



Public Notice

Applicant:

Sciandra Building &
Construction Corp.

Date:

Published: January 7, 2004

Expires: February 5, 2004

**U.S. Army Corps
of Engineers**

In Reply Refer To:

Buffalo District **CELRB-TD-R RE: 95-986-27(2)** **Section: NY 404**

**Application for Permit under Authority of
Section 404 of the Clean Water Act (33 U.S.C. 1344).**

The Sciandra Building & Construction Corporation, 9735 Main Street, Clarence, New York, proposes to place fill into approximately 4.0 acres of Federally regulated wetlands in association with the construction of the Oak Orchard Estates residential subdivision on an approximately 96 acre parcel. The project site is located south of and adjacent to Meyer Road in the Town of Pendleton, Niagara County, New York.

The project consists of the following:

- a. A total of approximately 4.0 acres of Federally regulated wetland will be filled in association with the construction of roads, utilities, and residential sublots within the proposed subdivision. Much of the wetland fill results from the construction of sublots 27-30, which are located entirely within the wetland area. These lots will be filled from the road back approximately 175 feet in order to establish an acceptable building/yard area. The remainder of these lots will remain unfilled and be protected by deed restrictions or other protective covenant.
- b. The proposed subdivision layout avoids approximately 59 acres of the subject parcel, including approximately 25.5 acres of wetlands. Also, as part of the proposed project, three of the Town-approved lots (sublots 9, 31 and 32) will not be built in order to avoid wetland impacts. The applicant has indicated that the proposed layout represents the fewest wetland impacts that are economically feasible for the project.
- c. The wetlands to be filled include an approximately 1 acre drainage swale which has become dominated by purple loosestrife (Lythrum salicaria), an invasive plant species which offers little habitat value, and three acres of a large scrub-shrub/primary successional wooded wetland complex. The swale area includes portions of the proposed road fill, as well as portions of sublots 6, 10, 26 and 33. The fill area for lots 27 and much of lot 28 consists of marginal areas of early successional scrub shrub wetland. The remainder of the fill area

for sublots 28, 29 and 30 encompasses the more wooded areas with stronger indicators of wetland hydrology. The avoided wetlands include areas of more developed woodland.

d. In order to mitigate for the proposed loss of 4.0 acres of wetlands, the applicant proposes to restore approximately 7.5 acres of wetlands within the avoided areas of the parcel. The wetlands will be constructed on existing upland areas immediately adjacent to a large wetland complex within the southern portion of the site. The constructed wetlands will include mixed wet meadow/emergent marsh habitat types. The design is proposed to enhance waterfowl and amphibian habitats, specifically chorus frogs and salamanders.

The applicant's stated purpose is to construct a residential subdivision.

Location and details of the above described work are shown on the attached maps and drawings.

Questions pertaining to the work described in this notice should be directed to Steven V. Metivier, who can be contacted by calling (716) 879-4314, or by e-mail at: steven.v.metivier@usace.army.mil

The following authorization(s) may be required for this project:

Water Quality Certification (or waiver thereof) from the New York State Department of Environmental Conservation.

There are no registered historic properties or properties listed as being eligible for inclusion in the National Register of Historic Places that will be affected by this project.

In addition, available evidence indicates that the proposed work will not affect a species proposed or designated by the U.S. Department of the Interior as threatened or endangered, nor will it affect the critical habitat of any such species.

This notice is promulgated in accordance with Title 33, Code of Federal Regulations, parts 320-330. Any interested party desiring to comment on the work described herein may do so by submitting their comments, in writing, so that they are received no later than 4:30 pm on the expiration date of this notice.

Comments should be sent to the U. S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, and should be marked to the attention of Steven V. Metivier, or by e-mail at: steven.v.metivier@usace.army.mil. A lack of response will be interpreted as meaning that there is no objection to the work as proposed.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. All written comments will be made a part of the administrative record which is available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof may also be posted on a Corps of Engineers internet web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

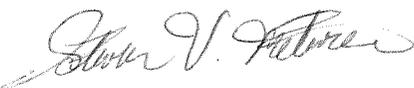
Any individual may request a public hearing by submitting their written request, stating the specific reasons for holding a hearing, in the same manner and time period as other comments.

Public hearings for the purposes of the Corps permit program will be held when the District Commander determines he can obtain additional information, not available in written comments, that will aid him in the decision making process for this application. A Corps hearing is not a source of information for the general public, nor a forum for the resolution of issues or conflicting points of view (witnesses are not sworn and cross examination is prohibited). Hearings will not be held to obtain information on issues unrelated to the work requiring a permit, such as property ownership, neighbor disputes, or the behavior or actions of the public or applicant on upland property not regulated by the Department of the

Army. Information obtained from a public hearing is given no greater weight than that obtained from written comments. Therefore, you should not fail to make timely written comments because a hearing might be held.

The decision to approve or deny this permit request will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.


for Thomas C. Switala
Chief, Regulatory Branch

NOTICE TO POSTMASTER: It is requested that this notice be posted continuously and conspicuously for 30 days from the date of issuance.

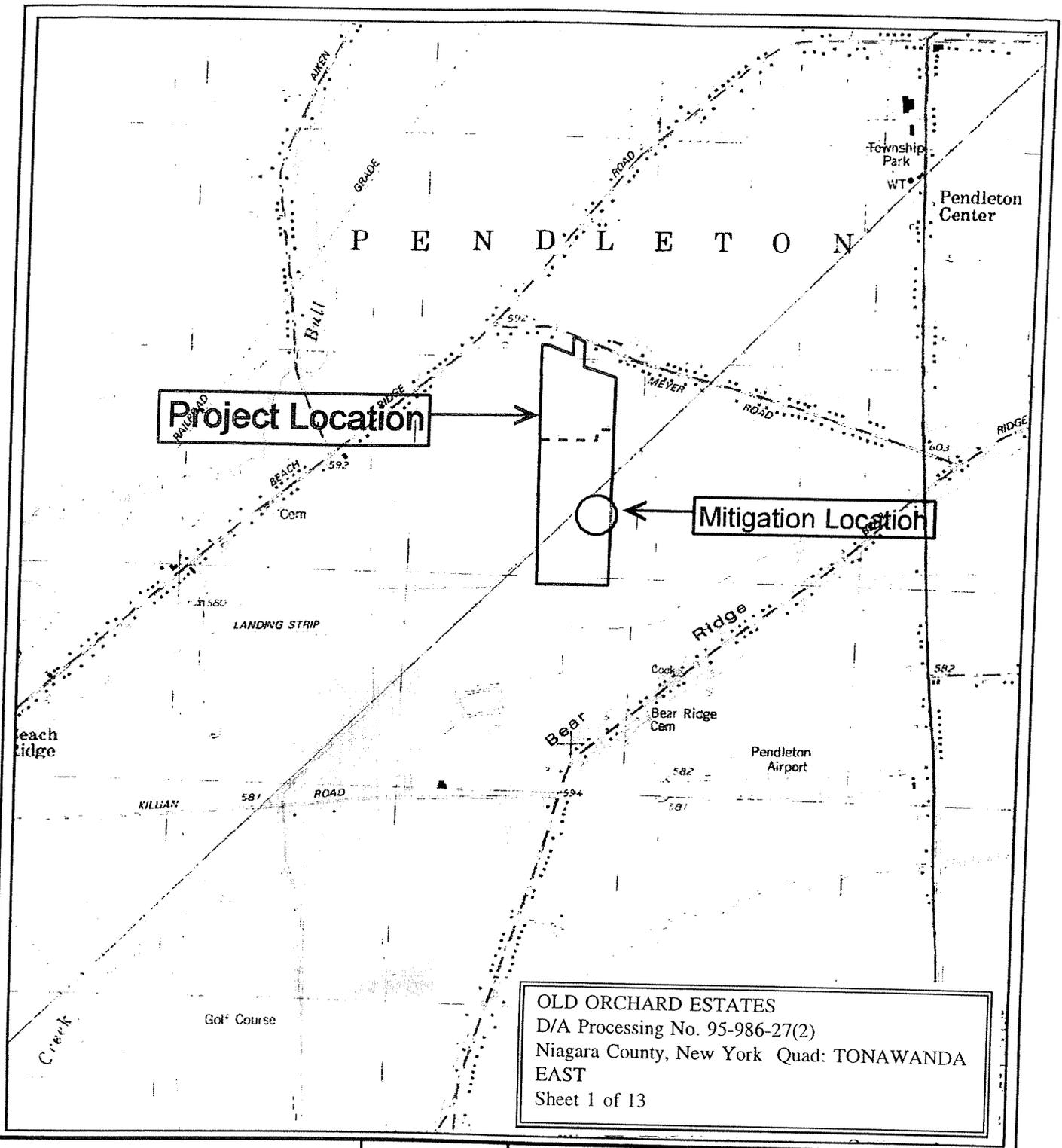


Figure 2.
 USGS Quadrangle Map

Tonawanda East, NY
 Quadrangle
 Scale 1:24000



**Old Orchard Estates Subdivision
 Scindra Building & Construction Corp.
 Mitigation Location**

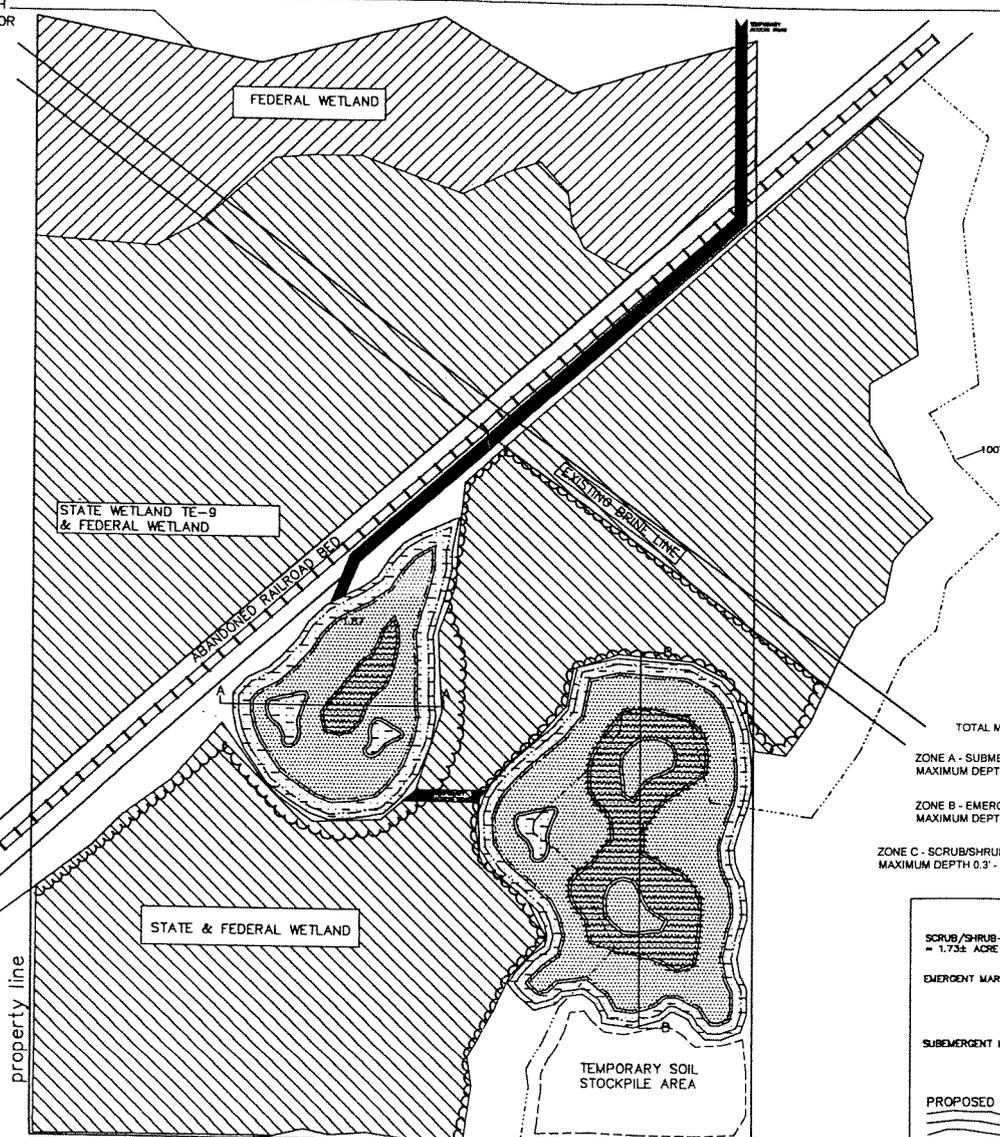
**Meyer Road
 Town of Pendleton
 Niagara County, NY**

OLD ORCHARD ESTATES
 D/A Processing No. 95-986-27(2)
 Niagara County, New York Quad: TONAWANDA
 EAST
 Sheet 3 of 13

FEDERAL WETLAND CONTINUES NORTH
 (SEE WETLANDS DELINEATION MAP FOR
 DETAIL OF WETLAND LIMITS)

WETLAND MITIGATION PLANTING SPECS

- Wet Meadow and Emergent Marsh - Northeast Wetland Diversity Mix -**
 Seeding at a rate of 2 lbs. per acre
- | | |
|-------------------------|----------------------------------|
| Common Nettle | <i>Urtica dioica</i> |
| Green burdock | <i>Arctium lappa</i> |
| Soft rush | <i>Scirpus atrovirens</i> |
| Fox sedge | <i>Carex lasiocarpa</i> |
| Ditch stone crop | <i>Carex vulpinoidea</i> |
| Reed meadow grass | <i>Phalaris arvensis</i> |
| Blue vervain | <i>Verbena hastata</i> |
| Boneset | <i>Lupinus perlatum</i> |
| Rice cutgrass | <i>Larix laricina</i> |
| Canada Marsh grass | <i>Quercus canadensis</i> |
| Common arrowweed | <i>Sagittaria arifolia</i> |
| Joe-pye weed | <i>Liatris scariosa</i> |
| New England aster | <i>Aster novae-angliae</i> |
| Water plantain | <i>Alisma plantago-aquatica</i> |
| Grassleaf goldenrod | <i>Euthamia occidentalis</i> |
| Wetland goldenrod | <i>Solidago rugosa</i> |
| Stow colored foxtail | <i>Setaria pumila</i> |
| Purple stemmed aster | <i>Aster purpureus</i> |
| Butterbush | <i>Cephalanthus occidentalis</i> |
| Softstem bulrush | <i>Scirpus tabernaemontani</i> |
| Flat-top white aster | <i>Aster umbellatus</i> |
| Bearded sedge | <i>Carex cornosa</i> |
| Fringe sedge | <i>Carex chilia</i> |
| Giant goldenrod | <i>Solidago gigantea</i> |
| Deertongue grass | <i>Eriophorum angustatum</i> |
| Nodding beggar-tick | <i>Rhus typhina</i> |
| Water penny | <i>Sparganium angustifolium</i> |
| Small fruited bulrush | <i>Scirpus microcarpus</i> |
| Water hemlock | <i>Cicuta occidentalis</i> |
| Wild rye | <i>Elymus canadensis</i> |
| Devil's beggar ticks | <i>Blitum frondosum</i> |
| Purple stemmed angellio | <i>Aristida stricta</i> |
| Water dock | <i>Rumex crispus</i> |
| Shivow sedge | <i>Carex lasiocarpa</i> |
| Pennsylvania smartweed | <i>Eleocharis acicularis</i> |
| Swamp milkweed | <i>Asclepias tuberosa</i> |
| Riverbank wild rye | <i>Elymus riparius</i> |
| Hop sedge | <i>Carex lasiocarpa</i> |
| Blue flag iris | <i>Iris versicolor</i> |
- Submergent Habitat - Mixed Vegetation Grouping** Seeding at a rate of 2 lbs. per acre
- | | |
|--|----------------------------------|
| Arrowhead | <i>Sagittaria latifolia</i> |
| Giant burreed | <i>Sagittaria arifolia</i> |
| Burton bush | <i>Cephalanthus occidentalis</i> |
| Water plantain | <i>Alisma plantago-aquatica</i> |
| Turtle head | <i>Chamaecrista glabra</i> |
| Yellow flag | <i>Iris pseudacorus</i> |
| Swamp rose | <i>Rosa carolina</i> |
| *Button bush to be planted as 8" potted or bare root plants. | |
- Adjacent Disturbed Area - Seed at a rate of 20 lbs. per acre**
- | | |
|---------------|----------------------|
| Redtop grass | <i>Agrostis alba</i> |
| Red fescue | <i>Festuca rubra</i> |
| Meadow fescue | <i>Festuca ovina</i> |
- SHRUB PLANTING LIST**
 Sized at 2 foot plants spaced at 4' centers within first 10' of Zone C.
- | | |
|------------------|--|
| Greydon spruce | - <i>Juniperus horizontalis</i> , esp. <i>repens</i> |
| Blue spruce | - <i>Juniperus horizontalis</i> |
| Red-twig dogwood | - <i>Cornus sericea</i> |
| Common alder | - <i>Alnus incana</i> |
| Black locust | - <i>Robinia pseudoacacia</i> |
| Artemisia | - <i>Artemisia vulgaris</i> |



- WETLAND MITIGATION NOTES:**
1. Wetland to be monitored for a period of 5 years.
 2. Areas of emergent and submergent vegetation to be overcovered by not less than 6 inches. Topsoil to be applied to those areas.
 3. Final grading to be irregular.
 4. Seeding to occur upon completion of topsoiling. No later than July 31, of the year of construction.

OLD ORCHARD ESTATES,
 Part of Lot 4, Township 13, Range 7
 TOWN OF PENDELTON, NIAGARA COUNTY, NY
 WETLANDS MITIGATION PLAN
 SCALE = 1" = 100'
 JOB NO. 130.001 5/22/03 SHEET 1 OF 2

STATE WETLAND BOUNDARY DELINEATED ON
 9-6-01, APPROVED ON 3/18/02 BY
 GREG G. ECKER, WLDLIFE TECH II.

ALL TEMPORARY ACCESS ROADS FOR WETLAND
 CONSTRUCTION TO BE REMOVED AND RESTORED
 BY CLIENT UPON COMPLETION L OF MITIGATION
 AREA AND FINAL APPROVAL BY THE USACE &
 NYSDEC.

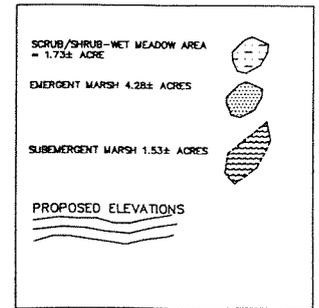
ALL EXCESS SOIL MATERIAL RESULTING FROM
 MITIGATION CONSTRUCTION TO BE REMOVED
 FROM TEMPORARY STORAGE AREA AND UTILIZED
 ON SUBDIVISION PARCEL.

TOTAL MITIGATION AREA = 7.54± ACRES

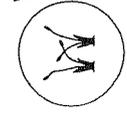
ZONE A - SUBMERGENT MARSH HABITAT - 1.53± ACRES
 MAXIMUM DEPTH 1.5' - 3' - BELOW EXISTING ELEVATION

ZONE B - EMERGENT MARSH HABITAT - 4.28± ACRES
 MAXIMUM DEPTH 0.6' - 1.0' - BELOW EXISTING ELEVATION

ZONE C - SCRUB/SHRUB-WET MEADOW HABITAT - 1.73± ACRES
 MAXIMUM DEPTH 0.3' - 0.6' - BELOW EXISTING ELEVATION

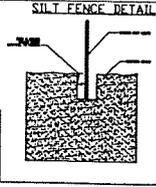


Wilson Environmental Technologies, Inc.
 1331 N. Forest Rd. Suite 250, Williamsville, NY 14221
 (716) 688-6900 Fax (716) 688-5884

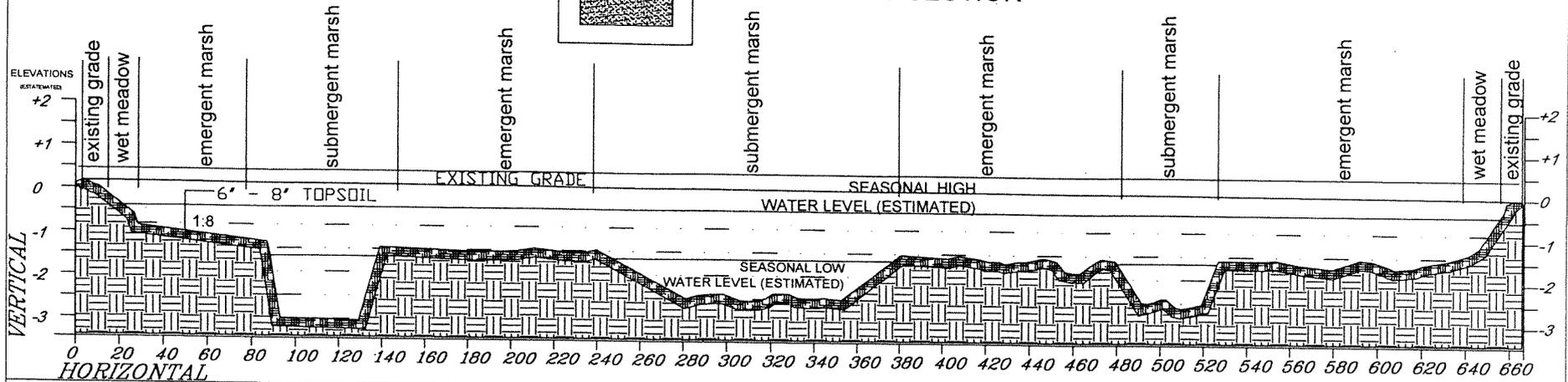


CONSTRUCTION NOTES

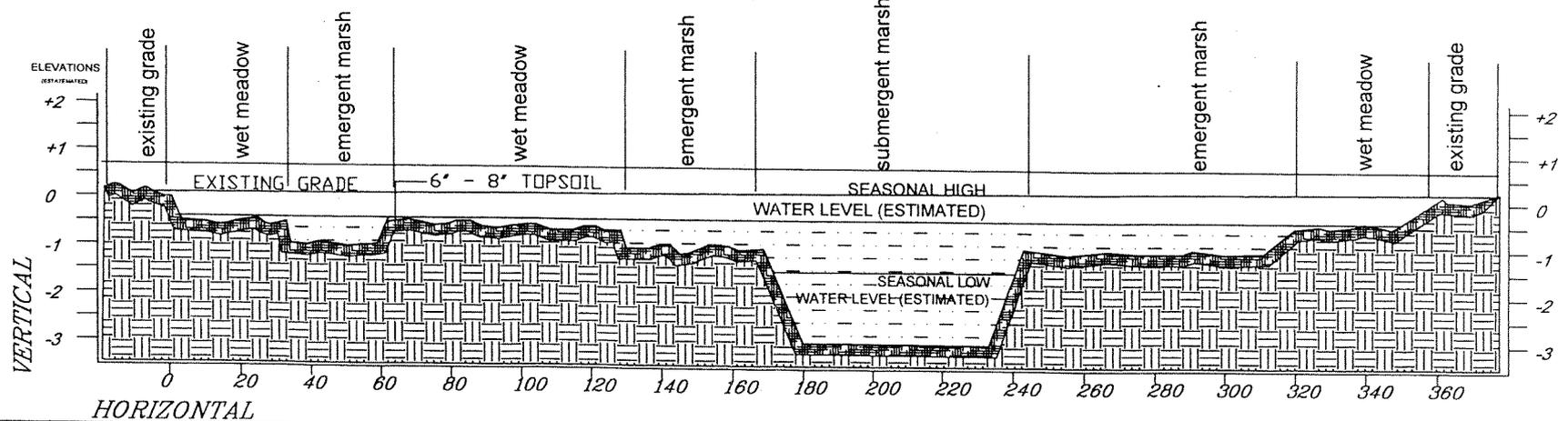
1. ALL DIMENSIONS UNLESS TO BE CONSIDERED BY 1/8" IN TO BE REPLACED WITH TOPSOIL.
2. FINE GRASSES SHALL BE SPECIFICALLY AS DIRECTED BY WETLAND CONSULTANT.
3. UPLAND HARDY TREES TO REMAIN AT EXISTING GRADE ELEVATION.
4. SUBURGENT WETLAND TO BE SPECIFIED WITH NEAREST WETLAND CATEGORIES SEE SHEET 14 IN ACCORDANCE WITH SURVEY. WETLAND LOCATION TO BE SURVEYED BY FLS FROM PRIOR TO SPECTING PERMITS.
5. ALL APPROPRIATE EROSION CONTROL METHODS TO BE APPLIED DURING CONSTRUCTION. FILTER FABRIC SILT FENCING TO BE STAKED AND LOCATED WITH 100' FROM ACHES WITH 50' FROM BOUNDARY.
6. EXISTING WETLAND TO BE MAINTAINED WITH CHANGE CONSTRUCTION PERMITS DURING CONSTRUCTION IN ACCORDANCE WITH SURVEY. WETLAND LOCATION TO BE SURVEYED BY FLS FROM PRIOR TO SPECTING PERMITS.



A-A CROSS-SECTION



B-B CROSS-SECTION



CROSS SECTIONS
AS SHOWN

OLD ORCHARD ESTATES SUDIVISION
WETLAND MITIGATION/CREATION PLAN

TOWN OF PENDLETON
NIAGARA COUNTY, NEW YORK



Wilson Environmental Technologies, Inc.
1331 N. Forest Rd. Suite 250, Williamsville, NY 14221
(716) 688-6900 Fax (716) 688-5884

JOB NO. 130.001 SHEET 2 OF 2

OLD ORCHARD ESTATES
D/A Processing No. 95-986-27(2)
Niagara County, New York Quad: TONAWANDA
EAST
Sheet 4 of 13

IV. PROPOSED MITIGATION SITE

A. Existing Site Conditions

The proposed mitigation site is located within an area of dense shrubland and old field located in the central and west portions of the site within upland areas surrounded by successional shrub/saplings wetlands. Elevations within the proposed mitigation average 585 feet USGS.

B. Site Ecology

The majority of the site consists of dense shrubland areas which border on successional woodlot vegetation communities. Successional shrubland is best defined as a community that occurs on sites that have been cleared otherwise disturbed. Typically this community will have at least a 50% cover of shrubs. Shrubs commonly found in this vegetation community and on this parcel include graystem and silky dogwood (*Cornus foemina*, FAC; *C. amomum*, FACW), arrowwood (*Viburnum dentatum*, FAC), tartarian honeysuckle (*Lonicera tatarica*, FACU), common and glossy buckthorn (*Rhamnus cathartica*, FAC; *R. frangula*, FAC) and hawthorn (*Crataegus spp.*, FACU). The herbaceous area within the dense shrubland contains sparse herbaceous species including common strawberry (*Fragaria virginiana*, FACU) and white avens (*Geum canadense*, FAC) and others.

C. Soils

Soils in the vicinity of the proposed mitigation area consist primarily of somewhat poorly drained Odessa soils. The Odessa series consists of deep, somewhat poorly drained soils on the lowland plain in the northern part of the county. This soil formed in red glacial lake sediment deposits high in clay and silt content. Slope ranges from 0 to 3 per cent, but 0 to 2 per cent is most common. The Ap Horizon is a very dark brown 10YR3/2 silt loam. Soil colorations in the B Horizon consist of a reddish brown 5YR5/3 with common fine distinct strong brown 7.5YR5/6 and common medium distinct gray 5YR5/1 mottles. The B2 Horizon has a hue of 5YR to 2.5YR, values of 3 to 6, and chroma of 2 to 4, except some subhorizons have a 7.5YR hue. Texture in the B2 horizon is silty clay loam to clay. Associated soils include Churchville, Niagara, Cosad Ovid and Rhinebeck soils.

V. WETLAND MITIGATION CONCEPT PLAN

A. Mitigation Overview

The USACE has stated for other mitigation project that an acceptable mitigation ratio for impacts resulting from the placement of fill material into the jurisdictional areas would be a ratio of 1.5 :1. The creation will provide an emergent component to an otherwise seasonally saturated wetland. The emergent area will provide amphibian habitat, which is limited and confined to the existing drainage ditch areas in addition to providing an increase wading bird habitat.

WET proposes to create a total of approximately 2.01± acres of varied wetland complexes containing areas of submergent marsh, emergent, and wet meadow/scrub/shrub habitat.

HABITAT/ ELEVATION RANGE	WATER DEPTH (Max.)	SIZE (Acres)	VEGETATION COVER
Submergent Marsh 670.0' - 668.5	3.00 feet	1.53±	Cattail - <i>Typha latifolia</i> Rice cut-grass - <i>Leersia oryzoides</i> Sedge - <i>Carex comosa</i> , <i>C. intumescens</i> Smart weed - <i>Polygonum pennsylvanicum</i> Rice cutgrass - <i>Leersia oryzoides</i> Water plantain - <i>Alisma subcordatum</i> Button Bush - <i>Cephalanthus occidentalis</i> (See Planting Spec - Sheet 1 of 2, Mitigation Concept Plan)
Emergent Marsh 671.0 - 670.0'	1.0 feet	4.28±	Soft rush - <i>Juncus effusus</i> Fox sedge - <i>Carex vulpinoidea</i> Rice cut-grass - <i>Leersia oryzoides</i> Sedge - <i>Carex lurida</i> , <i>C. crinita</i> Soft rush - <i>Juncus effusus</i> Silky dogwood - <i>Cornus amomum</i> (See Planting Spec - Sheet 1 of 2, Mitigation Concept Plan)

Scrub/shrub - Wet Meadow 671.5' - 671.0	0.6 feet	1.73±	Bulrush, wool grass - <i>Scirpus atrovirens</i> Sedges - <i>Carex lurida</i> , <i>C. crinita</i> , Silky dogwood - <i>Cornus amomum</i> Spicebush - <i>Lindera benzoin</i> (See Planting Spec - Sheet 1 of 2, Mitigation Concept Plan)
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B. MITIGATION IMPLEMENTATION

WET is proposing the creation of the varied wetland habitat through the excavation of a upland area within an old field habitat. The mitigation areas will be excavated to achieve the required depth. The excavation is intended to intercept the seasonally high groundwater in addition to drawing seasonal highwater flow hydrology from the existing tributary system adjacent to the west east portion of the mitigation area. Hydrology will be maintained through the compaction of soils to severely limit the rate of permeability of the constructed wetland and through excavating a channel to allow direct flow from the existing tributary. An overflow spillway will be provided to the downstream side of the tributary, set at an elevation to be determined at time of construction. A saturated soil condition is expected to be maintained for a significant portion of the growing season within the upper reaches of the seasonal high water table.

ZONE C— SCRUB-SHRUB/WET MEADOW

HABITAT DESCRIPTION

Zones C is to be constructed within the outer ring the mitigation area surrounding Zones A and B. Currently this community exists as a shrubland and old field vegetation community. The community occurs on sites that have been cleared or otherwise disturbed and this community has at less than a 50% cover of shrubs. Shrubs commonly found in this area of the parcel include graystem and silky dogwood (*Cornus foemina*, FAC; *C. amomum*, FACW), arrowwood (*Viburnum dentatum*, FAC), and hawthorn (*Crataegus spp.*, FACU). The herbaceous species common to this area include timothy grass (*Phleum pratense*, FACU), sweet vernal grass (*Anthoxanthum odoratum*, FACU), hairgrass (*Deschampsia flexuosa*, FACU), perennial ryegrass (*Lolium perenne*, FACU) Canada goldenrod (*Solidago canadensis*, FACU), common dandelion (*Taraxacum officinale*, FACU), and small white aster (*Aster vimineus*, FAC).), small white aster (*Aster vimineus*, FAC) and white sweetclover (*Melilotus alba*, FACU).

Soils sampled within this upland area corresponded, in general, to the somewhat poorly drained Odessa silty clay. The Odessa series is deep, nearly level somewhat poorly drained soil formed in red glacial lake sediment deposits high in clay and silt content. Typically this soil has a perched water table in the

upper part of the subsoil from December through May. Permeability is slow to very slow in the subsoil and available water capacity is high.

OBJECTIVE

A scrub/shrub - wet meadow habitat complex will be created by the excavation of soil material to the necessary ground elevation within the creation area. The construction of the replacement habitat will serve to provide nesting, rearing and forage wading birds, amphibians and American woodcock, amphibians and reptiles.

PROPOSAL

A scrub/shrub - wet meadow habitat will be constructed in a non wetland area adjacent to Zone B. The constructed mitigation plan would incorporate an irregularly shaped boundary/margin sloping gradually to incorporate a wet meadow/emergent marsh. The margins of the boundary would have a shallow grade (1 vertical to 6 horizontal) connecting to the Zone B. Using shallow excavation, as indicated on the concept plan map, a constructed depression will create a scrub/shrub habitat. Areas of slightly higher elevated upland shrubland habitat will occupy the area adjacent to the mitigation construction, merging into the existing wetland located to the north of the proposed mitigation area.

PROPOSED PROTOCOL FOR ESTABLISHMENT OF SCRUB/SHRUB - WET MEADOW COMPLEX

- 1) Remove all vegetation with a bulldozer or similar equipment from the mitigation creation area as noted on the mitigation plan map. Trees and shrubs which are removed should be clipped with a commercial wood chipper and stockpiled outside the limits of the wetland construction area. This material may be suitable for use as mulch or erosion control in the future.
- 2) Strip topsoil from this area and stockpile for re-use as a seedbed in the areas to be excavated. No stockpiling of topsoil or subsoil will occur within the delineated wetland area. **Topsoil should not be mixed with subsoil.**
- 3) Excavate to planned elevation and contour as indicated on the plan profile map to be provided. Any shrub and tree species existing along the margin of the planned construction will be avoided by maintaining a proper construction distance. The wetland construction area must be over-excavated to accommodate the re-application of 8 - 10 inches of topsoil. The existing open water may have to be de-watered to the appropriate planting depth with commercial pumps at the time of construction for the placement of required topsoil material. The planting

zone, (depth to 3 feet below seasonal high water level) will be planted with the appropriate wetland species (see below).

- 4) Maintain slopes of 1:6 (V:H) or flatter within the area of construction area. Areas sloping up from Zone B will have slopes of 1:6 (V:H) on all sides of excavated areas.
- 5) Over-excavate planned elevations and re-apply a minimum of 8 - 10 inches of topsoil over the entire Zone area for the purpose of planting shrub species. Allow the recharge of hydrology within the planting area.
- 6) Shrubs planted within the mitigation area, adjacent to Zone B will be protected from man-induced disturbance, such as mowing or pruning to allow for establishment and growth of the shrub species. Native shrubs species will be planted (sized approximately 2 -3 feet high when planted) and planted in staggered rows with plants and rows on 4 - foot centers. The shrubs will be planted along the out edge of the mitigation area and will infringe into the wet meadow/emergent marsh zone of the wetland in limited numbers as to not create a dominance of shrub species in that zone.

<u>SHRUB SPECIES</u>	<u>SCIENTIFIC NAME</u>
Graystem dogwood	<i>Cornus foemina. spp. racemosa</i>
Silky dogwood	<i>Cornus amomum</i>
Spicebush	<i>Lindera benzoin</i>
Common elderberry	<i>Sambucus canadensis</i>
Meadowsweet	<i>Spiraea latifolia</i>
Arrowwood	<i>Viburnum dentatum</i>

ZONE A & B — EMERGENT - SUBMERGENT MARSH

OBJECTIVE

An emergent marsh habitat complex will be created by the excavation of soil material to the necessary ground elevation within the creation area. The construction of the replacement habitat will serve to provide nesting, rearing and forage wading birds, dabbling ducks, amphibians and American woodcock, amphibians and reptiles.

PROPOSAL

A shallow water emergent marsh will be constructed in a non wetland area adjacent to the existing tributary to Beeman Creek (Appendix B, Sheet 1). The constructed mitigation plan would incorporate an irregularly shaped depressions sloping gradually to the middle of the complex at no less than a 1 vertical to 8

horizontal. Using shallow excavation, as indicated on the concept plan map, a constructed depression will create a mixed wet meadow and emergent marsh habitat. Areas of slightly higher elevated shrubland habitat will occupy the upland tongues and opposing ends of the mitigation site.

PROPOSED PROTOCOL FOR ESTABLISHMENT OF
EMERGENT MARSH COMPLEX

- 1) Remove all vegetation with a bulldozer or similar equipment from the mitigation creation area as noted on the mitigation plan map.
- 2) Strip topsoil from the proposed impact wetland mitigation area and stockpile for re-use as seedbed material within the mitigation area. **If soil is found to contain purple loosestrife and common reed grass plant species, clean topsoil will be used in the designated mitigation area.** No stockpiling of topsoil or subsoil will occur within the delineated wetland area.
- 3) Over-excavate to planned elevation and contour as indicated on the plan profile map to be provided and entitled Old Orchard Estates Wetlands Mitigation/Creation Plan Sheet 1 of 2. The final shallow water emergent marsh will be a maximum of 24 inches in depth after the re-application 6 - 8 inches of topsoil material and seed with a wetland vegetation seed mixture (see below). Shrub and tree species along the margin of the tongues will be avoided by maintaining a proper construction distance.
- 4) Maintain slopes of 1:8 (V:H) or flatter within the area of moist-soil wet meadow construction. These areas are to be re-seeded with suitable mixture.
- 5) After planned elevations have been obtained, re-apply a minimum of 6-8 inches of topsoil over the entire excavated shallow water marsh area for the purpose of holding the seed mixture.
- 6) Seeding:
 - A. Prepare seeding area by scarifying soil with a York rake or similar equipment.
 - B. No fertilizer or lime will be necessary.
 - C. Seeding should be done before June 15 or after September 15 unless irrigated.

D. Northeast Wetland Diversity Mix seed mixture to be applied within the emergent marsh area at a rate of 2.0 lbs/acre: Emergent Marsh Wetland seed mixture species as follows (Also See Planting Specs on Sheet 1 of 2 of the Mitigation Concept Plan)

<u>SPECIES</u>	<u>SCIENTIFIC NAME</u>
Green bulrush	<i>Scripus atrovirens</i>
Soft rush	<i>Minulus regens</i>
Fox sedge	<i>Carex vulpinoidea</i>
Ditch stone crop	<i>Penthorum sediodes</i>
Reed meadow grass	<i>Glyceria grandis</i>
Blue vervain	<i>Verena hastata</i>
Common boneset	<i>Eupatorium perfoliatum</i>
Rice cutgrass	<i>Leersia oryzoides</i>
Canada Manna grass	<i>Glyceria canadensis</i>
Common sneezeweed	<i>Helenium autumnale</i>
Joe-pye weed	<i>Eupatorium maculatum</i>
New England aster	<i>Aster novae-angliae</i>
Water plantain	<i>Alisma plantago-aquatia</i>
Goldenrod	<i>Euthamia graminifolia</i>
Rough goldenrod	<i>Solidago rugosa</i>
Straw colored flatseed	<i>Cyperus strigosus</i>
Purple stemmed aster	<i>Aster puniceus</i>
Softstem bulrush	<i>Scirpus tabernaemontanii</i>
Flat-top white aster	<i>Aster umbellatus</i>
Bearded sedge	<i>Carex comosa</i>
Fringed sedge	<i>Carex cinita</i>
Giant goldenrod	<i>gigantea</i>
Deertongue grass	<i>Panicum clandestinum</i>
Nodding beggar-tick	<i>Bidens cernua</i>
Water parsnip	<i>Sium suave</i>
Small fruited bulrush	<i>Scirpus micocarpus</i>
Water hemlock	<i>Cicuta maculata</i>

Wild rye grass	<i>Elymus canadensis</i>
Devil's beggar tick	<i>Bidens frondosa</i>
Purple stemmed angelica	<i>Angelica atropurpurea</i>
Water dock	<i>Rumex verticillatus</i>
Shallow sedge	<i>Carex lurida</i>
Pennsylvania smartweed	<i>Polygonum pennsylvanicum</i>
Swamp milkweed	<i>Asclepias incarnata</i>
Riverbank wild rye	<i>Elymus reparius</i>
Hop sedge	<i>Carex lupulina</i>
Blue flag iris	<i>Iris versicolor</i>

E. Non-wetland/Transitional Zone Seeding Mixture:

<u>SPECIES</u>	<u>SEEDING RATE</u>	<u>APPLICATION AREA</u>
Meadow fescue (<i>Festuca pratensis</i>)	20 lbs/acre	Upland/marginally wet soils.
Redtop grass (<i>Agrostis alba</i>)	3 lbs/acre	Upland/marginally wet soils.

C. MONITORING SCHEDULE

Monitoring of the mitigation areas will be conducted for five years following the first full growth cycle. During the five year period, WET is proposing to assess the success of the mitigation creation during the second and third growing seasons in accordance with accepted USACE procedures. The purpose of the monitoring will be to determine if the plant community in the mitigation area has become dominated by FACW and obligate vegetation species. A per cent areal cover estimate of the herbaceous layer will be conducted using a random quadrat test to determine if a dominant FACW - OBL species cover has developed.

Within the mitigation creation area, soil and hydrology will also be monitored to determine if soil saturation/inundation conditions occur for a duration long enough to promote the development of hydric soil characteristics and hydrophytic vegetation. The soils should exhibit a higher degree of saturation within the upper 12 inches of the A-B Horizon. Ponding and saturation to the surface should be evident for a longer duration during the growing season.

In addition to vegetation and hydrology information, each monitoring report will contain a summary of wildlife activity in or adjacent to the mitigation wetland

areas. Fixed station mitigation site photographs will accompany each report. Monitoring will Purple loosestrife and common reed grass (*Phragmites australis*) is an exotic, invasive species which can quickly become established in wetland areas. This undesirable species must be removed, either by hand pulling of young plants, by applying a commercial herbicide or through biological control. The broad-leaved herbicide which could be used is Rodeo (active ingredient, glyphosphate 53.5%). This herbicide is approved for use in or near fresh water wetlands. According to the manufacturer, Rodeo is non-volatile, non-toxic to animals, does not bioaccumulate in the food chain, and produces no residual soil activity.

Addition attempts at controlling purple loosestrife is through the use of biological methods. Currently the NYSDEC is experimenting with the use of two species of beetles, *Galerucella calmeriensis* and *G. pusilla*. The beetles are specific to purple loosestrife and were first introduced to North America in 1992. Currently the beetle has been introduced to several locations in the Tonawanda Creek watershed by the NYSDEC. *Galerucella calmeriensis* and *G. pusilla* have very similar life habitats. Adults emerge in the spring from hibernation in leaf litter and feed on the new leaves and shoots of purple loosestrife. The egg laying phase lasts approximately two months in the spring and eggs are laid in clusters of two to ten daily on the plant stem and in the leaf axils. A female can lay 300-400 eggs per year, and the adult lives 8 - 10 weeks. Larvae feed on bud, leaf, and stem tissue. Pupation takes place in the soil or ground cover near the plants. From egg to adult takes about 6 weeks, and there is generally one generation per year. e conducted in mid to late summer of the aforementioned report years.