

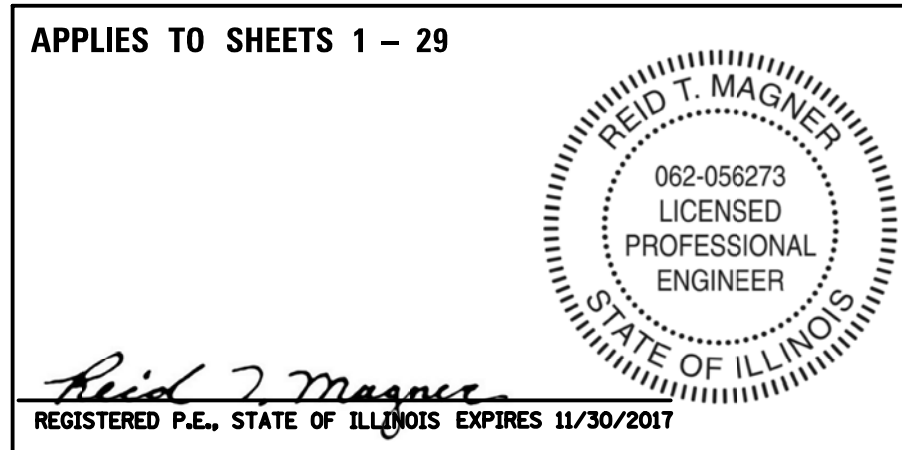
Public Access Improvements Ethel's Woods Forest Preserve Project No. 63910-18006-887

Client:

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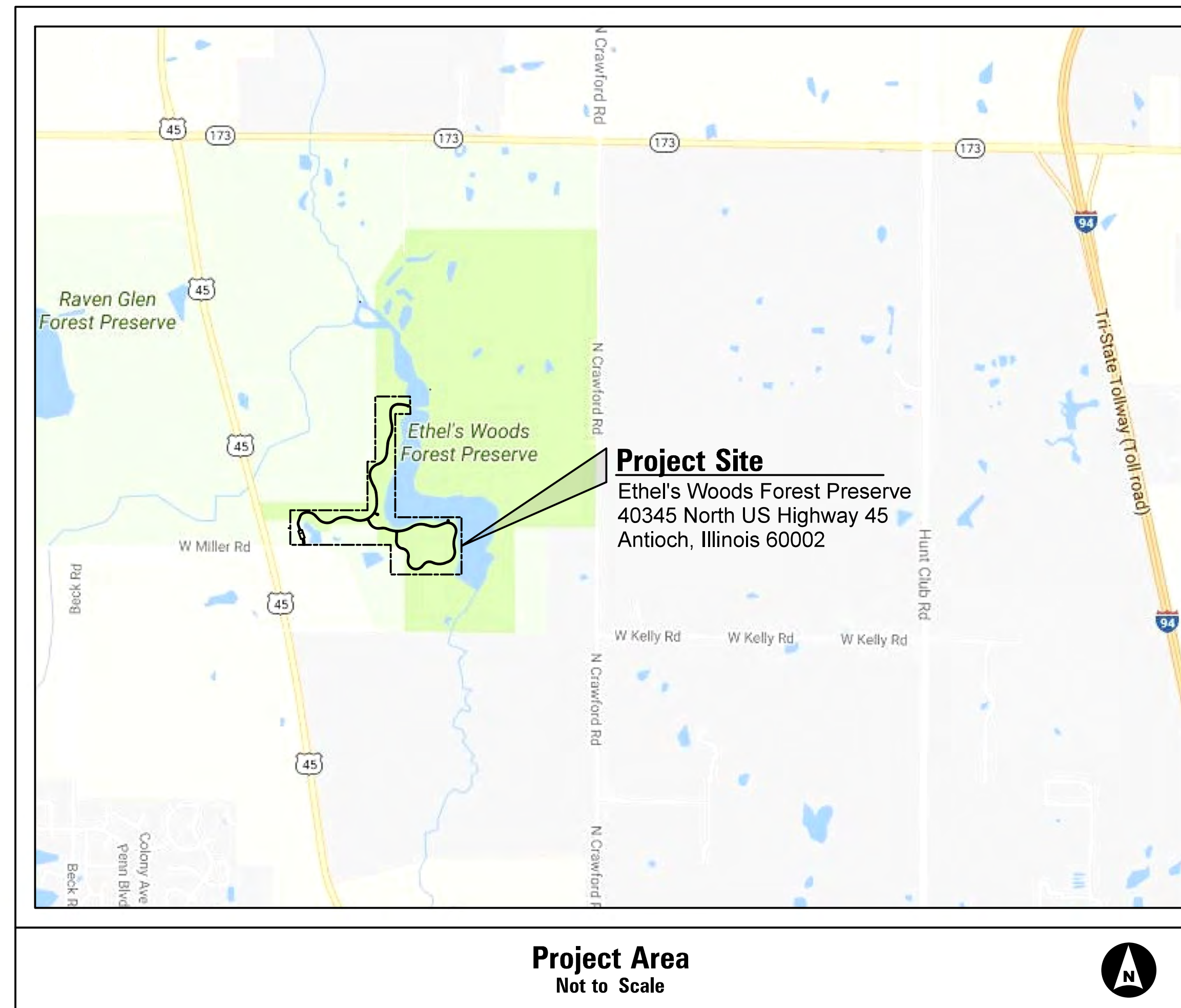
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Benchmark:

BM #3 is a Railroad spike (set) in the first power north of Miller Road on the east side of U.S. Route 45. See Sheet No. 5 for elevation and coordinate values.

BM #9 is a Railroad spike (set) in the power pole on the south side of Miller Road east of the proposed parking lot entrance (address 19235 Miller Road). See Sheet No. 5 for elevation and coordinate values.



Project Length:

		Sta.	to	Sta.	Length
Millennium Trail	12' Wide Aggregate	138+50.0	to	176+12.5	3,762.5 FT
Ethel's Loop Trail	10' Wide Aggregate	400+06.0	to	435+52.2	3,546.2 FT
Trail Total					7,308.7 FT
Hot Mix Asphalt Parking Lot		36+12.0	to	138+50.0	239.0 FT

Sheet Index:

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Legend

- XX" Existing Tree (to remain)
- XX" Tree Removal
- XX" Tree Protection paid for as Temporary Construction Fence, 4' (Limits of Fence to be marked in the field)
- LIM Proposed Construction / Restoration Limits
- NMCCR North Mill Creek Channel Restoration Limits
- PL Property Line
- Utility Easement
- SF Silt Fence
- Proposed Culvert, HDPE Pipe, 12"
- 2' (TYP) Steel Flared End Section with Grating
- 10' (TYP) Steel Flared End Section with Grating and Riprap

Bid Set

The following notes are intended to supplement the plans and specifications and bring to the attention of the Contractor any contract requirements which are specific to this particular project and location.

GENERAL NOTES

1. The Contractor and all appropriate subcontractors shall attend a pre-construction meeting with the Owner, Engineer and required permit agencies prior to the start of construction to review submittals, access restrictions, phasing and schedules, permit requirements, construction methods and any other information pertinent to the work.
2. The Contractor shall submit a construction schedule prior to start of the work.
3. The Contractor shall thoroughly examine all contract documents and shall maintain a complete plan set and specifications at the site during all work operations. This set of documents shall be used and maintained to note all deviations or changes to the work as a working 'as-built' plan set.
4. The Contractor shall maintain a secure and rain-proof permit box at the work site which shall contain all permits, logs and records required by permit agencies, utilities and other governing bodies.
5. The Owner is not responsible for the construction means, methods, techniques, sequences or procedures, time of performance, programs or for any safety precautions used by the Contractor. The Contractor is solely responsible for execution of the work in accordance with the contract documents and specifications. The Contractor is to provide all labor, material, equipment, etc. necessary to perform all the work required for construction of the proposed improvement as indicated in the contract documents.
6. The Contractor is required to have a competent supervisor present at the site during critical work planning and operations regardless of whether the work is being performed by the Contractor or one of their Subcontractors.
7. The Contractor shall be solely responsible for scheduling and attending all permit inspections, including those procured by the Owner or others.
8. Unless specifically noted, the proposed lines and grades shown on the construction plans represent finished grade elevations.
9. This project may require a phased construction as defined by the Owner. Refer to the SPECIAL PROJECT NOTES on this sheet for any phasing requirements. If so required, the Contractor shall complete the construction of each phase in its entirety before beginning work on the next phase. The Owner shall inspect and approve each phase upon its completion and authorize the contractor to advance to the next area of work.
10. The Contractor shall make arrangements for the proper bracing, shoring and other required protection of all roadways and structures before construction begins. The Contractor shall be responsible for any damage to the roadways and associated structures and shall make repairs as necessary to the satisfaction of the Owner.
11. All existing traffic signs, street signs, mail boxes, etc., which interferes with construction operations and are not noted for removal or disposal shall be removed and reset by the contractor at locations as designated by the Owner. This work shall be considered incidental to the contract and no additional compensation shall be allowed.
12. All permanent type pavements or other permanent improvements which abut the proposed improvement and must be removed shall be saw-cut as directed prior to removal. All items so removed shall be replaced with similar construction materials to their original condition or better. Unless listed separately as a pay item, payment for sawing shall be included in the cost for removal of each item and replacement will be paid under the respective items in the contract, unless otherwise indicated.
13. All work performed, whether completed or in part, shall immediately become the responsibility of the Contractor. Any damage of the work which is incurred before the Owner's acceptance shall be repaired or otherwise reconstructed to the requirements of the contract documents at no cost to the Owner.

SURVEY NOTES

1. All elevations shown on these plans are based on U.S.G.S. Datum NAVD 88. All horizontal coordinates reference to the Illinois State Plane Coordinate System, East Zone, NAD 83-03.
2. Where property corner, section or subsection monuments are encountered and conflict with the work, the Owner shall be notified before the monuments are removed. The Contractor shall carefully preserve all property marks and monuments until the owner, authorized surveyor or agent has surveyed or otherwise referenced their location. Any unauthorized damage or loss of survey monuments shall be replaced by a Professional Land Surveyor.
3. Site benchmarks and control points are shown on the Plans. Any additional layout of lines and grades or any other surveying required to construct the Work shall be the responsibility of the Contractor.
4. All layout and staking of the proposed improvements, both horizontal and vertical, shall have an accuracy of within one-tenth (.10) of one foot.

DEBRIS REMOVAL NOTES

1. The Contractor is prohibited from burning any material within or adjacent to the project limits without expressed approval of the Owner. All excess or waste material shall be hauled away from the project site by the Contractor and legally disposed. It shall be the responsibility of each respective Contractor to remove from the site any and all materials and debris which result from their construction operations at no additional expense to the Owner.

UTILITY NOTES

1. Information regarding type or location of underground utility facilities shown on the plans represents the best information provided to the Owner, and is only included for the convenience of the Contractor. The Owner assumes no responsibility for the sufficiency or the accuracy of the location information provided.
2. Before starting any excavation, the Contractor shall contact "JULIE" at 1-800-892-0123 for field locations of buried electric, telephone, gas, water, sewer, cable, etc., utility lines (minimum 48-hour notification is required).
3. If any utility is encountered which was not identified with a JULIE location request and is in conflict with the work, the Contractor shall immediately notify the Owner and the appropriate utility representative.
4. The Contractor shall be responsible for any damage or destruction of public or private utilities even though they may not be shown on the Plans. The Contractor shall restore such utilities or property at the Contractors own expense.
5. The Contractor shall use all necessary precautions and protective measures required to maintain existing utilities, sewers, and appurtenances that must be kept in operation. In particular, the Contractor will take adequate measures to prevent the undermining of utilities and sewers which are still in service.
6. Overhead utilities which may interfere with the construction activities shall be properly marked and signed.

EARTHWORK AND GRADING NOTES

1. It is the Contractor's responsibility to determine all material quantities required to meet the proposed grades and achieve a balanced site when required.
2. When unsuitable materials are encountered the Contractor shall notify the Owner immediately. No remedial soils replacement shall be performed without notice to the Owner, consultation with the geotechnical engineer and either a materials estimate or an approved method of determining replacement quantities and stabilization methods.
3. During earthwork and mass grading operations, it is critical that areas proposed for permanent landscape improvements are constructed with soils capable of supporting vegetation. Stripping and stockpiling operations conducted in native undisturbed areas and former agricultural areas shall have soils segregated as follows:
 - A. **Topsoil:** The top surface layer of the natural ground containing sufficient organic matter, a relatively neutral pH and friable structure suitable for supporting normal plant growth. This layer typically varies in depth and may be quantified from soil core sampling if available.
 - B. **Mid-Layer:** The soils typically found directly below the topsoil layer and to a depth of 48" and typically composed of clay, silty clay and/or sand and gravel and having an elevated pH value.
 - C. **Unsuitable Soil Layer:** Soils generally found below a depth of 48" and having qualities unsuitable to plant growth, including a high pH value and dense structure. These soils may include extremely dense hydric clays which are impermeable when compacted.
 - D. During respreading operations in areas proposed for permanent landscape improvements, the Contractor shall be required to provide the soil profile shown above at their corresponding natural depths. In areas where fill operations require less than a 5' depth of material, no Unsuitable Soil Layer material shall be used. The Owner and Engineer shall determine relative depths of each soil layer during the initial stripping operations.
4. Before respreading or furnishing and spreading topsoil adjacent to pavements, all excess aggregates and other debris remaining beyond the specified pavement base dimension shall be removed and disposed off of the site.

DRAINAGE NOTES

1. Unless otherwise noted on the plans, the existing drainage facilities shall remain in use during the period of construction. During construction operations the Contractor shall ensure positive site drainage at the conclusion of each day. Site drainage may be achieved by ditching, pumping, or any other method acceptable to the Owner.
2. If during construction, the Contractor encounters or otherwise becomes aware of any drainage structures other than those shown on the plans, the Contractor shall inform the Owner, who shall direct the work necessary to maintain or replace the facilities in service and to protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of non-compliance with this provision shall be replaced at the Contractor's own expense. All field tile encountered during construction operations which has not been identified on the Plans shall be immediately reported to the Owner and temporarily directed to outlet into a proposed drainage way. The Owner and Contractor shall determine the permanent repair and related costs before performing the work. A record of the location of all field tile or on-site drain pipe encountered shall be kept by the Contractor and turned over to the Owner upon completion of the project.

SITE ACCESS AND RESOURCE PROTECTION NOTES

1. The Contractor shall maintain access to abutting public and private properties at all times during construction, except for brief periods of interruption with due notice. The Contractor shall notify the property owner no less than 24 hours in advance of the interruption of access and/or services. The notification will include the time and duration of the interruption.
2. The work described in these contract documents is being performed on public lands which may be open to the public at the time of construction. The Contractor shall assure the safety of all persons encountered during the work regardless of whether the location has been closed, fenced or signed as a construction zone.
3. Temporary access permits or road bonds shall be solely the responsibility of the Contractor.
4. The Contractor shall obtain, erect, maintain and remove all signs, barricades, fencing and other control devices as may be necessary to regulate, warn or guide vehicular or pedestrian traffic for purposes of maintaining a safe work site, whether or not those measures are described in the contract documents. These measures shall also be moved, relocated or increased in quantity depending on the daily work conditions.

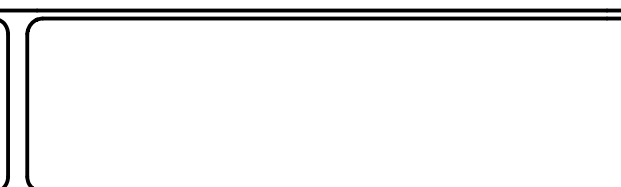


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Designed - JRR
Drawn - TFS
Checked - RTM
Date - 11/10/2017

Revised -
Revised -
Revised -
Revised -

**LAKE COUNTY
FOREST PRESERVE DISTRICT**



**GENERAL NOTES
ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 1 of 2 Sheets

County	Total Sheets	Sheet No.
Lake	29	2
Project No. 63910-18006-887		

SPECIAL PROJECT NOTES

1. This project shall be constructed concurrently with another separate project known as the "North Mill Creek Channel Restoration" (NMCCR). The NMCCR includes the final draining of the former Rasmussen Lake, restoration of the Mill Creek channel and excavation and deposition of soil materials from the former lake bottom. The Channel Restoration Contractor (for the NMCCR) and the Public Access Contractor (this project) shall share common areas of the site in pursuit of their respective contracts. It is imperative that the Public Access Contractor cooperate and coordinate with the other contractors and plan the work to minimize potential conflicts both in work logistics and cost factors.
2. The two projects will share a single site entry at US Route 45 just north of Miller Road, where an existing stabilized construction entry is located. The Public Access Contractor shall construct an extension to the existing entry directly to the south for their exclusive use. This stabilized construction extension shall be transitioned to a haul route which shall be used to access a staging area near the proposed parking lot.
3. The Channel Restoration Contractor will utilize and is solely responsible for the existing and modified haul routes as shown on the plans, including their restoration after project completion. The haul routes for NMCCR will cross the proposed trail at multiple locations. Refer to the plans for these locations and the temporary crossings required.
4. The Public Access Contractor shall minimize their use of these existing haul routes to perform the work. The primary access for this contract shall be the parking lot and trail construction limits as shown on the plans.
5. The proposed NMCCR includes the excavation, hauling, deposition and grading of soils from the former Rasmussen Lake bed. These fill areas will create new landforms which abut the proposed trail loop at the eastern limits of this project. Refer to the plans for more information. Although the exact construction schedule for NMCCR is unknown at this time, it is expected that the NMCCR filling will occur after the start of this contract. It is highly desirable to complete the Public Access earthwork and grading which is adjacent to the NMCCR fill areas before the NMCCR filling and grading occurs in order to manage new drainage patterns. Therefore, the Contractor shall be required to perform the work in the following sequence:
 - A. Perform all tasks typical of site improvements projects, including mobilization, layout, site access improvements, vegetation removal and soil erosion and sediment control measures.
 - B. Perform earthwork tasks at the Ethel's Loop Trail (Sta. 400+06 to Sta. 435.52.2), including topsoil stripping and stockpiling, culvert crossing installation, ditching and trail grading.
 - C. Construct temporary crossings for NMCCR haul routes. The Owner and both Contractors shall meet prior to this work to confirm all locations and the number of crossings.
 - D. Respread topsoil to within 2' of the proposed edge of trail and finish grade to proposed elevations to the construction limits.
 - E. Perform seeding, erosion control blanket and hydromulch as per the plans for the entire Ethel's Loop Trail.
 - F. Resume work on the other areas of the project.

VEGETATION REMOVAL - COMPLETE

Vegetation Removal Complete shall be an all-inclusive lump sum payment item for all vegetation removal required to complete the project, including:

- A. Field Mowing within the entire construction limits and access routes and staging areas to a height of no more than 6".
- B. Cutting and removal of all trees and shrubs, including trees and brush 6" in size or less DBH which may or may not be shown on the plans and trees over 6" DBH which are shown on the plans.
- C. Stump grinding of trees removed by the Contractor over 6" DBH and select stumps of trees removed by others as shown on the plans.
- D. All related gathering, hauling, chipping and spreading of the processed materials listed above.

AVAILABLE REPORTS

1. Subsurface Drainage Inventory (Drain Tile Investigation Plan) January 10, 2011 is available upon request.

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Designed - JRR
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 Checked - RTM
 Date - 11/10/2017

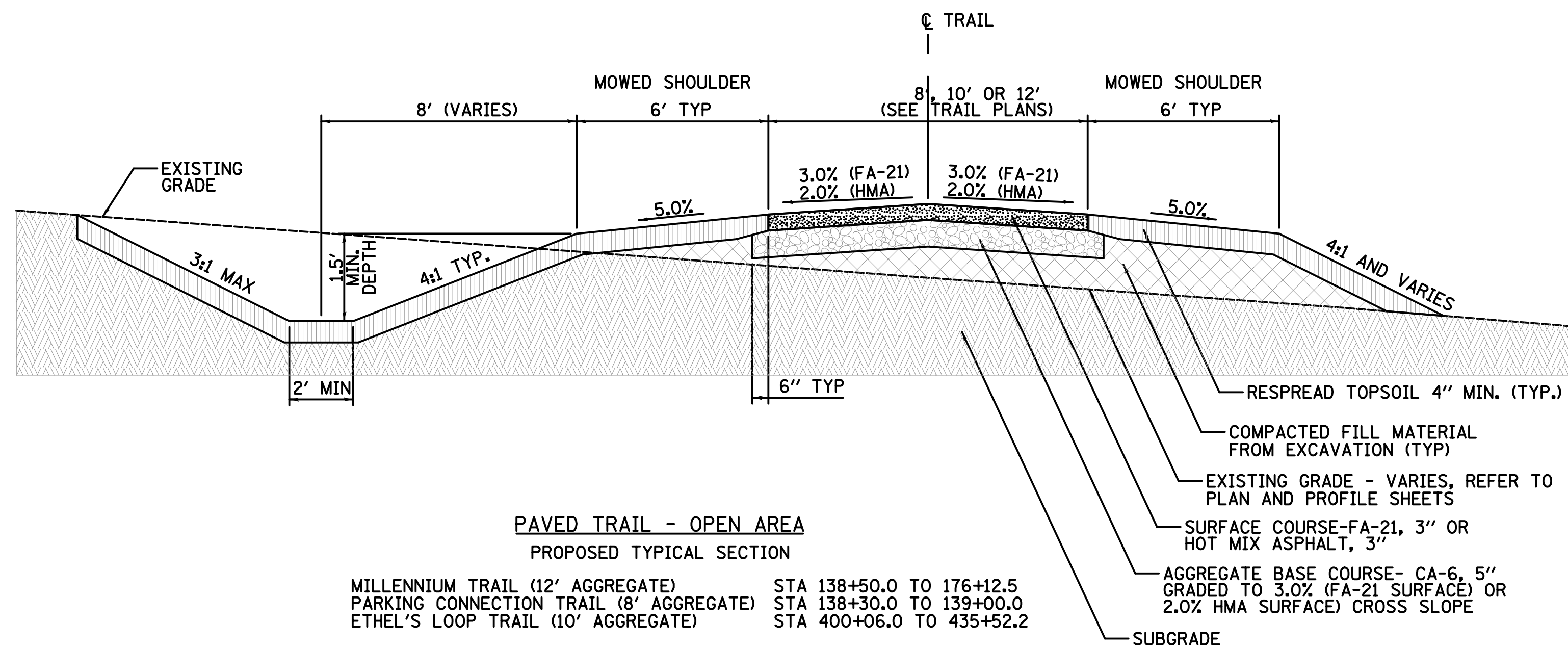
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**LAKE COUNTY
 FOREST PRESERVE DISTRICT**

**GENERAL NOTES
 ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 2 of 2 Sheets

County	Total Sheets	Sheet No.
Lake	29	3
Project No. 63910-18006-887		



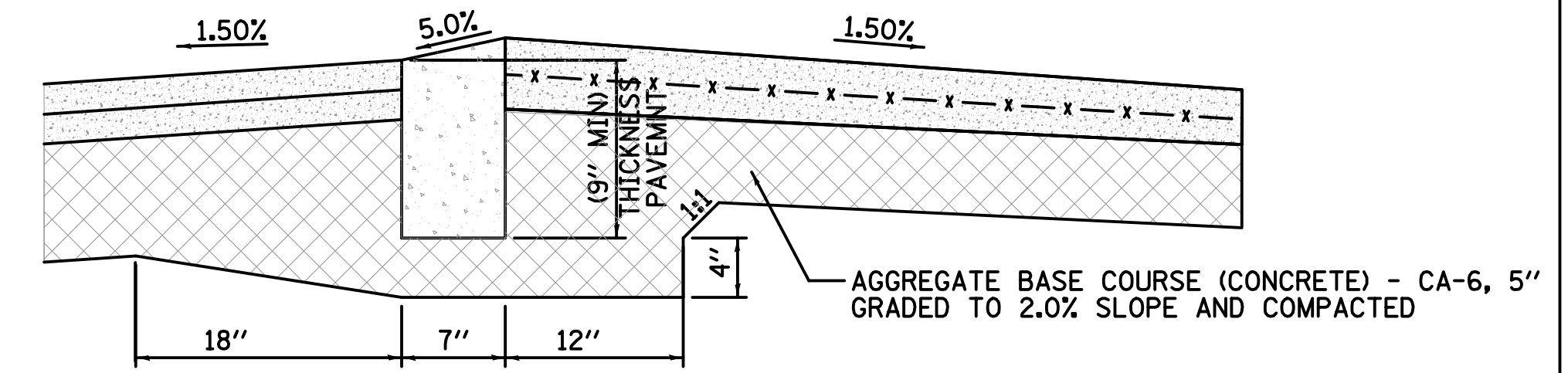
PAVED TRAIL - OPEN AREA
PROPOSED TYPICAL SECTION
 MILLENNIUM TRAIL (12' AGGREGATE) STA 138+50.0 TO 176+12.5
 PARKING CONNECTION TRAIL (8' AGGREGATE) STA 138+30.0 TO 139+00.0
 ETHEL'S LOOP TRAIL (10' AGGREGATE) STA 400+06.0 TO 435+52.2

TRAIL - OPEN AREA NOTES

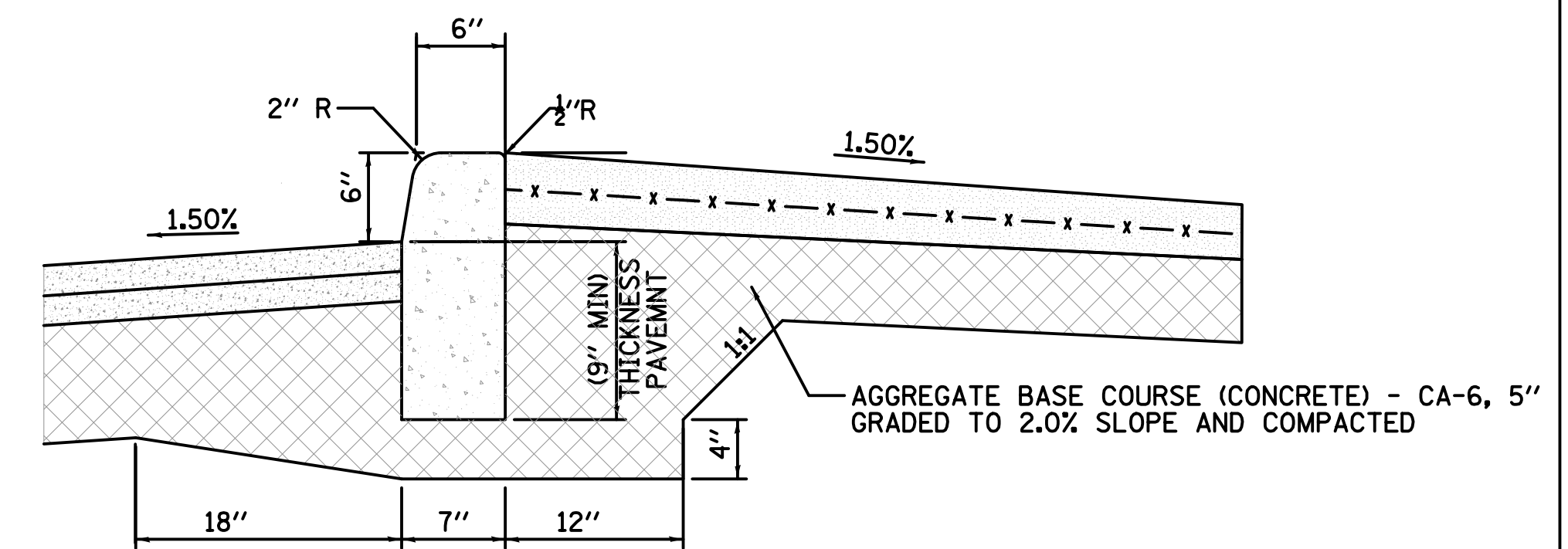
- The typical section depicted above applies to both FA-21 aggregate and hot-mix asphalt surface types. Refer to the plan and profile sheets for surfacing requirements at specific trail locations. Note the difference in cross slopes for different surface types.
- Specific trail locations may not require the ditching shown or may require ditching on both sides of the trail. Refer to other plan sheets for ditching requirements and locations.
- All aggregate base, aggregate surface and hot-mix asphalt surfaces shall be installed using a paving machine. Aggregate trail surfaces shall be compacted with a roller no wider than half the trail width to maintain the crowned profile.
- The existing grade lines shown in the sections are for illustrative purposes only. Refer to the plan and profile sheets for existing and proposed elevations and cut and fill requirements along the trail length.
- A woven geotextile for ground stabilization may be required upon direction by the owner when unsuitable soil conditions are encountered and is not shown on the section.
- The finished topsoil grade directly adjacent to paved trail edges must be equal to or slightly (1/4") lower than the edge of trail to assure positive drainage.
- Provide a soft gradual transition between existing and proposed grading.

LANDSCAPE NOTES

- Mowed trail shoulders shall be seeded with LCFP Low-Maintenance mix. Refer to other plan sheets for seed mixes outside of the mowed shoulders.
- Mowed shoulders and seeded slopes 2.5:1 or less shall be hydro-mulched. Slopes greater than 2.5:1, ditches and other concentrated flow zones shall be covered with North American Green (NAG) S75BN erosion control blanket or approved equal and with the manufacturers recommended staple pattern. Ditches typically require a minimum of two (2) rolls of blanket at 6.67' width each.



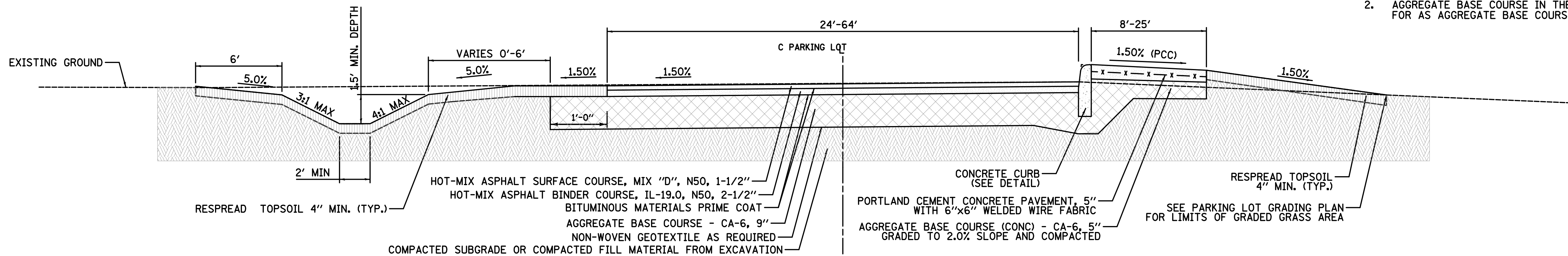
CONCRETE DEPRESSED CURB
NOT TO SCALE



CONCRETE BARRIER CURB
NOT TO SCALE

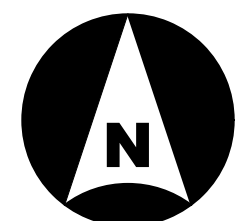
CURB NOTES:

- SEE TRANSITION BETWEEN BARRIER AND DEPRESSED CURB LOCATION ON PARKING LOT LAYOUT PLAN.
- AGGREGATE BASE COURSE IN THE THICKENED WEDGE IS PAID FOR AS AGGREGATE BASE COURSE (CONCRETE), CA-6, 5"



8' WIDE PCC SIDEWALK
 STA 137+00.0 TO 138+03.5
CONCRETE PAD AREA
 STA 138+03.5 TO 138+30.0

PROPOSED HMA PARKING LOT WITH CONCRETE WALK TYPICAL SECTION
 STA 136+12.0 TO 138+50.0

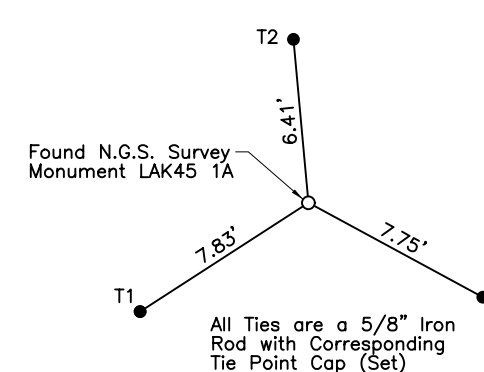


PROJ. CURVE	NO.1	NO.2	NO.3	NO.4	NO.5	NO.6
PI STA.	= 136+50.13	= 139+54.39	= 141+22.10	= 142+80.50	= 146+06.94	= 148+90.37
Δ	= 18° 09' 42" (LT)	= 37° 50' 11" (RT)	= 56° 16' 13" (RT)	= 62° 00' 39" (RT)	= 83° 23' 24" (RT)	= 61° 38' 22" (RT)
D	= 47' 44' 47"	= 57' 17' 45"	= 57' 17' 45"	= 31' 49' 52"	= 30' 58' 14"	= 19' 05' 55"
R	= 120.00'	R = 100.00'	R = 100.00'	R = 180.00'	R = 185.00'	R = 300.00'
T	= 19.18'	T = 34.27'	T = 53.47'	T = 108.18'	T = 164.80'	T = 178.98'
L	= 38.00'	L = 66.04'	L = 98.21'	L = 194.81'	L = 269.25'	L = 322.74'
E	= 1.52'	E = 5.71'	E = 13.40'	E = 30.01'	E = 62.76'	E = 49.33'
P.C. STA.	= 136+30.95	P.C. STA. = 139+20.12	P.C. STA. = 140+68.62	P.C. STA. = 141+72.33	P.C. STA. = 144+42.14	P.C. STA. = 147+11.39
P.T. STA.	= 136+68.99	P.T. STA. = 139+86.16	P.T. STA. = 141+66.83	P.T. STA. = 143+67.14	P.T. STA. = 147+11.39	P.T. STA. = 150+34.14

PROJ. CURVE	NO.7	NO.8	NO.9	NO.10	NO.11	NO.12
PI STA.	= 154+69.74	PI STA. = 157+01.17	PI STA. = 158+15.82	PI STA. = 160+17.00	PI STA. = 162+28.44	PI STA. = 164+65.64
Δ	= 115° 28' 16" (LT)	Δ = 9° 59' 32" (LT)	Δ = 14° 40' 19" (LT)	Δ = 24° 40' 19" (RT)	Δ = 73° 37' 13" (RT)	Δ = 68° 03' 56" (RT)
D	= 20° 50' 05"	D = 7° 09' 43"	D = 16° 22' 13"	D = 23° 52' 24"	D = 40° 55' 32"	D = 23° 52' 24"
R	= 275.00'	R = 800.00'	R = 350.00'	R = 240.00'	R = 140.00'	R = 240.00'
T	= 435.61'	T = 69.94'	T = 45.00'	T = 52.49'	T = 104.77'	T = 162.00'
L	= 554.22'	L = 139.52'	L = 89.63'	L = 103.35'	L = 179.89'	L = 285.11'
E	= 240.15'	E = 3.05'	E = 2.89'	E = 5.67'	E = 34.86'	E = 49.60'
P.C. STA.	= 150+34.14	P.C. STA. = 156+31.24	P.C. STA. = 157+70.76	P.C. STA. = 159+64.51	P.C. STA. = 161+23.67	P.C. STA. = 163+03.56
P.T. STA.	= 155+88.36	P.T. STA. = 157+70.76	P.T. STA. = 159+64.51	P.T. STA. = 160+67.86	P.T. STA. = 163+03.56	P.T. STA. = 165+88.67

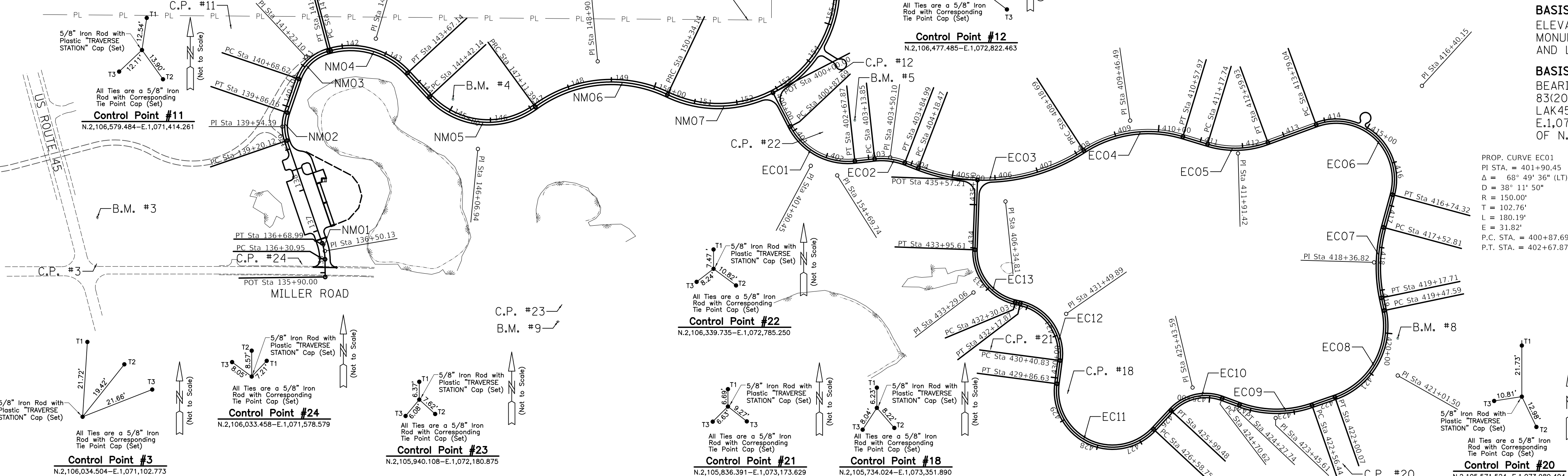
PROJ. CURVE	NO.13	NO.14	NO.15	NO.16	NO.17
PI STA.	= 167+66.34	PI STA. = 169+42.02	PI STA. = 171+50.79	PI STA. = 173+56.95	PI STA. = 175+39.65
Δ	= 23° 00' 13" (RT)	Δ = 42° 22' 15" (LT)	Δ = 18° 53' 58" (RT)	Δ = 82° 17' 10" (RT)	Δ = 28° 43' 04" (RT)
D	= 19° 05' 55"	D = 19° 05' 55"	D = 9° 14' 29"	D = 47° 44' 47"	D = 12° 43' 57"
R	= 300.00'	R = 300.00'	R = 620.00'	R = 120.00'	R = 450.00'
T	= 61.05'	T = 116.27'	T = 103.19'	T = 104.84'	T = 115.20'
L	= 120.45'	L = 221.85'	L = 204.51'	L = 172.34'	L = 225.55'
E	= 6.15'	E = 21.74'	E = 8.53'	E = 39.35'	E = 14.51'
P.C. STA.	= 167+05.30	P.C. STA. = 168+25.75	P.C. STA. = 170+47.60	P.C. STA. = 172+52.11	P.C. STA. = 174+24.45
P.T. STA.	= 168+25.75	P.T. STA. = 170+47.60	P.T. STA. = 172+52.11	P.T. STA. = 174+24.45	P.T. STA. = 176+50.00

NOTE:
THREE POINT TIES ARE PROVIDED ONLY TO FIND GENERAL LOCATIONS OF CONTROL POINTS, NOT TO ACCURATELY ESTABLISH THE POINTS.



N.G.S. Survey Monument LAK45 1A
N.2,106,661.43-E.1,070,857.85

N.G.S. Survey Monument LAK45 1A
N.2,106,579.484-E.1,071,414.261



PROPOSED MILLENNIUM TRAIL				
DESCRIPTION	STATION	NORTHING	EASTING	
800 POT	135+90.00	2106004.1268	1071632.2252	
NM01	PC	136+30.95	2106045.0740	1071631.6948
	PI	136+50.13	2106064.2520	1071631.4464
	PT	136+68.99	2106082.3971	1071625.2327
NM02	PC	139+20.12	2106319.9827	1071543.8723
	PI	139+54.39	2106352.4074	1071532.7696
	PT	139+86.16	2106384.8264	1071543.8889
NM03	PC	140+68.62	2106462.8335	1071570.6467
	PI	141+22.10	2106513.4143	1071587.9968
	PT	141+66.83	2106527.0712	1071639.6973
NM04	PC	141+72.33	2106528.4735	1071645.0062
	PI	142+80.50	2106556.1014	1071749.5965
	PT	143+67.14	2106476.7105	1071823.0778
NM05	PC	144+42.14	2106421.6685	1071874.0227
	PI	146+06.94	2106300.7230	1071985.9653
	PRC	147+11.39	2106397.9992	1072118.9927
NM06	PI	148+90.37	2106503.6432	1072263.4633
	PRC	150+34.14	2106426.6954	1072425.0536
	PRC	150+34.14	2106426.6954	1072425.0536
NM07	PI	154+69.74	2106239.4138	1072818.3446
	PT	155+88.36	2106675.0193	1072818.2855
	PC	156+31.24	2106717.9002	1072818.2796
NM08	PI	157+01.17	2106787.8364	1072818.2701
	PCC	157+01.17	2106856.7102	1072806.1258
	PCC	157+01.17	2106856.7102	1072806.1258
NM09	PI	158+15.82	2106901.0849	1072798.3014
	PT	158+60.38	2106942.0309	1072779.4927
	PC	159+64.51	2107036.6560	1072736.0262
NM10	PI	160+17.00	2107084.3509	1072714.1173
	PT	160+67.86	2107136.8372	1072714.1173
	PC	161+23.67	2107192.6497	1072714.1173
NM11	PI	162+28.44	2107297.4219	1072714.1173
	PRC	163+03.56	2107326.9677	1072814.6373
	PRC	163+03.56	2107326.9677	1072814.6373
NM12	PI	164+65.64	2107372.6747	1072970.1407
	PT	165+88.67	2107533.9952	1072985.8302
	PC	167+05.30	2107650.0756	1072997.1198
NM13	PI	167+66.34	2107710.8343	1073003.0290
	PRC	168+25.75	2107764.4523	1073032.2121
	PRC	168+25.75	2107764.4523	1073032.2121
NM14	PI	169+42.02	2107866.5799	1073087.7979
	PRC	170+47.60	2107979.4923	1073080.0380
	PI	170+47.60	2107979.4923	1073080.0380
NM15	PI	171+50.79	2108076.7015	1073035.4013
	PCC	172+52.11	2108182.4883	1073044.5513
	PCC	172+52.11	2108182.4883	1073044.5513
NM16	PI	173+56.95	2108286.9167	1073053.8474
	PCC	174+24.45	2108291.7219	1073158.5787
	PCC	174+24.45	2108291.7219	1073158.5787
NM17	PI	175+39.65	2108297.0017	1073273.6544
	PT	176+50.00	2108246.3385	1073377.1122

SURVEY BASIS OF ELEVATIONS
ELEVATIONS ARE BASED ON THE FOUND NATIONAL GEODETIC SURVEY MONUMENTS LAK45 1A, P.I.D. AJ2896, PUBLISHED NAVD '88 ELEVATION 759.17 AND LAK45 1B, P.I.D. AJ2904, PUBLISHED NAVD '88 ELEVATION 759.25.

BASIS OF COORDINATES
BEARINGS ARE REFERENCED TO THE ILLINOIS COORDINATE SYSTEM NAD 83(2011) EAST ZONE AT FOUND NATIONAL GEODETIC SURVEY MONUMENTS LAK45 1A, P.I.D. AJ2896, PUBLISHED COORDINATE VALUES OF N.2,106,661.43-E.1,070,957.85 AND LAK45 1B, P.I.D. AJ2904, PUBLISHED COORDINATE VALUES OF N.2,108,804.42-E.1,070,259.49.

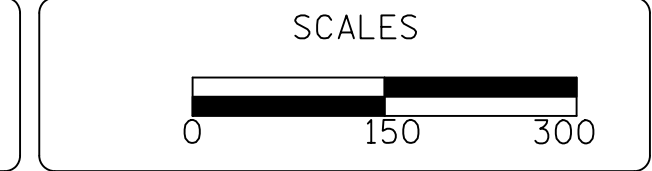
PROJ. CURVE	NO.1	NO.2	NO.3	NO.4	NO.5
PI STA.	= 401+90.45	PI STA. = 403+50.10	PI STA. = 406+34.81	PI STA. = 409+46.49	PI STA. = 411+91.42
Δ	= 68° 49' 36" (LT)	Δ = 27° 10' 28" (RT)	Δ = 53° 57' 17" (LT)	Δ = 49° 51' 13" (RT)	Δ = 37° 01' 48" (LT)
D	= 38° 11' 50"	D = 38° 11' 50"	D = 13° 28' 53"	D = 20° 50' 05"	D = 26° 02' 37"
R	= 150.00'	R = 150.00'	R = 425.00'	R = 275.00'	R = 220.00'
T	= 102.76'	T = 36.25'	T = 216.34'	T = 127.81'	T = 73.68'
L	= 180.19'	L = 71.14'	L = 400.22'	L = 239.28'	L = 142.19'
E	= 31.82'	E = 4.32'	E = 51.89'	E = 28.25'	E = 12.01'
P.C. STA.	= 400+87.69	P.C. STA. = 403+13.85	P.C. STA. = 404+18.47	P.C. STA. = 408+18.69	P.C. STA. = 411+17.74
P.T. STA.	= 402+67.87	P.T. STA. = 403+84.99	P.T. STA. = 408+18.69	P.T. STA. = 410+57.97	P.T. STA. = 412+59.93

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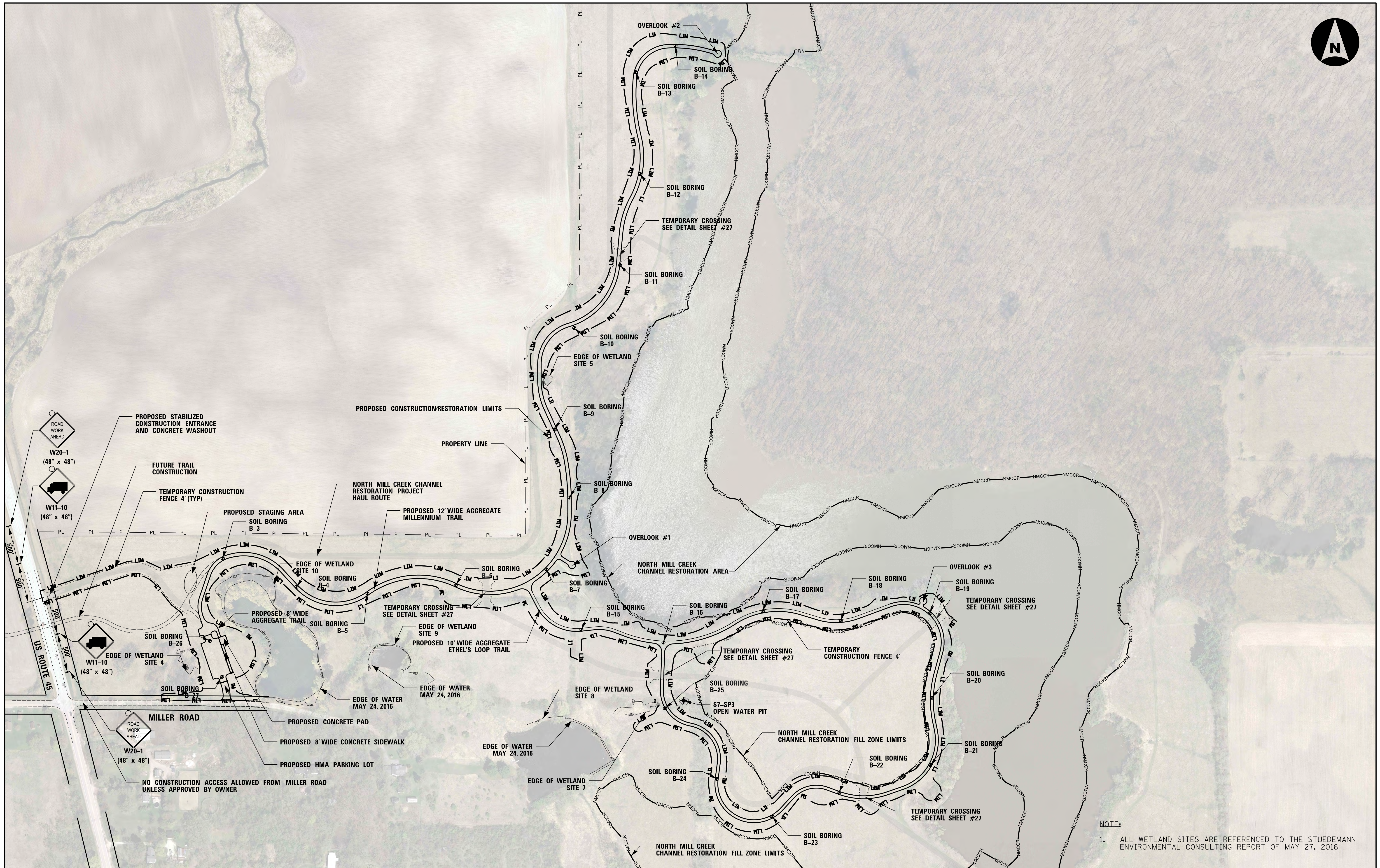
Revised -
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Revised -
Revised -

LAKE COUNTY FOREST PRESERVE DISTRICT



OVERALL LAYOUT KEY, ALIGNMENT, TIES AND BENCHMARKS
ETHEL'S WOODS FOREST PRESERVE
Sheet No. 1 of 1 Sheets

County	Total Sheets	Sheet No.
Lake	29	5
Project No. 63910-18006-887		



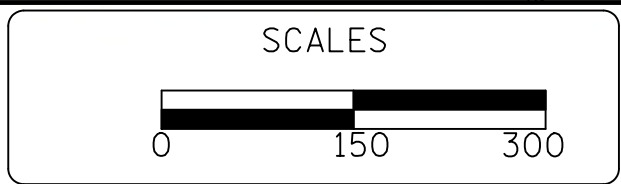
NOTE:
 1. ALL WETLAND SITES ARE REFERENCED TO THE STUEDEMANN ENVIRONMENTAL CONSULTING REPORT OF MAY 27, 2016

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 Revised -
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 Revised -

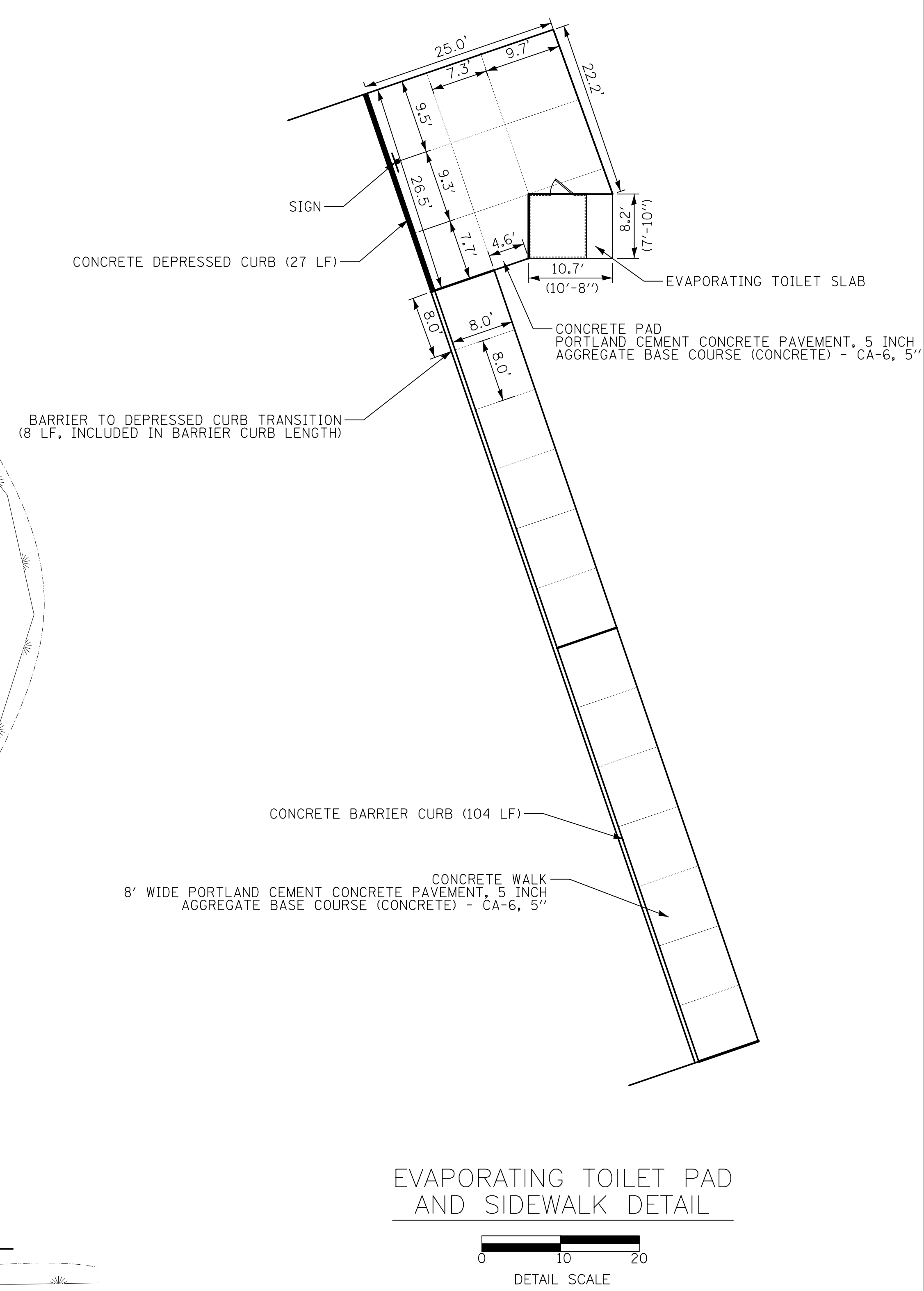
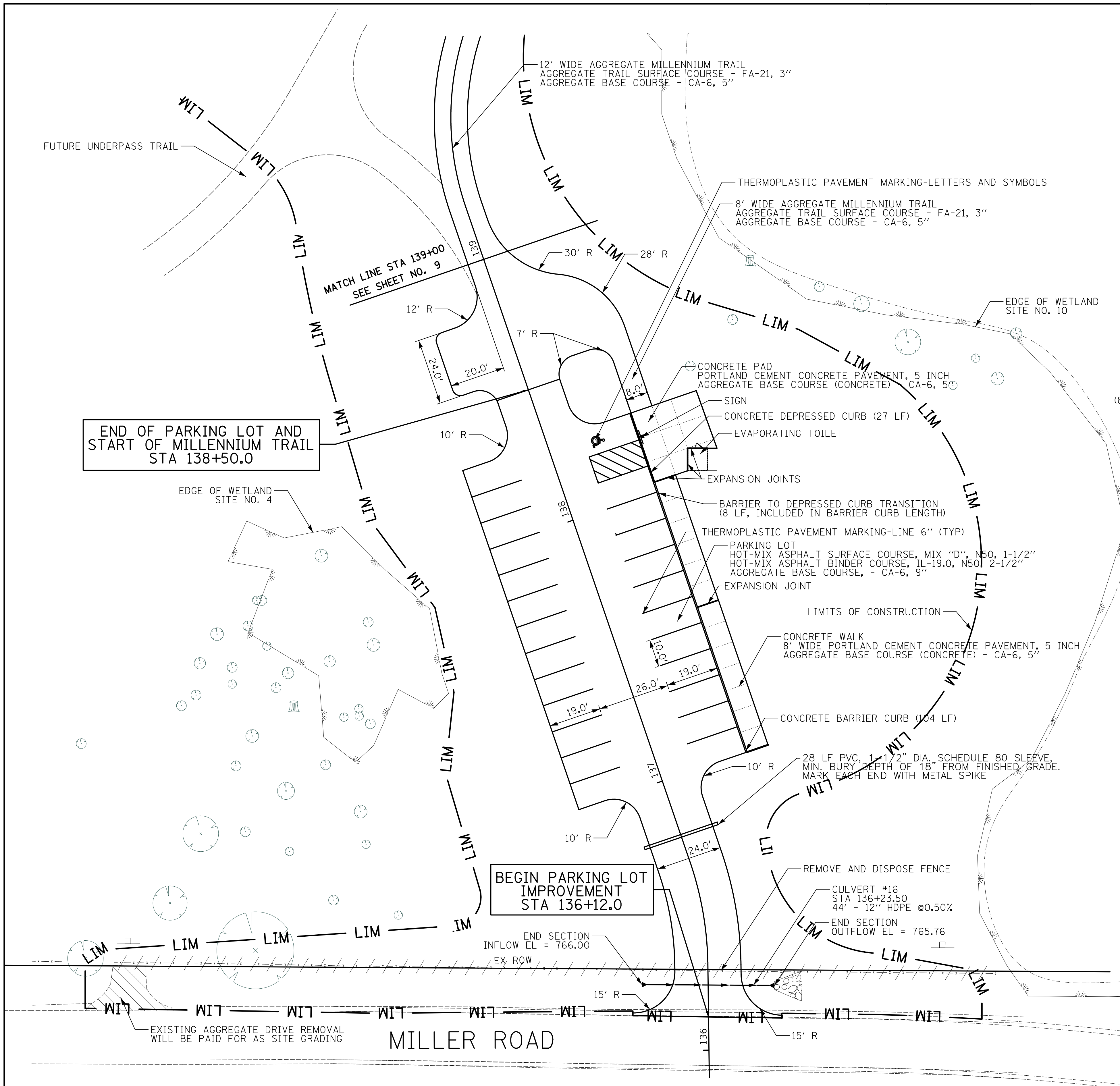
**LAKE COUNTY
 FOREST PRESERVE DISTRICT**



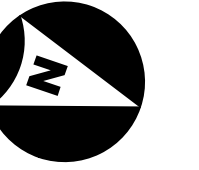
**OVERALL LAYOUT SITE PLAN
 ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 1 of 1 Sheets

County	Total Sheet No.
Lake	29
	6
Project No. 63910-18006-887	



NOTES:



1. RIP RAP AND FLARED END SECTION CONSTRUCTION IS INCIDENTAL TO THE RESPECTIVE CULVERT CROSSING AND PIPE INSTALLATION.
2. PER SPECIFICATION 03100 EARTHWORK AND GRADING; IT IS THE OWNER'S INTENT THAT THE SITE GRADING WILL RESULT IN A BALANCE BETWEEN SOIL CUTS AND SOIL FILLS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR BALANCING SITE MATERIALS ACCORDING TO THE PLANS AND / OR AT THE DIRECTION OF THE OWNER. ON-SITE TOPSOIL STRIPPING AND STOCKPILING, EXCAVATION, HAULING, PLACEMENT AND RE-SPREADING OF MATERIALS BEYOND THE SPECIFIED WORK AREAS SHALL BE INCIDENTAL TO THE WORK WHEN REQUIRED TO BALANCE CUTS AND FILLS. IF MATERIAL OVERAGES ARE INDICATED, THE EXCESS SOILS SHALL BE EXCAVATED, HARVESTED, HAUL OR OTHERWISE MOVED TO NEW LOCATIONS AND DEPOSITED AND SPREAD AS DIRECTED BY THE OWNER. TOPSOIL AT NEW FILL AREAS SHALL BE STRIPPED, STOCKPILED AND THEN RE-SPREAD AFTER FILLING. WHEN MATERIAL DEFICITS OCCUR, BORROW AREAS MAY BE INDICATED ON THE PLANS OR IDENTIFIED IN THE FIELD BY THE OWNER. WHEN REQUIRED TO UTILIZE BORROW AREAS, THE CONTRACTOR SHALL STRIP, STOCKPILE AND RE-SPREAD ANY EXISTING TOPSOIL AS PART OF THE BORROW OPERATIONS. IF ON-SITE EXCAVATION AND BORROW OPERATIONS DO NOT PROVIDE ENOUGH SUITABLE MATERIAL FOR FILL AREAS, THE CONTRACTOR SHALL NOTIFY THE OWNER. THE OWNER SHALL DETERMINE WHETHER ADDITIONAL BORROW AREAS SHALL BE UTILIZED OR IF NEW MATERIAL WILL BE BROUGHT IN FROM OFF SITE.

END OF PARKING LOT AND START OF MILLENNIUM TRAIL STA 138+50.0

12' WIDE AGGREGATE MILLENNIUM TRAIL
AGGREGATE TRAIL SURFACE COURSE - FA-21, 3"
AGGREGATE BASE COURSE - CA-6, 5"

FUTURE UNDERPASS TRAIL

VEGETATION REMOVAL - COMPLETE
(FIELD MOWING AND REMOVAL OF WOODY SPECIES
WITHIN SHADED AREA = 1056 SY)

VEGETATION REMOVAL - COMPLETE
(FIELD MOWING AND REMOVAL OF WOODY SPECIES
WITHIN SHADED AREA = 230 SY)

END SECTION
INFLOW EL = 766.00
CULVERT #16
STA 136+23.50
44' - 12" HDPE @ 0.50%

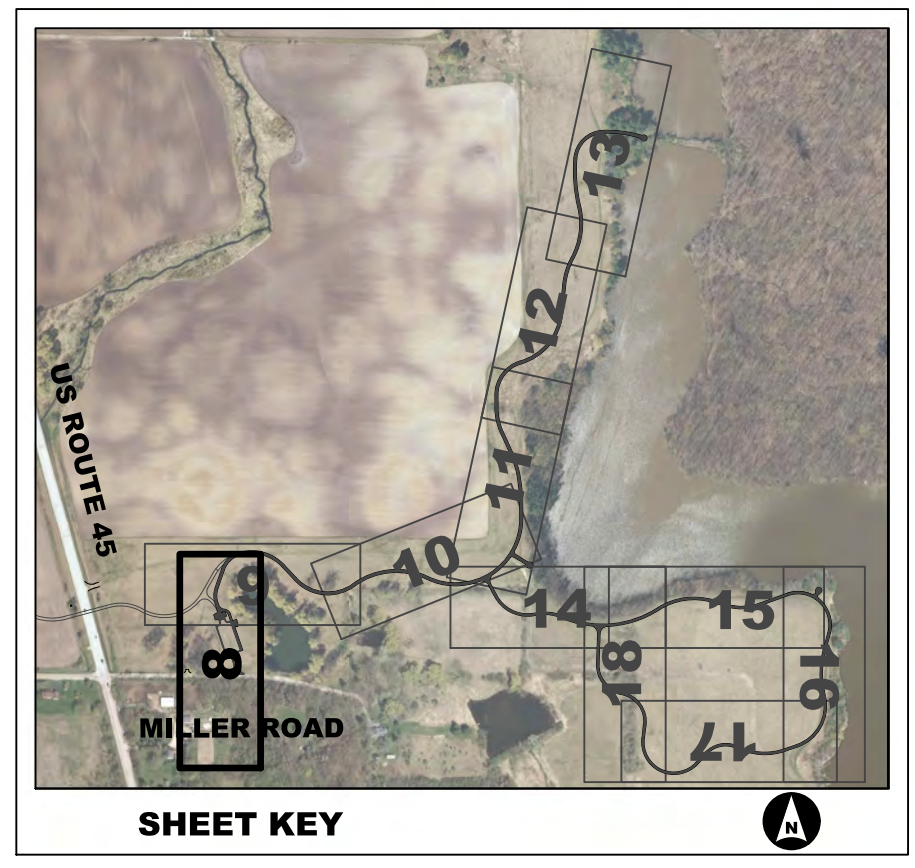
END SECTION
OUTFLOW EL = 765.76

PARKING LOT
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 1-1/2"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 2-1/2"
AGGREGATE BASE COURSE, - CA-6, 9"

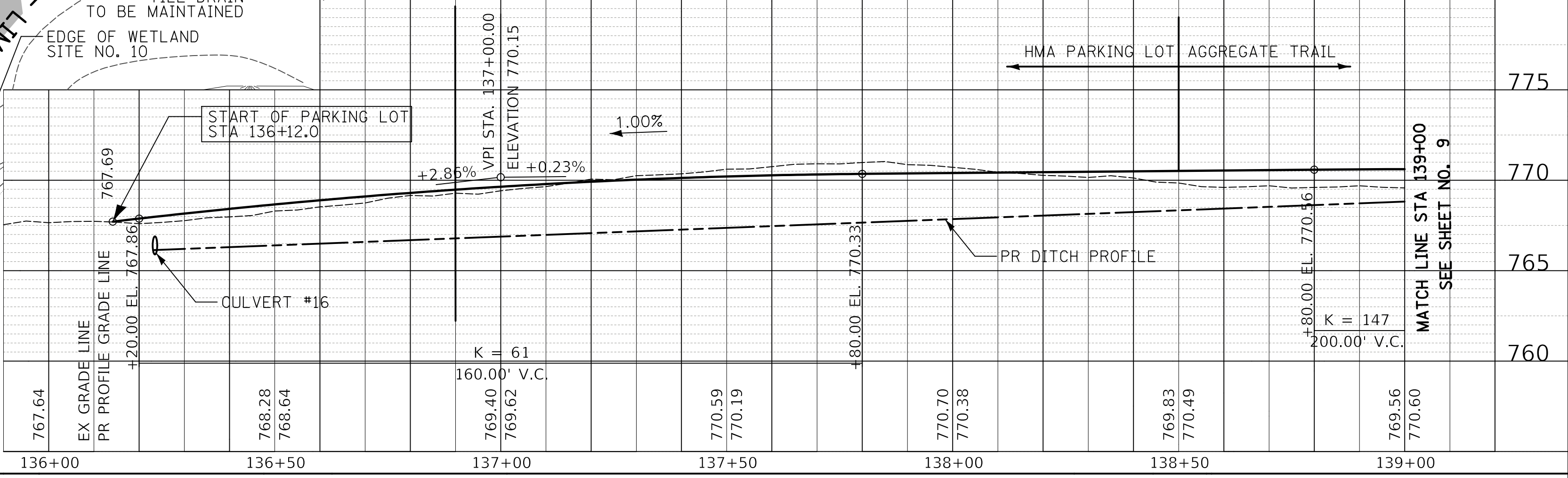
EVAPORATING TOILET SLAB FOUNDATION
CONCRETE PAD FINISHED FLOOR ELEVATIONS = 770.89

VEGETATION REMOVAL - COMPLETE
(FIELD MOWING AND REMOVAL OF WOODY SPECIES
WITHIN SHADED AREA = 156 SY)

BEGIN PARKING LOT
IMPROVEMENT
STA 136+12.0



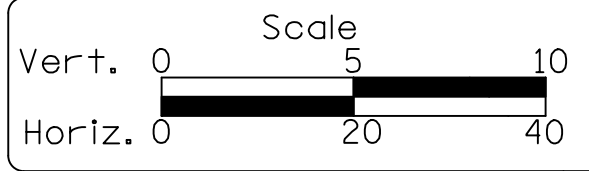
SHEET KEY



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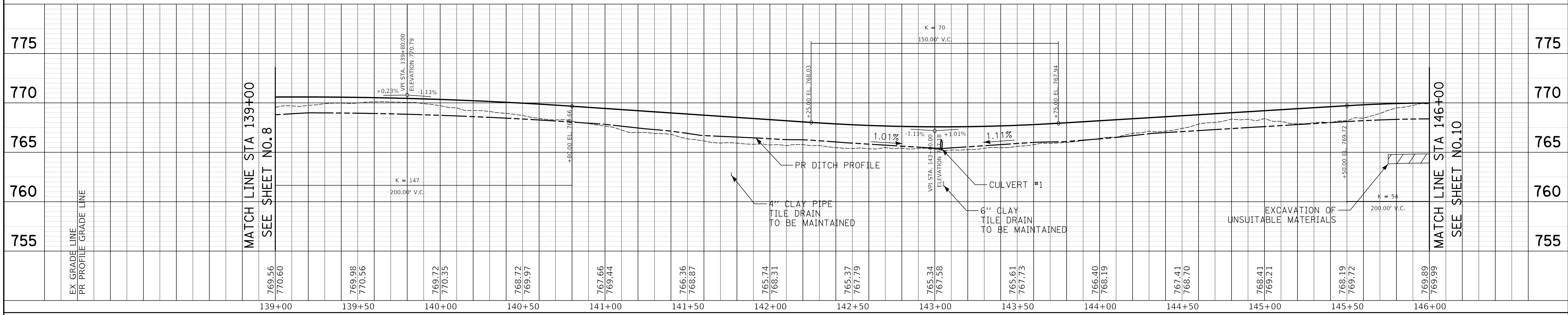
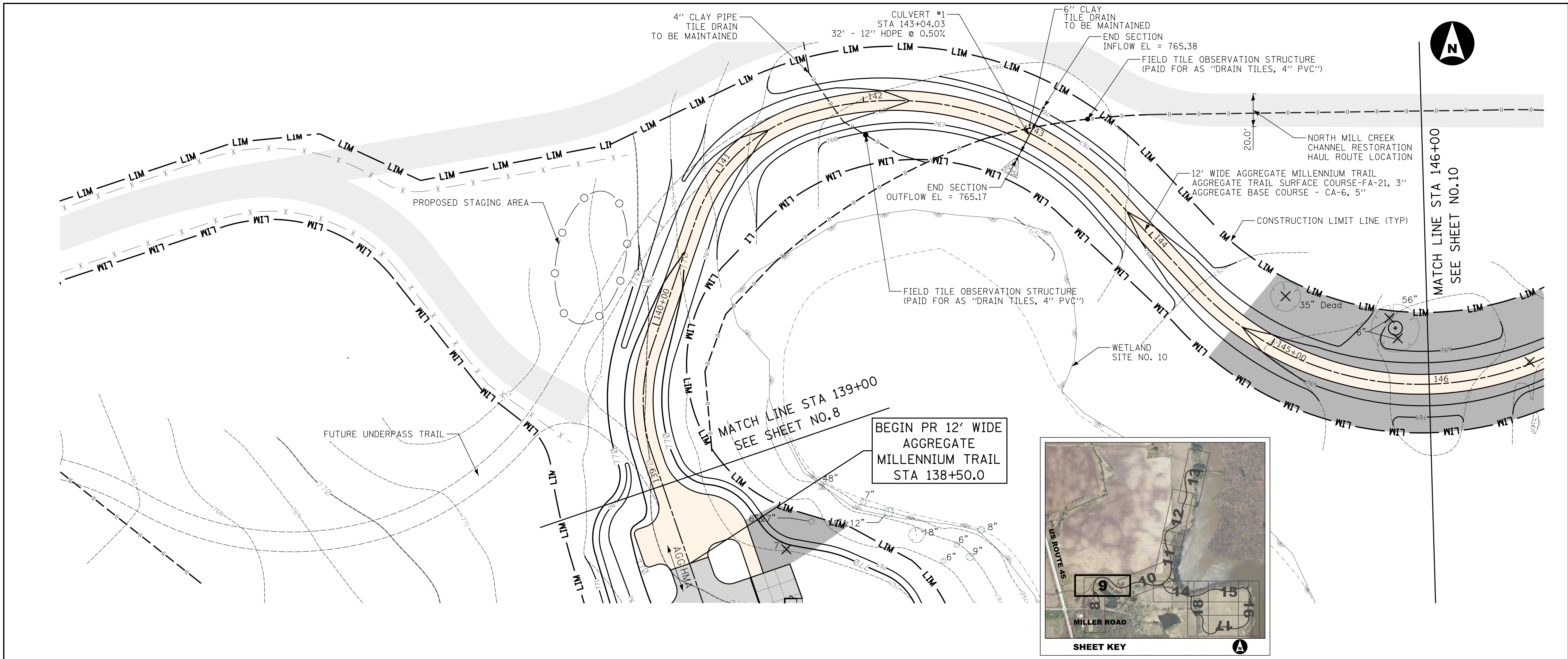
**LAKE COUNTY
FOREST PRESERVE DISTRICT**

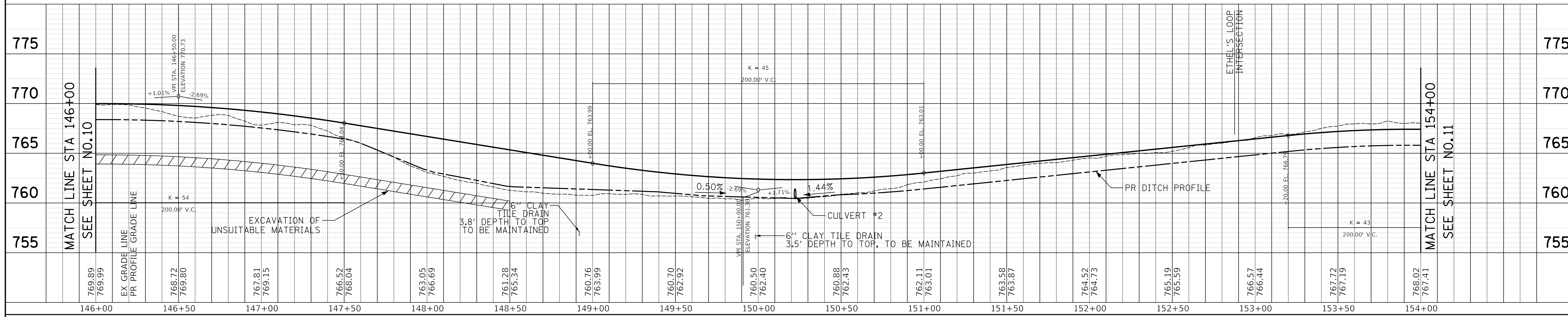
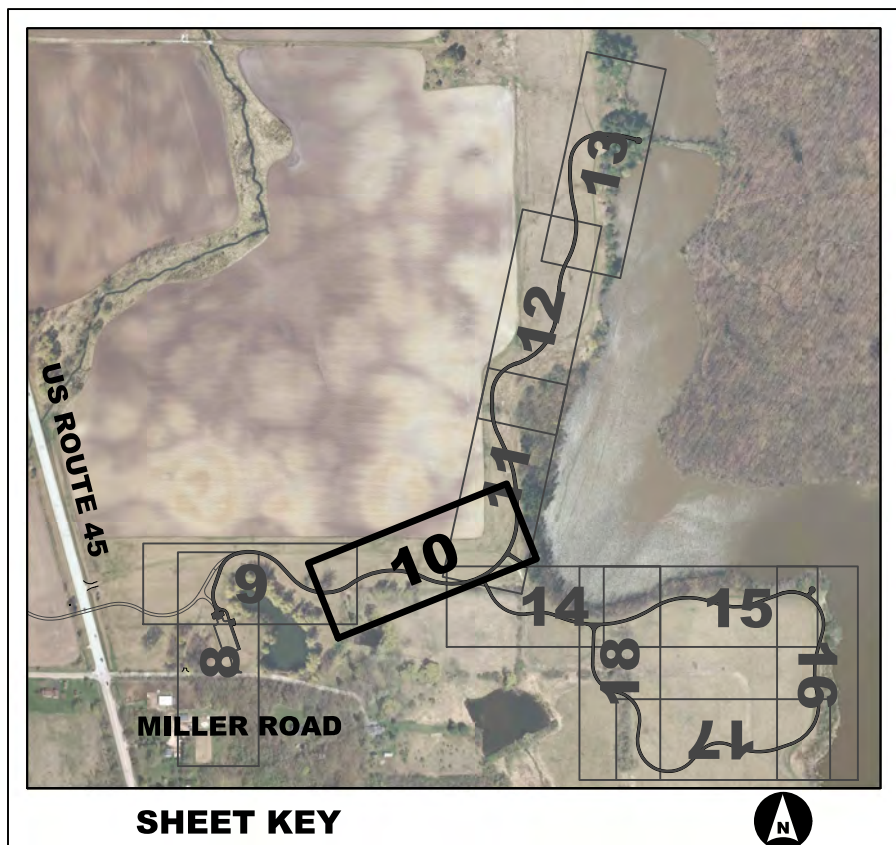
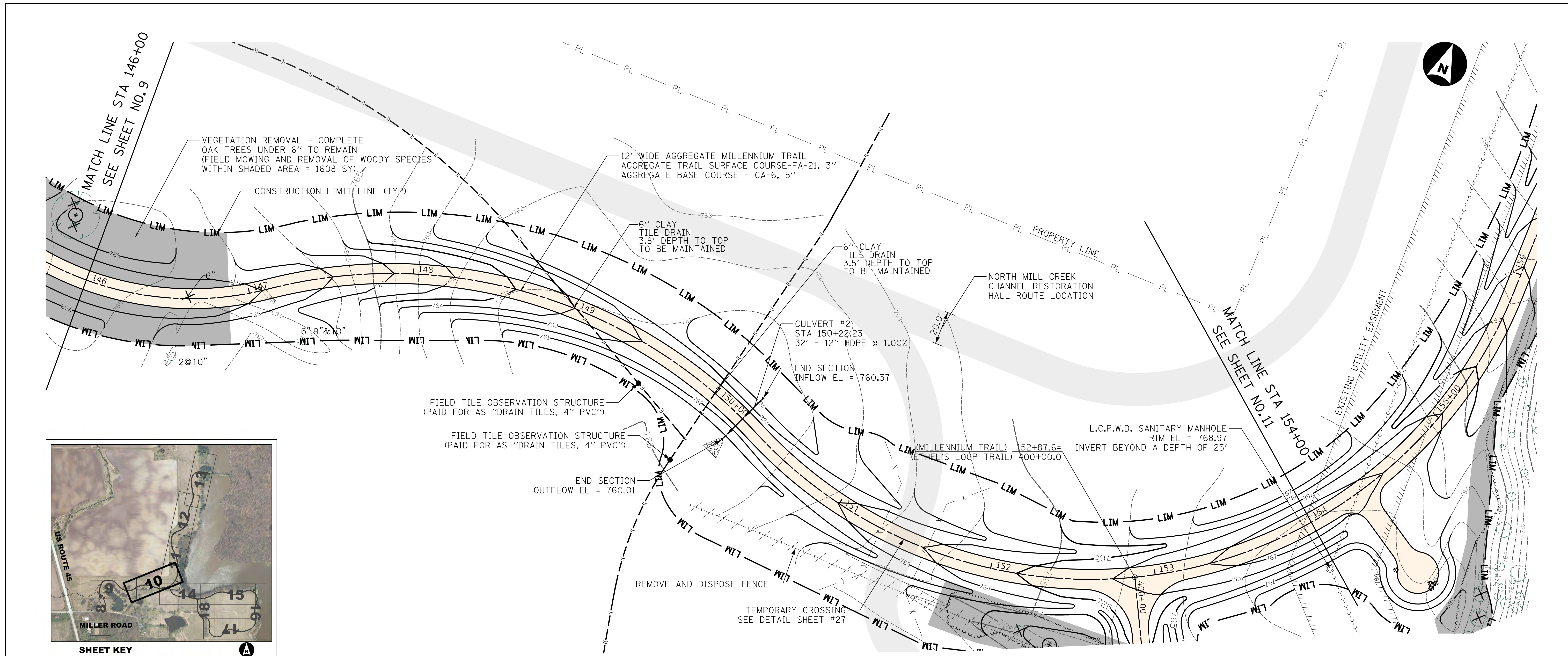


**PARKING LOT GRADING
MILLENNIUM TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 1 of 11 Sheets STA. 136+12.0 to STA. 139+00

County	Total Sheet
Lake	29
	8
Project No. 63910-18006-887	

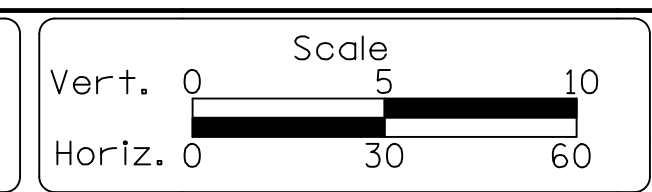




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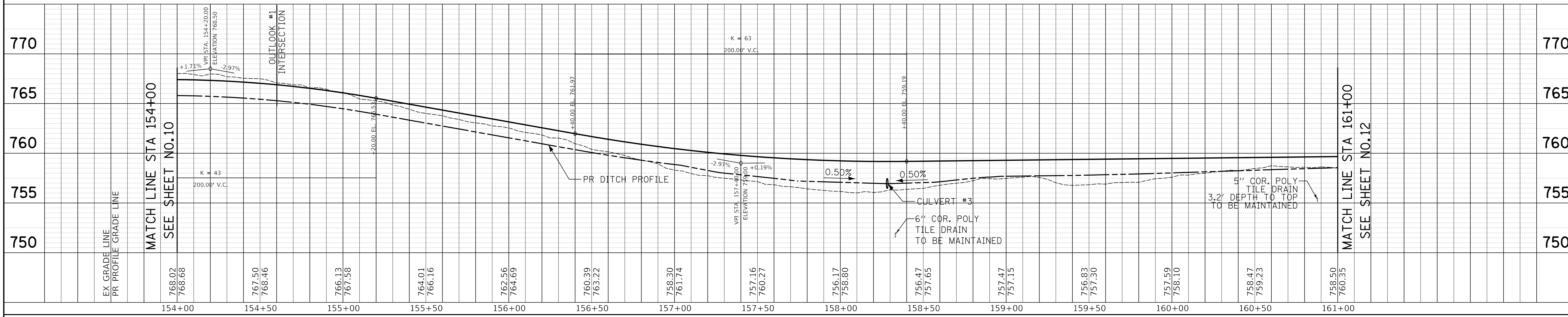
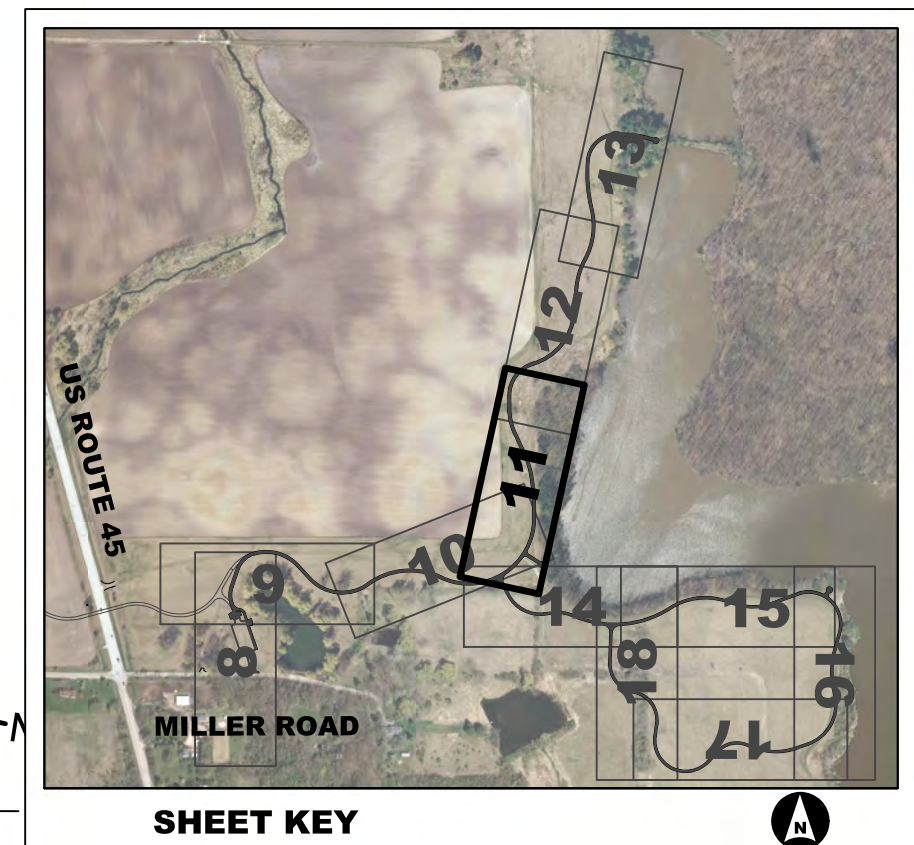
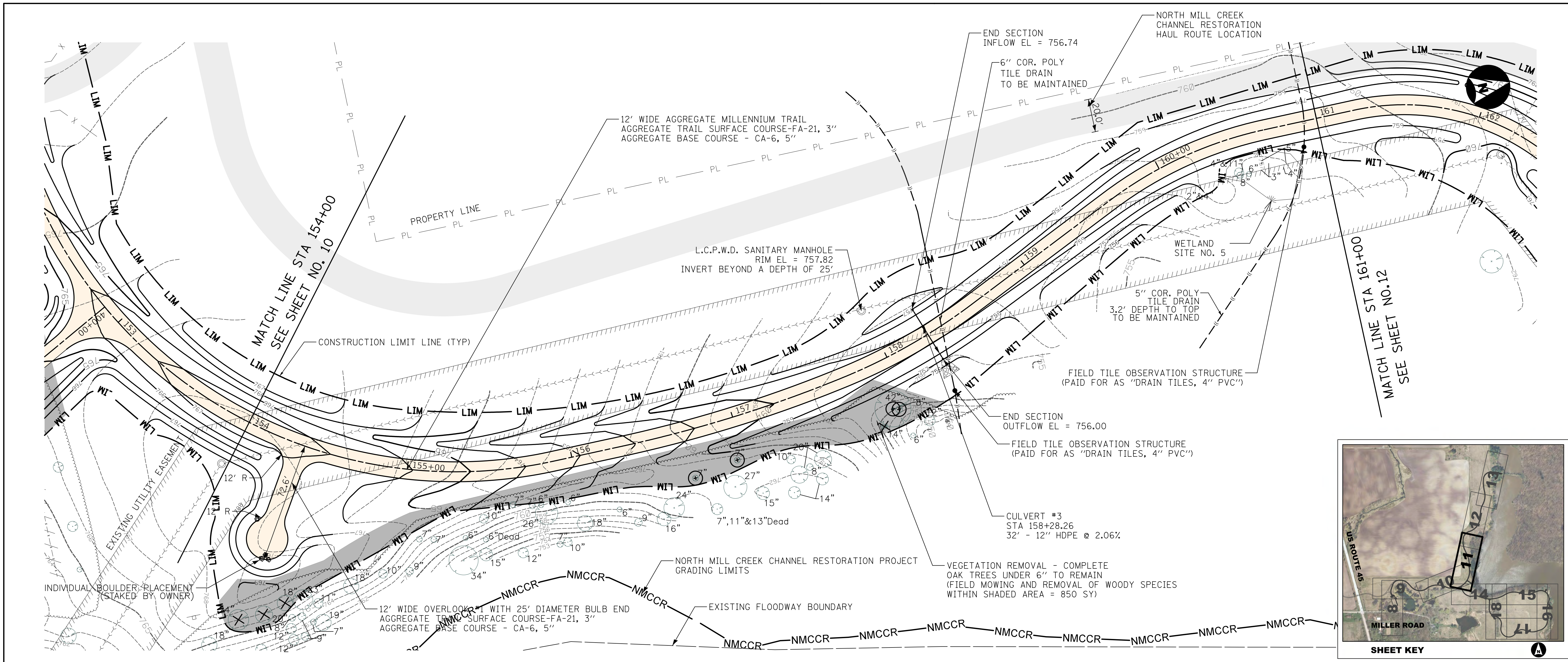
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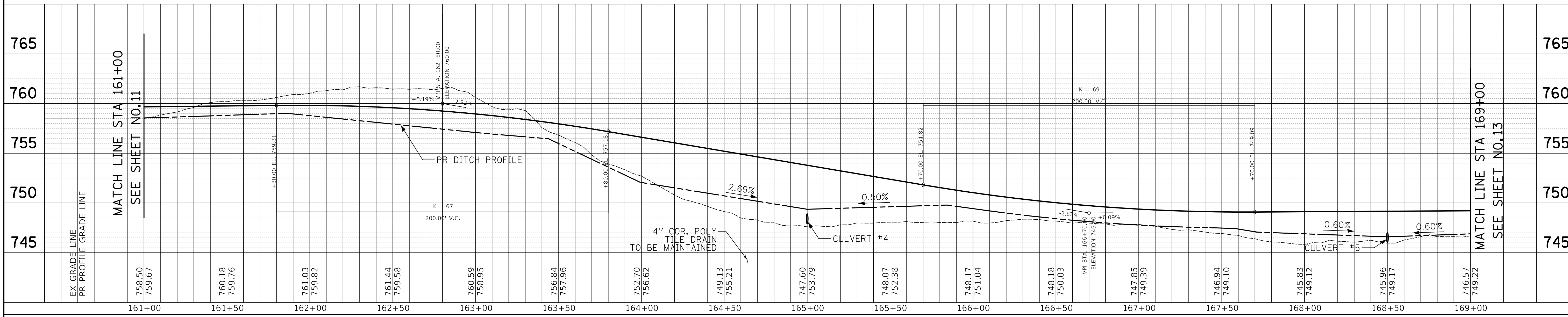
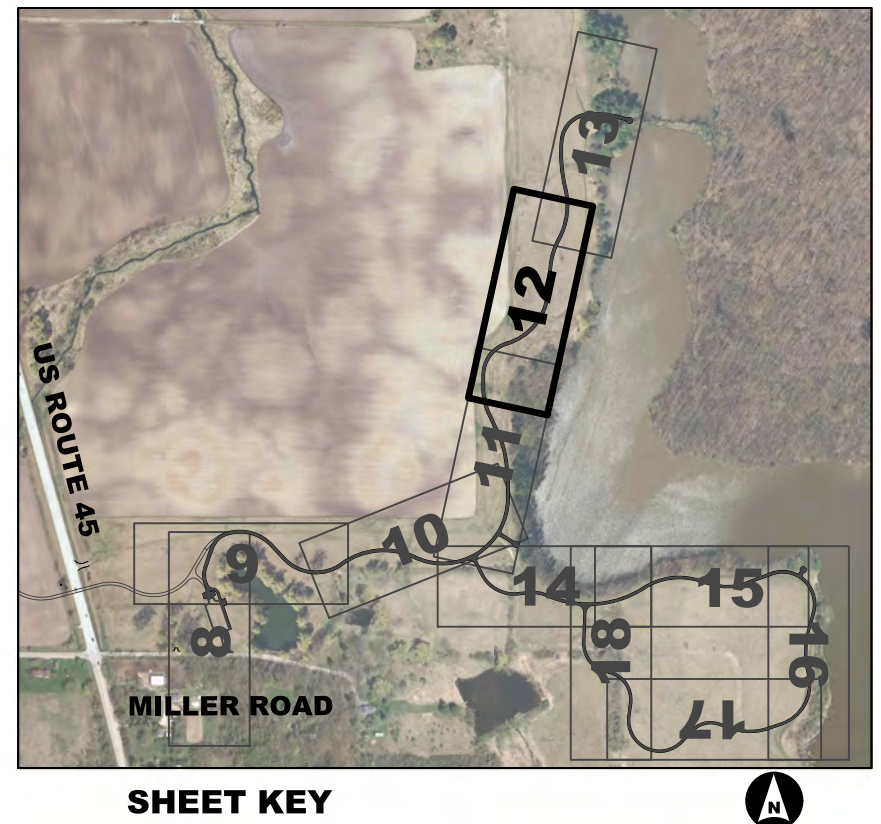
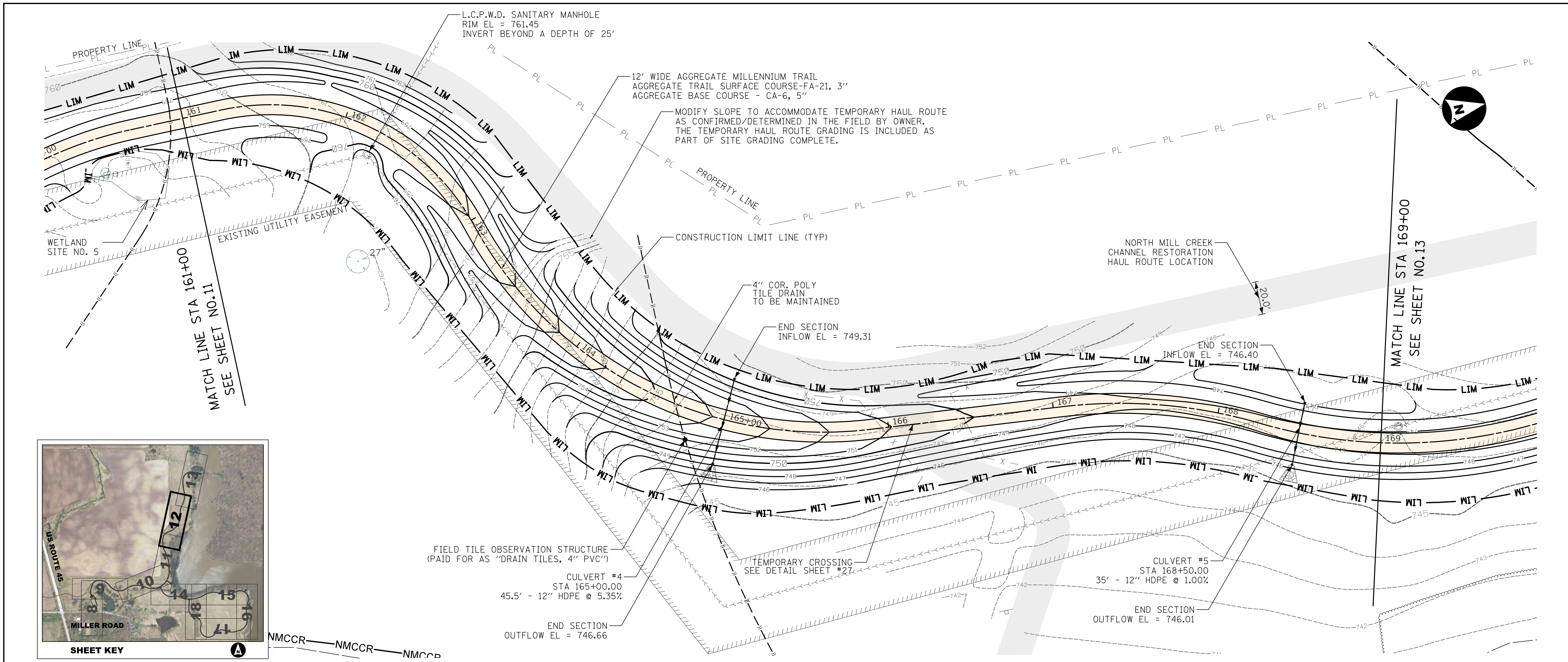


**MILLENNIUM TRAIL PLAN AND PROFILE
 ETHEL'S WOODS FOREST PRESERVE**
 Sheet No. 3 of 11 Sheets STA. 146+00 to STA. 154+00

County
 Lake
 Total Sheet No. 29
 Project No. 63910-18006-887



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	Sheet No. 4 of 11 Sheets STA. 154+00 to STA. 161+00		Project No. 63910-18006-887				



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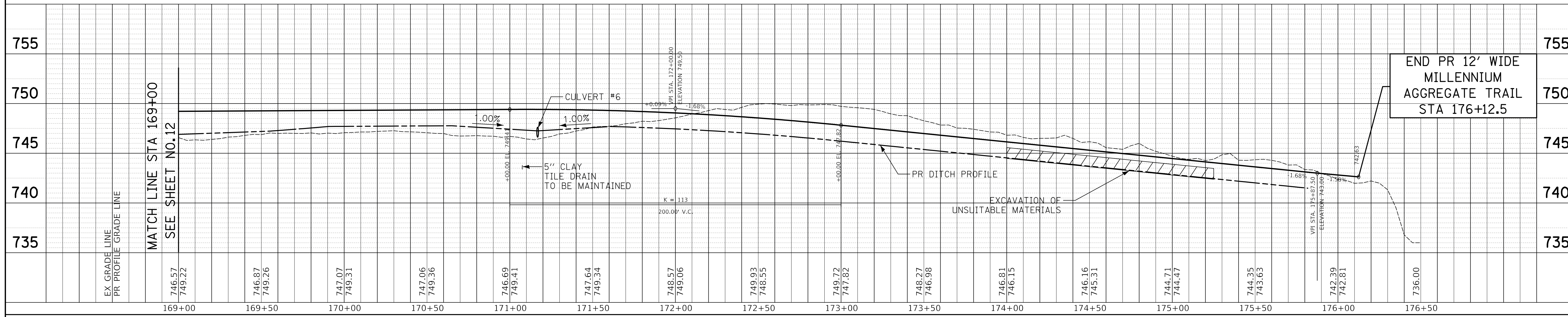
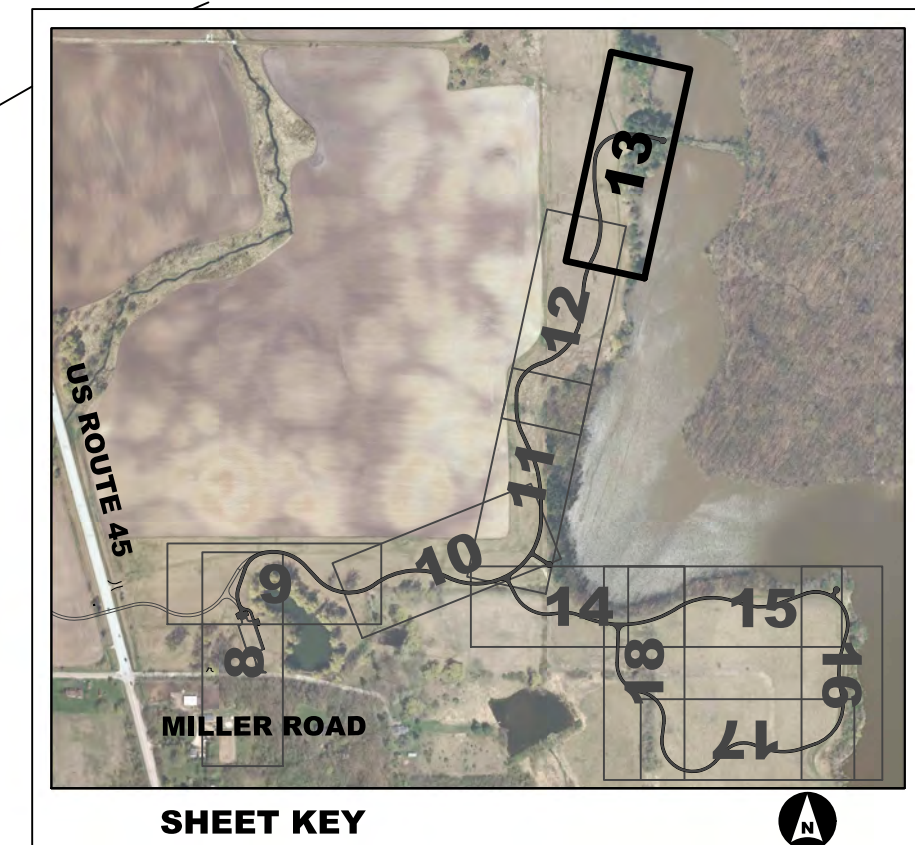
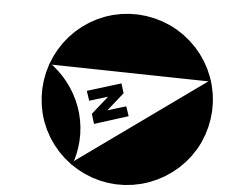
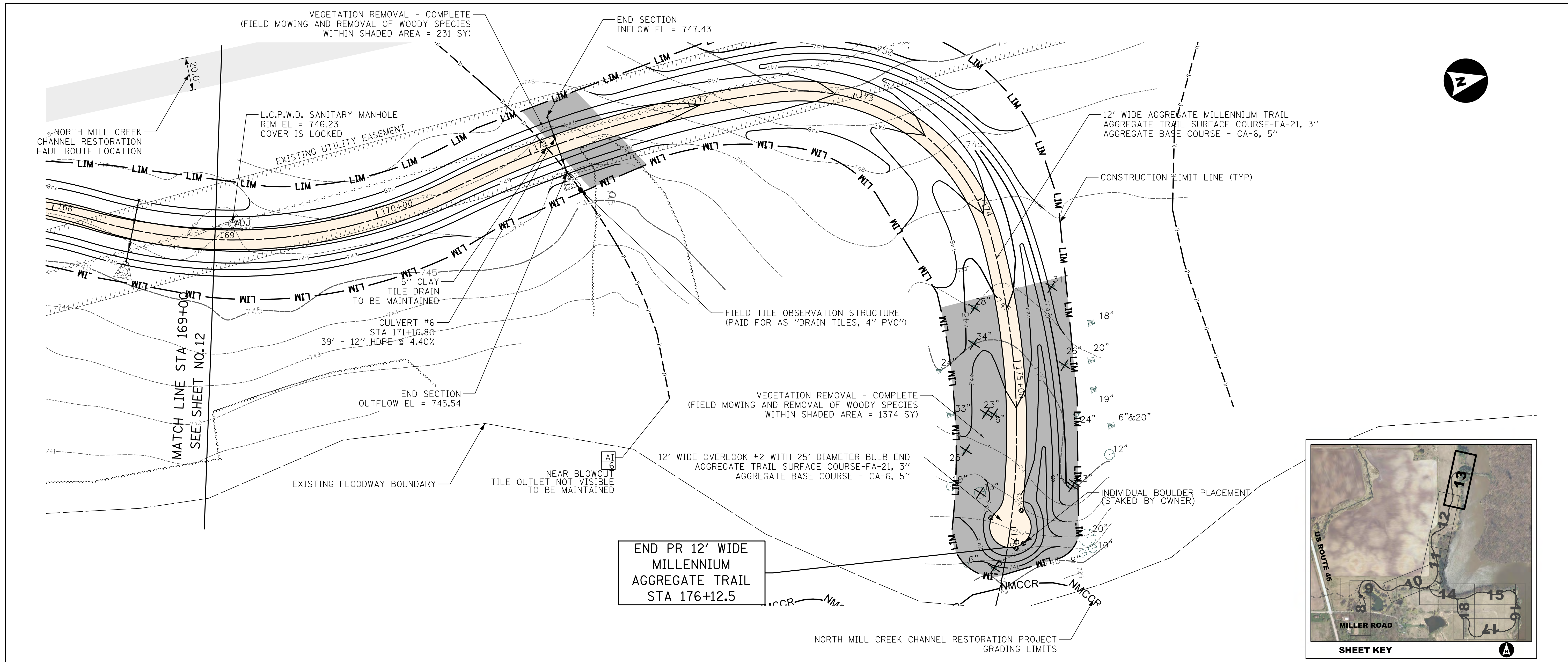
**LAKE COUNTY
FOREST PRESERVE DISTRICT**

Scale
Vert. 0 5 10
Horiz. 0 30 60

**MILLENNIUM TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 5 of 11 Sheets STA. 161+00 to STA. 169+00

County	Total Sheet No.
Lake	29 12
Project No. 63910-18006-887	

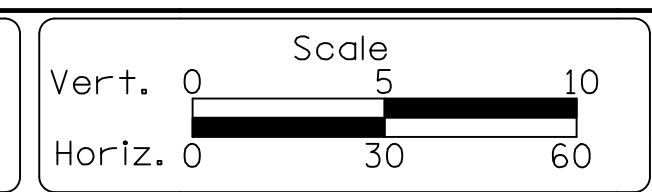


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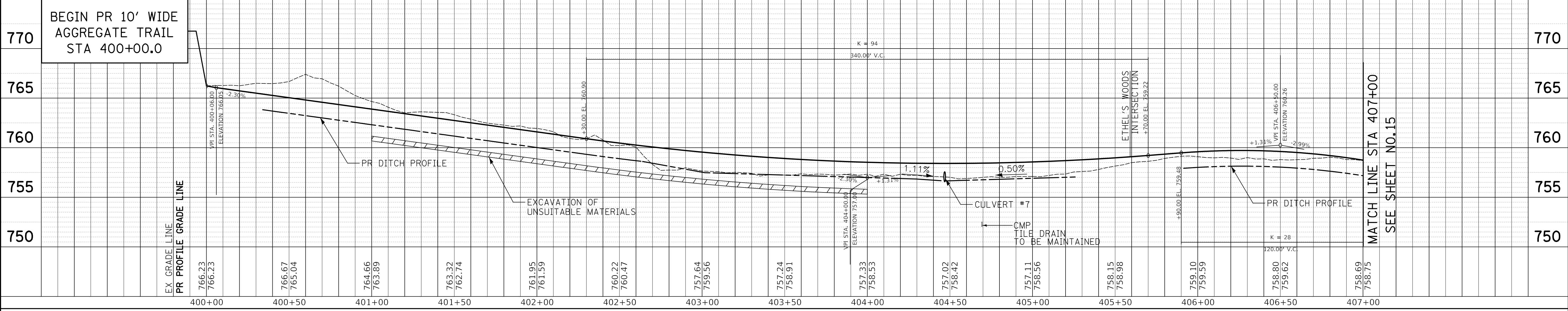
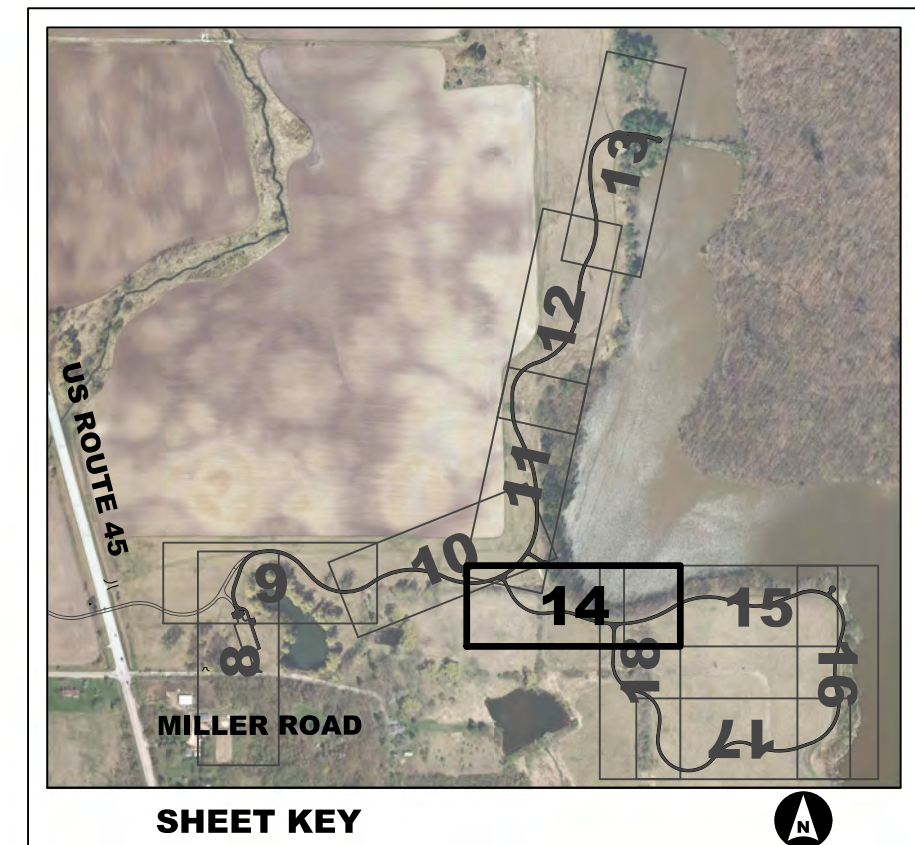
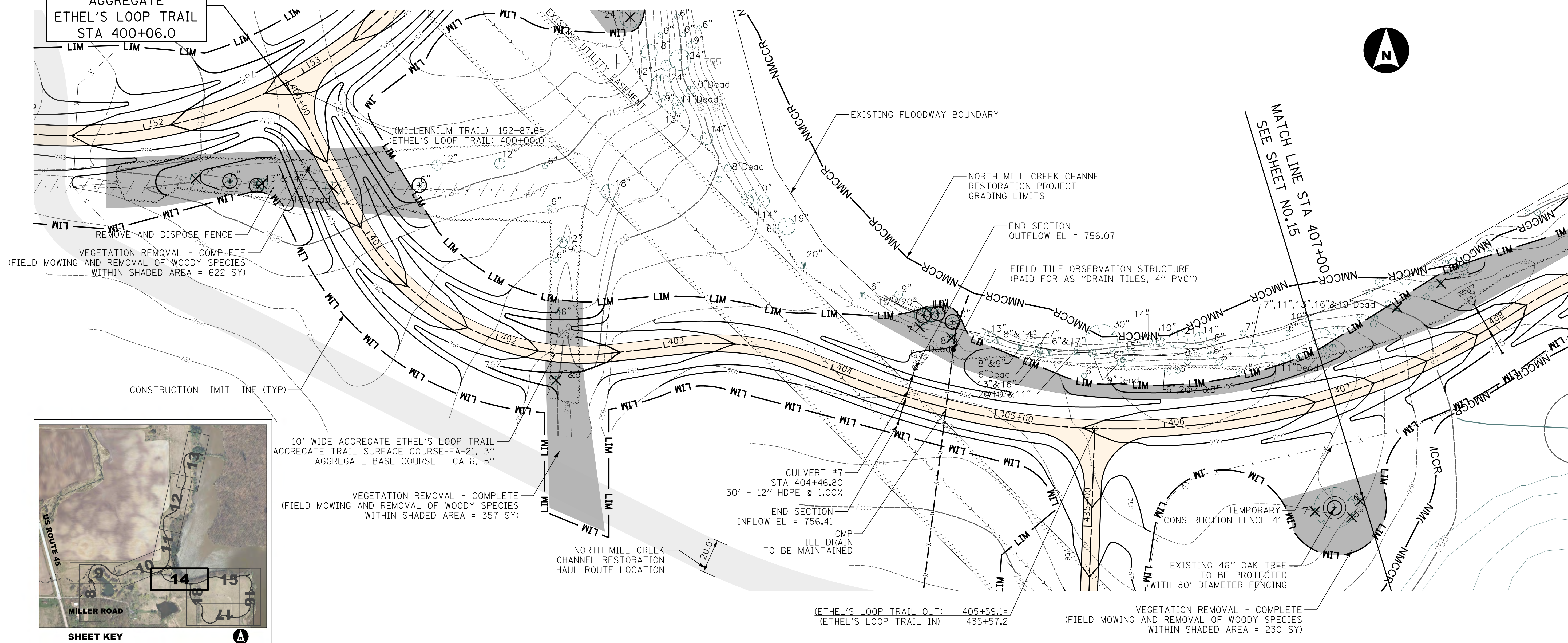
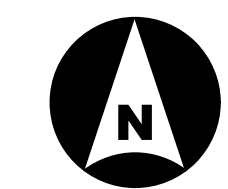
**LAKE COUNTY
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**MILLENNIUM TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE**
Sheet No. 6 of 11 Sheets STA. 169+00 to STA. 176+50

County
Lake
Total Sheet No. 29
Total Sheet No. 13
Project No. 63910-18006-887

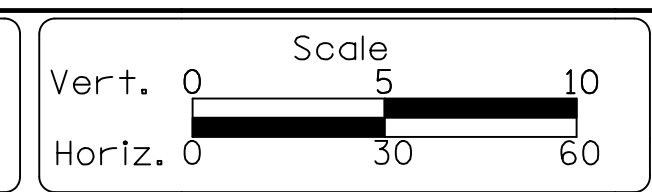
BEGIN PR 10' WIDE
AGGREGATE
ETHEL'S LOOP TRAIL
STA 400+06.0



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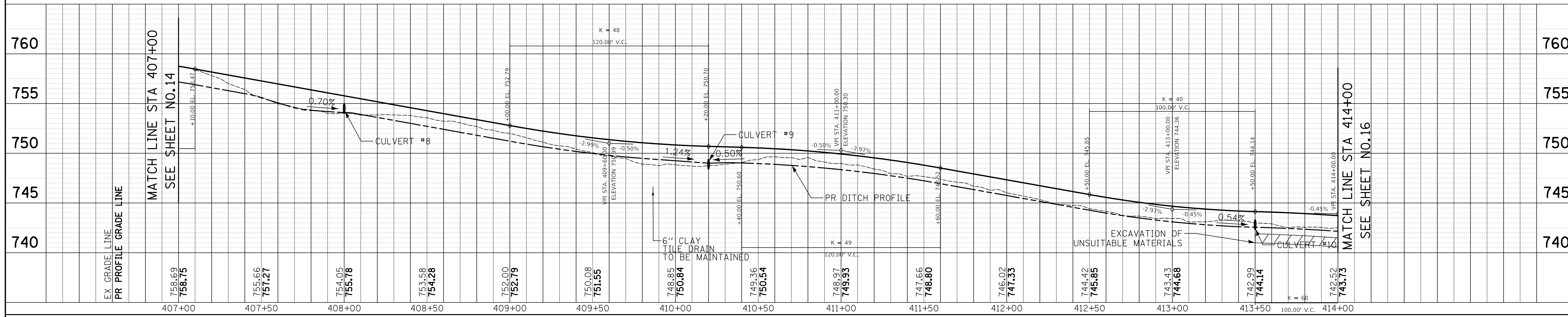
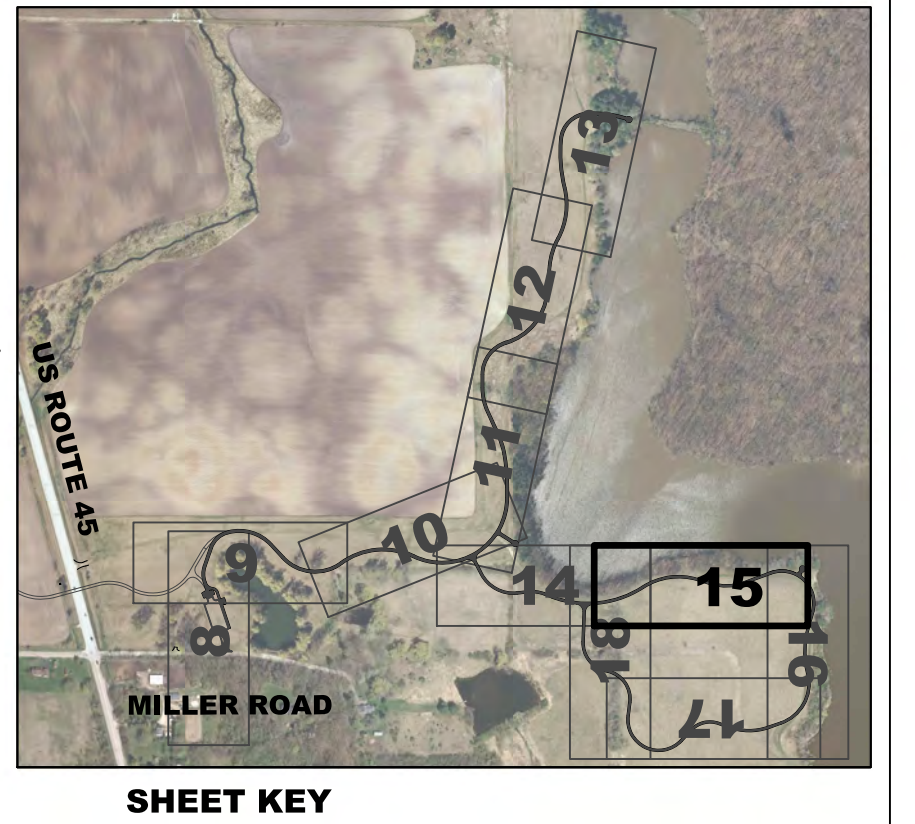
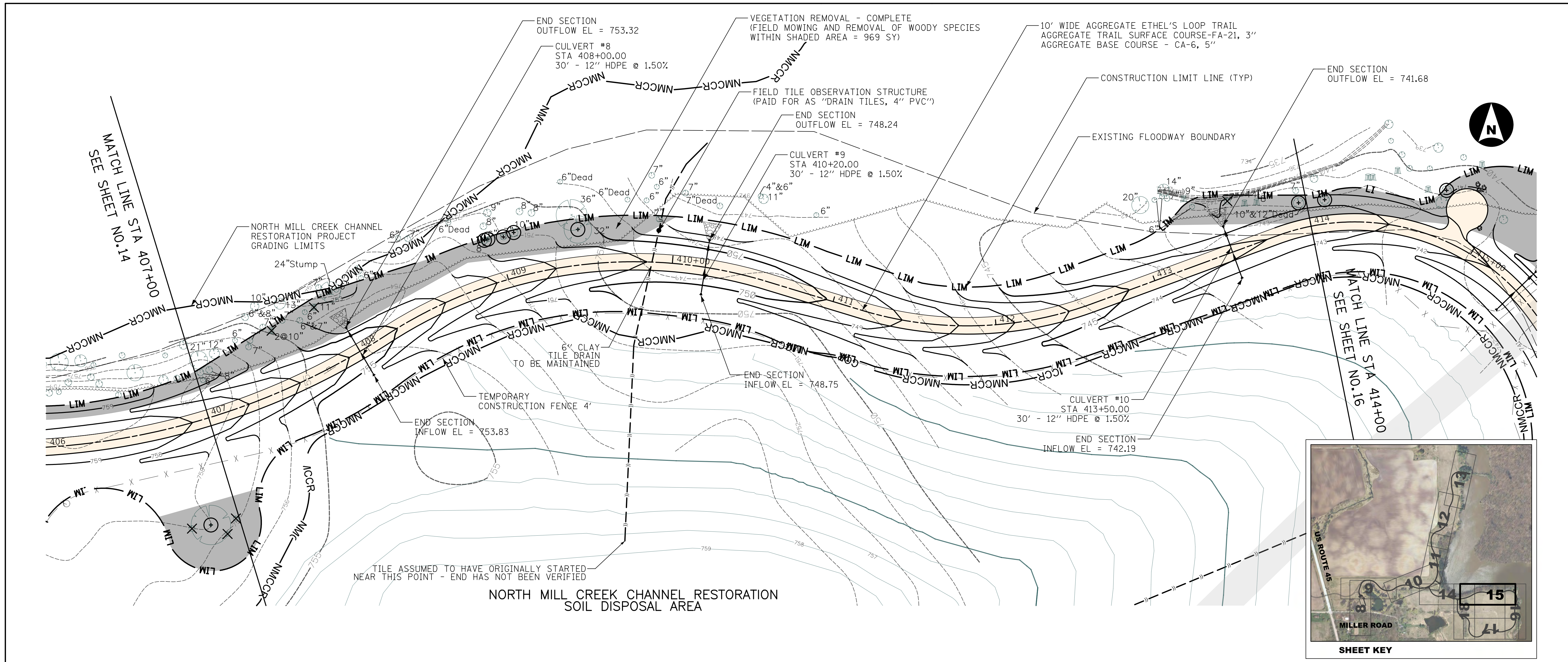
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**ETHEL'S LOOP TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE**
Sheet No. 7 of 11 Sheets STA. 400+00 to STA. 407+00

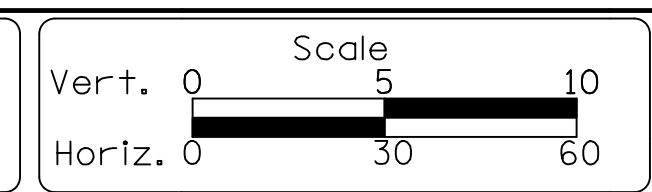
County	Total Sheet No.
Lake	29 14
Project No. 63910-18006-887	



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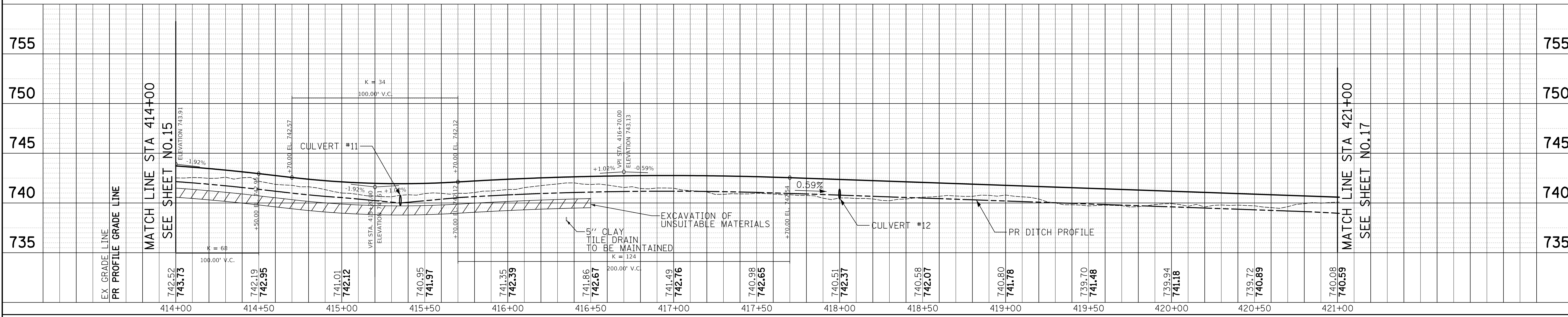
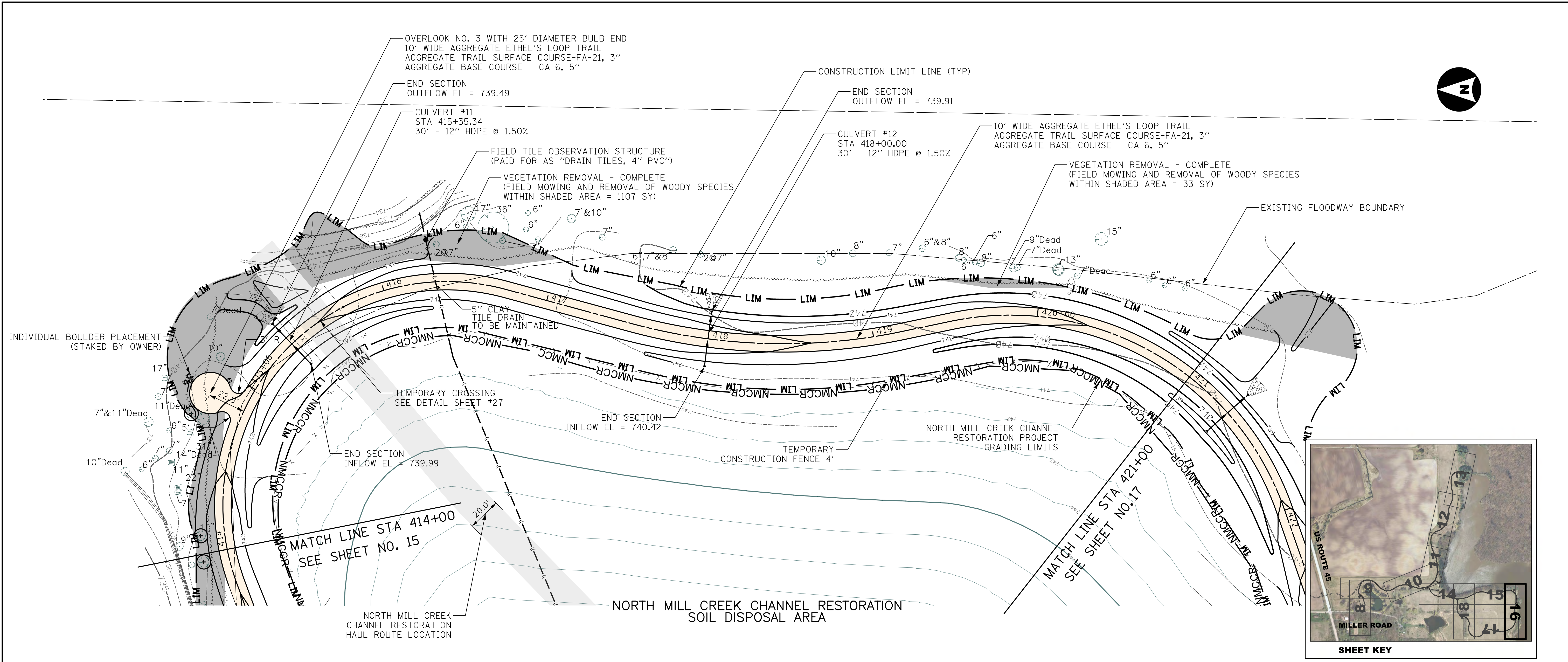
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**LAKE COUNTY
 FOREST PRESERVE DISTRICT**



**ETHEL'S LOOP TRAIL PLAN AND PROFILE
 ETHEL'S WOODS FOREST PRESERVE**
 Sheet No. 8 of 11 Sheets STA. 407+00 to STA. 414+00

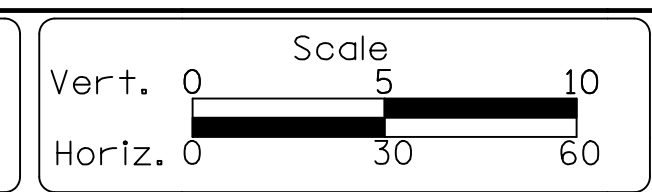
County Lake
 Total Sheet No. 29
 Project No. 63910-18006-887



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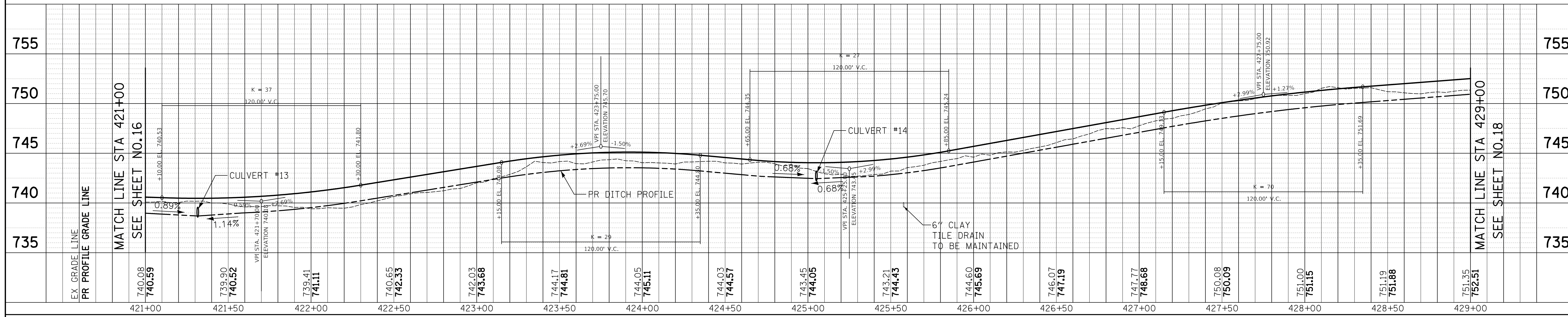
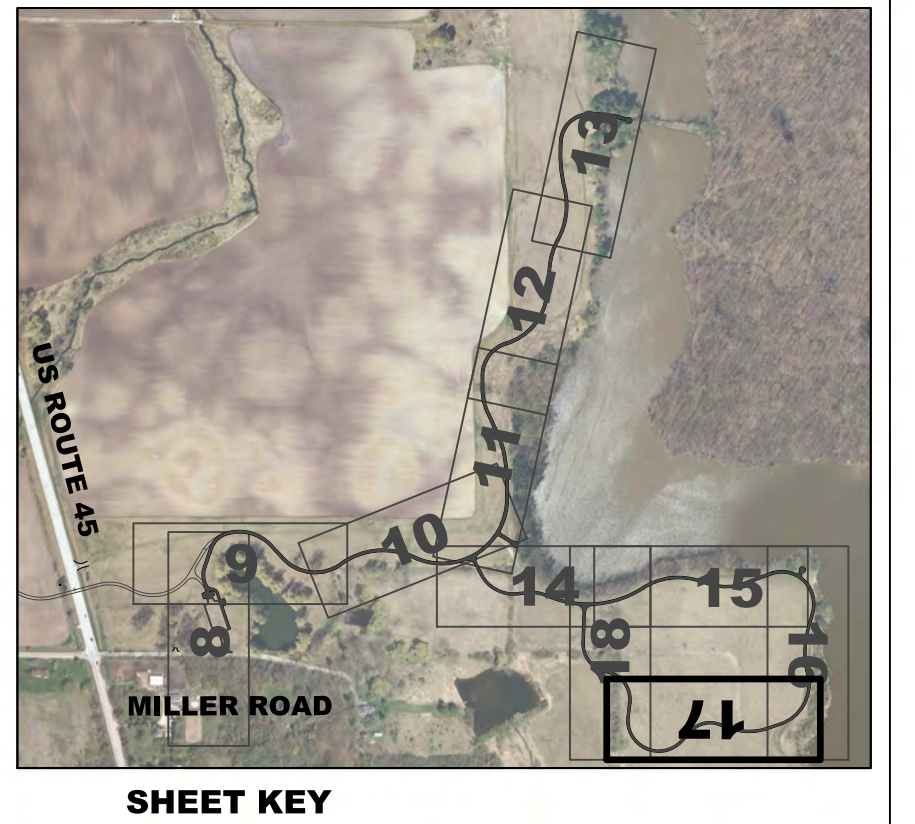
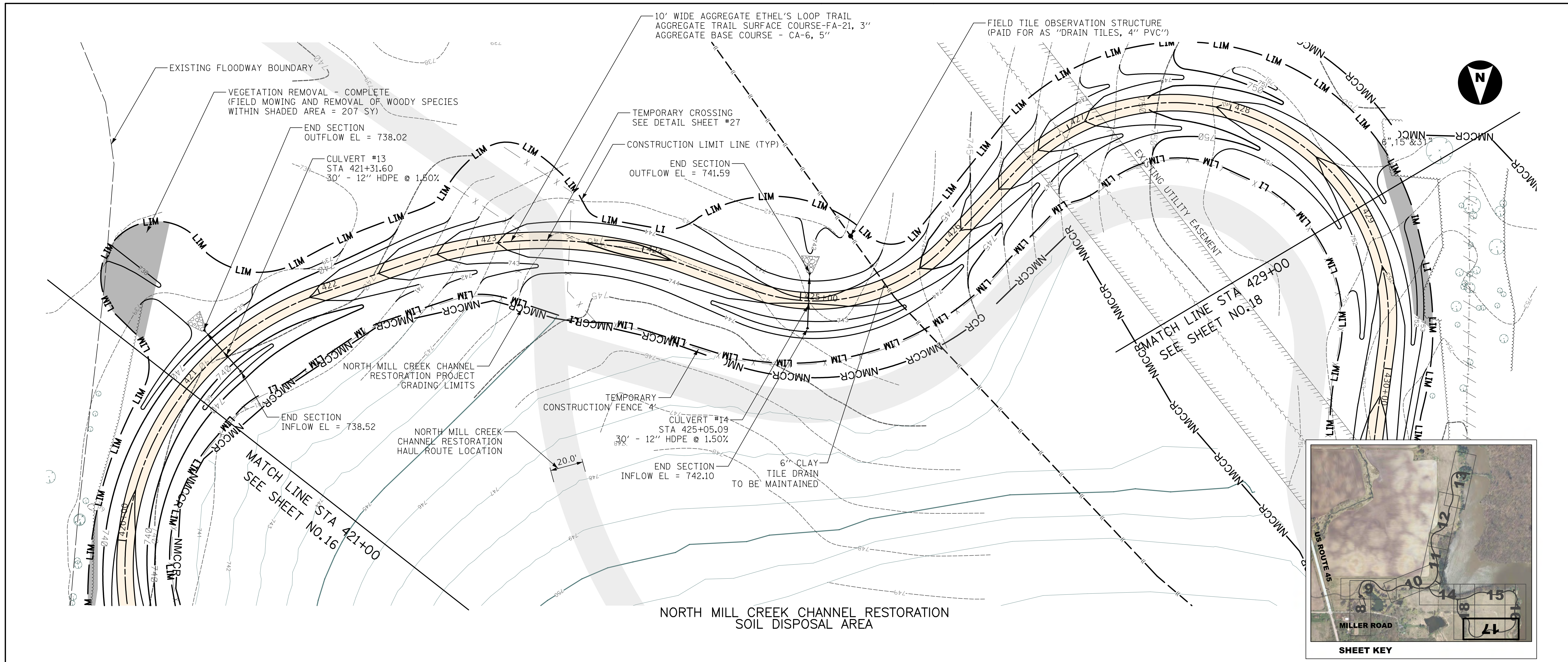
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**LAKE COUNTY
 FOREST PRESERVE DISTRICT**



ETHEL'S LOOP TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE
 Sheet No. 9 of 11 Sheets STA. 414+00 to STA. 421+00

County	Total Sheet No.
Lake	29 16
Project No. 63910-18006-887	

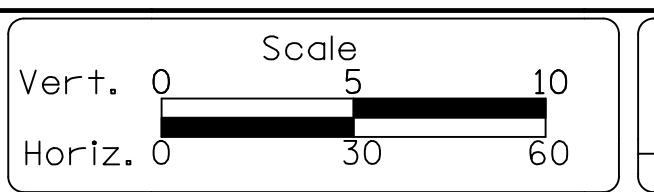


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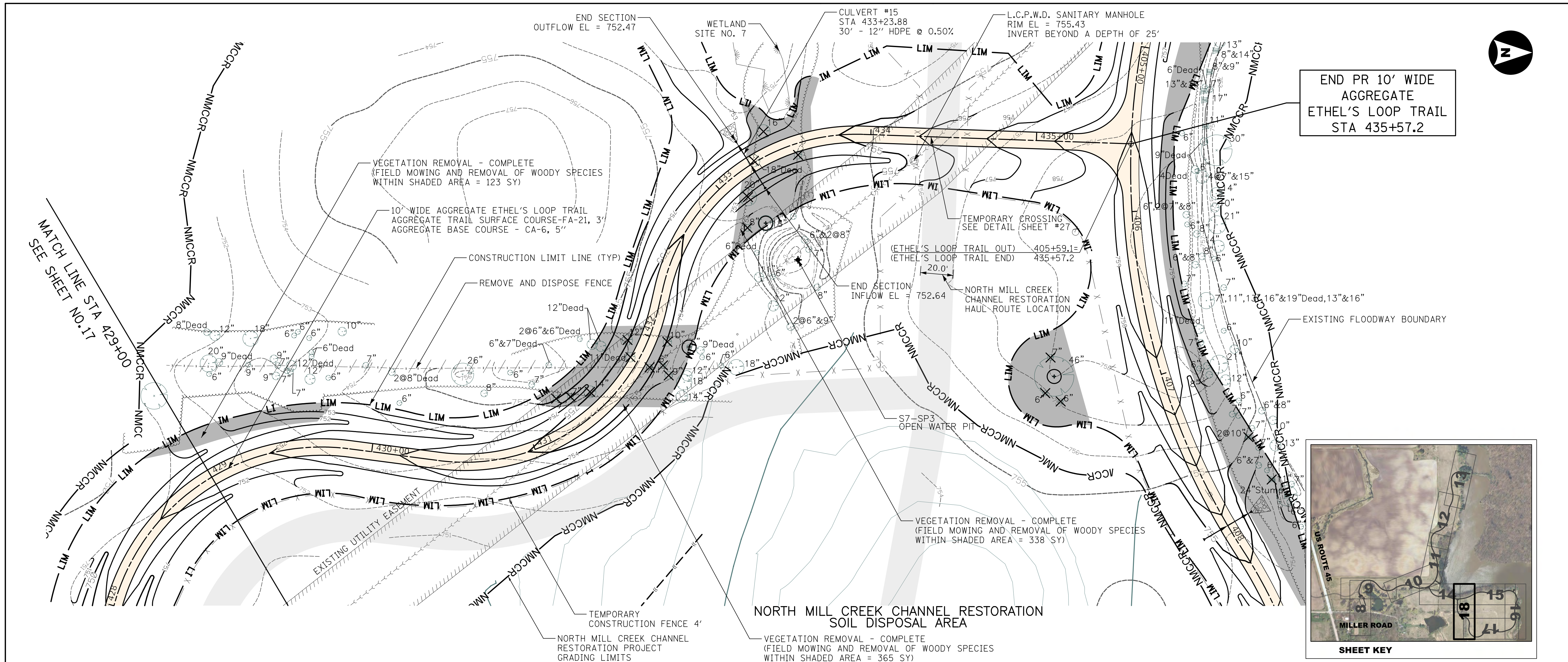
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 Revised -
 Revised -
 Revised -

**LAKE COUNTY
 FOREST PRESERVE DISTRICT**

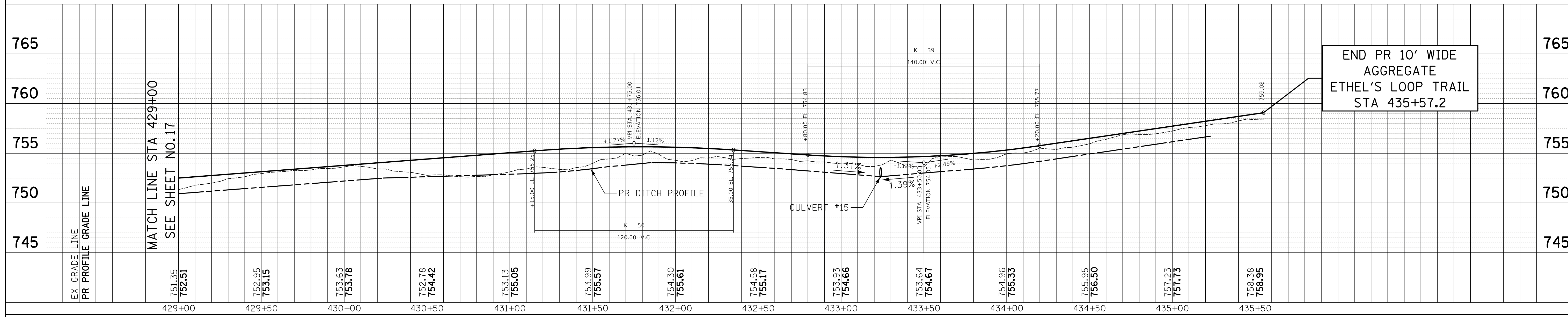
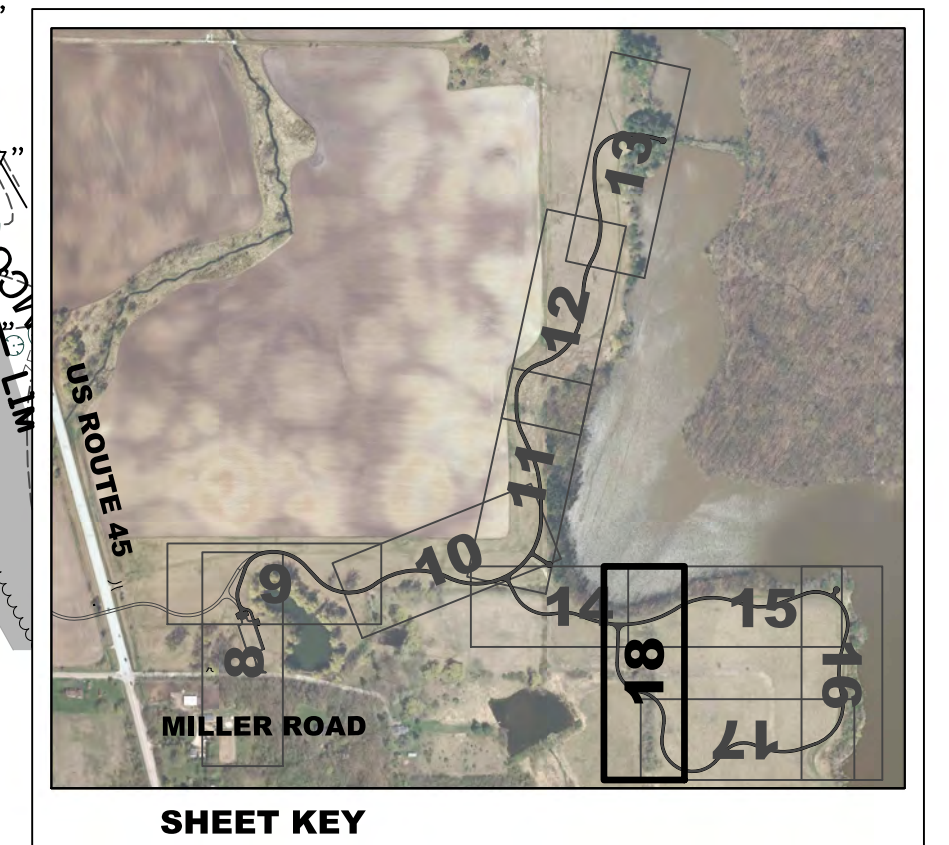


ETHEL'S LOOP TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE
 Sheet No. 10 of 11 Sheets STA. 421+00 to STA. 429+00

County
 Lake
 Total Sheet No. 29
 Project No. 63910-18006-887



END PR 10' WIDE
AGGREGATE
ETHEL'S LOOP TRAIL
STA 435+57.2

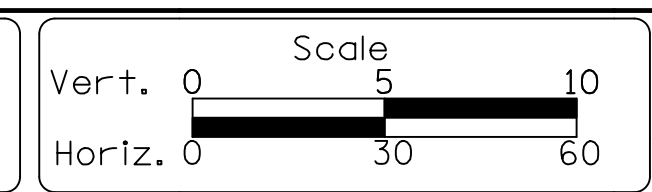


END PR 10' WIDE
AGGREGATE
ETHEL'S LOOP TRAIL
STA 435+57.2

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Drawn - TFS
Checked - RTM
Date - 11/10/2017

**LAKE COUNTY
FOREST PRESERVE DISTRICT**



ETHEL'S LOOP TRAIL PLAN AND PROFILE
ETHEL'S WOODS FOREST PRESERVE
Sheet No. 11 of 11 Sheets STA. 429+00 to STA. 435+57.21

County Lake
Total Sheet No. 29
Sheet No. 18
Project No. 63910-18006-887

EROSION CONTROL NOTES

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE FOLLOWING LAKE COUNTY STORMWATER MANAGEMENT COMMISSION (LCSMC) SEDIMENTATION AND EROSION CONTROL NOTES:

- A. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- B. FOR THOSE DEVELOPMENTS THAT REQUIRE A DESIGNATED EROSION CONTROL INSPECTOR (DECI), INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
 - > UPON COMPLETION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - > AFTER EVERY SEVEN (7) CALENDAR DAYS OR STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
- C. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- D. A STABILIZED MAT OF CRUSHED STONE MEETING IDOT GRADATION CA-1 UNDERPLAIN WITH FILTER FABRIC AND IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, OR OTHER APPROPRIATE MEASURE(S) AS APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- E. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN.
- F. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE OR REDISTURBANCE.
- G. ALL STOCKPILES SHALL HAVE APPROPRIATE MEASURES TO PREVENT EROSION. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS OR WETLANDS AND DESIGNATED BUFFERS.
- H. SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH APPROPRIATE MEASURES AS APPROVED BY THE ENFORCEMENT OFFICER. APPROPRIATE EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN THE NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- J. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- K. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DISCHARGES SHALL BE ROUTED THROUGH AN APPROVED ANIONIC POLYMER DEWATERING SYSTEM OR A SIMILAR MEASURE AS APPROVED BY THE ENFORCEMENT OFFICER. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE ENFORCEMENT OFFICER, OR APPROVED REPRESENTATIVE, MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- L. IF INSTALLED SOIL EROSION AND SEDIMENT CONTROL MEASURES DO NOT MINIMIZE SEDIMENT LEAVING THE DEVELOPMENT SITE, ADDITIONAL MEASURES SUCH AS ANIONIC POLYMERS OR FILTRATION SYSTEMS MAY BE REQUIRED BY THE ENFORCEMENT OFFICER.
- M. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- N. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- O. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, ENFORCEMENT OFFICER, OR OTHER GOVERNING AGENCY.

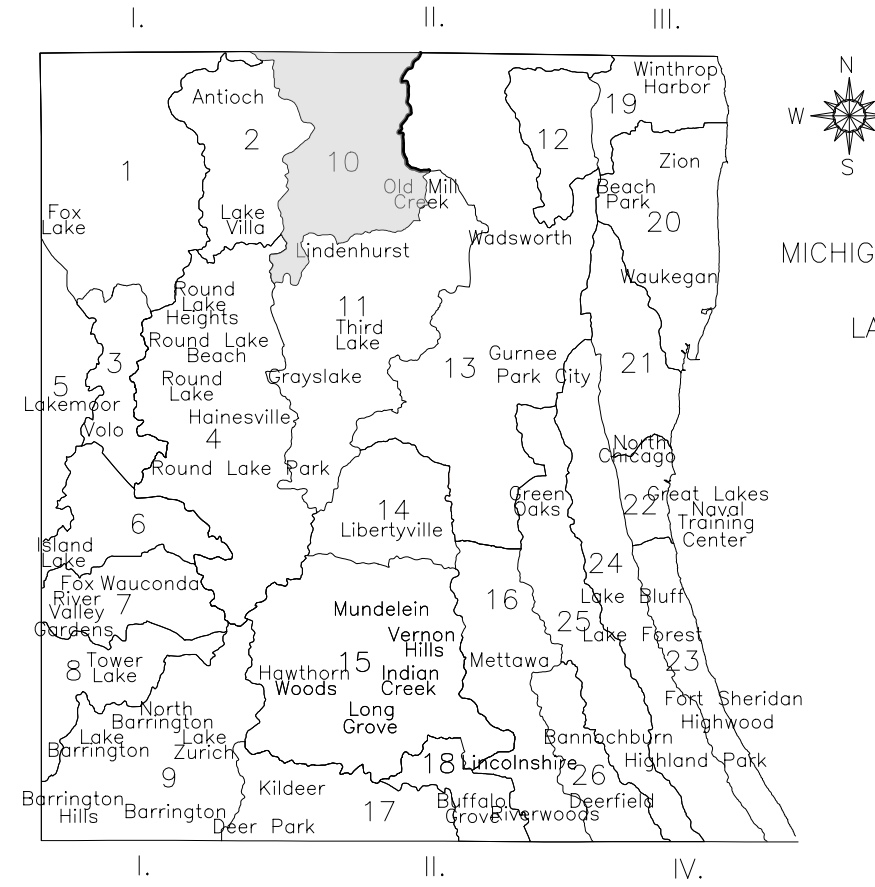
EROSION CONTROL NOTES

- 1. CONTRACTOR MUST EMPLOY A LAKE COUNTY STORMWATER MANAGEMENT COMMISSION (LCSMC) APPROVED DESIGNATED EROSION CONTROL INSPECTOR (DECI) FOR THIS PROJECT. THE CONTRACTOR'S DECI SHALL BE RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL INSPECTIONS, RECORD KEEPING, AND OTHER REQUIREMENTS INCLUDING MAINTENANCE OF THE PROJECT'S STORM WATER POLLUTION PREVENTION PLAN (SWPPP). IT IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR'S DECI TO UNDERSTAND AND COMPLY WITH ALL REGULATIONS. ANY SOIL EROSION AND SEDIMENT CONTROL RELATED FINES OR OTHER PENALTIES IMPOSED UPON OWNER AS A RESULT OF ACTIONS OR INACTIONS OF CONTRACTOR'S DECI SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 2. SOIL EROSION CONTROL MEASURES IN ACCORDANCE WITH THESE SPECIFICATIONS SHALL BE FOLLOWED AS DIRECTED BY THE OWNER OR LCSMC. ANY SOIL EROSION CONTROL MEASURES, IN ADDITION TO THOSE OUTLINED IN THESE PLANS AND WHICH ARE DEEMED NECESSARY BY THE OWNER AND/OR LCSMC, SHALL BE IMPLEMENTED IMMEDIATELY BY THE CONTRACTOR.
- 3. STREETS ADJACENT TO THE SITE SHALL BE KEPT FREE OF DIRT, MUD AND DEBRIS THROUGH THE USE OF RUBBERTIRE TRACTORS OR STREET SWEEPER.
- 4. ALL STORM SEWER, CULVERTS, CATCH BASINS, AND/OR DETENTION BASINS PROVIDED WITHIN THIS PROJECT ARE TO BE CLEANED AT THE END OF CONSTRUCTION OF THE PROJECT AND PRIOR TO FINAL ACCEPTANCE. CLEANING MAY ALSO BE REQUIRED DURING THE COURSE OF THE CONSTRUCTION OF THE PROJECT IF IT IS DETERMINED THAT THE SILT AND DEBRIS TRAPS ARE NOT PROPERLY FUNCTIONING AND THEIR PERFORMANCE IS IMPAIRED.
- 5. UNLESS SOIL EROSION CONTROL ITEMS ARE SPECIFICALLY REFERRED TO AS BID ITEMS (SUCH AS SILT FENCE, MISC. EROSION CONTROL, ETC.), THEY ARE TO BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.
- 6. UPON COMPLETION OF TOPSOIL RESPREAD OPERATIONS, ALL DISTURBED AREAS SHALL BE SEEDED, SODDED, OR LANDSCAPED AS NOTED ON THE PLAN OR AS DIRECTED BY OWNER.
- 7. ALL DISTURBED GROUND WITHIN THE STATE, COUNTY AND VILLAGE RIGHT-OF-WAY SHALL BE RESTORED PER THE STANDARDS OF THE APPLICABLE AGENCY.
- 8. EACH RESPECTIVE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE, AND ANY NECESSARY CORRECTIVE ACTION ASSOCIATED WITH THE EROSION CONTROL MEASURES SO DESIGNATED FOR THAT CONTRACTOR. THE ITEMS ARE TO BE PROVIDED BY THE DESIGNATED CONTRACTOR AT THE TIME AND IN THE SEQUENCE INDICATED WITHIN THE GENERAL CONSTRUCTION NOTES.

SOIL EROSION SEDIMENT CONTROL AND LANDSCAPING PLANS

DRAINAGE BASINS OF LAKE COUNTY

- I. FOX RIVER WATERSHED
 - 1. Upper Fox River
 - 2. Sequoit Creek
 - 3. Fish Lake Drain
 - 4. Squaw Creek
 - 5. Lower Fox River
 - 6. Mutton Creek
 - 7. Slocum Lake Drain
 - 8. Tower Lake Drain
 - 9. Flint Creek
- II. DES PLAINES RIVER WATERSHED
 - 10. North Mill Creek
 - 11. Mill Creek
 - 12. Newport Drainage Ditch
 - 13. Upper Des Plaines River
 - 14. Bull Creek
 - 15. Indian Creek
 - 16. Lower Des Plaines River
 - 17. Buffalo Creek
 - 18. Aptakisic Creek
- III. LAKE MICHIGAN WATERSHED
 - 19. Kellogg Creek
 - 20. Dead River
 - 21. Waukegan River
 - 22. Pettibone Creek
 - 23. Bluff/Ravine
- IV. CHICAGO RIVER WATERSHED
 - 24. Skokie River
 - 25. Middle Fork
 - 26. West Fork



LEGEND

- DITCH FLOW ARROW
- OVERLAND FLOW DIRECTION
- PERMEABLE PLASTIC DITCH CHECKS
- SF SILT FILTER
- FILTER SOCK
- EXISTING TREES
- TREE PROTECTION PAID FOR AS TEMPORARY CONSTRUCTION FENCE, 4' (LIMITS OF FENCE TO BE MARKED IN THE FIELD)
- PROPOSED CULVERT, HDPE, 12"
- STEEL FLARED END SECTION WITH GRADING
- STEEL FLARED END SECTION WITH GRADING AND RIPRAP
- LCFP LOW-MAINTENANCE TURF MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
- LCFP PARKLAND SEED MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
- LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
- RIPRAP

NPDES STATEMENT:

THIS PROJECT DISTURBS 4.96 ACRES OF TOTAL LAND AREA. COMPLIANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PERMIT IS ONLY NECESSARY IF A PROJECT DISTURBS 1.0 OR MORE ACRES OF TOTAL LAND AREA; AN NPDES STORMWATER PERMIT IS REQUIRED FOR THIS PROJECT.

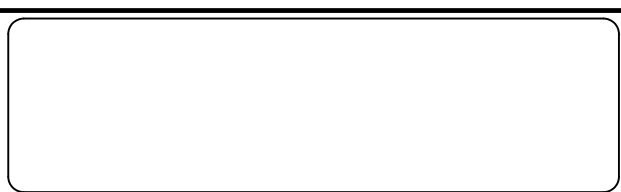
LAKE COUNTY STORMWATER MANAGEMENT COMMISSION TYPICAL CONSTRUCTION SEQUENCE

- 1. INSTALLATION OF SOIL EROSION AND SEDIMENT CONTROL SE/SC MEASURES
 - A.) SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION
 - B.) SILT FENCE INSTALLATION
 - C.) CONSTRUCTION FENCING AROUND AREAS NOT TO BE DISTURBED
 - D.) STABILIZED CONSTRUCTION ENTRANCE
 - 2. TREE REMOVAL WHERE NECESSARY (CLEAR & GRUB)
 - 3. CONSTRUCT SEDIMENT TRAPPING DEVICES (SEDIMENT TRAPS, BASINS...)
 - 4. CONSTRUCT DETENTION FACILITIES AND OUTLET CONTROL STRUCTURE WITH RESTRICTOR & TEMPORARY PERFORATED RISER
 - 5. STRIP TOPSOIL, STOCKPILE TOPSOIL AND GRADE SITE
 - 6. TEMPORARILY STABILIZE TOPSOIL STOCKPILES (SEED AND SILT FENCE AROUND TOE OF SLOPE)
 - 7. INSTALL STORM SEWER, SANITARY SEWER, WATER AND ASSOCIATED INLET & OUTLET PROTECTION
 - 8. PERMANENTLY STABILIZE DETENTION BASINS WITH SEED AND EROSION CONTROL BLANKET
 - 9. TEMPORARILY STABILIZE ALL AREAS INCLUDING LOTS THAT HAVE REACHED TEMPORARY GRADE
 - 10. INSTALL ROADWAYS
 - 11. PERMANENTLY STABILIZE ALL OUTLOT AREAS
 - 12. INSTALL STRUCTURES AND GRADE INDIVIDUAL LOTS
 - 13. PERMANENTLY STABILIZE LOTS
 - 14. REMOVE ALL TEMPORARY SE/SC MEASURES AFTER THE SITE IS STABILIZED WITH VEGETATION
- * SOIL EROSION AND SEDIMENT CONTROL MAINTENANCE MUST OCCUR EVERY TWO WEEKS AND AFTER EVERY 1/2" OR GREATER RAINFALL EVENT

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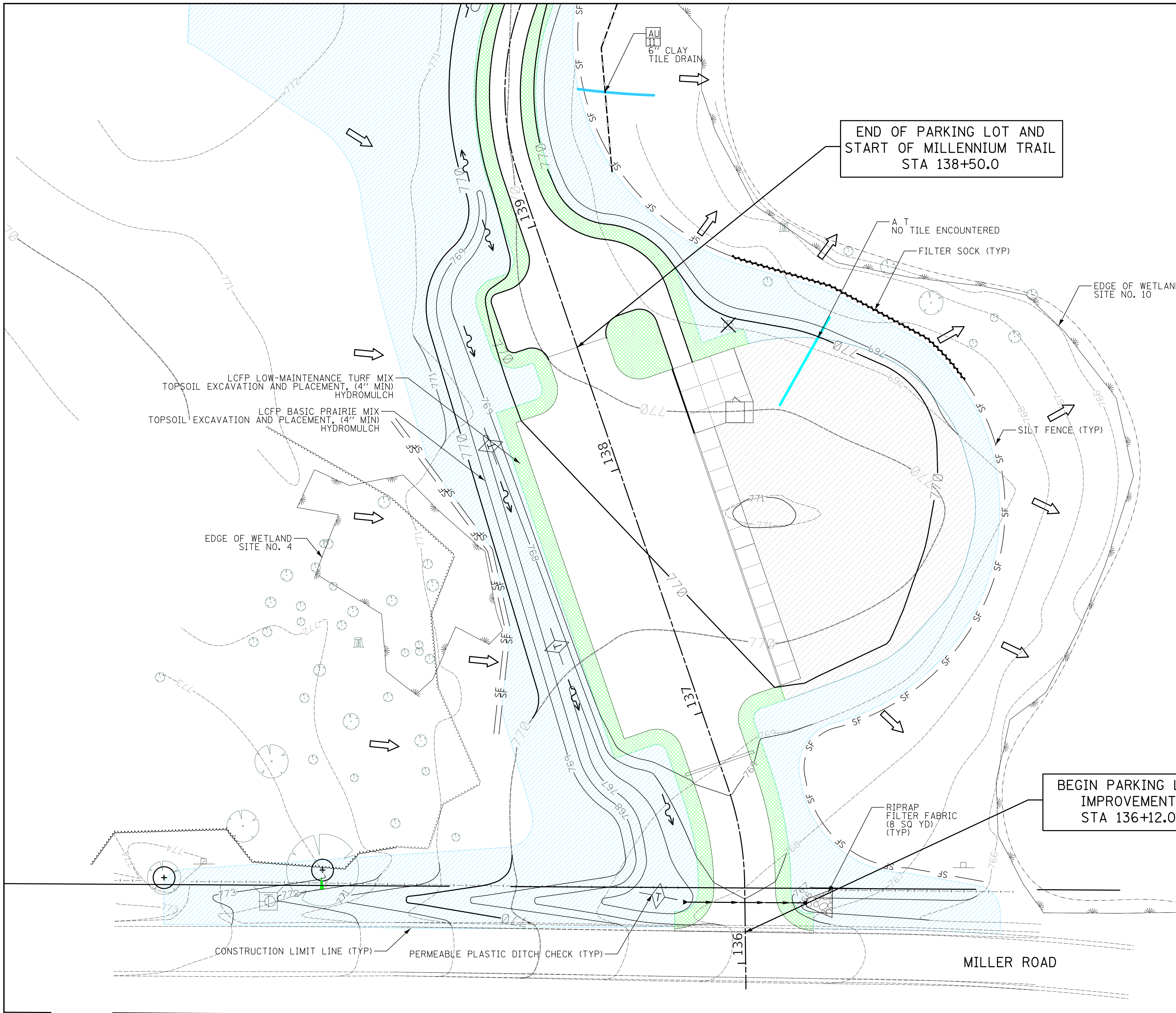
Designed - JRR	Revised -
Drawn - TFS	Revised -
Checked - RTM	Revised -
Date - 11/10/2017	Revised -

LAKE COUNTY FOREST PRESERVE DISTRICT



EROSION CONTROL AND LANDSCAPING NOTES
ETHEL'S WOODS FOREST PRESERVE
 Sheet No. 1 of 8 Sheets

County	Total Sheet No.
Lake	29 19
Project No. 63910-18006-887	



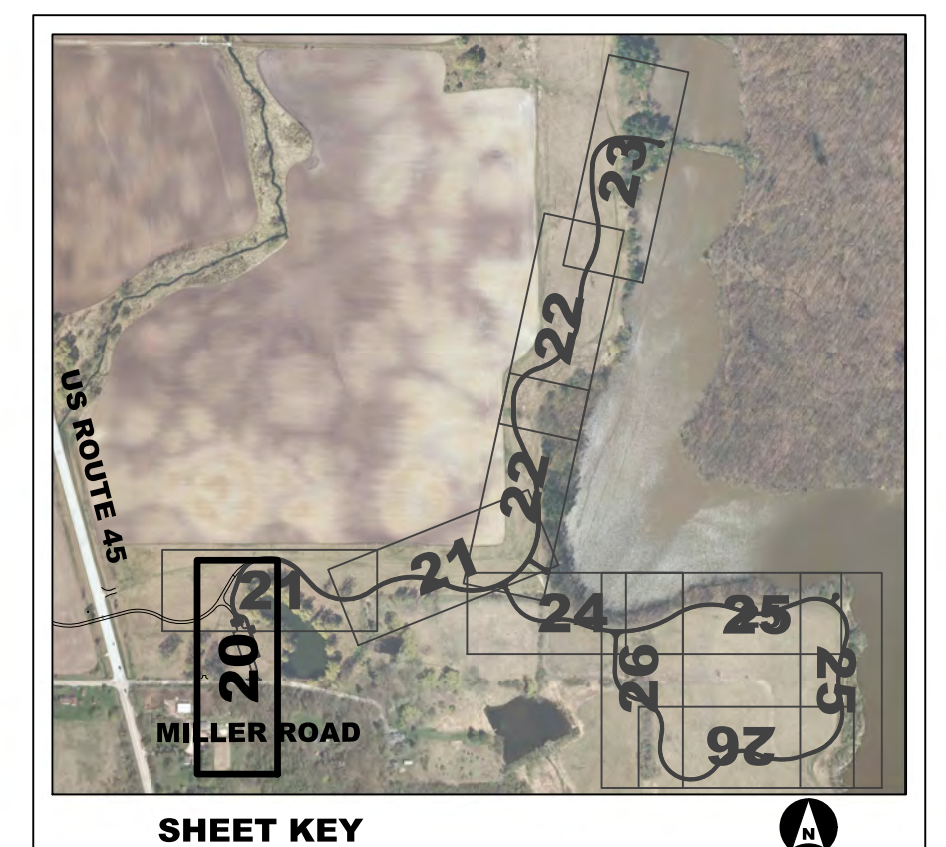
LEGEND

- DITCH FLOW ARROW
- OVERLAND FLOW DIRECTION
- PERMEABLE PLASTIC DITCH CHECKS
- SF — SILT FILTER
- FILTER SOCK
- EXISTING TREES
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- LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
- RIPRAP

NOTES:

1. RIP RAP AND FLARED END SECTION CONSTRUCTION IS INCIDENTAL TO THE RESPECTIVE CULVERT CROSSING AND PIPE INSTALLATION.
2. ALL SILT FENCE MUST MEET AASHTO M288-00 STANDARDS.
3. ALL SILT FENCE MUST BE AT LEAST 1 FOOT FROM THE FLAGGED WETLAND BOUNDARY.
4. SUBSURFACE DRAINAGE INVENTORY (DRAIN TILE INVESTIGATION PLAN) JANUARY 10, 2011 IS AVAILABLE UPON REQUEST.

CONTACT:
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 1899 Winchester Road
 Libertyville, Illinois 60048
 Office 847.968.3274
 Cell 847.489.6188
 gwalenter@lcpd.org



SHEET KEY

END OF PARKING LOT AND
 START OF MILLENNIUM TRAIL
 STA 138+50.0

BEGIN PARKING LOT
 IMPROVEMENT
 STA 136+12.0

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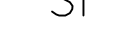







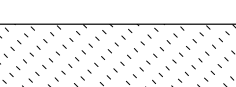


**LAKE COUNTY
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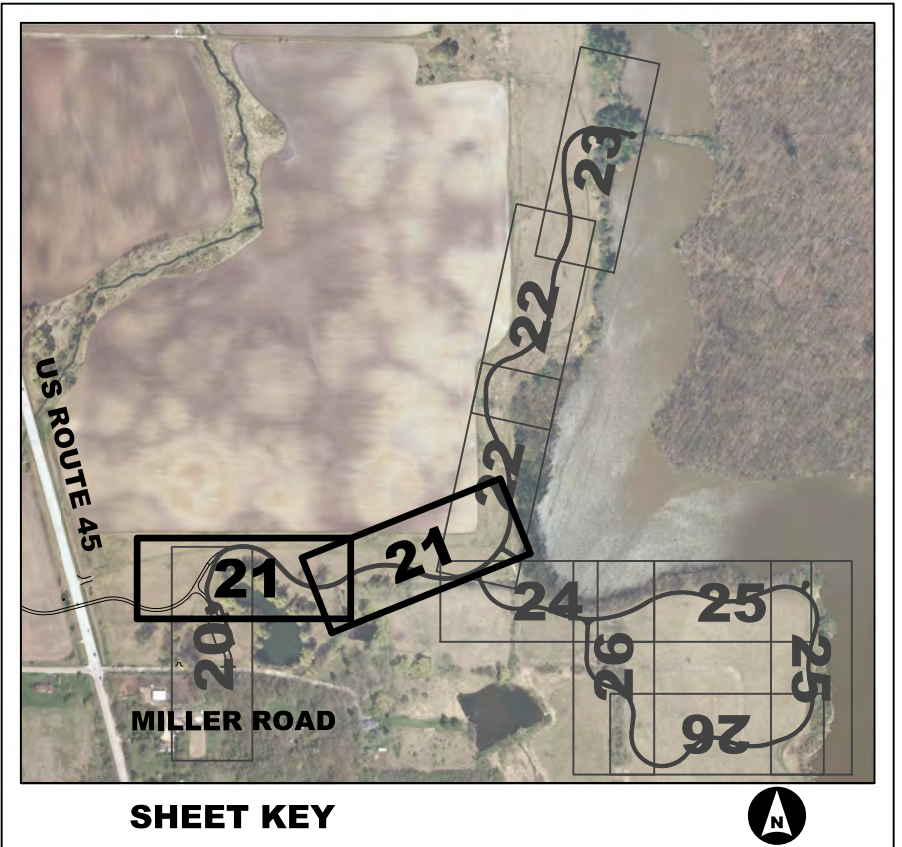
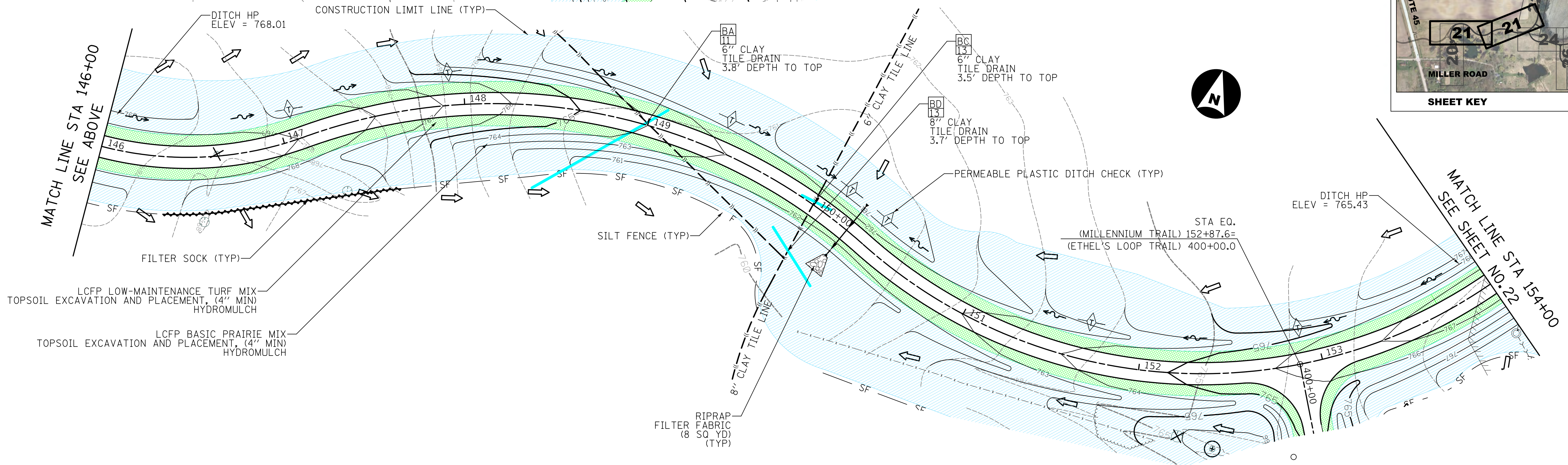
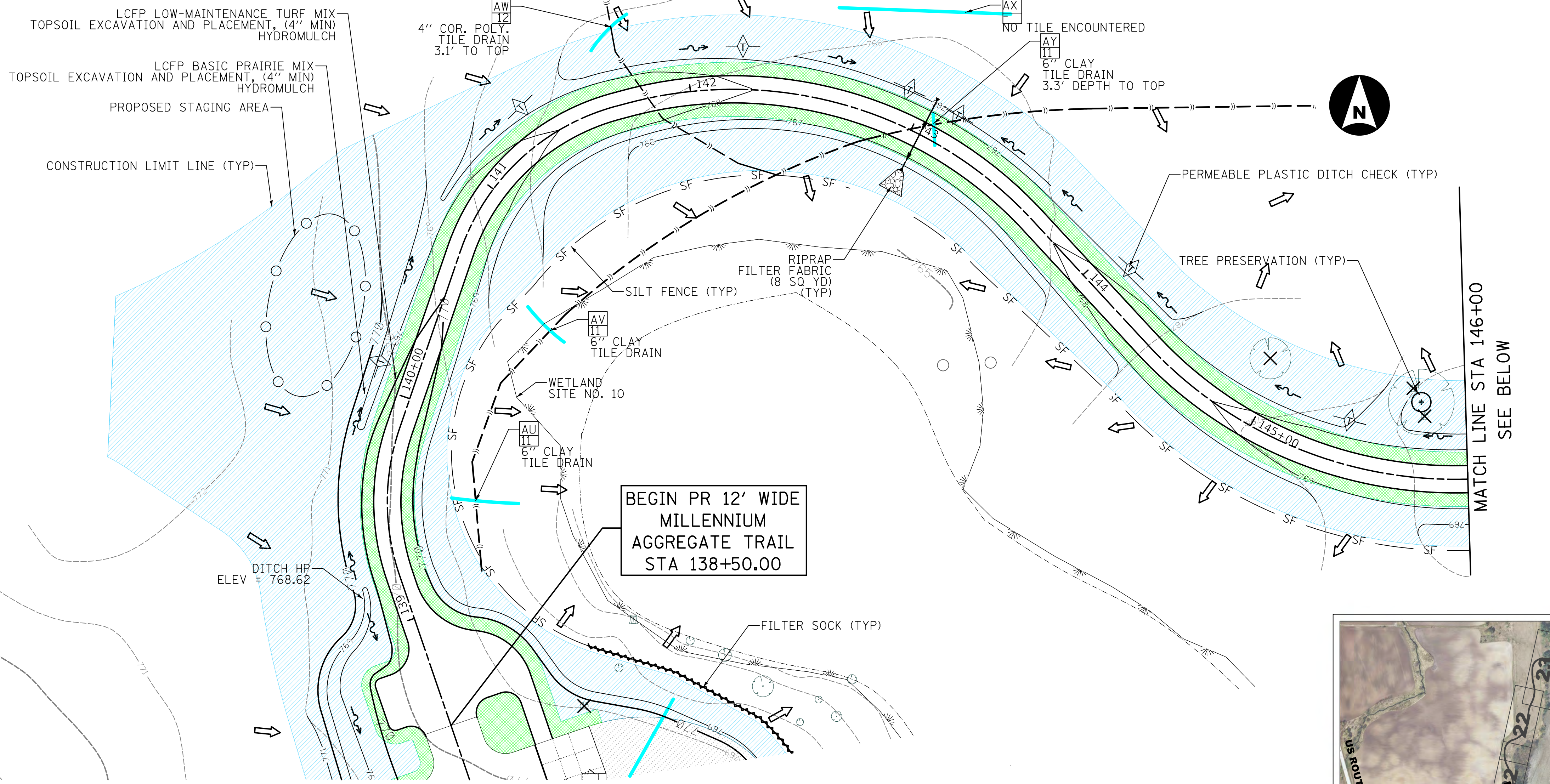
Scale
 Horiz. 0 20 40

**PARKING LOT
 EROSION CONTROL AND LANDSCAPING PLANS
 ETHEL'S WOODS FOREST PRESERVE**
 Sheet No. 2 of 8 Sheets STA. 136+12.0 to STA. 138+50.0

County	Total Sheet No.
Lake	29 20
Project No. 63910-18006-887	

LEGEND

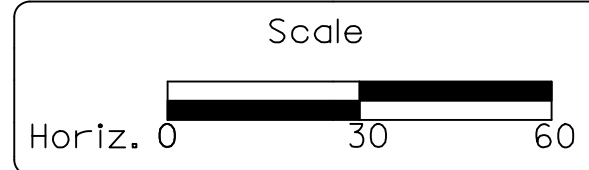
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-  OVERLAND FLOW DIRECTION
-  PERMEABLE PLASTIC DITCH CHECKS
-  SF SILT FILTER
-  FILTER SOCK
-  EXISTING TREES
-  TREE PROTECTION PAID FOR AS TEMPORARY CONSTRUCTION FENCE, 4' (LIMITS OF FENCE TO BE MARKED IN THE FIELD)
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-  STEEL FLARED END SECTION WITH GRADING AND RIPRAP
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-  LCFP PARKLAND SEED MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MIN) HYDROMULCH
-  LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MIN) HYDROMULCH
-  RIPRAP



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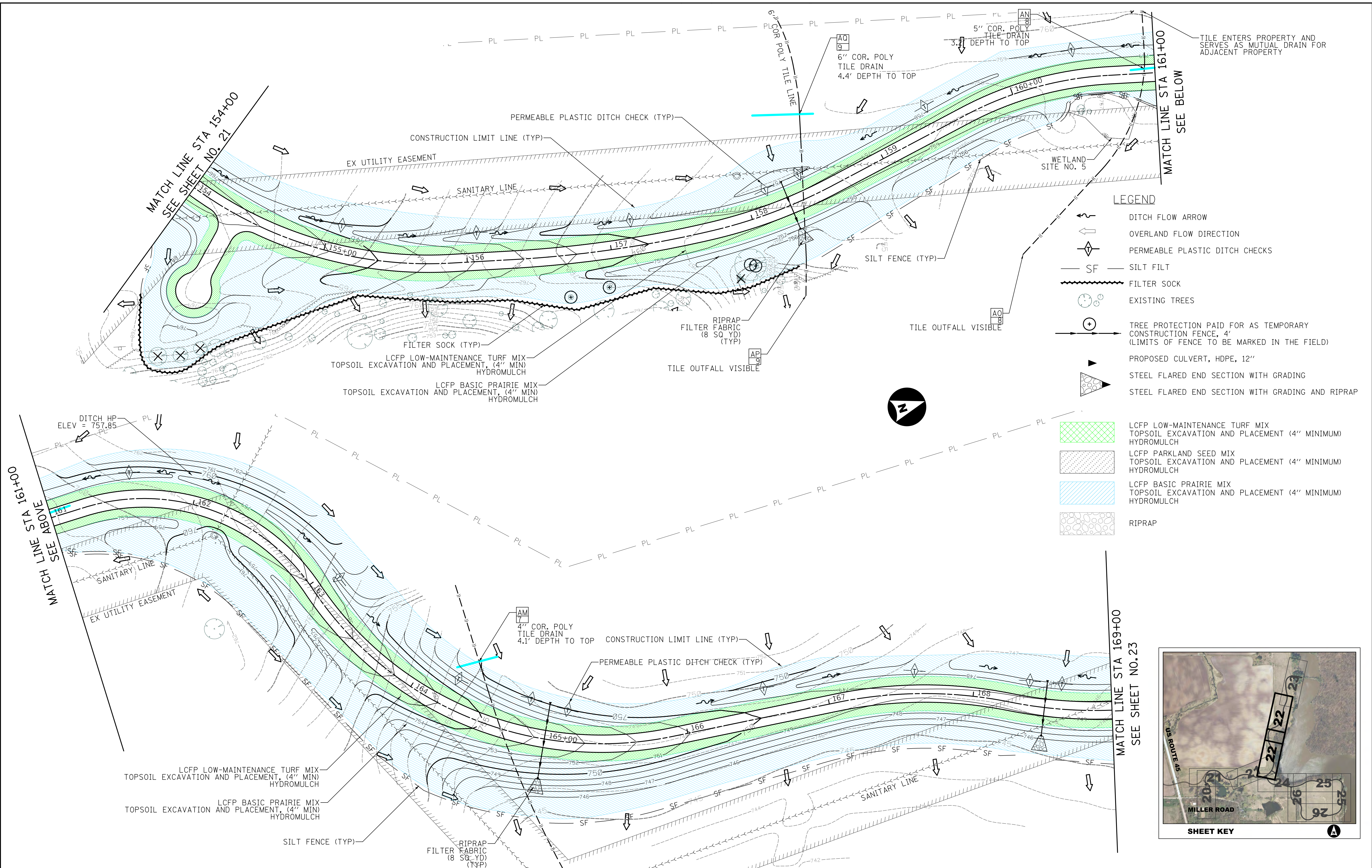
**LAKE COUNTY
 FOREST PRESERVE DISTRICT**



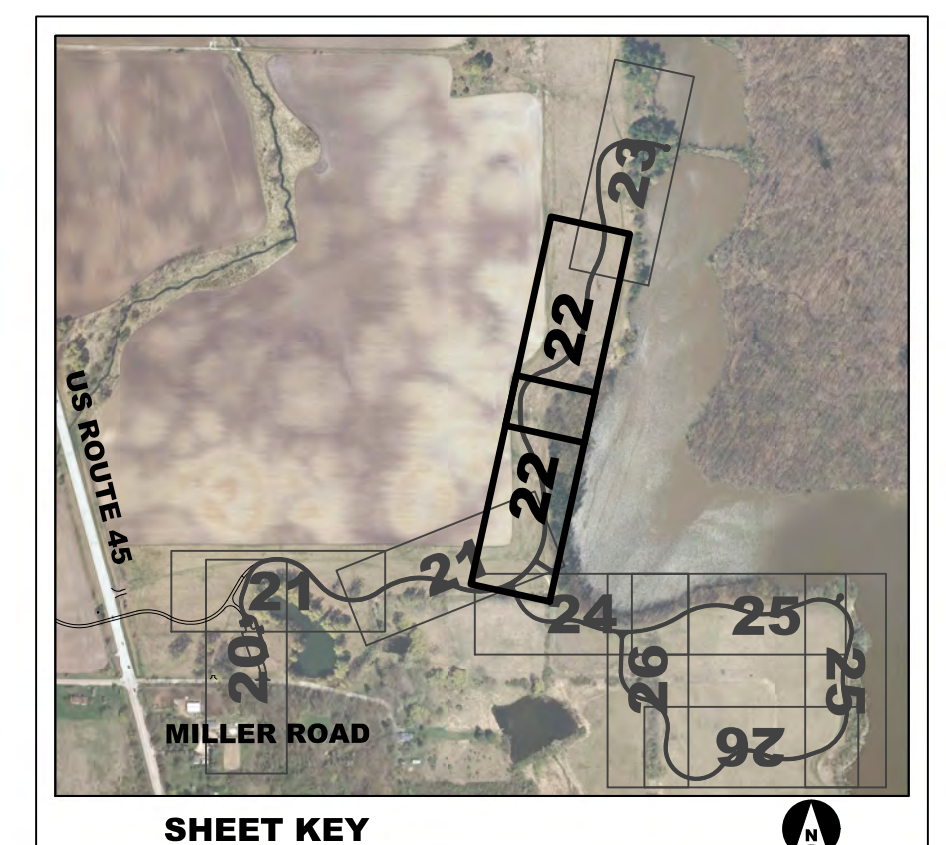
**MILLENNIUM TRAIL EROSION CONTROL AND LANDSCAPING PLANS
 ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 3 of 8 Sheets STA. 138+50 to STA. 154+00

County	Total Sheet No.
Lake	29 21
Project No. 63910-18006-887	



- LEGEND**
- DITCH FLOW ARROW
 - OVERLAND FLOW DIRECTION
 - PERMEABLE PLASTIC DITCH CHECKS
 - SILT FENCE (TYP)
 - FILTER SOCK
 - EXISTING TREES
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 - LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
 - RIPRAP

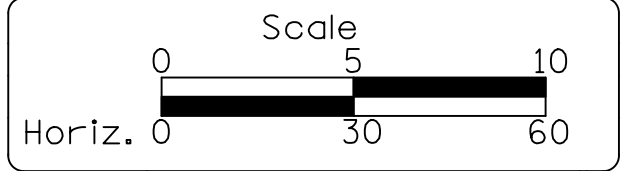


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 Drawn - TFS
 Checked - RTM
 Date - 11/10/2017

Revised -
 Revised -
 Revised -
 Revised -

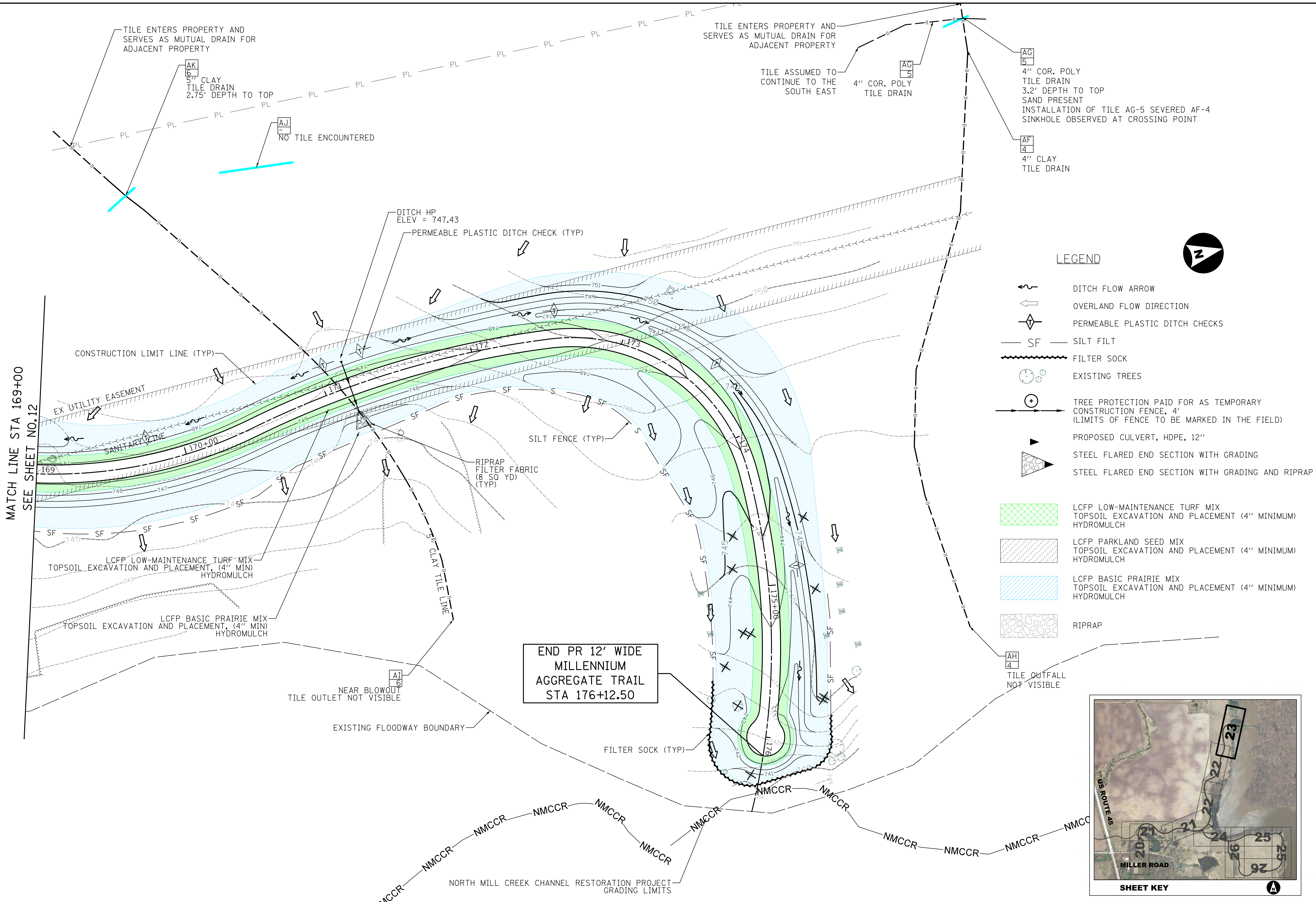
**LAKE COUNTY
 FOREST PRESERVE DISTRICT**



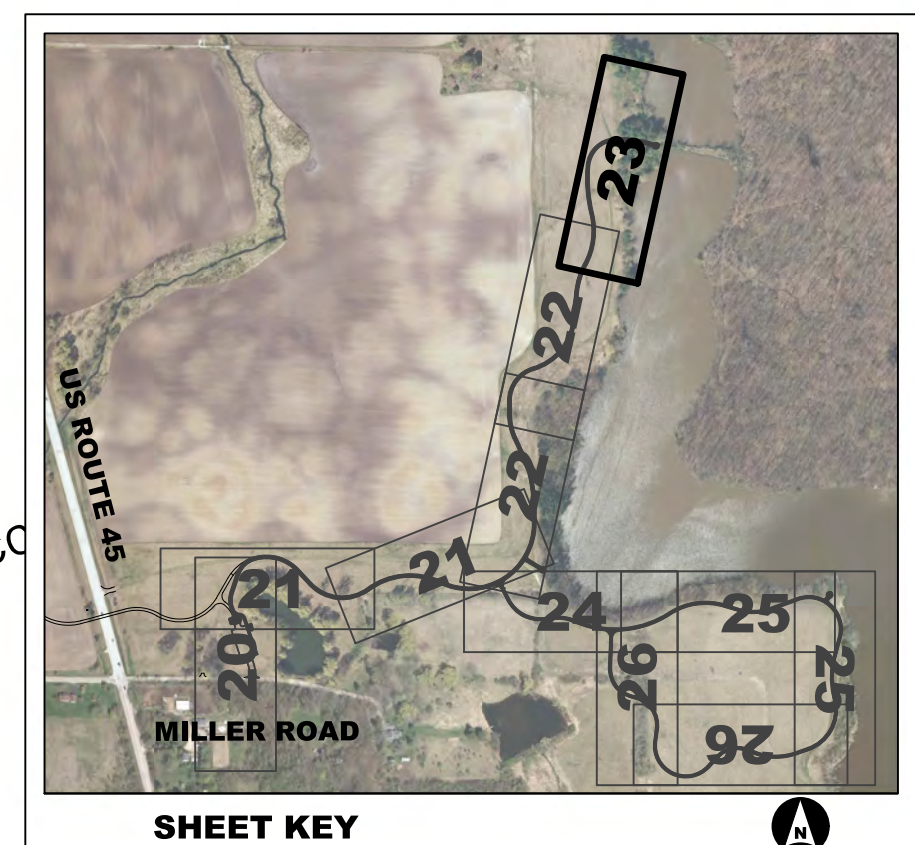
**MILLENNIUM TRAIL EROSION CONTROL AND LANDSCAPING PLANS
 ETHEL'S WOODS FOREST PRESERVE**

Sheet No. 4 of 8 Sheets STA. 154+00 to STA. 169+00

County	Total Sheet No.
Lake	29
Project No. 63910-18006-887	22



- LEGEND**
- DITCH FLOW ARROW
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 - LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
 - RIPRAP



MATCH LINE STA 169+00
SEE SHEET NO. 12

END PR 12' WIDE
MILLENNIUM
AGGREGATE TRAIL
STA 176+12.50

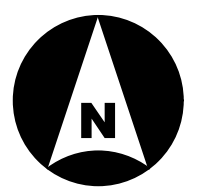
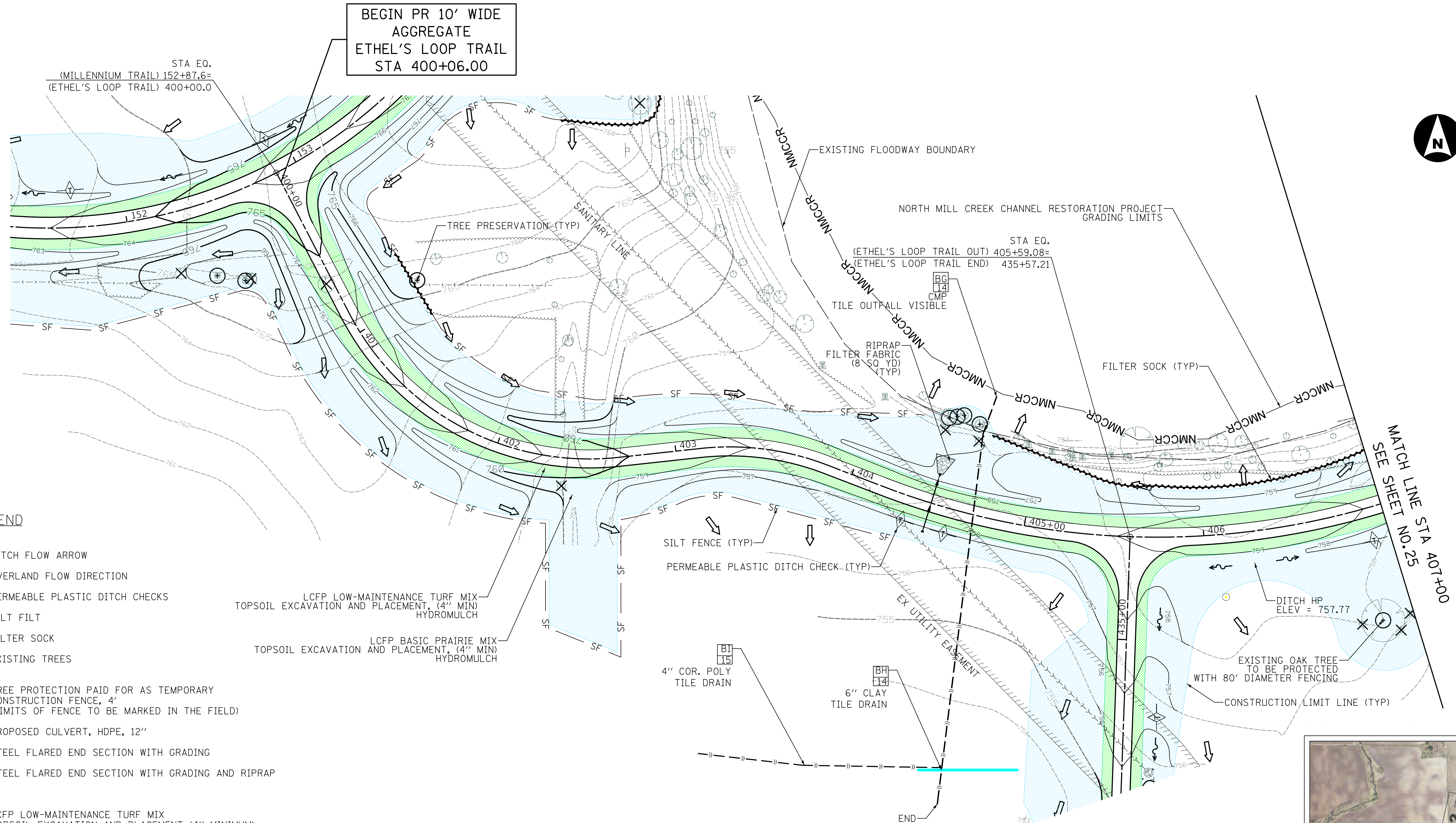
NEAR BLOWOUT
TILE OUTLET NOT VISIBLE

EXISTING FLOODWAY BOUNDARY

AH
4
TILE OUTFALL
NOT VISIBLE

NMCCR

NORTH MILL CREEK CHANNEL RESTORATION PROJECT
GRADING LIMITS

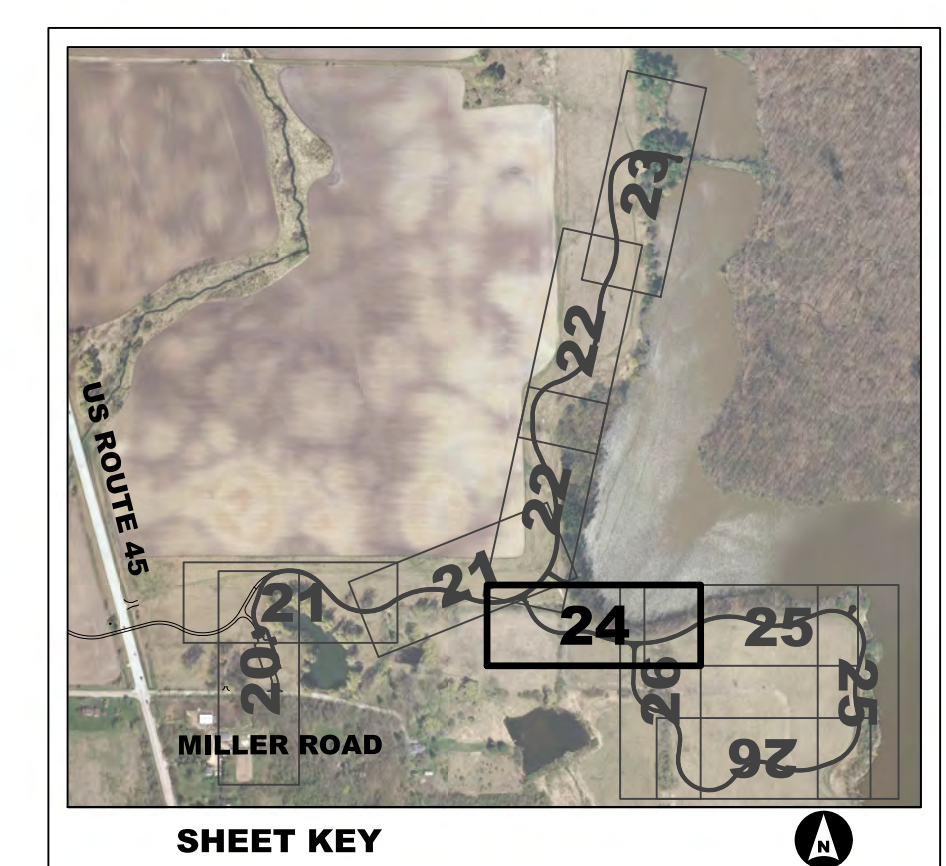


LEGEND

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- RIPRAP

LCFP LOW-MAINTENANCE TURF MIX TOPSOIL EXCAVATION AND PLACEMENT, (4" MIN) HYDROMULCH

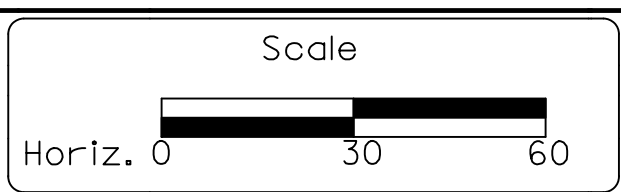
LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT, (4" MIN) HYDROMULCH



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Designed - JRR	Revised -
Drawn - TFS	Revised -
Checked - RTM	Revised -
Date - 11/10/2017	Revised -

LAKE COUNTY FOREST PRESERVE DISTRICT



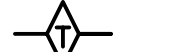








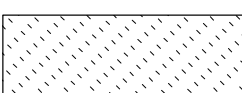
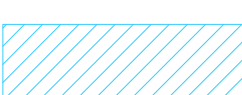



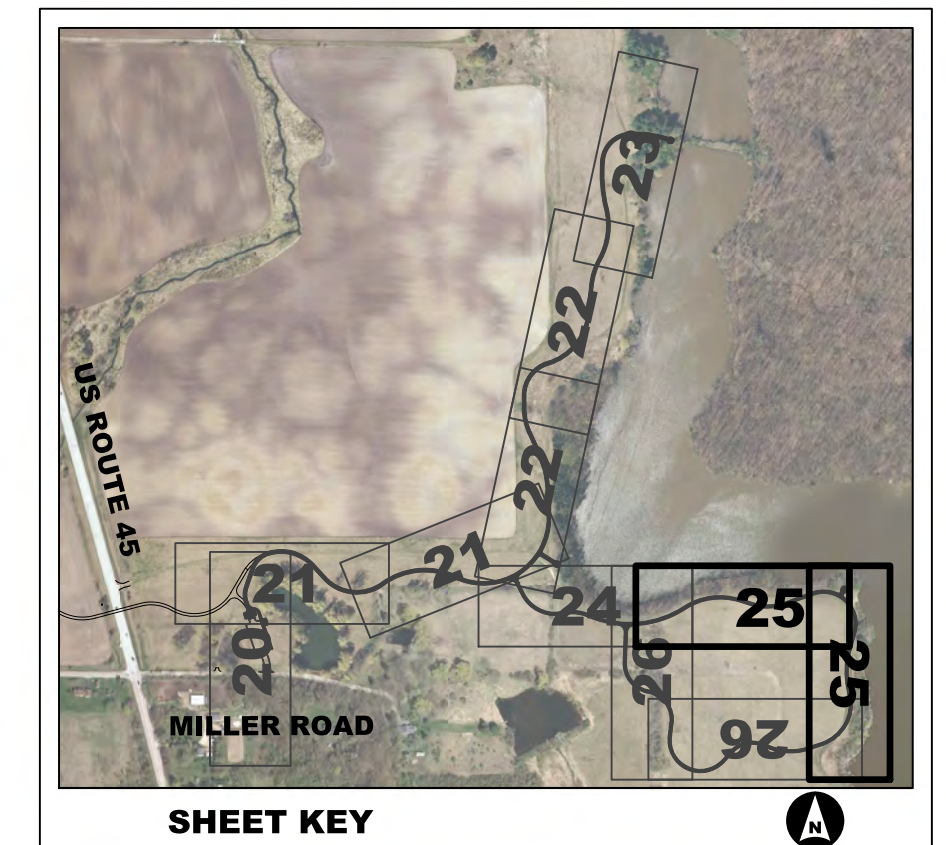
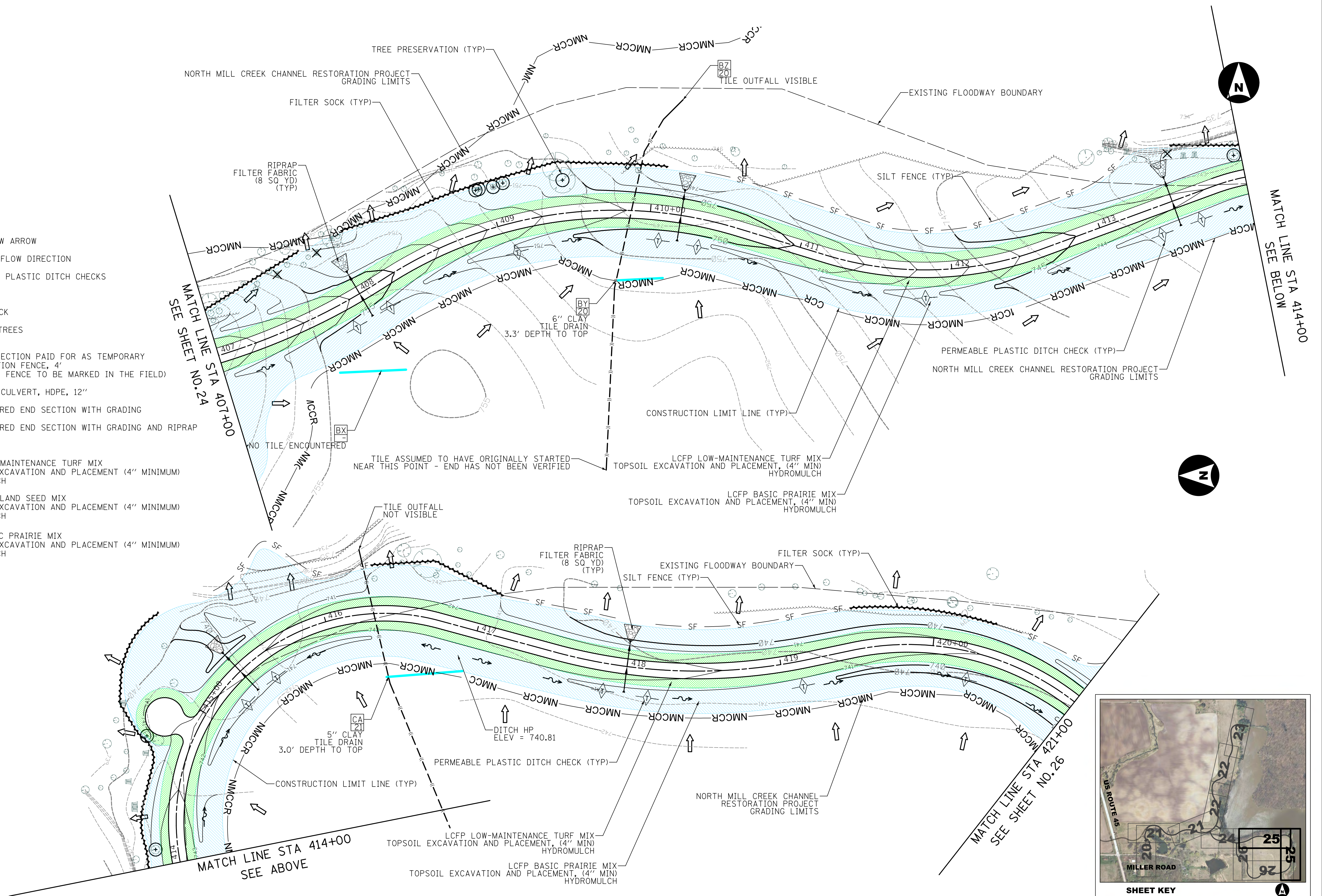
ETHEL'S LOOP TRAIL EROSION CONTROL AND LANDSCAPING PLANS
ETHEL'S WOODS FOREST PRESERVE

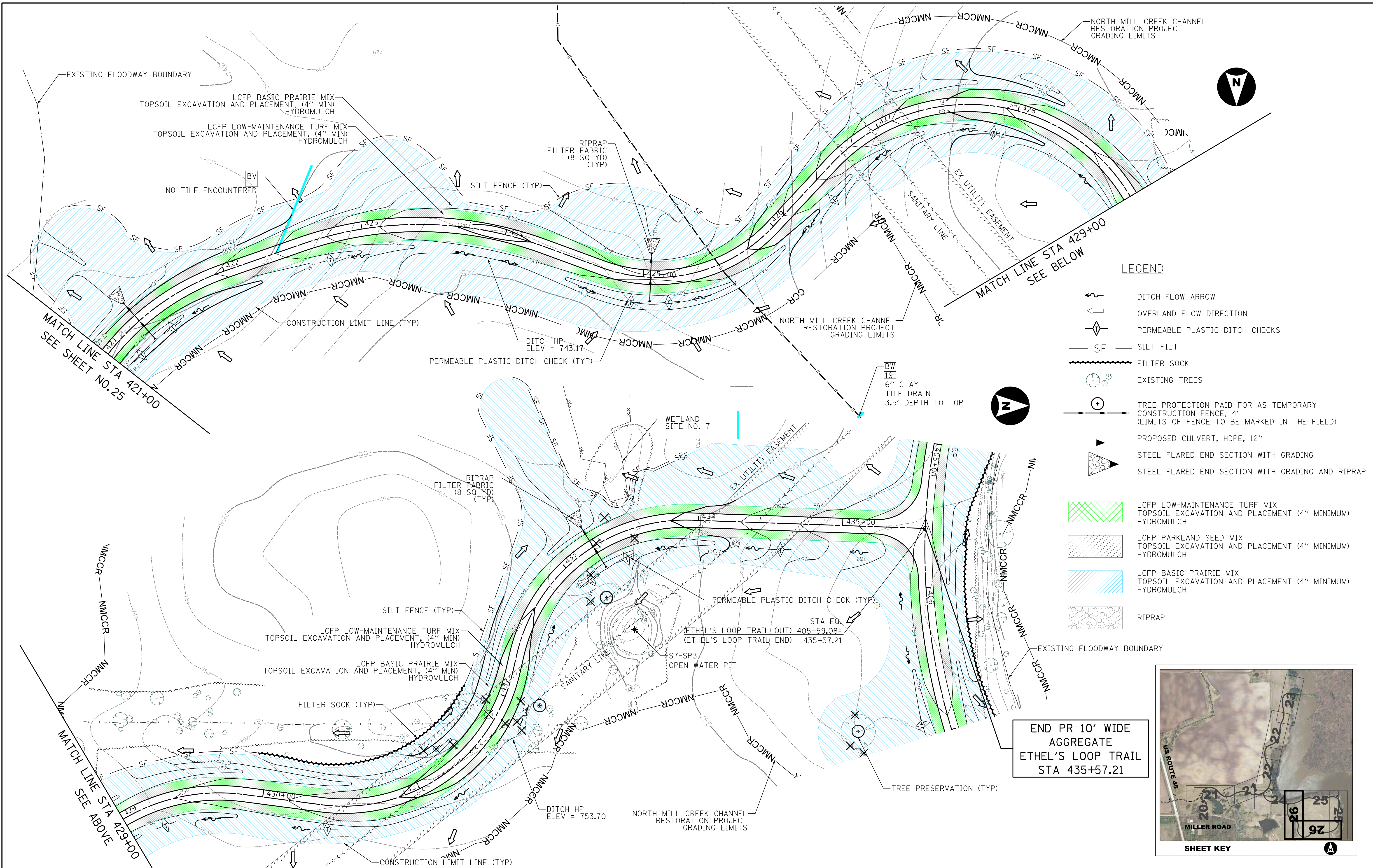
Sheet No. 6 of 8 Sheets STA. 400+00 to STA. 407+00

County	Total Sheet No.
Lake	29
	24
Project No. 63910-18006-887	

LEGEND

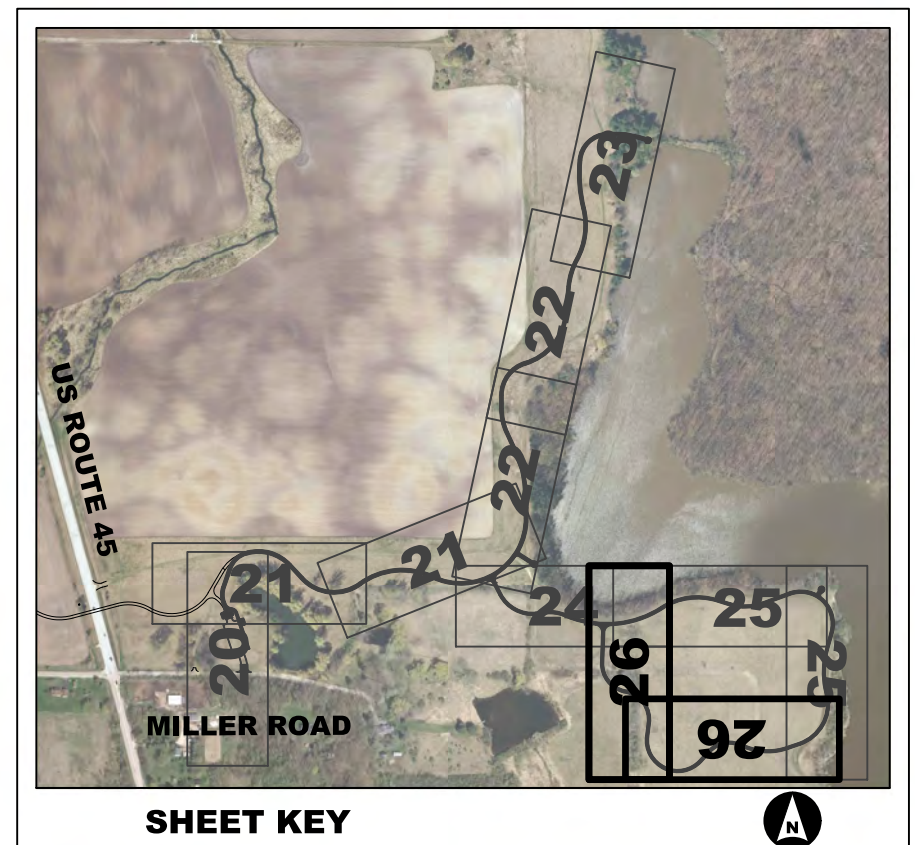
-  DITCH FLOW ARROW
-  OVERLAND FLOW DIRECTION
-  PERMEABLE PLASTIC DITCH CHECKS
-  SILT FENCE
-  FILTER SOCK
-  EXISTING TREES
-  TREE PROTECTION PAID FOR AS TEMPORARY CONSTRUCTION FENCE, 4' (LIMITS OF FENCE TO BE MARKED IN THE FIELD)
-  PROPOSED CULVERT, HDPE, 12"
-  STEEL FLARED END SECTION WITH GRADING
-  STEEL FLARED END SECTION WITH GRADING AND RIPRAP
-  LCFP LOW-MAINTENANCE TURF MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
-  LCFP PARKLAND SEED MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
-  LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
-  RIPRAP





- LEGEND**
- DITCH FLOW ARROW
 - OVERLAND FLOW DIRECTION
 - PERMEABLE PLASTIC DITCH CHECKS
 - SF SILT FILL
 - FILTER SOCK
 - EXISTING TREES
 - TREE PROTECTION PAID FOR AS TEMPORARY CONSTRUCTION FENCE, 4' (LIMITS OF FENCE TO BE MARKED IN THE FIELD)
 - PROPOSED CULVERT, HDPE, 12"
 - STEEL FLARED END SECTION WITH GRADING
 - STEEL FLARED END SECTION WITH GRADING AND RIPRAP
 - LCFP LOW-MAINTENANCE TURF MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
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 - LCFP BASIC PRAIRIE MIX TOPSOIL EXCAVATION AND PLACEMENT (4" MINIMUM) HYDROMULCH
 - RIPRAP

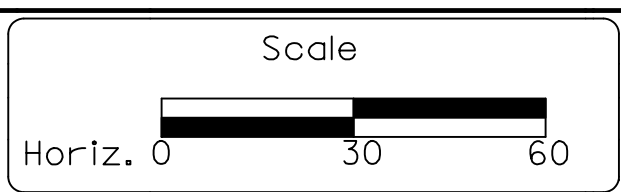
END PR 10' WIDE
AGGREGATE
ETHEL'S LOOP TRAIL
STA 435+57.21



CIVILTECH
Two Pierce Place, Suite 1400
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

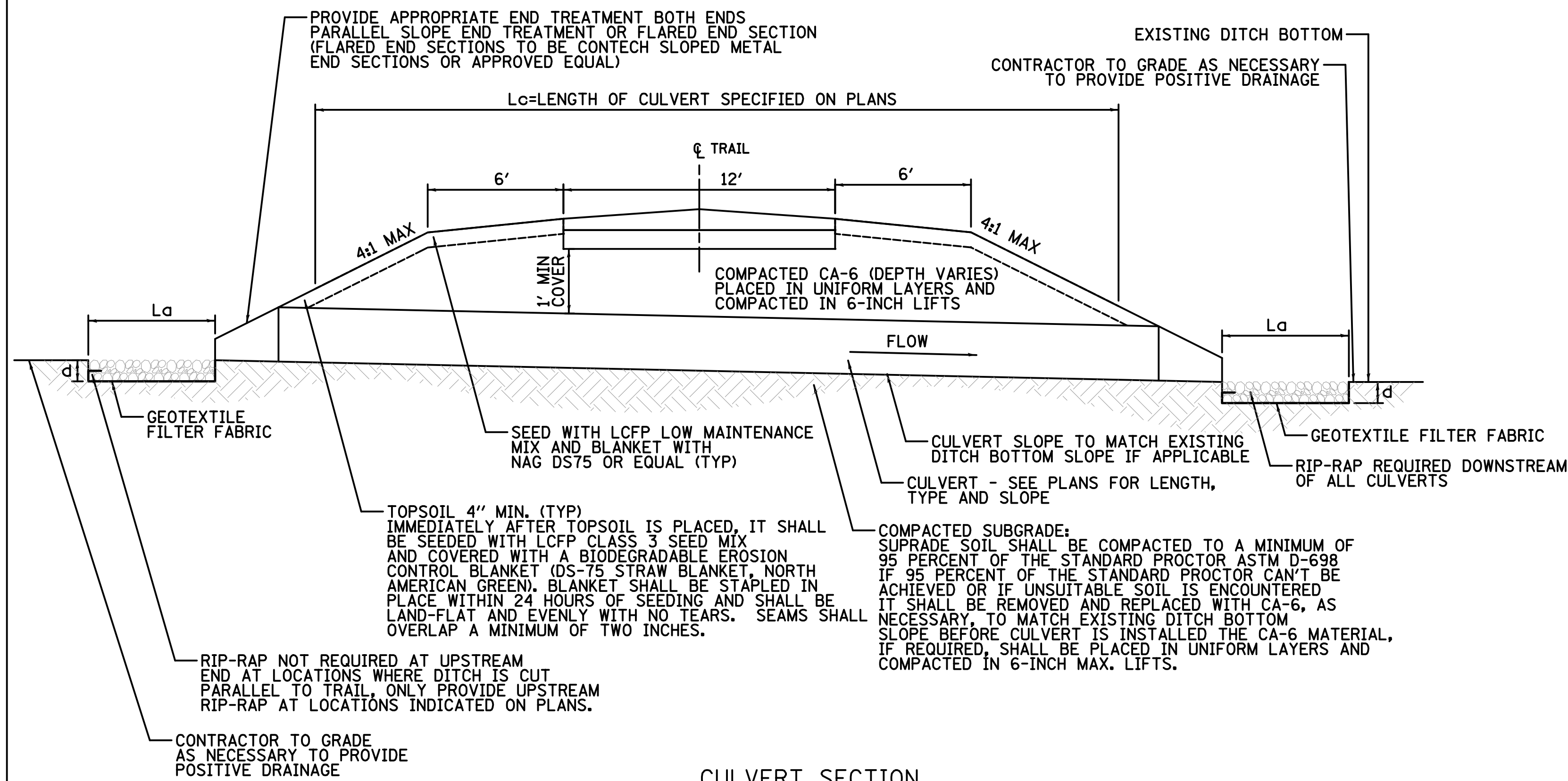
Designed - JRR	Revised -
Drawn - TFS	Revised -
Checked - RTM	Revised -
Date - 11/10/2017	Revised -

**LAKE COUNTY
FOREST PRESERVE DISTRICT**

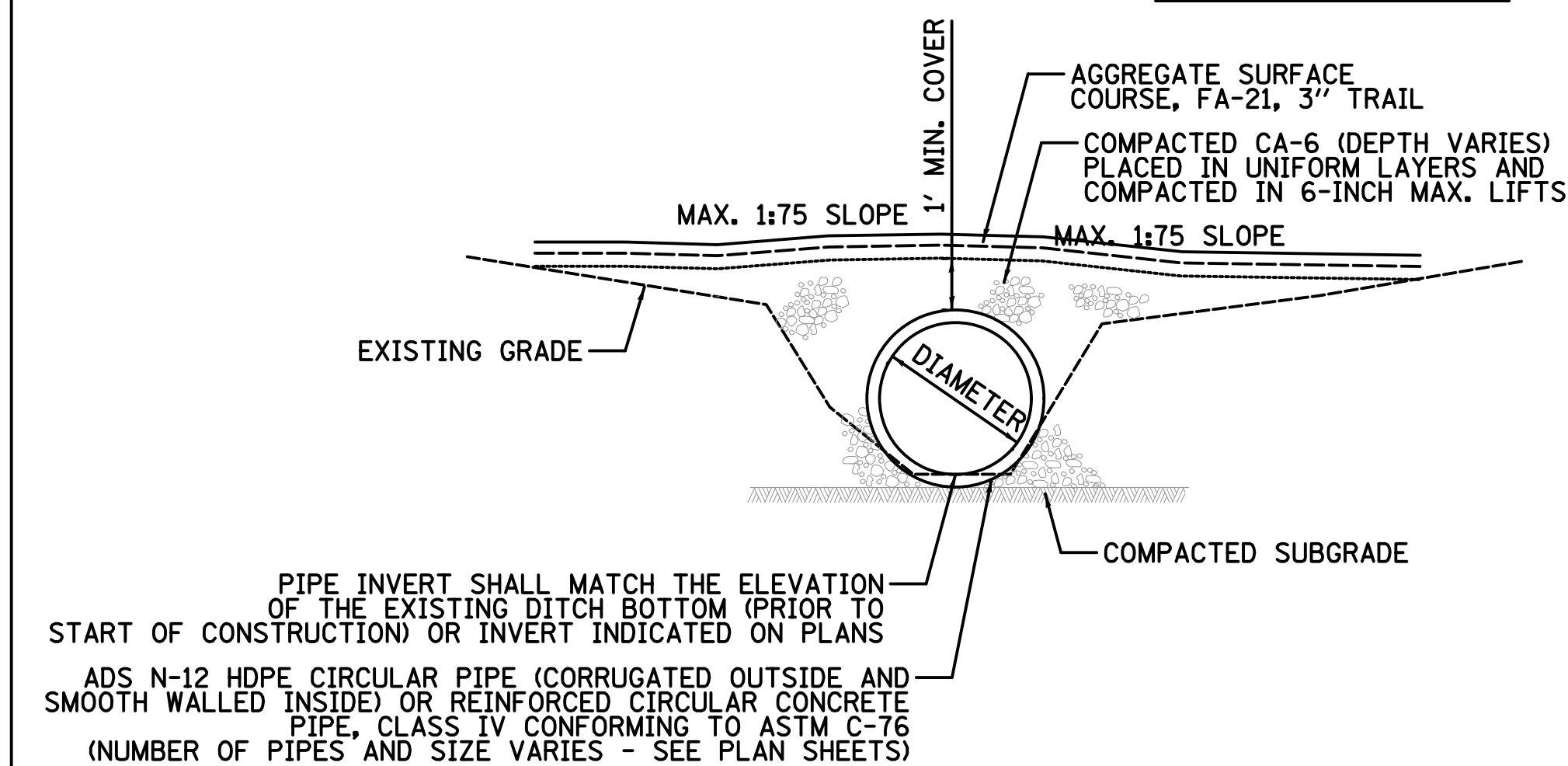


ETHEL'S LOOP TRAIL EROSION CONTROL AND LANDSCAPING PLANS
ETHEL'S WOODS FOREST PRESERVE
Sheet No. 8 of 8 Sheets STA. 421+00 to STA. 435+57.21

County	Total Sheet No.
Lake	29 26
Project No. 63910-18006-887	



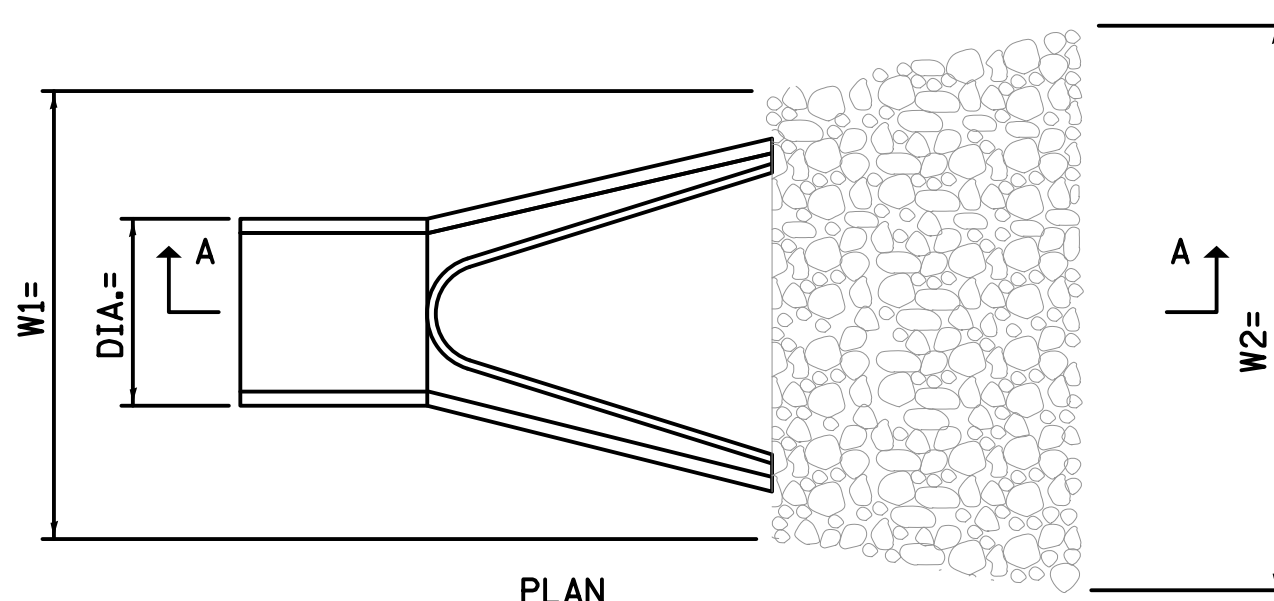
CULVERT SECTION



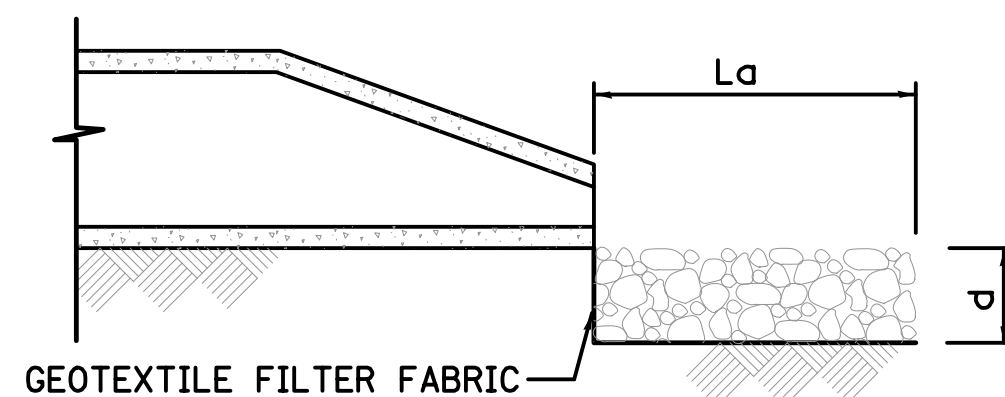
CIRCULAR HDPE OR RCP CULVERT CROSSING

NOTES

- CULVERTS TO BE INSTALLED TO MATCH EXISTING DITCH BOTTOM SLOPE, MINIMUM 0.5% SLOPE OR SLOPE AND INVERTS INDICATED ON PLAN SHEET.
- HDPE CULVERTS SHALL BE INSTALLED AS SPECIFIED BY THE MANUFACTURER WITH APPROPRIATE FLARED END SECTION SECURELY ANCHORED IN-PLACE WITH PE THREADED ROD WITH WING NUTS FOR END SECTIONS 12"-24" AND WELDED TO PIPE FOR END SECTION LARGER THAN 24" PER MANUFACTURER'S SPECIFICATIONS.
- JOINTS FOR HDPE PIPE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- JOINTS FOR CONCRETE PIPE SHALL TYPICALLY BE A TROWEL APPLIED BITUMINOUS MASTIC COMPOUND IN ACCORDANCE WITH ASTM C-76.
- RIP-RAP SHALL BE INSTALLED AT ALL CULVERT LOCATIONS PER RIP-RAP AT FLARED END END SECTION DETAIL.
- CONTRACTOR TO PROVIDE PROPER DITCH TRANSITIONS PER PLAN.
- ALL DISTURBED DITCH BOTTOMS AND SIDE SLOPES SHALL BE COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND PROVIDE DATA FOR ALL REQUIRED CULVERT CROSSING CONSTRUCTION ITEMS PRIOR TO START OF CONSTRUCTION.



PLAN



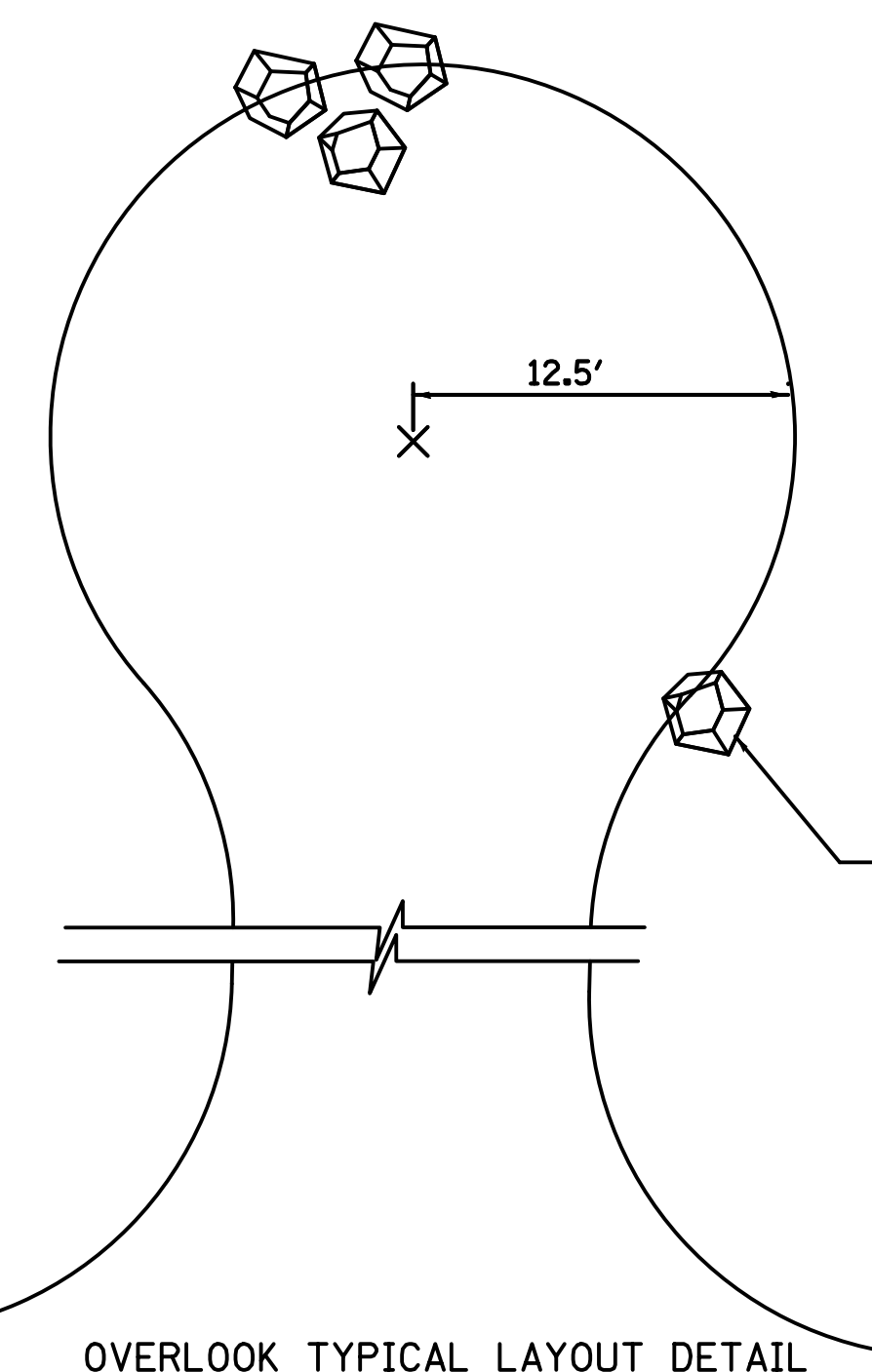
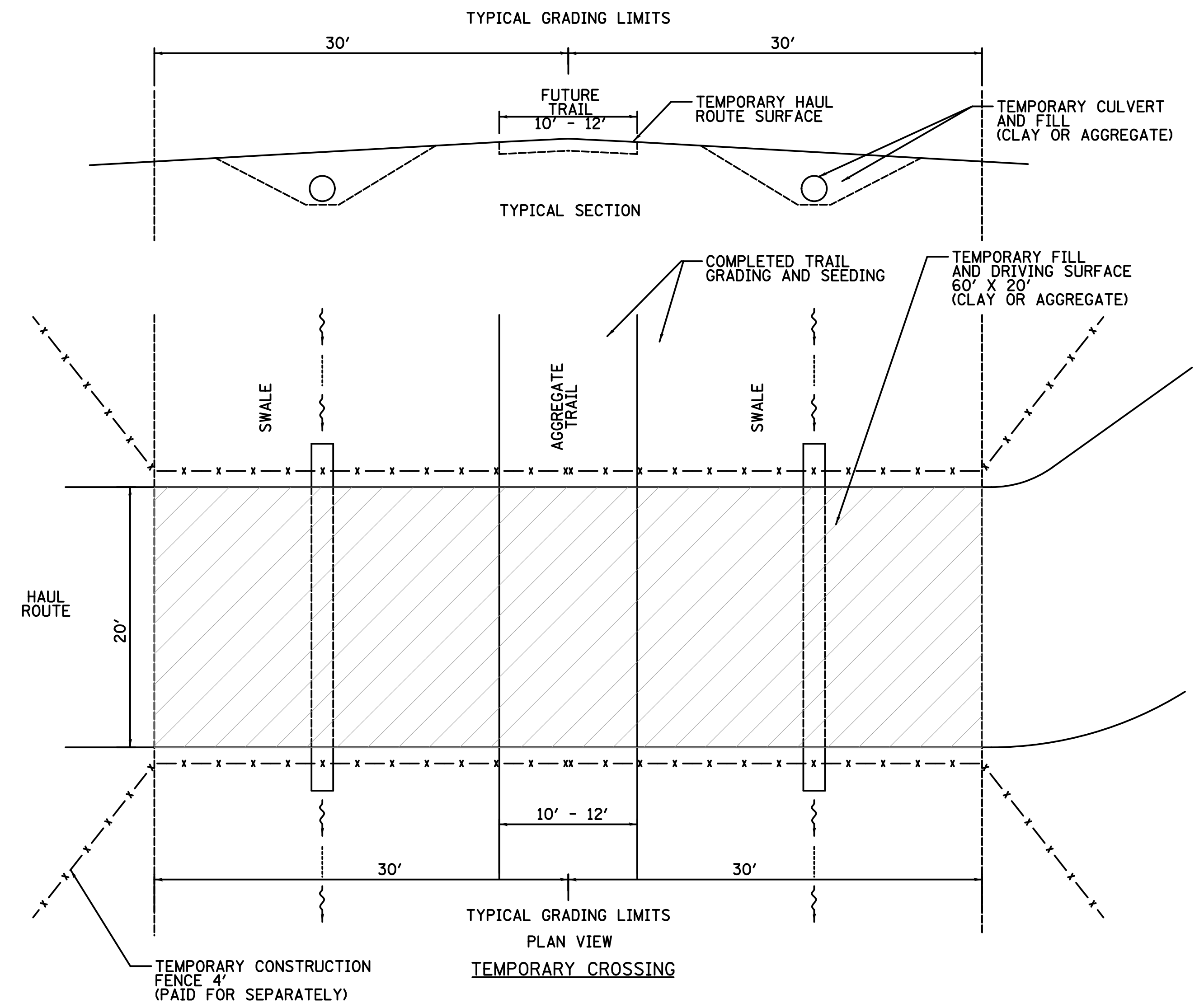
SECTION A-A

DIA. (Inches)	Lc(fft)	W1 (Inches)	W2 (fft)	RIP-RAP SIZE	d (Inches)	VOLUME(cy)
12	10	36	11	4"-8"	12	2.6
15	12	45	13.2	4"-8"	12	3.8
18	14	54	15.5	4"-8"	12	5.2

NOTES:

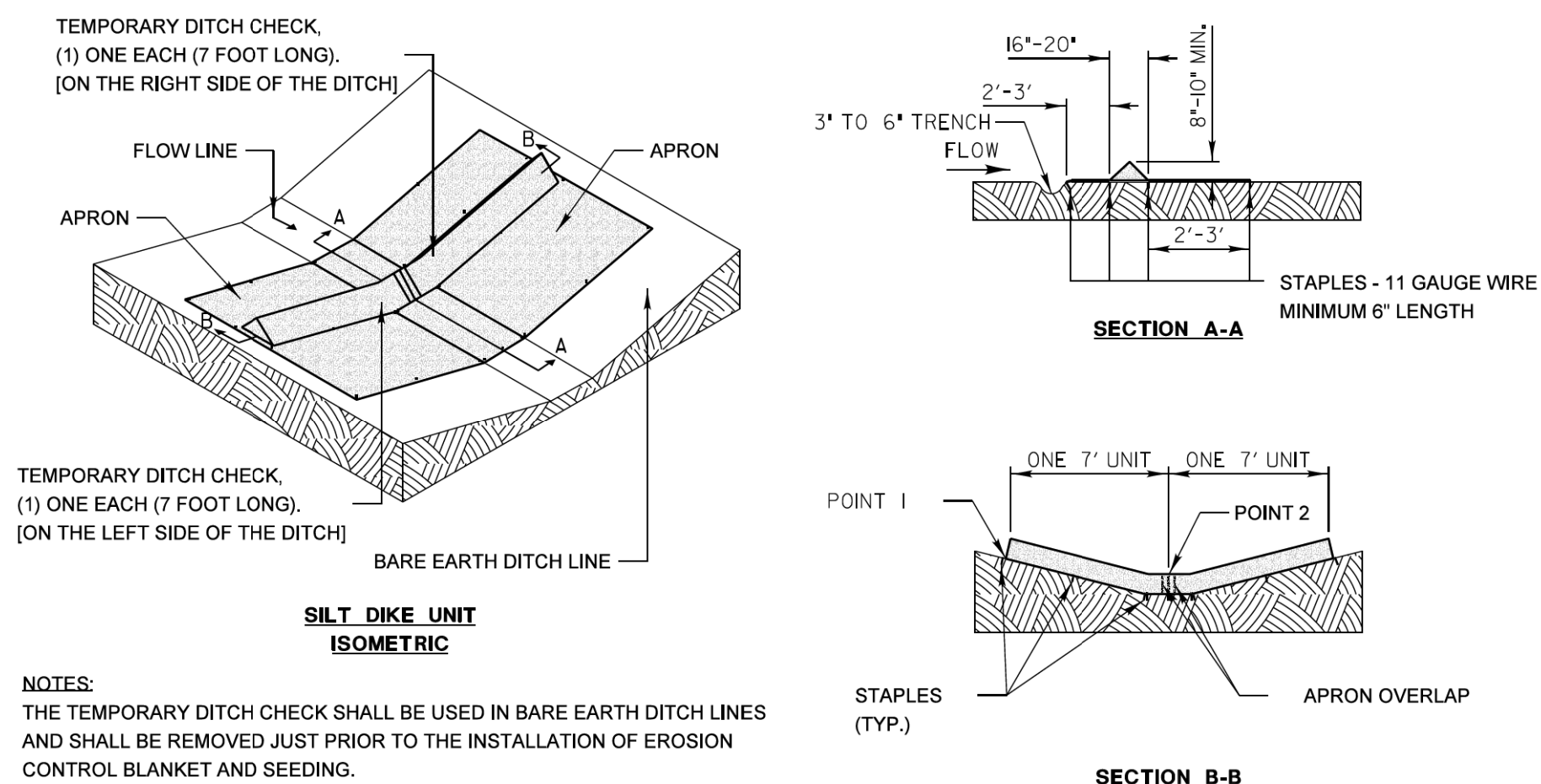
- ABOVE TABLE FOR PIPE OUTLET TO FLAT AREA WITH NO WELL DEFINED EXISTING OR PROPOSED CHANNEL OR DITCH.
- FOR PIPE OUTLET TO AREAS WITH EXISTING OR PROPOSED WELL DEFINED CHANNEL OR DITCH THE RIP-RAP SHALL EXTEND ACROSS THE DITCH BOTTOM AND UP THE DITCH SIDE SLOPES TO TOP OF CULVERT ELEVATION FOR LENGTH, Lc SHOWN IN TABLE ABOVE.
- THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATIONS 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II, III.
- RIP-RAP SHALL BE IN ACCORDANCE WITH ARTICLE 281.04A OF THE STANDARD SPECIFICATIONS FOR STONE RIP-RAP WITH THE FOLLOWING EXCEPTIONS, THE RIP-RAP SHALL BE FOUR (4) TO EIGHT (8) INCHES IN DIAMETER MINIMUM FIELD STONE COBBLES. LIMESTONE RIP-RAP IS NOT ACCEPTABLE. SAMPLES OF SPECIFIED MATERIAL SHALL BE SUBMITTED FOR APPROVAL TO THE OWNER PRIOR TO DELIVERY AND PLACEMENT. THE FURNISHED MATERIAL SHALL BE FROM THELEN SAND AND GRAVEL - ANTIOCH QUARRY (847-395-3313) OR APPROVED EQUAL.

RIP-RAP AT FLARED END SECTION



OVERLOOK TYPICAL LAYOUT DETAIL

FOR BARE EARTH APPLICATION ONLY



TEMPORARY DITCH CHECK, (1) ONE EACH (7 FOOT LONG), [ON THE RIGHT SIDE OF THE DITCH]

TEMPORARY DITCH CHECK, (1) ONE EACH (7 FOOT LONG), [ON THE LEFT SIDE OF THE DITCH]

BARE EARTH DITCH LINE

SILT DIKE UNIT ISOMETRIC

NOTES:
THE TEMPORARY DITCH CHECK SHALL BE USED IN BARE EARTH DITCH LINES AND SHALL BE REMOVED JUST PRIOR TO THE INSTALLATION OF EROSION CONTROL BLANKET AND SEEDING.

THE INSTALLATION SHOWN WILL BE MEASURED AND PAID FOR AS A TEMPORARY DITCH CHECK 14 FEET IN LENGTH.

STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAM.

POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

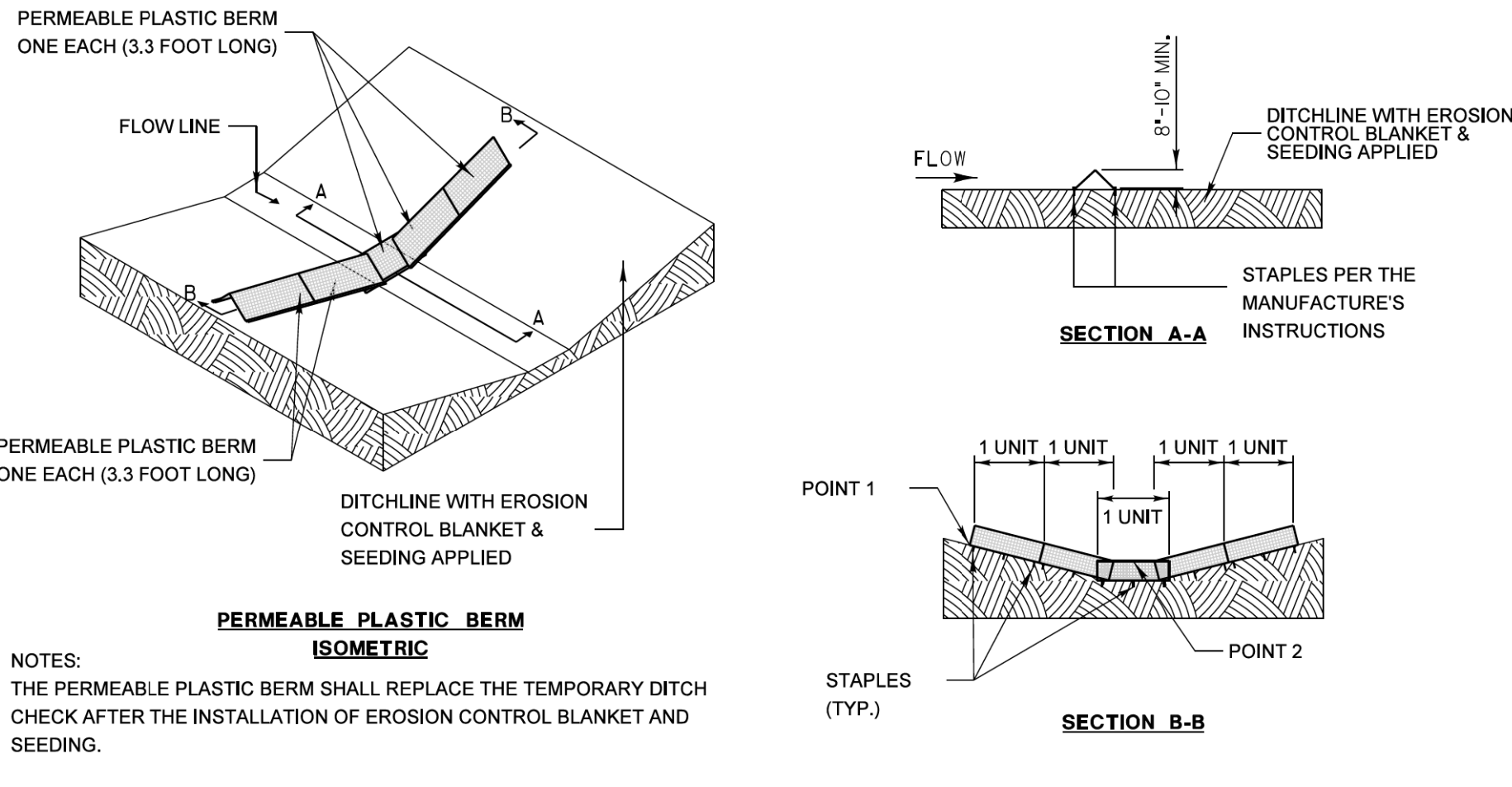
REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
ADDED DIMENSIONS	04/12/08	DATE: APRIL 1, 2007
REVISED PAY ITEM	04/15/10	
ADDED PLASTIC BERM 10x20	10/10/12	

Lake County Division of Transportation

TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH

(SHEET 1 OF 2)

FOR USE WHILE ESTABLISHING FINAL LANDSCAPING



PERMEABLE PLASTIC BERM ONE EACH (3.3 FOOT LONG)

PERMEABLE PLASTIC BERM ONE EACH (3.3 FOOT LONG)

DITCHLINE WITH EROSION CONTROL BLANKET & SEEDING APPLIED

PERMEABLE PLASTIC BERM ISOMETRIC

NOTES:
THE PERMEABLE PLASTIC BERM SHALL REPLACE THE TEMPORARY DITCH CHECK AFTER THE INSTALLATION OF EROSION CONTROL BLANKET AND SEEDING.

EACH PERMEABLE PLASTIC BERM IS 3.3 FEET IN LENGTH. THE MINIMUM INSTALLATION IN A DITCH SHALL BE THREE UNITS. THE INSTALLATION SHOWN WILL BE MEASURED AND PAID FOR AS A PERMEABLE PLASTIC BERM 16.5 FEET IN LENGTH (5 UNITS).

STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

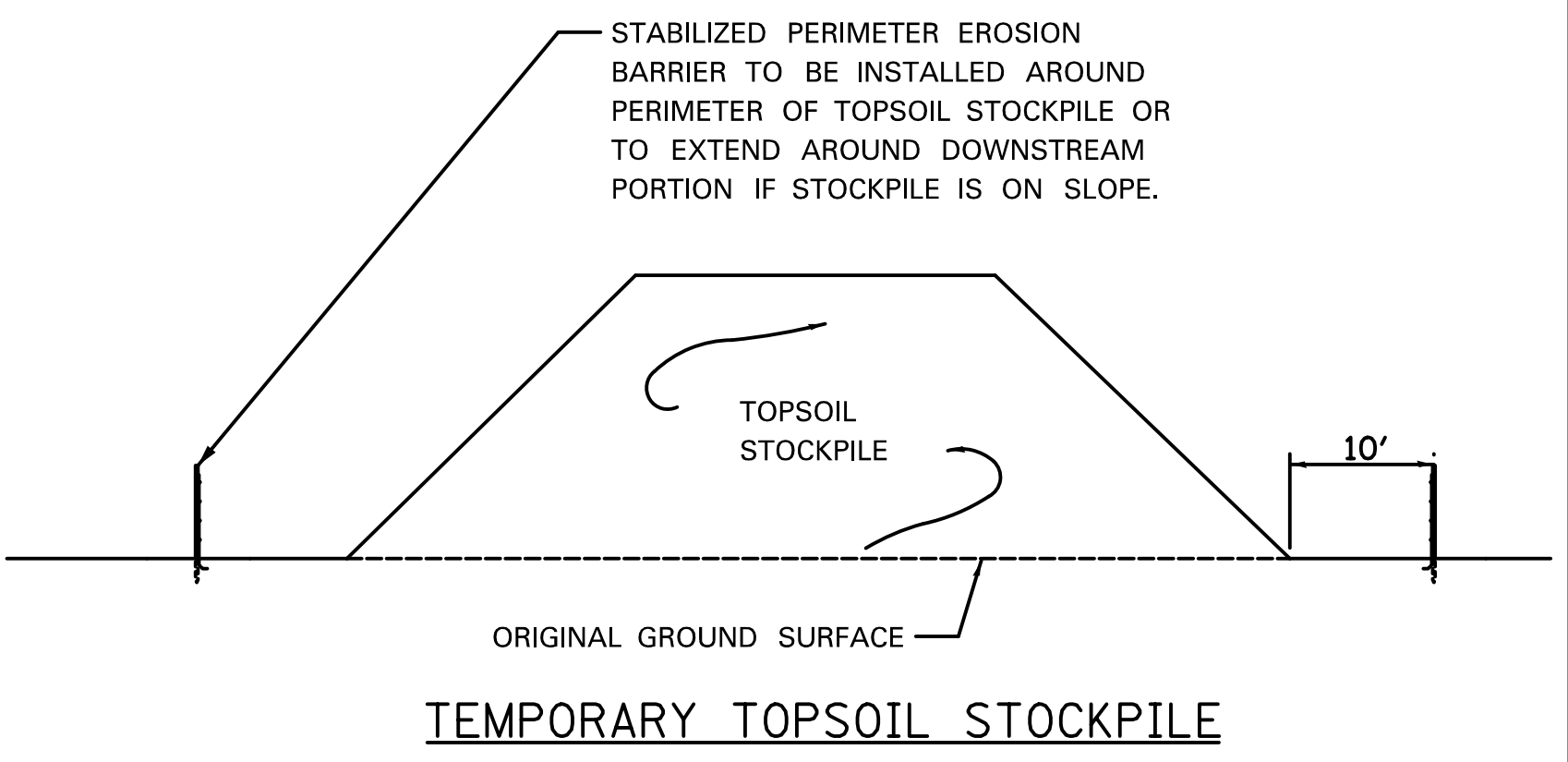
POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS THROUGH OR OVER THE BERM AND NOT AROUND THE ENDS.

REVISIONS	DATE	APPROVED BY: M. G. ZEMAITIS
ADDED DIMENSIONS	04/12/08	DATE: APRIL 1, 2007
REVISED PAY ITEM	04/15/10	
ADDED PLASTIC BERM 10x20	10/10/12	

Lake County Division of Transportation

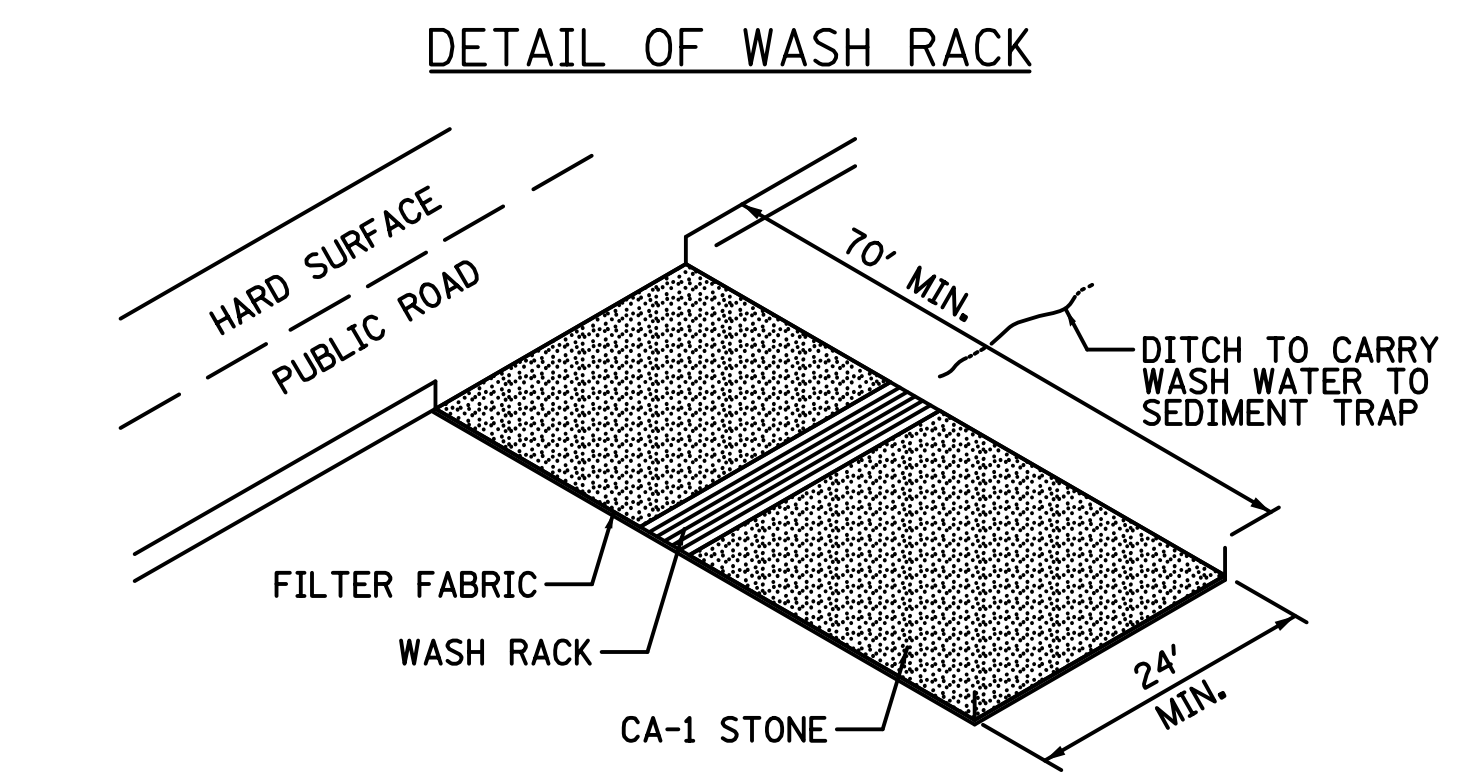
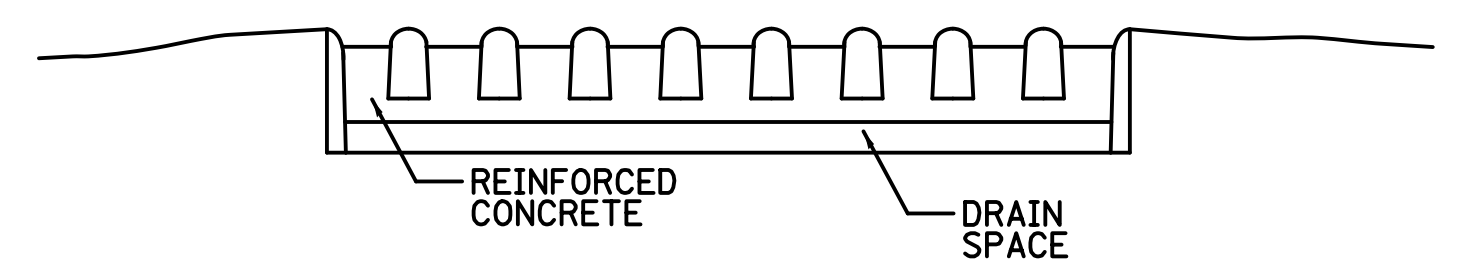
TEMPORARY DITCH CHECK INSTALLATION FOR ROADWAY OR DRAINAGE DITCH

(SHEET 2 OF 2)



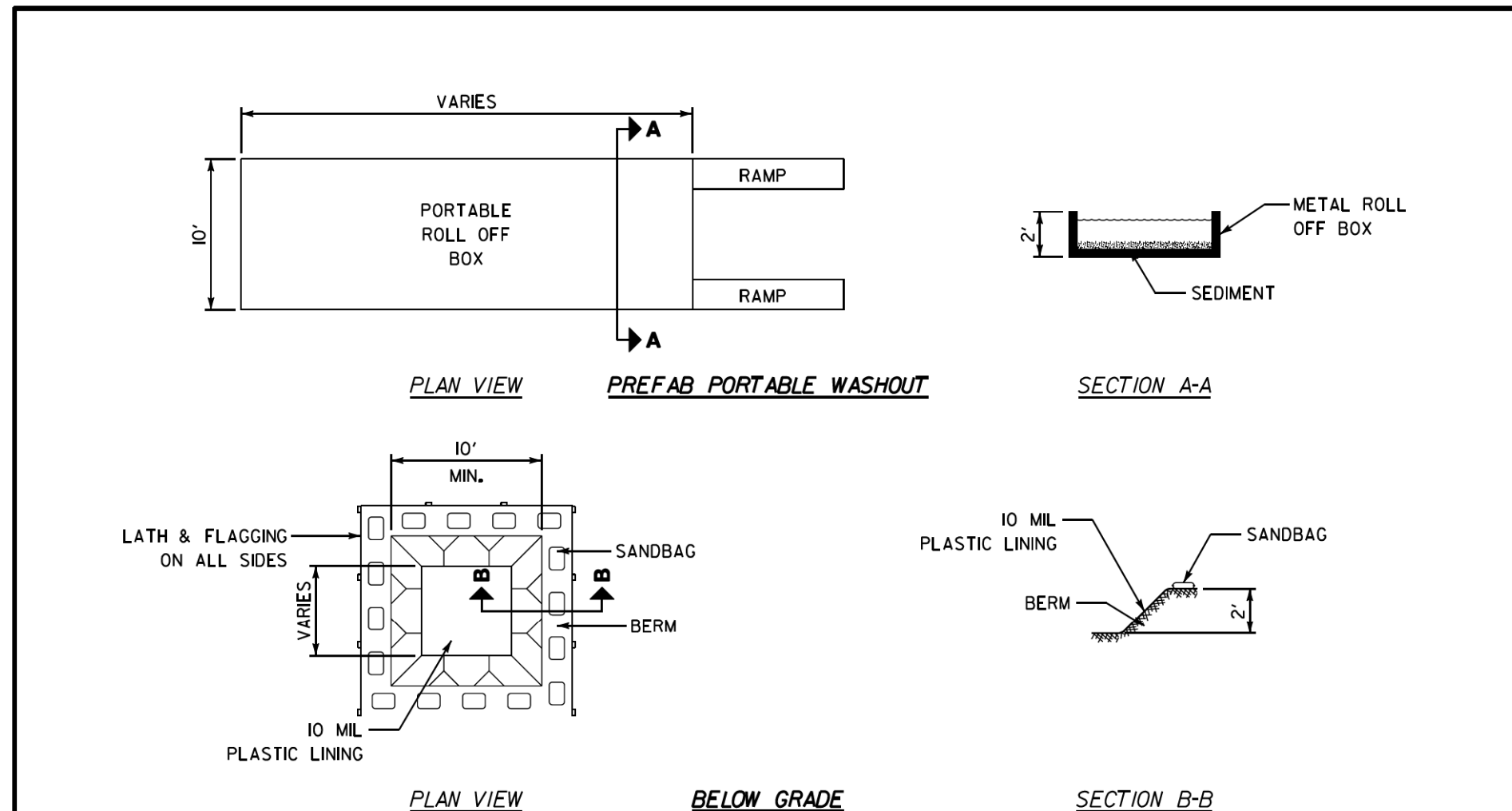
TEMPORARY TOPSOIL STOCKPILE

NOTE:
1. THE CONTRACTOR shall construct stockpiles and embankments to accommodate earthwork staging in such a way that in the permanent condition organic soils shall be placed on the top of soils unsuitable for landscaping. This may require material from the deepest section of the excavation to be placed on the bottom of the proposed embankment location. Critical depth separations shall be as follows: Topsoil (4-inch minimum depth), intermediate layer, base layer. If Hydric "Blue" clays are encountered during the excavation, this material shall be placed at a minimum of 6 feet below finished grade where attainable. The RESIDENT ENGINEER shall make the sole determination regarding the suitability of material for each of the layers. Multiple stockpiles may be required to conform to these requirements. All stockpiling shall be included in the cost of 'SITE GRADING - COMPLETE PER PLAN'.



STABILIZED CONSTRUCTION ENTRANCE WITH WASH RACK

NOTES:
1. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED INTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
2. FILTER CLOTH - WILL BE PLACE OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
3. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE.
4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



VARIES

PORTABLE ROLL OFF BOX

RAMP

PREFAB PORTABLE WASHOUT

SECTION A-A

SECTION B-B

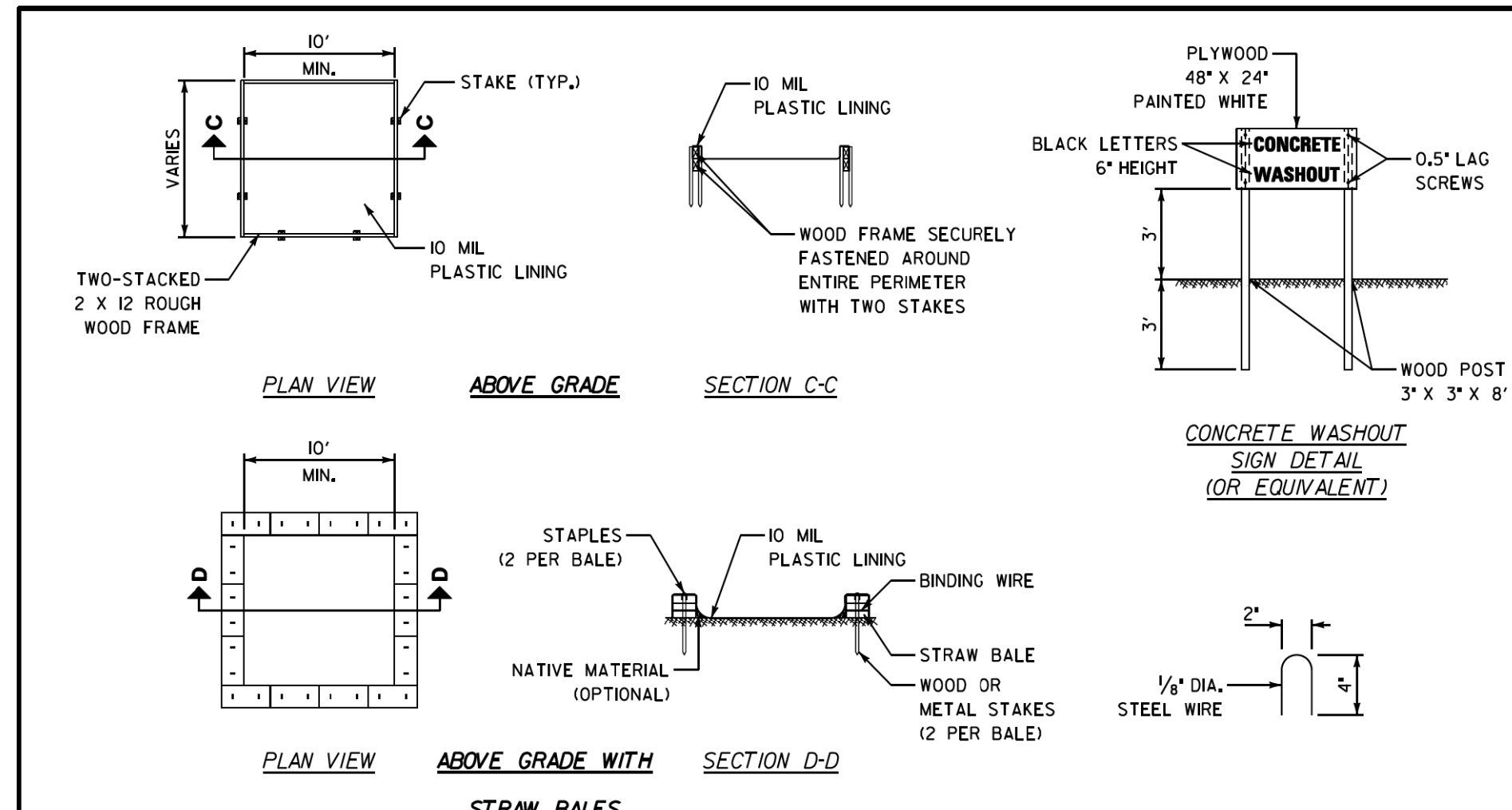
NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

REVISIONS	DATE	APPROVED BY: MGZ
		DATE: March 17, 2008

Lake County Division of Transportation

CONCRETE WASHOUT FACILITIES

(SHEET 1 OF 2)



10' MIN.

STAKE (TYP.)

10 MIL PLASTIC LINING

WOOD FRAME SECURELY FASTENED AROUND ENTIRE PERIMETER WITH TWO STAKES

PLYWOOD 48" X 24" PAINTED WHITE

BLACK LETTERS 6" HEIGHT

CONCRETE WASHOUT SIGN

0.5" LAG SCREWS

WOOD POST 3" X 3" X 8'

CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

SECTION C-C

SECTION D-D

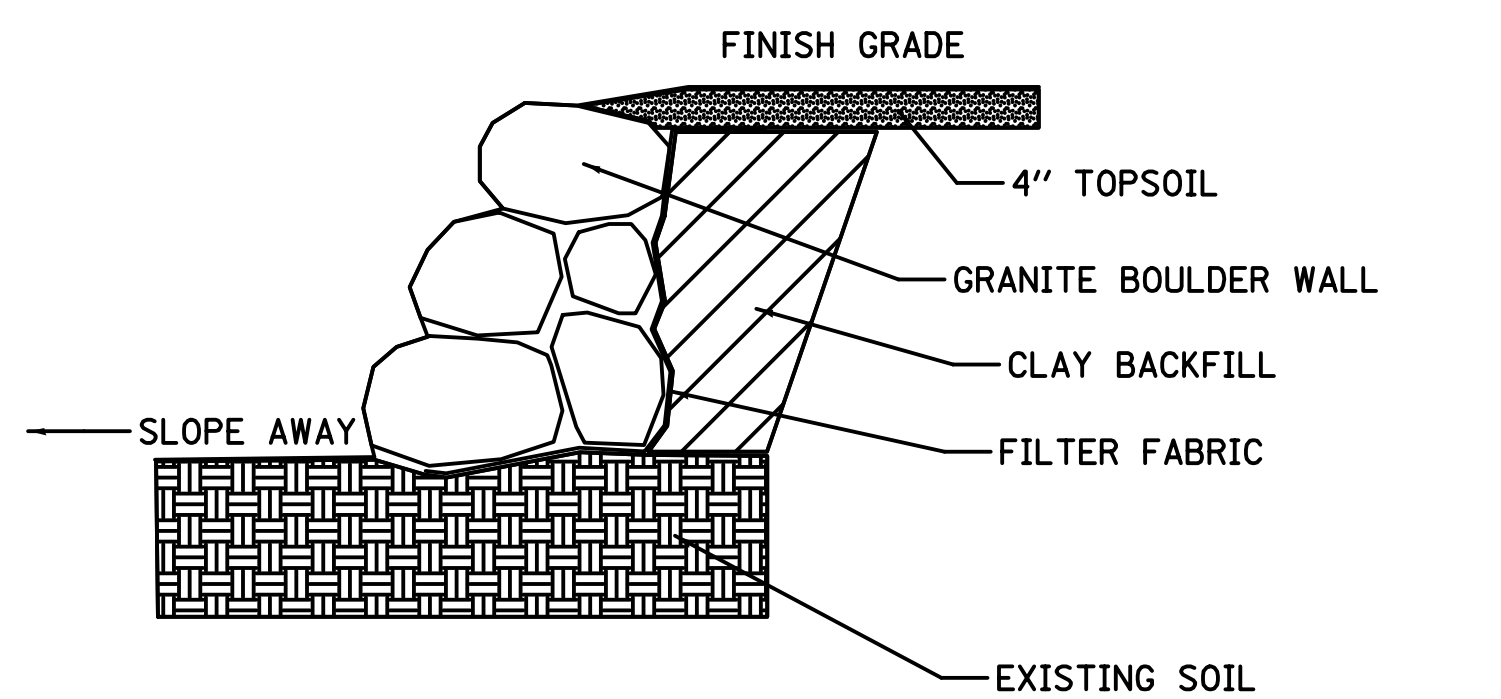
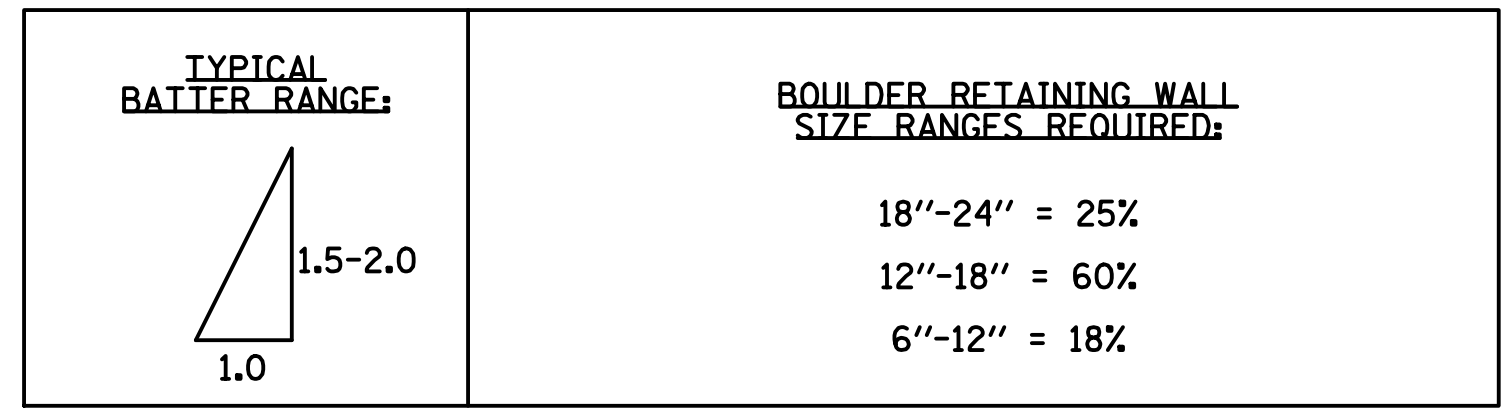
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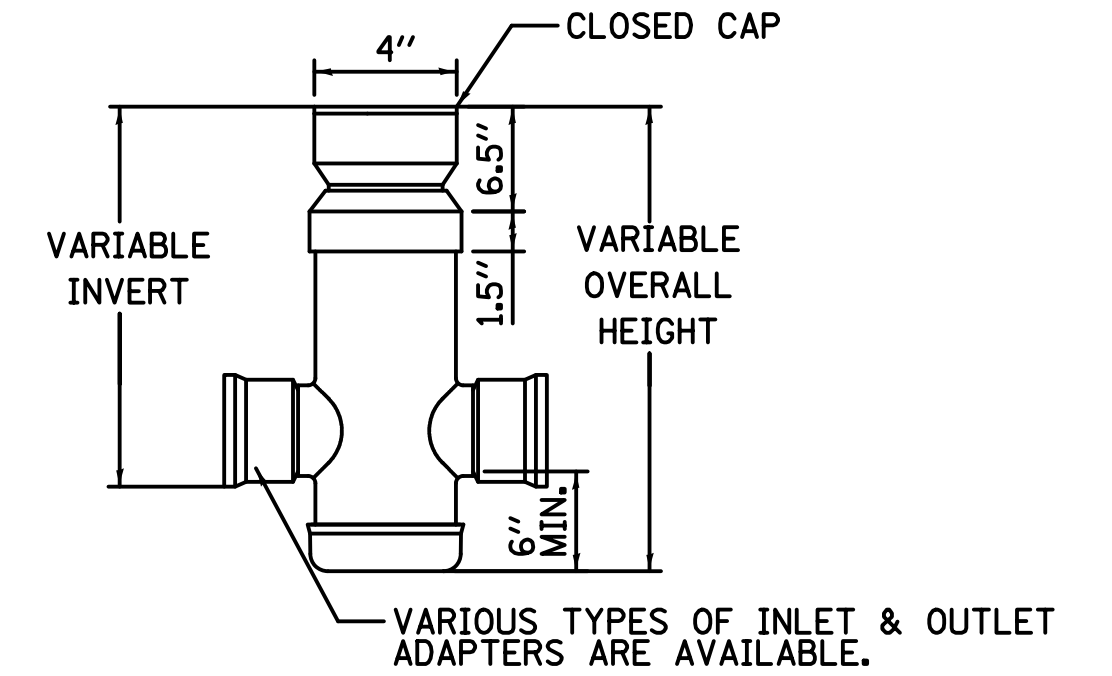
Lake County Division of Transportation

CONCRETE WASHOUT FACILITIES

(SHEET 2 OF 2)



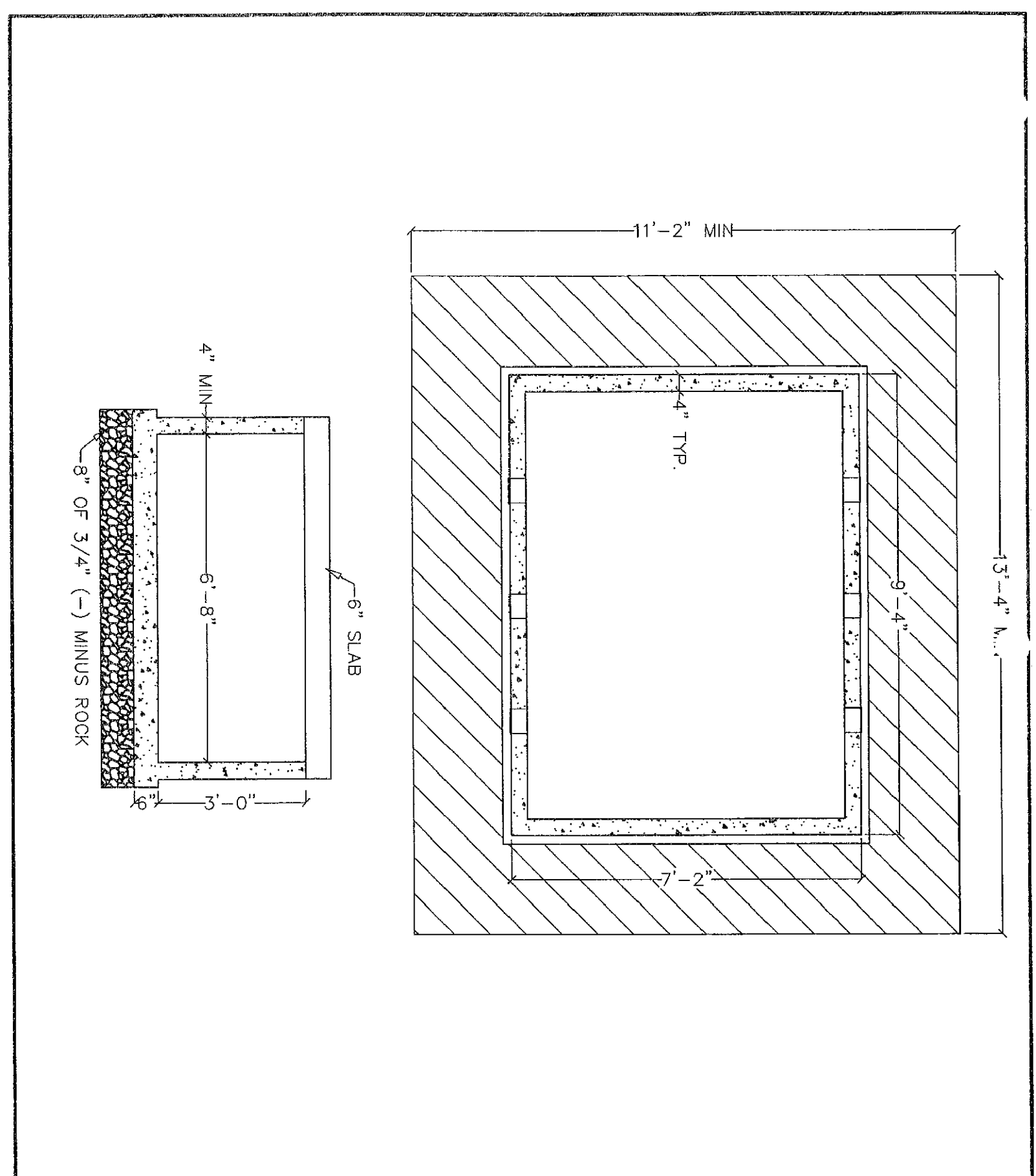
BOULDER RETAINING WALL
 TO BE LOCATED IN FIELD BY OWNER AS NEEDED



FIELD TILE OBSERVATION STRUCTURE DETAIL
 (PAID FOR AS "DRAIN TILES, 4" PVC")

- NOTES:
1. STRUCTURE TYPE TO BE APPROVED BY OWNER PRIOR TO INSTALLATION.
 2. DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

C:\AUTOCAD DRAWINGS\ALL WORKING PLANS\LAKE COUNTY\2017\ETHEL'S WOODS\OUTBACK\W\URINAL-ROCK-DC.DWG



**EXCAVATION
 DETAIL FOR
 OUTBACK**

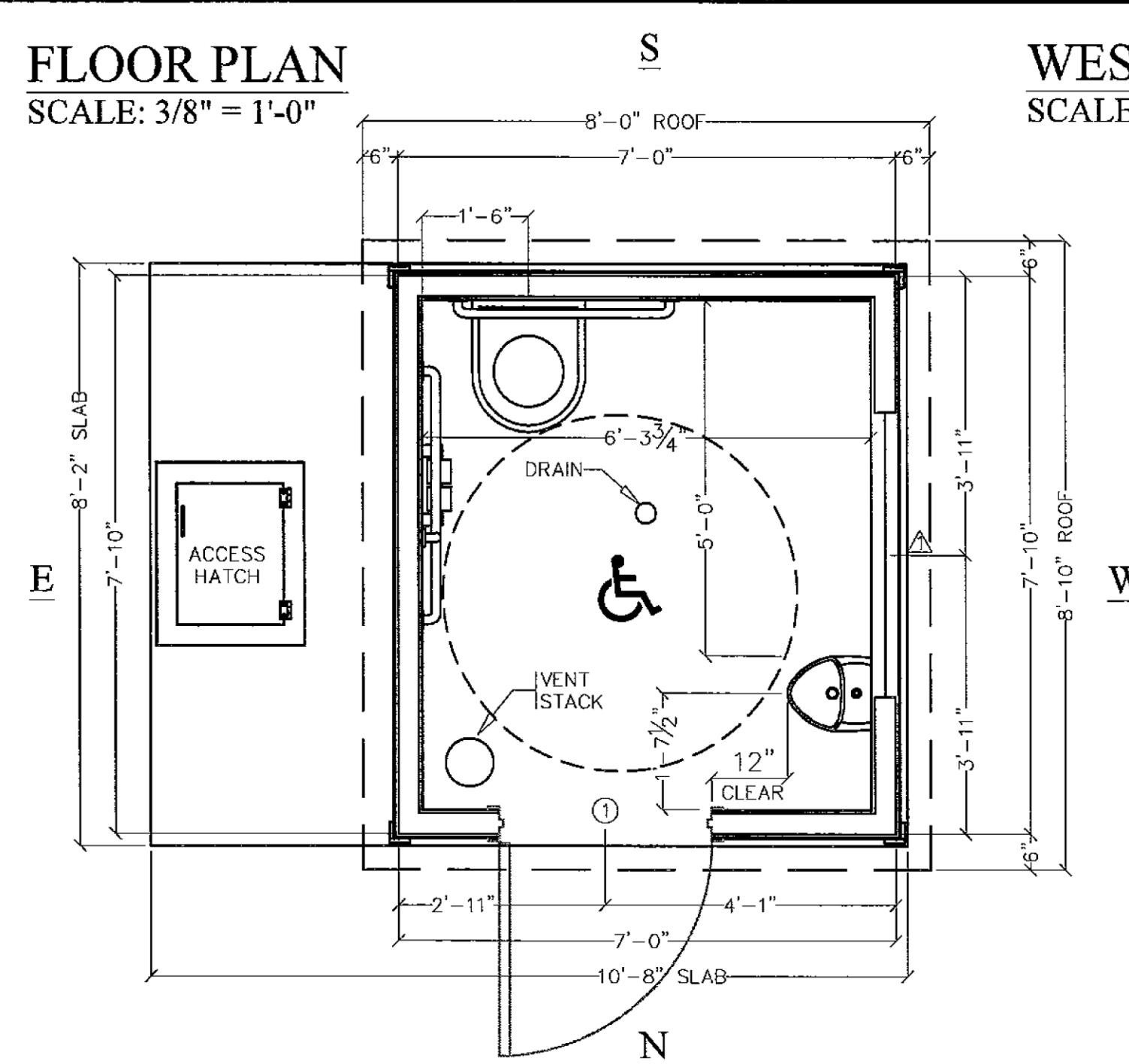
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DATE: 9/15/14

BIOLOGICAL MEDIATION SYSTEMS, L.L.C.
 NATIONAL VALUE ENGINEERING STRUCTURES
 1-800-524-1097

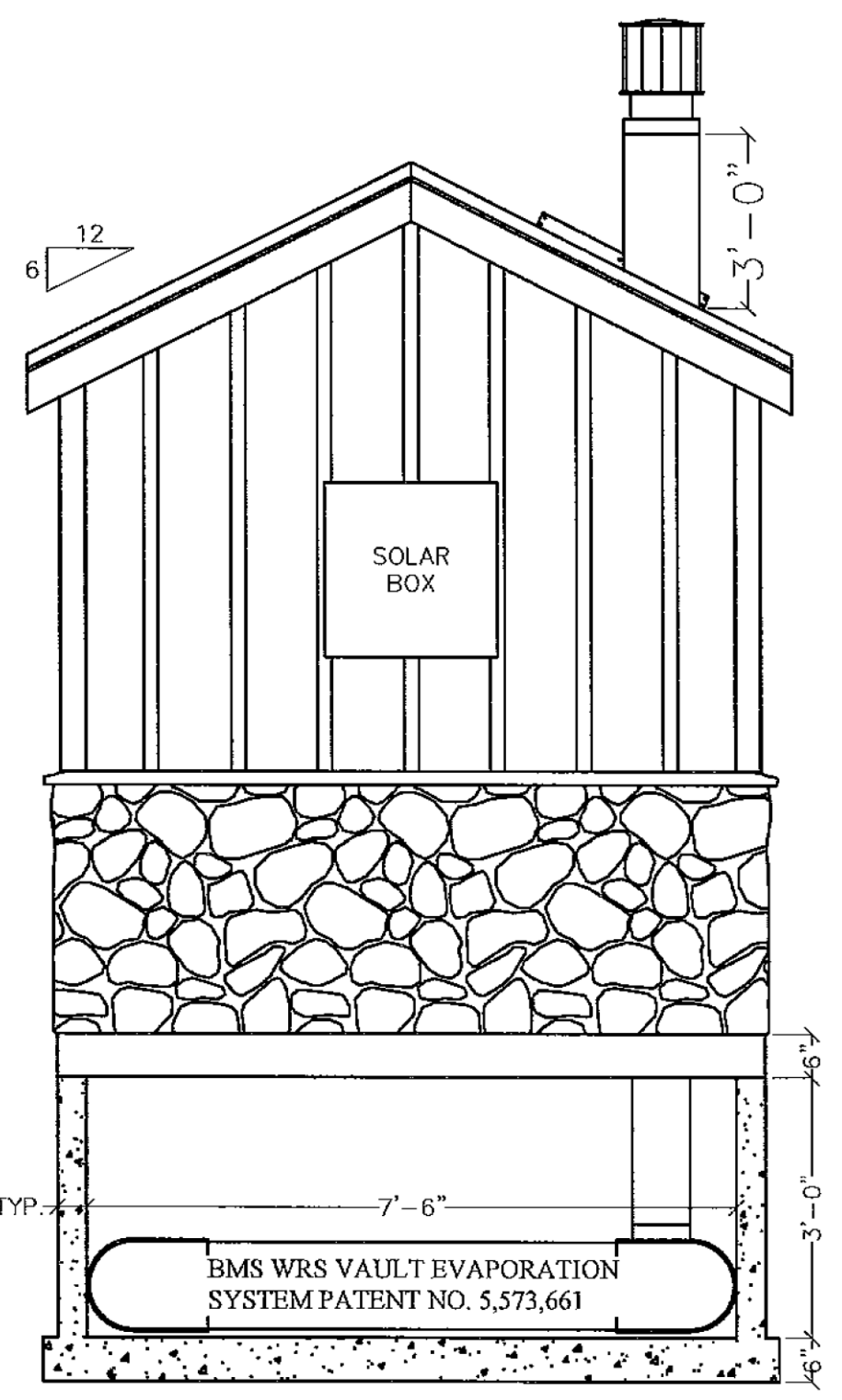
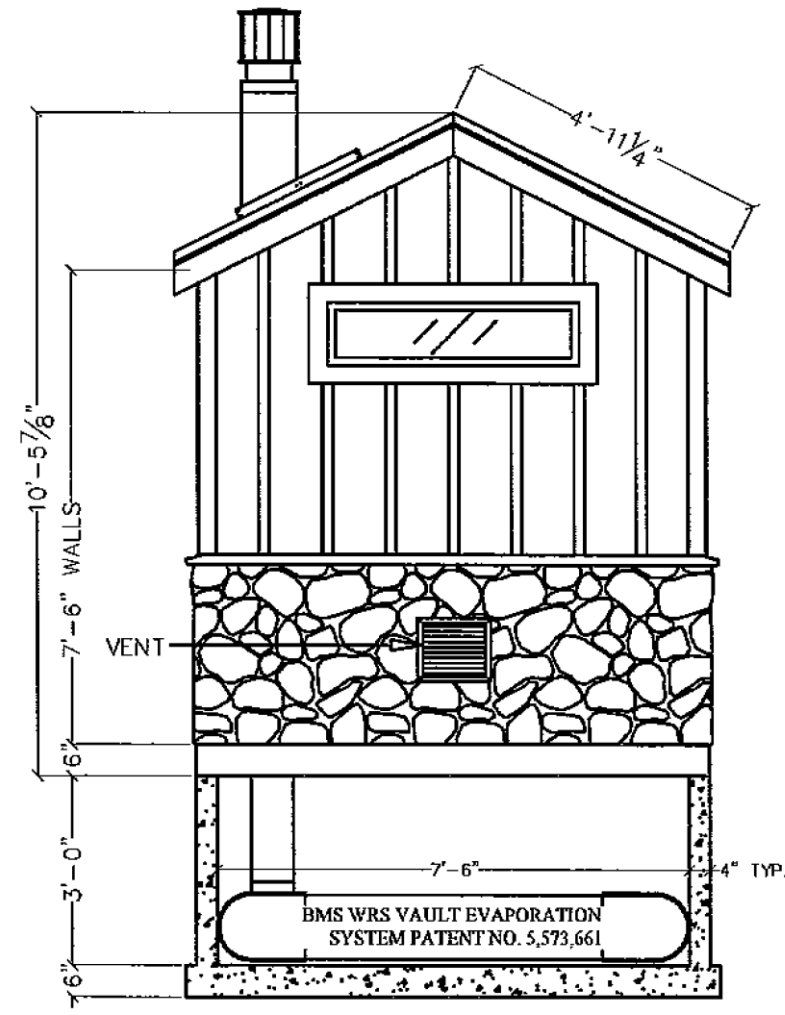
BMS

NOTE: IT IS THE RESPONSIBILITY OF THE OWNER TO VERIFY THAT THESE PLANS MEET OR EXCEED ALL GOVERNING CODES. IT IS ALSO THE RESPONSIBILITY OF THE OWNER TO OBTAIN PLAN APPROVALS AND ALL WORK PERMITS BY GOVERNING AGENCIES.

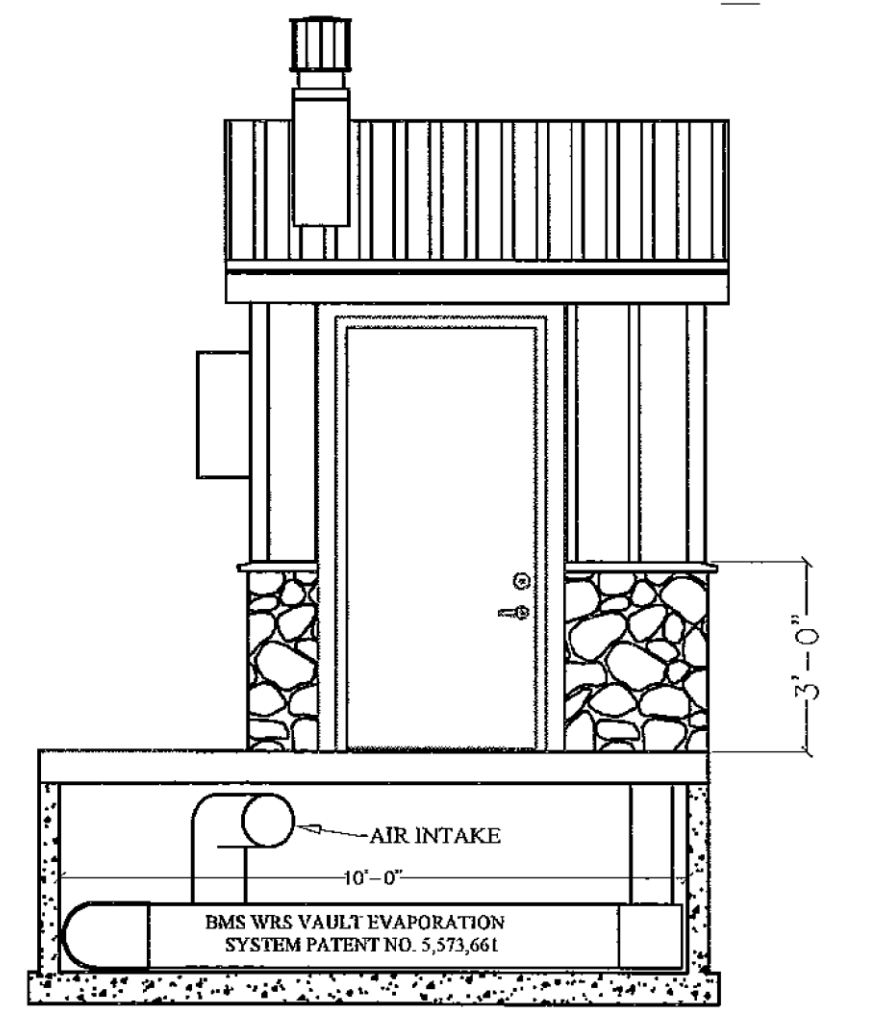


FLOOR PLAN
 SCALE: 3/8" = 1'-0"

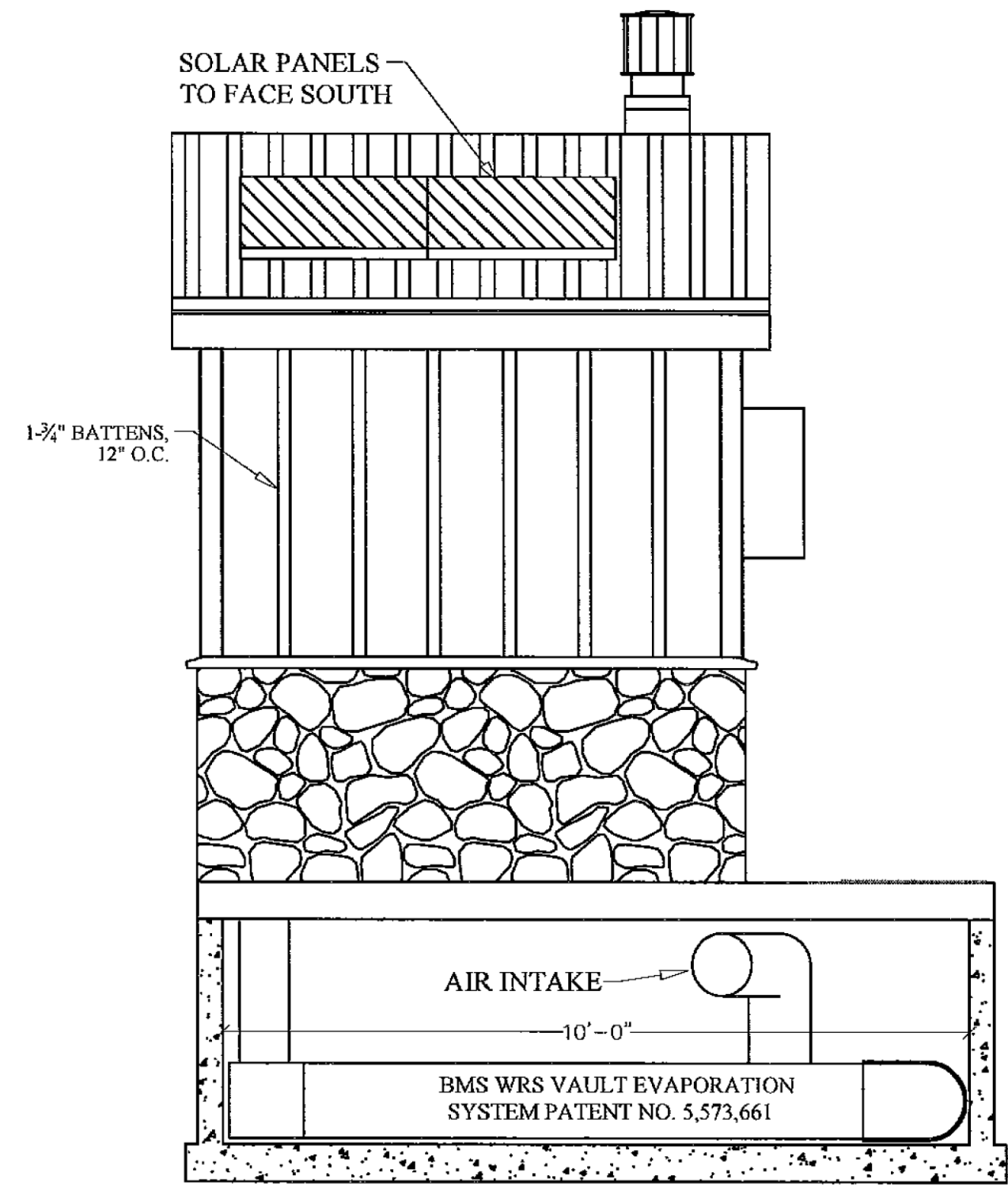
WEST VIEW
 SCALE: 1/4" = 1'-0"



EAST SIDE VIEW
 SCALE: 3/8" = 1'-0"



NORTH SIDE VIEW
 SCALE: 1/4" = 1'-0"



SOUTH SIDE VIEW
 SCALE: 3/8" = 1'-0"

DATE: 8/14/17

PROJECT: ETHEL'S WOODS FOREST PRESERVE

PROJECT NO.: 63910-18006-887

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ETHEL'S WOODS FOREST PRESERVE
BMS: OUTBACK
WITH URINAL, ROCK & DC POWER