ability to support or sustain various land uses. Additional information on coastal erosion and sedimentation, including Coastal Erosion Area maps, is available from the Lake Erie Geology Group of the Division of Geological Survey and the department's Lake Erie Geographic Information System. These data and analyses, available for all lakeshore communities, are valuable tools for local decisions on land use and development.

C. ODNR has developed guidelines for local land-use management, and model ordinances have been developed for different types of critical resources and hazard areas, including flood hazards, geological hazards, mineral resources, river corridors and natural areas. In addition, model ordinances for Lake Erie coastal erosion area permitting will be made available to communities. (See Policy 1.) The ODNR Division of Water provides assistance in the development and review of flood hazard area regulations. (See Policy 3.)

Owners of agricultural land meeting the requirements of O.R.C. 929.02 may apply for designation by the county auditor of their land as an agricultural district. Agricultural districts are exempt from certain special assessments and have limited protection from land condemnation (O.R.C. 929.03, 929.04, 929.05). The benefits provided by designation of agricultural districts may help keep some land as agricultural land that otherwise may be converted to some other use.

POLICY 19 – LAKE ERIE PORTS

IT IS THE POLICY OF THE STATE OF OHIO TO PROMOTE AND PROVIDE FOR MARITIME COMMERCE AND RELATED ECONOMIC DEVELOPMENT ALONG THE LAKE ERIE SHORE BY:

A. PROVIDING ASSISTANCE TO, AND ASSISTING IN THE PROCUREMENT OF FEDERAL FUNDS FOR PORT DEVELOPMENT ACTIVITIES FOR, LOCAL GOVERNMENTS AND PORT AUTHORITIES THAT HAVE THE POWERS TO PLAN, IMPROVE, ACQUIRE, ENLARGE, OPERATE, MAINTAIN AND FINANCE PORT ACTIVITIES AND PROJECTS; AND

B. ENCOURAGING THE DEVELOPMENT OF COMPREHENSIVE PORT FACILITY AND EXPANSION MASTER PLANS AND IMPROVEMENT PROJECTS THROUGH FINANCIAL ASSISTANCE FROM THE OHIO DEPARTMENT OF TRANSPORTATION.

Authorities and Administration

In Ohio, any municipality, township, county or combination of such, may create a port authority (O.R.C. 4582.22). A municipality shall act by ordinance; a township shall act by resolution of the township trustees, and a county shall act by resolution of the county commission in authorizing the creation of a port authority. Port authorities shall be governed by a board of directors (O.R.C. 4582.27). The jurisdiction of a port authority shall include all of the territory of the political subdivision or subdivisions creating it, provided that the same area is not included in more than one port authority.

A. The State of Ohio has developed a port assistance program for Ohio's Lake Erie ports. Grants are available through the Ohio Department of Transportation (ODOT), Division of Transportation Assistance, to assist port authorities in port planning, feasibility studies and improvement projects. These planning and feasibility studies should be coordinated with the affected local communities and should reflect local comprehensive planning and zoning regulations, where applicable. ODOT also provides technical assistance to port authorities in obtaining financial assistance for port development and expansion from other state and federal agencies.

B. Ports are encouraged to undertake planning studies that provide public access points or recreation areas within the harbors as well as studies on the compatibility of recreational development and commercial facilities and traffic. This consideration increases public awareness and support for the ports and the important role they play in the local, regional and state economy.

POLICY 20 – TRANSPORTATION FACILITIES

IT IS THE POLICY OF THE STATE OF OHIO TO INCORPORATE COASTAL CONCERNS AND RESOURCE PROTECTION INTO COASTAL TRANSPORTATION PLANNING THROUGH COORDINATION WITH THE OHIO DEPARTMENT OF TRANSPORTATION, REGIONAL TRANSPORTATION AGENCIES AND LOCAL MUNICIPALITIES.

Authorities and Administration

The state reviews federally financed projects through the state intergovernmental review process. The following internal guidelines are used in reviewing transportation projects and related facilities:

1. The development of new commercial water transportation facilities should be encouraged to locate in areas in or adjacent to already developed commercial and industrial areas in existing ports and harbors.

2. The development and maintenance of land transportation and improvement of highway and railroad access to Lake Erie ports and other major Lake Erie facilities is encouraged. However, development of new, major land transportation that impedes physical access to the Lake and the immediate shore; damages or destroys wetlands, wildlife habitat or other natural areas; or is in Lake Erie or its bays, is discouraged.

3. The development and maintenance of new air transportation facilities, including airports that serve Lake Erie ports, islands or other major Lake Erie facilities is encouraged. However, development of new air transportation facilities, including airports, that impede access to the lake and the immediate shore; damage wetlands without mitigation; cause unacceptable damage to wildlife habitat and other natural areas; interfere with shore erosion protection, or commercial or recreational boating and fishing; or create unacceptable noise or safety hazards to the abutting or surrounding area, is discouraged.

4. The use of lakeshore property for parking lots is discouraged, except for those parking facilities that provide public access or serve lake-dependent facilities.

Projects may require water quality certification or other permits or approval from the Ohio EPA or the COE (see Policy 12).

RECREATION AND CULTURAL RESOURCES

Uses Subject to Management

- Activities associated with the development of public park and recreation areas including marinas and boat-launching facilities.
- Activities associated with the development of public hunting and fishing areas.
- Activities affecting archaeological or historic sites.

Recreational Facilities

Over 3,200 square miles of Lake Erie are held in trust as a state resource for the people of Ohio. The Lake offers an almost endless variety of recreational opportunities on a year-round basis. However, user conflicts arise because the coastal area must provide for the recreational needs of Ohioans, while also maintaining nonrecreational and nonwater-dependent opportunities. Some existing recreational facilities are overburdened, and new facilities and expansion of existing facilities are needed in some areas.

Despite a wide variety of state, local and federally managed recreational areas, there remains a shortage of access and facilities necessary to promote the full recreational enjoyment of Lake Erie, according to the 1993 Ohio Statewide Comprehensive Outdoor Recreation Plan (SCORP). The demand for current facilities is increasing more rapidly than new ones can be provided. The high cost of land and the loss of potential recreational areas to other uses make it increasingly difficult to offer new services. The lakeshore is one of the more intensively developed areas of the state, and decreasing acreage has been available for recreational development, especially parcels both large and suitable enough for extensive recreation.

Many local officials indicate that the high cost of maintenance is a significant deterrent to new recreational development. Communities have limited resources and rely increasingly on federal funding for general municipal operations. As other costs of city government increase, park maintenance is often given a lower priority. In some cases, parks were built without provision for continuing park maintenance. Many local governments previously neglected the maintenance of shore area parks because poor water quality, high lake levels and erosion have lessened their value as public recreational areas. Improved environmental quality and increased awareness of Lake Erie's opportunities have created a growing demand for lake-based recreation that must be matched by government commitment to providing appropriate facilities.

Beaches

Swimming and other beach activities have always been popular along the Lake Erie lakeshore. During the 1970s, poor water quality significantly reduced the use of Lake Erie beaches. Today, only a few beaches near larger cities and municipal/industrial facilities experience beach advisories for swimming during the summer months because of water pollution. Eventually, all beaches must be cleaned up for recreational use.

Erosion also has damaged beaches. Recent high lake levels have increased erosion, significantly reducing beach areas in many locations and completely eliminating others. In some areas, damage has extended to beach houses and shelters. Erosion is costly, not only in terms of the loss of valuable beach resource, but also in terms of construction and maintenance costs for erosion control structures.

Boating

Lake Erie is the primary area of use of a substantial number of Ohio's recreational boaters. The high degree of demand creates several pressures on the Lake's resources.

Harbors of refuge are an important need of recreational boaters. Recreational boats are typically small and are often threatened by storm waves that develop quickly due to Lake Erie's shallow depth. Harbors of refuge provide safety when storm conditions develop. Most of the accessible and geographically suitable natural locations for harbors of refuge have been developed, although the capacity and accessibility of these existing harbors varies.

Construction, maintenance and improvement of boating facilities can conflict with environmental concerns. Marinas and small boat harbors often have been located at the mouths of streams or in wetland areas. The development of marina facilities and the review of such projects must consider the environmental impacts and the public interest.

Fishing and Hunting

Lake Erie provides a greater variety of fish species than any of the other Great Lakes. While fish populations fluctuate on an annual basis, the Lake supports a thriving sport fishing economy. The one-half million anglers who fish there spend an estimated $100 million annually in pursuit of their sport. Principal species are walleye, yellow perch, white bass and smallmouth bass.

Mallards, black ducks, wood ducks and blue-winged teal comprise approximately 70 percent of Ohio's annual harvest of more than 100,000 ducks. Mallards and black ducks are late migrants into Ohio and make up over half of the waterfowl reported on the hunter bag checks in the Lake Erie marsh region. Trapping for sport and harvest is particularly important in the Lake Erie marshes. Ohio's consistent second place rating in muskrat production is due principally to trapping along Lake Erie.

Cultural Resources

Cultural resources include the historic, architectural and archaeological resources important in the history and pre-history of the State of Ohio. The State of Ohio has acknowledged the importance of historic sites for over a century. In 1885, the state granted a charter to the Ohio Historical Society (OHS), a private, nonprofit organization, to serve as curator for the material remains of Ohio's past. Federal-level consideration for the protection of cultural resources is provided under the National Historic Preservation Act of 1966. In accordance with the provisions of the act, Ohio has designated the Chief Operating Officer and Deputy Executive Director of OHS to serve as the State Historic Preservation Officer.

POLICY 21 – LAKESHORE RECREATION AND ACCESS

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE LAKESHORE RECREATIONAL OPPORTUNITIES AND PUBLIC ACCESS AND ENCOURAGE TOURISM ALONG LAKE ERIE BY:

A. PROVIDING FOR PUBLIC ACCESS TO COASTAL AREAS WITHIN THE STATE NATURE PRESERVE SYSTEM THROUGH ARTICLES OF DEDICATION WHEREVER POSSIBLE AND CONSISTENT WITH PRESERVATION AND PROTECTION OF THE LAND (O.R.C. 1517.05);

B. PROTECTING PUBLIC ACCESS RIGHTS TO LAKE ERIE WATERS AND SHORELINE AREAS WHERE COMPATIBLE WITH EXISTING AND PLANNED USES OF WATERFRONT AREAS THROUGH THE LAKE ERIE SUBMERGED LANDS LEASING PROGRAM (O.R.C. 1506.11 AND O.A.C. 1506-6-01 THROUGH 1501-6-06);

C. DEVELOPING AND MAINTAINING SHOREFRONT STATE PARKS (O.R.C. CHAPTER 1541);

D. PROVIDING FOR COMPREHENSIVE ASSESSMENT OF RECREATIONAL NEEDS AND PLANNING FOR FACILITIES TO MEET THOSE NEEDS THROUGH THE STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN (SCORP) AND LAKE ERIE ACCESS PROGRAM (LEAP);

E. ASSISTING LOCAL GOVERNMENTS TO DEVELOP LAKESHORE AND URBAN WATERFRONT RECREATIONAL AREAS BY PROVIDING FINANCIAL AND TECHNICAL ASSISTANCE;

F. PROVIDING FOR RECREATIONAL OPPORTUNITIES SUCH AS HIKING, BIRD WATCHING AND INTERPRETIVE SERVICES AT STATE PARKS, WILDLIFE AREAS AND NATURE PRESERVES AND ENCOURAGING LOCAL GOVERNMENTS AND OTHER AGENCIES TO PROVIDE GREATER ACCESS TO THE SHORE OF LAKE ERIE; AND

G. ENCOURAGING THE INCORPORATION OF PUBLIC ACCESS AND APPLICABLE RECREATIONAL OPPORTUNITIES INTO THE PLANNING OF PRIVATE DEVELOPMENTS AND PUBLIC INSTITUTIONS LOCATING ALONG THE SHORE OR RIVERS IN THE COASTAL AREA.

Authorities and Administration

A. ODNR is charged with the responsibility of acquiring a system of nature preserves for scientific research, teaching of natural history, ecology, conservation and similar fields, as habitats for plant and animal species and communities, as reservoirs of natural materials, as places of natural interest and beauty, and other purposes and uses. Articles of dedication shall be executed by the owner of the land in the same manner and with the same effect as a conveyance of an interest in land and shall be irrevocable (except as provided in O.R.C. 1517.05). The nature preserve law expresses the intent of the Ohio General Assembly and ODNR "wherever possible and consistent with such preservation and protection of the land, the articles shall provide for public access in order that the maximum benefit be obtained for the uses and purposes stated . . ." (O.R.C. 1517.05).

B. ODNR's authority to control Lake Erie's submerged lands through the lease application process has been effective in retaining public access where it has been a traditional and beneficial use of the waterfront. Rules that guide the lease process provide that "public access may be required as a condition of a lease or permit depending upon historic use patterns and suitability of the lease site for existing or prospective recreational uses" (O.A.C. 1501-06-03(1)(3). Where no public access had existed previously, ODNR and the lessee have often identified opportunities for provision of various forms of public access (shoreline fishing, pedestrian access to shore-lands, transient boat dockage and other uses and improvements). Often, developers have taken the initiative to provide for access, in light of potential benefits to their coastal-dependent enterprises. (See Policy 16 for additional detail on the lease program. Submerged lands leasing rules are contained in Appendix L.)

C. ODNR's Division of Parks and Recreation (DPR) is charged with the development, operation and maintenance of a system of state parks in Ohio for the recreational use of the citizens of Ohio (O.R.C. Chapter 1541). State park development is financed primarily through ODNR's capital improvement budget. The Land and Water Conservation Fund (LWCF) and the NatureWorks program are supplemental sources of funding for state parks, and ODNR continues to develop new facilities and expand existing facilities along Lake Erie.

D. The Statewide Comprehensive Outdoor Recreation Plan (SCORP), updated approximately every five years, is the State of Ohio's official policy document for outdoor recreation. The SCORP identifies statewide issues and problems impeding the provision of recreation opportunities and also identifies recreation resources, participation and activity trends, and social indicators that will influence the provision of these opportunities in the future. ODNR, REALM is the lead agency responsible for developing the SCORP. The SCORP also serves as a guide for allocations from the LWCF.

In 1998, ODNR completed a two-year planning process that culminated in the publication of a strategic plan for recreation opportunities. Commonly referred to as the Recreation Opportunities Priority (ROP), the strategic plan contains a number of issues and actions that

have relevance to the Ohio Coastal Management Program. Specifically, strategies for enhancing recreation resource protection, improving access to water-based recreation opportunities, and becoming more actively involved in the recreational corridors/greenways movement are consistent with the Ohio Coastal Management Program.

Ohio SCORPs have recognized the importance of Lake Erie in providing outdoor recreation opportunities for Ohio and its visitors. The need to provide additional access to Lake Erie was recognized in the 1980-85 Ohio SCORP that recommended the implementation of a comprehensive study of the access needs for boating and fishing. The Lake Erie Access Study was initiated in 1983 and included a comprehensive inventory of existing and potential access sites along the 262-mile shoreline. User surveys of boaters and anglers were also conducted to develop a data base for assessing access needs. The Lake Erie Access Study identified regional boating and fishing access needs to assist decision makers in developing rational acquisition and development strategies for providing access to Ohio's single most important water resource.

Upon completion of the Lake Erie Access Study, a public assistance program, the Lake Erie Access Program (LEAP), was established and has been administered by ODNR's Division of Watercraft. The program is authorized to provide up to 75 percent matching funds to local governmental agencies along the Lake Erie coast for boating and fishing improvements.

Assistance provided by the LEAP and continued demand for recreational access has necessitated a need to update the Lake Erie Access Study. Scheduled periodic updating will help decision makers in prioritizing sites for acquisition and recreational development.

The LWCF program provides up to 50 percent reimbursement grants to the state and its political subdivisions for acquisition and/or development of public outdoor recreation areas, consistent with SCORP. Other federal funding programs may, in certain instances, be matched with the LWCF money. However, ODNR requires that a minimum of 20 percent of the project costs be local funds to assure a local commitment to the proper operation and maintenance of the project. In allocating LWCF monies, a high priority has been placed on local projects.

The NatureWorks program was established in 1994 with permanent funding through $200 million in state bonds. The NatureWorks grant program provides up to 75% reimbursement assistance for local government subdivisions (townships, villages, cities, counties, park districts, joint recreation districts, and conservancy districts) to for the acquisition, development, and rehabilitation of recreational areas. Since NatureWorks' inception, over 1,300 applications totaling over $63 million have been funded.

The General Assembly specified that NatureWorks funds are to be available on a modified county per capita basis. Government agencies within each county are to apply to ODNR and compete for funds available to the county. Approximately one-fourth of the total county allocation will be available each funding year. The local grants program is an up-to 75 percent

reimbursement program, so the project sponsor must have the 25 percent matching funds as well as cash flow capability to complete the project. "In-kind" costs are eligible as match.

E. ODNR encourages local governments to develop lakeshore recreational areas through technical and financial assistance for the acquisition and development of community park and recreation areas. The goals of ODNR's assistance are to: (1) qualify the state to receive federal funds from both the LWCF and the Recreational Trails Program (RTP) component of the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), (2) administer the NatureWorks and LWCF programs and the NRTF component of SAFETEA-LU in Ohio so that political subdivisions receive the maximum benefits, and (3) provide other essential assistance to communities to provide quality recreation throughout the state.

Technical assistance is provided to communities by REALM. Typical assistance includes identification of funding sources; site inspection and evaluation; plan reviews and recommendations; inventory information; and guidance in application preparation, federal regulation compliance and project procedures.

ODNR encourages local communities to revitalize valuable urban water resources by providing technical and financial assistance to fully use the recreational potential of urban waterfronts. Technical assistance through REALM is primarily oriented toward providing information and expertise to local governments in such areas as plan review, applicable state and local programs, and sources of financial aid. Projects have been funded primarily through the LWCF program and the Waterways Safety Fund.

Projects that propose to provide new or improved boating, fishing or recreational opportunities to Lake Erie for the general use of the public are eligible to receive assistance through the LEAP. The lake access to be developed must be in the form of launching lanes or ramps, and/or shore-based fishing facilities such as piers, platforms, walls or breakwaters. In addition to actual access facilities, support accommodations such as parking, rest rooms, lighting, landscaping and lakefront park development may be eligible for financial assistance. In 1994, funding from the NatureWorks program in the amount of $1.75 million for the 1996/97 biennium was made available specifically for LEAP.

F. ODNR provides recreational opportunities at its state parks, nature preserves and wildlife areas in the coastal area. Interpretive facilities and programs continue to be developed at ODNR-managed properties on the Lake. Financial assistance through NatureWorks and the RTP can be provided to local and regional governmental agencies to develop recreational opportunities, including trails. Technical assistance is available from ODNR for interest groups, local communities and park districts interested in developing trails in Ohio. ODNR, (REALM) is the designated state agency responsible for the administration of the RTP. The RTP was established with the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (PL 102-240) and was reauthorized by SAFETEA-LU through 2009. RTP funds can be

used to assist governmental agencies and non-profit trail groups in the rehabilitation, development, maintenance and acquisition of recreational trails and related facilities. RTP funds also can be used by states for environmental protection and safety education programs. Trails funded with NRTF monies may be motorized, nonmotorized or multiple-use trails.

G. ODNR, through Section 10 and 404 permits and technical assistance, encourages the incorporation of public access and recreational opportunities into the planning of major developments and public institutions that locate at the shoreline or along rivers in the coastal area. Project developers and planners are encouraged to recognize multiple-use advantages of providing access areas in their plans where feasible.

POLICY 22 – LAKE ERIE BEACHES AND PUBLIC BATHING

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE PUBLIC BEACH ACCESS AND SAFE PUBLIC BATHING AREAS ALONG LAKE ERIE BY:

A. DEVELOPING AND MAINTAINING BEACHES AND BATHING AREAS ON STATE-OWNED LAND;

B. PARTICIPATING JOINTLY WITH THE U.S. ARMY CORPS OF ENGINEERS, SHORELINE PROPERTY OWNERS AND LOCAL LAKESHORE GOVERNMENTS IN BEACH AND LITTORAL NOURISHMENT PROJECTS;

C. PROVIDING FOR CONTINUING STUDY OF BATHING BEACH WATER QUALITY ALONG THE LAKE ERIE SHORE AND ADVISING APPROPRIATE AUTHORITIES OF WATER TEST RESULTS WITHIN THEIR RESPECTIVE JURISDICTIONS; AND

D. ENCOURAGING LOCAL AUTHORITIES TO ESTABLISH BEACH SAMPLING AND SANITATION PROGRAMS.

Authorities and Administration

A. ODNR, through the Division of Parks and Recreation (DPR), develops and maintains Lake Erie public beach access areas. DPR is charged with the development, operation and maintenance of new and existing bathing facilities within the state park system. DPR also has the authority to govern all state beaches and swimming activities on lands and waters that are part of the state park system (O.R.C. 1541.03).

B. ODNR strongly urges the COE and requires other public and private entities to provide littoral/beach nourishment by returning dredged material composed primarily of sands or gravels derived from Lake Erie beach or nearshore zones to the shallow (less than 10 feet deep) nearshore waters or on the beach downdrift of the worksite. This is consistent with ODNR's position that all sand and gravel of littoral origin be returned to the downdrift littoral zone when dredged from marinas and channels by private interests and/or public agencies. ODNR works with the COE and other intrastate agencies on littoral/beach nourishment projects.

The COE, through several federal laws, including Section 145 of the Water Resources Development of 1986, Section 111 of the 1968 Rivers and Harbors Act and Section 103 of the 1962 Rivers and Harbors Act, is authorized to coordinate with the state on littoral/beach nourishment projects. The state also comments through the Section 404, Environmental Assessment and Evaluation, Public Notice, and Finding of No Significant Impact (FONSI) review process, to achieve an environmentally acceptable alternative for the disposal of dredged material.

C. The Ohio Department of Health (ODH) samples and analyzes water from (1) selected beaches to determine the need for water quality improvements and pollution abatement, (2) all state park beaches along the lake to determine water quality and to monitor changes in the various state park watersheds, and (3) various community and privately owned beaches within local health districts to provide water quality data and assist in developing local bathing beach sampling and sanitation programs. All ODH samples along the Lake Erie shore are taken routinely throughout the bathing beach season. Additional samples are taken in response to unusual conditions or to evaluate water quality problems when identified.

If E.coli bacteria counts exceed standards, ODH recommends to DPR or the beach operator that a swimming advisory be posted. Such a posting does not prohibit swimming; it merely informs the public that for a particular time period, high-risk groups may increase their chances of becoming ill as a result of increased E.coli levels. Subsequent testings determine whether or not the beach advisory remains posted.

D. ODH encourages local health districts to establish permitting systems for operation of public bathing beaches and to develop regulations regarding water quality and other health and safety concerns. ODH provides local health districts with guidelines for developing regulations and strongly recommends adoption of regulations through their program surveys and reviews of local procedures. Cuyahoga, Erie, and Lake counties administer their own permitting and regulatory programs.

POLICY 23 – RECREATIONAL BOATING

IT IS THE POLICY OF THE STATE OF OHIO TO SATISFY AND SERVE THE PUBLIC INTEREST FOR RECREATIONAL BOATING OPPORTUNITIES AND WATERCRAFT SAFETY IN THE COASTAL AREA BY:

A. REGULATING SAFETY OF WATERCRAFT BY ENFORCING WATERCRAFT LAWS (O.R.C. CHAPTER 1547);

B. CONDUCTING A WATERCRAFT SAFETY AND EDUCATION PROGRAM (O.R.C. 1547.52 AND 1547.521);

C. DEVELOPING AND OPERATING BOAT FACILITIES AT STATE-OWNED AREAS ALONG LAKE ERIE;

D. ASSISTING IN THE PLANNING AND DEVELOPMENT OF LOCAL GOVERNMENT OPERATED MARINAS AND BOAT LAUNCHING AREAS UNDER OHIO DEPARTMENT OF NATURAL RESOURCES' COMMUNITY WATERCRAFT ASSISTANCE PROGRAM AND THE LAKE ERIE ACCESS PROGRAM; AND

E. PARTICIPATING JOINTLY WITH THE U.S. ARMY CORPS OF ENGINEERS AND LOCAL COASTAL AREA GOVERNMENTS IN COMPLETING THE OHIO LAKE ERIE REFUGE HARBOR SYSTEM (O.R.C. 1547.71).

Authorities and Administration

A. The Division of Watercraft in ODNR is responsible for the enforcement of the state watercraft laws and pursuant regulations (O.R.C. Chapter 1547). Watercraft laws and regulations pertain to vessel registration and operation, safety equipment and procedures, littering and abandonment of vessels. The division has four area offices along Lake Erie for patrol and education purposes. Enforcement and patrol activities are coordinated with municipal marine patrol officers and the U.S. Coast Guard.

B. State watercraft officers conduct safety classes, both in the classroom and on the water, for interested groups along Lake Erie as part of the division's Watercraft Safety and Education Program (O.R.C. 1547.52 and 1547.521). Completion of a Boating Education Course is mandatory for all watercraft operators born in 1982 or later operating a vessel with a horsepower rating of 10 or more (O.R.C. 1547.05). Also, Educational Grants are available to non-profit corporations and political subdivisions to conduct Ohio Boater Education Courses (O.R.C. 1547.68).

C. ODNR, through the Divisions of Watercraft, Parks and Recreation, and Wildlife, develops and operates boating facilities on state properties along Lake Erie. The Division of Watercraft can assist financially in the development of such facilities at state parks. As a part of the Fish Ohio Program, the Division of Wildlife acquires properties for fishing access to Lake Erie and develops boat launching facilities on these properties and other public shoreline areas. Land and Water Conservation Fund grants can also be used for public recreation boating facilities (see Policy 21).

D. ODNR provides financial assistance to local communities for the planning and development of boating facilities. The Division of Watercraft provides assistance to local communities for launching and marina facilities from the Waterways Safety Fund (O.R.C. 1547.72) with the consent and approval of the Director of ODNR. The Waterways Safety Fund is financed from boat registration and title fees and 7/8 of 1 percent of the motor fuel tax. The Division of Watercraft allocates funds statewide as determined by need, the number of boats to be benefited, the cost of the projects in relation to the amount of funds available, priority relative to other projects and the willingness of public agencies and political subdivisions to participate in a cooperative project. Only political subdivisions, park districts, conservancy districts and agencies of state government are eligible for assistance from the Waterways Safety Fund in developing recreational boating facilities. Projects that receive major attention are those that provide for the construction of ramps or hoists, parking areas and better access, essential sanitary facilities, or the expansion of existing facilities.

   Projects that propose to provide new or improved boating or fishing opportunities to Lake Erie for the general use of the public are coordinated through the Lake Erie Access Program (LEAP). The LEAP encourages increased boating and fishing access to the lake. These projects are eligible for cooperative funding by ODNR to local park districts and political subdivisions through the above-mentioned funding sources and various other sources.

E. Pursuant to O.R.C. 1547.71, the Division of Watercraft acts as the refuge and small boat harbor agency for Ohio for the purpose of cooperating with ODNR and the Corps of Engineers in acquiring, constructing, and maintaining refuge and small boat harbors. The refuge harbor program in Ohio is carried out jointly with the Corps of Engineers under Congressional authorization for federal financial and technical assistance. Participation by the Division of Watercraft in a refuge harbor project is determined by the need, the number of boaters to be benefited, the cost of the project in relation to the amount of funds available, priority relative to other projects and the willingness of public agencies to participate in such cooperative projects. Recreational harbors are low priority for the federal government.

POLICY 24 – FISHING AND HUNTING

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE EXPANDED SPORT FISHING AND SAFE HUNTING OPPORTUNITIES IN THE COASTAL AREA BY:

A. REQUIRING LICENSURE FOR HUNTING, TRAPPING AND FISHING (O.R.C. 1533.10, 1533.111 AND 1533.32);

B. REQUIRING COMPLETION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES HUNTER SAFETY AND TRAPPER EDUCATION COURSES FOR FIRST-TIME LICENSE BUYERS BEFORE ISSUING A HUNTING LICENSE OR TRAPPING PERMIT (O.R.C. 1533.10 AND 1533.111);

C. ACQUIRING AND DEVELOPING AND ASSISTING LOCAL GOVERNMENTS IN DEVELOPING FISHING ACCESS AREAS;

D. ESTABLISHING AND MAINTAINING WILDLIFE AREAS AND WETLANDS, AND EXPANDING THE USE OF OTHER STATE-OWNED LANDS FOR THE REGULATED TAKING OF WILDLIFE; AND

E. ENCOURAGING PRIVATE LANDOWNERS TO ALLOW FISHING AND HUNTING ON THEIR LAND UNDER THE OHIO WILDLIFE COOPERATIVE FISHING AND HUNTING PROGRAM.

Authorities and Administration

A. See Policies 27 and 29.

B. All first-time hunting license buyers in the State of Ohio are required to complete a hunter safety and conservation course and pass an examination as prescribed by the Chief of the Division of Wildlife (DOW) before a hunting license can be issued (O.R.C. 1533.10). The course consists of subjects including, but not limited to, hunter safety and health, use of hunting implements, hunting tradition and ethics, the role of hunting in conservation, and hunting rules and regulations.

C. DOW has the authority to acquire and develop areas for fishing access along Lake Erie, (O.R.C. 1531.06). This activity is part of the Division's Fish Ohio Program to increase fishing opportunities in Ohio through cleaner waters, stocking and fishing access to Ohio's waters. The division has developed a prioritization system for fishing access projects of the LEAP, which considers fishing access needs, shoreline analysis for potential sites and number of existing accesses and cooperation of landowners.

ODNR provides financial and technical assistance for fishing access to local governments along the Lake Erie shoreline. Development of shoreline fishing access has resulted from shoreline recreational projects funded through the Land and Water Conservation Fund (LWCF). Technical assistance is available from the above divisions and programs for fishing access.

D. See Policies 27 and 29.

E. Through the Ohio Wildlife Cooperative Hunting and Fishing Program, additional hunting and fishing opportunities are created for Ohio hunters and anglers by encouraging private landowners to permit public hunting, fishing and trapping. Effective control of public use is available to participating landowners. Under the hunting phase of the program, the landowner permits hunting on a first-arrival basis. Permits outlining certain conditions to be followed while hunting on the premises must be signed by each hunter and the landowner. The landowner still retains the authority to regulate the number of hunters on his or her land at any one time and to refuse hunting privileges to any intoxicated, disrespectful or abusive individuals. A landowner must control a single farm unit of 50 acres or more. In return, the DOW agrees to furnish certain materials to landowners that will help them control hunters on their property. Hunting with permission, parking and safety zone signs are provided by the DOW as well as the permit forms. To increase game on the property, participants in the program may obtain food and cover planting stock from the DOW. State wildlife officers patrol these areas during the hunting season as a routine part of their duties. Through the hunting permit, the landowner is released from liability in case the sportsperson is injured or suffers personal property damage while on the landowner's property (O.R.C. 1533.18 and 1533.181).

POLICY 25 – SURPLUS PUBLIC PROPERTY

IT IS THE POLICY OF THE STATE OF OHIO TO, WHEREVER APPROPRIATE, RETAIN SURPLUS STATE LAKESHORE PROPERTY IN PUBLIC OWNERSHIP AND TO OBTAIN FEDERAL LAKESHORE PROPERTY TO USE OR REDEVELOP SUCH AREAS FOR OTHER PUBLIC SHORELINE ACCESS AND PUBLIC PURPOSES.

Authorities and Administration

All departments within the State of Ohio provide notice to other agencies regarding availability of surplus property within the state. The Ohio Department of Administrative Services reviews notices of federal and state surplus properties in the state and coordinates with other agencies to evaluate the suitability of such property for state management. In the case of the Ohio Department of Transportation (ODOT), the agency notifies ODNR directly. The OCMP will review such notices for properties within the coastal area and for properties where activities may significantly affect the coastal area. OCMP will assess and actively pursue opportunities for retention by the current agency or transfer to ODNR for provision of public access and use.

POLICY 26 – PRESERVATION OF CULTURAL RESOURCES

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE FOR THE PRESERVATION OF CULTURAL RESOURCES TO ENSURE THAT THE KNOWLEDGE OF OHIO'S HISTORY AND PRE-HISTORY IS MADE AVAILABLE TO THE PUBLIC AND IS NOT WILLFULLY OR UNNECESSARILY DESTROYED OR LOST, BY:

A. PROTECTION OF CULTURAL RESOURCES ON OR ELIGIBLE FOR STATE AND NATIONAL REGISTERS OF HISTORIC PLACES (O.R.C. 149.51 THROUGH 149.55);

B: REGULATING RECOVERY OF SUBMERGED ABANDONED PROPERTY THROUGH PERMITS (O.R.C. 1506.32); AND

C. ESTABLISHING AND ENFORCING LAKE ERIE SUBMERGED LANDS PRESERVES (O.R.C. 1506.31).

Authorities and Administration

A. The State of Ohio, to protect its cultural resources, identifies, evaluates, designates and preserves significant resources and provides for consideration of cultural resources endangered by public and private development. The state accomplishes these goals through the following activities.

National Register of Historic Places – In accordance with the provisions of the National Historic Preservation Act of 1966, the Ohio Historic Preservation Office (OHPO) within the Ohio Historical Society (OHS) reviews nominations for placement of properties on the National Register. The 17-member Ohio Historic Site Preservation Advisory Board (OHSPAB) advises the OHPO as to whether National Register criteria are met. If the nominated site meets the criteria, the nomination is forwarded to the National Register, where the final decision is made.

State Registries of Archaeological and Historic Landmarks – The OHS has the authority to develop and maintain a State Registry of Archaeological Landmarks pursuant to O.R.C. 149.51 and a Registry of Historic Landmarks pursuant to O.R.C. 149.55. OHS places land on these registries only after obtaining a written agreement with the landowner that subjects the property to the provisions of the Revised Code. Within any land placed on either registry, no person or governmental entity may alter or disturb the cultural resources located there without first notifying the Director of OHS, allowing inspection by his or her representatives and providing information on findings of archaeological or historical significance. In addition, sale and possession of objects removed from such sites without privilege to do so is prohibited (O.R.C. 149.51 and 149.55). The owner may not engage in or authorize any archaeological

survey or salvage work within lands registered as Archaeological Landmarks without a permit issued under O.R.C. 149.54.

Archaeological Preserves – OHS may accept articles dedicating as preserves real property upon which significant archaeological sites are located, if funds and services are available for their preservation and protection. Whenever possible and consistent with such purposes, the articles are to provide for public access (O.R.C. 149.52).

State Memorials – OHS is authorized to create, supervise, operate, protect, maintain and promote for public use a system of state memorials in Ohio (O.R.C. 149.30(A)).

Agency Coordination – All departments, agencies and political subdivisions of the State of Ohio must cooperate with the OHS and OHSPAB in the preservation of historic sites and in the recovery of the scientific information from such sites (O.R.C. 149.53). Section 106 of the National Historic Preservation Act of 1966, requires federal agencies to consider the effects of "undertakings" they fund or license in Ohio. "Undertakings" include a broad range of federal activities, including construction, rehabilitation and repair projects, demolition, licenses, permits, loans, loan guarantees, grants, federal property transfers and many other types of federal involvement. The OHPO reviews more than 6,000 federally assisted undertakings each year to see that alternatives are considered in any action that would damage or destroy properties listed on, or eligible for, the National Register. If after consultation with the state, there is no reasonable alternative, the state and the federal Advisory Council on Historic Preservation may agree to the loss of a significant property if steps adequate to mitigate the impact of its loss are taken.

The following are nonenforceable enhancement activities that contribute to carrying out the above-mentioned enforceable protections.

Certified Local Governments – Communities can participate more actively in the state historic preservation program by becoming Certified Local Governments, as provided for by the National Historic Preservation Amendments Act of 1980 (16 U.S.C. 470). To become certified, a unit of local government must have an approved program for recognizing and protecting its historic, architectural and archaeological resources. The OHPO helps local governments establish certifiable preservation programs, offering advice on identifying historic, architectural and archaeological resources; developing a preservation plan; nominating eligible properties to the National Register of Historic Places; and protecting local resources. Certified Local Governments can apply for matching grants awarded by the OHPO to help fund projects like these and others.

Ohio Historic Inventory and Ohio Archaeological Inventory – The Ohio Historic Inventory (OHI) records places of historic or architectural merit. The Ohio Archaeological Inventory (OAI) records prehistoric and historic archaeological sites. Records describing more than

130,000 properties in all parts of the state are kept at the Ohio Historic Preservation Office in Columbus.

Rehabilitation Investment Tax Credits – Owners who rehabilitate income-producing properties listed on the National Register of Historic Places are eligible to apply for federal investment tax credits on qualified expenses. Work must be certified as conforming to the Secretary of the Interior's "Standards for Rehabilitation." OHPO counsels owners about how to apply for certification and conducts preliminary meetings, site visits and project assessments as needed to help them qualify for the tax credit.

Ohio Historic Preservation Plan – OHPO has, with public input, prepared a comprehensive statewide historic preservation plan. The plan organized existing information about the state's historic, architectural and archaeological resources so that it can be used to set future priorities for the identification, evaluation and protection of Ohio's historic resources. The goal of the plan is to identify and publicize the critical, pressing issues that face preservation of Ohio's historic architectural and archaeological properties. The plan is composed of broad-based goals and objectives that will provide guidance and direction for state and local organizations to take in preserving Ohio's historic properties over the next five years.

Technical Advice and Educational Programs – Technical advice is available from OHPO staff, and periodic workshops and other educational programs help inform Ohioans about historic preservation. Services include a preservation research library, Building Doctor clinics, preservation conferences, an awards program and publications.

Grants – When federal funds are available, the OHPO can make direct matching grants-in-aid to individuals, organizations and agencies for projects that help OHPO carry out the survey and planning responsibilities as defined by the National Historic Preservation Act of 1966, 26 U.S.C. 470 et seq. The OHPO also administers historic preservation matching development grants, also when available, for properties listed in the National Register of Historic Places. Matching grants of up to 50 percent of the cost of stabilization, preservation, restoration and rehabilitation of properties listed in the National Register of Historic Places are available to both owners and tenants of National Register-listed properties through OHPO. (Such funds are not available currently).

B. The State of Ohio has ownership and title to submerged abandoned property in Lake Erie in trust for the benefit of the people of the state. Any person who wishes to recover, alter, salvage or destroy any abandoned property located on, in or in the immediate vicinity of and associated with a submerged watercraft or aircraft in Lake Erie must obtain a permit from the Director of ODNR (O.R.C. 1506.32). Permits are issued only with the approval of the Director of OHS. If the Director of OHS determines that the property has historical significance, the permit may be conditioned or denied (O.R.C. 1506.32(D)). If the Director of ODNR determines that the property has substantial recreational, ecological, environmental, scenic or scientific value, the director may deny or condition the permit (O.R.C. 1506.32(E)). No permit shall be approved

within any submerged land preserve unless the operation is for historical or scientific purposes or will not adversely affect the historical, cultural, recreational or ecological integrity of the preserve as a whole (O.R.C. 1506.32(I)). O.R.C. Chapter 1506 is contained in Appendix C.

C. To provide special protection for abandoned property and features and formations in Lake Erie having historical, archaeological, recreational, ecological, geological, environmental, educational, scenic or scientific value, the Director of ODNR with approval of the Director of OHS may adopt rules to establish Lake Erie submerged lands preserves (O.R.C. 1506.31).

A preserve may be established for any area of submerged lands that contains a single watercraft or aircraft of historical value, two or more watercraft or aircraft constituting abandoned property, or other features of archaeological, historical, recreational, ecological, environmental, educational, scenic, scientific, or geological value other than sand, gravel, stone, and other minerals and substances authorized to be taken and removed in accordance with O.R.C. э 1505.07. Each preserve established shall include the designated area and extend upward to include the water surface. When establishing preserves, the directors must consider:

1. Whether it is necessary to protect either abandoned property or significant underwater features possessing historical, archaeological, recreational, geological, ecological, environmental, educational, scenic or scientific value;

2. The extent of local public and private support for creation of the preserve;

3. If the purpose of the preserve is to be recreational, the extent to which preserve support facilities have been developed in or are planned for the coastal area nearest the proposed preserve;

4. Whether creating the preserve will conflict with existing or potential authorized removals of sand, gravel, stone or other minerals or substances.

The directors may establish rules regarding access to and use of such preserves. Access shall be limited or prohibited if the site is biologically or ecologically sensitive or is hazardous, or if historically valuable property is fragile or suffering extensive deterioration due to unregulated access (O.R.C. 1506.31(C)). O.R.C. Chapter 1506 is contained in Appendix C.

FISH AND WILDLIFE MANAGEMENT

Uses Subject to Management

- Activities involving the taking of fish and wildlife.
- Activities affecting the fish and wildlife habitat areas.
- Activities that affect the management of fish and wildlife.

Fish and Habitat Management

The history of Lake Erie fisheries has included human-induced changes in both the extent and variety of lake habitats. Generally, the populations and diversity of sport and commercial fish species have declined in conjunction with loss of habitat loss and degradation. Those habitats most greatly reduced in size include deep, oxygenated cold water areas, vegetated areas, clean bottom sand and gravel areas, estuaries, and wetlands used for spawning, feeding, migration, and refuge.

Increased sedimentation from past and present land use, higher nutrient levels in Lake Erie from point and nonpoint pollution sources, dredging and filling activities, and chemical and thermal pollution all have had their impacts.

Lake Erie's varied aquatic ecosystems, including nearshore waters, bays and estuaries, offshore shoal areas, and deep water, all provide important fish habitat. Specifically, there are five habitat areas of critical concern: Maumee Bay, the Toussaint-Locust Point reef complex, the Islands area, the Ruggles reef complex, and Sandusky Bay (including Muddy Creek Bay). Protection of these habitat areas is an important objective of the OCMP. A few remaining coastal coldwater streams east of Cleveland offer important seasonal habitat for salmonids because they are the closest suitable habitat near summer feeding areas of Lake Erie. These species are adapted to the colder water temperatures provided by such streams, and thus it is important that such habitat is not degraded or warmed.

International committees and work groups of the Great Lakes Fisheries Commission, the Lake Erie Committee, the Walleye Task Group, the Yellow Perch Task Group, the Forage Task Group and the Standing Technical Committee have reached a consensus regarding necessary scientific needs and a management approach for Lake Erie. Funds available through the Federal Aid in Sport Fish Restoration Program 16 U.S.C. 777 have been used primarily for research, development of access sites, fish hatchery renovations and land acquisition. Through the Council of Great Lakes Governors, the four Lake Erie states and Ontario are continuing efforts to develop a coordinated fish advisory for Lake Erie. Such improved coordination and unified management practices will continue to improve these valuable fisheries.

Wildlife and Habitat Management

Human activities in the Lake Erie basin have dramatically reduced wildlife habitat in the coastal area. This habitat loss is the major reason for an overall reduction in Ohio's coastal wildlife population. Most of the original Lake Erie wetlands and swamp forests have been drained, filled, cut or paved over for various purposes. High water and erosion have caused an additional loss of shoreline wetlands.

Wildlife habitat areas that remain relatively undisturbed still face an array of threats including air and water pollution, soil erosion and siltation. Poor water quality is a particularly serious problem that helps explain why aquatic animals make up a large portion of Ohio's endangered species. Loss of habitat and degraded environmental quality has harmed migratory waterfowl, for which the Great Lakes serve as an important link between Canada and southern destinations. In particular, marshes of the western Lake Erie basin are known as significant migration resting areas as well as sites of excellent waterfowl hunting. These marshlands extend from Sandusky to Toledo and contain approximately 22,700 acres of waterfowl habitat, a large portion of which is actual wetlands. Most of this habitat is owned by the state or federal government and private hunting clubs. The Ottawa National Wildlife Refuge alone encompasses roughly 8,300 acres of waterfowl habitat. ODNR, Division of Wildlife, maintains approximately 4,500 acres of western basin wetlands located within seven western Lake Erie wildlife areas. Private hunting clubs manage an additional 8,000 acres of habitat.

POLICY 27 – FISHERIES MANAGEMENT

IT IS THE POLICY OF THE STATE OF OHIO TO ASSURE THE CONTINUAL ENJOYMENT OF THE BENEFITS RECEIVED FROM THE FISHERIES OF LAKE ERIE AND TO MAINTAIN AND IMPROVE THESE FISHERIES BY:

A. REGULATING THE TAKING OF FISH (O.R.C. 1531.08 AND O.A.C. 1501:31);

B. PROSECUTING PERSONS RESPONSIBLE FOR STREAM LITTER AND FOR WATER POLLUTION RESULTING IN FISH KILLS (O.R.C. 1531.29 AND 1531.02);

C. PROTECTING FISH HABITAT THROUGH OHIO EPA'S SECTION 401 WATER QUALITY CERTIFICATION AUTHORITY (O.R.C. 6111.03(O) AND 6111.03(P) AND O.A.C. 3745-1 AND 3745-32);

D. CONSIDERING THE PROTECTION OF FISH HABITAT THROUGH THE REVIEW OF STATE AND FEDERAL PERMIT APPLICATIONS;

E. ESTABLISHING STATE WILDLIFE AREAS FOR FISH AND WILDLIFE HABITAT (O.R.C. 1531.06);

F. SURVEYING FISH POPULATIONS AND TRENDS AND CONDUCTING OTHER FISHERY RESEARCH STUDIES;

G. PROVIDING ACCESS TO THE FISHERY; AND

H. PROVIDING TECHNICAL AND GENERAL INFORMATION ABOUT THE LAKE ERIE FISHERIES.

Authorities and Administration

A. The state holds title to and is mandated to protect all the fish in Ohio for the benefit of the public (O.R.C. 1531.02). The Chief of the Division of Wildlife (DOW), ODNR, has authority and control in all matters pertaining to the protection, preservation, propagation, possession and management of the state's fisheries. Pursuant to O.R.C. 1531.08, the chief may regulate the taking, possession, transportation, buying, selling, offering for sale and exposing for sale fish or any part thereof.

All orders of the DOW relating to establishment of seasons, limits, size, species, method of taking and possession shall be adopted only upon approval of the Wildlife Council (O.R.C. 1531.03). The Wildlife Council is an eight-member appointed body whose functions are to advise on policies and programs of the division. O.R.C. Chapter 1533 specifies the laws

concerning the taking of fish from Lake Erie. O.A.C. 1501:31 specifies the rules promulgated by the Chief of DOW regarding the taking of fish.

Any persons16 years of age or older, including nonresidents, taking or catching fish by angling in any waters in the state are required to have a fishing license from DOW (O.R.C. 1533.32). All money derived from fishing license fees is appropriated exclusively for the use of ODNR, DOW (O.R.C. 1533.33) and is used primarily for public fishing waters acquisition, stock fish management, education, research and waterbody improvements.

B. DOW investigates incidents of stream pollution that result in the killing of fish and other wildlife. Under O.R.C. 1531.02 and 1531.201, persons responsible for the pollution that causes the death of fish or other wildlife are civilly and criminally liable for the taking of the fish or wildlife (O.R.C. 1531.99).

Persons dumping trash in or along Ohio waters and industries discharging or spilling oily wastes into Ohio waters without a valid National Pollutant Discharge Elimination System (NPDES) permit issued by the Ohio EPA may be charged by the DOW with a violation of the Stream Litter Act (O.R.C. 1531.29); enforcement of other water quality laws rests with Ohio EPA (see Policy 6). Individual violators may be fined up to $500 or sentenced to 60 days in jail, or both, for a first offense. Corporations may be fined up to $3,000 for the first offense and $5,000 for subsequent offenses (O.R.C. 2929.31). No kills of fish need to be involved in a case of stream litter. The Stream Litter Act applies to the banks and bluffs along Lake Erie as well as other waterways in the state.

C. The State of Ohio helps protect habitat for fish and aquatic life through Ohio EPA's authority to issue or deny Section 401 water quality certifications for activities that discharge dredged or fill material to waters of the state or create any obstruction or attraction in waters of the state. (See Policy 12 for details on this authority.) Biological criteria are considered in water quality standards, and the antidegradation policy is used to protect state resource waters from degradation. Therefore, a Section 401 certification may be denied for sufficient grounds to protect important aquatic life uses of Lake Erie and coastal area waters. Special conditions of Section 401 certifications may be imposed on activities (O.A.C. 3745-32-05(C)). Such terms and conditions may affect the design of a project to protect or enhance fish habitat; may provide for increased water circulation or other factors important to maintaining quality habitat; or may restrict when dredging might occur in order to avoid adverse impacts to spawning areas.

D. ODNR protects fish habitat through several means. ODNR reviews Section 10 and Section 404 permits through the COE, using prime fish habitat as an aspect of the review criteria. Preservation of fish habitat is considered in mineral extraction and energy facility-siting decisions (see section on "Energy and Mineral Resources"); in approving permits for offshore development, dredging and dredged material disposal (see "Ports and Shore Area Development"); in the water quality regulations and nonpoint pollution policies (see "Water Quality"); in the protection and acquisition of wetlands and natural areas (see "Ecologically Sensitive

Resources"); and through the submerged lands leasing program (see "Ports and Shore Area Development").

E. The Chief of DOW, with the approval of the Director of ODNR, may acquire or lease lands or surface rights upon lands and water for wild animals, fish and wildlife management, preservation, propagation, and protection, outdoor and nature activities, public hunting and hunting grounds, and flora and fauna preservation. The lease or purchase of all such lands and waters may be paid from hunting and fishing license fees (O.R.C. 1531.06).

F. DOW conducts continuing surveys with trawls and gill nets to provide an index of population numbers through monitoring of incoming year class strengths, relative numbers of adult age groups, seasonal abundance, growth rates, and maturity for sport and commercial species. Age, sex and size composition of these same species captured commercially are also monitored. Correlations between seasonal sport catches and reports from charter boat operators are used for future estimates of total sport fishing harvest.

G. DOW provides fishing facilities (parking, boat launching, piers, shoreline access, etc.) to improve access to the fishery resource (see Policy 21).

H. DOW provides technical and general information to sport and commercial fishermen. Information leaflets and reports cover a wide range of subjects including sport and commercial fishing laws, fish identification, bait fish, Lake Erie fishing services and facilities, when and where to fish, and the life history of many species in Lake Erie.

POLICY 28 – FISHERIES RESEARCH AND INTERSTATE COOPERATION

IT IS THE POLICY OF THE STATE OF OHIO TO COOPERATE IN GREAT LAKES BASINWIDE FISHERIES MANAGEMENT EFFORTS AND TO CONTINUALLY RESEARCH BETTER FISHERIES USE AND MANAGEMENT.

Authorities and Administration

ODNR, Division of Wildlife, coordinates closely with Canada, Michigan, Pennsylvania and New York by working in conjunction with the Great Lakes Fishery Commission, the IJC, the Great Lakes Commission, U.S. Fish and Wildlife Service and other groups concerned with Lake Erie fishery management and rehabilitation. The commissions coordinate their efforts for the better development of fishery rehabilitation programs and management practices, including a process for consolidating and resolving issues.

The division also conducts extensive research on Lake Erie fisheries. Annual indices of fish population trends and sport and commercial fisheries harvests are developed by the division and are used to develop recommendations to allow a desirable fish community to reach its potential within existing environmental conditions. Such indices are prerequisites for determining the present status and future outlook of certain fish stocks. This comprehensive stock assessment program assists in determining research priorities and provides a means of evaluating the success of management strategies. The application of findings from these assessment surveys provides biologically sound harvest regulations for the sport and commercial fisheries.

The Great Lakes Toxic Substances Control Agreement calls for the issuance of uniform lakewide fish consumption advisories. This initiative has improved cooperation among state agencies involved with the issues of toxic pollutants in the environment and public health. The Directors of ODNR, Ohio EPA, Ohio Department of Health (ODH) and Ohio Department of Agriculture (ODA) agreed to identify additional surveillance, laboratory and related programs needed to effectively address these issues. An ad hoc committee from those departments was formed to recommend the types of fish tissue contaminant monitoring programs that are needed.

POLICY 29 – WILDLIFE MANAGEMENT

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE FOR THE MANAGEMENT OF WILDLIFE IN THE COASTAL AREA TO ASSURE THE CONTINUED ENJOYMENT OF BENEFITS RECEIVED FROM WILDLIFE BY:

A. PROTECTING ALL WILDLIFE INCLUDING NONGAME AND ENDANGERED SPECIES (O.R.C. 1531.02, 1531.08 AND 1531.25);

B. REGULATING THE TAKING OF WILDLIFE (O.R.C. CHAPTER 1533 AND O.A.C. 1501:31);

C. ESTABLISHING STATE WILDLIFE AREAS AND PROVIDING RECREATION OPPORTUNITIES;

D. PROVIDING FOOD, COVER AND HABITAT FOR WILDLIFE, AND

E. PROVIDING NONGAME WILDLIFE RESEARCH AND EDUCATION FUNDING.

Authorities and Administration

A. The state holds title to all wild animals in Ohio for the public (O.R.C. 1531.02). The Chief of the Division of Wildlife, ODNR, has authority and control in all matters pertaining to the protection preservation, propagation and management of wild animals (O.R.C. 1531.08). The chief may regulate the taking, possession, transportation, buying, selling, offering for sale or exposing for sale any wild animal or part thereof. DOW also protects fish and wildlife species threatened with statewide extinction (O.R.C. 1531.25). See Policy 14.

B. O.R.C. Chapter 1533 specifies the laws concerning the taking of wild animals. O.A.C. 1501:31 specifies the rules promulgated by the chief on taking wild animals. All orders of the DOW relating to establishment of seasons, limits, size, species, method of taking and possession shall be adopted only upon approval of the Wildlife Council (O.R.C. 1531.03).

Persons hunting any wild bird or wild quadruped are required to have a hunting license or a trapping permit if trapping furbearers (O.R.C. 1533.10 and 1533.111). Special permits are required for deer and turkey hunting (O.R.C. 1533.11). A property owner may hunt on his or her own property without a hunting license. First-time hunters are required to complete a hunter safety and conservation course before a license will be issued. First-time trappers must complete a trapper education course. Persons owning or controlling land or water within a 10-mile radius of a state or federal waterfowl management area shall annually obtain a permit from the Chief of DOW prior to allowing the hunting or taking of waterfowl on said land or water (O.R.C. 1533.81). This permit is designated as a "waterfowl hunting area permit." Fees from

the sale of hunting and trapping licenses are to be used by the DOW for the following purposes (O.R.C. 1533.15):

1. Education of hunters and trappers;
2. Purchase, management, preservation, propagation, protection, and stocking of wild birds and wild quadrupeds; and
3. Establishing and purchasing or otherwise acquiring title to lands for wildlife preservation, propagation, and protection, and for public hunting.

C. The Chief of DOW, with the approval of the Director of ODNR, may acquire or lease lands or surface rights upon lands and water for wild animals, fish and wildlife management, preservation, propagation, and protection, outdoor and nature activities, public fishing and hunting grounds, and flora and fauna preservation. The lease or purchase of all such lands and waters may be paid for from hunting and fishing license fees (O.R.C. 1531.06). Under this effort, four state wildlife areas have been established in the coastal area. These areas are managed by wildlife biologists and devoted primarily to the management of migratory birds, fish habitat, and marsh-dependent wildlife. The areas are generally open to the public except during hunting season, when their use may be restricted.

D. The DOW offers a variety of programs and services to rural landowners who wish to make their property more attractive to wildlife or to control excessive hunting pressure. A qualified biologist from the DOW will review a landowner's current wildlife habitat and evaluate the potential for developing additional habitat. A complete wildlife management plan will be designed for the current and future pattern of crop and land use on the property.

E. An Endangered Species and Diversity Program has been established in the Division of Wildlife, with responsibilities encompassing more than 1,000 species of wild animals. In less than 200 years, 10 of these species have become extinct and 78 have been extirpated from the state. One hundred-sixteen species are protected as endangered, and more are being reviewed for endangered status. O.R.C. 1531.25 provides for the adoption of rules by the chief restricting the taking or possession of native wildlife, or any eggs or offspring thereof, that the chief finds to be threatened with statewide extinction. Current program objectives are to provide population status reports, develop habitat management guidelines and procedures, develop species-specific management programs for endangered animals and develop restoration programs for selected nongame wildlife species extirpated from Ohio.

The State of Ohio administers the Nongame and Endangered Wildlife Tax Checkoff Program to help fund nongame management. Money from this source has contributed to activities such as the restoration of Ohio's Bald Eagle population; a wildlife education program called "Project Wild;" a bluebird restoration project; and the reintroduction of the River Otter into four watersheds in the eastern portion of the state, including the Grand River watershed in the coastal region.

ENVIRONMENTAL QUALITY

Uses Subject to Management

- Activities involving any process, system or practice that may be a source of air pollution.
- Activities involving the storage, handling, disposal, and transportation of toxic substances and hazardous wastes.
- Activities involving the cleanup of unregulated hazardous waste disposal sites.
- Activities involving the handling and disposal of marine sanitary wastes.
- Activities affecting the visual and aesthetic quality of the shoreline, including unsanitary dumping and unsightly littering in Lake Erie and its tributaries or along its banks, and in embayments, tributaries, and back waters.

Air

Ohio's lakeshore counties contain many of the state's largest industrial complexes, including coal-fired electric generating facilities with 17 percent of the statewide coal-fired generating capacity. In the past 10 years, emissions from the numerous air pollution facilities have decreased substantially. However, unacceptable air quality conditions remain in the industrialized regions of Lucas, Lake, Lorain, and Cuyahoga Counties, and to a lesser degree, in Ashtabula County (see Table 3 below).

Because of poor air quality nationwide, Congress passed the Clean Air Act (CAA) in 1967, strengthening it considerably in 1970, 1977 and 1990. These amendments broadened the federal role in setting standards for air quality, directing state efforts to meet the standards and providing for enforcement of plans when a state fails to do so.

The U.S. EPA has established primary National Ambient Air Quality Standards (NAAQS) sufficient to protect public health and secondary NAAQS to protect against damages to property, vegetation, crops and animals. The CAA required states to develop State Implementation Plans (SIPs) that would result in attainment of the standards for six primary air pollutants. Current SIPs focus primarily upon the pollutant standards with which certain areas in Ohio have not achieved compliance. Additional work is also necessary in Cuyahoga County to address the 1987 revision to the particulate standard to emphasize particulate matter of 10 microns or less (PM_{10}); the Cuyahoga County particulate SIP is being revised accordingly. Table 3 indicates the nonattainment status for the pollutants for which several coastal counties in Ohio have not achieved compliance.

TABLE 3

Ohio Counties of the Lake Erie Coastal Area
Designated Nonattainment
for the National Ambient Air Quality Standards

	PM^{10}	OZONE	SULFUR DIOXIDE primary
LUCAS			X
WOOD*			
OTTAWA*			
SANDUSKY*			
ERIE*			
LORAIN*			
CUYAHOGA			X
LAKE*			
ASHTABULA*			

NOTE: Although this table reflects the entire county as designated nonattainment, the actual nonattainment designations refer to specific areas within each county. Actual boundaries can be found in the Code of Federal Regulations (40 C.F.R. э 81.336).

* Attainment for all criteria pollutants.

These matters are of concern to Ohio's Coastal Management Program primarily because they have major impacts upon the health and property of coastal residents. Also, directly and indirectly, air pollutants adversely affect water quality and the aquatic biota and wildlife of the region. Atmospheric deposition of toxics is currently being studied to determined the extent to which it poses a threat to the environmental well-being of the Great Lakes region.

Solid, Hazardous and Infectious Waste

Ohioans generate approximately 1 ton of solid waste per person, per year. Much of that solid waste includes substances that can be harmful if improperly released into the environment. The majority of these household solid wastes are disposed of in the nearly 90 sanitary landfills operating in Ohio.

Of the more than 1240 large-quantity generators of hazardous waste in Ohio, 397 are located in the coastal counties, according to Ohio EPA records based on Generator Annual Reports filed for 1998. There are more than 11,000 small quantity generators in Ohio. There are approximately 50 hazardous waste storage, treatment and disposal facilities operating within Ohio, 15 in coastal counties. Three coastal counties rank in the top ten generators of hazardous waste: Cuyahoga (2), Lucas (8) and Ashtabula (10).

Of the top 10 counties for hazardous waste shipments listed in Annual Reports, three are coastal counties. These counties and their statewide rank are: Cuyahoga (1), Lucas (4) and Ashtabula (5). The coastal counties with significant treatment, storage or disposal activity are Ashtabula, Sandusky, Cuyahoga and Lucas.

Improper management of hazardous waste in the past has created many environmental and public health problems in Ohio. There are approximately 30 abandoned waste sites in Ohio today that are on the National Priority List for action under the federal Comprehensive Environmental Response Compensation Liability Act "Superfund" (CERCLA) program. In the coastal area, five Superfund sites are in Ashtabula County and one is in Lorain County. There are nearly 900 additional sites that, although not of sufficient importance or hazard to be placed on the National Priority List, do pose environmental threats.

As the nation's landfills have begun to fill up and more stringent waste-disposal laws have been enacted, hospitals, labs and clinics are looking more carefully at how they dispose of the infectious wastes they produce. Many choose to incinerate a portion of these materials at the site where they are produced. Others decide to transport their infectious wastes to commercial incinerators. Therefore, the need has arisen to address infectious waste as a separate category of waste and to regulate its transport and treatment.

Marina Facilities

Water quality improvements and the Lake Erie fishery caused a dramatic upswing in the use of Lake Erie by recreational boaters during the 1980s. The number of marinas in the Lake Erie basin has increased by 30 percent since 1986. Recreational boaters, the general public and the environment must be protected from unsafe drinking water, pollution hazards from improperly disposed wastes, accident hazards and other unsanitary conditions that potentially can result from marina construction and use.

POLICY 30 – AIR QUALITY

IT IS THE POLICY OF THE STATE OF OHIO TO ATTAIN AND MAINTAIN AIR QUALITY LEVELS THAT PROTECT PUBLIC HEALTH AND PREVENT INJURY TO PLANT AND ANIMAL LIFE AND PROPERTY BY SURVEYING AND MONITORING AIR QUALITY; ENFORCING NATIONAL AMBIENT AIR QUALITY STANDARDS THROUGH PERMITS AND VARIANCES; AND RESTRICTING OPEN BURNING. (O.R.C. CHAPTERS 3745, 3706 AND 5709).

Authorities and Administration

The Ohio EPA, Division of Air Pollution Control, operates several programs that have far-reaching effects on the air quality of the state and Lake Erie. Such programs range from those developed and implemented since the inception of the agency, to new initiatives that limit the exposure of the population to air toxics.

Ohio's State Implementation Plan (SIP), approved by U.S. EPA, is developed, revised, implemented, and enforced by the Ohio EPA, local air pollution control agencies, and areawide planning agencies designated by the Governor. The principal provisions of the SIP are state emission limitations designed to meet federal primary and secondary ambient air quality standards (O.A.C. 3745-17, 3745-18, 3745-21, 3745-23 and 3745-71). Implementation and enforcement of these regulations are achieved through the issuance of air permits by the Director, Ohio EPA (O.A.C. 3745-31 and 3745-35).

SIPs are in effect statewide, with specific provisions for sources in nonattainment areas. Pursuant to the 1990 Clean Air Act (CAA) amendments, Cuyahoga, Lake, Lorain, Lucas and Wood counties underwent SIP revisions to reduce point and mobile sources which contributed to the moderate ozone nonattainment. Automobile inspection and maintenance are required in these areas, with the exception of Lucas and Wood counties.

Ohio's SIP also incorporates the following:

1. Emergency episode standards requiring the reduction of air contaminants during air pollution alerts, air pollution warnings and air pollution emergencies (O.A.C. 3745-25);

2. Restrictions on certain types of open burning within the boundaries of municipal corporations and buffer areas, and total prohibition of open burning of garbage (O.A.C. 3745-19);

3. Transportation control plans prepared by NOACA and TMACOG in the coastal area and geared toward encouraging and providing facilities for alternative means of transportation such as buses, rapid transit, bicycling and car pooling, as mandated by Section 174 of the CAA and enforced by Ohio EPA pursuant to its directive to adopt and maintain a program for the prevention, control and abatement of air pollution that is consistent with the federal CAA (O.R.C. 3704.02(2));

4. Extensive procedural means for citizen and industry involvement in agency actions; and

5. Provisions for daily Pollutant Standards Index readings in each major metropolitan area.

Operators of new sources of air contaminants must obtain a Permit to Install (O.A.C. 3745-31) and must meet criteria for the Prevention of Significant Deterioration (PSD) in attainment areas or emission offset regulations in nonattainment areas. New Source Performance Standards (NSPS), National Emission Standards for Hazardous Pollutants (NESHAPs), Best Available Technology (BAT) criteria, and source impact determinations must all be met before issuance of a Permit to Install. Risk assessment modeling studies may be conducted.

Additionally, permits to operate are issued to pollution sources that are in full compliance with regulations. Sources unable to attain compliance can be issued variances that include a schedule outlining the control program that the source will follow to achieve full compliance (O.A.C. 3745-35). Once full compliance is attained, a Permit to Operate may be granted.

Ohio EPA conducts field surveillance and source inspection to ensure that sources remain in compliance and that noncompliant sources make timely progress toward compliance. The Director of Ohio EPA may revoke or suspend any Permit to Operate upon finding that any conditions, standards or regulations have been or will be violated.

The Division of Air Pollution Control conducts an enforcement program. Compliance is monitored in the field, and noncomplying sources are referred to the Central Office, where enforcement cases are developed. Industry can be issued findings and orders to comply, or the case may be referred to the Ohio Attorney General for prosecution.

The Ohio General Assembly enacted legislation and subsequently revised O.R.C. 5709.20 to 5709.27 in 1963 and in 1973 to provide incentives for the purchase, installation and use of air pollutant emission control equipment. The incentives were in the form of exemptions from Ohio's real and personal property, franchise use and sales taxes. The legislature empowered the Tax Commissioner of Ohio to issue Air Pollution Control Certificates granting such exemptions after a determination that the equipment qualifies for such tax benefits.

The Division of Air Pollution Control assists with the development of a procedure for risk assessment, management, and communication, and will participate in cooperative efforts with other Ohio EPA divisions and Great Lakes states concerning multiple pathway pollution sources. These pathways of contamination to the Great Lakes should be monitored and controlled. New initiatives will begin to assess the impacts of toxics.

The air permit program (O.A.C. 3745-31) provides a means to control emission of criteria pollutants such as sulfur dioxide, oxides of nitrogen and particulate matter from stationary sources through the application of best available technology for new sources. Mobile sources of pollution are being addressed in major urban areas such as Cleveland, where an automobile inspection and maintenance program is being implemented to control ozone precursors.

POLICY 31 – HAZARDOUS, SOLID AND INFECTIOUS WASTE MANAGEMENT

IT IS THE POLICY OF THE STATE OF OHIO TO ENSURE THAT THE GENERATION OF SOLID, INFECTIOUS AND HAZARDOUS WASTES IS REDUCED AS MUCH AS POSSIBLE BY:

A. ADMINISTERING A PERMIT PROGRAM FOR THE SITING OF NEW FACILITIES AND THE MODIFICATION, REVISION AND OPERATION OF EXISTING FACILITIES (O.R.C. CHAPTER 3734);

B. COMPLIANCE MONITORING AND ENFORCEMENT OF REQUIREMENTS OF O.R.C. CHAPTER 3734, DEVELOPED PURSUANT TO AND IN ACCORDANCE WITH PROVISIONS OF THE FEDERAL RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) AND THE FEDERAL COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) (O.A.C. 3745-50 THROUGH 59; 3745-65 THROUGH 69; 3745-273; AND 3745-279);

C. ESTABLISHING LONG-RANGE SOLID AND HAZARDOUS WASTE MANAGEMENT PLANS (O.R.C. 3734); AND

D. ENCOURAGING THE ADOPTION OF POLLUTION PREVENTION PRACTICES THAT EMPHASIZE A PREFERENCE FOR SOURCE REDUCTION AND ENVIRONMENTALLY SOUND RECYCLING OVER TREATMENT AND DISPOSAL.

Authorities And Administration

A. through C.

Hazardous Waste Management

"Hazardous waste" means any waste or combination of wastes in solid, liquid, semisolid or contained gaseous form that in the determination of the Director, Ohio EPA, because of its quantity, concentration or physical or chemical characteristics, may:

(1) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or

(2) Pose a substantial present or potential hazard to human health or safety or to the environment when improperly stored, treated, transported, disposed of or otherwise managed.

"Hazardous waste" includes any substance identified by regulation as hazardous waste under the Resource Conservation and Recovery Act of 1976 (RCRA) 42 U.S.C.A. 6921 as amended, and does

not include any substance that is subject to the Atomic Energy Act of 1954, 42 U.S.C.A. 2011 (O.R.C. 3734.01(J)).

Ohio EPA regulates the management, transportation, treatment, storage and disposal of hazardous waste under authority of O.R.C. Chapter 3734, in part as a means of enforcing RCRA. Specific criteria for management of hazardous waste are specified in O.A.C. 3745-50 through 3745-59, 3745-65 through 3745-69, 3745-273, and 3745-279. These rules are implemented and enforced by Ohio EPA's Division of Hazardous Waste Management with headquarters personnel in Columbus and field staff located in five district offices.

Generators of hazardous waste must provide for the proper management, transportation, treatment and disposal of the wastes. "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in O.A.C. 3745-51 or whose act first causes a hazardous waste to become subject to the hazardous waste rules (O.A.C. 3745-50-10). The "cradle-to-grave" tracking of the movement and disposition of hazardous wastes is documented by a paperwork system that requires a manifest to accompany each waste load leaving a generator facility and requires entries at each point in the process leading up to final disposal of the waste. Generators are required to maintain these manifests, and the regulatory agencies can cross-reference manifest records to verify proper handling of the wastes (O.R.C. 3734.12 et seq.). Generator standards for the management of hazardous wastes are contained in O.A.C. 3745-52.

Each hazardous waste storage, treatment and disposal facility must operate in conformance with regulations that include specifications for day-to-day operations, financial responsibility, and the eventual closure of the facility and post-closure care. Storage, treatment or disposal of hazardous waste at nonpermitted facilities is prohibited. Decisions on siting for new hazardous waste treatment, storage and disposal facilities and certain modifications to such facilities are made by the Ohio Hazardous Waste Facility Board (HWFB). Other modifications may be approved by the Director of Ohio EPA. The terms "storage," "treatment," "disposal" and "facility" are defined in O.R.C. 3734.01 and O.A.C. 3745-50-10. Rules governing the operation of permitted hazardous waste facilities are specified in O.A.C. 3745-54-01 through O.A.C. 3745-59-50.

Remedial Response to Previously Improperly Disposed Hazardous Wastes

Ohio EPA has completed preliminary assessments at each abandoned hazardous waste site and is in the process of establishing priorities for corrective action. Corrective action at these sites involves a thorough study to characterize the nature of the problem and to evaluate alternatives for remedial action. After a remedial action plan is selected, Ohio EPA works with responsible parties to ensure that a proper cleanup is completed and that continuing environmental monitoring and maintenance of the site is secure. Requirements governing the investigation, cleanup and acquisition of abandoned hazardous waste sites are specified in O.R.C. 3734.19 through 3734.24; funding mechanisms are provided by O.R.C. 3734.25 through 3734.28. These provisions are implemented by Ohio EPA's Division of Emergency and Remedial Response (DERR).

Solid and Infectious Waste Management

"Solid wastes" means such unwanted residual solid or semisolid material as results from industrial, commercial, agricultural, and community operations, excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that would normally be included in demolition debris, nontoxic fly ash, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health, and includes, but is not limited to, garbage, tires, combustible and noncombustible material, street dirt, and debris. "Solid wastes" does not include any material that is an infectious waste or a hazardous waste (O.R.C. 3734.01(E)). (Construction and demolition wastes are defined and regulated separately under O.A.C. 3714.)

"Infectious wastes" includes cultures and stocks of infectious agents and associated biologicals; laboratory wastes that have or may have been in contact with such agents; pathological wastes; waste materials from rooms of humans or enclosures of animals that have been isolated due to communicable disease; blood specimens and products; contaminated carcasses, body parts, and bedding of animals intentionally exposed to infectious agents; sharp wastes used in treatment, diagnosis, or inoculation of humans or animals exposed to infectious agents (O.R.C. 3734.01(R)).

Existing solid waste landfills must operate in accordance with established rules that include requirements for daily cover of materials, minimization of nuisance conditions and other requirements to ensure that the facility does not cause an environmental problem (O.A.C. 3745-27). In addition, residual solid waste landfills must operate in accordance with O.A.C. 3745-30.

Ohio EPA's Division of Solid and Infectious Waste Management (DSIWM) regulates the disposal of solid waste and transport and treatment of infectious waste through permitting, registrations, licensing, monitoring, oversight of construction operations and closure and post-closure care pursuant to regulations specified in O.A.C. 3745-27, 3745-31 and 3745-37. Licensing systems for solid and infectious waste disposal facilities may be administered by the Board of Health of the health district in which the facility is located if Ohio EPA has determined that the board substantially complies with O.R.C. Chapter 3734. Decisions regarding siting of new solid and infectious waste facilities are the responsibility of Ohio EPA's Division of Solid and Infectious Waste Management with support from the Division of Drinking and Ground Waters.

Long-Range and Pollution Prevention Planning

Ohio EPA has adopted a State Solid Waste Management Plan in conjunction with the Solid Waste Advisory Council (O.R.C. 3734.50). The primary goals of this plan, completed in 1989, are to reduce the state's reliance upon landfills and to establish objectives for solid waste reuse, reduction, recycling and minimization. Boards of County Commissioners must establish single or joint county solid waste management districts (O.R.C. 3734.52). District committees must prepare, adopt and submit a solid waste management plan to Ohio EPA in compliance with agency standards (O.R.C. 3734.54 and 3734.55).

Hazardous waste generators and permitted facilities are required to certify that waste minimization programs and reports are in process (O.A.C. 3745-52-41, 3745-54-73 and 3745-54-

75). Annual waste minimization reports are required, and waste minimization requirements are included in hazardous waste permit terms and conditions (O.R.C. Chapter 3734).

Underground injection facilities' owners and operators are required to prepare waste minimization plans for industrial wastes disposed at their facilities. Each owner or operator of a class I injection well facility, as defined in O.A.C. 3745-34-04, must prepare and adopt a waste minimization and treatment plan to identify specific technically and economically feasible measures that will be taken to prevent or reduce releases into the environment of the industrial waste and other wastes generated at the facility. For an injection well facility located on the premises of the industrial facility generating the wastes disposed of at the injection facility, the plan must also address the industrial waste and other wastes generated at that industrial facility. The plan must cover a three-year planning period (O.R.C. Chapter 6111.045).

D. Ohio EPA incorporates pollution prevention requirements into enforcement cases to achieve environmental improvements rather than solely imposing penalties. Settlement offers may include reduced monetary penalties in exchange for development of waste minimization or pollution prevention plans or the installation of source reduction processes.

   Ohio EPA has received federal funding to develop projects to identify pollution prevention opportunities for Ohio businesses in the Lake Erie Basin. These efforts focus on providing technical assistance to help minimize the amount of waste generated and measuring the results of these activities. Site visits are provided to help companies implement pollution prevention programs, and presentations and training events are provided to educate Ohio businesses and organizations about pollution prevention. An Internet site has been developed that provides practical pollution prevention information that companies can use to reduce waste and improve operations. Low interest capital improvement loans are provided through the Pollution Prevention Loan Program, jointly administered through Ohio EPA and the Ohio Department of Development.

   Ohio EPA is also working to integrate pollution prevention into the agency's standard operations. These changes will enable each part of the agency to more effectively encourage and educate companies on the economic and environmental benefits of pollution prevention in their inspection, enforcement and permitting processes. The focus of this effort is to modify existing programs to encourage pollution prevention rather than pollution control.

POLICY 32 – MARINA FACILITIES

IT IS THE POLICY OF THE STATE OF OHIO TO REGULATE MARINA CONSTRUCTION THROUGH THE OHIO DEPARTMENT OF HEALTH AND LOCAL HEALTH DEPARTMENTS IN ORDER TO ASSURE THAT MARINAS WILL PROVIDE ADEQUATE SANITARY FACILITIES FOR THE WATERCRAFT USING THE MARINA, AND THAT SUCH MARINAS WILL BE CONSTRUCTED, LOCATED, MAINTAINED, AND OPERATED IN A SANITARY MANNER SO AS NOT TO CREATE A NUISANCE OR CAUSE A HEALTH HAZARD (O.R.C. 3733.21 THROUGH 3733.30 AND O.A.C. 3701-35).

Authorities and Administration

The Public Health Council has adopted statewide regulations, pursuant to O.R.C. 3733.22, governing marinas and the inspection and issuance of licenses for all marinas (O.A.C. 3701-35). The intent of the marina law is to ensure that Ohioans using recreational watercraft, as well as surrounding areas, will be protected from unsafe drinking water and pollution hazards from improperly disposed wastes, accident hazards, and other unsanitary conditions. This is accomplished by establishing uniform, minimum health and safety requirements for marinas throughout the state. Such marinas will provide adequate sanitary facilities for the watercraft using them, and will be constructed, located, maintained, and operated in a sanitary manner so as not to create a nuisance or cause a health hazard.

No person shall construct a marina, alter the sanitary facilities of a marina, or substantially increase the size or number of watercraft using the marina, unless the Director of ODH has approved plans for the construction, alteration or increase. Plans must be submitted for review to and approved by the Director of ODH at least 60 days before any construction, alteration or increase begins. During the month of March, a license to operate an existing marina for that year must be obtained from the Board of Health of the health district in which the marina is located (O.R.C. 3733.24). If a new marina is to be constructed, application must be made for a license from the Board of Health district in which the marina is to be located at the same time as submission of the plans to the Director of ODH. Before a license is initially issued, and annually thereafter, the Board of Health inspects each marina, compiles a record of each inspection, and requires each marina to satisfactorily comply with O.R.C. 3733.21 et seq. and the regulations adopted thereunder. The following are the criteria for licensing: approved plan, minimum sanitary facilities, waste disposal facilities, minimum safety equipment, vector control and nuisance prevention (O.A.C. 3701-35-01 to 3701-35-09). Marinas that provide dockage for watercraft with installed sewage holding tanks must provide sewage pump-out facilities (O.A.C. 3701-35-05).

Additionally, the Ohio Clean Marinas Program, implemented in 2003, is a proactive partnership to encourage marinas and boaters to use simple, innovative solutions to keep Ohio's coastal and inland waterway resources clean. Information can be found at www.sg.ohio-state.edu/cleanmarina/.

POLICY 33 – VISUAL AND AESTHETIC QUALITY

IT IS THE POLICY OF THE STATE OF OHIO TO PROTECT THE VISUAL AND AESTHETIC AMENITIES OF LAKE ERIE AND ITS SHORELINE TO ENHANCE THE RECREATIONAL, ECONOMIC, CULTURAL AND ENVIRONMENTAL VALUES INHERENTLY ASSOCIATED WITH THE COASTAL AREA BY:

A. PROHIBITING THE DUMPING OF LITTER AND REFUSE INTO OR ALONG THE WATERS OF LAKE ERIE AND ITS TRIBUTARIES, AND MAINTAINING LAW ENFORCEMENT ACTIVITIES TO APPREHEND VIOLATORS (O.R.C. 1531.29 AND 3767.32);

B. ENFORCING STATE WATER QUALITY STANDARDS (O.R.C. CHAPTER 6111, O.A.C. 3745-1-04); AND

C. PRESERVING AESTHETIC RESOURCE AREAS OF STATEWIDE SIGNIFICANCE THROUGH THE NATURE PRESERVE, WILDLIFE AREA, PARK DEVELOPMENT AND HISTORIC PRESERVATION PROGRAMS.

Authorities and Administration

A. Pursuant to O.R.C. 3767.32, no person shall deposit litter or cause litter to be deposited on any public property, on private property not owned by that individual, or in or on waters of the state. "Litter" means garbage, trash, waste, rubbish, ashes, cans, bottles, wire, paper, cartons, boxes, automobile parts, furniture, glass, or anything else of an unsightly or unsanitary nature.

In addition, O.R.C. 1531.29 prohibits the disposal of any litter into watercourses of the state or onto banks thereof, or where it is liable to be washed into the water either by ordinary flow or floods.

O.R.C. Chapter 1502 also has created a grant assistance program administered by the Division of Recycling and Litter Prevention within ODNR. Financial assistance is available to state agencies and local governments for implementing a variety of litter prevention and recycling activities, including collection, education, and litter law enforcement.

B. Visual and aesthetic qualities of the state's waters are further protected under the state's Water Quality Standards (O.A.C. 3745-1-04). These narrative standards, commonly called the "five free froms," provide the Director of Ohio EPA with authority to regulate pollution sources that create floating debris, oil, scum, color, odor or other annoyances. Violations of these standards are subject to criminal and civil penalties (O.R.C. 6111.07).

C. The State of Ohio plays a direct role in protecting the visual quality of the coastal area and providing visual access to shoreline resources through acquisition and development of public access

areas, state parks, state nature preserves, wildlife areas and historic areas. Municipalities, townships and counties are encouraged to protect visual qualities of and to provide visual access to the Lake Erie shoreline through their planning processes and local actions. These concerns can be addressed through site plan review, architectural boards of review, special protection districts, development standards (such as requiring landscaping, screening, and setback and height limitations), and additional subdivision requirements.

ENERGY AND MINERAL RESOURCES

Uses Subject to Management

- Activities involving the siting of major energy facilities and transmission lines.
- Activities involving the storage and transshipment of energy resources.
- Activities involving the onshore or offshore drilling of oil and gas resources.
- Activities involving the mining and extraction of onshore and offshore mineral resources.

Energy

The shore of Lake Erie is one of Ohio's major energy facility siting areas. Several major coal-fired and two nuclear-generating facilities are located in the coastal area.

Three principal factors for the siting of those facilities in the coastal area are proximity to large coastal urban areas, competitive shipping advantages of Lake Erie and the abundant supply of water for cooling. Some of these facilities are inherently lake-dependent, in that their successful functioning requires that they be sited on the coast. For others, inland locations may be possible but may entail increased costs to industry and consumers.

The siting of energy production facilities and related energy problems are concerns addressed by the OCMP. Coastal energy facility siting is useful for maintaining the economy and standard of living in the coastal and inland region. However, it raises many questions regarding effects on fish and wildlife, loss of valuable shorefront access and potential dangers.

Growth in energy demand is a dominant factor in determining the number of facilities to be constructed. Energy conservation may reduce the need to construct additional facilities. Methods by which energy can be conserved and used more efficiently include the establishment of lighting and heating standards, use of energy-conserving building and insulating materials, establishment of energy-sensitive building codes, implementation of rate structures that encourage energy conservation, and the promotion of statewide energy conservation measures.

In developing its energy policies, the OCMP has recognized that siting of energy facilities is of state and sometimes national concern. OCMP policies have been designed to maintain adequate electrical service to Ohio customers. In summation, Ohio recognizes the need for a rational allocation of coastal land for the accommodation of energy needs in a manner that minimizes impacts on the environment and is economically feasible.

Mineral Resources

Commercially available mineral resources of Ohio's coastal area provide numerous benefits to Ohio's citizens. These mineral resources are sand and gravel, limestone, dolomite, gypsum, sandstone, salt, shale and land reserves of oil and gas.

Mineral deposits are nonrenewable resources. Keen competition for land containing these reserves threatens their future availability. Unwise extraction of these minerals can impair use of the area's other resources. Proper planning and management are necessary to ensure adequate future supply and to avoid irreversible loss or damage to other valuable coastal resources. The OCMP therefore supports actions directed toward preservation of lands for future mineral recovery, environmentally sound exploitation, stricter enforcement of permits and monitoring, and ultimate rehabilitation of the land for future appropriate uses.

POLICY 34 – ENERGY FACILITY SITING

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE FOR ENVIRONMENTALLY SOUND SITING OF MAJOR ELECTRIC ENERGY GENERATING AND TRANSMISSION FACILITIES IN THE COASTAL AREA, AND TO REGULATE THE SITING OF THESE FACILITIES TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF OHIO'S CITIZENS AND THE NATURAL RESOURCES OF THE STATE BY:

A. REQUIRING CERTIFICATION OF ANY MAJOR UTILITY FACILITY THROUGH THE OHIO POWER SITING BOARD IN A PROCESS WHICH ENSURES PUBLIC PARTICIPATION (O.R.C. CHAPTER 4906 AND O.A.C. 4906) AND

B. REQUIRING 10-YEAR DEMAND, RESOURCE AND SITE INVENTORY FORECASTS FOR ALL ENERGY GENERATION AND TRANSMISSION ACTIVITY IN THE STATE (O.R.C. 4935.04).

Authorities and Administration

A. O.R.C. Chapter 4906 establishes the Ohio Power Siting Board (PSB), within the Public Utilities Commission (PUCO), as the lead agency to implement a "one-stop" process for all permits involving the construction, operation and maintenance of a major utility facility. The PSB is composed of the Directors of Ohio Department of Health (ODH), ODNR, the Department of Development, Ohio EPA, Department of Agriculture (ODA) and PUCO; a public member; and four legislators (nonvoting) (O.R.C. 4906.02). PSB decisions and actions relate to any "major utility facility" including:

1. An electric generating plant and associated facilities designed for, or capable of, operation at a capacity of 50 megawatts or more;

2. An electric transmission line and associated facilities of a design capacity of 125 kilowatts or more; and

3. A gas or natural gas transmission line and associated facilities designed for, or capable of, transporting gas or natural gas at pressures in excess of 125 pounds per square inch.

The PSB shall not issue a certificate unless it finds and determines that "the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations" (O.R.C. 4906.10(A)(3)). Under this authority, the PSB conditions all permits upon compliance with all applicable state and federal permits.

Other coastal-related concerns considered by the PSB include degree of coastal dependency, impact on environmentally sensitive areas and Special Management Areas (SMAs), compatibility with adjacent uses and activities, coastal access, visual impact upon adjacent areas (mainly in regard to alignment of transmission lines), and degree of erosion and flood hazard involved (O.A.C. 4906).

B. All owners and operators of major utility facilities within the state are required to annually provide PUCO with a long-term forecast report pursuant to O.R.C. 4935.04. These annual reports, which must provide a 10-year year-by-year forecast, are reviewed by PUCO and made available to the public. Criteria for evaluating these long-term forecasts are contained in O.A.C. 4901:5-1, 5-3, 5-5, and 5-7. Complete details regarding Ohio's energy facility planning process are provided in Chapter 10.

POLICY 35 – ENERGY RESOURCE STORAGE AND TRANSSHIPMENT

IT IS THE POLICY OF THE STATE OF OHIO TO REGULATE THE STORAGE OF ENERGY RELATED RESOURCES (COAL, OIL AND GAS) IN THE COASTAL AREA THROUGH PLANNING ASSISTANCE AND PERMIT REVIEW TO ASSURE THE SAFE AND EFFICIENT USE OF THESE RESOURCES; AND TO ENSURE THAT AIR, WATER AND OTHER ENVIRONMENTAL STANDARDS ARE MET (O.R.C. 4906.06 AND O.A.C. 4906-13-02).

Authorities and Administration

The location and layout of all storage areas for proposed major utility facilities (O.R.C. 4906.01(B)) is reviewed by the Ohio Power Siting Board (PSB) as a part of the certification process described in Policy 34. O.R.C. 4906.06 and O.A.C. 4906-13 require a description of the location of the storage facility and the major utility facility to be built thereon, as well as a summary of any studies made regarding potential environmental impacts of the facility. O.A.C. 4906-13-02 requires an applicant for a PSB certificate to supply a map of the generating plant site showing the fuel storage facilities, fuel processing facilities, and other pertinent installations of the proposed and existing facilities and their associated facilities. O.A.C. 4906-13-04 requires an applicant to provide detailed and specific environmental data for all phases of the activity, i.e., preconstruction, construction and operation to be used by the PSB to assess environmental effects of the proposed facility. O.A.C. 4906-13-05 requires submission of costs and benefits of direct and indirect effects of alternative siting decisions to allow for assessment of potential social and ecological impacts of the proposed facility.

Authorities related to the storage and transshipment of coal, oil and gas in locations unrelated to major utility facilities are discussed in Chapter 10.

In addition to other guidelines used in the project review process, projects that locate storage and transshipment facilities adjacent to major energy facilities, in port areas already used for industrial purposes, or removed from the immediate shoreline, will be encouraged.

Complete details regarding Ohio's energy facility planning process are provided in Chapter 10.

POLICY 36 – OIL AND NATURAL GAS DRILLING

IT IS THE POLICY OF THE STATE OF OHIO TO PROTECT PUBLIC SAFETY AND WELFARE AND THE ENVIRONMENT AND TO ASSURE WISE MANAGEMENT BY:

A. REGULATING OIL AND GAS DRILLING ONSHORE BY REQUIRING A PERMIT TO DRILL FROM ODNR (O.R.C. 1509.05); AND

B. DISCOURAGING OFFSHORE OIL AND NATURAL GAS DRILLING IN OHIO WATERS OF LAKE ERIE.

Authorities and Administration

A. ODNR, Division of Mineral Resources Management (DMRM), requires a permit for any person planning to drill a new well, drill an existing well deeper, reopen a well, convert a well to any use other than its original purpose, plug a well to a source of supply different from the existing pool, or plug and abandon a well (O.R.C. 1509.05 and 1509.13). When any well is to be abandoned, it shall be plugged in accordance with a method of plugging adopted by rule by the Chief of DMRM. The Chief also administers a permit program for subsurface injection solution (salt) mining and brine disposal activities pursuant to O.R.C. 1509.22.

   Drilling and operation rules cover the criteria for permit issuance, disposal of brine and other oil field wastes, secondary recovery operations, solution mining of minerals, safety practices for drilling and operations of wells, pipeline installation, and plugging of wells (O.A.C. 1501:9-1, 1501:9-3, 1501:9-5, 1501:9-7, 1501:9-9, 1501:9-10, and 1501:9-11). Permit regulations provide criteria for a surety bond, spacing of wells, location of wells with reference to inhabited dwellings and public rights of way, and prevention of contamination and pollution.

B. The Governor of Ohio and the other Great Lakes states governors agreed to "A Statement of Principle Against Oil Drilling in the Great Lakes" that opposed drilling for oil in the waters of the Great Lakes and the connecting channels. The statement declares the states' shared stewardship of and intent to protect Great Lakes water quality and its dependent fishery, wildlife resources, drinking water, and recreational, transportation, business, and agricultural uses.

   The drilling permit (O.R.C. 1509.05), the mineral lease (O.R.C. 1505.07) and the submerged lands lease (O.R.C. 1506.11) are existing tools to implement this policy. By opposing drilling "in the waters of the Great Lakes," the statement would not affect directional drilling; no such drilling currently is occurring in Ohio's portion of the Lake Erie basin. Ohio's statutes and rules governing these permits and leases do not, however, specifically contain conditions or criteria in this regard and therefore would allow such drilling.

POLICY 37 – OFFSHORE MINERAL EXTRACTION

IT IS THE POLICY OF THE STATE OF OHIO TO PROVIDE FOR AND REGULATE THE EXTRACTION OF MINERALS AND OTHER SUBSTANCES FROM AND FROM UNDER THE BED OF LAKE ERIE, THROUGH THE ISSUANCE OF OHIO DEPARTMENT OF NATURAL RESOURCES MINERAL LEASES AND PERMITS, TO PROTECT THE PUBLIC SAFETY AND WELFARE, AND TO MINIMIZE ADVERSE ENVIRONMENTAL IMPACTS, INCLUDING ADVERSE IMPACTS ON LITTORAL OWNERS' RIGHTS (O.R.C. 1505.07).

Authorities and Administration

Pursuant to O.R.C. 1505.07, no person shall remove sand, gravel, stone or other minerals or other substances from or from under the bed of Lake Erie without obtaining a lease or permit from the Director of ODNR. Issuance of any lease by the Director of ODNR requires the additional approval of the Director of Ohio EPA, the Attorney General and the Governor. The issuance of an offshore extraction lease is granted on either a rental or royalty basis, whichever is deemed best for the state. All monies derived from the granting of these leases are deposited into a special revenue account administered by ODNR for the protection of Lake Erie shores and waters; investigation and prevention of erosion; the planning, development, and construction of facilities for recreational use of Lake Erie; preparation of the state shore erosion plan under O.R.C. 1507.10; and state administration of Lake Erie coastal erosion areas under O.R.C. 1506.06 and 1506.07 (O.R.C. 1507.05). All data pertaining to the origin, distribution, extent, use and valuation of offshore minerals, and other offshore substances or resources are collected, analyzed, and interpreted by the Division of Geological Survey (O.R.C. 1505.01). The director may, in accordance with O.R.C. Chapter 119, promulgate rules for the implementation of the aforementioned lease activities (O.R.C. 1505.07).

O.R.C. 1505.07 requires that any taking or removal must be within "fixed boundaries that do not conflict with the rights of littoral owners."

Offshore sand and gravel extraction is currently limited to three designated areas: Vermilion-Lorain Inner, Vermilion-Lorain Outer, and Fairport. Extraction areas are designated based upon sufficient distance from the shoreline to avert erosion damage. ODNR continues explorations for sand and gravel areas that may be economically viable now and in the future. Dredge operators must comply with all state and federal water quality regulations during the extraction process.

The extraction of oil and natural gas from under Lake Erie is also included under this lease requirement. See Policy 36 for discussion of this extraction activity.

The construction or maintenance of channels, jetties, docks, boating facilities, or other projects along Lake Erie and its bays often requires removal of sand and gravel resources from the littoral zone. It is ODNR's policy that sand and gravel be returned to the littoral zone downdrift of a project to reduce erosion by nourishing and restoring beaches downdrift of the project site. This requirement is applied to both public and private projects and is enforced through special conditions developed in submerged lands leases (O.R.C. 1506.11) and through the Section 401 Water Quality Certification process.

POLICY 38 – SURFACE MINING

IT IS THE POLICY OF THE STATE OF OHIO TO REGULATE SURFACE MINING ACTIVITIES TO MINIMIZE ADVERSE ENVIRONMENTAL IMPACTS, PREVENT DAMAGE TO ADJOINING PROPERTY, ENSURE RECLAMATION OF ALL AFFECTED AREAS THROUGH THE ISSUANCE OF OHIO DEPARTMENT OF NATURAL RESOURCES PERMITS AND SEE TO THE HEALTH AND SAFETY OF ALL PERSONS WITHIN THE MINING FACILITY (O.R.C. ∋1514.02, 1514.021, 1561, 1563, 1565 AND 1567.

Authorities and Administration

ODNR, Division of Mineral Resources Management (DMRM), requires a permit prior to the initiation of any surface mining activity (O.R.C. 1514.02(A)). When applying for a permit, the applicant must include, among other submissions, a mining and reclamation plan. The Chief of DMRM shall issue an order granting or denying an operating permit or amendment to an operating permit within 90 days after the filing of an application (O.R.C. 1514.02(F)).

An application for a surface mining permit (for materials other than coal) shall contain the information set forth in O.R.C. 1514.02 and shall be submitted to the Chief of DMRM. The chief has promulgated rules and regulations for surface mining in O.A.C. 1501:14-1 through 1501:14-4. These rules cover the general permit provisions and mining and reclamation performance standards.

The Chief of DMRM shall issue an order granting a permit upon his approval of an application as required and filing of a performance bond and filing fee. Such funds are to be used by the chief if the applicant fails to perform reclamation of the area according to O.R.C. Chapter 1514. If the applicant performs the required reclamation, the performance bond shall be released to the applicant by the Chief.

In addition, the Chief of DMRM shall enforce and supervise the execution of all laws enacted for the health and safety of persons and the protection and conservation of property within, about, or in connection with mines, mining and quarries, and for such purpose shall adopt, publish, and enforce necessary rules not inconsistent with the mining laws of the state.

WATER QUANTITY

Uses Subject to Management

- Activities involving the diversion of waters out of or into the Lake Erie Basin.
- Activities related to Lake Erie water levels.
- Activities involving water supply planning.

Lake Erie is an interstate and international resource that Ohio shares with Michigan, Pennsylvania, New York and the Canadian Province of Ontario. Lake Erie water supports an array of activities, including commercial navigation, power generation, recreation, and industrial and public water supply. It also provides extensive wildlife and aquatic habitat. Changes in Lake Erie levels can affect these various activities, especially those that rely on in-lake water uses. Fluctuating lake levels and the potential for large-scale transfers of water by out-of-basin interests make it judicious for water managers in the Lake Erie Basin to develop and maintain a comprehensive water use and management plan.

Diversions

New and increased water diversion out of the Great Lakes basin has been advocated by some as a means to address high lake levels and replenish water supplies in the arid Great Plains and Southwestern states. The Council of Great Lakes Governors, concerned about the economic and environmental consequences of large-scale diversions of Great Lakes water, adopted a 1983 resolution on such diversions. This resolution encouraged the Great Lakes States and provinces to implement actions to regulate and mitigate potential impacts from large-scale diversions out of the Great Lakes basin. In 1985, the eight governors and two premiers of the region signed the Great Lakes Charter, establishing guidelines and principles for the management of Great Lakes water resources. The states agreed to give prior notice and consultation on future diversions and consumptive uses, and to develop a common data and information exchange system to document management of the Great Lakes water resources. In 1986, Congress passed the Water Resources Development Act, which prohibits the diversion of water out of the Great Lakes Basin without the approval of the governors of all the Great Lakes states.

Fluctuating Lake Levels

The Great Lakes are a vast natural freshwater system over which man exerts little control. Lake Erie water levels vary naturally over time in cyclical fluctuations, ranging from the record historical average monthly low of 568.08 feet (IGLD 1985) in February 1936 to the record high of 574.31 feet in June 1986. Long-term average level of Lake Erie is 571.16 (IGLD 1985) feet. Lake level is controlled naturally through precipitation and evaporation in the basin, inflow from the upper Great Lakes via the Detroit River and outflow into the Niagara River. Although four man-made diversions and two regulatory structures have some effect on Great Lakes water levels in general, no water

level control structures exist specifically on Lake Erie. Outflow is naturally constricted at the Niagara River, limiting the rate at which water leaves the lake. Relatively small amounts of water are diverted through the Welland Canal, New York State Barge Canal and Black Rock Lock in the Niagara River.

Water Supply

Lake Erie water is an abundant resource for public water systems and is routinely transported inland to serve ground water-poor areas in the basin. Approximately 75 percent of the water used in the basin comes from Lake Erie. Because of the lake's shallowness and nearshore water quality problems, water supply withdrawers are required to locate intake structures at least 1,500 feet into the lake.

Industry and public utilities, found primarily around larger cities in the harbor areas, are major users of Lake Erie water. About 89 percent of Lake Erie withdrawals are used for industrial processing and electrical generation. Electrical generation alone accounts for 74 percent of the withdrawals. Along the Ohio Lake Erie shoreline, there are eight coal-fired plants and two nuclear power plants (Davis Besse in Ottawa County and Perry in Lake County).

POLICY 39 – WATER DIVERSION

IT IS THE POLICY OF THE STATE OF OHIO TO MANAGE DIVERSION OF LAKE ERIE AND TRIBUTARY WATERS BY:

A. REGULATING WATER DIVERSIONS OF LAKE ERIE BASIN WATERS THROUGH THE OHIO DEPARTMENT OF NATURAL RESOURCES PERMIT PROCESS (O.R.C. 1501.30 THROUGH 1501.32);

B. OBTAINING THE PERMISSION OF THE GREAT LAKES STATES' GOVERNORS PRIOR TO APPROVING PERMITS FOR DIVERSIONS OF LAKE ERIE WATERS (O.R.C. 1501.32); AND

C. REVIEWING ALL NEW PROPOSALS FOR DIVERSIONS OUT OF THE GREAT LAKES BASIN AS WELL AS ALL NEW PROPOSALS FOR FEDERAL STUDIES THAT WOULD INVOLVE DIVERSIONS OUT OF THE GREAT LAKES BASIN, AND GRANTING OR DENYING PERMISSION FOR SUCH DIVERSIONS OR STUDIES (42 U.S.C. 1962D-20).

Authorities and Administration

A. ODNR regulates diversions in excess of 100,000 gallons per day out of and into the Lake Erie Basin (O.R.C. 1501.32 and O.A.C. 1501-2-01 through 1501-2-12). A diversion is any withdrawal of water from either the Lake Erie or Ohio River drainage basin and transfer to another basin without return. Diversion does not include evaporative loss within the basin of withdrawal. Any proposed diversion in excess of 100,000 gallons per day must receive a permit issued by the Director of ODNR. A permit will not be issued if it is determined that: (1) some or all of the water to be diverted will be needed for use within the basin, (2) the public health, safety, or welfare would be endangered, (3) the applicant has not demonstrated that the proposed diversion is for a reasonable and beneficial use and is necessary to serve the applicant's needs, (4) reasonable efforts to develop and conserve water resources in the importing basin have not been made, (5) the proposed diversion, alone or in combination with other diversions and water losses, will have a significant adverse impact on in-stream uses or on economic or ecological aspects of water levels, or (6) the proposed diversion is inconsistent with regional or state water resources plans (O.R.C. 1501.32(B)). Any person who receives notice of a denial of a permit application or modification of an existing permit under O.R.C. 1501.32 is entitled to a hearing under O.R.C. Chapter 119 upon written request (O.R.C. 1501.32(E)(2)).

The director shall revoke any permit issued under O.R.C. 1501.32 without a prior hearing if it is determined that the quantity of water being diverted exceeds the amount allowed by the permit. A permit may be suspended if the director determines that continued diversions will endanger public health, safety or welfare. Within five days after the suspension, the director shall

provide the permittee an opportunity to be heard and to present evidence that the continued diversion of water will not endanger the public health, safety or welfare (O.R.C. 1501.32(F)).

B. Through the Council of Great Lakes Governors, Ohio signed the Great Lakes Charter, in which it agreed to seek to implement a strategy to protect the waters of the Great Lakes. The Great Lakes Charter calls on the states to regulate and manage diversions out of the Great Lakes basin of more than 2 million gallons per day. Subsequent to the signing of the Great Lakes Charter, the federal Water Resources Development Act of 1986 (WRDA-1986) was passed. Section 1109 of WRDA-1986 (42 U.S.C. 1962d-20) prohibits the diversion of water from the U.S. portion of the Great Lakes and Great Lakes Basin without the approval of all the governors of the Great Lakes states. It also prohibits federal agencies from studying the feasibility of such diversions without the approval of the Great Lakes states' governors.

When applications are received for diversion of water from the Ohio portion of the Lake Erie basin in quantities greater than 100,000 gallons per day, the Director of ODNR shall consult and seek consensus with the governors and premiers of the Great Lakes states and provinces as called for in the Great Lakes Charter (O.R.C. 1501.32). The director shall not grant a permit for a diversion that is subject to the jurisdiction of Section 1109 of WRDA-1986 until all the governors of the Great Lakes states have approved the diversion (O.R.C. 1501.32). Further, pursuant to Section 1109 of WRDA-1986, the Governor of the State of Ohio must approve proposals for diversion of water out of the Great Lakes Basin in the other Great Lakes states before they can be implemented.

C. The Council of Great Lakes Governors developed a process, pursuant to the Great Lakes Charter, for prior notice and consultation on proposed projects (*Managing the Waters of the Great Lakes Basin*, February 1987). It is the responsibility of the state or province in which the project is proposed to notify the other states and provinces and seek consensus. States and provinces have 45 days from notification to provide comments or request a consultation meeting. The Great Lakes states have used a modified form of the Great Lakes Charter process to consider diversion proposals under Section 1109 of WRDA-1986. Instead of seeking consensus, as under the Charter, states seek the approval of the governors.

POLICY 40 – LAKE ERIE WATER LEVELS

IT IS THE POLICY OF THE STATE OF OHIO TO PROMOTE THE DEVELOPMENT AND IMPLEMENTATION OF A LAKE LEVELS MANAGEMENT PLAN AGREEABLE TO THE UNITED STATES AND CANADA CONCERNING THE WATER LEVELS OF LAKE ERIE AND THE GREAT LAKES.

Authorities and Administration

ODNR is the lead state agency in coordinating with the International Joint Commission (IJC) on lake level issues. ODNR will work with the IJC to mitigate high lake levels and implement measures that reduce shore damage from high waters without accelerating shore erosion or harming biological resources, recreational and residential interests, commercial navigation, and hydroelectric power facilities. ODNR will also advocate that IJC recommendations address the issues of low, high and fluctuating lake levels in a balanced perspective.

POLICY 41 – WATER MANAGEMENT

IT IS THE POLICY OF THE STATE OF OHIO TO COLLECT AND ANALYZE WATER RESOURCES INFORMATION TO PROMOTE WATER RESOURCES PLANNING AND MANAGEMENT BY:

A. REQUIRING LARGE WATER WITHDRAWAL FACILITIES TO REGISTER THEIR CAPACITY AND SUBMIT ANNUAL WITHDRAWAL REPORTS (O.R.C. 1521.16);

B. REQUIRING THE FILING OF WELL LOGS AND WELL-SEALING REPORTS (O.R.C. 1521.05);

C. PREPARING WATER SUPPLY PLANS;

D. PREPARING A LONG-TERM WATER RESOURCES PLAN FOR THE LAKE ERIE DRAINAGE BASIN;

E. PREPARING TECHNICAL STUDIES AND MAPPING, DESIGNATING GROUND WATER STRESS AREAS, AND ASSISTING IN CONFLICT RESOLUTION (O.R.C. 1521.03(E) AND 1521.16(B)); AND

F. PARTICIPATING WITH THE OTHER GREAT LAKES STATES AND PROVINCES IN COOPERATIVE PROGRAMS AND MANAGEMENT OF GREAT LAKES BASIN WATER RESOURCES.

Authorities and Administration

A. ODNR's Division of Water administers a water withdrawal facility registration program for water withdrawal facilities with a capacity of more than 100,000 gallons per day, O.R.C. 1521.16. Facilities must be registered within three months of completion and shall file an annual report with the Division of Water listing the amount of water withdrawn and other data. The registration and reporting of these water uses allows the state to identify the sources of water withdrawal, the types of uses, and the distribution of withdrawals and uses statewide. This information is critical for the proper development and management of water supplies and to assist in the investigation and resolution of water use conflicts.

B. Any person who constructs or seals a well as defined in O.R.C. 1521.01(B) is required to keep a careful and accurate log of the construction or sealing and to file a well log or well-sealing report with the Division of Water, ODNR, for each well (O.R.C.1521.05).

C. ODNR's Division of Water, under authority of O.R.C. 1521.03(B), collects and analyzes data and develops water supply plans for communities, upon request. The division, in cooperation with Ohio EPA's Division of Drinking and Ground Waters, assesses the state's water supply

situation on a regional or site-specific basis and formulates immediate and long-term recommendations for community water supply source development. In formulating these recommendations, the use of Lake Erie water is considered an alternative to the development of inland sources and is recommended when it is the least-cost solution for users within the Lake Erie drainage basin.

D. ODNR's Division of Water is required to develop a long-term water resources plan for the Lake Erie drainage basin (O.R.C. 1521.15). The plan is to include an inventory of surface and groundwater resources; an assessment of existing uses and future demand for withdrawals, diversions and consumptive uses; guidelines to minimize consumptive use; and guidelines and procedures to coordinate, conserve, develop, protect, use and manage the water resources of the Lake Erie drainage basin. The plan will serve, in part, as the basis for decisions on permit applications for water diversions.

E. Using the information on the well logs, the division produces county ground water resource maps that generally describe the expected ground water yields throughout the county. The division has the authority to assist in resolving ground water conflicts by conducting investigations, issuing a report of findings and recommendations, and holding public meetings or hearings (O.R.C. 1521.03(E)). The division responds to requests for ground water information and provides technical assistance to the public and to local, state, and federal agencies. The chief of the division also has the authority to designate a Ground Water Stress Area (O.R.C. э 1521.16(B)), which will provide more detailed information on uses of ground water.

F. As a part of the Great Lakes Charter, the Great Lakes states and provinces made a commitment to develop a basin water resource management program to "guide future development, management and conservation of the water resources of the Great Lakes basin." The framework for this basin water resource management program is similar to that of the long-term water resources plan in O.R.C. 1521.15. ODNR's Division of Water, in conjunction with its work on the Lake Erie basin plan, will coordinate with the Great Lakes states and provinces on the basin water resources management program. As with Ohio's Lake Erie basin plan, the basin water resource management plan is to serve as the basis for decisions on applications for water diversions.

The Great Lakes states and provinces have developed the Great Lakes Regional Water Use Data Base. The Great Lakes Commission is the repository for the data. Each year states and provinces are to submit data on prescribed forms. A technical committee has been established to maintain and refine the protocol for reporting and compiling data.

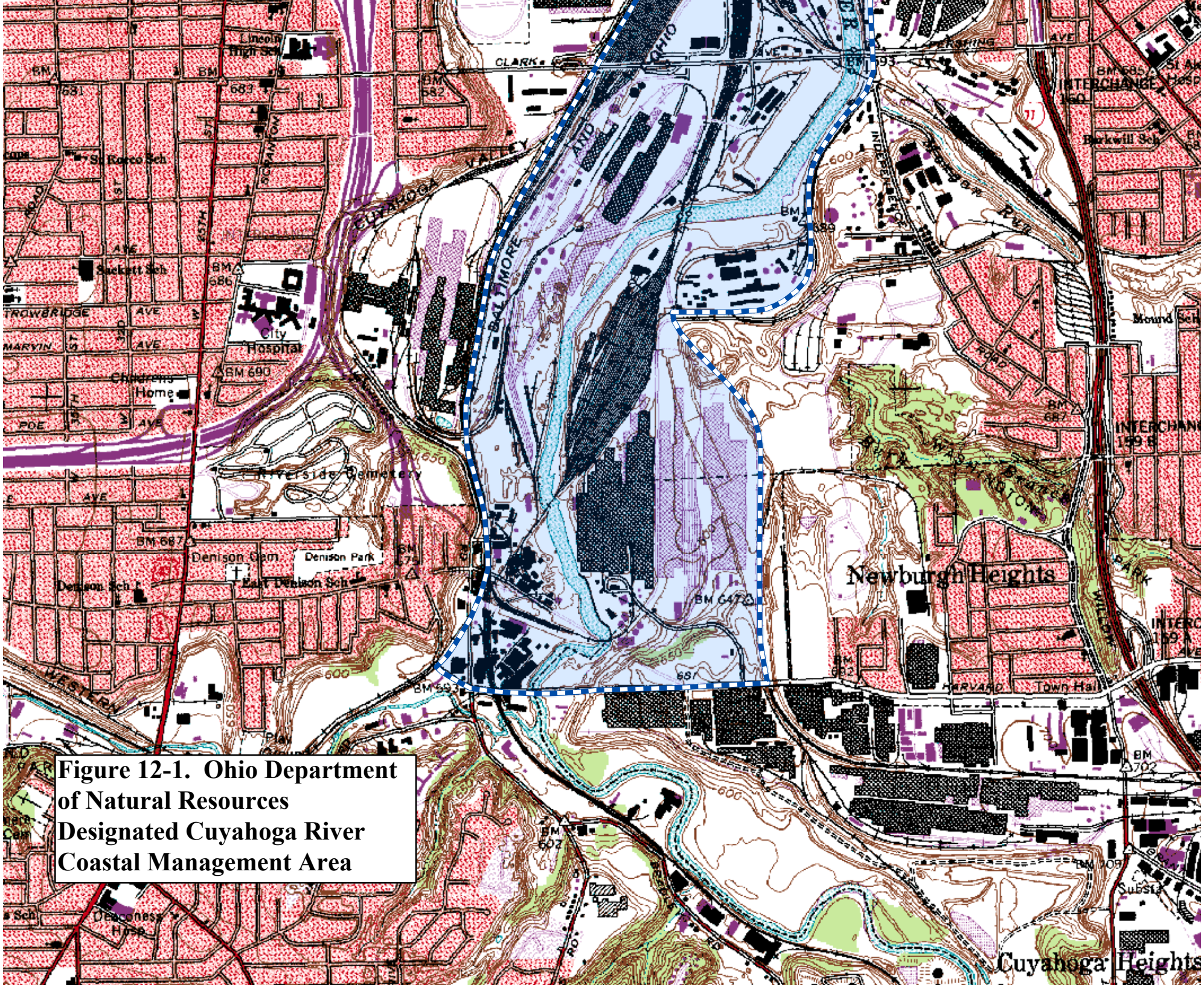


Figure 12-1. Ohio Department of Natural Resources Designated Cuyahoga River Coastal Management Area

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Advancing the Regeneration of the Cuyahoga Valley

a report to the Cuyahoga County Planning Commission

by Rocky Mountain Institute

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www.joycefdn.org

The Joyce Foundation supports efforts to protect the natural environment of the Great Lakes, to reduce poverty and violence in the region, and to ensure that its people have access to good schools, decent jobs, and a diverse and thriving culture.

The Cleveland Foundation

www.clevelandfoundation.org

The Cleveland Foundation's mission is to enhance the lives of all residents of Greater Cleveland, now and for generations to come, by building community endowment, addressing needs through grantmaking, and providing leadership on key community issues.

The George Gund Foundation

www.gundfdn.org

The George Gund Foundation aims to improve human well-being and the progress of society through the support of the arts, civic affairs, economic development, education, environment and human services, primarily in Greater Cleveland and Ohio.

Cuyahoga County Planning Commission (CPC)

www.planning.co.cuyahoga.oh.us

For over half a century, CPC has provided land use, zoning, development, and other planning services for the county's cities, villages, and townships; the Board of County Commissioners; and other governmental and not-for-profit organizations.

Rocky Mountain Institute (RMI)

www.rmi.org

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First Edition

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Executive Summary

Community Success & Environmental Restoration

Environmental restoration is no longer an option for American cities; it's an imperative. Though many people regard efforts to rebuild environmental assets as burdensome to a local economy, environmental restoration, when pursued intelligently, is in reality both a minimum requirement for, and a path to, a strong economic future. As described in this report, the Cuyahoga Regeneration Project focused on specific projects that simultaneously restore natural systems and strengthen economic development along the Cuyahoga River ship channel.

Only a generation ago, cities built their economies while ignoring environmental protection. Many celebrated the fact that industries could operate in their area with few environmental constraints. But that time has long passed. Now, quite to the contrary, cities that want to remain competitive must not only protect their remaining environmental assets, but they must also reverse the environmental damage that is the legacy of generations that operated by the old rules.

The new rules are emerging rapidly. Cities at the forefront of the momentum toward restoration and sustainability will be the winners.

Nationwide, there are many signs of this momentum. For example, a rapidly increasing number of major corporations are adopting strong environmental policies, reducing greenhouse gas emissions and waste, requiring their suppliers to provide green products, and, increasingly, choosing locations for their operations based on the city's quality of life. They do all this because it's more profitable, strengthens their reputations, and helps them recruit and retain bright, creative employees who feel better about the places where they live and work. Cities that lag behind in efforts to green themselves will fall off the list of prospective sites for successful companies of the future. As a recent Gallup survey of twenty American metropolitan areas discovered, the number one issue that makes people feel satisfied with their city is the quality of place—that is, "its overall aesthetic and physical beauty, air and water quality, great open space, and authentic neighborhoods."[1]

Another sign of this change is the increasing use of environmental performance indices. In the past, outsiders may have had some vague sense of the quality of a city where they were thinking about holding a conference or relocating their family or business. But now, they can refer to readily available indices of livability, quality of life, environmental performance, and sustainability. Examples include:

- The Federal Reserve Bank of St. Louis issues a "rational index" of the "ten most-livable and least-livable large metro areas."

- SustainLane issued its second annual index of U.S. cities' sustainability performance based on fifteen economic and quality-of-life categories, including air quality, housing affordability, land use policy, and transportation capabilities. Cleveland ranked 28th out of 50 cities.

- The Environmental Defense Pollution Prevention Alliance is currently developing an environmental livability index that will "…track environmental progress on issues contributing to urban quality of life…" Its pilot version will focus on Cleveland, Dayton, and Milwaukee.

Some of these indices are new and some are still under development. Their criteria and assessments will probably be controversial, at least at first. Currently, there is no way to predict which particular

1. Florida, Richard. "The Keys to the City." *The Philadelphia Inquirer* 22 Jan. 2006.

Mittal Steel is located at the upstream end of the Cuyahoga River ship channel.

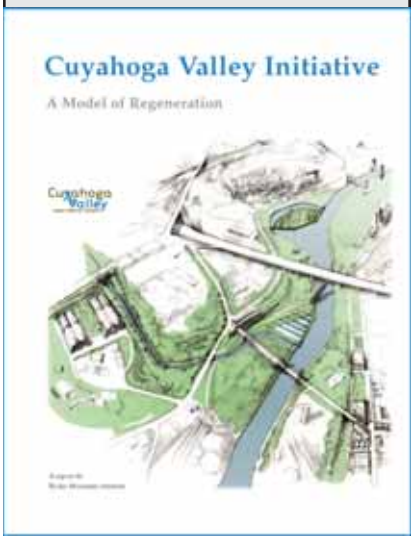
2. Cunningham, Storm. *The Restoration Economy*. San Francisco: Berrett-Koehler, 2002.

index or set of criteria will be most widely accepted. But what is predictable is that, over time, these kinds of indices will improve and gain widespread attention and credibility.

Like smart companies, smart cities are getting ahead by moving toward restoration and sustainability. Green city leaders regard restoration and sustainable development not as costs, but as essential investments with short- and long-term returns. The value of restorative development is explored at length in the 2002 book, *The Restoration Economy*.[2]

The primary factor that will make Cleveland a better place to live and do business and position Cleveland high on environmental-performance indices will be the decision of every community leader to include environmental performance in his or her own job description.

Cover of the 2004 RMI report, "Cuyahoga Valley Initiative: a Model of Regeneration."



The Cuyahoga Valley Initiative & Rocky Mountain Institute

The goal of the Cuyahoga Valley Initiative (CVI) is to "revitalize the Valley and make it once again an economic force, environmental treasure, and unifying element for the region." The Cuyahoga County Planning Commission's (CPC) mission is to provide the tools necessary to achieve this vision.

In 2003 and 2004, a team from Rocky Mountain Institute (RMI) worked with CPC and its circle of advisors to develop recommendations for regeneration of the environment, economy, and community of the Cuyahoga River Valley. Those recommendations are described in the April 2004 report "Cuyahoga Valley Initiative: A Model of Regeneration," available on RMI's website (www.rmi.org/sitepages/pid1087.php). This report will not repeat the important background information contained in the 2004 report.

In 2005 and 2006, RMI again worked with CPC, this time to move several of its earlier recommendations toward implementation. Called the Cuyahoga Regeneration Project, this stage of RMI's work, like the first stage, is a subset of the larger CVI. It especially focused on environmental

Not far downstream from Mittal is the mouth of Kingsbury Run, which, with a little work, could become a jewel of a park.

restoration and economic development along the Cuyahoga River ship channel.

Economic & Environmental Restoration in Cleveland

Most of this report focuses on the particular ways in which the Cuyahoga Valley is beginning the process of economic and environmental restoration, and the specific steps necessary for success.

But first, it's well worth prefacing those important details with a vision of what the Cuyahoga ship channel can become. Let's start with what it is. For just a moment, picture some segment of the ship channel as you know it today. There's a good chance that your picture is in shades of gray: barren gray ground and gray steel walls holding the land back from gray river water.

If you're lucky, you've also seen the green gems along the river, many of them hidden from all but a very few Clevelanders: the mouth of Kingsbury Run, a pocket of vegetation here, a tenacious heron there. Pristine these jewels are not. But they are testaments to the extraordinary resilience and tenacity of nature. Give her a chance and she'll make a comeback.

Though located in a tarnished setting, these isolated gems can help us create a picture of the ship channel in the future. We could fantasize about a vast park, but that's not very likely in this generation, and it's certainly not attractive to those working along the river. However, we can conjure a realistic vision of the future by weaving green ecological threads with gray industrial threads into an unusual, perhaps unique, fabric. Imagine a pocket park along the Towpath Trail and next to a concrete batch plant or a steel mill. It's big enough for several mature trees and there's a wetland that enhances the river. It does this by way of a new kind of bulkhead, one that protects the ship channel yet allows water to flow through it and into the wetlands, where fish thrive and herons hunt.

The 5.5 miles of the ship channel include many places for these green gems. These restored areas could thrive in the immediate vicinity of heavy industry without interfering with their operations. It's not difficult to imagine truck drivers, bookkeepers, and other industrial workers, as well as area residents, using these open spaces for lunch.

These pockets of natural refuge together create genuine habitat for fish and other wildlife, and, as a bonus, they help clean the water as it moves slowly to a grateful Lake Erie. This picture is within reach of the people of Cleveland. The activities described in this report can lead Cleveland in that direction.

Economy & Environment in Partnership

Though this report lists economic development and environmental restoration separately, the two are actually integrated, and part of a larger whole. Each drives the other. For example, green bulkheads are included in environmental restoration. But the design and implementation of these innovative solutions will create new jobs and business opportunities, while simultaneously improving river water quality and habitat. All this will provide the Cleveland community the opportunity to offer other cities not only a model of restoration, but also billable services.

Another example is low impact development (LID) for stormwater solutions. Essential for improved river water quality, these solutions also can create significant new business and job opportunities for heavy-equipment operators, landscapers, laborers, designers, contractors, and others recreating the ways in which the community deals with stormwater. And because LID is usually relatively small in scale, its projects are readily accessible to smaller businesses with limited bonding capacity.

Worldwide demand for restoration services is growing rapidly. Cities that develop technologies and techniques to solve local problems early will be positioned to sell their services elsewhere. Cities late in their restoration efforts will be the clienteles in that market.

Another exciting and concrete economic development opportunity driven by the ideas of restoration is an unusual effort with a curious name: Waste = Revenue. This initiative takes industrial waste, the stuff of environmental problems and business liability, and turns it into a business asset by finding markets for it. Though it has already generated business opportunities, the initiative described in this report just scratches the surface of what's possible. When Cleveland digs deeper into this prospect, it will find a wide range of opportunities seldom found by more conventional economic development—self-generated opportunities created where none seem to exist, and that don't depend on new business entering the community.

Report Contents

The core of this executive summary is an action plan for implementing projects that will support environmental restoration and economic development. The report then details the background, progress, and future commitments of each of the projects in the plan. These sections are a snapshot of a longer process. Also included are indicators of progress that, when monitored, will help capture future successes in each of the project areas and progress toward CVI's goals. These are accompanied by suggestions for stories that may be documented to help publicize innovative projects as they progress. Lastly, letters of support from various organizations affirm their public commitment to continue work on these projects once RMI's role concludes.

As part of its CVI work, RMI commissioned two studies, "Designing a Regeneration Zone for the Cuyahoga River Valley: Ecological Restoration" and "Review of the Doan Brook Watershed Study Report." Their executive summaries start on p. 77; the full reports are in the CD Appendix, "RMI Reports" folder. Supplemental materials on each of the projects can be found on the CD Appendix.

Action Plan for Regenerating the Cuyahoga River Valley

Cuyahoga Valley Initiative (CVI) Organization

Project description: Establish an organization to champion the vision, coordinate the activities, and implement the projects of the CVI.

Sources of financial support: George Gund Foundation (GGF) and Cuyahoga County Planning Commission (CPC) have committed to fund the organization.

Technical requirements: Currere, Inc. of Cleveland to design and establish the organization, supported by a grant from GGF and under CPC supervision.

Organizational requirements: To be defined by Currere's work. This new entity is an organizational requirement for each of the projects below.

Marketing ideas: To be defined by Currere's work.

Task requirements: Complete Currere's work, which is expected to occur in the summer of 2007. Then, secure explicit support from a wide range of stakeholders, especially local government leadership. Fortunately, because CPC already hired Alison Ball to be responsible for CVI-related work until the new organization is operational, much of the coordinating work required of this organization is now underway.

Budget estimate: $500,000

Forms of commitment: Grant proposal to GGF (see CD Appendix, "CVI Organization" folder), and GGF's proposal acceptance letter (see p. 64). CPC will be responsible for CVI-related work until the new organization is operational.

Dredging

Project description: Determine cost-effective modes of freight transportation on the Cuyahoga River that support the industrial sector while improving river ecology, water quality, and community development.

Sources of financial support: CPC has issued an RFP for the "Cleveland Lakefront/Cuyahoga River Maritime Facilities Study" (a.k.a. the Port Study), which may complete a whole-system analysis of this problem.

Technical requirements: The Port Study, authorized by the Board of County Commissioners and directed by CPC, is to include a whole-system analysis of freight transportation in the Cuyahoga River ship channel. The study will consider economic trends, optimal locations for the port, transportation modes, community development plans, and environmental aspirations.

Task requirements: Award contract to the winning firm and complete the Port Study.

Budget estimate: $200,000

Form of commitment: RFP issued by CPC (see CD Appendix, "Dredging" folder).

Stormwater

Project description: Reduce the volume and contamination of stormwater runoff in Cleveland by amending the City of Cleveland's stormwater policy, forming stormwater agencies that can charge stormwater fees, and educating agency staff and communities on stormwater best management practices (BMP).

Sources of support: Ed Rybka (City Department of Building and Housing, BH), Frances DiDonato (City Law Department), Andrew Watterson (City Sustainability Programs Manager), Jan Rybka (Soil and Water Conservation District, SWCD), Betsy Yingling (Northeast Ohio Regional Sewer District, NEORSD), Chris Alvarado (CPC), and Jim White (Cuyahoga River Remedial Action Plan, RAP).

Technical requirements: Conduct a stormwater retrofit analysis for a

neighborhood using GIS land cover images, and considering land use, building stock, and localized rain data. Determine the volume of runoff that would be captured by a comprehensive retrofit of distributed stormwater technologies in the community, whether such endeavors would be cost-effective, and what policies might produce such results.

Organizational requirements: Form a Stormwater Steering Committee, led by Cleveland city government. Secure a court order authorizing NEORSD and the Self-Funded Watershed Management Organization to be stormwater agencies for Northeast Ohio.

Marketing ideas: Issue stormwater BMP manuals, conduct education sessions for communities and developers, and familiarize the leadership of various municipalities with the function of stormwater agencies and policies.

Task requirements: Review existing stormwater policies and adopt additional policies to mandate and incentivize stormwater BMPs in Cleveland. Design the purpose and function of each of the stormwater agencies and market the idea in appropriate communities.

Forms of commitment:

1. Letter from Betsy Yingling affirming NEORSD's intent to become a stormwater agency (see p. 66).
2. Letter from Jan Rybka (SWCD) affirming continued commitment to produce educational materials on stormwater BMPs and to foster BMP adoption in the City of Cleveland (see p. 68).

Aquatic Habitat Restoration

Project description: Develop structures to restore aquatic habitat in the Cuyahoga River ship channel, including use of pocket wetlands, green bulkheads, fish shelves, and tributary restoration.

Sources of support: Jim White (RAP), Chris Alvarado (CPC), Richard Zavoda (Mittal Steel), George Cantor (City Planning Commission), Tracey Nichols (Cuyahoga County Brownfields Redevelopment Division).

Technical requirements: Conduct workshop series with diverse professionals to transform the concept of a green bulkhead into actual design parameters that will result in a patented design held in the public domain. Design parameters for the pocket wetland pilots. Assess brownfield contamination and mitigation requirements of restoration sites.

Organizational requirements: Establish a property-title-retaining entity with the financial capability to oversee the sites' maintenance.

Marketing ideas: Streamline the restoration process so that it becomes attractive and easily usable by interested landowners.

Task requirements: Conduct the design workshop series; transfer property from Mittal Steel to the City for potential use as a pocket wetland pilot site; issue design parameters for pocket wetlands; promote the siting of mitigation-credit-funded restoration in the channel; conduct brownfield site assessments and remediation as needed.

Budget estimate: $1.8 million for green bulkhead concept development; $2.6 million requested from the federal Senate Budgetary Appropriations for tributary restoration; mitigation credit funding.

Forms of commitment:

1. Letter from Jim White (RAP) detailing intent and method of pursuing a green bulkhead design (see p. 70).
2. Letter from Jim White (RAP) affirming that RAP will continue to champion the establishment of a pilot pocket wetland on the Cuyahoga River ship channel (see p. 72).
3. Letter from Paul Alsenas (CPC) affirming that the County submitted a Senate Budgetary Appropriations application for funding to purchase and restore tributary mouths in the ship channel (see p. 74), and the actual funding application (see CD Appendix, "Habitat Restoration" folder).

Industrial Cleanup

Project description: Remediate brownfield sites in the Cuyahoga River ship channel area, especially with respect to habitat restoration sites.

Sources of support: Tracey Nichols (Cuyahoga County Brownfields Redevelopment Division, BRD).

Technical requirements: Assess and remediate brownfield sites where habitat restoration will either permit contact between soil and water or between people and soil.

Task requirements: Transfer property title from a private landowner to the title-holding entity for restoration sites; apply for BRD site assessment grants; issue permission for BRD to conduct the assessments.

Budget estimate: Projects approved by BRD receive up to $6,000 for Phase I assessment and up to $35,000 for Phase II assessment.

Green Building for Industries

Project description: Establish a green building standard for Cleveland's Industrial Land Bank (ILB).

Sources of support: Andrew Watterson (City Sustainability Programs Manager), Michael Hoag (WIRE-NET), City Department of Economic Development (ED).

Technical requirements: Conduct a workshop with ED, WIRE-NET, local builders, developers, industries, regulatory agencies, and green building experts to determine the structure and function of the green industrial-building standard.

Organizational requirements: Establish design guidelines and review accreditation system.

Marketing ideas: Brand green building standards as a cost-saving and improved worker productivity approach.

Task requirements: Review of the concept of a green building standard for the ILB by the ED director; ED to conduct the policy designworkshop.

Waste = Revenue

Project description: Create a network of industries (primarily in or near the Cuyahoga Valley) that trade waste byproducts as useful resources. This can proceed with or without technical support.

Sources of support: Holly Harlan (E4S), CPC, and such industries as Alcoa, Aleris, GEM, Metaloy, Mittal, Rosby, and Zaclon.

Technical support (optional): Analysis by material and chemical engineers of business waste streams.

Organizational requirements: Continue with E4S as the organizing entity. Eventually the network may be self-sustaining, or administered by a separate non-profit organization.

Marketing ideas: Increase interest by word of mouth among industries; newspaper stories of new business opportunities may also increase participation.

Task requirements: Expand current network by recruiting new businesses and waste experts; cement current relationships and follow through on conceptual Waste = Revenue ideas.

Budget estimate: $10–20,000 for organizational support; further funding needed for research and development.

Forms of commitment: MOU signed by Holly Harlan and a group of business leaders affirming their commitment to nascent Waste = Revenue partnerships and to pursue new partnerships (see p. 73).

Cuyahoga Valley Initiative Organization

The Cuyahoga Valley Initiative (CVI) requires action on many fronts, including the projects described in this report. Though each of these projects has a champion (that is, an organization or individual committed to achieving the goals of the project), the CVI will not succeed if each champion proceeds in isolation. That may be the path to individual success, but it's also the path to community failure. Regeneration of the Cuyahoga Valley requires champions committed to the success of the larger CVI effort.

CVI success also depends on the creation of an organization whose mission is the overall success of the CVI. Many organizations and people are necessary ingredients of CVI, but each has a wide range of responsibilities beyond CVI. Success requires that one organization be the primary CVI driver.

Thanks to the foresight of the Cuyahoga County Planning Commission (CPC), the design of that organization is now underway, with the guidance of a local organizational development consulting firm, Currere, which has been funded by both the county government and a substantial grant from the George Gund Foundation (December 15, 2005). An early draft of the organization's structure may be available by mid-July 2006. The design of the organization should be complete by the summer of 2007. In addition, to keep the CVI effort going until the new organization is created, CPC has hired a temporary Cuyahoga Valley Organization Coordinator with support from the same grant.

Given Currere's long track record, RMI is confident that the design process will be a model of collaborative decision-making. Though RMI will not have a hand in designing the organization, we have two recommendations we hope will be considered:

1. Though the board of directors should include people with a variety of experiences and skills, the directors of the new organization should not formally represent particular groups. Representatives are often hamstrung by the obligation to bring only their group's inflexible position to the table, possibly to the exclusion or detriment of other points of view. Instead, "elders" come to the table with their groups' underlying interests and ideas. Representatives tend to argue, while elders discuss. (Elders are wise but not necessarily old.)

2. The scope of issues to be addressed by the new organization should be clearly defined and not too wide. For example, if the scope includes the entire breadth of environmental restoration and protection, community health, and economic development issues for the watershed, the effort will become diluted—just another layer on all the existing economic, social and environmental efforts (public, nonprofit, and for-profit) already underway.

Paul Alsenas (CPC Director), Michael Kinsley (RMI), Carla Regener (CPC), and David Beach (EcoCity Cleveland) catch up at RMI's final presentation to Cleveland at the Hausheer Building.

For draft descriptions of the future CVI organization design process, purpose, and capabilities, please refer to the CD Appendix, "CVI Organization" folder.

Healing the Cuyahoga River

All water draining the Cuyahoga watershed into Lake Erie and all larval fish swimming up the river from the lake (an indicator of the health of the next generation of fish) must pass through the Cuyahoga River ship channel. Therefore, the quality of water in that last stretch of river is central to the health of the Cuyahoga River.

To this end, RMI contracted Ohio State University biologist Dr. Bill Mitsch to identify significant causes of poor water quality in the river and to determine the best solutions for restoration in the ship channel. The report "Designing a Regeneration Zone for the Cuyahoga River Valley, Project Component: Ecological Restoration" notes that, until dredging stops and combined sewer overflows decrease in frequency and volume, the dissolved oxygen levels in the ship channel will continue to occasionally "reach levels that severely affect the viability of fish and macroinvertebrates."[3] Furthermore, the lack of aquatic habitat in the ship channel imperils larval fish health. In addition, habitat restoration along the ship channel will most likely require brownfield assessment and remediation in order to not exacerbate river water quality problems.

Healing the water quality and ecology of the Cuyahoga River will benefit not only the fish, but also human well being and prosperity. A healthy river with living stream banks improves the aesthetic quality of the river. This in turn enhances the property value and also strengthens economic development. The creation of restoration services provides new Cleveland-based jobs.

Seeking progress in these areas—dredging, stormwater, aquatic habitat, and brownfield remediation—RMI examined alternatives that would cost-effectively decrease the dredged depth, decrease the volume of stormwater entering the sewer system, and increase and restore native habitat in the ship channel. The following sections address each of these issues.

3. Mitsch, et al. "Designing a Regeneration Zone for the Cuyahoga River Valley, Project Component: Ecological Restoration." Aug. 2005, p. 6. See CD Appendix, "Habitat Restoration" folder. Also, OEPA. "Cuyahoga River Ship Channel Water Quality Modeling Analysis." Apr. 1993, p. 7–8.

Dredging the Cuyahoga

Scoop by scoop, Cuyahoga River sediment is dredged and removed on a barge.

According to the Mitsch report (see CD Appendix, "RMI Reports" folder), the ship channel suffers from poor water quality primarily due to dredging and combined sewer overflows (CSOs).[4] However, staff at the Ohio Environmental Protection Agency (OEPA) consider dredging to be the most entrenched of the two water quality issues because:

1) Overflows occur during times of high rain, when the river flows faster and sewage is pushed quickly into the lake; therefore, decomposing sewage is less likely a cause of oxygen depletion in the channel;

2) The lack of oxygen and habitat is crucial to aquatic ecosystems; and

3) The sewer district already has plans to eliminate CSOs.

The 5.5-mile Cuyahoga River ship channel reduces the health of the river in two key ways. First, the sudden change in river depth from a natural 5 feet to the dredged channel's 23–28 feet causes the river's flow rate to drop from 4.5 miles per hour upstream to 0.024 miles per hour in the channel.[5] This slower water turnover rate contributes to the depletion of dissolved oxygen levels in the channel. While a healthy river contains at least 5 milligrams per liter of dissolved oxygen, the Cuyahoga's levels drop from 8 milligrams per liter above the channel to as low as 1.5 milligrams per liter at the river's mouth.[6] Dissolved oxygen is lowest in the summer and fall, when higher temperatures and lower rainfall deplete the oxygen and severely restrict aquatic life in the river. The OEPA writes, "The physical habitat of the channel and the prevailing background dissolved oxygen regime are insufficient to support any resemblance of the warm-water habitat aquatic life use designation."[7] For this reason, the OEPA classifies the ship channel as a Limited Resource Waterway, with a standard of 1.5 milligrams per liter of dissolved oxygen from June to January.[8]

The second way in which the ship channel reduces river health is that the channel is almost entirely bulkheaded with concrete or steel to provide structural support to the riverbanks, virtually eliminating larval and migrating fish habitat. While the Index of Biological Integrity and the Invertebrate Community Index[9] have both improved since the 1970s, these measures continued to drop noticeably in the last few miles of the river.[10] Despite the increase in types and numbers of fish found in the channel over the years, the most dominant species in the channel remain the common carp (non-native), gizzard shad, and emerald shiner, all tolerant of degraded habitat and poor water quality.[11] The Army Corps of Engineers has also conducted studies on the sharp declines of larval fish communities in the ship channel, and concludes that declines are due to annual dredging, lack of habitat, and low dissolved oxygen.[12]

The navigation channel is an expensive and heavily subsidized transporta-

4. Earlier sewer systems combined both rainwater runoff and household sanitary sewage in one set of underground pipes. In larger storm events, the system will overload and get directed to overflow outfalls, causing untreated wastewater to enter waterbodies. These combined sewer overflows will be discussed in greater detail in the following section.

5. RAP. "Cuyahoga River Bulkhead Habitats" Factsheet.

6. Mitsch, et al, p. 6.

7. OEPA-2. "Water Quality Standards Use Designations – OAC 3745-26, Cuyahoga River." Effective July, 2002. Available online at: www.epa.state.oh.us/dsw/rules/01-26.pdf.

8. Ibid.

tion route. The yearly removal of about 350,000 cubic yards of sediment by the Army Corps of Engineers costs about $2 million.[13] Because sediments dredged from the river are too contaminated to be dumped in Lake Erie, they must be placed in a confined disposal facility (CDF). The disposal of the dredged sediment costs about $82,000 each year.[14] These costs are paid by federal budget allocations to the U.S. Army Corps of Engineers. Unexpectedly, the current Cleveland CDF is filled to capacity and will close by the end of 2006; a new CDF will last 15–20 years and cost approximately $30–40 million.[15] The federal government will pay about two-thirds of this cost, while the local government pays one-third. Thus, the cost of dredging is about $3.7–$4.9 million per year.

These costs do not include bulkhead replacement expenses. Built in the New Deal era, many sections of the bulkheads are more than fifty years old and need to be replaced. Eighty-five percent of the 5.6-mile river is bulkheaded, which means there are 50,266 linear feet of bulkheads on both sides of the river. At an estimated $3,750 per linear foot, the complete replacement of the river's bulkheads—over time—will cost at least $188 million.[16] Timely replacement of the shoreline structures is the responsibility of landowners, some of whom receive no income from shipping.

Given the ecological consequences and high cost of dredging, RMI explored alternatives to the current navigation system. As shown above, RMI's calculations find that discontinuing dredging would save $8–9 million a year. Thus, if federal funds were fungible (which they are not[17]), the cost of some possible alternative transport system must not exceed $8–9 million a year in order to match the costs of the current transportation system.

According to one Army Corps study, shipping iron ore and limestone materials to harbors 30 miles from Cleveland and moving them the rest of the way by rail would increase the delivery costs of these products to users at Cleveland Harbor. Over a twenty-year period, these costs could increase by $31.6 million.[18] Since each 600-foot ship hauls the equivalent carried by some 200 rail cars, a shift to rail also presents both traffic and energy-efficiency concerns.

Alternatively, switching from the use of deep-draft ships to 12-foot-draft barges would double dissolved levels, but would also quadruple ship traffic, increase delivery times, and require drastic capital investments that may not be feasible, especially given the uncertain longevity of key industries on the ship channel.

With these factors in mind, it appears, at least through cursory review, that the current mode of conveyance for industries on the ship channel, while heavily subsidized by the public and private sectors, may be the least expensive form of transport available. Despite its ecological significance, dredging may continue for some time due to the lack of cost-effective alternatives.

Additionally, there are practical and political reasons for maintaining the ship channel as it is. Traditionally, Cleveland has been an industrial city and the industries located along the ship channel remain important to the city's economy. Furthermore, many of these industries are located in Cleveland due, in large part, to the inexpensive transportation offered by the channel. The City of Cleveland and Cuyahoga County are committed to retaining these industries and to preserving much of the ship-channel area for industrial uses. Thus, local elected officials are unlikely to speak out against dredging, and local political support is crucial to implementation of

The ship channel is authorized to be dredged to at least 23 feet deep throughout. This means about 350,000 cubic yards of sediment is removed yearly from the river floor.

9. The IBI and ICI synthesize biological metrics that reflect the impact of human actions on biological attributes to depict the overall health of a waterway; the IBI includes fish, while the ICI is limited to macro-invertebrate species.

10. Mitsch, p. 42-43.

11. Ibid, p. 9.

12. U.S. Army Corps of Engineers – Buffalo District. "Conceptual Designs for the Improvement of Larval Fish Populations." September, 2004.

13. U.S. Army Corps of Engineers, 2004.

14. "Dredging Evaluation, Cleveland Harbor, Ohio." U.S. Army Corps of Engineers, Buffalo District, Buffalo, New York. March, 2003.

15. White, Jim. Personal communication: July 13, 2005.

16. Cuyahoga County Planning Commission. "Cuyahoga Valley Initiative Idea Package Summary - Working River." April, 2003, Draft, p. 4.

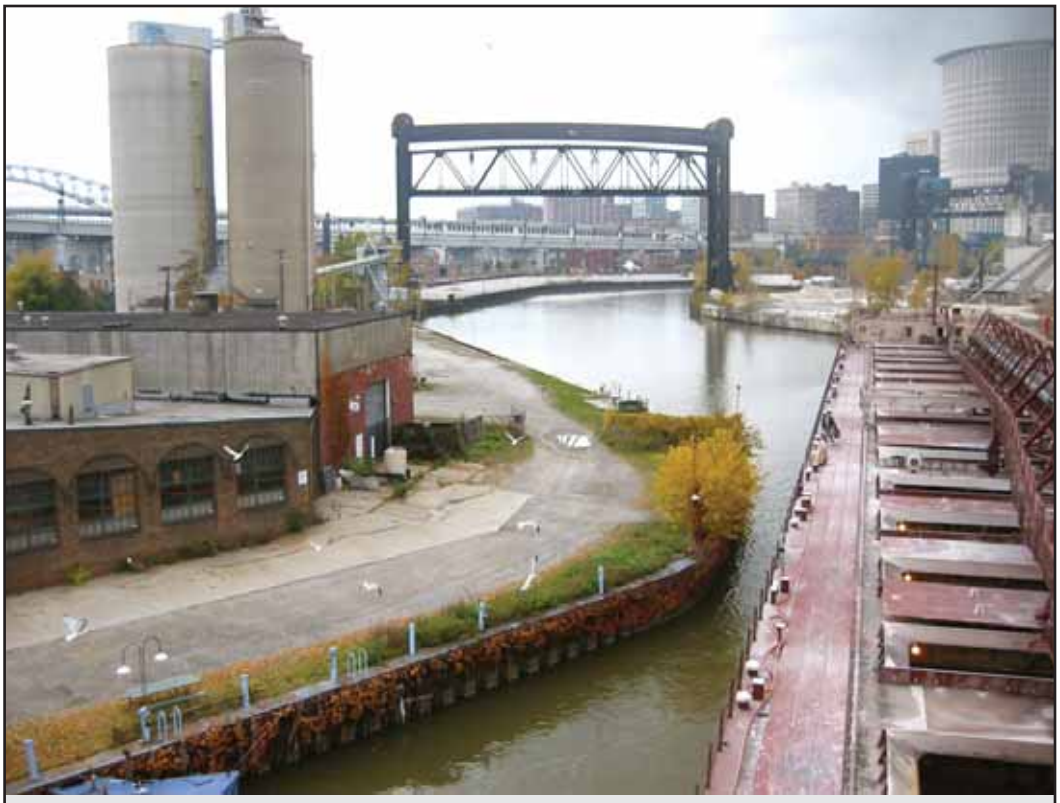
17. Federal funds tend to be allocated based on the historical expenditures of a certain agency, rather than by solutions for certain problems; thus, funding cannot readily be shifted to a different solution.

18. "Dredging Evaluation, Cleveland Harbor, Ohio."

19. Gerdel, Thomas W. "Undredged Channels Are Limiting Shipping." *The Plain Dealer* 14 Apr. 2006: C1.

20. Snyder, Matthew, Army Corps of Engineers, Cleveland Office; personal communication, March 16, 2006.

21. U.S. Army Corps of Engineers, Great Lakes and Ohio River Division. "Dredging Trends", PowerPoint presentation, June 2005. Available online at: http://operations.usace.army.mil/nav/05junndc/Trends-LRD.pdf.



The 600-foot-long *Earl W. Oglebay* makes its way through tight bends in the Cuyahoga River.

alternative strategies by the Army Corps of Engineers.

Despite the fact that the existing system is deeply rooted, significant infrastructure costs are reducing the cost-benefit ratio of dredging and may one day compel a re-examination of alternatives. A 2006 *Plain Dealer* article explored the growing dredging deficit in the Great Lakes. For instance, the Saginaw River in Michigan is authorized to be dredged to a depth of 22 feet, a depth that has not been attained since the 1980s; parts of the river are now 12 to 13 feet deep. Jim Weakley, president of Lake Carriers' Association, estimates that $200 million is necessary to restore authorized depths around the Great Lakes. The Army Corps' Great Lakes budget for 2007 is $86 million.[19]

As an engineer in the Cleveland office of the Army Corps of Engineers noted, Cleveland will only receive enough funding in 2006 to dredge 40 percent of the necessary volume to maintain the shipping channel. While the office has been allotted additional funds for 2007, these will still be insufficient to dredge the full volume, much less the backlogged sediment.[20] All of this means that, in the short term, ships would have to reduce loads to cut draft depth. In the long-term, if current levels of federal funding become the norm or even decline further, use of the channel for shipping may become uncertain.

As for Cleveland's CDF, where dredged material is deposited, there are interim plans for disposal sites until 2013 when, if requested funding comes through, hopefully a new CDF will be built. The ratio of funding for CDFs, two-third federal to one-third local, will likely change in the future as the Army Corps' budget shrinks, while demand for new infrastructure increases. Currently, CDFs on the Great Lakes are 70 percent full.[21]

High Risk or Whole Systems

While Cleveland's leadership will certainly continue to support sufficient dredging subsidies, relying on federal money is a high-risk strategy. It would be unwise for the community to assume

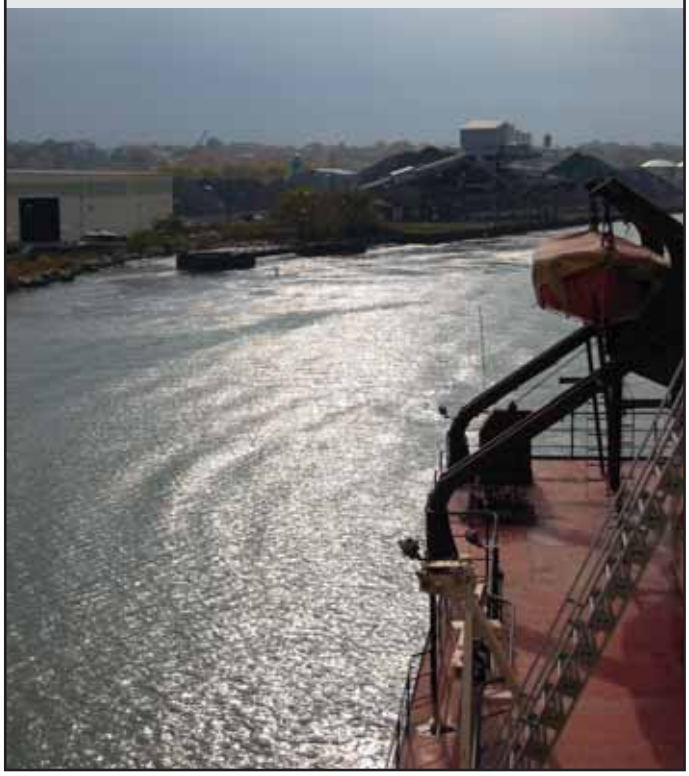
that the subsidies will always be available. A host of factors conspire to present the community with an uncertain future regarding the ship channel. Maintenance is being deferred in other cities. Future Army Corps budgets may not be adequate. The effects of large-scale disasters elsewhere may continue to capture federal resources in the future. Key industries on the ship channel may not be able to depend on access by large ships.

To avoid being caught napping, as so many other cities have, Cleveland would be well advised to consider how it can best respond to more than one scenario for its ship channel. It should pursue a whole-system analysis that considers the cost and benefits to industry, the environment, the community, the economy, and the full range of options for transporting materials from their sources to points of use.

Fortunately, the Board of County Commissioners (BOCC) has tasked CPC with directing a "Cleveland Lakefront/ Cuyahoga River Maritime Facilities Study" (a.k.a. the "Port Study"). This study will provide the information, analysis, and public feedback to assist the BOCC in making decisions about the location, extent, and type of maritime shipping operations in Cleveland and Northeast Ohio. The qualifying firm will: conduct an economic assessment and market forecast of the region and various maritime industries; identify how changes to the port's location will affect environmental aspirations and community development plans; and determine if the economy, community development, and environmental aspirations would all be optimized by moving the port to a different location or by transporting materials via an alternative system. The responses to the request for proposals were due in late June 2006, and the subsequent yearlong study will provide answers to many of the questions cited in this section. RMI sees the Port Study as a hopeful sign that a pragmatic whole-system solution to the dredging issue may be found.

Fundamental changes to the river's dredging regime will depend on time, federal funding, and the marketplace. For the time being, efforts to improve river and lake water quality must assume continued dredging. And, while a dredged channel will never be a pristine river environment, its water quality may be strengthened enough to prevent further damage to Lake Erie and to allow more fish species to survive their journey through the ship channel. Therefore, the water quality action plan focuses on habitat restoration to boost aquatic health and stormwater management to improve water quality and levels of dissolved oxygen.

The *Earl W. Oglebay* leaves Cleveland Harbor and heads for Mittal Steel some six miles upriver.



Stormwater

Impermeable surfaces like this parking lot in downtown Cleveland create stormwater runoff that can subsequently pollute waterways.

Stormwater is a major contributor to water quality degradation in the Cuyahoga River. It sometimes travels in the form of surface runoff, which gathers pollutants and erodes soil before entering a water body. It can also enter storm drains and separate stormwater sewers that empty directly into the nearest waterway without treatment. Finally, it can enter combined sewers in which sanitary sewage and stormwater mix and are treated at the wastewater treatment plant. During storm events, however, combined sewers can overload and empty without treatment directly into waterways; these events are dubbed combined sewer overflows (CSOs). Cleveland has all three forms of stormwater pollution, which degrade both the Cuyahoga River and Lake Erie.

As the following section will show, though Cleveland may be complying with regulatory requirements to improve the quality and decrease the quantity of stormwater, there is much more the community can do to prevent future stormwater pollution while improving river and lake water quality, as well as the overall urban environment. In short, compliance is not enough to clean up the river or the lake.

Encouragingly, stormwater management in Cleveland has been progressing rapidly during the past year. The Northeast Ohio Regional Sewer District (NEORSD) is moving toward becoming a stormwater agency. A separate group is working toward the creation of a Self-Funded Watershed Management Organization that will serve as a stormwater agency in areas of northeast Ohio not served by NEORSD. The City of Cleveland will soon establish a new Stormwater Management Steering Committee that will re-examine the existing stormwater runoff ordinance and related policies. The Soil and Water Conservation District (SWCD) serves as a consistent champion for progressive policies that will make northeast Ohio a

stormwater management leader. These initiatives would be strengthened if an additional study were conducted to analyze all the effects of distributed stormwater solutions, potentially pointing to cost-effective solutions that are not now being fully considered. With these shifts in policy and institutional development, Cleveland is well on its way to establishing a far-reaching stormwater management regime that will address a daunting national water quality problem.

Cleveland's Stormwater Story

The relative success of water pollution control from point-sources (e.g., factories) since the 1970s has highlighted the enormous impact that non-point sources of water pollution (e.g. stormwater and agricultural runoff) have on water quality. Indeed, about 30 percent of surface water pollution nationally is attributable to stormwater runoff.[22]

The importance of non-point source pollution led Congress to amend the Clean Water Act to include industries and construction sites more than one acre in size, municipalities, and sewer districts as point-source polluters. These entities are required to obtain National Pollution Discharge Elimination System (NPDES) permits. Under a NPDES permit, the regulated entity must establish a stormwater management plan using best management practices (BMPs), stormwater pollution prevention plans, or satisfy nine minimum control measures. Participants must prevent pollution from entering runoff and decrease total runoff volume. By 2008, all participants should be in compliance or have management plans underway.

Industries required to comply with NPDES include manufacturing plants, facilities with effluent limitations, mineral, metal, oil and gas, recycling facilities, hazardous-waste treatment or disposal facilities, as well as those involved in construction-related activities. Companies must issue a stormwater pollution prevention plan to the state environmental agency. However, the lack of enforcement capacity on the part of state agencies often results in limited knowledge and compliance in many industries.

The municipal NPDES permit plan must satisfy six BMPs issued by the Environmental Protection Agency. These include: public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, and pollution prevention or "good housekeeping." However, municipalities need only satisfy these requirements for sites draining into municipal separate storm-sewer systems (MS4). For an older city like Cleveland, MS4s represent only 10 percent of the overall sewer system. Thus, while Cleveland promulgated the ordinance "Chapter 3116: Construction and Post-Construction Site Runoff Control to Municipal Separate Storm Sewer System," construction on 90 percent of land within city limits is not governed by any stormwater regulations. This is a significant limitation because, as Cleveland redevelops, current levels of pollution and the runoff volume of stormwater will remain at the same levels or even increase.

One effective way to tackle stormwater is to find ways in which certain stormwater

22. Copeland, Claudia. "Stormwater Permits: Status of EPA's Regulatory Program." CRS Report for Congress, June 1998. Available online at: http://cnie.org/NLE/CRSreports/water/h2o-26.cfm.

Certain industries are responsible for ensuring that runoff from their properties attains specific water quality standards.

Turfed lawns, with their short leaves and even shorter root systems, actually retain very little rainwater.

solutions will serve the community in other ways, too. For example, landscaping can be designed to capture stormwater at little or no additional cost. Unfortunately, Chapter 352 of the Zoning Code—"Landscaping and Screening"—requires certain landscaping and screening in redevelopment projects, but it does not require that the design accommodate stormwater, even though its language is similar to that describing stormwater BMPs.

Because mitigation of CSOs is important to improving water quality, sewer districts are also required to obtain NPDES permits. In Cleveland, 41 percent of CSOs that would otherwise have been treated at the Southerly Waste Treatment Facility flow into the Cuyahoga River.[23] In many older cities, such as Cleveland, the combined sewer system is too extensive to separate into stormwater and sanitary sewer systems. The solution in such cities is invariably to build large tunnels or retention tanks with enough capacity to prevent almost all CSOs. The retained volume is then slowly released to treatment plants over ensuing dry weather days. Building this new infrastructure requires multi-billion-dollar investments over multiple decades. In Cleveland, NEORSD is planning to construct a series of tunnels over twenty to thirty years. The estimated total cost is $1.6 billion.[24]

Despite this weighty responsibility, NEORSD is not a stormwater agency, and therefore cannot issue stormwater fees on water bills or require certain standards in development designs, which would reduce demand on its stormwater system.

While stormwater management plans that mandate infrastructure projects such as storage tunnels and treatment plants are typical of most urban stormwater management plans, such cities as Seattle, Portland, and Chicago are recognizing the effectiveness of vegetation as a supplemental solution. In nature, where there is no waste, rainwater is a resource that restores groundwater, replenishes waterways, and nourishes the vegetation that then produces fresh air, habitat, and cooling for the immediate area. Current trends in stormwater management show an increased willingness to implement low impact development (LID) that treats stormwater as a resource, not a waste product.

Best practices in developments include policies like smart growth guidelines and zoning for riparian corridors and open space, and structural LID technologies like vegetated strips, bioswales, permeable pavement, green roofs, and the use of native vegetation (see p. 32). The leaves, stems, and roots of these plants filter and retain rainwater before it percolates through the soil. Plants also offer many other benefits, such as urban heat-island effect mitigation, energy savings, and wildlife habitat. However, developers and local governments are often hesitant to employ new technologies, fearing a price premium. But a report compiled by the Conservation Research Institute[25] demonstrates that, for example, installation costs for natural landscaping can be $4,400 to $8,850 cheaper per acre than turf grass, and that maintenance costs range from $3,950 to $4,583 cheaper per acre per year over ten years. In addition, while porous pavement is more expensive than its conventional cousin, it can reduce total development costs by as much as 30 percent by reducing the scale of pipes and drains. Similarly, bioswales can be 80

23. Northeast Ohio Sewer District. "Southerly CSO Phase II Facilities Plan" Chapter 7, p. 6.

24. Northeast Ohio Areawide Coordinating Agency. "2004 State of the Region Report" p. 16. Available online at: http://www.noaca.org/04SOR.pdf.

percent cheaper than sewer systems by reducing the need to convey and detain stormwater.

Stormwater Workshop

Having conducted this background sleuthing, RMI sensed that much more could be done to strengthen stormwater management in Cleveland. We found that there is limited public support for LID in new development; there is no financial incentive for developers to take greater care in site design or for owners to retrofit existing seas of impermeable surfaces; and existing regulations do not connect urban beautification with vegetation that absorbs stormwater.

Therefore, RMI focused on galvanizing consensus and action around a stormwater ordinance that would require LID for all developments in the City, and on promoting financial incentives for retrofits at existing sites. As a first step, RMI convened a workshop in November 2005 to discuss these ideas with Cleveland's key regulatory, non-profit and private sector players in water quality management.

Workshop Agenda

The workshop began with a presentation by Linda Shi (RMI) on the costs and lost opportunities of the current system, and the net benefits to ecology, sewer operation and maintenance costs, property values, and aesthetics that lay in enhancing the City's stormwater policies. The presentation (see CD appendix, "Stormwater" folder) covered the natural and developed hydrologic cycles, and the technologies and policies that can restore natural hydrology in developed landscapes.

On behalf of Joe Deal (City of Chicago, Special Assistant to the Mayor), Ms. Shi also delivered a presentation (see CD appendix, "Stormwater" folder) on Chicago's proposed stormwater ordinance, which is based on performance standards. Michael Kinsley (RMI) facilitated the workshop. In addition, RMI brought in Daniel Medina (CH2M Hill), a senior stormwater expert, to provide technical guidance throughout the session.

Discussion and Results

The discussions following the presentations were both lively and productive, demonstrating the power of collaborative problem-solving when knowledgeable people are in the room. When concerns were raised around potential actions, there was usually someone who could supply a knowledgeable response. Others pointed to specific problems in the existing stormwater system that were new to the group and helped underscore the urgency of the issue.

The group listed sixteen desired outcomes from a stormwater management policy. Then, attendees listed actions that would lead to the outcomes, and grouped them into six categories: establish baselines, develop model ordinances, create standards,

25. Conservation Research Institute. "Changing Cost Perceptions: an Analysis of Conservation Development." February 2005, p. iii. Report prepared for the Illinois Conservation Foundation and Chicago Wilderness.

Case Study 1: Ford River Rouge Stormwater Retrofit

The common solution for industrial compliance is constructing bigger treatment facilities and pipes. A notable exception is Ford Motor Company's Truck Assembly Plant in Dearborn, Mich., an industrial plant that fell under Phase I NPDES regulations. Instead of building a stormwater treatment facility that would have cost $50 million, Ford's massive renovation of the over 90-year-old site includes the world's largest green roof (as of 2004: 10.4 acres), the world's largest porous pavement lot (16 acres), as well as bioswales. All told, these installations are expected to absorb 85 percent of its rainwater, while costing less than a third of the proposed treatment facility and providing multiple other services. The green roof not only absorbed 50 percent of rainwater, but it also provided 25 percent of the productive habitat of an undisturbed natural site. It was also expected to improve air quality above the roof by 40 percent.

26. Rybka, Ed. Personal communication: 2 Feb. 2006.

27. For a virtual tour of SEA Streets and more information on other SPU projects, see http://www.ci.seattle.wa.us/util/About_SPU/Drainage_&_Sewer_System/Natural_Drainage_Systems/index.asp.

review procedures, develop market-based strategies, and establish institutional frameworks.

Of twenty-one suggested actions, eight were deemed achievable within the next six months. These included: issuing riparian, wetland, stormwater, and post-construction regulations; highlighting local stormwater examples and business opportunities; and developing standards manuals, among others. A team volunteered to champion each of these actions, with RMI's coordination.
The workshop helped build a shared sense of importance around stormwater, cement collaborative relationships, and establish agreed-upon goals.

Participants included members from:
City Planning Commission, CPC, Division of Water Pollution Control (WPC), City Department of Building and Housing (DBH), SWCD, City Law Department, City Sustainability Programs Manager, NEORSD, Northeast Ohio Areawide Coordinating Agency (NOACA), OEPA, RAP, Entrepreneurs for Sustainability, Chagrin River Watershed Partners, Inc., Parsons Brinckerhoff, and CH2M Hill.

Regulatory Action

The elections in November 2005 delayed progress on the development of a new stormwater policy. Nevertheless, Cleveland Mayor Frank G. Jackson has stated that he wants the city to go beyond minimum compliance with state regulations.[26] Since 2006, DBH, Department of Law, City Planning, Department of Public Utilities, Division of Water Pollution Control (WPC), and SWCD have each attended at least one of three meetings to discuss how the City of Cleveland can have an equitable and thorough stormwater management policy. These conversations have shed new light on the stormwater management situation in the City of Cleveland, as well as the steps needed to proceed.

In 2003, the Stormwater Management Steering Committee issued a Stormwater Management Plan[28] (SWMP) in compliance with the requirements of a MS4 permit. Included in the SWMP was a mandate to adopt a set of construction and post-construction stormwater ordinances that were, at the time, being developed by the Euclid Creek Watershed and NOACA. Though NOACA's model ordinances were completed in 2004 and have been audited

Case Study 2: Seattle's Street Alternatives (SEA Streets)[27]

In 2000, Seattle Public Utility (SPU) constructed its first alternative drainage and street design project to examine more ecological options for streets in need of new infrastructure. The 2nd Avenue NW project redesigned a 660-foot paved street to absorb runoff from the street and homes. The redesigned street replaced curbs, sidewalks, and gutters with swales of native vegetation, structural grass lattices for street-side parking, and traditional drainage infrastructure.

The result? In the first three years, the improvements reduced 100 percent of dry-weather flow and 98 percent of wet-weather flow from the catchment basin. The new landscaping also helps slow traffic and creates a safer environment for bicyclists and pedestrians.

Today, the walkability and garden-like environment on the street creates a sense of place that engages the care, pride, and community of local residents. Of the 100-plus trees and 1100 shrubs planted, almost 100 percent have survived due to the residents' maintenance efforts. The project has also created a local awareness among residents of their place in the larger watershed. In addition, students and design professionals visit the street for education purposes. As SPU notes, SEA Streets evokes "stewardship by design."

The project cost $850,000 due to extensive consultation in designing the pilot and communicating with residents. SPU estimates that future projects will cost less than traditional street improvements.

and approved by OEPA, the Euclid Creek ordinances were never completed.

However, after NOACA's ordinances were finalized, the City of Cleveland promulgated Chapter 3116 (see above) instead. While this ordinance appears at first to satisfy the MS4 permit requirement that cities issue policies on stormwater best practices, it is more limited in scope. Also, it's difficult for developers to implement and officials to enforce. For example, this construction- and post-construction-runoff ordinance covers only MS4 areas and does not provide the guidance, best management practice detail, or enforcement capabilities of NOACA's ordinances. Also, Chapter 3116 is an ordinance by reference; for the meat of the regulatory language, the ordinance only refers to the MS4 permit. The permit's language translates poorly into building and development codes, thereby adding to the difficulty of using it.[29]

From the informal dialogues among the various departments, the group appears to agree on two points: first, that additional policies are necessary to both comply with the MS4 permit and to attain local best practice; and second, that a stormwater policy should apply to the entire city for both ease of implementation and fairness.

The crucial next step is to form a Stormwater Management Steering Committee with the authority to review the SWMP, determine if NOACA's ordinances should be adopted, and issue additional stormwater policies. At the time of this report, the Law Department had been in conversation with the Mayor's office and expected that a Steering Committee would soon be established. From speaking with various parties who have been involved in these stormwater conversations, RMI has a sense that positive, comprehensive policies will likely be enacted by the current administration.

Financial Incentives Action

As noted previously, there is no fee directly related to stormwater impact in northeast Ohio. Funding for the CSO mitigation project will come entirely from increased water user fees, which are based on water usage and are unrelated to stormwater impact. This presents an unfair system whereby land users with vast impermeable spaces contribute little or nothing toward the CSO mitigation project.

NEORSD is actively pursuing regional stormwater management authority, which would entail collecting fees for impermeability, as well as providing stormwater management services. The total revenue from rate charges would not change. Instead, it would be charged more equitably according to types of land uses. While this idea is new to Cleveland, it is by no means uncharted territory. According to Green City Blue Lake, an online community workspace hosted by EcoCity Cleveland, there are currently some 230 stormwater agencies in the country, most of which charge a stormwater fee based on impermeability.[30]

Gaining this authority will require a change to the court order that established NEORSD, which, in turn, will require the approval of NEORSD's sixty member communities. The process will likely require two years, beginning with a marketing and education campaign in member communities to further understanding and collaboration. More information can be found in NEORSD's letter of support (p. 66).
Following RMI's workshop, a group of lawyers, watershed-related organizations, staff of CPC, NEORSD, and Metroparks, and others began meeting to discuss the creation of a Self-Funded Watershed Management Organization (SFWMO). If established, the SFWMO would provide a source of local funding for important federal watershed restoration grants that require a local match. It would also serve as a stormwater and watershed manage-

28. The "Cleveland Stormwater Report 2003" is available on the main page of the Division of Water Pollution Control's website: www.clevelandwpc.com.

29. Houser, Todd. Personal communication: 17 May 2006.

30. Green City Blue Lake. "Paying for Stormwater." 15 May 2006. Available online at: http://www.gcbl.org/water/water-issues/paying-for-stormwater.

Debris and oil often seen along the Cuyahoga could be reduced by LID technologies.

ment organization in areas of Northeast Ohio that are not within NEORSD's jurisdiction.

As of May 2006, the American Heritage Rivers Initiative, led by Jim White, is facilitating monthly meetings with a growing group of partners to discuss needs, governance structures, and revenue mechanisms of the SFWMO. Under one scenario, the organization could charge a stormwater fee and use the revenue to conduct watershed preservation and restoration projects. The organizing group has no legal authority, but is working with county and city officials and others to get to a point where the SFWMO may become a legal entity.

Small Solutions for a Big Problem?

Around the country, small-scale implementation of distributed stormwater technologies have proven cost-effective in decreasing runoff volumes and contamination levels, in addition to enhancing neighborhood aesthetics, local ecology, and property values. To capture these values, some land developers have favored gravel trails, bioswales, and native vegetation over conventional underground pipe systems; many cities have adopted ordinances to encourage the adoption of these technologies in redevelopment; and some utilities have redesigned streets to absorb runoff from roofs and streets (see Case Study 2, p. 26).

RMI wondered if Cleveland was taking full advantage of these innovations and decided to examine if these distributed solutions could be implemented at a large-enough scale to make a large-enough difference in the local watershed's hydrology. In particular, RMI commissioned E-Design Dynamics (EDD) to review the Doan Brook Watershed Study (DBWS). (See p. 80 for the executive summary from EDD's review. The entire EDD and DBWS reports are on the CD Appendix, "Reports" folder.)

RMI's goal in commissioning this study was not to fault existing analyses but rather to determine if the full range of innovative solutions had been fully considered. A study on the efficacy of LID in the Cleveland area—based on local impermeability, soil type, building type, and cost data—would help everyone in the building and stormwater-management sectors understand the extent to which they can rely on swales, retention tanks, and stormwater tunnels (a.k.a. interceptors).

RMI selected the DBWS for review because it is the most thorough watershed management plan completed to date in the Greater Cleveland area. It is also the only study in the region that compared centralized and decentralized solutions at the scale of the watershed.

Led by NEORSD in 2001, the report evaluated all of the impacts on Doan Brook's stream ecology and encompassed biotic, channel and floodplain, stormwater, and wastewater management plans. It was funded in part by the U.S. EPA and engaged the participation of a variety of local stakeholders, as well as the consultation of the Center for Watershed Protection and EcoCity Cleveland. Today, NEORSD is carrying out the wastewater and CSO recommendations, while the Doan Brook Watershed Partnership is implementing some of the other proposals.

The DBWS notes that,"a sustained effort to implement numerous small retrofit practices over a long period of time may have a significant cumulative impact on stormwater."[31] However, the report concludes that runoff reduction measures are not technically feasible, cost-effective, easily implemented, or reliable.

The central finding of EDD's review of DBWS stands in sharp contrast to this conclusion. It indicates that DBWS did not fully explore the effects of widespread implementation of LID and that, therefore, the DBWS cannot conclude whether centralized solutions, LID, or some mix of technologies would be most cost-effective. Furthermore, EDD recommends a definitive, scientific assessment of this question before final management decisions are made. In particular EDD suggests that the optimal mix of strategies be identified through the use of an independent cost-effectiveness and land-cover model.

There is no question that a management plan that incorporates LID requires a different management model and implementation strategy, both of which may require more work (e.g., working with landowners to redesign streets). However, the important question for Cleveland's leaders is whether the long-term benefits of LID outweigh the costs. Such an analysis would be particularly timely as NEORSD considers watershed-wide stormwater management strategies and becoming a stormwater agency, and as city officials decide on comprehensive stormwater management regulations and policies.

Crisis as Danger and Opportunity

Non-point source pollution endangers the health of water bodies across the country. To avert this crisis, the U.S. EPA has issued regulations that are aimed at

31. NEORSD. *Doan Brook Watershed Study Report*, 2001, p. 5-26.

32. See the CD Appendix, "Stormwater" folder, "PhiladelphiaCH2M-HillStudy.pdf" for more comprehensive data.

Case Study 3: LID Effectively Reduce CSOs[32]

CH2M Hill studied a 28-acre area in Philadelphia to analyze the efficacy of LID (green roofs, bioretention cells, pervious pavement, and impervious pavement replacement) in reducing CSOs. The area, which is 65 percent impervious, created an average of twelve overflows per year, totaling about 2.3 million gallons. Land uses were primarily residential, with a few big box stores, institutions, and parking lots. The housing and other infrastructure was about 75 years old.

In the study's model, each building and land use was allotted certain retrofitted features, (e.g., bioretention cells for roof leaders on front yards with slopes of 2 percent or less). The cumulative result of widely implemented LID was a reduction in annual runoff volume of 37 percent, reduction in the number of overflow events by 46 percent, and an increase of 38 percent in the threshold of rainfall needed to create an overflow event. While no cost data were provided for this study, it is striking that these technologies had the potential to reduce overflow events by 46 percent—almost as much as the reduction promised by the planned infrastructure project in Doan Brook.

Downtown Cleveland seen from a nook along the river.

the symptoms of that danger: CSO overflows. Under this strategy, sewer districts like NEORSD comply with their CSO permits by eliminating almost all CSOs within as short a time as possible (e.g., twenty years) for as little cost as possible. Hamstrung by this framework of expectations and threatened by fines in the thousands per day if they fail to meet these deadlines, NEORSD is in a challenging position. Understandably, it is relying on centralized solutions that it can control. In conversation with staff at NEORSD, we've heard their frustration at being cornered into interceptor-based solutions that they know will satisfy the CSO permits but will not, in the end, solve the problem.

Yet, it is also within cities' grasp to turn this crisis into an opportunity, one that can reshape the form and function of a city. An urban-design model[33] of a 35-block area in Portland, Ore. found that under pre-development conditions, 30 percent of precipitation in the area became runoff, 20 percent evapotranspired, and 50 percent recharged the groundwater. Under 2004 urban conditions, 88 percent of precipitation became runoff, 13 percent evapotranspired, and no groundwater was recharged. Ironically for a rain-rich region, all of the water used on site was piped in; 90 percent of it left as wastewater.

Responding to these compelling numbers, designs for the redevelopment of the area include rainwater collection tanks on roofs, curbs that direct street runoff into street-side bioswales, underground tanks that gather overflow from bioswales, and a small runoff treatment system that returns collected rainwater to the area for irrigation and plumbing. Models show that rainwater harvesting for the area would reduce potable water consumption by 62 percent, which, when combined with incremental implementation of an area-wide stormwater treatment system, would reduce the costs of using and treating water by 89 percent. Though improvements to buildings and sites would cost $17.8 million, they would pay back the investment in five years through avoided water-utility costs. From then on, the avoided costs would all be booked as savings. Over 45 years, the site would accrue $22.4 million dollars in savings. Currently, four blocks in downtown Portland are being redeveloped according to this design as an experiment.

Unfortunately, few cities have seriously examined how small-scale solutions—e.g., redesigning streets, redesigning curbs, and upgrading plumbing stocks—can be retrofitted into existing communities to reduce the stormwater problem. Therefore, it would be risky for NEORSD, which is not yet even a stormwater agency, to disrupt streets to install LIDs. Accordingly, NEORSD's current approach relies on building interceptors as the primary solution, and regards widespread LID as infeasible to implement in a reasonable timeframe. For instance in the Doan Brook Watershed, the Heights/Hilltop Interceptor, a sanitary sewer line that is being completed, removes enough

33. Mithun. "Lloyd Crossing: Sustainable Urban Design Plan & Catalyst." 1 Jul. 2004. Available online at: http://www.mithun.com/expertise/LloydSustainableDesignPlan.pdf.

sanitary waste to cut CSOs to Doan Brook by half. For the remaining half of the CSOs, the DBWS encourages the use of LIDs in the long-term, but ultimately recommends that NEORSD construct the Easterly Interceptors with enough capacity to accept the Doan Brook Watershed's CSOs.

But imagine this: NEORSD working in conjunction with the Department of Public Service (Division of Streets), the Department of Building and Housing, the Department of Economic Development, the Department of Parks, Recreation and Properties, and community development organizations to redesign the form and function of lawns, streets, and medians in existing neighborhoods. In areas undergoing redevelopment, such design changes may be relatively easy to incorporate into future plans. In neighborhoods with little or no development activity, these investments could improve property values, create jobs, and infuse the area with new hope and prospects.

This alternative approach would identify and commit to the optimum whole-system mix of technologies for each neighborhood. In many areas, existing interceptor construction would continue as a necessary retention and filtration system for large storms. In other areas, renovated streetscapes that absorb rainwater could reduce or even avoid the need for segments of interceptors. As a bonus, they would enhance community pride, create jobs, and engage neighborhoods in maintenance and care.

The participation of multiple departments and community groups would enable projects to leverage not only NEORSD's funds, but also community development grants, regular funding for road repairs, and housing development funds. This approach transforms the stormwater problem into an economic opportunity.

The hydrologic cycle is a complex system and involves one of the most fundamental resources to society. Resolving the current misuse of rainwater must therefore be a multi-agency and multi-jurisdictional task, with solutions that address the fundamental purposes of rainwater. Adopting numerous small-scale solutions and depending upon multiple partners can be risky and time-consuming, and requires an entirely different framework from that of centralized solutions. Also, it requires additional negotiations with the EPA for a court order, which is still to be decided.

These recommendations are not easy to implement. However, the potential benefits merit not only the study EDD suggests, but also collaboration among various departments to determine how to best resolve, from a whole-system perspective, the crisis of stormwater.

A little boy points to a dollar bill on a country road. "Grandpa!" he says. "There's a dollar on the ground!"

"No, that can't be true," replies the grandpa, a retired economist. "If there were a dollar on the ground, someone would already have picked it up."

Examples of Low Impact Development Technologies

Green Roofs

Green roofs, or vegetated roofs, are waterproofed roofs, covered by drainage systems, soil, and plants. Studies have shown that green roofs absorb 60–80 percent of the rainfall, and that 40–50 percent of urban surfaces are rooftops.[34] As an example of the effect of these figures, if 80 percent of the rooftops in Washington DC were covered by green roofs, the Capitol's stormwater discharges would be halved.[35]

In addition to absorbing stormwater, green roofs provide natural habitat and mitigate the urban heat island effect, which saves building cooling energy. Of the sun's rays, green roofs reflect 27 percent, absorb 60 percent, and transmit only 13 percent into the soil, while also evapotranspiring to actively cool the roof.[36] Chicago City Hall's green roof measured 100°F on the hottest day in the summer of 2001, 65°F cooler than the blacktop roof next door. Indeed, roof gardens have been demonstrated to reduced interior temperatures by as much as 6–8°F.[38] For every 1°F drop in cooling needs, as much as 8 percent less energy is needed in air conditioning.[39] Cooling bills are also lowered since mechanical equipment working in 95°F conditions (standard operating temperature) requires much less energy and maintenance than those working at 165°F. These same characteristics protect the roof from changes in temperature (by as much as 94 percent), UV rays, and weather; thus, green roofs last two to three times as long as standard asphalt roofs.

Green roofs reintegrate nature into the urban landscape in the form of gardens and views from surrounding, taller buildings. The Gap Headquarters in California has a roof garden planted with local vegetation, the colors of which change with the seasons. A green roof in Washington DC was planted by at-risk youth from Covenant House. The Fairmount Hotel in Vancouver grows herbs, flowers, and vegetables on its roof, saving the hotel's restaurant about $30,000 a year.

Cost: A conventional roof costs $4–10 per square foot, depending on its quality. A typical 4-inch thick green roof costs about $10–14 per square foot in addition to the waterproofing layer. However, this additional cost is paid for during the life of a green roof, because the owner avoids portions of energy, stormwater, and roof replacement costs.

Three major green-roofing companies in the country are located in the area: Soprema in Wadsworth, Garland Company in Cleveland, and W.P. Hickman Systems, Inc. in Solon. Therefore, green-roof renovations of current industrial facilities or redevelopment of new areas along the Cuyahoga are prime business opportunities for area industries.

Table 5: Distributed Stormwater Technology Costs[37]

	Green Roofs	Porous Pavement	Bioinfiltration/ Bioswales	Stormwater Wetlands	Rain Barrel/ Cistern
Low End	$13/gallon or $10/ft^2	$2/ft^2	$10/ft^2	$83,500 / 10 acres	$0.50/gallon
High End	$22/gallon or $14/ft^2	$3/ft^2	$40/ft^2	$289,000 / 10 acres	$2/gallon

This green roof covers the structured parking lot at the Great Lakes Science Center in downtown Cleveland.

34. Dunnett and Kingsbury. Planting Green Roofs and Living Walls. Portland, OR: Timber Press, 2004.

35. Turner, Laura. 2004. "Washington, D.C. Joins Trend of Greenroofs for a Better Environment" in Cities Weekly 27(26).

36. Eumorfopoulou and Aravantinos. 1998. "The Contribution of a Planted Roof to the Thermal Protection of Buildings in Greece" in Energy & Buildings 27(1): 29-36.

37. Stormwater Manager's Resource Center. Available online at: www.stormwatercenter.net.

38. Peck, et al. 1999. "Greenbacks from Greenroofs: Forging a New Industry in Canada." Toronto: Canada Mortgage and Housing Corp.

39. Dunnett and Kingsbury, 2004.

Porous Pavement

Porous pavement allows stormwater to permeate paved areas that are normally impervious. Rainwater is stored in gravel sub-pavement reservoirs before entering the subsoil. Porous pavement types include asphalt and concrete, which have coarse grains to increase perviousness, and interlocking pavers with grass growing in grid spaces. These innovative pavements absorb a storm's first flush, which is the time in which most pollutants are washed off conventional paving into waterways. As a result, they remove 95 percent of suspended solids, 65 percent of phosphorous, 82 percent of nitrogen, and 98–99 percent of metals.[40] Porous pavement also allows rain to recharge groundwater.

Heavy traffic will compress porous pavement, thereby decreasing the permeability of the soil in grass pavers or of the grains in asphalt and concrete. Thus, this new paving should only be applied on infrequently used surfaces. Also, snowplow blades may catch on the edges of grass pavers and damage them. And porous pavement cannot be sanded or salted, as the former will clog the holes and the latter will directly pollute the soil and groundwater below. Therefore, this pavement must be used where snow and ice can melt naturally. Furthermore, porous pavement requires vacuum sweeping in order to clear the air pockets of debris.

Cost: At $2–3 per square foot, porous pavement can be four-to-six times more expensive than its conventional cousin, which results in an additional cost of $45,000 to $100,000 per acre. Though these appear to be significant costs, porous pavement avoids stormwater infrastructure costs and can actually save a project money. As discussed in Case Study 1 on p. 25, Ford Motor Company installed 16 acres of porous pavement as part of its BMP stormwater renovation, which cost less than one-third of conventional technologies.

Bioinfiltration / Bioswales

These are used as islands in parking lots or on residential streets. They slow the fall of rain and capture it with their biomass. They keep rain for a considerable time on the surface and, with their roots, release moisture to the subsoil and groundwater or through evapotranspiration.

Bioinfiltration and bioswales absorb and filter out the first flush of pollution during storm events. The drainage area, usually no more than 5 acres, is graded to channel runoff into these pockets of landscaping, about 5–10 percent the size of their drainage area. Curbs are completely or partially eliminated to help direct the water.

Stormwater enters the planted area, which is graded to pond runoff to a depth of 6 inches. Once the organic materials and soil reach saturation, rainwater seeps into the groundwater or into the gravel infiltration trenches. If it goes into the trenches, the water then exfiltrates into surrounding subsoils, or into the standard stormwater drainage system once the trench is full. One study shows that bioswales remove 81 percent of suspended solids, 29 percent of phosphorous, 49 percent of nitrogen, 38 percent of nitrogen oxides, and 51–71 percent of metals.[41]

40. Stormwater Manager's Resource Center. "Factsheet on Porous Pavement." Available online at: www.stormwater-center.net.

41. Stormwater Manager's Resource Center. "Factsheet on Bioretention." Available online at: www.stormwatercenter.net.

A porous pavement trail at Lakewood Park absorbs water that otherwise would run off.

42. One equation finds that the cost of construction, design and permitting is $C = 7.30V^{0.99}$, where V is the water treated in cubic feet. See Brown and Schueler, "The Economics of Stormwater BMPs in the Mid-Atlantic Region." Ellicott City, MD: Center for Watershed Protection, 1997.

43. Evans, T. "Wetlands and Land Development" in Properties Management, Inc. Jun. 2000.

44. See Brown and Schueler, 1997. They estimate the design, permitting and construction cost of wet ponds through the equation $C = 30.6V^{0.705}$, where V is the wetland volume in cubic feet needed to control a 10-year storm. By these calculations, a one-acre facility costs $71,375, a 10-acre facility costs $361,250, and a 100-acre facility costs $1,837,500.

Cost: Constructing bioswales in place of building a concrete surface is an additional cost. However, where there are landscaping and runoff regulations, bioswales can be implemented in lieu of landscaping requirements and also decrease runoff concerns with little to no additional cost.[42]

Stormwater Wetlands

Stormwater wetlands are constructed mainly to treat and store stormwater runoff. They are also used to control floods, alleviate channel erosion, and remove pollutants. Scores of studies have demonstrated the pollutant-removal ability of wetlands, which remove nitrogen and bacteria more effectively than any other system. Like many other nature-based stormwater treatment solutions, these wetlands offer additional benefits. They provide wildlife habitat, recreational and open space, and educational and aesthetic characteristics. However, though they simulate the function of a wetland, they are less biologically diverse. As a result they do not generally qualify as wetland mitigation for those seeking credit for having eliminated wetlands elsewhere.

In a typical wetland, the runoff flows into a sediment forebay (a shallow pool) that captures coarse particles. It then falls over a weir and enters a micro-pool that may be a pond with an island or a wetland. Finally, it leaves the wetland through an outfall pipe. The site is graded to capture enough runoff for water quality assurance, channel protection, overbank flood control, or extreme flood control.

There are five major variations of the stormwater wetland, which differ first in the proportion of the wetland in deep pool, high marsh, or low marsh, and second in the length of time water is detained above ground. A deeper pond or wetland requires less surface area. A wetland that runs with a hill's fall line retains water longer than an equal-sized one that crosses the fall line. Wetlands in colder areas receive fewer benefits because the wetlands sometimes freeze over, thereby capturing less runoff and fewer pollutants.

Interstate Commerce Park in Streetsboro, Ohio is a 200-acre mixed-use development that includes a 56-acre open-space amenity that "preserved 20 acres of existing wetlands and a stream corridor, enlarged existing wetlands by 12 acres, provided regional stormwater management, and donated 22 acres for a new city park."[43] The inclusion of these wetland plans was crucial in gaining the City Council's approval for the project.

Cost: Stormwater wetlands are usually 25 percent more expensive than dry retention ponds.[44] Maintenance costs range from 3–5 percent of the construction costs, and stormwater wetlands typically last more than 20 years. According to the Navy and Marine Corps, construction and maintenance costs are significantly lower than those of conventional solutions.

Scranton Peninsula from Tower City with widespread impermeable surfaces typical of the Cuyahoga valley. (Photo courtesy of Forest City Enterprises.)

Aquatic Habitat Restoration

The mouth of Kingsbury Run as it empties into the Cuyahoga River provides a hint of what the area could become.

While the Cuyahoga River water quality has greatly improved over the past several decades, riparian (streamside) habitat is one aspect of the ship channel that has seen virtually no improvement. Extensive bulkheading forces fish to swim almost six miles under low-oxygen conditions, braving ships and bow thrusters, as well as the occasional combined sewer overflow (CSO) event—all without places to rest, hunt for prey, or hide from predators, ships, and CSOs. Of particular concern in the channel are the sharp declines of larval fish populations of the endemic fish species that migrate from the Cuyahoga Valley National Park to Lake Erie and back.[45] Although changing the dredging regime and mitigating CSO events would enhance water quality, a high-quality fish population requires sufficient levels of aquatic habitat located in the right places.

Given the importance of enhancing aquatic habitat to the overall biological health of the Cuyahoga River, RMI engaged riverside landowners in the idea of riverside restoration. In this effort, RMI partnered closely with the Cuyahoga River Remedial Action Plan (RAP). RAP is a non-profit, community-based organization dedicated to restoring the environmental quality of the Cuyahoga River through remediation of existing problems, prevention of further degradation, and restoration of habitat and riparian corridors. RAP has been working on ideas for riparian habitat restoration in the channel for some time now, and supplied the technical details for restoration options, as well as a leadership presence in the community. RMI also worked with CPC, as the topic of river restoration is a central component of the CVI.

As the following details describe, RMI, RAP, and CPC worked to promote pilot projects for each of four restoration options: pocket wetlands, green bulkheads, fish shelves, and tributary restoration. These options serve a number of functions, including: aquatic and riparian habitat provision, job creation through the promulgation of new technologies, aesthetic enhancement, property value augmentation, and ecosystem services like urban runoff, erosion and sedimentation mitigation, and air and water filtration.

In August 2005, RMI met with ten landowners along the ship channel to discuss various CVI ideas. Discussions with landowners ranging from Inland Waters to Mittal Steel showed that there was significant positive interest in ecological restoration and beautification. Most indicated that civic pride motivated them to support the ideas. Many landowners had small parcels on their property that were

45. Mistch, p. 9.

underutilized, already heavily vegetated, and which could be given to the city by lease, easement, or sale. These meetings encouraged RMI to hold a workshop with local leaders and business owners to turn vague ideas into specific actions.

Shortly before the Revegetation Workshop in November 2005, Lake Carriers' Association (LCA) organized a tour of the ship channel to determine optimal sites for restoration. Representatives of Mittal Steel, LCA, RMI, RAP, and CPC toured aboard a 600-foot Oglebay Norton iron-ore ship. This was a critical step in relationship building between the shipping and steel industries and the agencies that seek river restoration. LCA's main intent was to ensure that agency representatives understood the size of ships plying the channel, how much turbulence they created in the river, and how difficult it would be for restoration sites to survive under such conditions. However, the eight-hour tour gave both sides a chance to understand each other on a more personal level. Detailed discussions of RAP's restoration designs mixed with civic duty, and the desire to beautify and restore the river resulted in genuine progress. By the following day's discussion over maps and photos, representatives of LCA and Oglebay Norton took a leadership role in suggesting specific potential restoration sites. This group selected a dozen sites along the ship channel that would be feasible for restoration from a navigation perspective (see map on facing page).

The following week RMI organized a workshop with landowners, government agencies, local business associations, design firms, and non-profit organizations to discuss restoration locations and brownfield liability issues.

Habitat Restoration Workshop

As all water in the Cuyahoga River watershed drains into the ship channel before it enters Lake Erie, it represents a bottleneck for water quality and aquatic-habitat viability. Today, the bulkheads that stabilize the riverbanks preclude almost all riparian and aquatic habitats, making especially difficult the survival of larval and native fish in the river. Bulkhead replacement is needed along much of the channel; yet, at $3750 per linear foot, replacement would offer no new habitat. This workshop focused on how Cleveland could replace bulkheads that would provide both structural support and aquatic habitat in areas not used for shipping.

Workshop Agenda

Linda Shi (RMI) and Jim White (RAP) presented on current water quality and habitat conditions of the Cuyahoga River ship channel, the costs and conditions of the current bulkheading system, and alternative, habitat-restoring shoreline options, including green bulkheads, pocket wetlands, fish shelves, and tributary restoration. Then, since brownfield sites are pervasive in the Cuyahoga Valley, Tracey Nichols (County Brownfields Redevelopment Division, BRD) presented

Paul Alsenas (CPC Director), discusses ideas for the valley with Linda Shi (RMI).

Potential pocket wetland restoration site by Lock 44, where Canal Basin Park will one day mark the northern end of the Ohio Canal.

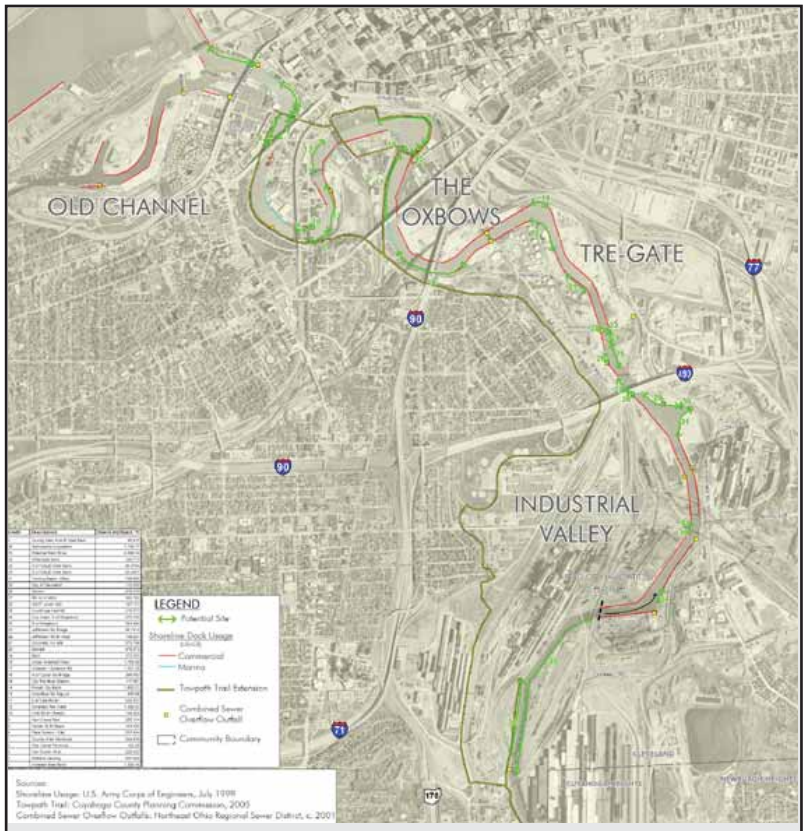
on the ownership, liability, risks and costs of restoring a site with potential contamination. She noted that owners could transfer properties to a non-profit entity, which would be able to assess contamination and retain liability, and that the BRD could assist with site assessment and work with landowners to do clean up and find matching funds.

Discussion and Results

The attendees were split into two groups: a Design Group that determined the three best sites for riparian restoration in the ship channel, and a Policy Group that discussed ownership and liability issues.

As criteria for selection, the Design Group used RAP's eleven criteria for green bulkhead sites and also recommended that sites be publicly accessible, benefit from an aesthetic upgrade, and not be considered if they have docking potential or are on the outside curve of the river. The Design Group chose the following: the site at the north end of the Ohio and Erie Canal (City-owned), the boat slip by the fire station on Scranton Peninsula (City-owned), and a parcel by the I-490 bridge on the west bank (Mittal-owned).

The Policy Group found the potential advantages (e.g., tax deduction, mitigation credits, public relations, cost savings, property value increase, etc.) and risks (e.g., remaining/future land-use limitations, brownfield liability, public access, etc.) to landowners using ecological bulkhead replacements. The group also listed



This map marks in green potential restoration sites identified by those who went on a cargo-ship tour of the Cuyahoga River ship channel (larger version available on the CD appendix, "Habitat Restoration" folder.

the organizations (Port Authority, City, non-governmental organizations, landowners through easements, or public-private partnership, etc.) that could retain title to the property. The workshop helped create a sense of goodwill between sectors and identified the sites and process through which RMI, RAP, and others would pursue pilot restoration projects.

Participants included members from: City Planning Commission, City Depart-

Much of the ship channel needs bulkhead replacement. This site could be restored as a pocket wetland.

Some sites where the bulkhead has collapsed into the ship channel can present hazards to navigation.

46. Cuyahoga River RAP. "Cuyahoga River Bulkhead Habitats." 2005, p. 1.

ment of Economic Development, City Sustainability Programs Manager, Cleveland-Cuyahoga County Port Authority, CPC, Cuyahoga County Department of Development, RAP, NEORSD, OEPA, U.S. Army Corps of Engineers, Flats Oxbow Association, LCA, Oglebay Norton, Interlake Steamship, Ohio and Erie Canalway Association, Cleveland Metroparks, Entrepreneurs for Sustainability, Schmidt Copeland Parker Stevens, Biohabitats, Parsons Brinckerhoff, and Valley landowners.

Restoration Options & Progress

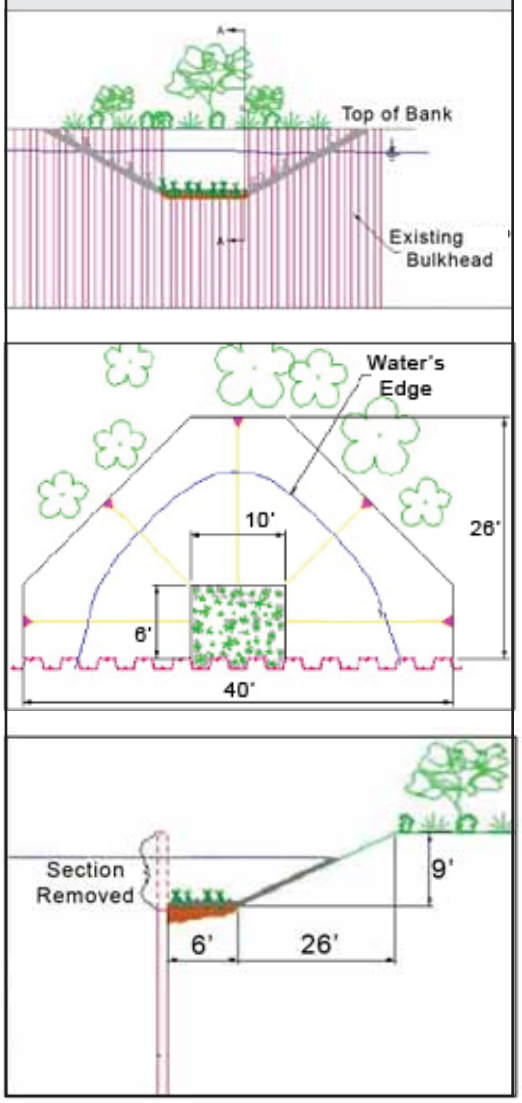
Pocket Wetlands – Jim White (RAP) has been exploring ways to create aquatic habitat in an improbable place: a steel-encased ship channel. One of his design ideas is a "pocket wetland" (see Figures 1a-c), which removes a portion of the bulkheading, scoops out the soil behind the bulkhead, grades the slopes, and replants the site with native wetland vegetation. Such sites would have to be located away from the turbulence generated by ships' bow thrusters. These pocket wetlands require about fifty feet of frontage, a thirty-to-forty-foot setback, and six feet of depth. Specific designs have not yet been rendered, but may include a small floating boom to keep out debris. The cost is estimated at $20,000–$40,000 per pocket. As with all of the following designs, pilot projects and monitoring is necessary prior to widespread implementation.

The river tour identified a dozen restoration sites, which the revegetation workshop then pared down to three top priority sites for piloting pocket wetlands. Subsequently, because two of the sites were publicly owned and would require a lengthy council-approval process, RMI pursued the parcel owned by Mittal Steel.

Mittal has signed an MOU with the City Planning Commission, promising to give them the 0.75-acre property as part of the Towpath Trail. Both Mittal and the City Planning Commission believe that an innovative restoration of the site would be an added amenity, and they have encouraged the process to continue. Nevertheless, there are issues that the City must resolve first—actually conducting the transfer of property, and amending Chapter 573 of the Harbor Code to permit such new shoreline systems as pocket wetlands and green bulkheads. We are confident that this will move forward, and RAP will continue to champion the project (see p. 72).

Green Bulkheads – RAP has been working on a green bulkhead prototype (a.k.a. high-performance shoreline edge system). It is a conceptual prototype that could functionally replace steel sheet pile bulkheads while meeting structural and navigation requirements, and simultaneously providing habitat for fish and

Figures 1a-c: Conceptual Designs of a Pocket Wetland[46]



potentially earning wetland mitigation credits. The prototype may be a series of stepped planter boxes rising from steel sheet pile bulkheads.

RAP has secured $500,000 of the $2 million federal funding request to develop green bulkheads. With this funding, RAP is proceeding with the design process. The next step is to assemble a technical committee of engineers, regulatory professionals, hydrologists, biologists, and ecologists who will together design the prototype green bulkheads. The patent will be held in the public domain. These designs will be constructed with the federal funding and physically tested in the Cuyahoga River. RAP hopes to have the first pilots in the ground before the winter of 2006.

If successful, green bulkheads could produce a new industry in Cleveland that generates the systems for ship channels in similar rivers around the Great Lakes. Because the time required to design green bulkheads is longer than the term of RMI's Regeneration Project, RMI could not establish firm commitments between landowners and RAP. Nevertheless, RMI helped accelerate progress through networking—namely RMI's meetings with landowners and the workshop on habitat restoration. See p. 70 for RAP's letter of support stating that the organization will continue to work on green bulkheads.

Fish Shelves – The innovative idea of a fish shelf was first piloted on the Black River in Lorain County, just west of Cleveland. In 2002, the Lorain Port Authority created a 400-foot-long horizontal steel pier near the mouth of the 28-foot deep, channelized river. Under the mitigation requirements of Section 401 of the Clean Water Act, the Port and an OEPA representative to the Black River RAP designed a fish shelf unique in the Great Lakes area. As can be seen in Figure 2 (p. 40), the bank slopes down to a 25-foot-wide shelf located 6–8 feet below the waterline. The outer edge of the shelf then drops off steeply to the bottom of the river, and is supported by a mound of boulders in riprap. The shelf is shallow enough to gather sunlight and vegetation; the rock piles provide habitat at lower depths. The fish shelf has been astonishingly successful in attracting fish, especially bass. Indeed, the shelf was still under construction when the fishermen on the river were already shouting to the workers, "What are you doing? The fishing here is great now!" The estimated cost was about $150–$250 per linear foot.

Two sites were identified in the ship channel as appropriate for fish shelf construction—Kingsbury Run and the boat slip on Scranton Peninsula. As seen under "Tributary Restoration" below, CPC is seeking funding to acquire Kingsbury Run's mouth. Given RMI's limited time on the project, it prioritized pocket wetlands and green bulkheads for implementation. The concept and locations for fish shelves remain on the list of RAP's future work.

It does not require much imagination to envision a restored Kingsbury Run that serves as a beautiful asset.

This boat slip by the Cleveland Fire Station could be restored with a fish shelf.

47. Lorain Port Authority, URS Corporation; published in *The Plain Dealer* with graphics by James Owen.

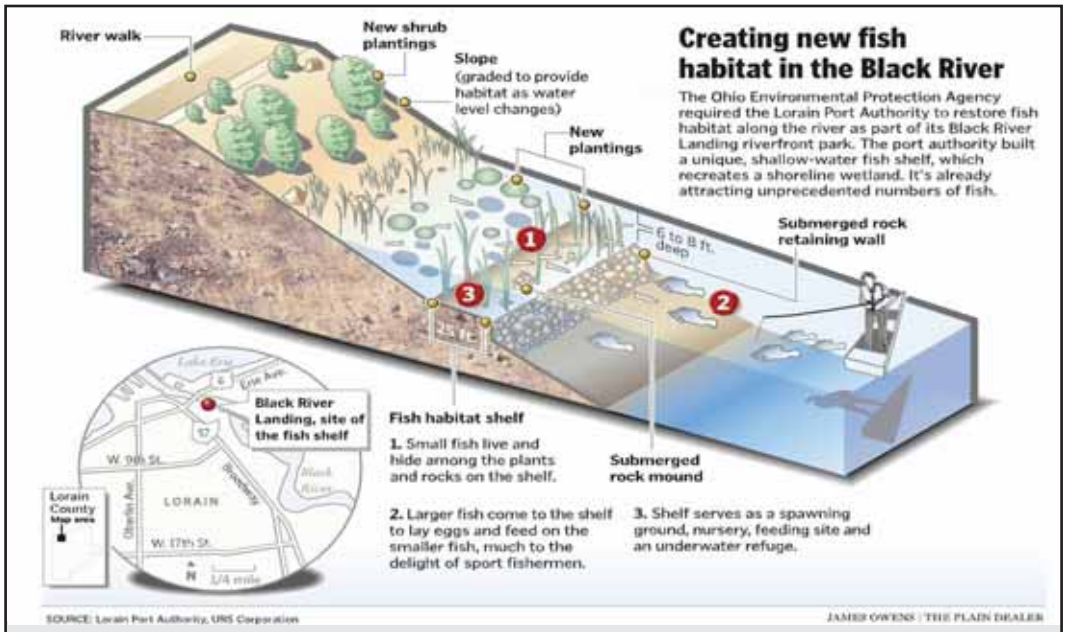


Figure 2: Black River Fish Shelf[47]

Tributary Restoration – Streams, like wetlands, were once seen as dispensable and useless. As development spread, communities buried their waterways in pipes and built roads, homes, and factories on top. Only recently have scientists and communities come to realize that streams are functionally important and economically valuable. Along the ship channel, there are two tributaries to the Cuyahoga River: Kingsbury Run and Walworth Run.

Kingsbury Run, which drains land from Shaker Heights to the Cuyahoga River, is entirely culverted except for the last few hundred feet, where the inlet is still physically intact. Walworth Run is culverted up until it discharges into the Cuyahoga River. Both are combined sewer outfalls, though the work of the sewer district will decrease the number of overflow events in the future.

Despite the alteration from their natural state, it is not difficult to imagine these places as beautiful parks, wetlands, and catalysts of restoration further upstream. Although the Kingsbury Run inlet includes a few small industrial features and its surface contains debris and petroleum slicks, its banks retain substantial vegetation and can easily be envisioned as an oasis of ecological restoration in close proximity to heavy industry. Nearby community development corporations have already developed plans to create a greenway that would restore the higher reaches of Kingsbury Run in their neighborhoods, though currently they do not have the funds necessary for such a project.

CPC submitted an appropriations application to the U.S. Senate via Ohio Senator Mike DeWine for funds to purchase and restore both tributaries. As the budgetary hearings are late in 2006, this project awaits Congressional decision. See the CD Appendix, "Habitat Restoration" folder for the application.

Brownfield Remediation

Brownfields are properties that contain or potentially contain chemical, petroleum, or other hazardous pollutants that complicate redevelopment, expansion, or reuse.[48] They are common in old, industrial cities like Cleveland. As the prevalence of brownfields can obstruct redevelopment, their remediation is crucial to rehabilitating urban properties for higher or new uses, and overall economic development.

In Cleveland, steel, oil drilling and refining, and other industries date back to the 1800s, long before environmental policies arose. Tracey Nichols, with the County Brownfields Redevelopment Division (BRD), once noted that at every location along the Cuyahoga River ship channel, some level of contamination can be found. For instance, in one 700-acre area along the ship channel there are currently forty-four RCRA, one TSD, one CERCLA, twenty UST, and twenty-seven LUST known brownfield sites.[49]

Because the City of Cleveland and Cuyahoga County have demonstrated the capacity for innovative brownfield redevelopment, RMI confined its brownfield cleanup efforts to sites along the ship channel that are targets for habitat restoration. One of the fundamental characteristics of the habitat restoration designs discussed in the previous section is the reintegration of the land with the river. However, the removal of barriers like bulkheads may inadvertently allow soil contaminants to enter the waterway. Thus, riverbank sites that are being restored must first be assessed for contaminants and then, if necessary, remediated (see "Remediation Process" box, p. 42).

Over the past year, RMI has worked with CBP and RAP to educate landowners about the need for brownfield assessments and the risks and opportunities therein. CBP has been a steadfast partner that is capable of supporting site assessments once a property is secured for restoration.

RMI had hoped to catalyze the remediation of a property in the Cuyahoga ship channel area. However, as we dug into the issue, it became evident that remediation is generally not cost-effective without a change of ownership or conversion to higher-value uses. Because the city and the county intend to keep heavy industry along the portion of the ship channel where RMI focused its attention, and because most of the ship channel's industrial operators have been there for many years and plan to remain, there appears to be little opportunity to shift to higher value uses and, therefore, little opportunity to remediate in this section of the ship channel without substantial government intervention.

Fortunately, with its history of brownfield innovation, Cleveland has found a way through this dilemma: an Industrial Land Bank that will recycle properties by remediating sites using federal grants and recruiting new industrial end-users.

This old industrial building now houses tanks of chemicals along the Cuyahoga River ship channel.

48. EPA Office of Brownfields Cleanup and Redevelopment. Available online at: http://www.epa.gov/swerosps/bf/index.html, last updated on April 3, 2006.

49. RCRA: Resource Conservation and Reclamation Act, governs the transport, storage, treatment, and disposal of hazardous waste; TSD: Transport, Storage and Disposal sites for hazardous waste; CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act, often known as Superfund, though this site is not on the National Priority List; UST – underground storage tank – soil samples must still test below such tanks to make sure they're not leaking; LUST: Leaking Underground Storage Tank, known to be leaking, and may be very expensive to clean up if contamination has reached groundwater.

The Brownfield Remediation Process

The process of remediation begins with two levels of site assessment that determine extent of contamination. Phase I involves a literature review to detail the environmental history of the site, which helps identify possible areas of contamination (a.k.a."areas of concern"), such as locations of old fuel-tanks, leaks, and spills. Then, if areas of concern are identified, a Phase II site assessment analyzes soil samples. At least three samples must be taken for each contaminant at each area of concern.

If significant contamination is found, then site assessment is followed by cleanup (a.k.a. remediation), the standards for which vary depending on the eventual use for the land. For example, residential and park standards require clean soil to a depth of twelve inches, while industrial standards call for 6–8 inches. The cost of remediation depends on the technology, the level of contamination, and the speediness of the solution. According to one study, there are three cost levels of cleanup technologies:

- Low cost – Natural attenuation, enhanced bioremediation, phytoremediation, and capping;
- Medium cost – Soil vapor extraction, bioventing, enhanced bioremediation, and encapsulation; and
- High cost – Landfarming, composting, on-site treatment, and off-site disposal.

Actual remediation costs can be surprisingly different from the costs one might estimate based on site appearance or history. Ms. Nichols notes that a site that appears exceedingly dirty can actually be relatively uncontaminated, while remediation of an old Wendy's restaurant in Cleveland will cost $3 million because it was once a gas station with leaky underground fuel tanks.

Though it's not required by federal law, a city interested in sustainable solutions could add a final site-healing step: green development (that is, ensuring that redevelopment uses resources efficiently and ensures healthful conditions for the environment and future site occupants). Sites developed with these criteria will remain a community asset instead of deteriorating into a liability as they once did. For information concerning green building standards for recycled brownfield properties, see "Green Building for Industries," p. 46.

Brooke Furio with the City Department of Economic Development is in charge of creating the nationally recognized Bank.

It became clear to RMI that a long-term effort is required to catalyze the remediation of larger industrial properties and identify opportunities for land assembly and consolidation. While RMI's short-term project is not conducive to such an effort, the Industrial Land Bank is well positioned and moving aggressively in that direction.
RMI focused its attention instead on promoting remediation as part of the habitat restoration process.

In effect, bulkheads have prevented pollutants in the brownfields around the ship channel from migrating through the soil and into the Cuyahoga River. Without remediation, pocket wetlands that remove a portion of a bulkhead could actually exacerbate water quality issues by allowing pollutants to seep into the river. Thus, site assessment and remediation are crucial first steps in the restoration process.

RMI worked with BRD, which has done award-winning work in the Cleveland area and which was a vital partner in the habitat restoration project. The program has twenty-one projects in Cuyahoga County, many of which have been fully remediated, have end-users, and, they have added 516 jobs and hundreds of thousands of dollars to the property tax base. Since 2001, the program has secured about $800,000 from the U.S. EPA to help fund site assessment. For each accepted project, it can contribute up to $6,000 for Phase I site assessment, and $35,000 for Phase II assessment. Also, the staff works with landowners to help find public funding and other resources in the remediation process.

CBP is particularly interested in remediation of sites that will be set aside for open space or restored ecologically, in part because the EPA Brownfields Program values such projects. At RMI's Habitat Restoration Workshop in November (see p. 36), Ms. Nichols spoke to landowners and agencies about how brownfield liability issues impact restoration efforts, and how liability and costs should not cripple action because assistance is available.

After the workshop, RMI worked with BRD and RAP to submit applications for county site-assessment funds for two sites: the Mittal I-490 parcel and the Lock 44 site. While BRD was willing to provide the funds and manpower for the assessments, and had also lined up potential funding from the state Department of Development for actual remediation, property ownership issues derailed completion of this work in the time frame of RMI's involvement.

Remediation of one or more sites can take place only when the City Planning Commission agrees to collaborate on a pocket wetland restoration for the Mittal I-490 site, or when other sites for restoration become available. BRD has indicated a willingness to be a partner in the remediation process.

Filtration tanks remove the petroleum in the runoff from an old BP property along the ship channel.

Building the Economy along the Cuyahoga

Volumes have been written, millions spent, and many organizations created to strengthen the economy of Northeast Ohio. Many of those organizations employ brilliant people who are doing excellent work. The Regeneration Project was intended, in part, to complement their efforts by approaching economic development from, perhaps, a different perspective.

Most economic development focuses on increasing economic "throughput," that is, increasing the flow of goods, services, and capital through an economy. Success is measured by such indicators as housing starts, tons of product, and retail sales. Particular attention is paid to finding new external sources of revenue. These efforts are important and necessary, but they miss one important fact: Virtually every local economy leaks resources and revenues.

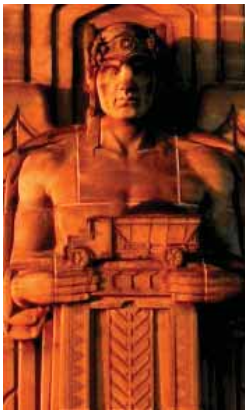
If we think of a local economy as a water bucket that is full when prosperous, we would notice that most economic development focuses on finding more hoses to fill the bucket—certainly well worth doing. But, less obvious is that the bucket is full of holes, that is, the inefficiencies that allow money to leak from the community.

The bucket is a simple metaphor; the concept shouldn't be taken to the extreme. In a modern economy, it is obviously absurd to think of plugging all the leaks, of making the locality entirely self-sufficient. The leaks are not wrong, instead they are wonderful opportunities for local creativity, innovation, and entrepreneurship. For example, any community spends many millions of dollars for electricity that is wasted through inefficient lighting, motors, roofing, windows, insulation, and many other factors. Worse, most of that wasted money is spent outside the community and results in economic leakage. The good news is that the measures required to improve efficiency create local businesses and jobs, reduce family and business costs, and are often less expensive on a unit basis that the electricity they are saving.

Though energy efficiency, as a discrete effort, is not within the scope of the Regeneration Project, RMI urges the leadership of the Cleveland metropolitan area to aggressively pursue this significant economic-development opportunity—one that doesn't depend on an upturn in the economy or decisions made by distant governments or companies. Low-risk, high-return investments in energy efficiency can be driven by local technical, financial, and political creativity. Described below, green industrial buildings are part of this project and energy efficiency is an important aspect of them.

Another form of economic leakage is industrial waste. Generally, waste creates significant costs and risks for the people who create it. Worse, when improperly disposed, it creates risks for the community. But, as Cleveland business people have clearly demonstrated in their involvement in Waste = Revenue, described below, this form of economic leakage also offers significant business opportunities. Smart business people in Cleveland are transforming waste from a liability into a working asset.

Resource productivity (of which energy efficiency is a subset) and waste-to-revenue efforts are powerful self-generated opportunities created where none seem to exist, opportunities that don't depend on new business coming to the community. For more information on these opportunities, explore RMI's book, *Natural Capitalism*, available free online at www.natcap.org.



Green Building for Industries

50. U.S. Green Building Council. "LEED Reference Guide for New Construction and Major Renovations, Version 2.1, 2nd Edition" May 2003, p.1.

Buildings have an enormous impact on the environment, through not only the construction process, but also ongoing resource consumption. Buildings consume about 40 percent of this country's total energy and 60 percent of its electricity, and account for 49 percent of its sulfur dioxide emissions, 35 percent of its carbon dioxide emissions, 25 percent of its nitrous oxide emissions, and 10 percent of its particulate emissions. They also use five billion gallons of potable water daily to flush toilets.[50]

This daylit warehouse in Utrecht, the Netherlands, belongs to Ecover, an international company that produces ecologically safe cleaners.

Yet, for little to no increase in capital cost, buildings can radically reduce operating costs by reducing the energy, water, and materials they consume, and improve the productivity and health of occupants. Green building standards may one day become part of standard building codes. Nevertheless, it is crucial to make wise decisions now about building design and efficiency because buildings become decades-long commitments to future resource use and environmental and human impact.

As part of its Regeneration Project, RMI committed to promoting efficient, ecological, and healthy buildings in the Valley. To this end, RMI worked with the Industrial Land Bank (ILB), housed within the City Department of Economic Development, to establish a green building standard for industrial properties. The ILB is an innovative program that works to clean Cleveland's brownfield properties, some of which are in the Cuyahoga Valley, and then sell these properties at below-market rates to new industries in order to entice companies back into Cleveland.

Brownfields are a legacy of the externalities and inefficiencies of the industrial revolution, which regarded natural resources as unlimited and laborers as expendable. This unsustainable and profligate model burdened today's generation with significant investments in cleanup and restoration. It is therefore particularly appropriate that redevelopment on such properties avoid repeating mistakes of the past and reduce business risk in the present.

A green building standard should demonstrate resource efficiency, energy independence, waste recovery, and a respect for worker and ecological well-being to the maximum extent feasible. The ILB could create a new, local green building standard. Alternatively, the ILB could adopt an existing standard such as the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system. The LEED system has the advantage of being comprehensive, periodically updated, and widely recognized. Its stringent documentation and commissioning requirements also ensure a high level of quality in the final product. However, the process of LEED certification can be cumbersome, time-consuming, and costly. Also, as presently written, LEED standards are geared more towards commercial than industrial projects.

The city staff involved with the ILB and the developers for the first ILB project have been very supportive of the idea of establishing a green building standard for the land bank. The current thinking amongst ILB staff is to craft a local standard, drawn in part from LEED and tailored to industrial properties. The standard would focus on energy use, site design, local materials use, and water and stormwater. The actual criteria, review and certification mechanisms, incentive structures, and other policies concerning the standard would be devel-

oped in collaboration with such groups as local architects, developers, industries, regulatory agencies, and the Cleveland Green Building Coalition. This process may draw much upon the experiences of the Cleveland Housing Trust Fund's development of a residential green building standard. The residential green building standard has three approaches: "basic requirements, additional incentives to encourage a higher standard, and an aggressive pilot program to set a new standard."[51]

Despite the staff's interest, currently the ILB cannot commit to a green building standard for the Land Bank because the new director for the Department of Economic Development came onboard very recently. His opinions and assessment of the green building standard will determine whether the ILB issues a green building policy. However, given the merits of the standard, RMI is confident that there will soon be rapid progress towards a green building policy for the ILB.

Background: The LEED System

To provide a sense of what a green building standard for the ILB would entail, the following describes the LEED rating system, its applicability to industrial properties, the LEED process, and the costs related to green building.

The Applicability of LEED to Industrial Properties

The LEED rating system groups design elements into five categories: sustainable sites, water, energy and atmosphere, materials and resources, and indoor environmental quality. The more credits under each category a project wins, the more points it receives. Based on the total points earned, a project can attain a LEED Certified, Silver, Gold, or Platinum rating. LEED is also separated into different rating systems: LEED-NC for "New Construction," LEED-CS for "Core and Shell," and LEED-EB for "Existing Buildings," among others. For ILB, LEED-NC is the applicable standard.

While commercial properties dominate the list of 200-plus projects that have been LEED certified in the world, about a dozen commercial/industrial facilities have also been certified (see CD Appendix, "Green Development" folder, "LEED Industrial.doc," for a list of facilities and a case study on one project). The standard does not apply to equipment or building areas dedicated to industrial or manufacturing purposes, but would help produce an overall building that is well-insulated, uses efficient appliances for lighting (e.g., skylights and southern orientation) and water (e.g., waterless urinals and industrial wastewater recycling), uses a more efficient heating and cooling system (e.g., better chillers and more insulated refrigerators for food warehouses), and buys local materials for construction. See p. 49–50 for the LEED-NC checklist from which a new facility would be able to choose.

The Cost of Building Green

Developers across the country are building green not out of the goodness of their hearts, but because it makes financial sense. Studies of the incremental cost of making a project green demonstrate that LEED increases construction costs by little to nothing, since the cost

51. Memorandum from Andrew Watterson to Daryl Rush. "High Performance, Healthy Building Standards for the Housing Trust Fund Program." 24 Oct. 2005.

The offices in Gotz Manufacturing, Germany, are well daylighted with backup fluorescent lighting.

of such additions as high-performance glazing, chillers, and insulation are offset by down-sized heating, ventilation, and cooling systems.[52] Even the increased costs of commissioning (making sure the building works as it should)—about 1.5–3.0 percent of construction costs for an under $5 million project—are offset by the returns on decreased utility bills (5–10 percent) and increased occupant comfort. For instance, the State of Oregon Office of Energy studied the direct energy savings of two buildings after they had been commissioned. In the 110,000-square-foot building, energy savings totaled $12,276 per year, or $0.21 per square foot per year. In the 22,000-square-foot building, savings totaled $7,630 per year, or $0.35 per square foot per year.[53]

The average green building costs slightly less than 2 percent ($3–$5 per square foot) more than its conventional equivalent.[54] Beginning in 2003, the General Services Administration required all new GSA projects to meet minimum LEED criteria. In this policy, it allocated a 2.5 percent increase in building project budgets, finding that this would be sufficient for all projects to attain minimum certification and for many projects to meet LEED Silver, and for a few to achieve LEED Gold.

The biggest economic gains accrue to the building user as a result of decreased utility bills for both water and energy. The more expensive the energy and the more efficient the LEED building, the faster the efficiency measures will pay themselves back. In a 2003 study by Greg Kats, the average green building cost 2 percent more to construct, but resulted in life-cycle savings of 20 percent of total construction costs. For example, if a $5 million project were allocated $100,000 more for green components, it would accrue $1 million in savings over the lifespan of the building.[55] In the Cuyahoga River Valley, Zaclon installed a wastewater-recycling stormwater-recapture system that allowed it to decrease its draw on municipal potable water by 80 percent, with associated savings. Various simulation software programs like DOE-2 can help calculate the length of payback time for each building component.[56]

Building Green in Cleveland

Though there are only five LEED certified projects in the entire state of Ohio, green building is clearly a growing trend in the region, as it is elsewhere in the country. There are currently ten projects in Cleveland that are registered to become LEED certified and 135 LEED accredited professionals in the Greater Cleveland area.[57] This suggests that there exists a group of experts in the area who can help develop the local green building industry.

Despite growing awareness in the private sector about the benefits of building green, the public sector can accelerate the adoption of greener standards by mandating green building standards in projects where the government has a role. While a green building standard may be a challenge at first, such a policy will incentivize local expertise and the entire green building industry.

In a city whose long industrial history continues to trouble its prospective development, it is appropriate and inspirational for the inheritors of brownfields to refashion the image and future legacy of manufacturing, and of Cleveland. As a green-building champion, the Industrial Land Bank can play a major role in transforming the next generation of industries in Cleveland.

52. Matthiessen, L.F. and Peter M. "Costing Green: A Comprehensive Cost Database and Budgeting Methodology." July 2004, p. 23. Available online at: http://www.usgbc.org/Docs/Resources/Cost_of_Green_Full.pdf.

53. USGBC, p. 112.

54. Kats, Greg. "The Costs and Financial Benefits of Green Buildings." October, 2003, p. 14. Available online at: http://www.cap-e.com/ewebeditpro/items/O59F3259.pdf. The average premium for a LEED Certified building is one percent (sampling pool of eight buildings), a Silver building is 2.1 percent (sample pool of eighteen), and a Gold building is 1.8 percent (sample pool of six).

55. Ibid, p. ii.

56. For more information on DOE-2, see http://www.doe2.com.

57. For a list of accredited professionals in the area, see LEED AP directory at: http://www.usgbc.org/LEED/AP/ViewAll.aspx?CMSPageID=280&CategoryID=127&?CMSPageID=288&.

58. More information on LEED standards can be found in "LEED-NC, Green Building Rating System for New Construction & Major Renovations, V. 2.2," available online at: https://www.usgbc.org/ShowFile.aspx?DocumentID=1095.

The following LEED-New Construction checklist provides an idea of the kinds of building designs choices that can affect a building's efficiency and quality.[58]

Project Checklist

Sustainable Sites — 14 Possible Points

Prereq 1	**Construction Activity Pollution Prevention**	Required
Credit 1	**Site Selection**	1
Credit 2	**Development Density & Community Connectivity**	1
Credit 3	**Brownfield Redevelopment**	1
Credit 4.1	**Alternative Transportation**, Public Transportation Access	1
Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
Credit 4.3	**Alternative Transportation**, Low Emitting & Fuel Efficient Vehicles	1
Credit 4.4	**Alternative Transportation**, Parking Capacity	1
Credit 5.1	**Site Development**, Protect or Restore Habitat	1
Credit 5.2	**Site Development**, Maximize Open Space	1
Credit 6.1	**Stormwater Design**, Quantity Control	1
Credit 6.2	**Stormwater Design**, Quality Control	1
Credit 7.1	**Heat Island Effect**, Non-Roof	1
Credit 7.2	**Heat Island Effect**, Roof	1
Credit 8	**Light Pollution Reduction**	1

Water Efficiency — 5 Possible Points

Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
Credit 2	**Innovative Wastewater Technologies**	1
Credit 3.1	**Water Use Reduction**, 20% Reduction	1
Credit 3.2	**Water Use Reduction**, 30% Reduction	1

Energy & Atmosphere — 17 Possible Points

Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Prereq 2	**Minimum Energy Performance**	Required
Prereq 3	**Fundamental Refrigerant Management**	Required
Credit 1	**Optimize Energy Performance**	1–10
Credit 2	**On-Site Renewable Energy**	1–3
Credit 3	**Enhanced Commissioning**	1
Credit 4	**Enhanced Refrigerant Management**	1
Credit 5	**Measurement & Verification**	1
Credit 6	**Green Power**	1

Materials & Resources — 13 Possible Points

Prereq 1	**Storage & Collection of Recyclables**	Required
Credit 1.1	**Building Reuse**, Maintain 75% of Existing Walls, Floors & Roof	1
Credit 1.2	**Building Reuse**, Maintain 95% of Existing Walls, Floors & Roof	1

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Credit 1.3	**Building Reuse**, Maintain 50% of Interior Non-Structural Elements	1
Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
Credit 3.1	**Materials Reuse**, 5%	1
Credit 3.2	**Materials Reuse**, 10%	1
Credit 4.1	**Recycled Content**, 10% (post-consumer + 1/2 pre-consumer)	1
Credit 4.2	**Recycled Content**, 20% (post-consumer + 1/2 pre-consumer)	1
Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured Regionally	1
Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured Regionally	1
Credit 6	**Rapidly Renewable Materials**	1
Credit 7	**Certified Wood**	1

Indoor Environmental Quality 15 Possible Points

Prereq 1	**Minimum IAQ Performance**	Required
Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
Credit 1	**Outdoor Air Delivery Monitoring**	1
Credit 2	**Increased Ventilation**	1
Credit 3.1	**Construction IAQ Management Plan**, During Construction	1
Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1
Credit 4.3	**Low-Emitting Materials**, Carpet Systems	1
Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1
Credit 5	**Indoor Chemical & Pollutant Source Control**	1
Credit 6.1	**Controllability of Systems**, Lighting	1
Credit 6.2	**Controllability of Systems**, Thermal Comfort	1
Credit 7.1	**Thermal Comfort**, Design	1
Credit 7.2	**Thermal Comfort**, Verification	1
Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1
Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1

Innovation & Design Process 5 Possible Points

Credit 1.1	**Innovation in Design**	1
Credit 1.2	**Innovation in Design**	1
Credit 1.3	**Innovation in Design**	1
Credit 1.4	**Innovation in Design**	1
Credit 2	**LEED Accredited Professional**	1

Project Totals 69 Possible Points

Certified 26–32 points Silver 33–38 points Gold 39–51 points Platinum 52–69 points

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Waste = Revenue

Industrial symbiosis, or industrial ecology, is the co-existence among industries—ranging from agricultural to chemical—in which each business benefits financially from the other to create a healthy, productive, and, ultimately, waste-free environment. In the field of industrial symbiosis, the City of Kalundborg, Denmark is the first and foremost example documented to date. Over the last few decades, businesses and the municipality have created more than twenty relationships that turn each other's "wastes" into revenue. Each relationship increased the area's economic and environmental sustainability.[59]

Two fundamental principles of nature that are insightful to industrial symbiosis come to us from the Zero Emissions Research & Initiatives (ZERI) network:

1. Wastes of one kingdom are always food and/or energy for another.

2. Toxins produced by one kingdom are always neutral or inputs for another kingdom.

Yet, due to flaws inherent in contemporary engineering, most industries are designed as isolated units that use linear flow processes: raw material in, products and unusable waste out. Consider some of the following statistics:[60]

1. Only 6 percent of material ends up in final product.

2. Over 99 percent of everything we take from the earth ends up back in the earth in six months in a form that can not be easily reused.

3. The U.S. automobile industry creates seven billion pounds of unrecycled scrap metal each year.

4. Two quarts of gasoline and one thousand quarts of water are required to produce one quart of orange juice.

All of the "wastes" from these processes could be "food" for another industry. Ignoring the value of waste can lead to significant environmental impacts on air, water, and soil, which in turn lead to considerable human health impacts. Capturing the value of waste leads to cost savings, new revenue, and job creation. Commonly overlooked values of reusing waste include: reduced disposal and disposal reporting costs; revenues from selling waste as the raw materials for other processes; and reduced raw material costs.

In Cleveland, Great Lakes Brewing (GLB) understands these principles. The company has moved from a conventional "take make waste" process to an innovative "take make remake" process. GLB uses spent brewery grains to make bread and pretzels and to grow shitake mushrooms. Spent vegetable oils are used to fuel their "Fatty Wagon," a van that delivers patrons to the nearby Jacobs Field for a ball game and returns them to the brewery afterwards. GLB is currently testing vegetable oil as fuel in one of its delivery trucks. The company has reduced its costs and found new revenue streams.

GLB owner Daniel Conway explains, "In the process of seeking ways to make our operations more environmentally friendly,

59. For more information on the Kalundborg industrial symbiosis model, please see their website, available online at: http://www.symbiosis.dk.

60. Hawken, Paul, Amory Lovins, and L. Hunter Lovins. *Natural Capitalism*. Little, Brown and Company: New York, 1999.

A group of business leaders at Zaclon for the first Waste = Revenue Roundtable in January, 2006.

Steel mills already apply many waste = revenue principles, such as recycling scrap metal. Yet, even here, there are uncharted opportunities.

we've been able to cut operating costs at the same time. It's simply a matter of taking the time and making the commitment up front to explore the technology that's out there and find a way to do it that makes environmental, financial, and social sense." His partner Patrick Conway continues, "Our objective is to make full use of the by-products created by the brewing process. By taking a 'full circle' approach, we are making the most of potential savings and income-generating opportunities as the raw materials used to produce our products are continuously transformed into a host of food-generating and energy-saving opportunities." Their ultimate goal is to mimic nature, where 100 percent of resources are used in closed-loop systems.

The Cuyahoga Valley, where many industries transform raw materials to create new products, is a natural area in which to consider how to transform waste into revenue. In RMI's effort to stimulate local industrial symbiotic relationships, we partnered with Holly Harlan, Founder and President of Entrepreneurs for Sustainability (E4S). An engineer and business specialist, she identified local business leaders and brought them together in a Waste = Revenue Roundtable.

At the time of writing, the roundtable had eight member companies, among other institutional experts, and had produced twenty project ideas, nine of which are actively under investigation. CPC has committed to financially supporting E4S's work after RMI's role concludes so that the network will continue to grow.

Waste = Revenue Roundtables

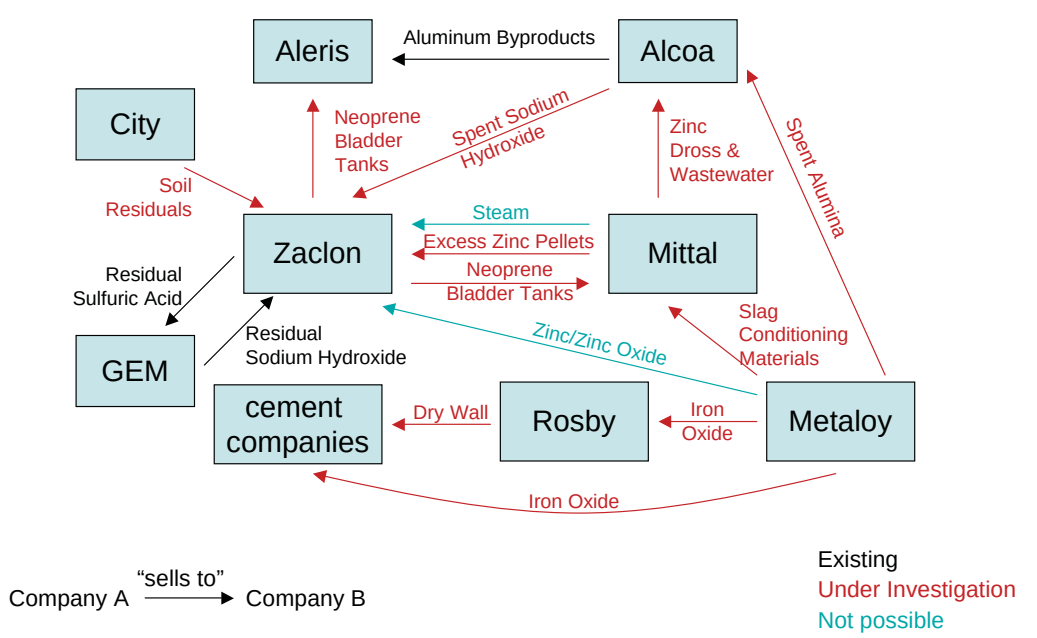
There were several ways to explore turning waste into revenue in the Cuyahoga Valley. One was to study all the industries in the Valley and identify those most likely to have common material needs. Another was to map material flows like building materials, food, recycled goods, and transportation through several of the major industries in the Valley. However, through interviews with local business leaders, we learned that they already knew the value of turning waste into revenue within their companies. What if we got those business leaders together and helped them get to know

each other's business? Would we find more opportunities between the companies? Based on more than twenty years of working with business leaders, Ms. Harlan knew that relationships are the backbone of business. Business leaders are more likely to invest in change if the projects involve partnering with people they trust. RMI had already established relationships with Alcoa, Mittal, Zaclon, GEM, and St. Mary's Cement in the interview process. E4S had relationships with Aleris and Metaloy. While these businesses were physically proximate and a few already had ongoing business relationships, most of them were unaware of what processes took place in neighboring industries.

E4S hoped to achieve the following through the Roundtable: create business opportunities from waste or byproducts; document triple bottom line benefits from these business opportunities; develop a network of business leaders who turn waste into revenues; and discuss the viability of promoting industrial ecology or industrial symbiosis as a way to bring economic, environmental, and social prosperity to the Cuyahoga Valley.
At the first Roundtable in January 2006—with Zaclon, GEM, Alcoa, Alumitech, Metaloy, St. Mary's Cement, Mittal and RMI in attendance—Ms. Harlan posed the question: "Could one company's waste be another's food?" The participants went around the room, introducing themselves and stating what waste products they could sell and what materials they needed. Within an hour, the business cards were flying across the table. As Rich Zavoda with Mittal noted, such a gathering of industry leaders had never taken place before and was a valuable way to find new business opportunities. Since then, the roundtable has met three more times, and added Rosby Resource Recovery, the City of Cleveland, and CSU to the group. St. Mary's Cement and GEM did not participate further.

To date, more than twenty projects have been discussed during the four meetings since the end of January. Three of these were existing connections, nine are under investigation, two did not work out, and seven are concepts that are waiting for partners or materials experts (see Diagram p. 53).

Diagram: Waste = Revenue Connections in the Valley



Other Possible Connections: Feldspar Shingles, Wind Energy, Tire Recycling, Equipment Sales

Waste = Revenue's Future

Given the successful conversations thus far, the Roundtable is looking to continue to develop the list of twenty projects and identify new opportunities by inviting other industries located in or near the valley to the Roundtable. Already, the group has invited materials experts in soils, minerals, chemicals, solid waste, and polymers, and it will continue to grow its partnerships with local professionals. Eventually, the group may invite national or international experts in industrial ecology for further guidance and inspiration.

The Roundtable is not limited to discussions about waste. Other business opportunities have been discussed, including wind energy, equipment, and land and infrastructure needs. Ms. Harlan is also interested in starting a food or organic materials roundtable.

To help promote communication once relationships are established, the team would like to create a materials trading website or listserv. They want a real-time way of identifying and tracking business opportunities. Asked if the website could take the place of the meetings, they all agreed that the Roundtable enabled them to get to know each other and their businesses better. This will help them find more opportunities than a simple list of materials or waste streams on a website. Such attitudes are supported by the experience of those in Kalundborg. "Today the basis of the symbiotic co-operation of Kalundborg is openness, communication, and mutual trust between the partners. The Kalundborg companies are located in a small community that has helped establish fine conditions for open and intimate working relations."

The Roundtable will seek out research funding to help business representatives learn about new opportunities for the waste streams that do not have apparent opportunities. With the assistance of the materials experts from local institutions, they hope to create experimental products to test in new markets.

The participants signed a letter of support (see p. 73). They believe that, given time, they will find win-win solutions that maximize social, environmental, and economic values for their businesses and the region. The Waste = Revenue Roundtable offers participants the time to develop relationships with each other and an understanding of each participant's business that will lead to future benefits. Could the Cuyahoga Valley Initiative create an American Kalundborg? The Waste = Revenue Roundtable is a fine start to such a goal.

As this rust stain on a concrete step shows, waste, seen in the right light, can be a beautiful thing.

Real Estate Development Workshop

The May 2005 workshop gathered ideas and discovered compelling solutions for the area around the Cuyahoga Valley ship channel from a group of senior local development professionals, all of whom are members of the Urban Land Institute (ULI).

Redevelopment, especially of brownfields, is most feasible when land will be used for high-value activities like commercial or residential development, which can generate enough revenues to cover remediation costs. Yet, given the proximity and impacts (e.g., noise, dust, odors, etc.) of heavy industry in the Valley, few developers choose to site commercial or residential projects there. The city and county are committed to keeping industry in the vicinity of the ship channel. All of the attendees felt frustrated that they had little opportunity to redevelop parts of the Flats and the river valley despite rewarding potential. They all regard the river, especially a restored ship channel, as an extraordinary real estate asset.

Workshop Agenda

The workshop began with a tour of the most heavily industrial area of the ship channel. Afterwards, the group discussed development and ecological restoration in the area. RMI introduced the idea of economic modeling to demonstrate the value of ecological restoration and opened the floor for an energetic and well-informed conversation.

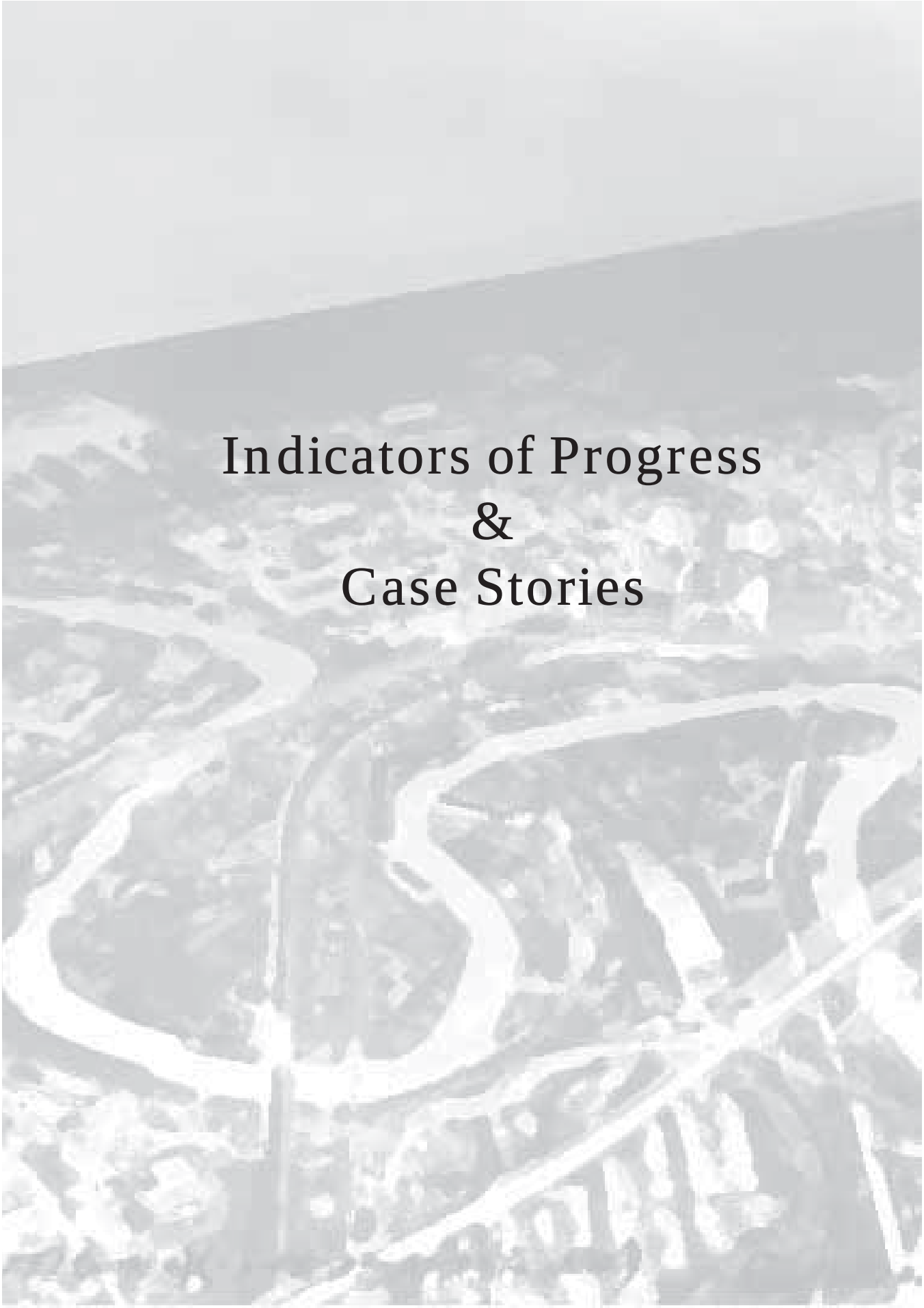
Discussion and Results

Two points of consensus emerged. First, the success of the CVI requires unequivocal public sector commitment to quality of place (i.e., use control through standards and entitlements, site control, and planning with vision) over a long period of time, as well as the political will to make the hard decisions. Political will was defined as extending beyond the politicians. Second, the ship channel would be prime development land if uses shifted from heavy industry to office, commercial, residential, and even light industrial, if the latter were clean and quiet. The primary reason for this observation is that properties along the river have an unusual and attractive position in the market. As one participant remarked, "They aren't making any more rivers."

Given that the city and county are committed to maintaining industrial uses in the upstream portion of the ship channel, but that the future of some heavy industry is uncertain, some participants suggested that the area should shift over time from heavy to light industries (e.g., fuel-cell R&D, medical products, nanotechnology, etc.). The latter would be more compatible with office, commercial, and residential uses, which might gradually come into the area if zoning allowed, and if noise, dust, and odors were mitigated.

Following the workshop, one participant e-mailed RMI to say: "I felt the most compelling concept yesterday was the 'system thinking' approach; specifically, the graph that showed that commercial and residential real estate would benefit the most from a restoration while industrial real estate would only benefit marginally. Now, to me here lies the biggest challenge. The industrial stakeholders are the ones that need to be convinced of a restoration project, but are the ones that will benefit least from it."

Participants included members from:
Hemisphere Corporation, Midland Group, Allegro Realty Advisors, Forest City Capital Corporation, Cumberland Development, Heartland Developers, Baker Hostetler, University Park Alliance–University of Akron, ULI Cleveland Executive Committee, Greater Cleveland Partnership, Cuyahoga County Department of Development, City of Shaker Heights, and E4S.



Indicators of Progress & Case Stories

The Cuyahoga Valley Initiative (CVI) will best succeed in affecting local and regional policy and attracting investment when its proponents can clearly document success and demonstrate positive change.

Evidence of progress is most effective when substantiated by both empirical evidence (i.e., data showing change) and anecdotal evidence (i.e., stories about change). Data appeals to some people; stories influence others. Stories supported by and bringing life to data are particularly powerful.

The kinds of changes anticipated in the Regeneration Action Plan (see p. 11) require longer to take effect than the eighteen months over which the Regeneration Project has taken place. Thus, RMI presents here the foundations upon which data and case stories can be developed as CVI proceeds. RMI suggests that the future CVI organization compile and disseminate this information, possibly with the help of local government and other nonprofit organizations.

Indicators of Progress

See Table (p. 60)

Benchmarks: With the guidance of a wide range of local stakeholders, RMI focused on several projects intended to achieve the outcomes of the Regeneration Action Plan. Included in the chart below are recommended benchmarks that reflect steps required to implement each project.

Indicators: The table also suggests the kinds of indicators that will reflect progress toward environmental, social, and economic goals consistent with the original vision of the CVI (e.g., water quality, public use of new green spaces, etc.). RMI recommends that the future CVI organization review each indicator in the chart, adopt the indicators it deems most appropriate, and then derive specific measures for that indicator to be used as hard evidence of progress. For example, acreage of planted medians, roofs, and parking lots could measure changes in urban vegetated areas.

Indicators point toward longer-term goals, as contrasted to benchmarks that show shorter-term achievements toward specific projects. Benchmarks address incremental "outputs," while indicators (and their specific measures) focus on "outcomes." (Arrows in the chart suggest the positive direction for each indicator.)

Case Stories

Also below are suggestions for case stories that should be written and disseminated in order to provide anecdotal evidence to substantiate popular understanding of CVI in general and each of the projects in particular. Because all projects are works in progress, each story is still emerging. The future CVI organization should collect and share these stories as they emerge.

The case stories will be most effective when they illuminate the indicators. For example, if the indicator is water quality, possibly measured by the population of a certain species of fish, a companion story might portray the people who helped create fish habitat through green bulkheads. Indicator data, as they accrue over time, can be included in new stories.

The following are suggestions for the kinds of stories that will catch the attention of the public and influential people who can reinforce the CVI. This effort can proceed at three levels: printed, audio, and video media—each with increasing effectiveness and cost. At a minimum, the new CVI organization should produce an ongoing stream of press releases, written by people who understand the media, which colorfully portray the human side of progress toward regeneration of the Cuyahoga River Valley. Over time, as harder evidence of progress accumulates in the form of indicators, that data should be included in the stories.

The generalization that applies to all

Herons are increasingly common in the Cleveland area and the Cuyahoga River.

these projects is that the most effective stories always portray effects on individuals. Look for ways in which a project improves someone's neighborhood, creates a job or business opportunity for a particular person, is part of a person's job, or makes someone feel better about his or her city.

Dredging: Though most of the valley-regeneration stories are clearly positive, the story of dredging may be an awkward one to tell. It appears that without dredging, major industries on the river cannot operate economically (though this question may not have been thoroughly analyzed from an objective perspective). On the other hand, if dredging continues as it is practiced on the Cuyahoga today, the river cannot fully recover biologically.

While the authors of this report make no judgment, some people in Cleveland suggest that many current riverside industries will not always stay in Cleveland and that one day, changes in the global market will force a shift in the city's industrial sector and the need for the present dredging regime. At the same time, continued budgetary pressures may restrict the ability of the Army Corps of Engineers, which dredges the river, to dredge the Cuyahoga to the needed depths. These trends may converge more quickly than is imagined today.

The new CVI organization would serve the community well by developing stories that promote pragmatic discussion of these issues and that explore options in the event of future declines in the Corps' budget or changes in the mix of present industries.

Stormwater Ordinance: The principal effect of an ordinance will be to require site developers to design their projects to capture and filter significant portions of rainwater before it leaves the site. In many cases, on-site stormwater treatments are part of an attractive landscape design. An initial story about the ordinance could outline its effects on development design and provide comparative photos of developments with or without such treatments. A subsequent story could feature the people developing and executing the designs in Cleveland, and quote realtors or appraisers regarding the

Table: Benchmarks and Indicators of Progress

Activity	Project Benchmarks	Environmental Indicators	Social Indicators	Economic Indicators
Dredging	1. City or U.S. Army Corps of Engineers conducts study on alternative transportation or sediment disposal methods	1. ⇑ Dissolved oxygen levels in the ship channel 2. ⇓ Concentrations of heavy metals in the water 3. ⇑ Scores on the IBI and QHEI indices 4. ⇑ # of species and pop. of native fish species	1. Perceived support for and collaboration with industry by public sector	1. ⇑ Employment 2. ⇓ Use of public funding 3. Cost savings through reuse of resources (e.g. reuse of dredged sediments)
Stormwater Ordinance	1. City approves a new stormwater ordinance encompassing the entire city	1. Improved runoff or river water quality 2. ⇓ Volume of runoff 3. ⇓ Erosion & sedimentation in streams 4. ⇑ Urban vegetated areas (e.g., acreage of planted medians, roofs, parking lots) 5. ⇑ Habitat for birds, insects	1. ⇑ Attractiveness of vegetated stormwater treatments 2. Pride in "doing things right"—part of greening the city.	1. ⇓ Costs to developers 2. ⇓ Operation & maintenance costs to landowners 3. ⇓ NEORSD operations & maintenance costs 4. ⇓ NEORSD capital costs 5. ⇓ Urban heat-island effect and cooling costs
Stormwater Agency	1. An agency (e.g., sewer) accepts stormwater responsibility 2. Fund established for BMP retrofits & restoration 3. Economic incentive to build & retrofit with BMPs	Same as above	Same as above	Same as above
Habitat Restoration (pocket wetlands, fish shelves)	1. RAP revegetates 3 pilot sites in Ship Channel 2. Pilot sites cause more restoration 3. ⇑ Public acquisition of river frontage	1. ⇑ Aquatic habitat & fish pop. 2. ⇑ Native vegetation & wetland habitat	1. Use of small parks by neighborhood residents & industry workers 3. ⇑ Recreational use of river and riverbanks	1. ⇑ Nearby property values 2. ⇓ Private bulkhead maintenance costs
Green Bulkheads	1. Green bulkheads designs finalized 2. City approves bulkhead designs 3. Bulkheads installed	Same as above	Same as above	Same as above

Tributary Restoration	1. Senate allocates sufficient funding 2. Public acquires the land for tributary restoration	1. Feet of tributary restored 2. ⇑ In birds & aquatic wildlife on sites (e.g., larval fish pop.). 3. Improved water quality at the restored sites (e.g., dissolved O_2 levels)	1. ⇑ Public use (workers, residents) 2. Improved community health and safety 3. Improved perception of the industrial valley	1. ⇑ Nearby property values 2. CDCs expand restoration upstream (e.g., greenways)
Site Remediation	1. County to remediate riparian restoration sites	1. No pollution migration from the site's soils to river 2. Acceptable soil quality for restoration	1. ⇑ Community pride	1. ⇑ Nearby property value
Green Building for Industries	1. Industrial Land Bank adopts a green building standard 2. City adopts municipal or more encompassing green building standard	1. ⇓ Energy & water consumption 2. ⇑ Local material use 3. ⇑ Construction/demolition recycling	1. ⇑ Quality of work environment	1. ⇑ Employment 2. ⇑ Worker productivity 3. ⇓ Demand on public infrastructure/resources 4. ⇑ Nearby property values 5. New generation of greener industry
Waste = Revenue	1. Businesses trade waste products 2. Waste trading network established 3. Detailed analysis of waste trading potential in valley (aka industrial symbiosis)	1. ⇑ Resource efficiency 2. ⇓ (Hazardous) waste in landfills 3. ⇓ Waste-haul distance	1. Improved public image and relations between businesses and communities	1. ⇑ Cost savings to participating businesses 2. ⇓ Public cost of landfilling/treating waste

1. The Index of Biological Integrity (IBI) synthesizes biological metrics that reflect the impact of human actions on biological attributes to depict the overall "health" of a waterway. A score of 50 is considered "exceptional." The Qualitative Habitat Evaluation Index (QHEI) assesses the physical traits of a waterway using metrics on substrate, channel morphology, in-stream cover, etc. A score of 100 is considered "exceptional."

2. While the new tunneling system will have the capacity to store a large volume of wastewater, the operation and maintenance costs of the treatment facilities will be lower if less volume needs processing.

3. Impermeable surfaces like asphalt and concrete have lower reflectivity and emissivity rates and do not produce evapotranspiration like plants. Natural stormwater solutions will provide shading and decrease heat absorption, thereby lowering cooling costs.

4. If neither the conservancy district nor the stormwater agency is established, the city/county/region should find another means of creating a funding mechanism to cause stormwater retrofits and watershed restoration.

5. The Cuyahoga River Remedial Action Plan is working to pilot aquatic habitat retrofits into the ship channel bulkheads (pocket wetlands, fish shelves). The locations are at the northern end of the Ohio and Erie Canal, the boat slip on Scranton Peninsula, and a parcel below I-490 by Mittal Steel.

effect of the designs on property values. As these changes improve water quality and reduce combined sewer overflows, stories could include interviews with biologists, anglers, and environmental-agency personnel.

Stormwater Agency: Northeast Ohio may one day have a stormwater agency (or agencies) that will charge stormwater fees for impermeable coverage, much as the sewer agency currently charges for water usage. Through this revenue, the agency will restore watersheds and riparian corridors, and retrofit built environments. Stories regarding this project should be similar to those suggested for the stormwater ordinance.

Habitat & Tributary Restoration: Restoration of the ship channel and its tributaries offers an opportunity to design, discuss, and tell a story of ecological restoration opportunities: native vegetation, fish habitat, public spaces, and possibly access by recreational boaters. Biologists and landscape architects can discuss specific design possibilities. Staff from nearby Community Development Corporations might plan further restoration. The restoration itself will offer plenty of visual images that will make for compelling stories.

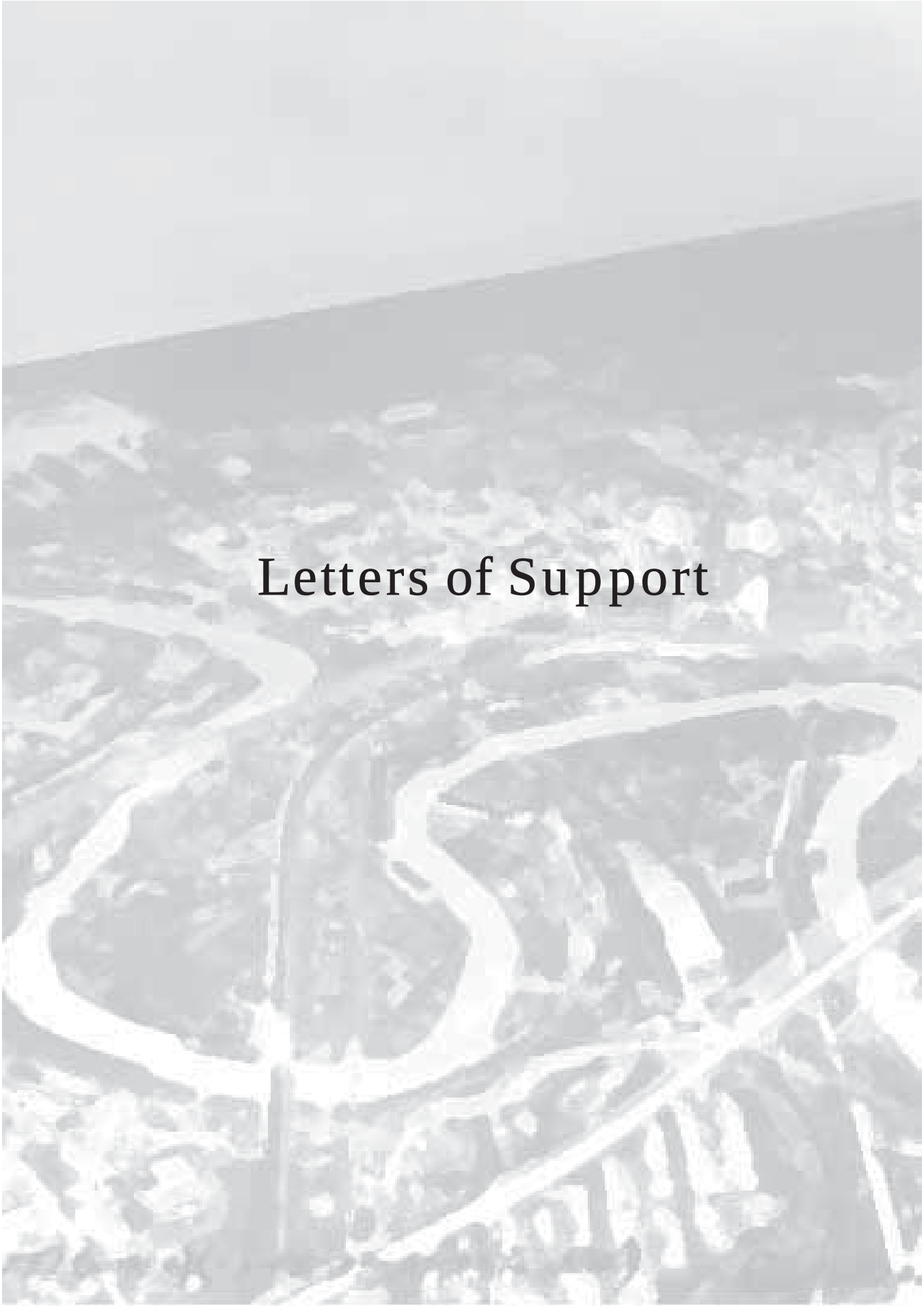
Green Bulkheads: This project may be the most interesting to the public, regardless of its direct effect on people. Converting a cold steel barrier into something that supports life is a surprising and visually interesting story. Stories may include conversations with various bulkhead designers and Jim White at RAP, and the story of the construction itself.

Site Remediation: While restoration creates new positive conditions, remediation improves a negative condition. Therefore, its story may be less interesting to the public. However, if these remediation efforts can be placed in the context of an overall river-valley recovery process, the story may prove more interesting. There might also be interest in the particular remediation techniques being employed or the collaborative institutional mechanisms that make it possible.

Green Building for Industries: This subject is well established in Cleveland. Therefore, unlike the green-bulkhead stories, novelty will produce green-development stories. The local Green Building Coalition has been a genuine innovator and may be interested in commenting on the city adopting green guidelines for the industrial river valley. The most effective story would describe the innovative features and life-cycle costs of a particular industrial building as a result of LEED certification, and what the owner thinks about those features.

Waste = Revenue: Businesses have been finding ways to use or sell waste for many years. The new feature of this project is that disinterested third parties, RMI and E4S, have brought industry people together to generate a waste-trading network. The deals that resulted point to the potential benefits of a larger-scale waste-trading effort.

Though business people are often reluctant to make public their internal workings, especially when related to waste, the business people involved in this project appreciate the value of the CVI and may be willing to discuss these efforts.



Letters of Support

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DEC 19 2005

CUYAHOGA COUNTY
PLANNING COMMISSION

216.241.3114
Fax 216.241.6560

1845 GUILDHALL BUILDING
45 PROSPECT AVENUE WEST
CLEVELAND, OHIO 44115

The George Gund Foundation

Mr. Paul A. Alsenas
Director
Cuyahoga County Planning Commission
323 Lakeside Avenue, West
Suite 400
Cleveland, OH 44113-

December 15, 2005

Dear Mr. Alsenas:

I am pleased to inform you that the Trustees of The George Gund Foundation have approved a two-year grant of $500,000 to the Cuyahoga County Planning Commission (Grant Number 05-317) for the Cuyahoga Valley Initiative organizational planning and start-up. This action has been taken in response to your letter and proposal of June 30, 2005, and is made on the terms described below.

A payment schedule for your grant will be determined when the conditions outlined below have been met. Grant payment cannot be made until the countersigned copy of this letter

It is our understanding that grant funds will be used for the Cuyahoga Valley Initiative organizational planning and start-up.

Terms and Conditions:
First payment of $250,000 will be paid to the Cuyahoga County Planning Commission for work as outlined in the proposal.
Second payment of $250,000 is committed, but payment will be subject to identification of new nonprofit as planned in proposal.

Under the laws of our Federal Government relating to the Foundation, all grants must be used solely for educational, scientific, or charitable purposes. The objective of this grant, as indicated above and described in the background material you have provided, may be modified only with the Foundation's approval.

It is our understanding that the Cuyahoga County Planning Commission has been determined to be a tax exempt instrumentality of the State of Ohio as described in Section 170 of the Internal Revenue Code. If there is any change in this status and/or classification, please let us know promptly. In event of loss of tax exempt status under Federal laws, or a change in classification, no further expenditures of grant funds are to be made and any unspent grant funds are to be returned to the Foundation.

Would you please arrange for our Foundation to receive reports on the dates indicated on the enclosed report and payment schedule forms. Please duplicate the Grant Reporting Form if more than one report is requested under the terms of this grant. Any additional correspondence should be sent to Jon M. Jensen, Senior Program Officer, and should reference the 05-317 grant number. When there are press releases, photographs, and any published material about this grant and the work it has made possible, we would appreciate receiving copies.

If this letter correctly sets forth your understanding of the terms of this grant and there has been no change in the IRS status and classification of the Cuyahoga County Planning Commission as indicated above, will you please countersign the attached copy and return it to me.

Sincerely,

David T. Abbott
Executive Director

JMJ:lr
Enclosures

Cuyahoga Soil and Water Conservation District

6100 West Canal Road • Valley View, Ohio 44125-3330 • Phone: 216 / 524-6580 • FAX: 216 / 524-6584

April 18, 2006

Mr. Michael Kinsley
Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass, CO 81654

Re: Storm water management-Cleveland collaboration

Dear Michael:

The Cuyahoga Soil and Water Conservation District (SWCD) is working with the City of Cleveland to assist in the implementation of their NPDES Phase II-MS4 Permit. As you know, a new administration is now in place and working on new initiatives.

The City and Cuyahoga SWCD have established a Memorandum of Understanding, which is a working agreement, to implement storm water initiatives. Our assistance to the City, relative to storm water management, includes:

- Training of City staff in the proper application of best management practices for new and redevelopment sites to help reduce sedimentation in local waterways and Lake Erie
- Storm water pollution plan reviews for new developments larger than one acre of part of a larger plan of development. Plan review recommendations take into account drainage and natural resource issues and recommendations are made regarding the best management practices for construction and post construction
- Develop reports to the City and developer relative to plan review recommendations
- Monthly inspections of development sites with follow up reports
- Assist the City with review and adoption of required ordinances for erosion and sediment control and post construction storm water management
- Coordination of public education and public involvement
  - Activities specific to the Euclid Creek watershed
  - Educational poster on rain gardens
  - Presentation regarding rain gardens; monthly presentations are being provided, mostly to garden clubs
  - Articles regarding bio-retention and storm water issues in the Cuyahoga SWCD newsletter
  - Article regarding bio-retention in Great Lakes Commission newsletter
  - *Plain Dealer* article regarding bio-retention
  - Interview with WKSU radio station for a storm water program, *not aired*
  - Educational literature regarding rain gardens

- Stream stewardship campaign (storm water awareness)
- Big Creek clean up on June 3, 2006
- Work with the Green Building Coalition Education Committee and building facility managers about capturing storm water
- Presentation regarding Site Planning Tools for Storm Water Management; presentations provided upon requested

Nearly every community in Cuyahoga County is required to implement a storm water management plan. As an outgrowth of the Regional Storm Water Task Force, the Cuyahoga SWCD has created the following tools for the use by each community, including the City of Cleveland. It is our opinion that a uniform approach across the county (and across county boundaries) will eliminate confusion among practitioners, thus providing a more uniform approach to resolving water quality issues, in a more timely fashion. This is especially true in the review of storm water pollution prevention plans and the implementation of best management practices, such as the ordinances for erosion and sediment control and post construction ordinances. The tools for storm water management include:

- Northeast Ohio Regional Model Ordinances for erosion and sediment control and post construction storm water management (especially for properties connected to separate storm water sewers or all properties)
- Community Riparian and Wetland Guidance
- Conservation Easements
- Storm Water Management Guidance (currently being developed by the SWCD)

The City of Cleveland is aware of its obligations and efforts are underway to tackled storm water issues. Due to the nature of high priority concerns, the City is working as quickly as possible. Ed Rybka, the Director of the Building and Housing Department, informed me that an internal meeting of the departments of Water Pollution Control, Building and Housing, Planning, and Law is scheduled for later this month. The purpose of the meeting is to move forward on the storm water issues.

I hope this is the information you need. If you need more clarification, please call.

Sincerely,

Janine Rybka
District Administrator

April 27, 2006

Michael Kinsley
Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass, CO 81654

Dear Mr. Kinsley:

Over the past year we have made significant progress on the idea of green bulkheads (also known as high performance shoreline management systems), prototypes for bulkheads that would functionally replace steel sheet pile bulkheads without sacrificing structural or navigation needs, while also providing habitat for fish. The many public and private landowners along the river who do not transport materials on the river derive no benefit from the steel sheet pile bulkheads and may be willing to pilot this new technology. Landowners who adopt green bulkheads may receive the following benefits: enhanced aesthetics, provision of aquatic habitat, opportunity to obtain stream bank restoration mitigation credits, improved public image, and increased property values.

This spring, the Cuyahoga River Remedial Action Plan (RAP) in partnership with the Cuyahoga County secured $500,000 of the $2 million federal funding requested to develop green bulkheads. With this funding, we are ready to proceed with the prototype design process. The next step is to assemble a technical advisory committee of engineers, regulatory professionals, hydrologists, biologists, and ecologists who will establish a list of minimum criteria that designs must satisfy. We will then hold a design collaborative; the most promising designs will be constructed with federal funding and physically tested in the Cuyahoga River. The process, from committee assembly to design selection, will take about a year. Since bulkheads can have a lifecycle of fifty years, we are discussing with the Army Corps of Engineers what indicators and standards will best suggest long-term success.

We are also currently discussing with a few public agencies regarding the final ownership of these shoreline properties. Since standard bulkhead replacement costs around $4,000 to $5,000 per linear foot, bulkhead replacement can drastically undercut or even negate the value of a property. Some landowners have expressed interest in the idea of deeding – through easement or donation – riverside property to the City in return for help in replacing the bulkheads. Public ownership may also be beneficial in assuaging concerns about brown fields liability and the risk of green bulkhead failure.

If successful, green bulkheads may provide a new industry for Cleveland that could be applied to similarly channelized rivers around the Great Lakes, and perhaps beyond. The Cuyahoga County

1299 Superior Avenue ~ Cleveland, Ohio 44114 ~(216) 241-2414 Ext. 307
www.CuyahogaRiverRAP.org

Planning Commission intends for green bulkheads to be the default design except at docking sites.

We appreciate RMI's collaboration with RAP; RMI has greatly helped promote awareness, understanding, and interest in green bulkheads and other forms of riparian restoration on the Cuyahoga. RMI's meetings with individual landowners along the river, including Forest City, and its workshop on Revegetating the Cuyahoga accelerated and strengthened the formation of our network.

At RAP's recent major introduction of the green bulkhead project at the Cleveland Engineering Society, several attendees expressed knowledge of the concept as a result of RMI's workshops and conferences. The progress that we've achieved to date is heavily dependant on the effort and energy of RMI's terrific staff and its information gathering, formation of meetings, and promotion of networks.

Sincerely,

James White

Executive Director, Cuyahoga River Remedial Action Plan
River Navigator, Cuyahoga-American Heritage River Initiative

1299 Superior Avenue ~ Cleveland, Ohio 44114 ~(216) 241-2414 Ext. 307
www.CuyahogaRiverRAP.org

Cuyahoga River Community Planning Organization
Cuyahoga River Remedial Action Plan
Cuyahoga American Heritage River Initiative

Rediscover ~ Respect ~ Revitalize Ohio's American Heritage River

June 27, 2006

Michael Kinsley
Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass, CO 81654

Dear Michael:

The Cuyahoga River ship channel with its dredged depth and armored shoreline creates a harsh environment for aquatic life, especially larval fish. The Cuyahoga River Remedial Action Plan (RAP), in conjunction with the U.S. Army Corps of Engineers and other stakeholders, has developed a prototype pocket wetland design for armored shorelines that would create much needed aquatic habitat. These roughly fifty- by thirty-foot wetlands are small enough and cheap enough to be feasibly implemented in numerous locations along the ship channel. These pocket wetlands would be eligible for wetland or stream mitigation credits and funding from Ohio EPA. They would also help beautify areas along the ship channel and, when accessible, serve as educational sites for the public.

Over the past year, RMI has greatly helped RAP publicize this design concept and engage landowner interest in the implementation of pocket wetlands. As RMI concludes its work on the Cuyahoga Valley Initiative's Regeneration Project, RAP commits to advancing pilot pocket wetland projects. One site with great potential is a parcel owned by Mittal Steel that is situated along the Cuyahoga River ship channel and Interstate-490. Both Mittal Steel and the City Planning Commission have shown interest in having this parcel serve as the site for the first pocket wetland pilot. We will continue to work with Mittal Steel, the City Planning Commission, and the County Planning Commission to make sure this project goes forward. We are also working with a public agency that has certain wetland mitigation requirements to see if some of the mitigation might be sited along the ship channel in the form of pocket wetlands.

We look forward to much success for ship channel habitat and will keep you abreast of future developments. RMI activity in the project was vital to the progress we have achieved.

Sincerely,

James White

Executive Director, Cuyahoga River Remedial Action Plan
River navigator, Cuyahoga-American Heritage River Initiative

1299 Superior Avenue ~ Cleveland, Ohio 44114 ~(216) 241-2414 Ext. 307
www.CuyahogaRiverRAP.org

Statement of Support for the CVI/Regen Waste=Revenue Roundtable
May 23, 2006

As a participant in one or more meetings of the W=R Roundtable, I submit my support for the continuation of the Roundtable. I have already found new business opportunities or believe that I will find one if I continue to participate. I also value networking with other business leaders who know the value of turning waste products into business opportunities. I look forward to working with material scientist that may assist the participants in the roundtable with creating new opportunities. Given time this Roundtable may bring new business to the region.

Signed,

Name, Title, Company

John W. Pickens — Director of Technology / Aluminitech Division / Alloys International

Claude Kennard — President — Metal Alloy Reclaimers Inc

[illegible] — ENV. MANAGER — ALCOA CLEVELAND WORKS

Joseph Jasper Jr — T2 OFFICER — CSU

Andrew Watterson — Sustainability Manager — City of Cleveland

[illegible] — G.M. — Rosby Companies

[illegible] — CFO — Zaclon

R Zourda — Mittal Environmental

Christyn Alison — ASSOCIATE SR. PLANNER — CUYAHOGA COUNTY PLANNING COMM.

CUYAHOGA COUNTY
PLANNING
COMMISSION

323 Lakeside Avenue West • Suite 400 • Cleveland, Ohio 44113 • 216/443-3700 • FAX 216/443-3737
e-mail: cpc@planning.co.cuyahoga.oh.us / web site: planning.co.cuyahoga.oh.us / TDD: 1-800-750-0750

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EILEEN A. PATTON
KENNETH E. PATTON
ROBERT N. BROWN
for FRANK G. JACKSON

PAUL A. ALSENAS
Director

15 June 2006

Martha C. Pickett
Executive Director
Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass, Colorado 81654

Dear Ms. Pickett:

We at the Cuyahoga County Planning Commission are extremely grateful for the opportunity that we have had to collaborate with the Rocky Mountain Institute on the Cuyahoga Valley Initiative.

We are also pleased to provide a report on the progress that is currently underway to meet the goals that we have worked on together to bring about systemic and lasting change throughout our Cuyahoga Valley Initiative project area and the Regeneration Zone in particular.

RMI's work in Phase I that was documented in their report *Cuyahoga Valley Initiative: A Model of Regeneration* has led directly to CPC's focus on putting RMI's ideas to work throughout the Valley, with a special focus on those changes which will lead to systemic water quality improvements. CPC has also distributed three hundred CDs of the report, over five hundred downloads from the website, and promoted the whole-systems approach advocated by RMI.

The work accomplished under Phase II has led to several new initiatives that the CPC will continue to promote, facilitate, and drive far past the end of RMI's own work.

Holly Harlan, founder of Entrepreneurs for Sustainability and RMI alumna, is leading several businesses in the Cuyahoga Valley Regeneration Zone towards diverting waste away from landfills and towards other businesses to be used as inputs for new or existing industrial operations. Based on the work begun by RMI, a community of industries has formed that has already begun developing purchase and transfer agreements that will make waste trading a reality in the Cuyahoga Valley. The businesses are as large as Mittal Steel's Cleveland Works (the world's most efficient steel mill based on man-hours per ton of steel produced) and include smaller companies such as Zaclon. We are working with Entrepreneurs for Sustainability to continue this work on converting waste to revenue, and to further expand the number of collaborating businesses.

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Our relationship with the business community has been fundamentally improved through our work with RMI. Prior to your work, our model for the Cuyahoga Valley Initiative was based on regulatory and statutory interventions that directed how development should take place and how businesses should minimize their negative impacts on the ecological health of the Valley. By showing us how to entice businesses to act in environmentally responsible ways that also increase profits, we see the development of a community of business leaders that see themselves as stewards of the Cuyahoga Valley and that are suggesting strategies and changing their actions in ways that create triple bottom line benefits to the Valley.

By gaining credence with the business community, we have been able to forge partnerships between government representatives, companies, neighborhood representatives, and stewards of the environment where previously adversarial relationships were the norm. It is this style of collaboration that has successfully attracted investments in the Green Bulkhead project, brought about regional initiatives for a sustainable energy strategy, and spurred green building projects throughout Northeast Ohio.

Another exciting project that may shortly come to fruition is the Cuyahoga River Valley Land Restoration Project (LRP). The goal is to acquire several properties at the mouths of the much-degraded Kingsbury Run and Walworth Run tributaries of the Cuyahoga River and to improve the aquatic and habitat health of these tributaries and the entire Cuyahoga River System, reconnect residents and workers within the Cuyahoga Valley to the River, and encourage sustainable economic development along the Kingsbury Run and Walworth Run corridors by restoring these properties to their natural state by removing pollutants, reestablishing wetlands and native vegetation, and daylighting these urban streams. This Regeneration Zone land strategy has been brought to the attention of federal officials, particularly Senator Mike DeWine's office, resulting in the submittal of an appropriations request for FY 2007 through the Coastal and Estuarine Land Conservation Program. Our discussions with the Senator's staff have drawn heavily from RMI's *Cuyahoga Valley Initiative: A Model of Regeneration*.

Local initiatives to address stormwater management in the Cuyahoga River Watershed have been improved through the work of RMI. Interactions initiated by RMI with the Northeast Ohio Regional Sewer District, the Cuyahoga River Remedial Action Plan, and the City of Cleveland are resulting in a greater understanding of how collaborative efforts can bring about water quality improvements in urbanized areas where non-point source pollution is an ever-increasing threat to the health of the Cuyahoga River and Lake Erie. We are looking forward facilitating these regional collaborations.

Finally, as a result of Phase II, RMI has contributed to introducing systemic thinking to stakeholders throughout the Cuyahoga Valley. The work on the High Performance Shoreline Management System, otherwise known as the Green Bulkheads, has been directly influenced by RMI. In cooperation with the Cuyahoga River Remedial Action Plan, the CPC is working on the design, development, and construction of a prototype Green Bulkhead that would provide a stable and secure division between dry land uses and the ship channel, promote recovery of a vegetated shoreline, provide habitat and dissolved oxygen for migrating fish, are stable enough to withstand prop wash and shore line scour from passing freighters and seasonal ice scour, and not consume additional land area that would inhibit development. Some of the most exciting work on this has come from the maritime users of the River, including businesses represented by the Lake Carriers' Association and the Flats Oxbow Association, who are assisting us in the design and location of the prototypes. This kind of collaboration between

planners, environmental advocates, and businesses has led to $500,000 in federal funding for the project, with the possibility of much more.

Systemic thinking has also informed our approach to our development of a Maritime Facilities Study for Cleveland Harbor that integrates economic development, maritime facility planning, and environmental protection in a single study that has been funded by the Board of Cuyahoga County Commissioners and that will be directed by the CPC.

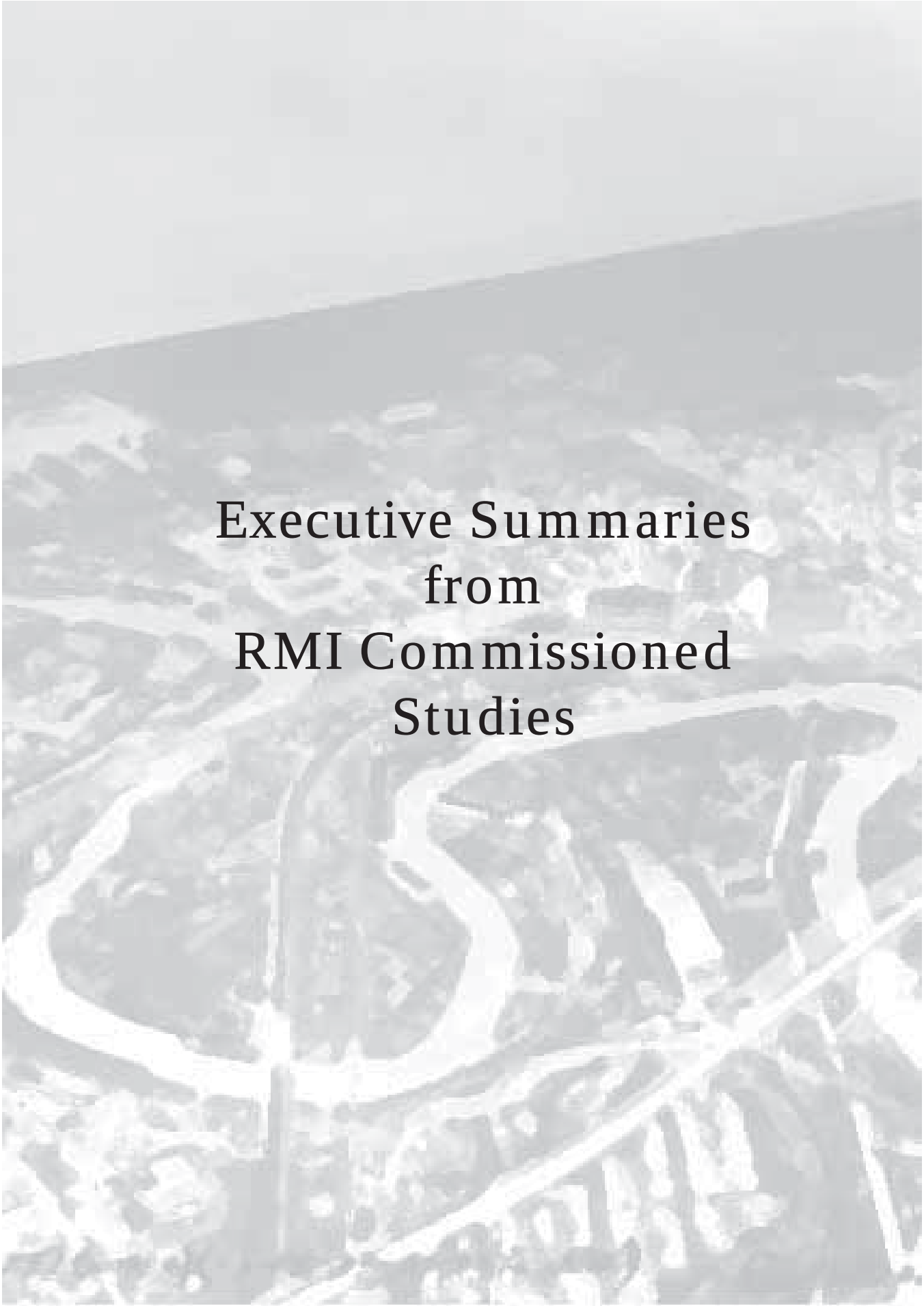
In the aggregate, these whole systems perspectives will fundamentally transform the Cuyahoga River and the Navigation Channel, which is the key to the redevelopment and restoration of the Regeneration Zone.

This legacy of sustainability and Valley transformation will continue through the work of the CPC and the recent Gund Foundation-funded development by the CPC of an organization whose purpose will be to implement these and many other measures throughout the Cuyahoga Valley. Needless to say, without the generous support of the Joyce Foundation, the George Gund Foundation, and the Cleveland Foundation, this work would not have been possible.

We hope to work again with you in the future, and we look forward to periodically providing you and the foundations updates that illustrate the positive changes made throughout the Cuyahoga Valley that have resulted from your work.

Sincerely,

Paul A. Alsenas
Director



Executive Summaries from RMI Commissioned Studies

Designing a Regeneration Zone for the Cuyahoga River Valley

Project Component: Ecological Restoration

William J. Mitsch, Ph.D.
Li Zhang, Ph.D.
Amanda M. Nahlik

Olentangy River Wetland Research Park
The Ohio State University
352 W. Dodridge Street
Columbus, OH 43202

August 2005

Summary

The potential for ecological restoration of the lower Cuyahoga River is presented as part of a planning for a Regenerative Development Zone (RDZ) in industrial/commercial land near downtown Cleveland. First, hydrology, water quality, and fish and invertebrate data and composite biological indicators are presented for this lower reach of the Cuyahoga River. While there are some signs of recent improvement in river fish richness, the biological indicators generally still indicate poor aquatic habitat. Channel dredging, large ship use, and rigid shoreline pilings limit the diversity of habitat and ensure continual resuspension of chemically contaminated river sediments. We present three general alternatives for restoration of the riverine system. One is the creation of 70 acres of oxbow wetlands on the floodplain terrace with seasonal hydrologic connections to the river but otherwise with connections to upland urban runoff. A second alternative is for the restoration of a 0.5-mile reach of a tributary stream, Kingsbury Run, to the Cuyahoga River, thus avoiding some of the problems associated with restoration of the Cuyahoga River itself while providing a significant habitat connected to the river. A third alternative considered is 5.6 miles of "pocket wetlands" along the Cuyahoga River riparian edge itself. Costs and ecological benefits of each of these options are provided. Cessation of river channel dredging and improvement in water quality in the upstream river are vital to any effective restoration techniques in the lower Cuyahoga River. Data on costs of a detailed study of the lower Cuyahoga River and of demonstration projects that would be needed as the next step are also provided.

Review of the Doan Brook Watershed Study Report

Prepared for: Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass, CO 81654-9199

Prepared by: Franco Montalto, PhD
Tim Conover White

eDesign Dynamics LLC
220 61st Street, Suite 2b
West New York, NJ 07093
www.edesigndynamics.com
tel: 201-453-9300
fax: 201-453-2342

Date: May 16, 2006

eDesign Dynamics

Executive Summary

Across the nation, urban and urbanizing communities like those in the Doan Brook Watershed are faced with the need to meet increasingly stringent water, wastewater, stormwater and other environmental regulations. Historically, urban environmental problems were addressed with centralized, hard infrastructure solutions, featuring end-of-pipe treatment works. Today, low impact development (LID) is a relatively new approach to stormwater management receiving increased attention as a potentially cost effective means of reducing the impacts of development on the landscape. By seeking to minimize stormwater runoff at its source, LID technologies minimize the need for runoff mitigation infrastructure downstream in the watershed.

The purpose of this review was to assess the extent to which low impact approaches were considered in the development of the Doan Brook Watershed's various management plans. These plans were developed through a participatory process involving the Doan Brook Watershed Study Committee (WSC) and the Northeast Ohio Regional Sewer District (NEORSD), and were summarized in a document entitled the Doan Brook Watershed Study Report (DBWSR), dated August, 2001. The following review is based almost exclusively upon the data and information as presented in that approximately 450-page document.

The DBWSR describes the development of four management plans:

- The Biotic Management Plan
- The Channel and Floodplain Management Plan
- The Stormwater Management Plan
- The Wastewater Management Plan

In addition, and resulting from a decision-making process external to development of the DBWSR, the NEORSD was to construct the Heights/Hilltop Interceptor Sewer (HHI Project). The purpose of the HHI Project was to reduce the volume of combined sewage discharges to Doan Brook from 759 to approximately 439 million gallons per year. The decision to construct the HHI Project is not addressed in the DBWSR. Instead, the "baseline conditions" described in the DBWSR refer to the Doan Brook Watershed with the HHI Project already in place. Consequently, no critique of the alternatives to the HHI Project could be provided in this review.

A summary of the plans as presented in the DBWSR follows below:

The final recommended Biotic Management Plan involved both direct manipulation of plant and animal populations, and indirect management of the environs in which the organisms live. The plan sought to a) enlarge and diversify the biotic community, b) increase and diversify habitat, and c) lead to the development of a lake management plan. The plan did not specifically address the diffuse sources of the poor water quality that are responsible for the degraded biological conditions in the watershed. Rather, it assumes that these factors will be addressed by the other three plans.

The final recommended Channel and Floodplain Management Plan included a variety of practices that serve to a) stabilize degrading channel banks, b) reduce flooding, c) control trash and debris, d) improve refuge areas and habitat and e) remove fish migration barriers. Although

there was ample mention in this chapter of the DBWSR of the extent to which runoff from upstream urban development is a cause of channel instability and flooding, the final recommended practices did not include any distributed, low impact runoff capture measures in the Doan Brook watershed.

The purpose of the Stormwater Management Plan was to address the problems associated with stormwater runoff quality (heavy metals, bacteria, phosphorus, sediments, toxics, oil, road salt) and quantity (high flow velocities, low base flows). The final recommended plan includes a combination of policy actions, operational changes, and capital improvement projects, with emphasis placed on implementing the six minimum control requirements of NYPDES Phase II storm water program. The recommendations are classified as measures that a) reduce the sources of pollutants carried in stormwater, b) reduce the amount and improve the treatment of stormwater runoff. However, although several capital projects for stormwater storage and infiltration are mentioned, the final plan falls short of any significant commitment of resources towards the retrofit of distributed runoff control measures throughout the watershed.

Lastly, the purpose of the Wastewater Management Plan was to address the inability of the existing Doan Brook Interceptor to adequately convey stormwater runoff and wastewater to the treatment plant. As interpreted in the DBWSR, regulations required that either additional wet weather flow be captured, or overflows be treated and/or stored. Consequently, the framers of the DBWSR took the position that "new facilities are necessary to relieve surcharge in the existing interceptor system and to allow for the capture of additional wet weather flows." This chapter of the DBWSR also does not consider low impact runoff reduction measures. Rather, the final plan calls for the construction of a $118 million tunnel, which would reduce CSOs by proving storage of approximately 45 million gallons of wet weather flow. In addition, the plan calls for a number of additional practices that would involve a) upgrading the existing sewer system and b) adding sewer system capacity.

There appear to be several reasons why LID technologies were not seriously considered in any of the management plans. First, certain decisions appear to have been made outside of the Doan Brook Watershed Study process. The HHI project, for example is a major infrastructure investment projected to reduce CSOs in the watershed by almost 50%. Although the reduction in CSOs is significant, the decision to construct an interceptor pipe represents a large commitment of the District's financial resources. Because the planning of the HHI project was external to the watershed planning process, comparison of the benefits of this project with a distributed LID approach was not presented in the DBWSR. Ideally, these two decision making processes would have been fused.

Secondly, the framers of the DBWSR suggest throughout the report that distributed runoff reduction measures are not technically feasible, not cost effective, not easily implemented, and not reliable. Based on the information provided in the DBWSR, and on the increasing attention LID technologies are receiving nationwide, these claims appear to be unsubstantiated.

Thirdly, the framing of alternatives appears to have diverted the attention of the WSC away from consideration of the full potential of low impact runoff reduction measures in the watershed. This is perhaps most obvious in the alternatives presented in the development of the Wastewater

Management Plan, none of which include runoff reduction measures. The alternatives presented in the development of the Stormwater Management Plan also do not include a concerted effort to incentivize the retrofitting of BMPs *throughout* the various subwatersheds, at a level at which significant runoff reductions would be achieved. Further, the development of other management plans – most notably the Biotic Management Plan – forego discussions on these issues, and rely on other sections of the DBWSR for adequate coverage.

For all these reasons, it is not possible to evaluate whether a comprehensive LID approach would have been more or less cost-effective than the HHI Project, or any of the final recommended practices included in the DBWSR.

We conclude this report by recommending that the final recommended management plans be revisited after conducting an independent study into the cost effectiveness of LID as a means of achieving the goals of the four management plans.