

Wetland Mitigation Plan
Rubbert Site Phase 2
Township 20 North, Range 16 East, Section 17
Southern Fox River/Lake Michigan Bank Region

Near-Site Mitigation for USH 45 Freeway Conversion
Project I.D. 6200-15-00
Winnebago County
CTH G – CTH II

December 2011

Prepared by the Wisconsin
Department of Transportation
NE Region – Green Bay
Environmental Unit

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SITE PURPOSE

The primary purpose of the Rubbert Mitigation Site Phase 2 (Phase 2) is to provide near-site, project specific compensation for wetland losses resulting from the USH 45 Freeway Conversion Project, which extends from CTH G to CTH II in Winnebago County (Attachment 1). The Wetland Mitigation Plan for this site was developed based on guidance in the Wisconsin Department of Transportation (WisDOT) Wetland Mitigation Banking Technical Guideline, March 2002.

PROJECT WETLAND IMPACTS

The conversion of a 4.6 mile portion of USH 45 from an expressway to a freeway will include the construction of east and west frontage roads and the addition of 3 overpasses. This construction will result in the unavoidable fill of 13.264 acres of wetland. Wetland impacts for wetland and water quality permitting purposes is summarized below in Table 1.

Table 1: Project Wetland Impacts

Wetland Type	Wetland Impact (Acres)
Shrub-Scrub (SS)	2.904
Wet Meadow (M)	6.501
Wooded Swamp (WS)	0.269
Riparian Emergent (RPE)	0.185
Aquatic Bed (AB)	3.364
Shallow Marsh (SM)	0.041
Total	13.264

SCHEDULE OF COORDINATION/ SITE BACKGROUND

An on-site/near-site search was performed using Geographic Information System software (GIS). This search used digital soils data, digital wetland inventory mapping, United States Geological Survey (USGS) digital raster graphic topographic maps, and aerial photography. A 40-acre X 40-acre search grid was developed based on quarter-quarter section data. This data in the quarter-quarter section grid was then ranked based on distance from the new highway, presence of hydric soils, presence of farmed areas that appeared to be suitable for wetland restoration/creation, and evidence of ditching on the aerials.

Several potential properties were identified through the GIS search and a preliminary windshield survey of these properties was completed by WisDOT in August 2010 and by WisDOT, USACE and WDNR in November 2010. Additionally, WisDOT-owned land adjacent to the existing Rubbert wetland mitigation site was also considered.

The USH 45 freeway conversion project schedule was accelerated and construction was set to begin in summer 2011. On-site or near-site mitigation for the project was preferred over debiting the wetland impacts to an existing state-wide bank site. The USACE added a condition to the project's Section 404 permit that project impacts would be banked at Hope

Marsh unless an on-site/near-site mitigation site plan and design were developed and sufficiently complete by the end of 2011. In order to facilitate the development of a mitigation site by the condition deadline, WisDOT decided to pursue wetland mitigation on the parcels adjacent to the existing Rubbert Site. These parcels were already owned by WisDOT and eliminated the additional time needed for real estate negotiations and acquisition.

In 2001, WisDOT acquired the former Gary Rubbert Property for wetland mitigation purposes. The original intent for the 107.84 acre property was to create a small wetland mitigation bank site. The highway project to convert USH 45 from a two-lane rural highway to a four-lane rural expressway prompted the need for on-site/near-site wetland mitigation in the area. WisDOT decided to utilize the land west of the Larsen Drainage District ditch for project-specific wetland mitigation. In 2007, the Rubbert Mitigation Site (Phase 1) was constructed on 42.5 acres of this land. The additional land was not used for wetland mitigation purposes at the time of the Phase 1 construction. The remaining property has been leased and was actively farmed through 2011.

The Rubbert Mitigation Site Phase 2 (Attachment 2) will consist of the two non-contiguous parcels from the initial acquisition and will total 54.815 acres. The two WisDOT-owned parcels are located to the east of the existing Phase 1. The Larsen Drainage District ditch separates Phase 1 from Phase 2. An 18.76 acre parcel (Ory parcel) located to the north of the existing Phase 1 was also considered for the Phase 2 mitigation. WisDOT anticipates sufficient wetland credit will be attained from the two WisDOT-owned parcels so the Ory parcel is not being pursued at this time.

The WisDOT met with the Larsen Drainage District on May 31, 2011 to discuss the preliminary design for Phase 2. It was decided that the drainage ditch would not be modified by WisDOT and a 50 foot buffer area surrounding the ditch, similar to that of Phase 1, would be incorporated into the site design.

WisDOT met with USACE and WDNR on November, 29 2011 to discuss the preliminary site design. Resource agency comments were taken into consideration for the site design.

COMPENSATION RATIOS AND WETLAND CREDIT

The WisDOT Wetland Mitigation Banking Technical Guideline suggests a compensation ratio of 1.5:1 for all on-site and near-site wetland mitigation constructed concurrent with wetland loss. At this compensation ratio, 19.896 acres of wetland credit would be needed for this project.

The roadway project is impacting 3.173 acres of shrub-scrub and wooded swamp; however WisDOT is not proposing to incorporate these wetland types in the Rubbert Phase 2 site design. WisDOT is proposing an adjusted compensation ratio of 2:1 for the shrub-scrub and wooded swamp wetland impacts, requiring 6.346 acres of wetland credit. (Compensation ratio is pending WDNR response.) The other 10.091 acres of wetland impact will remain at

the 1.5:1 compensation ratio and will require 15.137 acres of wetland credit. A total of 21.483 acres of wetland credit will be needed for this roadway project.

The Rubbert Phase 2 mitigation site is anticipated to provide 31.174 acres of wetland credit; however, creation of the on-site berms will require the filling of 0.898 acres of existing farmed wetland. This impact will be mitigated on-site at a 1.5:1 compensation ratio, requiring 1.723 acres of credit. The adjusted anticipated wetland credit from the Rubbert Phase 2 mitigation site is 29.827 acres (Attachment 3). If excess acres are indeed present at the end of the monitoring requirements, a consolidation site report will be prepared and submitted for approval.

DESCRIPTION OF THE WETLAND MITIGATION SITE

Soil of the site (Attachment 4) is predominately Menasha Clay (Mn). Menasha soils are poorly drained and are listed as hydric on the NRCS hydric soils list. The site also consists of Poy Silty Clay Loam (Pt) which is a poorly drained soil. This soil is also listed on the NRCS hydric soils list. Neenah Silty Clay Loam (NhA) is mapped in a few locations along the perimeter of the site. This soil is somewhat poorly drained and is identified as a hydric inclusion soil on the NRCS hydric soils list. The site soils are further displayed in Table 2.

Table 2: Soils Present at the Rubbert Site Phase 2

Map Unit	Soil Type	Slope
Mn	Menasha Clay	0-2 percent slopes
NhA	Neenah Silty Clay Loam	0-3 percent slopes
Pt	Poy Silty Clay Loam	0-2 percent slopes

Topography of the site is generally flat with small hills and depressions (Attachment 5). A natural drainage trends from the northeast to the southwest across both parcels. The Larsen Drainage District ditch cuts through this drainage. The natural drainage creates a north-south trending depression in the northwest portion of the northeast parcel and through the center of the southwest parcel. Higher ground and manmade berms surround these low areas and help to make them somewhat enclosed depressions.

Surface drainage of these parcels has been modified by a network of drain tiles. A drain tile exploration was completed on both parcels in August 2011 (Attachment 6). Both parcels were found to have functioning and abandoned drain tiles. These tiles aid in moving water across the parcels into the drainage ditch.

Surface geology of the site consists of glacial and postglacial lake deposits of Holocene and late Wisconsin age. U.S. Geological Survey mapping of the region shows the area of the Phase II Site to be clay and silt. These sediments are chiefly offshore and deep-water deposits of former glacial and postglacial lakes; some deposits are in small separate basins. The site is part of the Arrowhead River and Daggets Creek Watershed (Attachment 7).

Current Land Use: The parcels are actively farmed and were planted with alfalfa and corn in 2011.

Adjacent Land Use is a mix of agricultural, wetland and recreation. Agricultural parcels are located to the north and east of the Phase 2 parcels. Rubbert Wetland Mitigation Site Phase 1 consists of preserved and restored wetland and enhanced upland. This site is located to the west of the proposed Phase 2. Additionally, the Wiowash Trail borders Phase 1 to the west.

Existing Wetlands: Phase 2 parcels were delineated in 2011 and 8.9 acres of farmed wetland were identified (Attachment 8).

Wetlands are shown adjacent to and near the proposed Phase 2 site on the Wisconsin Wetland Inventory (WWI) mapping. Significant adjacent WWI wetland types include:

T3/S3K (T) Forested (3) Broad leaved deciduous (S) Shrub-scrub (3) Broad leaved deciduous (K) Wet soil, Palustrine

T3/E1K (T) Forested (3) Broad leaved deciduous (E) Emergent/Wet Meadow (1) Persistent (K) Wet soil, Palustrine

Additionally, the adjacent Rubbert Wetland Mitigation Site Phase 1 was delineated in 2011 and consists of 25.32 acres of wet meadow, shallow marsh and shrub/forested wetland communities.

WETLAND FUNCTIONS AND VALUES

Wetlands impacted by the USH 45 freeway conversion project are predominately wet meadow, aquatic bed, and shrub-scrub. Functions and values lost include flood storage, filtering to improve water quality, and wildlife habitat. Therefore, the mitigation site is designed to promote flood storage, improve water quality by reducing sediment loss, fertilizers, and herbicides from agricultural fields, and increase floral diversity in proposed planting areas of the site.

GENERAL GOAL

The goals of the Rubbert Wetland Mitigation Site Phase 2 are to provide self-sustaining, passively managed wetlands within the existing landscape and to compensate for wetland function loss caused by the USH 45 freeway conversion project.

CONSTRUCTION AND PROJECT OBJECTIVES

The main project objective is to create and restore converted wetlands to wet meadow and shallow marsh plant communities. This will be accomplished through disabling drain tiles, excavating to intercept groundwater, and creating berms. Additionally, two fixed plate weirs and riprap spillways will be installed to aid in restoration of the wetland. The Larsen Drainage District drainage ditch, which separates Phase 1 from the proposed Phase 2, will be maintained and surrounded by a 50-foot upland buffer. Revegetation of the site will be

accomplished through planting desired native species and through natural ingress from adjacent wetlands and the soil's seed bank. As aerial vegetative cover by different wetland types is dependent on the site's resulting hydrologic regime and duration, vegetative cover may vary through time. In addition to wetland creation and restoration, the design of the Rubbert Site Phase 2 will include on-site enhancement of upland and existing wetland communities.

CONCEPTUAL PLAN AND DESIGN

The plan for construction of the Rubbert Site Phase 2 is in the process of being developed and will be shared with the USACE and WDNR as it becomes available (Attachment 9). The main focus of the design includes the following: removing existing agricultural drain tiles, excavating to intercept groundwater, and creating berms with the waste material from the excavation to slow the process of surface water from leaving the site. Survey data and results of the drain tile exploration were used to establish elevations for the design.

From the 2011 drain tile exploration, it was determined that there are 6 functioning drain tiles in the northeast parcel. Five lateral tiles merge into a main tile, which discharges into the drainage ditch. Some of these tiles assist in draining the adjacent farm fields. To avoid flooding issues on the adjacent properties, the main line will be rerouted along the northern edge of the parcel from its entry point on the parcel. The existing 8-inch pipe will be replaced with a 10-inch, non-porous pipe and will discharge into the drainage ditch. The existing drain tiles will be disabled during construction by exposing the tile lines and crushing the pipe. Trenches will be backfilled with the excavated material and the fragmented tile.

The southwest WisDOT parcel contains 5 functioning drain tiles. Four lateral tiles merge into a main tile, which discharges into the drainage ditch. These tiles are not connected to adjacent farm fields and will be disabled as described above.

Within the southwest parcel, excavation is proposed to create a shallow marsh and wet meadow complex. The fixed weir elevation will be set to 756 ft to avoid flooding neighboring properties and to eliminate fisheries concerns with the adjacent drainage ditch. A central shallow marsh area will be created by expanding upon the existing swale and will have a bottom elevation of 755 ft (Attachment 10). To maximize the wet meadow community, this area will slowly grade up to an elevation of 756 ft.

Proposed excavation on the northeast parcel is intended to create shallow marsh and wet meadow communities. The fixed weir for this parcel will also be set to 756 ft. The northwest portion of this parcel will be excavated to an elevation of 755 ft to support a shallow marsh environment. The site will slowly grade up to an elevation of 756 ft to create a wet meadow area.

The site is being designed to maintain a balance between excavation and embankment so there is not a need to haul material in or out of the site. To achieve this balance, excavated material will be used to create berms on the north, west, and south edges of the southwest

parcel and the west, north, and east edges of the northeast parcel. Berms will be created with 6-foot horizontal to 1-foot vertical slopes and 10-foot tops. Additional excavated materials will be wasted in existing topographically high areas within the site. These areas include the eastern portion of the southeast parcel and the southern corners of the northeast parcel. These waste areas will be graded to match existing terrain elevations of the adjacent properties.

All excavation areas and berms will be covered with topsoil recovered from on-site and will be prepared for seeding. All other areas proposed for plantings but not disturbed with grading operations will have the seed bed prepared, including mowing if necessary, prior to the seeding operation.

It is anticipated that 34.467 acres of wetland will be created, restored or enhanced at the Rubbert Phase 2 mitigation site (Attachment 11). This acreage can be further broken down into 23.911 acres of wet meadow and 10.556 acres of shallow marsh. Wetland areas will be planted following construction in 2012 with a wetland vegetation mixture of various forbs, sedges, rushes, and grasses. Table 3 lists the recommended seed mix and planting rates for the wet meadow and shallow marsh areas.

Table 3: Wet Meadow and Shallow Marsh Planting Mix

Common Name	Scientific Name	Seeding Rate	% By Weight
Fringed Brome	<i>Bromus ciliates</i>	1.24 lbs/acre	15.50
Bluejoint	<i>Calamagrostis canadensis</i>	0.08 lbs/acre	1.00
Virginia Wild Rye	<i>Elymus virginicus</i>	2.02 lbs/acre	25.25
Reed Manna Grass	<i>Glyceria grandis</i>	0.26 lbs/acre	3.25
Annual Rye	<i>Lolium italicum</i>	1.30 lbs/acre	16.25
Fowl Bluegrass	<i>Poa palustris</i>	1.54 lbs/acre	19.25
Prairie Cordgrass	<i>Spartina pectinata</i>	0.50 lbs/acre	6.25
Pointed Brome	<i>Carex scoparia</i>	0.14 lbs/acre	1.75
Fox Sedge	<i>Carex vulpinoidea</i>	0.40 lbs/acre	5.00
Green Bulrush	<i>Scirpus atrovirens</i>	0.08 lbs/acre	1.00
Wool Grass	<i>Scripus cyperinus</i>	0.04 lbs/acre	0.50
Soft Stem Bulrush	<i>Scirpus validus</i>	0.16 lbs/acre	2.00
Water Plantain	<i>Alisma trivale</i>	0.08 lbs/acre	1.00
Swamp Milkweed	<i>Asclepias incarnate</i>	0.02 lbs/acre	0.20
Swamp Aster	<i>Aster puniceus</i>	0.01 lbs/acre	0.10
Flat-Topped Aster	<i>Aster umbelltus</i>	0.01 lbs/acre	0.10
Joy-Pye Weed	<i>Eupatorium maculatum</i>	0.01 lbs/acre	0.10

An upland buffer mixture of three native grasses and three native forbs will be planted on the upland buffer area surrounding the site. Species to be planted in the upland buffer area are listed in Table 4. The planting will follow construction in 2012. There are a total of 20.243 acres of upland at the site. The ratio for establishing upland credits is 1 acre of credit for every 4 acres of upland buffer; however, creditable upland buffer acres cannot

exceed 20% of total wetland acreage. The total upland buffer credit for the site is 6.893 acres.

Table 4: Upland Buffer Planting Mix

Common Name	Scientific Name	Seeding Rate
Switch Grass	<i>Panicum virgatum</i>	1 lb/acre
Indian Grass	<i>Sorghastrum nutans</i>	5 lbs/acre
Big Bluestem	<i>Andropogon gerardii</i>	5 lbs/acre
Yellow Coneflower	<i>Ratibida pinnata</i>	3 oz/acre
Black Eyed Susan	<i>Rudbeckia hirta</i>	1 oz/acre
Purple Prairie Clover	<i>Dalea purpurea</i>	4 oz/acre

MONITORING PLAN

Monitoring will be done as proposed in the WisDOT Wetland Mitigation Technical Guideline. Years one and three following construction will include Basic Compliance monitoring, field assessment, and wetland boundary delineation including comparison to the design specifications for the majority of the site. Basic Compliance monitoring will also include documenting plant species present noting prevalent species and incidental observations of use by wildlife. During monitoring years, hydrology will be monitored by staff gauge or monitoring well at a minimum of a weekly frequency during periods of high water. This will continue to the extent necessary to determine the hydroperiod at the site. Once hydrology criteria are met, hydrology monitoring will be reduced to every other week, or once a month. The final report on wetland acreage done at year five will include all of those items from years one and three, and an additional wetland assessment. All reports shall be submitted by December 31 of the respective monitoring year in which they are required, and shall be forwarded to Joey Shoemaker at: St. Paul District, Army Corps of Engineers, Regulatory Branch at Old Fort Square, 211 N. Broadway, Suite 221, Green Bay, WI 54303.

PERFORMANCE MEASURES

Site specific performance criteria: Criteria (i.e., acreages and vegetative species present) may fluctuate as the site becomes established. Coordination between WisDOT, USACE and DNR will address any concerns that arise during this process.

1 – The total acreage for the Rubbert Phase 2 Mitigation Site is 54.815 acres. It is anticipated that 26.943 acres of wetland will be created/restored and 7.524 acres of wetland will be enhanced at the end of the 5-year monitoring period. Also included in the design are 20.243 acres of upland buffer areas. Acreage of wetland creation/restoration will be assessed at the 3-year monitoring, and measures will be proposed to increase wetland acreage if necessary. The USACE 1987 manual wetland criteria along with applicable regional supplements will be used to make the wetland determinations.

2 – Of the 34.467 acres of wetlands created, restored or enhanced, it is proposed that 23.911 acres will be wet meadow. The area of establishing wet meadows shall have saturated soils at or within 12-inches of the soil surface for 30 consecutive days or two periods of 15 consecutive days. This condition shall be excused in the event of drought years. If this performance measure is found to be unfeasible due to site conditions, the DOT, DNR, and USACE will meet to re-assess this item and decide whether the site will be modified, the performance measure will be modified, or whether compensation ratios will be modified.

3 – Floristic diversity for the wet meadow will be assessed in years 1, 3, and 5. After establishment, a minimum of 80 percent of the vegetative cover in the wet meadow must be native wetland species. Wetland species refers to species that are facultative or wetter on the USFWS “National List of Plant Species That Occur in Wetlands.” The presence of a minimum of 15 native perennial wetland species by year 5 will ensure appropriate floristic diversity within the wet meadow. At least 50 percent of these 15 native species shall each have at least 10 percent aerial coverage. Plant species will be measured in transects (1/40th acre plot size) with one plot per 2.5 acres. The total number of species will be determined by the sum of all species identified in wet meadow plots. If the required frequency/type of species is below what is specified at year 5 and site conditions allow, the wet meadow area(s) will be replanted in order to bring the number/type back to standard. If this performance measure is found to be unfeasible due to site conditions, the DOT, DNR, and USACE will meet to reassess this item and decide whether the site will be modified, the performance measure will be modified, or whether compensation ratios will be modified.

4 – It is proposed that 10.556 acres at the Rubbert Phase 2 Mitigation Site will be shallow marsh. The area for establishing a shallow marsh shall have saturated soils at the surface, or inundation by up to 6-inches of water. During the growing season, these conditions must be maintained for a minimum of any of the following: 60 consecutive days, two periods of 30 consecutive days, or four periods of 15 consecutive days, all under normal to wetter than normal conditions. Inundation at depths to 18-inches is permissible during the growing season following a 2-year or greater storm/flood event, provided the duration does not exceed 28 days and that the depth drops back to 6-inches within the 30-days. If this performance measure is found to be unfeasible due to site conditions, the DOT, DNR, and USACE will meet to reassess this item and decide whether the site will be modified, the performance measures will be modified, or whether compensation ratios will be modified.

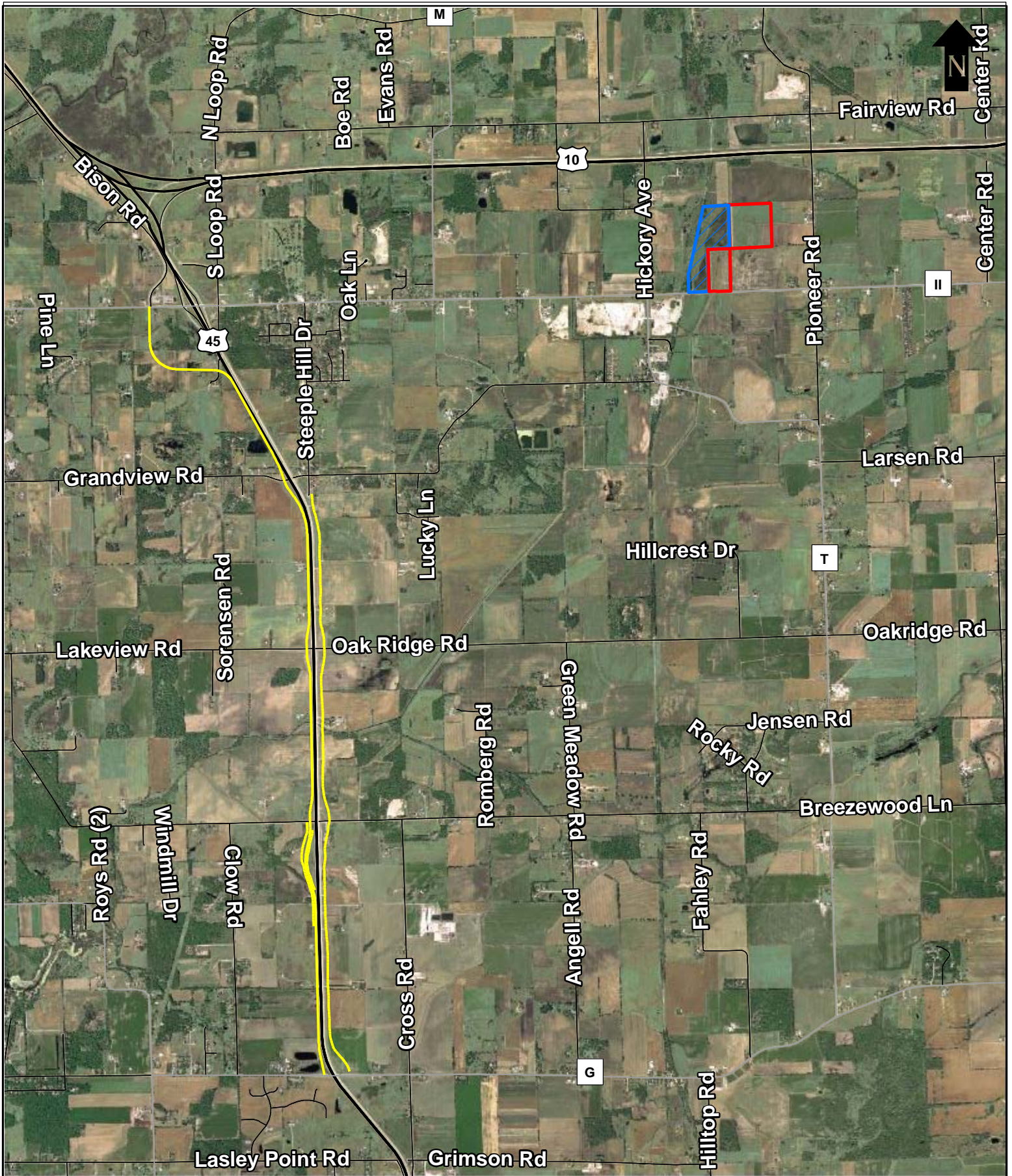
5 – Floristic diversity for the shallow marsh will be assessed in years 1, 3, and 5. Species present in the shallow marsh must be tolerant of shallow inundation. After establishment, a minimum of 80 percent of the vegetative cover in the shallow marsh must be native wetland species. Wetland species refers to species that are facultative or wetter on the USFWS “National List of Plant Species That Occur in Wetlands.” The presence of a minimum of 10 native perennial wetland species by year 5 will ensure appropriate floristic diversity with the shallow marsh. At least 50 percent of these 10 native species shall each have at least 10 percent aerial cover. Plant species will be measured in transects (1/40th acre plot size) with one plot per 2.5 acres. The total number of species will be determined by the sum of all species identified in shallow marsh plots. If the required number/type of species




is below what is specified at year 5 and site conditions allow, the shallow marsh area(s) will be replanted in order to bring the number/type back to standard. If this performance measure is found to be unfeasible due to site conditions, the DOT, DNR, and USACE will meet to reassess this item and decide whether the site will be modified, the performance measure will be modified, or whether compensation ratios will be modified.

6 – Invasive species will be controlled so that no more than 10 percent of vegetative cover is dominated by invasive species. No more than 5 percent of the wetland areas may be dominated by reed canary grass, 1 percent by purple loosestrife, or 1 percent by giant reed grass. The presence of invasive species will be assessed in all the monitoring reports, and controls including removal by hand, application of an approved herbicide, bio-control, mowing, and burning put in place if needed. If this performance measure is found to be unfeasible due to site conditions, the DOT, DNR, and USACE will meet to reassess this item and decide whether the site will be modified, the performance measure will be modified, or whether compensation ratios will be modified

SITE MANAGEMENT/PROTECTION

The site is being designed to minimize maintenance. Berms will have 10-foot tops with 6:1 side slopes to discourage muskrat damage. Water control structures will be fixed weirs. Vegetation control will include removal of *Phragmites australis* (Giant Reed Grass), whether native or non-native, *Lythrum salicaria* (Purple Loosestrife), and *Phalaris arundinacea* (Reed Canary Grass) as necessary. There are no plans at this time for transfer of ownership of the site, so it will stay under the protection of WisDOT. Restrictive covenants (Attachment 12) will also be applied to the deed to protect the site in perpetuity.




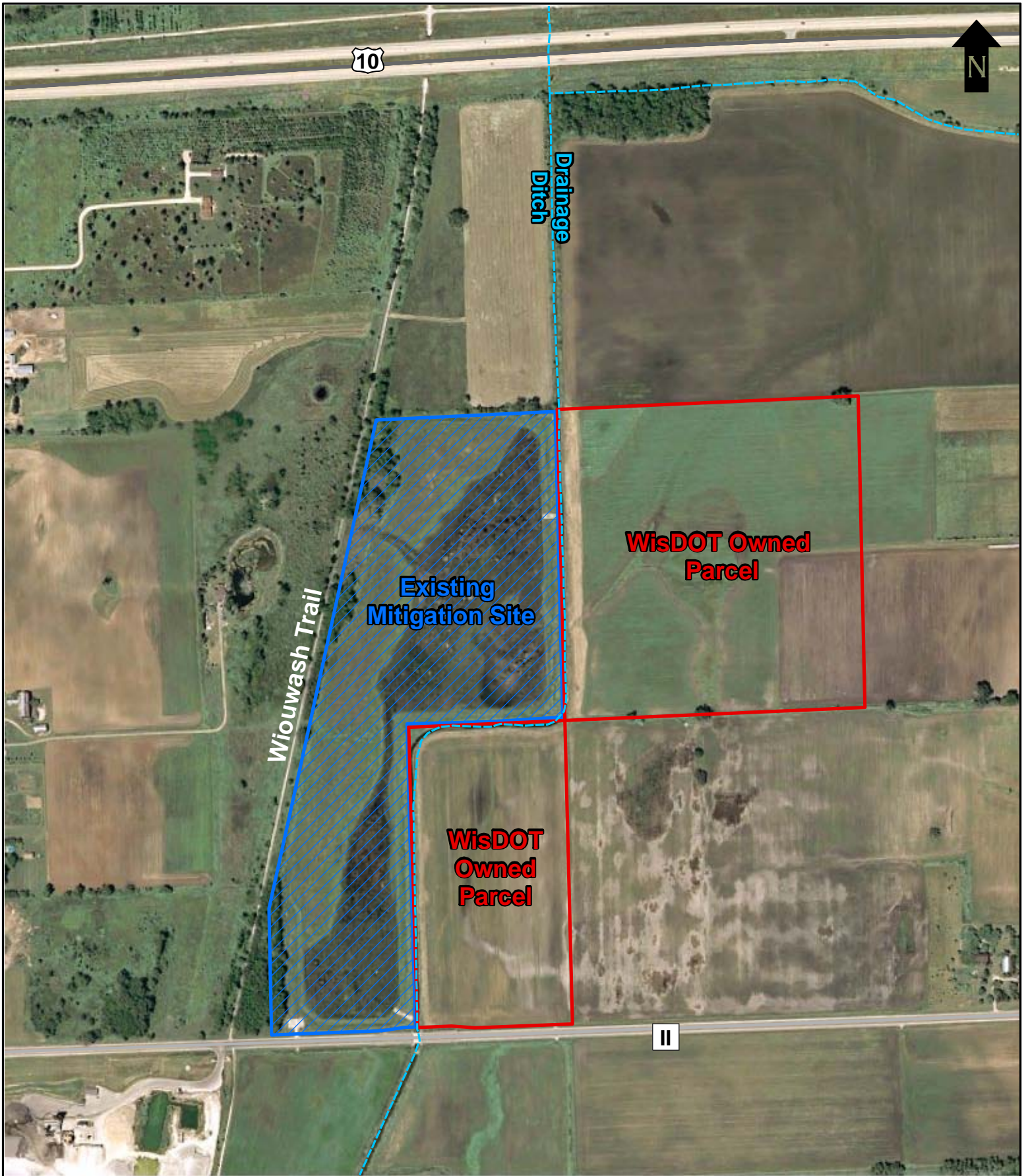
-  Frontage Roads
-  Rubbert Phase II
-  Rubbert Phase I

USH 45 Frontage Roads Alignment

Winnebago County

Attachment 1

0 0.25 0.5 1
 Miles

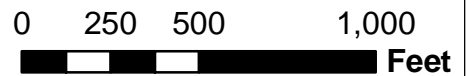


- Rubbert Phase II
- Rubbert Phase I
- Drainage Ditch

Rubbert Wetland Mitigation Site Phase II Overview

Winnebago County

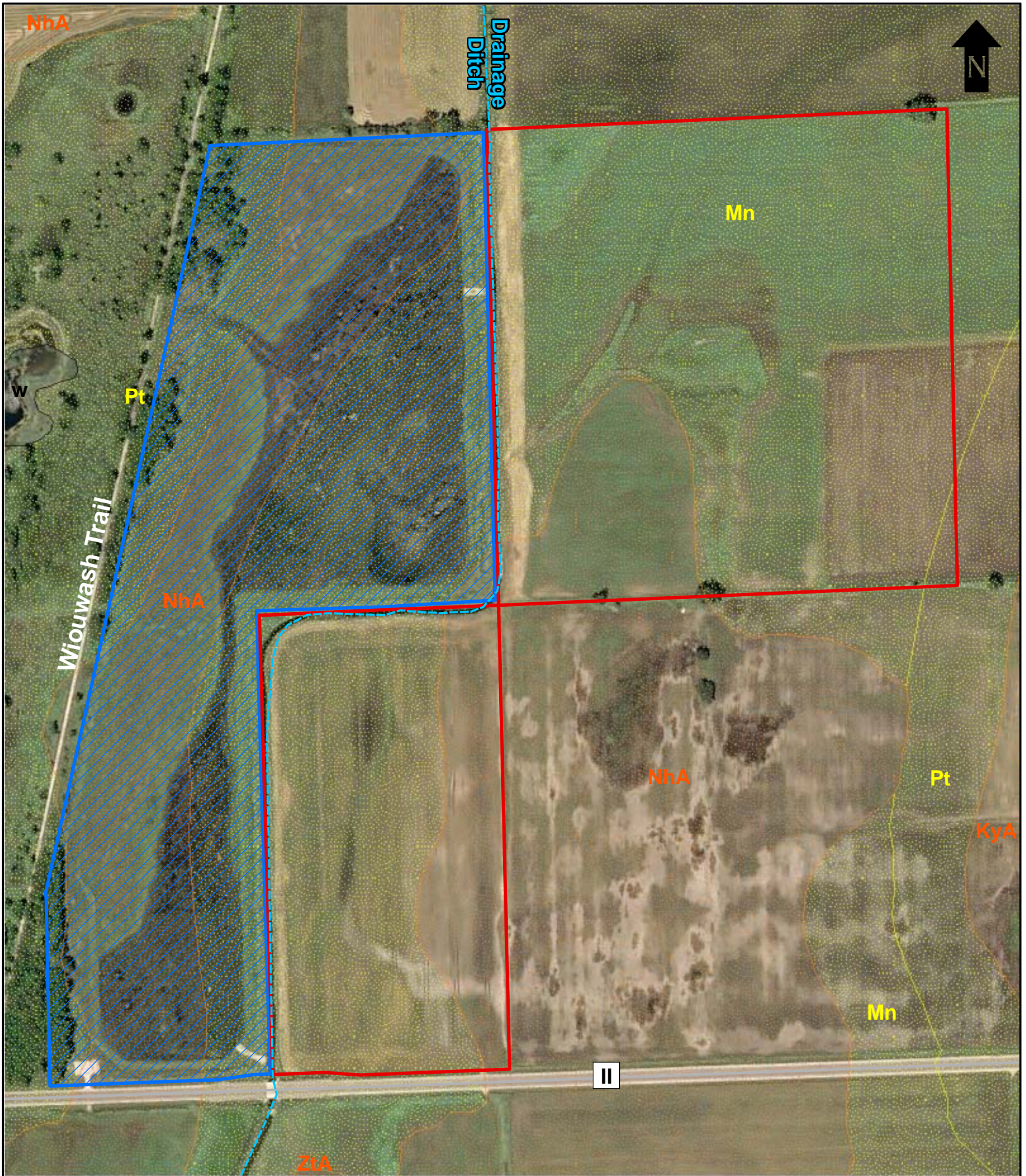
Attachment 2



Rubbert Phase 2 Anticipated Site Credits

		Actual Acres	Ratio	Acres of Credit
Creation/Restoration	Wet Meadow (WM)	21.876	1:1	21.876
	Shallow Marsh (SM)	5.067	1:1	5.067
	Total Creation/ Restoration	26.943		26.943
Enhancement	Wet Meadow (WM)	2.035	3:1	0.678
	Shallow Marsh (SM)	5.489	3:1	1.83
	Total Enhancement	7.524		2.508
Total Wetland		34.467		29.451
Upland Buffer*		20.243 (6.893)	4:1	1.723
Wetland Fill		-0.898	1.5:1	-1.347
Total		54.71		29.827

*Creditable upland buffer acres cannot exceed 20% of the total wetland acreage

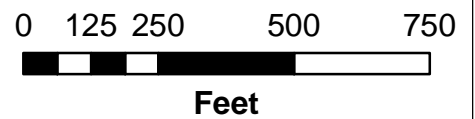


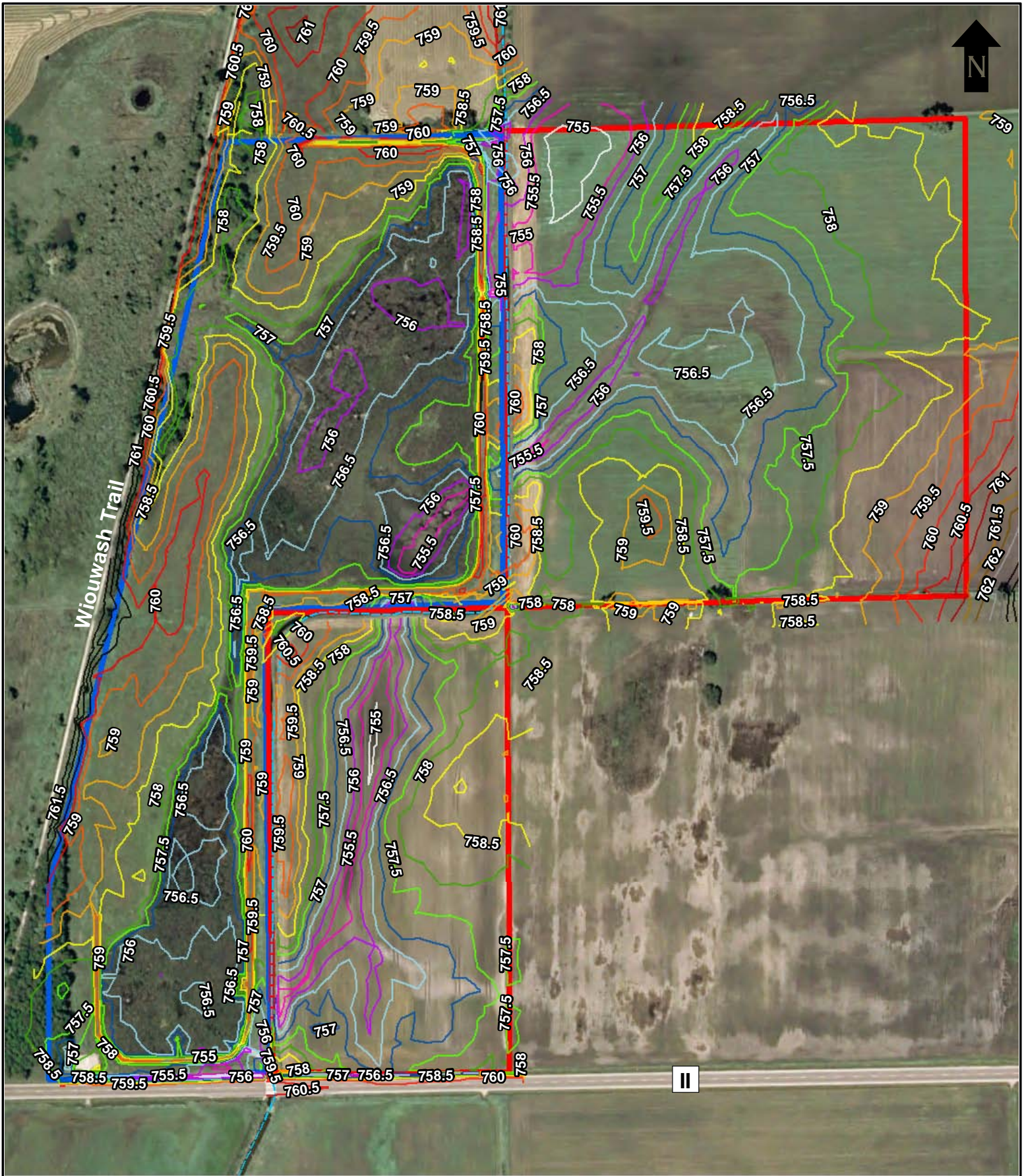
- Non-Hydric
- Hydric Component
- Hydric Inclusion
- Rubbert Phase II
- Rubbert Phase I

Rubbert Wetland Mitigation Site Phase II Soils

Winnebago County

Attachment 4



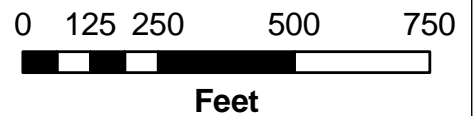


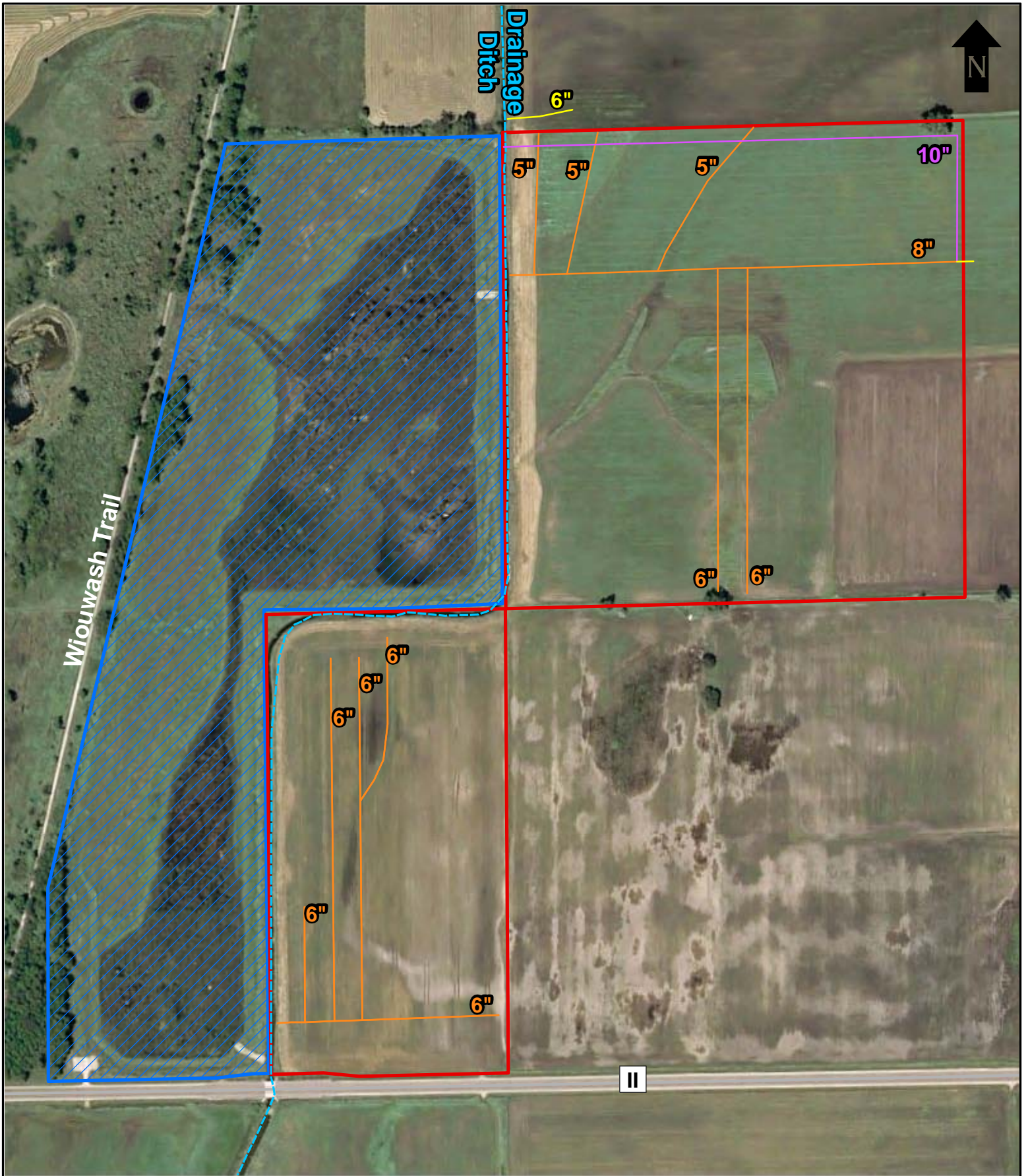
- Rubbert Phase 1
- Rubbert Phase 2
- Drainage Ditch

Rubbert Wetland Mitigation Site Phase II Initial Topography

Winnebago County

Attachment 5



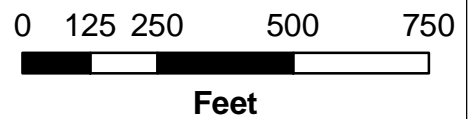


- New Drain Tile
- Preserve Drain Tile
- Disable Drain Tile
- Rubbert Phase II
- Rubbert Phase I
- Drainage Ditch

Rubbert Wetland Mitigation Site Phase II Drain Tiles

Winnebago County

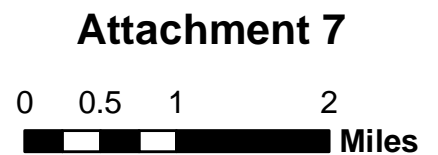
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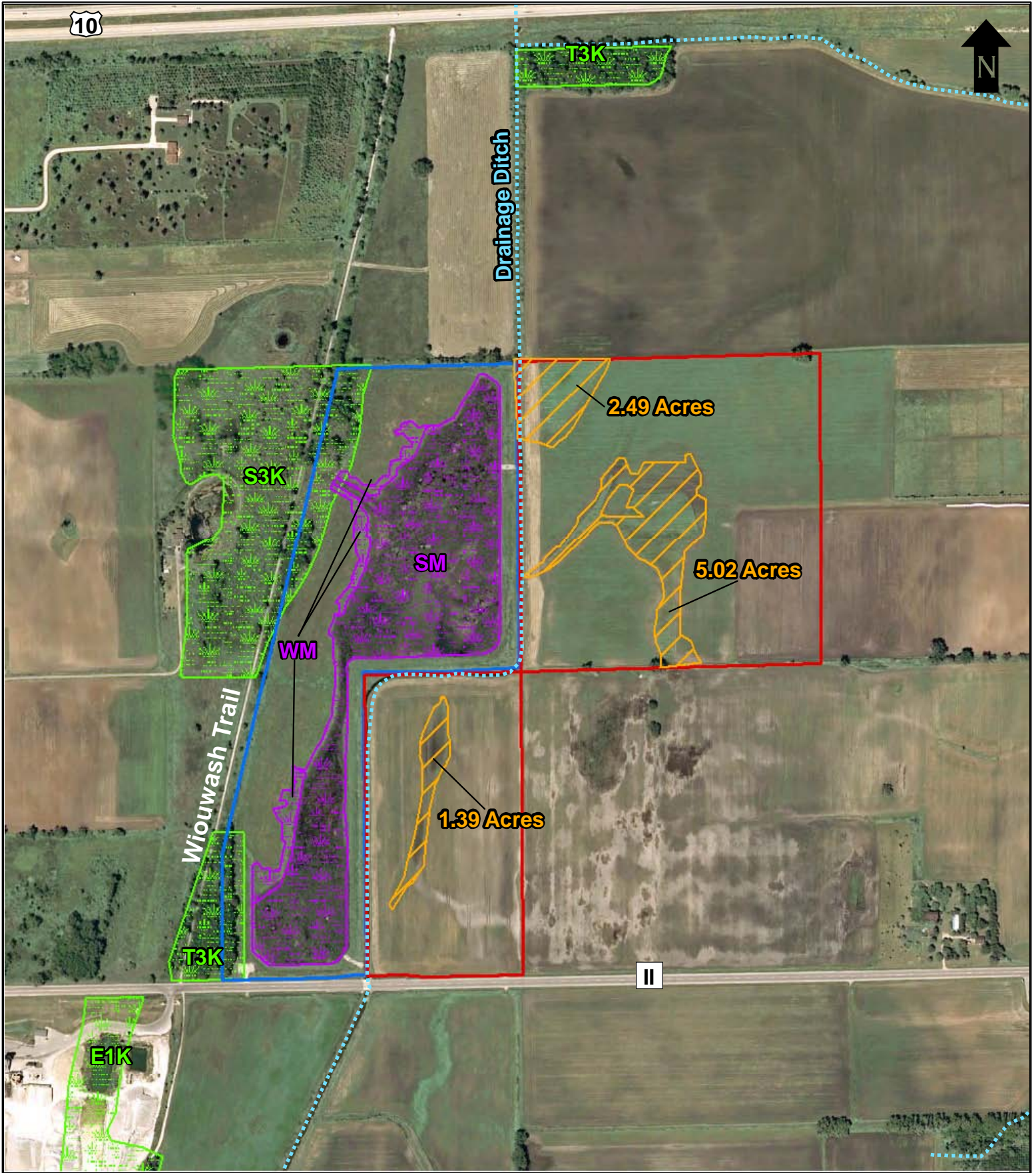









- Watershed Boundaries
- Streams
- Frontage Roads
- Rubbert Phase II
- Rubbert Phase I

**Rubbert Wetland
Mitigation Site Phase II
Watersheds**
Winnebago County



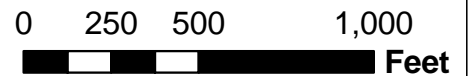


-  2011 Phase 2 Existing Wetland
-  WI Wetland Inventory
-  2010 Phase I Delineation
-  Rubbert Phase II
-  Rubbert Phase I

Rubbert Wetland Mitigation Site Phase II Existing Wetland

Winnebago County

Attachment 8



PROJECT ID: 6200-15-72
 WITH: N/A

COUNTY: WINNEBAGO

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT OSHKOSH - USH 10 CTH G - CTH II NON-HWY WINNEBAGO COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6200-15-72		

ORDER OF SHEETS

Section No.	Title
1	Title
2	Typical Sections and Details (Includes Erosion Control Plans)
3	Estimate of Quantities
3	Miscellaneous Quantities
4	Right of Way Plat
5	Plan and Profile
6	Standard Detail Drawings
7	Sign Plates
8	Structure Plans
9	Computer Earthwork Data
9	Cross Sections

TOTAL SHEETS =



STATE PROJECT NUMBER
6200-15-72

**USH 45
 WETLAND MITIGATION SITE**

**DRAFT PS&E
 12-9-2011**

DESIGN DESIGNATION

A.A.D.T.	=	N/A
A.A.D.T.	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A

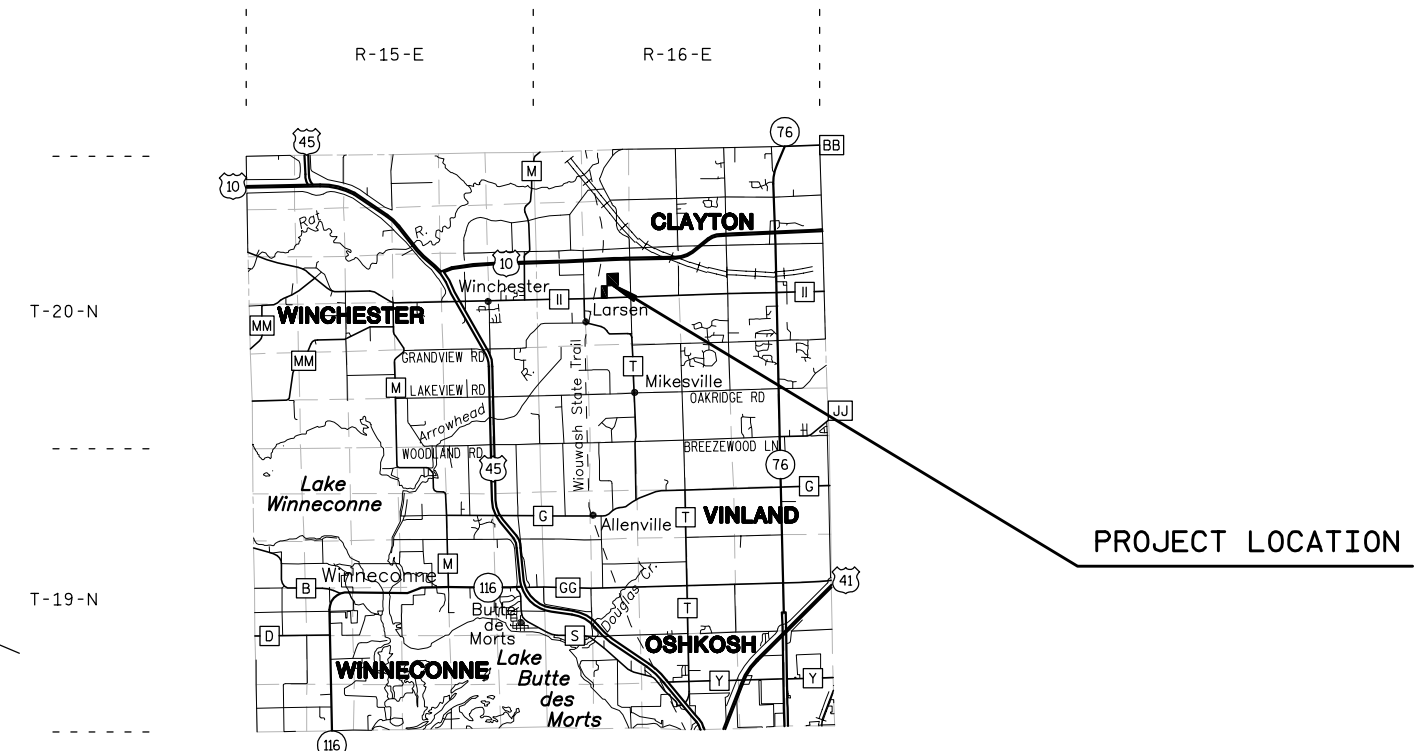
CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
DITCH LINE	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	



LAYOUT
 SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WINNEBAGO COUNTY, HORIZONTAL DATUM NAD 83 (1991). ALL DISTANCES ARE GROUND. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, NGVD 29.

ORIGINAL PLANS PREPARED BY
GREMMER & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 Stevens Point • Fond du Lac
 93 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
 (920) 924-5720 • fax (920) 924-5725

(Date) JEFFREY A. CHVOSTA, PE

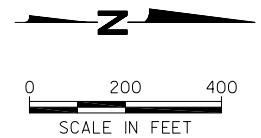
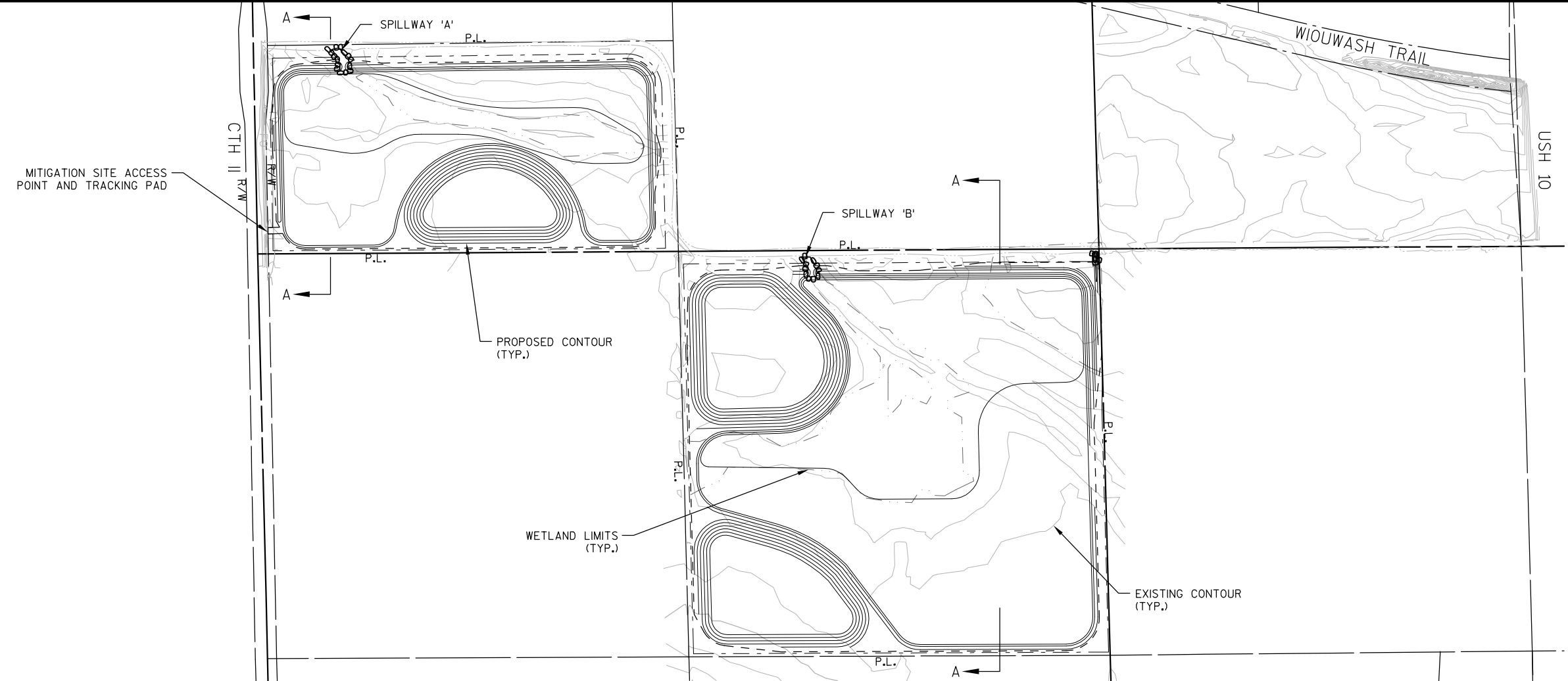
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY

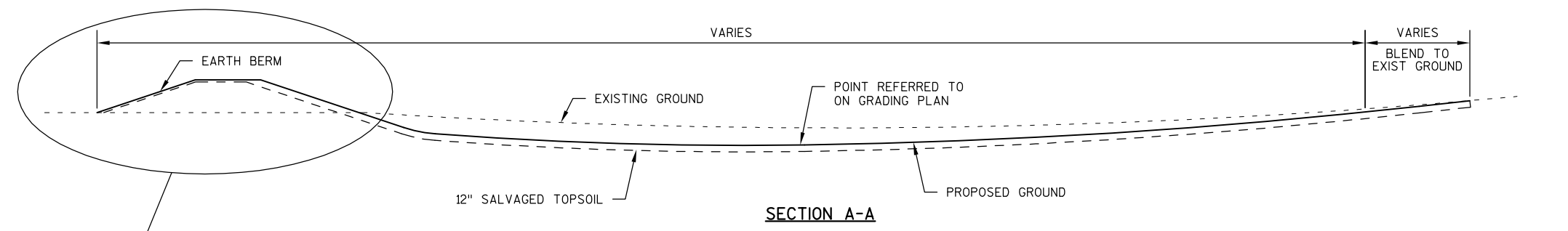
Surveyor	WISDOT NORTHEAST REGION
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	W R BERTRAND
Regional Examiner	
Regional Supervisor	R ROOYAKKERS
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
 DATE: _____ (Signature)

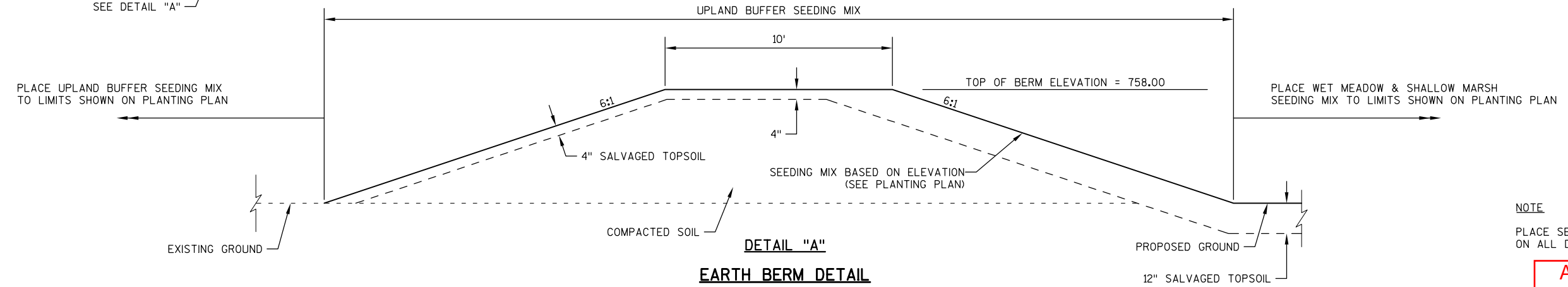
Attachment 9 **E**



PLAN VIEW



SECTION A-A

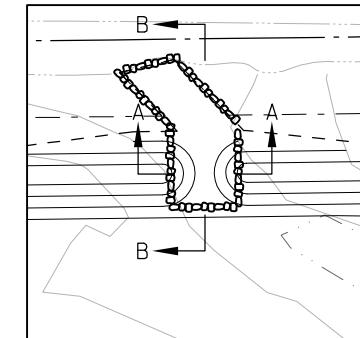
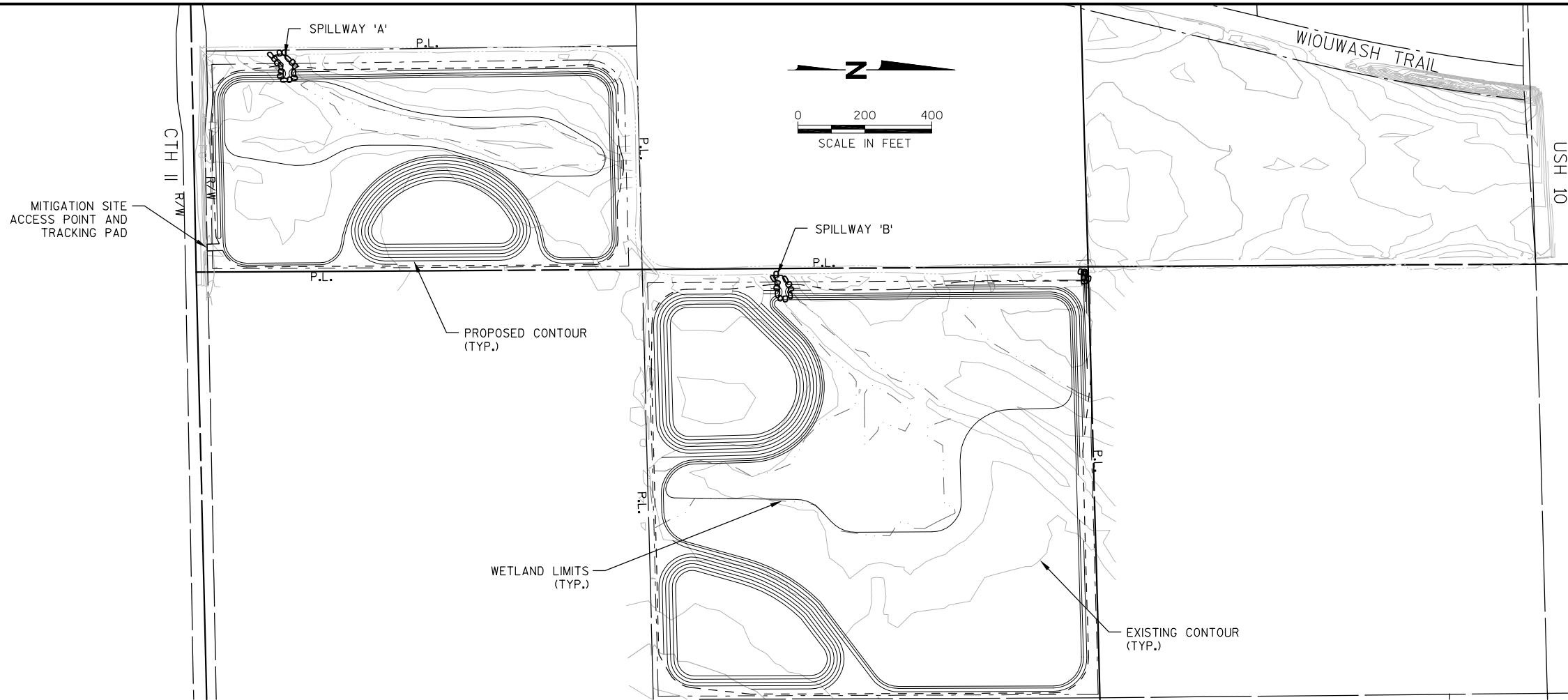


DETAIL "A"

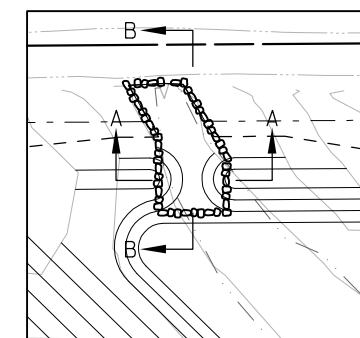
EARTH BERM DETAIL

NOTE
PLACE SEEDING TEMPORARY
ON ALL DISTURBED AREAS

Attachment 9

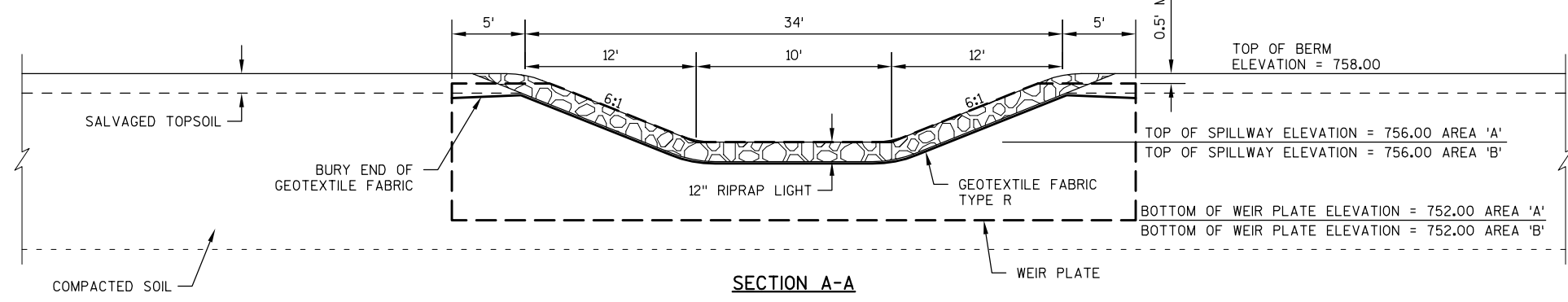


SPILLWAY "A"

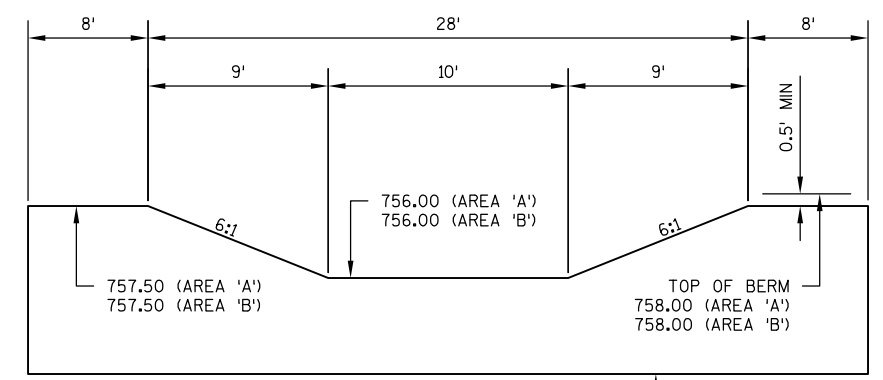


SPILLWAY "B"

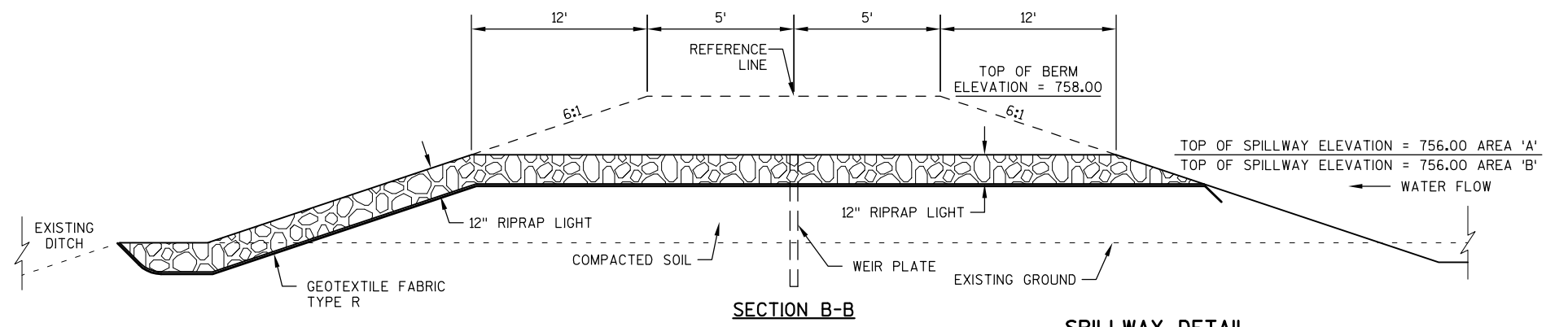
PLAN VIEW



SECTION A-A



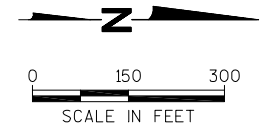
WEIR PLATE



SECTION B-B

SPILLWAY DETAIL

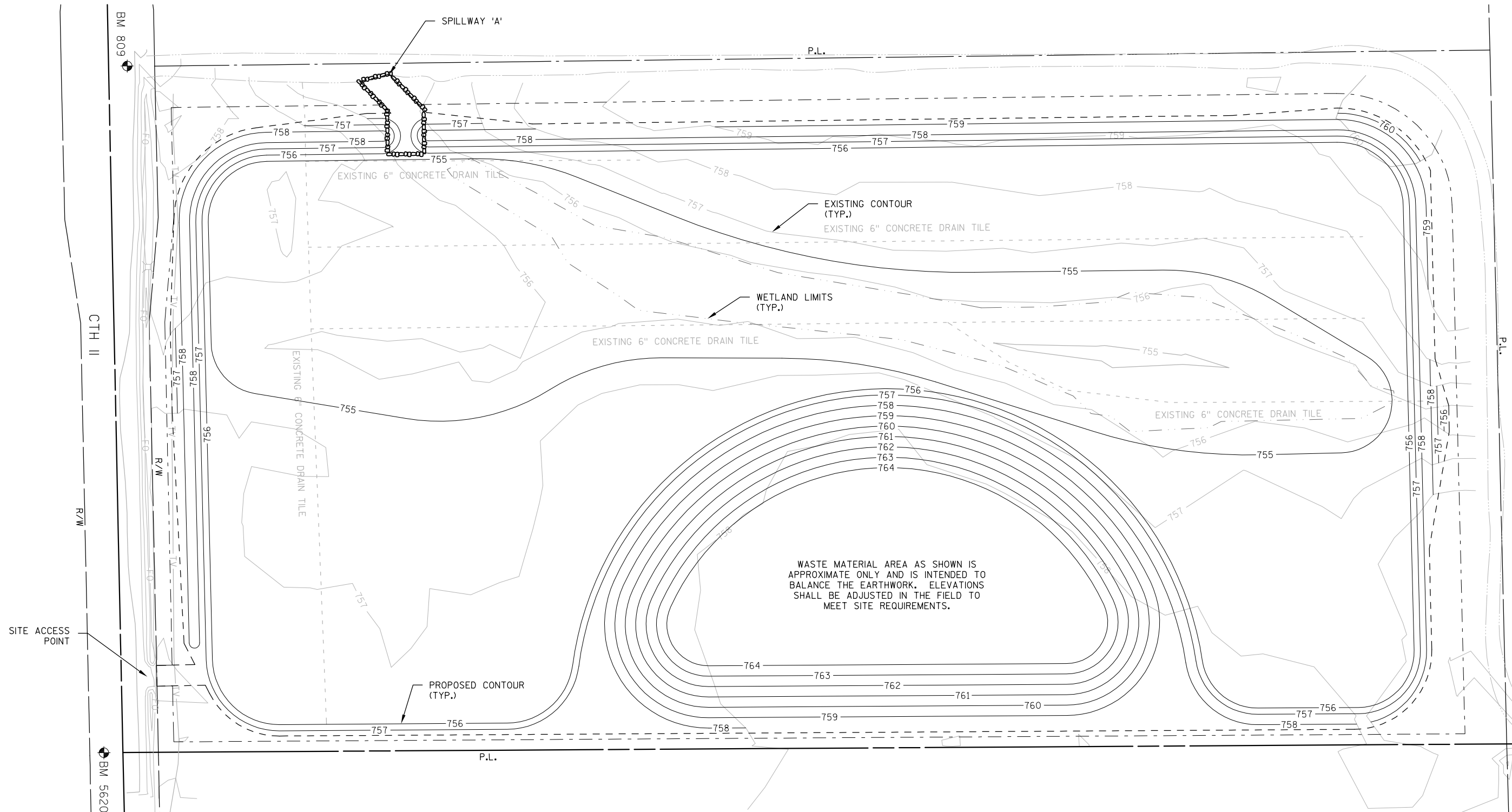
Attachment 9



LEGEND

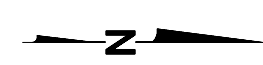
- 757 — EXISTING CONTOUR
- 757 — PROPOSED CONTOUR
- - - SLOPE INTERCEPT - LIMITS OF CUT/FILL
- - - SLOPE INTERCEPT - LIMITS OF DISTURBANCE/SEEDING
- - - EXISTING DRAIN TILE
- - - EXISTING WETLAND BOUNDARY

Attachment 9



LEGEND

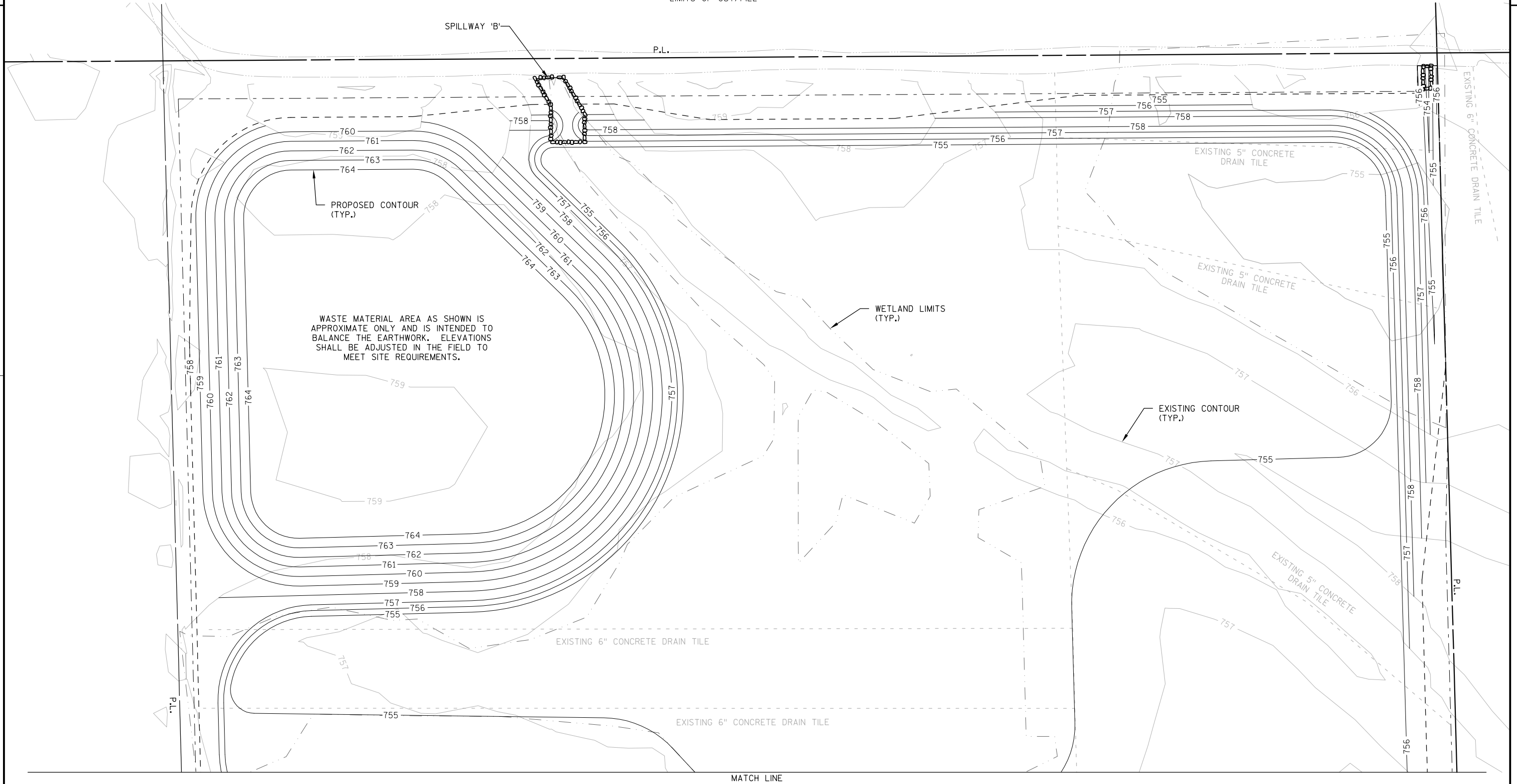
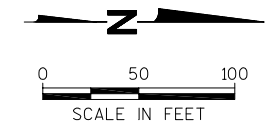
- 757 — EXISTING CONTOUR
- 757 — PROPOSED CONTOUR
- - - SLOPE INTERCEPT - LIMITS OF CUT/FILL
- - - SLOPE INTERCEPT - LIMITS OF DISTURBANCE/SEEDING
- - - EXISTING DRAIN TILE
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Attachment 9

LEGEND

- 757 — EXISTING CONTOUR
- 757 — PROPOSED CONTOUR
- - - SLOPE INTERCEPT - LIMITS OF CUT/FILL
- - - SLOPE INTERCEPT - LIMITS OF DISTURBANCE/SEEDING
- - - EXISTING DRAIN TILE
- - - EXISTING WETLAND BOUNDARY



Attachment 9

MATCH LINE

PROPOSED CONTOUR (TYP.)

WETLAND LIMITS (TYP.)

EXISTING 8" CONCRETE DRAIN TILE

EXISTING CONTOUR (TYP.)

WASTE MATERIAL AREA AS SHOWN IS APPROXIMATE ONLY AND IS INTENDED TO BALANCE THE EARTHWORK. ELEVATIONS SHALL BE ADJUSTED IN THE FIELD TO MEET SITE REQUIREMENTS.

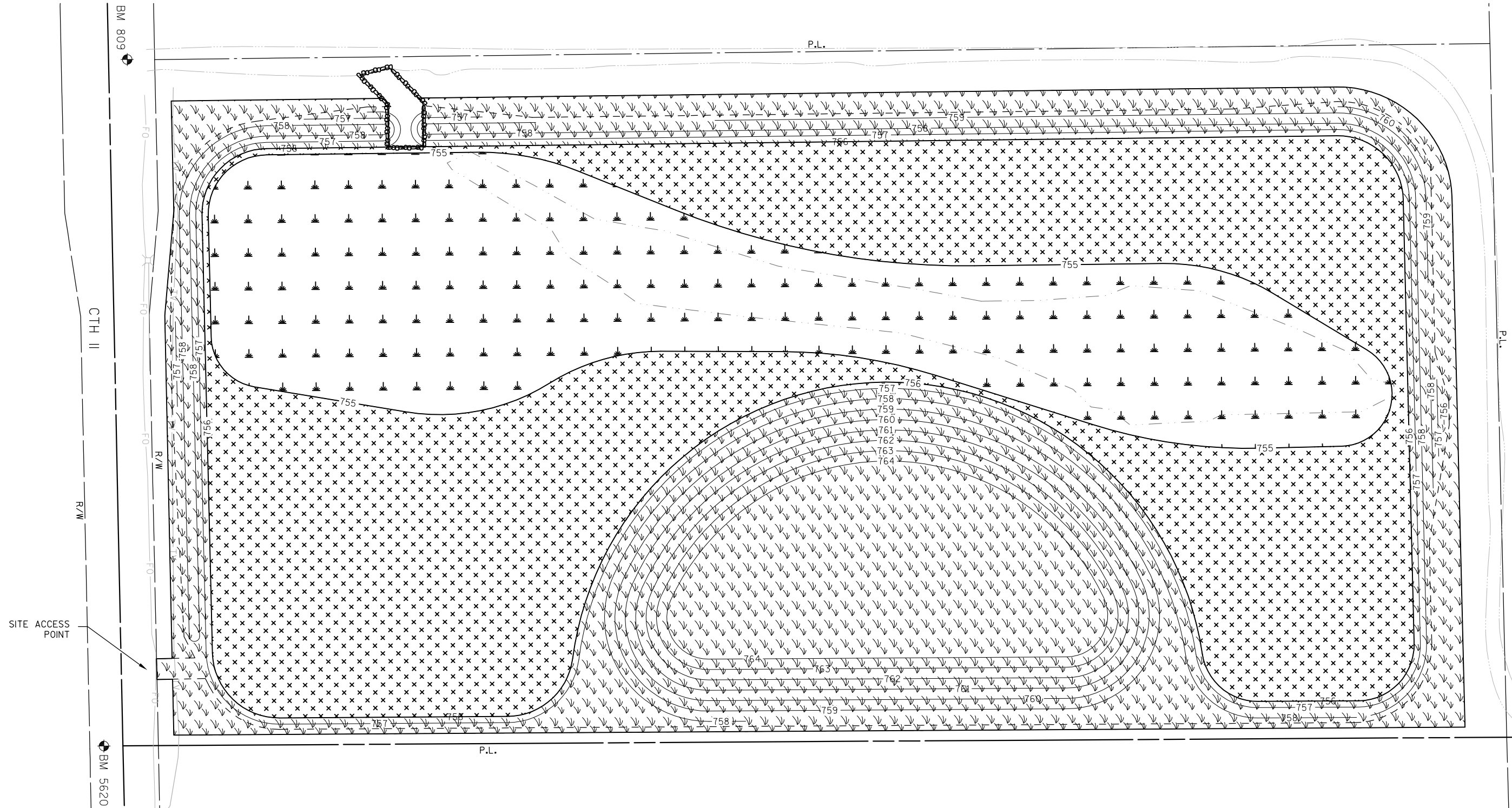
P.L.

LEGEND




- 757 — EXISTING CONTOUR
- 757 — PROPOSED CONTOUR
- - - SLOPE INTERCEPT - LIMITS OF CUT/FILL
- - - SLOPE INTERCEPT - LIMITS OF DISTURBANCE/SEEDING
- - - - EXISTING DRAIN TILE
- - - - EXISTING WETLAND BOUNDARY



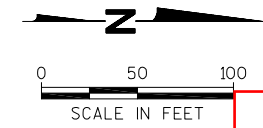
Attachment 9



PLANTING AND SEEDING LEGEND


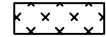
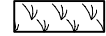
-  SHALLOW MARSH - PLACE WET MEADOW AND SHALLOW MARSH SEEDING MIX
-  WET MEADOW - PLACE WET MEADOW AND SHALLOW MARSH SEEDING MIX
-  UPLAND BUFFER - PLACE UPLAND BUFFER SEEDING MIX AND MULCH

NOTES
 PLACE SEEDING TEMPORARY ON ALL DISTURBED AREAS



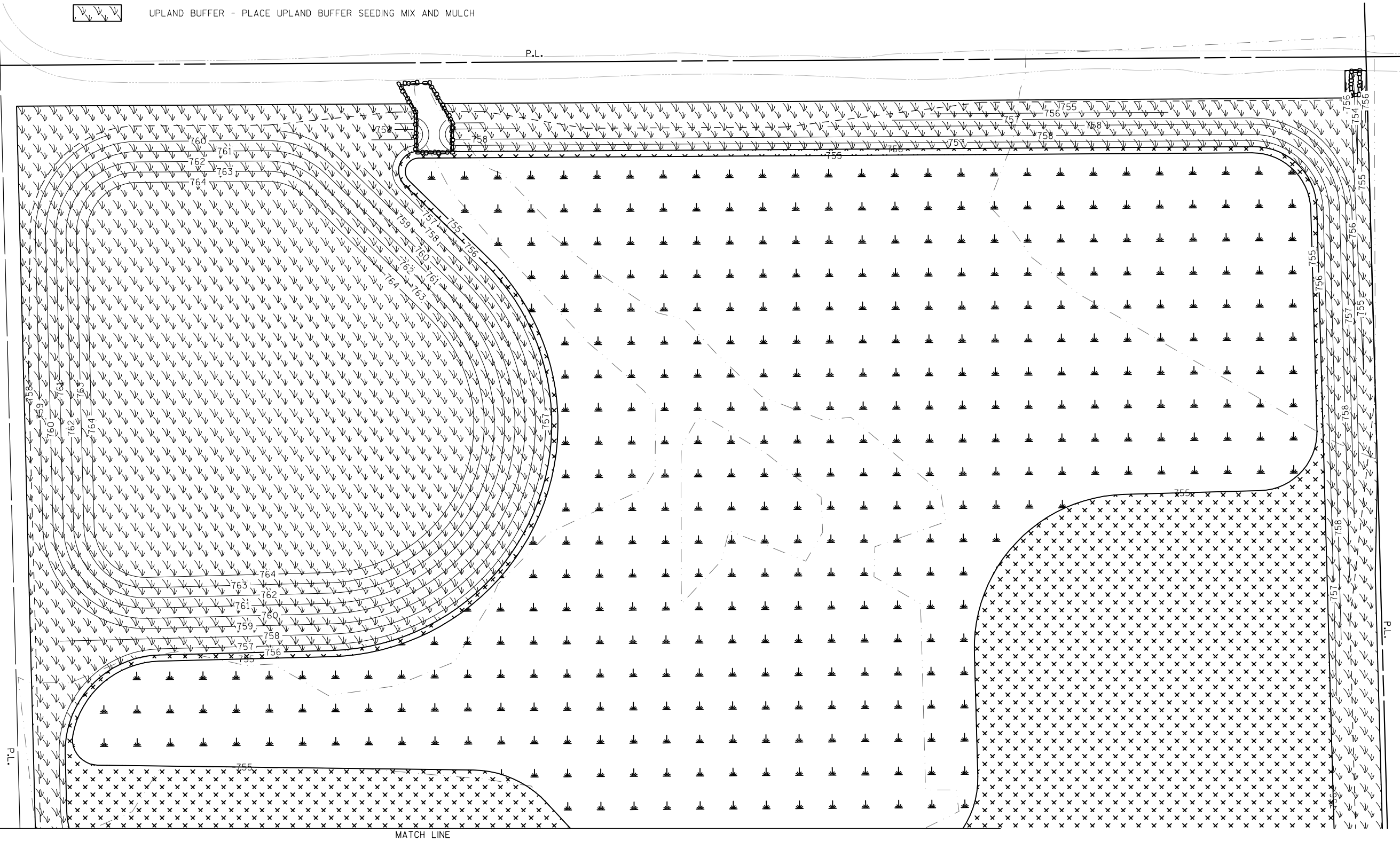
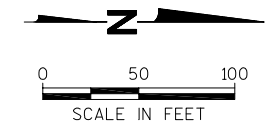
Attachment 9

PLANTING AND SEEDING LEGEND

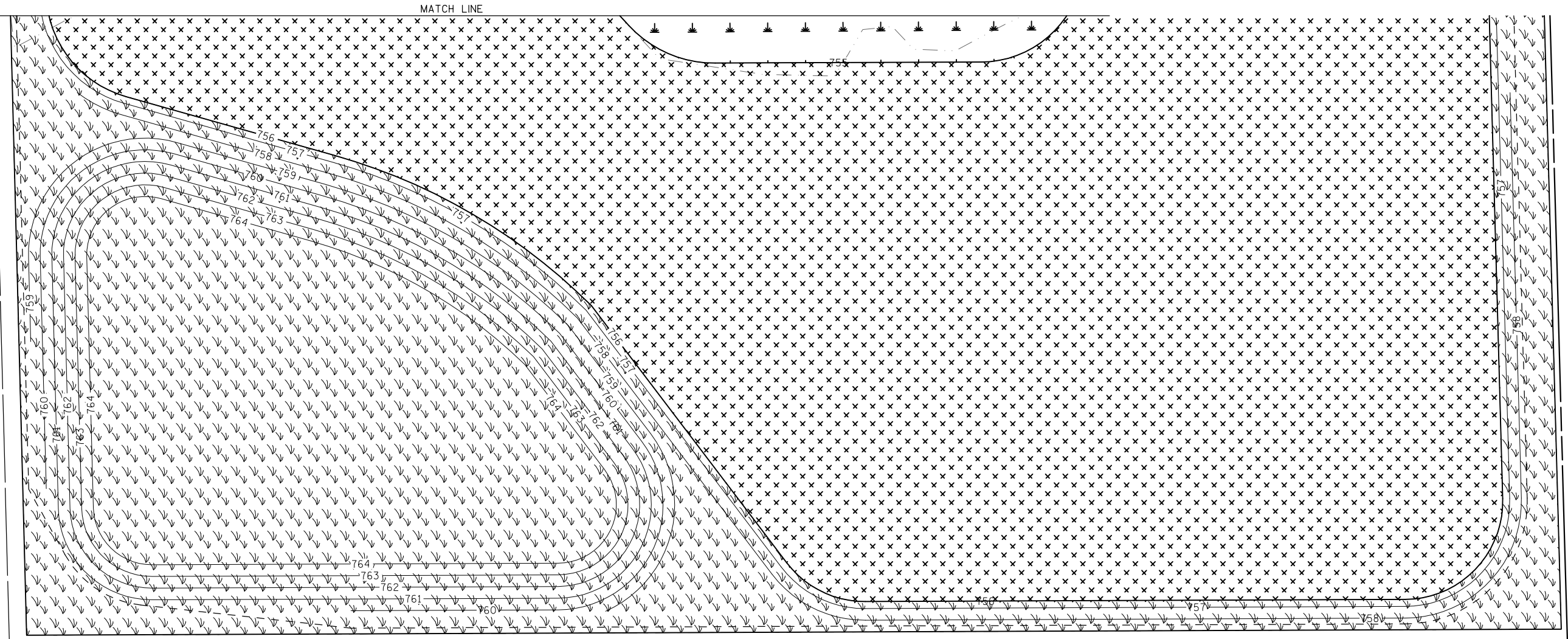
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NOTES

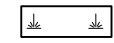
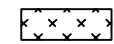
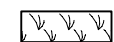
PLACE SEEDING TEMPORARY ON ALL DISTURBED AREAS



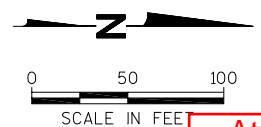
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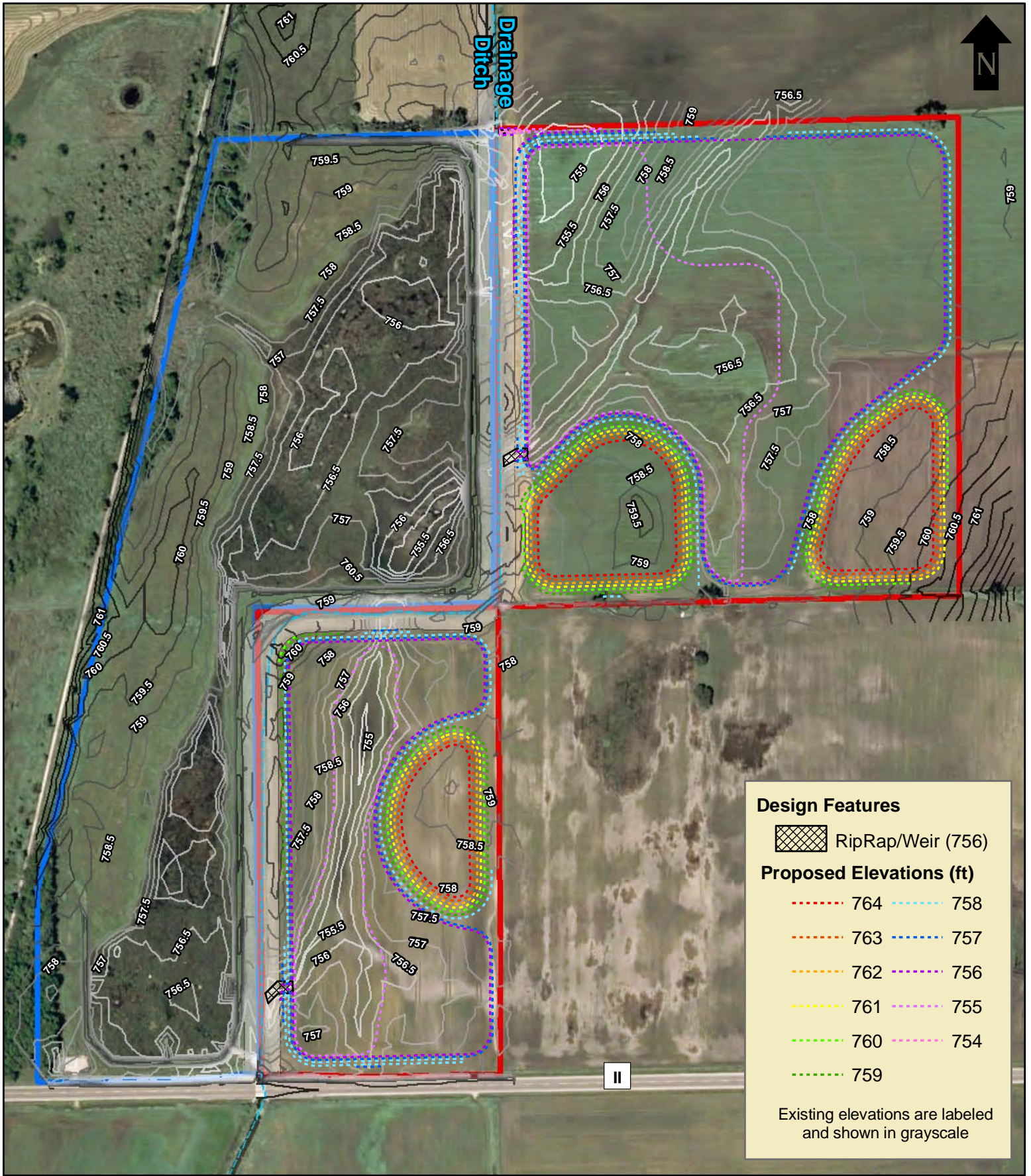


PLANTING AND SEEDING LEGEND

-  SHALLOW MARSH - PLACE WET MEADOW AND SHALLOW MARSH SEEDING MIX
-  WET MEADOW - PLACE WET MEADOW AND SHALLOW MARSH SEEDING MIX
-  UPLAND BUFFER - PLACE UPLAND BUFFER SEEDING MIX AND MULCH

NOTES
 PLACE SEEDING TEMPORARY ON ALL DISTURBED AREAS



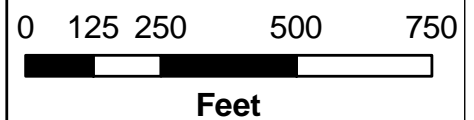


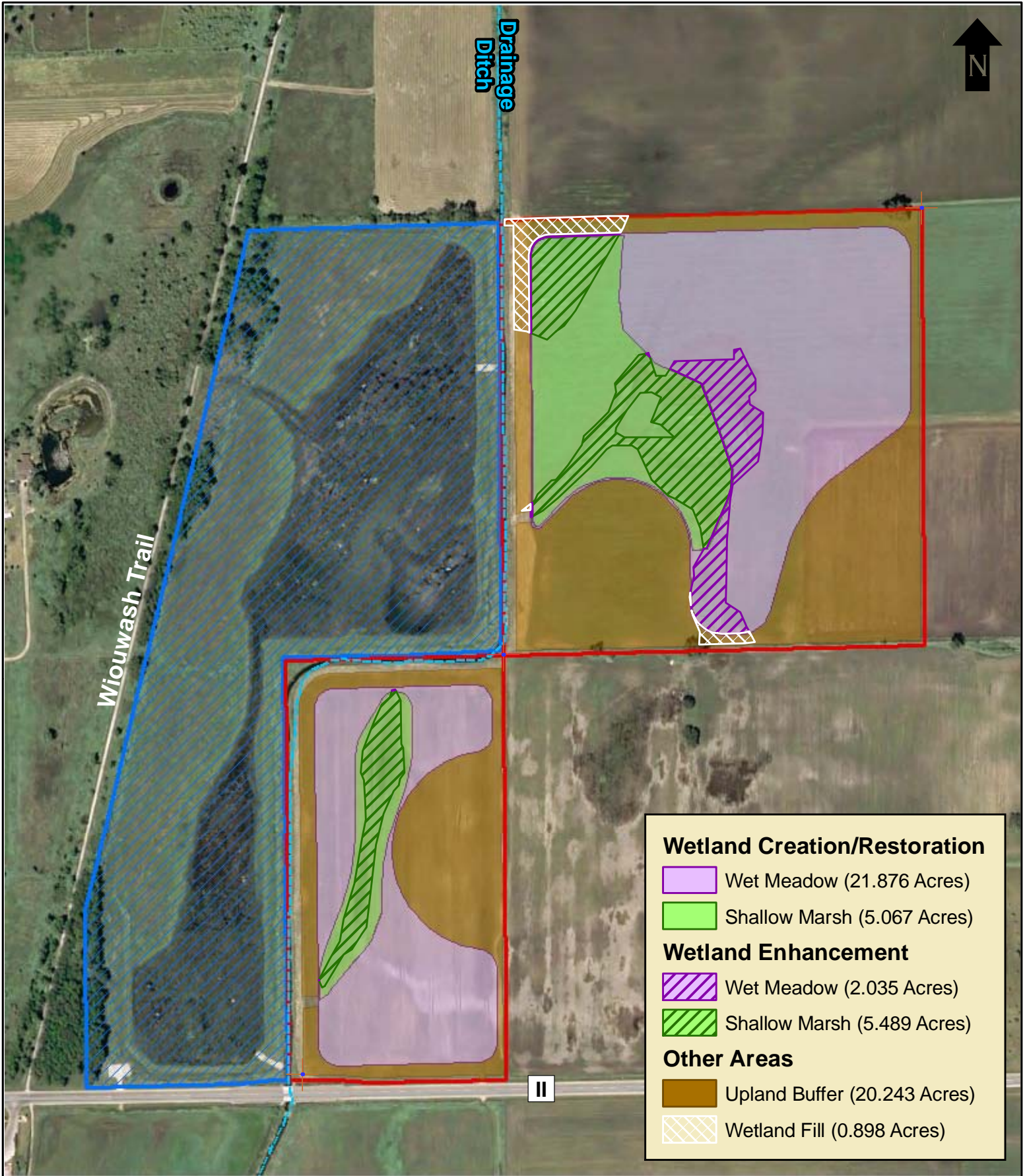
- Rubbert Phase II
- Rubbert Phase I
- Drainage Ditch

Rubbert Wetland Mitigation Site Phase II Proposed Elevations

Winnebago County

Attachment 10



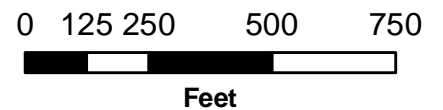


- Drainage Ditch
- ▭ Rubbert Phase II
- ▨ Rubbert Phase I

Rubbert Wetland Mitigation Site Phase II Anticipated Wetland Types

Winnebago County

Attachment 11



Mitigation Land Covenants

Note: The following covenants and statement giving the Corps of Engineers authority to inspect wetland mitigation sites is needed on all transfers of WisDOT wetland mitigation sites to future owners (DNR, FWS, County, etc.). This should put WisDOT in compliance with 1995 Federal guidelines on Wetland Mitigation Banking.

Inspection. The right of the Wisconsin Department of Transportation (DOT), its contractors, agents and invitees, the Wisconsin Department of Natural Resources (DNR), and the Army Corps of Engineers (COE) to enter the Rubbert Wetland Mitigation Site Phase 2, in a reasonable manner and at reasonable times, for the purpose of inspecting the Rubbert Wetland Mitigation Site Phase 2 to determine if the _ (successor) _ is complying with the lease or deed restrictions. Further reserve the right of representatives of the above named entities to observe, study, record, make scientific studies and educational observations, and to allow for a harvest of common wetland plant seed and root stock (not including state and federal listed threatened and endangered species) for replanting on the Rubbert Wetland Mitigation Site Phase 2 and other WisDOT wetland restoration sites or projects.

Covenants.

WisDOT imposes the following restrictive covenants that shall run with and bind the Rubbert Wetland Mitigation Site Phase 2 in perpetuity.

Uses. There shall be no commercial, industrial, residential or other incompatible activities adversely affecting wetlands undertaken or allowed within the Rubbert Wetland Mitigation Site Phase 2.

Buildings and structures. There shall be no buildings, dwellings, barns, roads advertising signs, billboards or other structures built or placed in the Rubbert Wetland Mitigation Site Phase 2 except structures essential to maintaining the site or structures such as interpretive signs or other additions that enhance the public's use of the site can be installed with written approval from WisDOT.

Topography. There shall be no dredging, filling, excavating, mining, drilling or removal of any topsoil, sand, gravel, rock, minerals or other materials within the restored wetland area or in adjacent on-site areas that affect the site. There shall be no plowing or any other activity that would alter the topography of the Rubbert Wetland Mitigation Site Phase 2.

Dumping or disposal. There shall be no dumping of trash, ashes, garbage or other unsightly or offensive material, including any hazardous or toxic waste. Nor shall there be dumping or depositing of other materials if such action would alter the topography or hydrology of the mitigation site.

Water. The hydrology of the Rubbert Wetland Mitigation Site Phase 2 will not be altered in any way that would effectively drain the site or by any means including pumping, draining, diking, impounding or diverting surface or ground water out of the Rubbert Wetland Mitigation Site Phase 2 except as approved by WisDOT and the Corps for the purpose or protecting or maintaining the site's wetland status.

Agricultural Uses. No removal of developing native vegetation, plowing, tilling, brushing, cultivating, crop planting or other agricultural activities (with the exception of planting native plants to enhance the site) may take place within the Rubbert Wetland Mitigation Site Phase 2.

Recreational motorized vehicles and watercraft prohibited. There shall be no operation of any motorized vehicles, watercraft, or equipment within the Rubbert Wetland Mitigation Site Phase 2. Including but not limited to all terrain vehicles, off road motorcycles, or boats with electric or gas motors.

Vegetation. There shall be no removal, cutting, mowing or alteration of any vegetation or change in the natural habitat in any manner, except that WisDOT or any successor owner of the property may take such steps necessary to remove non-native species, manage wildlife, control noxious weeds, eliminate a dangerous condition or public nuisance, or otherwise maintain the property in a native state. The exception to this covenant would be for sound silvicultural practices for fir-spruce, bottomland hardwood, swamp conifer, and swamp hardwood forest types as provided in the DNR *Silviculture and Forest Aesthetics Handbook 2431.5*. Vegetation cannot be modified to the point that it would force a change in wetland type unless approved in writing by the COE.

Enforcement of covenants. Any actions taken by the Grantee which violate these covenants shall entitle WisDOT or the Corps of Engineers the right to enter upon the property with respect to which said violation exists and remove at the expense of the owner, lessee or occupant thereof, any structure thing or condition that may be or exist thereof contrary to the intent and meaning of the covenants.

Mitigation Land Covenants

Reversionary Clause. All transactions will contain a reversionary clause. Any violation of the transaction outlined with the above restrictions will allow the WisDOT to regain total control of the parcel. Leases cannot be assigned. Parcels that are deeded over to another entity cannot be sold or transferred to another party. The Grantee does not have a right to sell or otherwise transfer any rights to the parcel to another party.

Any lease cannot be reassigned and the grantee shall not allow new easements within the Rubbert Wetland Mitigation Site Phase 2 without written approval from WisDOT.

These covenants and restrictions shall run with and burden the Rubbert Wetland Mitigation Site Phase 2 in perpetuity and shall bind the grantee and their heirs, successors, and assigns.