

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2023-074

Considered at Board of Managers Meeting: February 7, 2024

Received complete: January 22, 2024

Applicant: Minnesota Department of Transportation, Lynn Duijndam

Consultant: NA

Project: Trunk Highway 101 Rehabilitation and Culvert Improvement – The proposed project includes bituminous mill and overlay of TH101, Americans With Disabilities Act Improvements, trail reclamation/rehabilitation, signal revisions, drainage preservation work and modifications to an existing culvert that conveys Purgatory Creek under the roadway.

Location: TH 101 from Hwy 5 to Townline Rd. in Chanhausen/Eden Prairie

Reviewer: Scott Sobiech, PE, Barr Engineering

Proposed Board Action

Manager _____ moved and Manager _____ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the March 13, 2024 meeting of the managers. Resolved that the application for Permit 2023-074 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2023-074 to the applicant on behalf of RPBCWD.

Upon vote, the resolutions were adopted, _____ [VOTE TALLY].

Rule Conformance Summary

Rule	Issue	Conforms to RBPCWD Rules?	Comments
B	Floodplain Management and Drainage Alterations	Yes	
C	Erosion Control Plan	See Comment	See rule-specific permit condition C1 related to providing name and contact information for the individual responsible for erosion control.
D	Wetland and Creek Buffer	Yes	
E	Dredging and Sediment Removal	Yes	
G	Waterbody Crossing and Structures	Yes	
L	Permit Fee	NA	Governmental Entity
M	Financial Assurance	NA	Governmental Entity

Project Background

The proposed roadway construction project is on Trunk Highway 101 (TH101) from Highway 5 to Townline Rd. in Chanhassen/Eden Prairie. The project includes bituminous mill and overlay of TH101, Americans With Disabilities Act improvements, trail reclamation/rehabilitation, signal revisions, and drainage preservation work. The portion of TH 101 included in this project crosses over Purgatory Creek which flows through a 24-inch culvert under the road. This 24-inch culvert serves as the primary outlet from Lotus Lake. The upstream portion of the existing culvert, a 24-inch corrugated metal arch pipe, is deteriorating and at the end of its design life. The Minnesota Department of Transportation (MNDOT) is proposing to replace the deteriorated CMP with a 24-inch reinforced concrete pipe.

Above the downstream end of the Purgatory Creek culvert (east side of TH 101) is a tilting wooden retaining wall with erosion issues underneath and on the sides. MNDOT plans to remove this wall and flatten the roadway embankment down to 2H:1V slope. In addition, extensive sedimentation and delta formation has occurred on downstream end of the culvert resulting in roughly a 75% blockage. To facilitate the proposed slope, MNDOT proposes to extend the existing culvert 7 feet and remove accumulated sediment down to similar elevations recorded when the existing culvert was installed in 1977 for about 63 feet of the creek downstream of the crossing. Work is within MNDOT right-of-way and temporary easements on adjacent private property.



Because the proposed work constitutes a linear project as defined for purposes of the rules and involves the addition of less than 10,000 square feet of new impervious and the full reconstruction of less than 25,000 square feet of existing impervious surface (see project-site information table below), the project is exempt from stormwater-management review by Rule J, subsection 2.4.

The project site information is summarized below:

	Total Project
Total Site Area (acres)	15.29
Existing Site Impervious (acres)	11.68
Post Construction Site Impervious (acres)	11.84
New (Increase) in Site Impervious Area (acres)	0.16
Reconstructed impervious surface (acres)	0.40
Rehabilitated (mill/overly or full depth reclamation) Impervious Surface (acres)	11.28
Total Disturbed Area (acres)	12.98

Exhibits:

1. Permit Application received November 30, 2023 (applicant was notified that the application was incomplete on December 11, 2023; information completing the application was received on January 22, 2024)
2. Project Narrative Memorandum received November 30, 2023 (revision dated January 22, 2024)
3. Design Plans Sheets dated November 3, 2023 (revision dated January 11, 2024, sheet 114 revision received February 20, 2024)
4. Hydraulic Analysis summary dated March 23, 2023
5. Compensatory storage sheet received November 30, 2023 (revised January 22, 2024 and February 20, 2024)
6. Existing and proposed crossing site plans received November 30, 2023 (revised January 22, 2024)
7. Creek Bluff drawing dated November 23, 2023 (revised January 22, 2024)
8. Outlet riprap detail and specification received January 22, 2024
9. Wetland delineation report dated December 7, 2023
10. Purgatory Creek Culvert under TH 101 photos and inspection report dated September 1, 2021
11. 1977 creek crossing construction plan received January 22, 2024
12. Programmatic maintenance agreement dated March 29, 2016
13. Response to RPBCWD comments received January 22, 2024

Rule Specific Permit Conditions

Rule B: Floodplain Management and Drainage Alterations

Because the project disturbs land below the 100-year flood elevation (894.0 ft) of Purgatory Creek, a public watercourse, to modify the culvert under TH101, the applicant must submit plans showing the

project conforms to the requirements in the RPBCWD Floodplain Management and Drainage Alteration rule (Rule B, Subsection 2.1).

The proposed culvert modification project conforms to Rule B, Subsections 3.1 because no buildings are proposed to be constructed or reconstructed as part of the project. The summary of the changes to the floodplain storage capacity is provided in the following table. The project meets the requirements for compensatory storage (+/- 1 foot) for any fill placed in the floodplain of Purgatory Creek and provides a net increase in storage of 1.32 cubic yards (CY) below the 100-year flood elevation, thus conforming with Rule B, Subsection 3.2.

Fill and Cut computation below existing 100-year flood elevation

Elevation Bottom Top		Proposed Fill (CY)	Proposed Cut (CY)	Difference (CY) ¹
891.0	892.0	0.41	0	0.41
892.0	893.0	1.41	1.83	-0.42
893.0	894.0	4.92	6.23	-1.31
Total		6.74	8.06	-1.32
Notes				
(1) Negative (-) volume indicates net cut (i.e., increase in storage)				

The hydraulic analysis submitted by the applicant demonstrates that the post-construction flow velocity through the crossing and discharging to Purgatory Creek for the 100-year events will not materially change compared to existing conditions. Because the modeling confirms that the proposed flow velocity in the downstream channel (2.0 ft/s) remains unchanged from existing conditions (2.0 ft/s) and flood elevation are not increased, the proposed project is not reasonably likely to have adverse downstream impacts (Rule B, Subsection 3.3). The erosion and sediment-control plan submitted by the applicant to demonstrate compliance with subsection 3.5 of Rule B is analyzed below under Rule C. A note on the plans requires the activities to be conducted to minimize the potential transfer of aquatic invasive species conforming to Rule B, Subsection 3.6.

The proposed project conforms with the criteria in Rule B.

Rule C: Erosion and Sediment Control

Because the project will involve 12.98 acres of land-disturbing activities, the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control and turf establishment plans and/or project specification include installation of silt fence, biolog, inlet protection for storm sewer catch basins, floating silt curtain, turf establishment, daily inspection, placement of a minimum of 6 inches of topsoil with a minimum of 5 percent organic matter,

decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

- C1. The Applicant must provide the name and contact information of the individual responsible for erosion control at the site. RPBCWD must be notified if the responsible individual changes during the permit term.

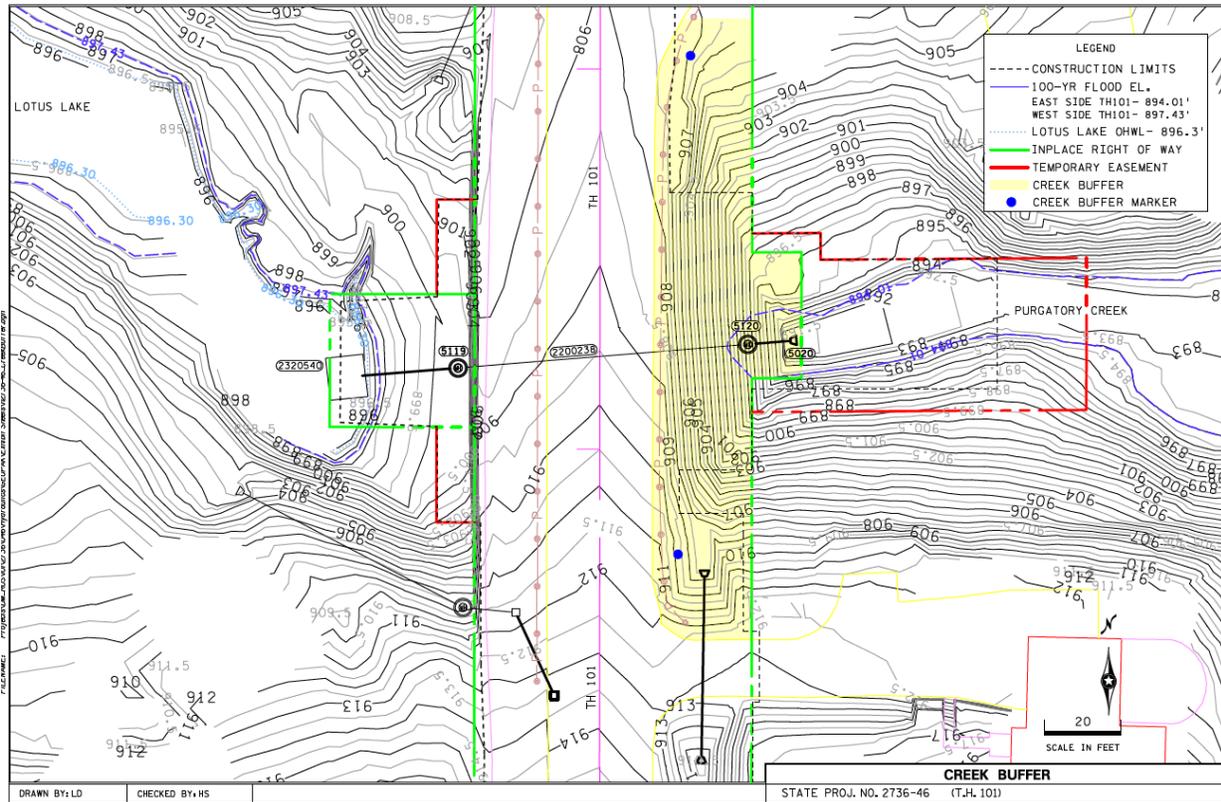
Rule D: Wetland and Creek Buffers

Because the proposed work triggers a permit under RPBCWD Rule B, E, and G for the crossing modification work and Purgatory Creek is a public waters watercourse, Rule D, Subsections 2.1a and 3.1c require buffer adjacent to the creek and 50 feet each from the upstream and downstream extent of disturbance. Because the onsite and downgradient, regulated wetlands are not disturbed by or downgradient from the regulated activities under Rules B, E, or G, Rule D does not impose wetland buffer requirements.

Purgatory Creek flows through the project site and requires an average buffer width of 50 feet from the creek centerline, minimum 30 feet in accordance with Rule D, Subsection 3.2.b.v for a public waters watercourse. The following drawing shows the buffer zone and marker locations, and shows that the proposed buffer area width extends the required average width or to the extent of available right-of-way and extends downstream to the right-of-way limits (Rule D, Subsection 3.1.c, 3.2.b.v and 3.2g). Because the upstream side of the crossing is directly connected to Lotus Lake, there is no watercourse or wetland requiring buffer. The buffer widths are summarized in the table below.

Regulated Feature	Required Minimum Width (ft)	Required Average Width (ft)	Provided Minimum Width (ft)	Provided Average Width (ft)
Purgatory Creek	30	50	10 ¹	47 ¹

¹ limited in width to the extent of available right -of-way (Rule D, subsection 3.2g)



The erosion control and turf establishment plans (sht 156 of 162) indicate the Applicant is proposing revegetating disturbed areas within the proposed buffer with native vegetation in conformance with Rule D, Subsection 3.3. A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule D, Subsection 3.5.

Buffer areas and maintenance requirements must be documented in an agreement after review and approval by RPBCWD in accordance with Rule D, Subsection 3.5. RPBCWD and MNDOT have entered into a programmatic maintenance agreement covering MNDOT projects subject to RPBCWD regulatory requirements. If the permit application is approved and the project is completed as presented, the project site will be added by RPBCWD to the roster of those maintained in accordance with the programmatic agreement.

The RPBCWD Engineer concurs that the proposed project conforms to the creek and wetland buffer requirements of Rule D.

Rule E, Dredging and Sediment Removal

Because the project involves removal of material from Purgatory Creek, a public watercourse, the project requires approval under RPBCWD Rule E, Dredging and Sediment Removal. The purpose of the land-disturbing activities is to maintain the existing creek channel by removing accumulated sediment

from the channel to improve the flow conditions of the Lotus Lake outlet culvert discharging under TH101 (Rule E, subsection 2.1a).

Because proposed sediment removal is not intended for navigation purposes, Rule E subsection 3.1a does not impose requirement on this project. The proposed removal of material from the bed of Purgatory Creek will restore the channel cross section and the ecological function of a portion of the creek to conditions that existed following the installation of the original culvert (Rule E, subsections 3.1b, 3.1c, 3.1d, and 3.1g). Because the proposed work involves removal of sediment down to the original channel bottom documented in the original culvert construction drawings, is not a marina or residential lakeshore, and the work under this permit alters the existing channel slope to a maximum of 3H:1V, the project conforms with Rule E, subsection 3.1f.

Because a note on sheet 114 requires the contractor to dispose of dredged materials above the ordinary high water level of a public water, outside WCA protected wetlands; not in a floodplain, and in a manner and location not subject to erosion or redeposition into a waterbody or stormwater facility, the project conforms with Rule E, Subsection 3.2. A note on the site map directs the contractor that no work affecting the bed or banks of a protected water shall occur between March 15 and June 15 (Rule E, Subsection 3.5). Banks will be immediately stabilized after completion of permitted work and revegetated as soon as growing conditions allow (Rule E, Subsection 3.3) and the plans call for the installation of floating silt curtain (Rule E, Subsection 3.4). A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule E, Subsection 3.6).

The RPBCWD Engineer concurs that the proposed project conforms to the dredging and sediment removal requirements of Rule E.

Rule G: Waterbody Crossings and Structures

Because the applicant proposes to modify a creek crossing along Purgatory Creek, a public watercourse, the project must conform to RPBCWD's Waterbody Crossings and Structures Rule (Rule G). The proposed work implicates the criteria in subsections 3.1, 3.2 and 3.7. The proposed work falls within the scope of Minnesota Department of Natural Resources General Permit #2015-1192. (Rule F: Stormwater and Streambank Stabilization is not triggered because the riprap being installed in bank of the creek is to prevent erosion moreso than stabilize the bank.)

This work represents a public benefit by replacing a deteriorating section of culvert and extending the culvert to allow slope stabilization and minimize the risk of a pipe collapse and ensuring continued roadway connectivity (Rule G, Subsection 3.1a)

The hydraulic analysis of the crossing shows that the proposed 100-year frequency flood elevation upstream of the crossing (897.4 ft) will match the existing elevation 897.4 M.S.L. and the downstream

flood elevation will also match the existing flood elevation of 894.0 M.S.L., thus confirming the project will not increase the flood stage of the existing water body conforming to Rule G, Subsection 3.2a.

This portion of Purgatory Creek is not used for navigation, thus Rule G, Subsection 3.2b does not impose requirements on this project. The modeling submitted demonstrates to the RPBCWD engineer's satisfaction that the project will not adversely affect water quality or cause increased scour, erosion or sedimentation because the project maintains similar flow velocities through the culvert and downstream creek section. Because the proposed Class IV riprap can withstand velocities between 10 – 12 feet per second, and the modeled 100-year velocity at the downstream end of the culvert is 6.1 fps with tailwater impacts and 10 fps without tailwater impacts, the riprap is sized and designed appropriately to withstand the forces and dissipate the energy at the crossing, thus providing a stable creek system consistent with the criteria in Rule G, Subsection 3.2c. Because this is a modification of the existing crossing in place, wildlife will continue to be able to use Purgatory Creek as it is used under existing conditions, thus preserving wildlife passage Rule G, Subsection 3.2d.

A no-build option would result in flows through the existing deteriorating culvert which could eventually lead to failure of the culvert. The applicant dismissed replacing the entire culvert because the traffic disruptions, increased construction costs, and the large potential impact to the area to facilitate construction. Because the modification option involves the lesser degree of site disturbance along the creek and maintains existing flow characteristics, this option is the minimal impact solution to the identified issue in the area and for the creek system, consistent with Rule G, Subsection 3.2e.

The submitted stormwater pollution prevention plan includes a note directing the contractor that no work affecting the creek bed shall occur between March 15 and June 15 as required in Rule G, Subsection 3.7a. Banks will be immediately stabilized after completion of permitted work and revegetated as soon as growing conditions allow (Rule G, Subsection 3.7b). A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule G, Subsection 3.7c).

Rule G, Subsection 3.7d requires compliance with the applicable criteria in subsections 3.3 of Rule F. Construction drawings submitted confirm that riprap is sized appropriately in relation to the erosion potential: The project proposes the use riprap having an average size of 12 inches in diameter (MNDOT Class IV Riprap). Because the proposed riprap can withstand velocities between 10-12 feet per second fps, and the modeled 100-year velocity at the downstream end of the culvert is 10 feet per second assuming no tailwater impacts, stabilization materials are sized and designed appropriately to withstand the velocities through the culvert, thus conforming to Rule F, Subsection 3.3b (i). Drawings confirm the proposed crossing will follow the existing alignment of the watercourse (Rule F, Subsection 3.3b (ii) and 3.3b (iv)). The standard riprap detail included with the drawings indicate that a granular transitional layer and a geotextile fabric will be placed, thus conforming to Rule F, Subsection 3.3b (iii). The drawing illustrates that the proposed riprap will extend to the top of bank, which is lower than the 100-year

flood elevation, thus conforming to subsection 3.3b (v). The riprap design reflects energy dissipation and stabilization necessary to minimize erosion at the watercourse and is not placed for cosmetic purposes per Rule F, Subsection 3.3b (vi).

RPBCWD and MNDOT have entered into a programmatic maintenance agreement covering MNDOT projects subject to RPBCWD regulatory requirements to comply with Rule G, subsection 5. If the permit application is approved and the project is completed as presented, the project site will be added by RPBCWD to the roster of those maintained in accordance with the programmatic agreement. The RPBCWD Engineer finds that the proposed project conforms to the Waterbody Crossings and Structures requirements of Rule G.

Applicable General Requirements:

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed above and on the permit. The granting of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
4. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
6. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
7. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
8. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

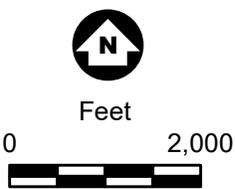
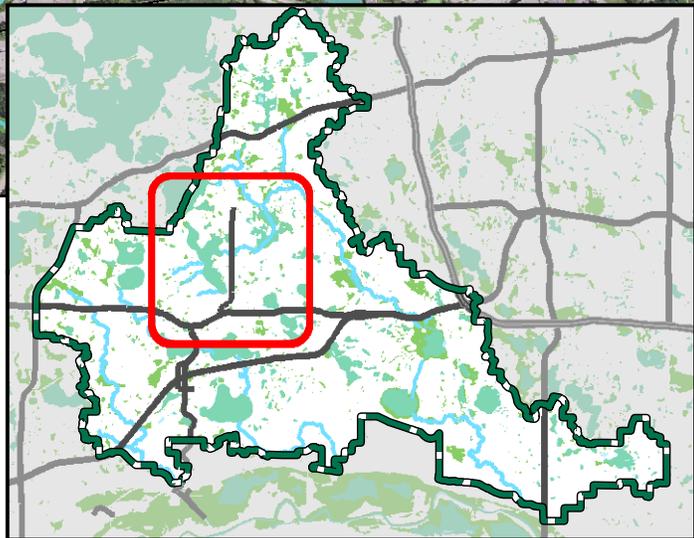
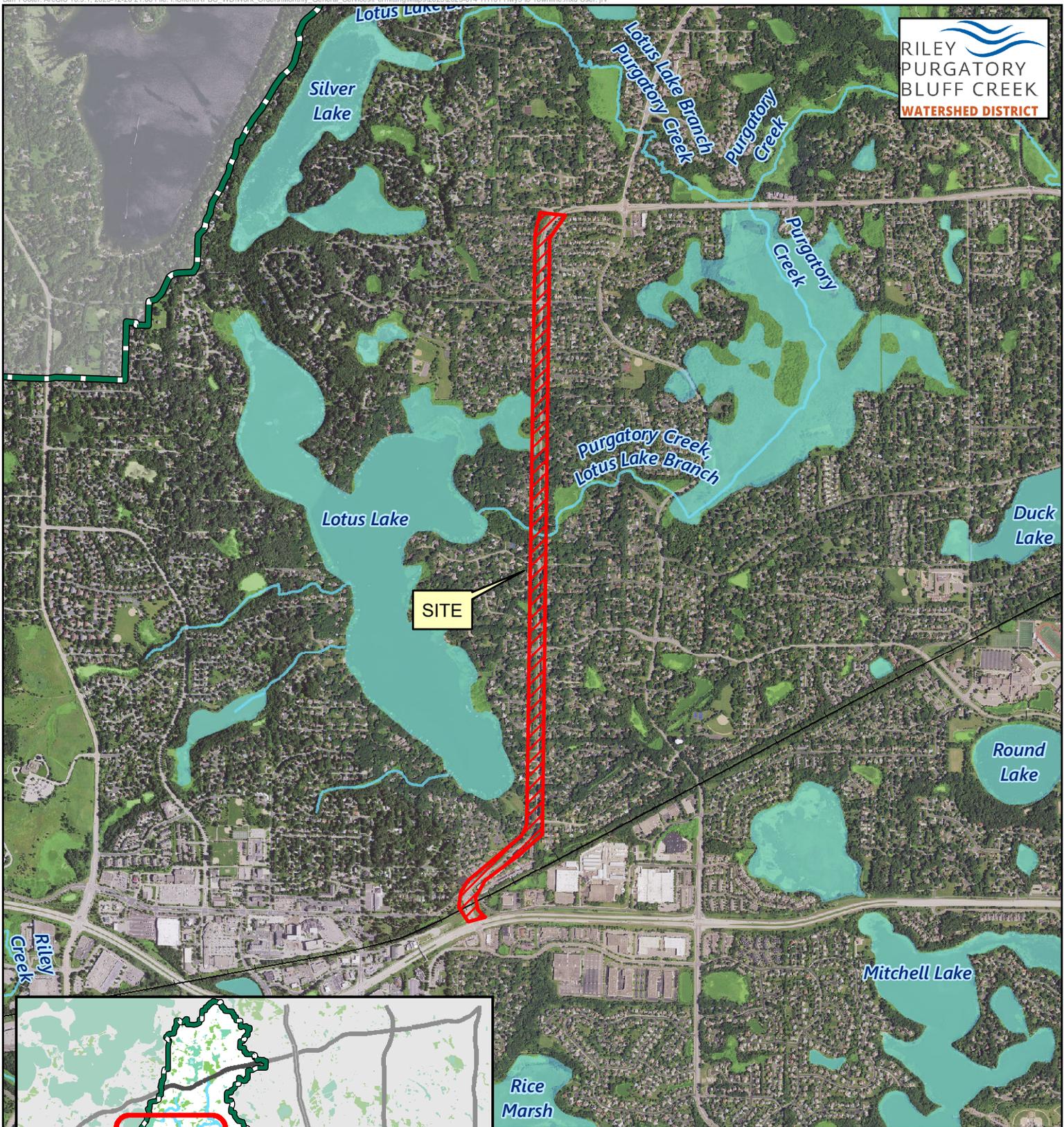
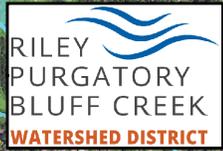
Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project conforms to Rule B, D, E, and G.
3. The proposed project will conform to Rule C if the conditions listed above are met.
4. If the permit application is approved and the project is completed as presented, the project site must be added by RPBCWD to the roster of those maintained in accordance with the MnDOT-RPBCWD programmatic maintenance agreement.
5. Under Minnesota Department of Natural Resources General Permit 2015-1192 (attached to this report), approval of work under RPBCWD rule(s) G constitutes approval under applicable DNR work in waters rules. Compliance with conditions on approval and payment of applicable fees, if any, are necessary to benefit from general permit approval and the responsibility of the applicant.

Recommendation:

Approval of the permit contingent upon:

1. Continued compliance with General Requirements.
2. The Applicant must provide the name and contact information of the individual responsible for erosion control at the site. RPBCWD must be notified if the responsible individual changes during the permit term.



Permit Location Map
TH101 HWY 5 TO TOWNLINE
Permit 2023-074
Riley Purgatory Bluff Creek
Watershed District

Select Plan Sheets Extracted from the Plan Set
for Inclusion in the Permit Report 2023-074

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL AND OVERLAY, ADA IMPROVEMENTS, BITUMINOUS TRAIL,
SIGNAL REVISIONS, AND PEDESTRIAN CROSSWALK FLASHER SYSTEM.
ADA IMPROVEMENTS, AND BITUMINOUS TRAIL.

LOCATED ON TH 101 FROM TH 5 TO 500 FT. S. OF CSAH 62 / TOWNLINE RD.

STATE PROJ. NO. 2736-46
GROSS LENGTH.....8622.00.....FEET.....1.633.....MILES
BRIDGES-LENGTH.....FEET.....MILES
EXCEPTIONS-LENGTH.....FEET.....MILES
NET LENGTH.....8622.00.....FEET.....1.633.....MILES
REF. POINT .013+00.829 TO REF. POINT .015+00.600

STATE PROJ. NO. 1010-10
GROSS LENGTH.....2037.00.....FEET.....0.386.....MILES
BRIDGES-LENGTH.....FEET.....MILES
EXCEPTIONS-LENGTH.....FEET.....MILES
NET LENGTH.....2037.00.....FEET.....0.386.....MILES
REF. POINT .013+00.430 TO REF. POINT .013+00.829

STATE AID PROJ. NO. 194-010-017
GROSS LENGTH.....8489.00.....FEET.....1.608.....MILES
BRIDGES-LENGTH.....FEET.....MILES
EXCEPTIONS-LENGTH.....FEET.....MILES
NET LENGTH.....8489.00.....FEET.....1.608.....MILES
REF. POINT.....TO REF. POINT.....

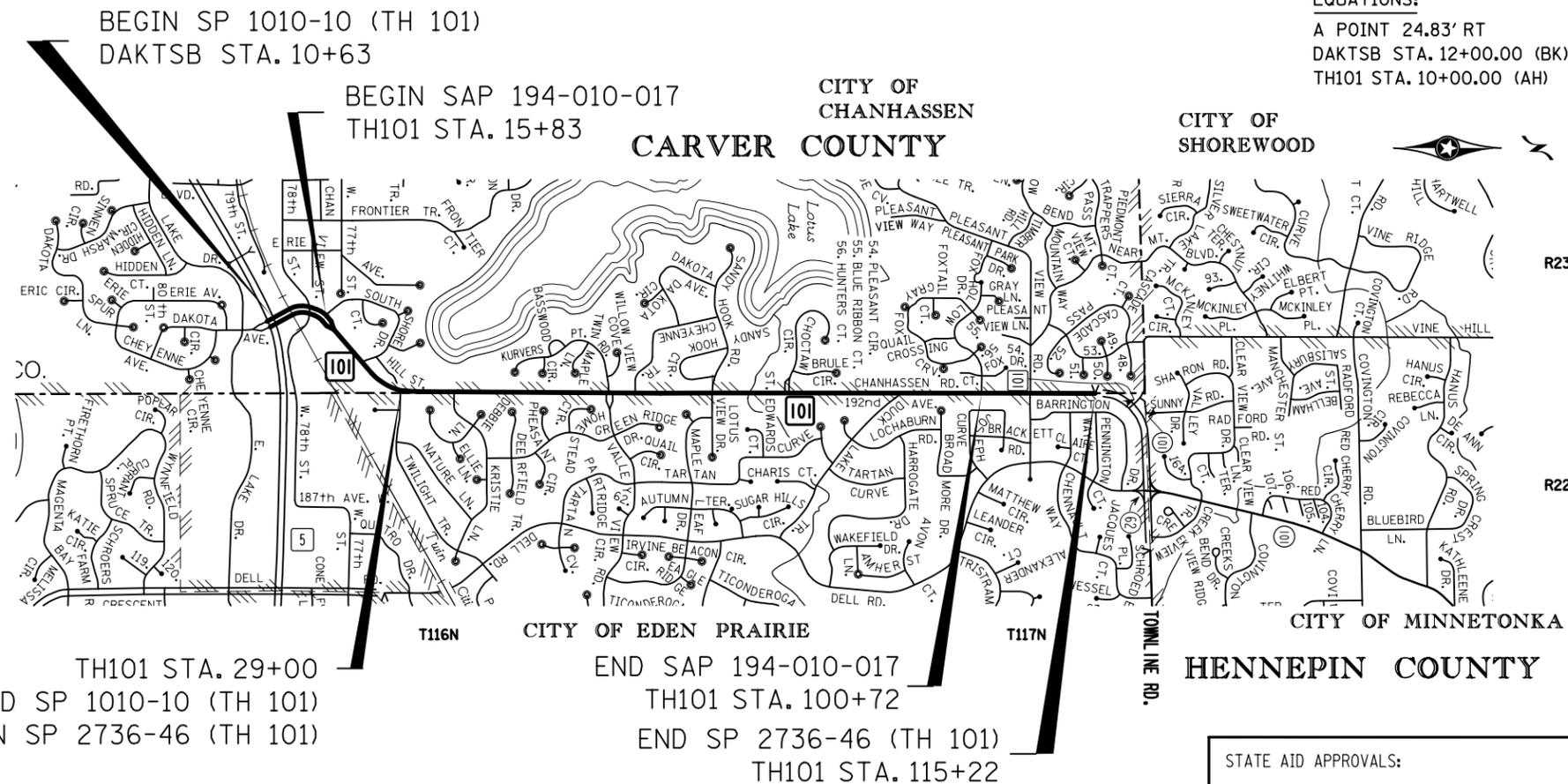
FED. PROJ. NO. STBG 2724 (090)

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2 - 4	GENERAL LAYOUT
5 - 8	STATEMENT OF ESTIMATED QUANTITIES
9	STANDARD PLATES AND SOILS & CONSTRUCTION NOTES
10	EARTHWORK QUANTITIES AND SUMMARY
11 - 18	TABULATIONS
19 - 22	INPLACE UTILITY INFORMATION AND TABULATIONS
23 - 24	TYPICAL SECTIONS
25 - 28	CONSTRUCTION DETAILS
29 - 70	STANDARD PLANS
71 - 74	ALIGNMENT PLAN
75	ALIGNMENT TABULATIONS
76 - 90	INPLACE TOPOGRAPHY AND UTILITY PLANS
91 - 105	REMOVAL PLAN
106 - 120	CONSTRUCTION PLAN
121 - 135	DRAINAGE PLAN
136 - 142	DRAINAGE PROFILES AND TABULATIONS
143 - 144	ENVIRONMENTAL MANAGEMENT PLAN
145 - 147	STORM WATER POLLUTION PREVENTION PLAN NARRATIVE
148 - 162	EROSION CONTROL AND TURF ESTABLISHMENT PLANS
A1 - A14	ADA PEDESTRIAN PLANS
RF1 - RF5	RECTANGULAR RAPID FLASHING BEACON LAYOUT PLAN
TC1 - TC16	TRAFFIC CONTROL PLAN
PM1 - PM13	PERMANENT PAVEMENT MARKING PLAN
ST1 - ST15	SIGNING PLAN
SS1 - SS17	SIGNAL PLAN
LL1	CROSS SECTION LAYOUT
X1 - X10	CROSS SECTIONS



EQUATIONS:
A POINT 24.83' RT
DAKTSB STA. 12+00.00 (BK) =
TH101 STA. 10+00.00 (AH)

THIS PLAN CONTAINS 253 SHEETS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: ROBERT.EVBAYEKHA LICENSE # 25421
DATE: 1/12/2024 SIGNATURE:
DESIGN SQUAD : SAVANNAH KAUL, MICHAEL CHRISTENSEN, MARLAND STANLEY, TONY SOFIE

STATE AID APPROVALS:
Date:
District State Aid Engineer: Reviewed for Compliance with State-Aid Rules/Policy
Date:
Approved for State Aid Funding: State Aid Engineer

OFFICE OF LAND MANAGEMENT APPROVAL	.....	DIRECTOR, LAND MANAGEMENT	.....20
APPROVED	.....20	DEPARTMENT OF NATURAL RESOURCES	.....
APPROVED	.....20	CITY OF CHANHASSEN ENGINEER	.....
APPROVED	.....20	CITY OF EDEN PRAIRIE ENGINEER	.....
APPROVED	.....20	STATE DESIGN ENGINEER	.....

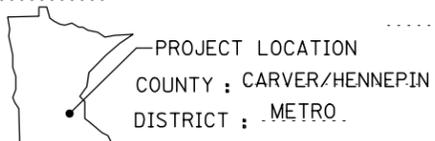
STATE PROJ. NO.	CHARGE IDENTIFIER
2736-46	
1010-10	

SCALES

PLAN	50'
PROFILE	50' HORIZ. / X' VERT.
INDEX MAP	400'
GENERAL LAYOUT	250'

DESIGN DESIGNATION

Design ESALS	=	10964	Design Speed 30 MPH AT STATION 22+65 - 26+00, 40-45 MPH
ADT (Current Year) 2023	=		Based on Stopping Sight Distance
ADT (Future Year)	=		Height of eye 3.5' Height of object 2.0'
DHV (Design Hr. Vol.)	=		Design Speed not achieved at:
D (Directional Distr.)	=	%	STA. TO STA. MPH
T (Heavy Commercial)	=	%	STA. TO STA. MPH



S.A.P. 194-010-017
STATE PROJ. NO. 1010-10 (TH 101=187)
STATE PROJ. NO. 2736-46 (TH 101=187)
SHEET NO. 1 OF 162 SHEETS

DISTRICT #: Metro
 PLOT NAME: d273646-1.tif
 PATH & FILENAME: Projects\DM ROS\01\2736\046\Design\PlanSheets\01 Title Sheet\d273646-1.shdgn
 PLOTTED/REVISED: 12-JAN-2024

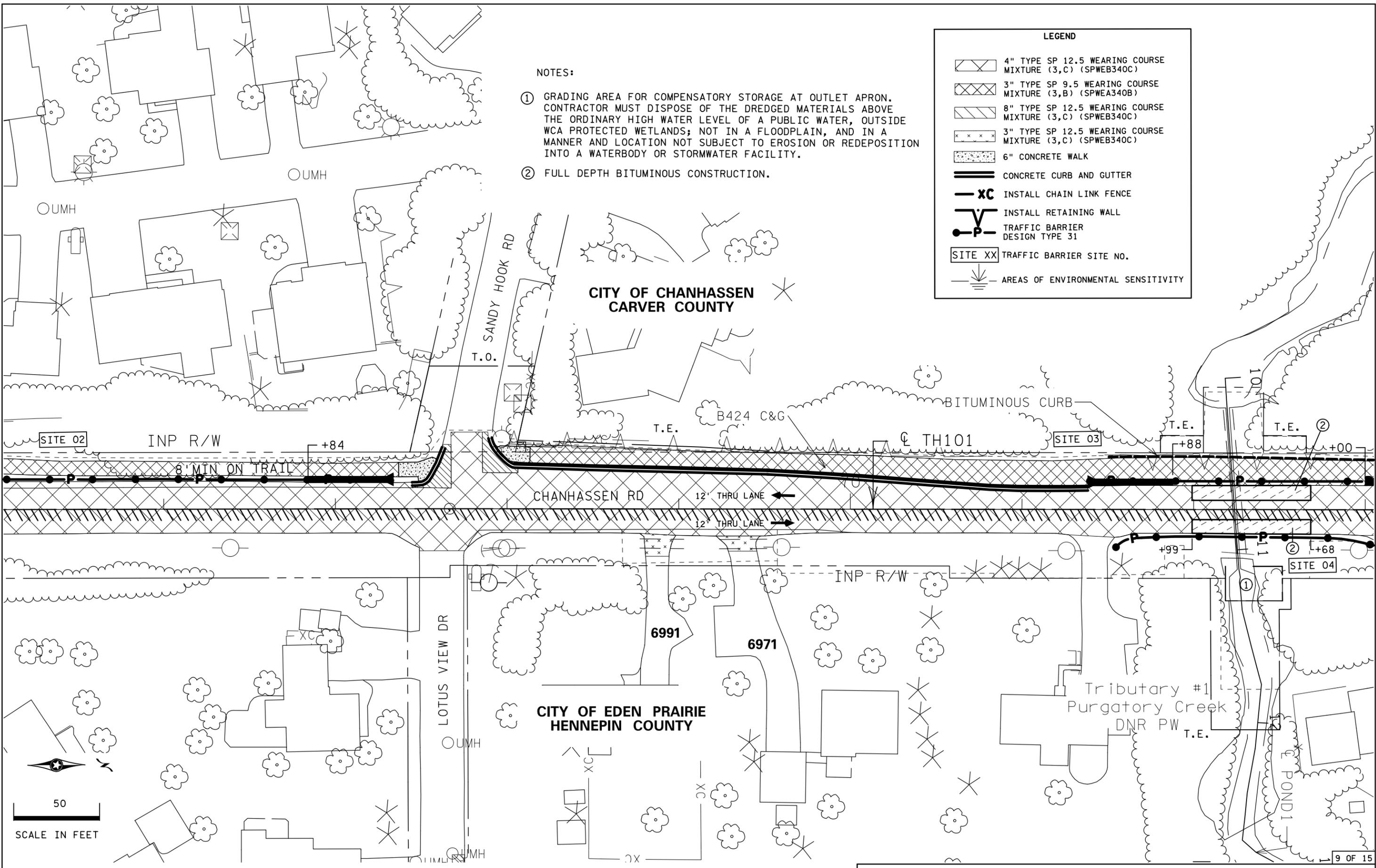
PLOTTED/REVISED: 30-JAN-2024

DISTRICT #: Metro
I/PLOT NAME: d273646_cp09
FILENAME: Projects\DM_273646\Design\PlanStreets\Const\273646_cp09.dgn

NOTES:

- ① GRADING AREA FOR COMPENSATORY STORAGE AT OUTLET APRON. CONTRACTOR MUST DISPOSE OF THE DREDGED MATERIALS ABOVE THE ORDINARY HIGH WATER LEVEL OF A PUBLIC WATER, OUTSIDE WCA PROTECTED WETLANDS; NOT IN A FLOODPLAIN, AND IN A MANNER AND LOCATION NOT SUBJECT TO EROSION OR REDEPOSITION INTO A WATERBODY OR STORMWATER FACILITY.
- ② FULL DEPTH BITUMINOUS CONSTRUCTION.

LEGEND	
	4" TYPE SP 12.5 WEARING COURSE MIXTURE (3,C) (SPWEB340C)
	3" TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) (SPWEA340B)
	8" TYPE SP 12.5 WEARING COURSE MIXTURE (3,C) (SPWEB340C)
	3" TYPE SP 12.5 WEARING COURSE MIXTURE (3,C) (SPWEB340C)
	6" CONCRETE WALK
	CONCRETE CURB AND GUTTER
	INSTALL CHAIN LINK FENCE
	INSTALL RETAINING WALL
	TRAFFIC BARRIER DESIGN TYPE 31
	TRAFFIC BARRIER SITE NO.
	AREAS OF ENVIRONMENTAL SENSITIVITY



S.A.P. 194-010-017

CONSTRUCTION PLANS

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE

PROJECT DESCRIPTION/LOCATION

SP 2736-46 IS LOCATED ON TH 101 FROM HWY 5 (W 78TH ST) TO HWY 10/TOWNLINE RD IN THE CITIES OF CHANHASSEN AND EDEN PRARIE IN CARVER AND HENNEPIN COUNTIES. THE PLANNED SCOPE OF THE PROJECT INCLUDES: MILL AND OVERLAY, DRAINAGE PRESERVATION WORK, ADA IMPROVEMENTS, TRAIL RECONSTRUCTION AND GUARDRAIL REPLACEMENT

THE SWPPP MUST BE AMENDED WITHIN 7 DAYS TO DOCUMENT ANY CHANGES TO EROSION AND SEDIMENT CONTROLS, METHODS OR PRACTICES. THESE AMENDMENTS ARE TO KEEP THE SWPPP UPDATED AND NEED TO BE KEPT ON SITE.

RESPONSIBILITIES

PROVIDE A CERTIFIED EROSION CONTROL SUPERVISOR PER MNDOT SPECIFICATION 2573.3.A.1. EROSION CONTROL SUPERVISOR WILL WORK WITH PROJECT ENGINEER TO OVERSEE IMPLEMENTATION OF SWPPP AND INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPs BEFORE, DURING AND AFTER CONSTRUCTION UNTIL PERMIT TERMINATION CONDITIONS HAVE BEEN MET. EROSION CONTROL SUPERVISOR IS INCIDENTAL.

PROVIDE AT LEAST ONE CERTIFIED INSTALLER PER MNDOT SPECIFICATION 2573.3.A.2. FOR EACH CONTRACTOR OR SUBCONTRACTOR THAT PLACES THE PRODUCTS LISTED IN MNDOT SPECIFICATION SECTION 2573.3.A.2.

CHAIN OF RESPONSIBILITY

MNDOT AND THE CONTRACTOR ARE CO-PERMITTEES FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION PERMIT. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION PERMIT AT ALL TIMES UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA. MNDOT'S CONSTRUCTION PROJECT ENGINEER WILL ENSURE THAT THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL SUPERVISOR FULFILLS THEIR DUTIES.

LAND FEATURE CHANGES

TOTAL DISTURBED AREA	1.70 ACRES
WITHIN THE DISTURBED AREA: TOTAL EXISTING IMPERVIOUS SURFACE AREA	0.30 ACRES
WITHIN THE DISTURBED AREA: TOTAL PROPOSED IMPERVIOUS SURFACE AREA	0.46 ACRES
TOTAL PROPOSED NET CHANGE IN IMPERVIOUS SURFACE AREA	0.16 ACRES

SWPPP SHEET DESCRIPTIONS	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEETS NO. 37-47, 148-162
PERMANENT EROSION CONTROL MEASURES	SHEETS NO. 37-47, 148-162
DIRECTION OF FLOW	SHEETS NO. 148-162
FINAL STABILIZATION	SHEETS NO. 148-162
SOILS AND CONSTRUCTION NOTES	SHEETS NO. 9
DRAINAGE STRUCTURES	SHEETS NO. 14, 121-135
DRAINAGE TABULATION	SHEETS NO. 14, 136-147
STORM SEWER PROFILE SHEETS	SHEETS NO. 121-142
STORM SEWER TABULATION	SHEETS NO. 14, 121-135
EROSION AND SEDIMENT CONTROL DETAILS	SHEETS NO. 37-47
EROSION CONTROL TABULATION	SHEETS NO. 16-18
TURF ESTABLISHMENT TABULATION	SHEETS NO. 16-18
SITE MAP	SHEETS NO. 147
STORMWATER CALCULATIONS	HYDRAULICS FOLDER

SOIL TYPES

SOIL TYPES TYPICALLY FOUND ON THIS PROJECT ARE PREDOMINANTLY LESTER-KILKENNY LOAMS (HSG B). LESTER-KILKENNY COMPLEX (HSG C) AND KILKENNY-LESTER LOAMS (HSG C/D).

ENVIRONMENTAL REVIEW

THERE ARE NO STORMWATER MITIGATION MEASURES REQUIRED AS A RESULT OF AN ENVIRONMENTAL, ARCHEOLOGICAL OR AGENCY REVIEW. ALL MITIGATION MEASURES HAVE BEEN ADDRESSED IN THIS PLAN SET OR THE SPECIAL PROVISIONS.

THIS PROJECT IS LOCATED IN A WELL HEAD PROTECTION AREA.

THIS PROJECT IS LOCATED IN A DRINKING WATER SUPPLY MANAGEMENT AREA (DWSMA).

THIS PROJECT IS NOT LOCATED IN A KARST AREA.

THIS PROJECT IS LOCATED IN AN EMERGENCY RESPONSE AREA (ERA) PER DEPARTMENT OF HEALTH.

WATER RELATED PERMITS

AGENCY	TYPE OF PERMIT
MINNESOTA POLLUTION CONTROL AGENCY (MPCA)	NPDES CONSTRUCTION PERMIT
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT	RULES B, C, D, E, G
ARMY CORPS OF ENGINEERS	NON-REPORTING TRGP

READ AND REVIEW ALL PERMITS FOR SPECIAL CONDITIONS THAT WILL AFFECT CONSTRUCTION OF THE PROJECT.

ARMY CORPS PERMIT IS NON REPORTING FOR THIS PROJECT. FOLLOW THE CONDITIONS IN THE GENERAL PERMIT FOR TRGP.

IF IT BECOMES NECESSARY TO DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS, OPERATIONS SHOULD CEASE AND DETERMINATION MADE IF ADDITIONAL PERMITS ARE NEEDED OR EXISTING PERMITS NEED TO BE MODIFIED.

TEMPORARY DEWATERING ACTIVITIES MAY BE REQUIRED FOR ROADWAY CONSTRUCTION AND UTILITY WORK. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE PERMIT. SUBMIT A SITE MANAGEMENT PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.

WATERBODY	NO WORK DURING
LAKES	APRIL 1 - JUNE 30
NON-TROUT STREAMS (BED AND BANKS)	MARCH 15 - JUNE 15
TROUT STREAMS	SEPTEMBER 1 - APRIL 1

SEE DNR PERMIT FOR MORE INFORMATION

SPECIAL AND IMPAIRED WATERS THAT ARE LOCATED WITHIN ONE MILE (AERIAL RADIUS) OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE.

WATERBODY NAME	IMPAIRMENT(S) OR SPECIAL STATUS
LOTUS LAKE	NUTRIENTS, FISH BIOASSESSMENTS
RICE MARSH	NUTRIENTS
SILVER LAKE	NUTRIENTS

LOTUS LAKE HAS THE FOLLOWING INVASIVE SPECIES: EURASIAN WATERMILFOIL, ZEBRA MUSSELS AND BRITTLE NAIAD. ACTIVITIES AROUND PURGATORY CREEK MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASEVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.

AREAS OF ENVIRONMENTAL SENSITIVITY (AES)

WETLANDS AND EXISTING STORMWATER FACILITIES WITHIN AND NEAR THE PROJECT BOUNDARY ARE SHOWN ON DRAINAGE PLANS.

PROJECT ORGANIZATION CONTACTS		PHONE
CONTRACTOR'S EROSION AND SEDIMENT CONTROL SUPERVISOR		
CONTRACTOR'S EROSION AND SEDIMENT CONTROL INSTALLER		
MNDOT METRO WRE (EROSION CONTROL/MS4)	RYAN RUPP	651-775-4081
	SARAH THOMSON	651-775-0921
MNDOT METRO CONSTRUCTION PROJECT ENGINEER	DANIEL KING	651-775-0987
MNDOT METRO CONSTRUCTION RESIDENT ENGINEER	ALLISON BERRETH	651-366-5958
MNDOT METRO WATER RESOURCES (WRE) DESIGN	HAILU SHEKUR	651-234-7521
MNDOT METRO DESIGN	ROBERT EVBAYEKHA	651-234-7627
MINNESOTA DEPARTMENT OF NATURAL RESOURCES	PATTY FOWLER	612-708-7732
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT	MAT NICKLAY	952-607-6512 EXT. 2
MPCA DUTY OFFICER 24 HR EMERGENCY NOTIFICATION	651-649-5451 OR 1(800)-422-0798	

INSPECTION TIMEFRAMES

INSPECT THE ENTIRE CONSTRUCTION SITE EVERY DAY WORK IS PERFORMED AND A MINIMUM OF ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION. THE PROJECT MUST ALSO BE INSPECTED WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. INSPECT ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT, EROSION PREVENTION AND SEDIMENT CONTROL BMPs, SURFACE WATERS AND CONSTRUCTION SITE EXITS UNTIL ALL CONSTRUCTION IS COMPLETE AND THE SITE HAS UNDERGONE FINAL STABILIZATION AND VEGETATIVE COVER IS ESTABLISHED. RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES IN WRITING WITHIN 24 HOURS. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO THE PROJECT ENGINEER. DEWATERING DISCHARGE MUST BE VISUALLY CHECKED AND PHOTOGRAPHED AT THE BEGINNING OF DEWATERING ACTIVITY AND AT LEAST ONCE EVERY 24 HOURS OF OPERATION TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE.

S.A.P. 194-010-017

STORM WATER POLLUTION PREVENTION PLAN NARRATIVE

DRAWN BY: LD

CHECKED BY: HS

CERTIFIED BY Lynn Duijndam

Digitally signed by Lynn Duijndam
Date: 2024.01.11 11:24:09 -0500
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 58918

DATE _____

STATE PROJ. NO. 2736-46 (T.H. 101)

SHEET NO.145 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
PLOT NAME: d2736-46_swppp
FILENAME: Proj\ecis\DM_ROS\N\2736-046\Design\Plan\Sheet\5.4 SWPPP.d2736-46_swppp.dgn

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

EROSION AND SEDIMENT CONTROL MEASURES

AREA	TIME FRAME
ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES	BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN
REPAIR, REPLACE OR SUPPLEMENT PERIMETER CONTROL BMPS	WHEN BMP BECOMES NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT OF THE BMP BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY.
REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPS	BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY.
REPAIR, REPLACE, OR SUPPLEMENT INLET PROTECTION BMPS	WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT AND/OR DEPTH OF THE BMP BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY.
REMOVE TRACKED SEDIMENT FROM PAVED SURFACES BOTH ON AND OFF SITE (LIGHTLY WET PRIOR TO SWEEPING)	WITHIN 24 HOURS OF DISCOVERY
REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS AND RESTABILIZE	WITHIN 7 DAYS OF DISCOVERY
CEASE DEWATERING ACTIVITY	WHEN NUISANCE CONDITIONS RESULT FROM DEWATERING DISCHARGE ACTIVITY MUST CEASE IMMEDIATELY. CORRECTIVE ACTIONS MUST OCCUR BEFORE DEWATERING RESUMES

1. PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES PRIOR TO THE INITIATION OF STOCKPILING AND DO NOT PLACE THEM IN NATURAL BUFFER AREAS, SURFACE WATERS OR STORMWATER CONVEYANCES. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS.
2. PROTECT STORM SEWER INLETS AT ALL TIMES WITH THE APPROPRIATE INLET PROTECTION BMP AND PROVIDE EMERGENCY OVERFLOW CAPABILITIES. SILT FENCE PLACED IN THE INLET GRATE IS NOT AN ACCEPTABLE INLET PROTECTION BMP FOR GRADING OPERATIONS.
3. PLACE AND MAINTAIN CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. REGULAR STREET SWEEPING IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE.
4. PROVIDE SCOUR PROTECTION AT OUTFALL OF DEWATERING ACTIVITIES. PROVIDE STABILIZATION IN TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
5. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN AND CONTACT ALL APPROPRIATE AUTHORITIES PRIOR TO WORKING IN SURFACE WATERS.
6. MAINTAIN ALL BMPS UNTIL WORK HAS BEEN COMPLETED, SITE HAS GONE UNDER FINAL STABILIZATION FOR PERMIT TERMINATION, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

STABILIZATION

AREA	TIME FRAME	NOTES
LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE	WITHIN 24 HOURS OF CONNECTION TO SURFACE WATER OR PROPERTY EDGE	2A, 3A
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE	7 DAYS	3A
PIPE AND CULVERT OUTLETS	24 HOURS	
EXPOSED SOILS AND STOCKPILES	7 DAYS	1A
WHEN CONSTRUCTION HAS TEMP. OR PERM. CEASED	INITIATED IMMEDIATELY, COMPLETED WITHIN 7 DAYS	
STREAM BANKS	STABILIZED IMMEDIATELY, REVEGETATED AS SOON AS GROWING CONDITIONS ALLOW	

- 1A. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT CLAY OR SILT AND STOCKPILED AND CONSTRUCTED ROAD BASE ARE EXEMPT FROM THE STABILIZATION REQUIREMENT.
- 2A. STABILIZE WETTED PERIMETER OF DITCH (I.E. WHERE THE DITCH GETS WET).
- 3A. APPLICATION OF MULCH, HYDROMULCH (SLOPE>2%), DISANCHORED MULCH (SLOPE>2%), TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN DITCHES AND SWALES.

MATERIAL STORAGE, WASTE MANAGEMENT, FUELING AND DUST CONTROL

1. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE. ENSURE ALL SPILLS ARE CLEANED UP IMMEDIATELY.
2. STORE ALL LIQUID CHEMICALS UNDER COVER WITH SECONDARY CONTAINMENT. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
3. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FROM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES.
4. PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
5. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTINGS, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
6. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, STREET SWEEPING DUST, SAWCUT SLURRY, PLANING WASTE, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING MNDOT RIGHT OF WAY, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
7. PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CHAPTER 7041.

IMPORTANT SWPPP NOTES FOR CONSTRUCTION ACTIVITY

1. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW A MINIMUM OF 7 DAYS FOR MNDOT TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY THE ENGINEER. THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL.
2. DO NOT BUILD INFILTRATION AREAS OR PLACE FINAL FILTRATION MEDIA UNTIL THE PROJECT IS NEARLY COMPLETE. PROTECT THESE AREAS FROM COMPACTION AND FROM CONSTRUCTION STORMWATER RUNOFF.
3. ROUTE STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE.
4. CONSTRUCTION PROJECT SHOULD BE PHASED TO MINIMIZE THE DURATION OF EXPOSED SOILS.
5. MINIMIZE COMPACTION OF SOILS AND PRESERVE TOPSOIL IN AREAS WHERE VEGETATION WILL BE ESTABLISHED.
6. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
7. FLOATING SILT CURTAIN IS ALLOWED AS PERIMETER CONTROL FOR IN WATER WORK ONLY. PLACE THE FLOATING SILT CURTAIN AS CLOSE TO SHORE AS POSSIBLE. PLACE PERIMETER CONTROL BMP ON LAND IMMEDIATELY AFTER THE IN WATER WORK IS COMPLETED.
8. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE. (REQUIRED IF DRAINAGE AREA IS 10 ACRES OR LARGER OR 5 ACRES OR LARGER AND WITHIN 1 MILE OF IMPAIRED WATER) THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN, THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. MUST DOCUMENT WHY SEDIMENT BASIN IS NOT FEASIBLE.
9. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
10. PROVIDE A 50 FOOT NATURAL BUFFER OR, IF BUFFER IS INFEASIBLE, PROVIDE A DOUBLE ROW OF SEDIMENT CONTROLS SPACED AT LEAST 5' APART WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF LAND DISTURBANCE AND STORMWATER FLOWS TO THE SURFACE WATER.
11. PROVIDE A 100 FOOT NATURAL BUFFER OR, IF BUFFER IS INFEASIBLE, PROVIDE A DOUBLE ROW OF SEDIMENT CONTROLS SPACED AT LEAST 5' APART WHEN A SPECIAL WATER IS LOCATED WITHIN 100 FEET OF THE LAND DISTURBANCE AND STORMWATER FLOWS TO THE SPECIAL WATER.
12. SUBSOIL ALL DISTURBED GREEN SPACES EXCEPT AS LISTED IN 2574.3A.5.
13. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
14. DEGRADATION OR EROSION OF THE BANKS OR BED OF PURGATORY CREEK BY ENTRY OF EQUIPMENT MUST BE AVOIDED.

PIPE AND STRUCTURE NOTES

1. SIZE AND ELEVATION OF CULVERTS, STORM SEWER PIPES, CATCH BASINS, PONDS, INFILTRATION/FILTRATION BASINS, PERMEABLE DITCH BLOCKS AND OVERFLOW DEVICES HAVE BEEN SPECIFICALLY DESIGNED TO CONFORM TO MNDOT DESIGN STANDARDS AND PERMIT REQUIREMENTS. THE DESIGN COMPUTATIONS ARE ON FILE WITH MNDOT METRO WATER RESOURCES. CHANGING THESE ITEMS OR THE DIRECTION OF FLOW FROM WHAT IS SHOWN ON THE PLANS MAY CAUSE PROBLEMS OFF THE PROJECT AND COULD MEAN THE PROJECT IS OUT OF COMPLIANCE WITH APPROVED DRAINAGE PERMITS. ANY CHANGES OF THE DRAINAGE SYSTEM MUST BE APPROVED BY THE METRO WATER RESOURCES DESIGNER.
2. PERFORM POST INSTALLATION MANDREL TESTING OF ALL PLASTIC PIPE.
3. SUBSURFACE DRAINAGE TILES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR REROUTED, AND CONNECTED TO THE EXISTING TILE OR DRAINAGE SYSTEM TO ENSURE THAT EXISTING UPLAND DRAINAGE IS PERPETUATED. THIS SHALL BE DONE TO THE APPROVAL AND SATISFACTION OF THE ENGINEER.

NPDES PERMIT TERMINATION CONDITIONS

1. PERMITTEES MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70% OF ITS EXPECTED FINAL GROWTH. GROUND OR AERIAL PHOTOGRAPHS MUST BE SUBMITTED SHOWING THIS CONDITION HAS BEEN MET.
2. PERMITTEES MUST REMOVE ANY ACCUMULATED SEDIMENT AND STABILIZE THE PERMANENT STORMWATER TREATMENT SYSTEM(S) AND MUST ENSURE THE SYSTEM(S) ARE OPERATING AS DESIGNED.
3. PERMITTEES MUST REMOVE ALL SEDIMENT FROM CONVEYANCE SYSTEMS PRIOR TO SUBMITTING THE NOT.
4. PERMITTEES MUST REMOVE ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPS PRIOR TO SUBMITTING THE NOT. PERMITTEES MAY LEAVE BMPS DESIGNED TO DECOMPOSE ON-SITE IN PLACE.
5. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND, PERMITTEES MUST RETURN THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE PRIOR TO SUBMITTING THE NOT.

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
 I/PLOT NAME: d2736-46-swppp
 FILENAME: Projects\DM ROS\ION\2736-046\Design\Plan\Sheet\5.4 SWPPP\d2736-46-swppp.dgn

S.A.P. 194-010-017

STORM WATER POLLUTION PREVENTION PLAN NARRATIVE

DRAWN BY: LD

CHECKED BY: HS

CERTIFIED BY Lynn Duijndam

Digitally signed by Lynn Duijndam
 Date: 2024.01.11 17:24:33 -0500
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 58918 DATE _____

STATE PROJ. NO. 2736-46 (T.H. 101) SHEET NO.146 OF 162 SHEETS

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

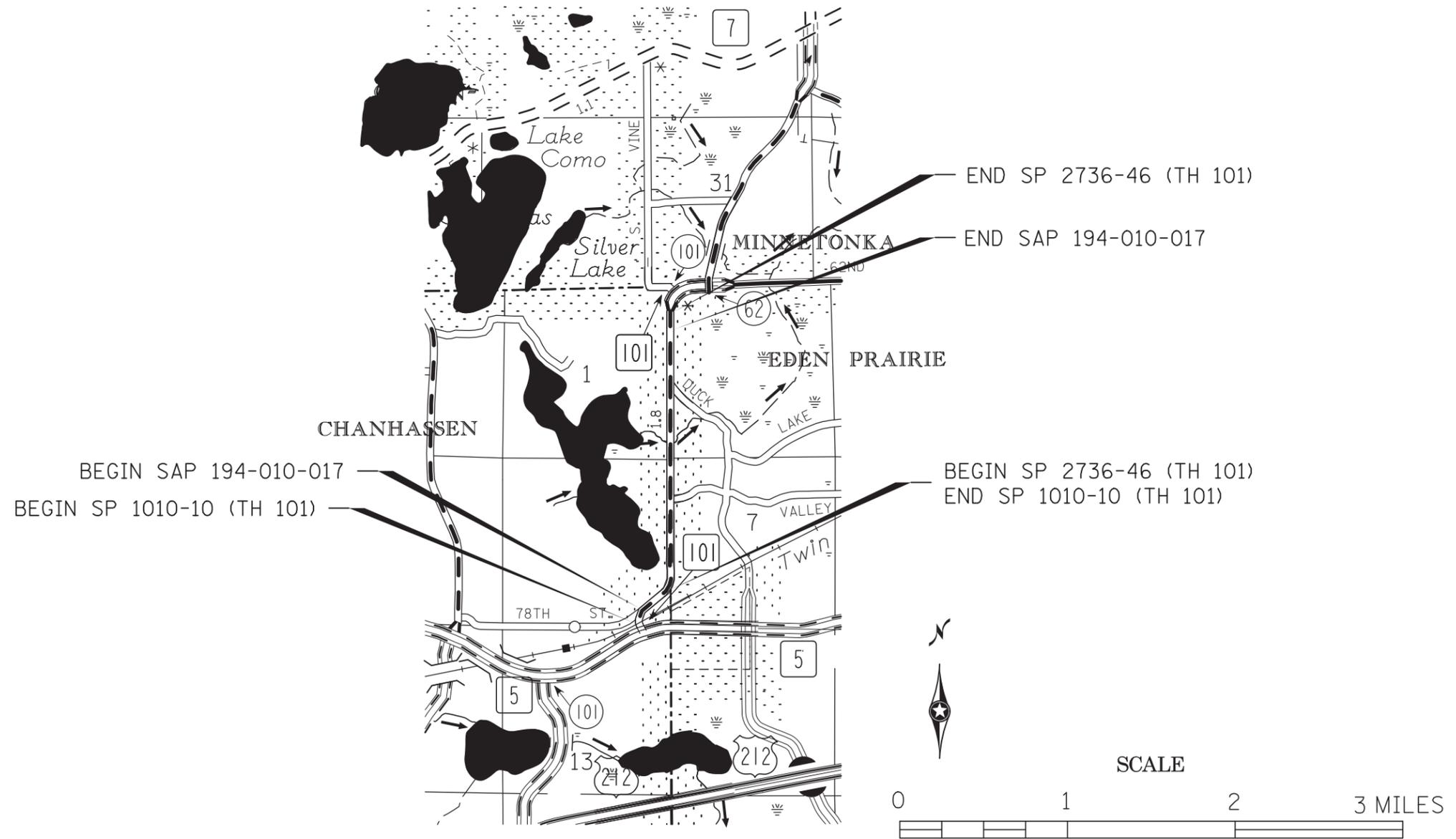
LONG TERM MAINTENANCE AND OPERATION

MNDOT METRO DISTRICT MAINTENANCE STAFF ARE RESPONSIBLE FOR THE LONG TERM MAINTENANCE AND OPERATION OF THE PERMANENT STORMWATER SYSTEM. CONTACT THE MNDOT METRO MS4 PROGRAM FOR ADDITIONAL INFORMATION.

LANDSCAPING NOTES

1. FILTER LOGS SHALL BE PLACED, AS NEEDED, TO TRAP SEDIMENT ON THE LOWER EDGE OF BEDS OR TREE HOLES. FILTER LOGS WILL BE CUT AND MATERIALS LEFT TO ACT AS SEDIMENT TRAPS.
2. TILLING FOR BEDS OR TREE HOLES MUST BE PLANTED AND MULCHED WITH WOOD CHIP WITHIN 7 DAYS OR STABILIZED UNTIL PLANTING OPERATIONS CAN BE COMPLETED.
3. ANY POND CORNERS OPENED DUE TO TILLING FOR SHRUB BEDS OR TREE HOLES MUST BE PLANTED AND MULCHED WITH WOOD CHIP WITHIN 24 HOURS OR STRAW MULCHED UNTIL PLANTING OPERATIONS CAN BE COMPLETED.

OFFSITE FLOW INFORMATION DRAWING



PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
 PLOT NAME: d2736-46_swppp
 FILENAME: Projects\DM_ROS\10\2736\046\Design\PlanSheets\5.4 SWPPP\d2736-46_swppp.dgn

S.A.P. 194-010-017

STORM WATER POLLUTION PREVENTION PLAN NARRATIVE

DRAWN BY: LD

CHECKED BY: HS

CERTIFIED BY Lynn Duijndam
Digitally signed by Lynn Duijndam
 Date: 2024.01.11 17:24:55 -0600
 LICENSED PROFESSIONAL ENGINEER

LIC. NO. 58918

DATE _____

STATE PROJ. NO. 2736-46 (T.H. 101) SHEET NO. 147 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
I/PLOT NAME: d273646_er01
FILENAME: Projects\DM_273646\Design\PlanSheets\6 Erosion Control & Turf\273646_er01.dgn

CITY OF CHANHASSEN CARVER COUNTY

LEGEND

- INPLACE PAVEMENT
- CONSTRUCTION LIMIT
- TRAFFIC DIRECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- STORM DRAIN INLET PROTECTION
- SEED MIXTURE 35-241
FERTILIZER TYPE 2 (22-5-10)
EROSION CONTROL PREVENTION CATEGORY 25
- DRAINAGE FLOW DIRECTION
- CULVERT END CONTROLS
- SILT FENCE, TYPE HI
- RANDOM RIPRAP
- AREAS OF ENVIRONMENTAL SENSITIVITY

**BEGIN S.P. 1010-10 (T.H. 101)
DAKTSB STA. 10+63**

Wet I
Type 4

☉ DAKTSB

CHANHASSEN RD

12' RIGHT TURN LANE
12' THRU LANE
12' THRU LANE
12' LEFT TURN LANE
12' THRU LANE
12' THRU LANE

☉ TH101

DAKOTA AVE

☉ DAKTNB

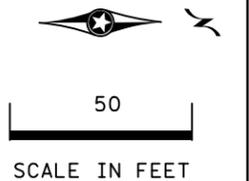
1055

TH 5

W. 78TH ST

Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:55:54-06'00'

S.A.P. 194-010-017



1 OF 15

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LIC. NO. 25421 DATE 1/5/2024

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

STATE PROJ. NO. 2736-46 (T.H. 101)

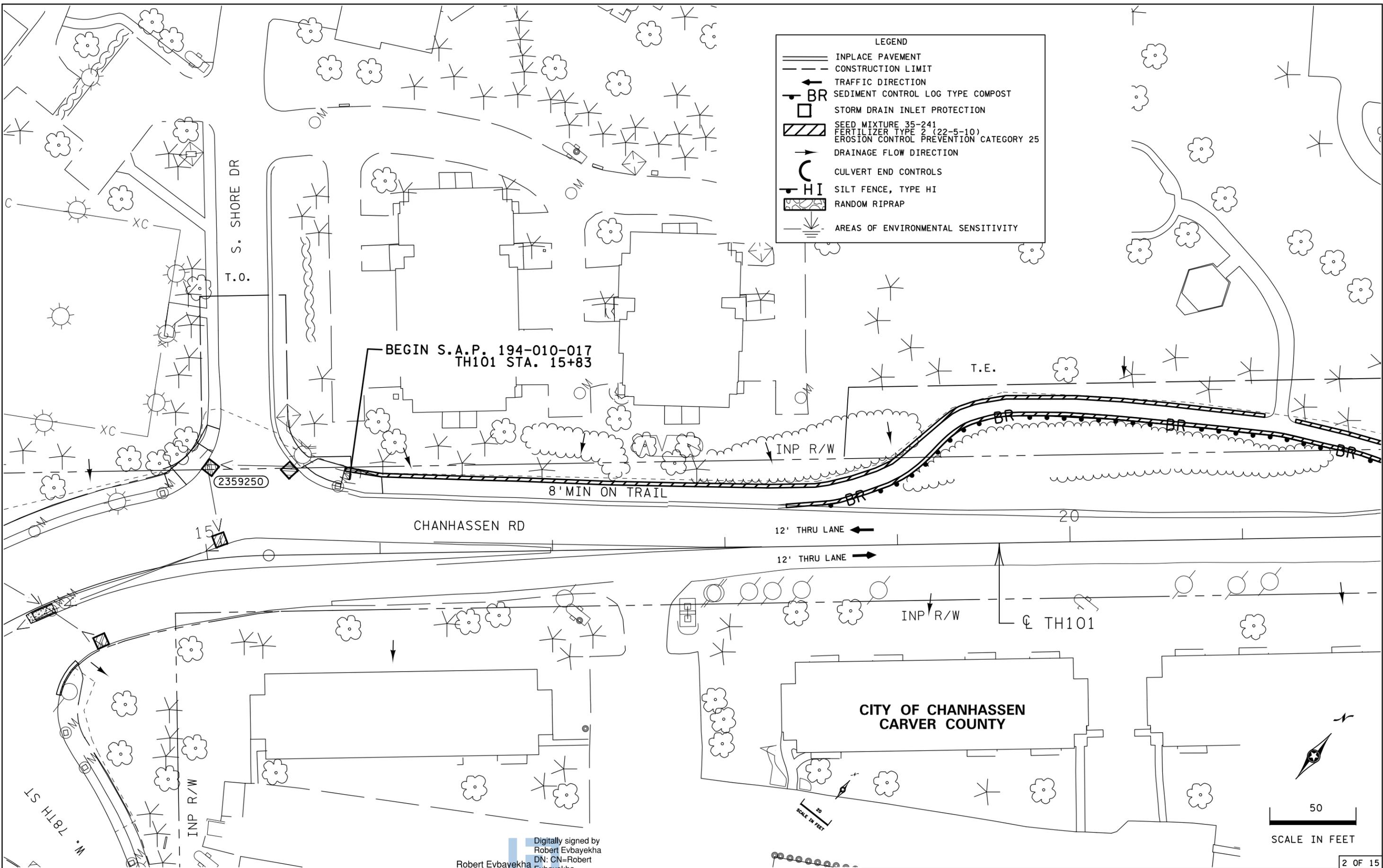
SHEET NO. 148 OF 162 SHEETS

LICENSED PROFESSIONAL ENGINEER

PLOTTED/REVISED: 11-JAN-2024

PROJECT NAME: d273646_er02.dgn

DISTRICT #: Metro
PLOT NAME: d273646_er02
FILENAME: Projects\DM_273646\Design\Plan\Streets\6 Erosion Control & Turf\273646_er02.dgn



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:55:55-06'00'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LIC. NO. 25421 DATE 1/5/2024

STATE PROJ. NO. 2736-46 (T.H. 101) SHEET NO. 149 OF 162 SHEETS

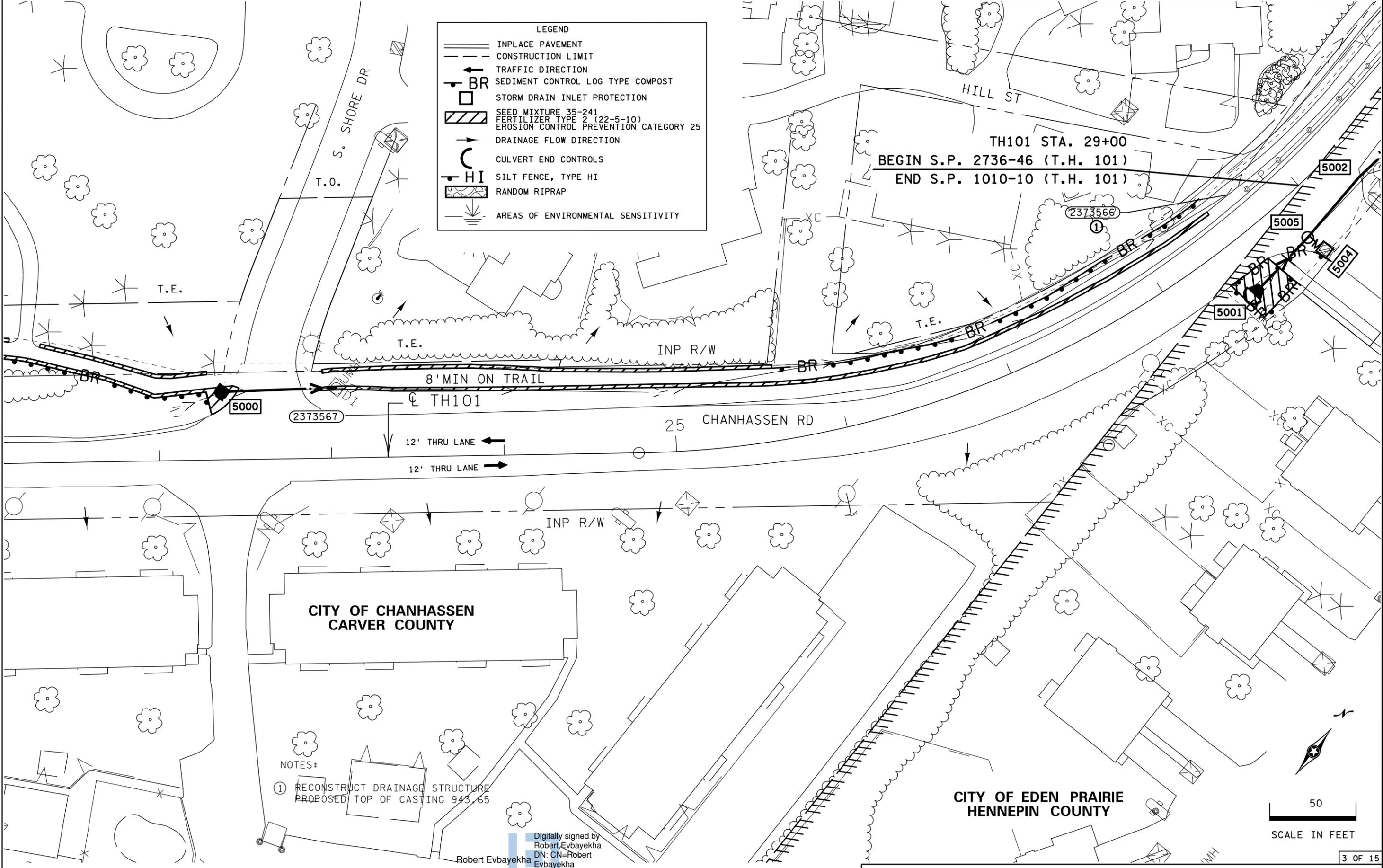
PLOTTED/REVISED: 11-JAN-2024

PROJECT NAME: d273646_er03.dgn
FILENAME: Projects\DM_2736\046\Design\PlanSheets\6_Erosion Control & Turf\273646_er03.dgn

DISTRICT #: Metro
I/PLOT NAME: d273646_er03
FILENAME: Projects\DM_2736\046\Design\PlanSheets\6_Erosion Control & Turf\273646_er03.dgn

LEGEND

- INPLACE PAVEMENT
- CONSTRUCTION LIMIT
- TRAFFIC DIRECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- STORM DRAIN INLET PROTECTION
- SEED MIXTURE TYPE 35-241
- FERTILIZER TYPE 2 (22-5-10)
- EROSION CONTROL PREVENTION CATEGORY 25
- DRAINAGE FLOW DIRECTION
- CULVERT END CONTROLS
- SILT FENCE, TYPE HI
- RANDOM RIPRAP
- AREAS OF ENVIRONMENTAL SENSITIVITY

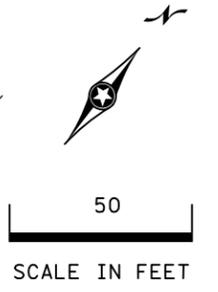


NOTES:

① RECONSTRUCT DRAINAGE STRUCTURE PROPOSED TOP OF CASTING 943.65

Digitally signed by Robert Evbayekha
DN: CN=Robert Evbayekha
Date: 2024.01.12 18:55:55-06'00'

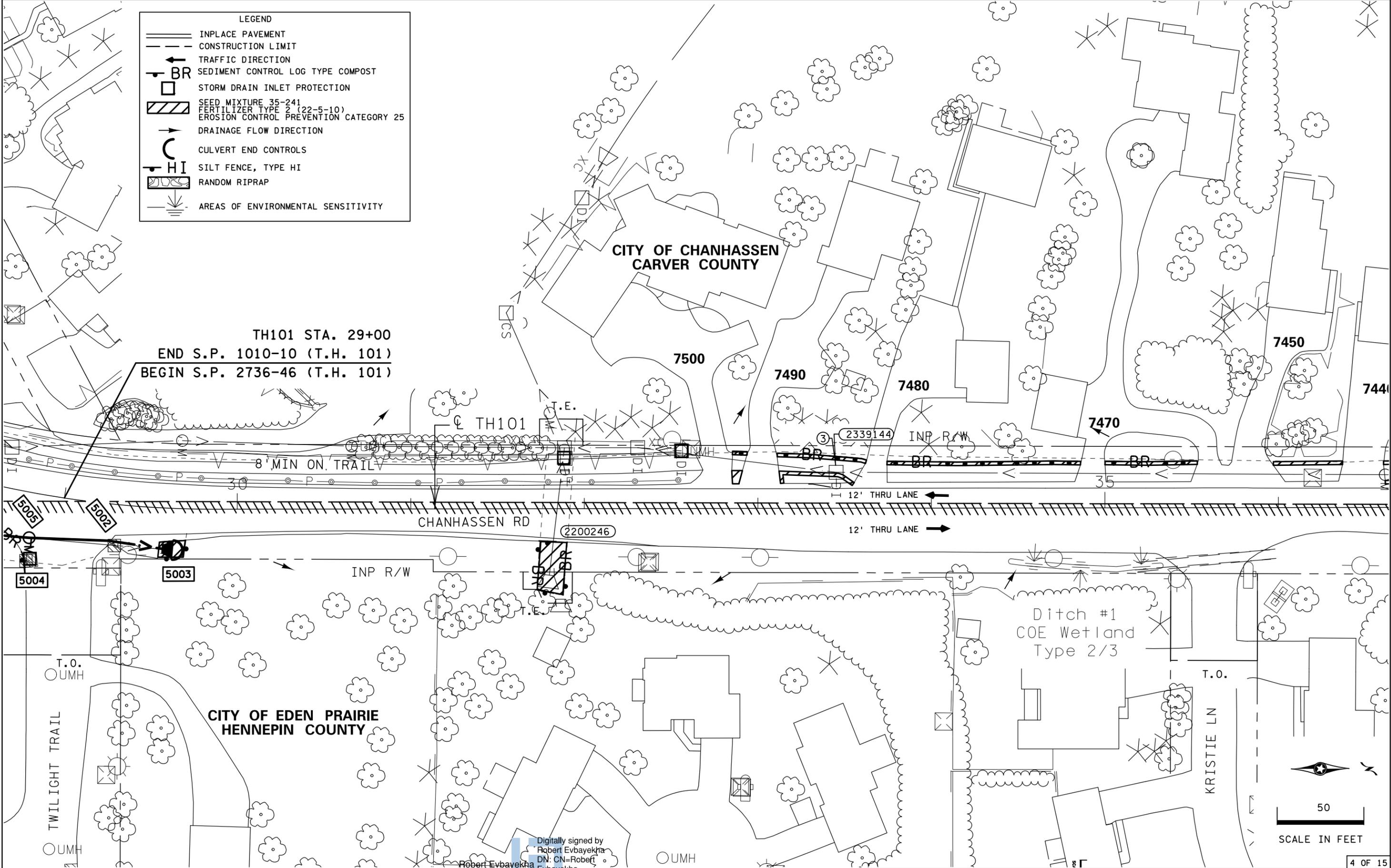
**CITY OF EDEN PRAIRIE
HENNEPIN COUNTY**



PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
PLOT NAME: d273646_er04
FILENAME: Projects\DM_ROS\01\273646\Design\Plan\Streets\6_Erosion Control & Turf.d273646_er04.dgn

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241 FERTILIZER TYPE 2 (22-5-10) EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY



CITY OF CHANHASSEN
CARVER COUNTY

CITY OF EDEN PRAIRIE
HENNEPIN COUNTY

Ditch #1
COE Wetland
Type 2/3



50
SCALE IN FEET

Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:55:56-06'00'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

4 OF 15

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

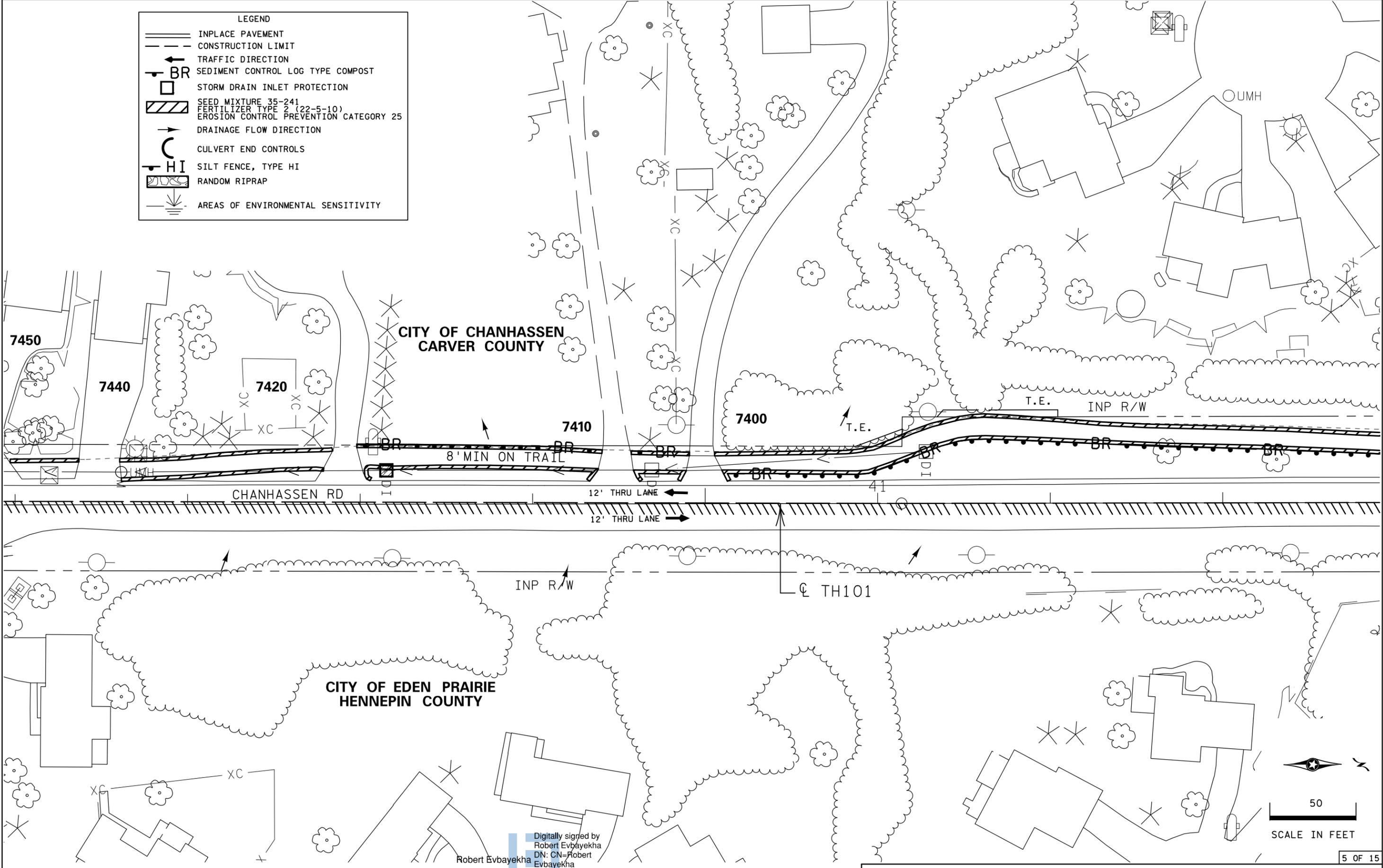
LIC. NO. 25421 DATE 1/5/2024

STATE PROJ. NO. 2736-46 (T.H. 101) SHEET NO. 151 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
PLOT NAME: d273646_er05
FILENAME: Projects\DM_2736046\Design\PlanSheets\6_Erosion Control & Turf\273646_er05.dgn

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241
	FERTILIZER TYPE 2 (22-5-10)
	EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:55:57-06'00'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

LIC. NO. 25421 DATE 1/5/2024

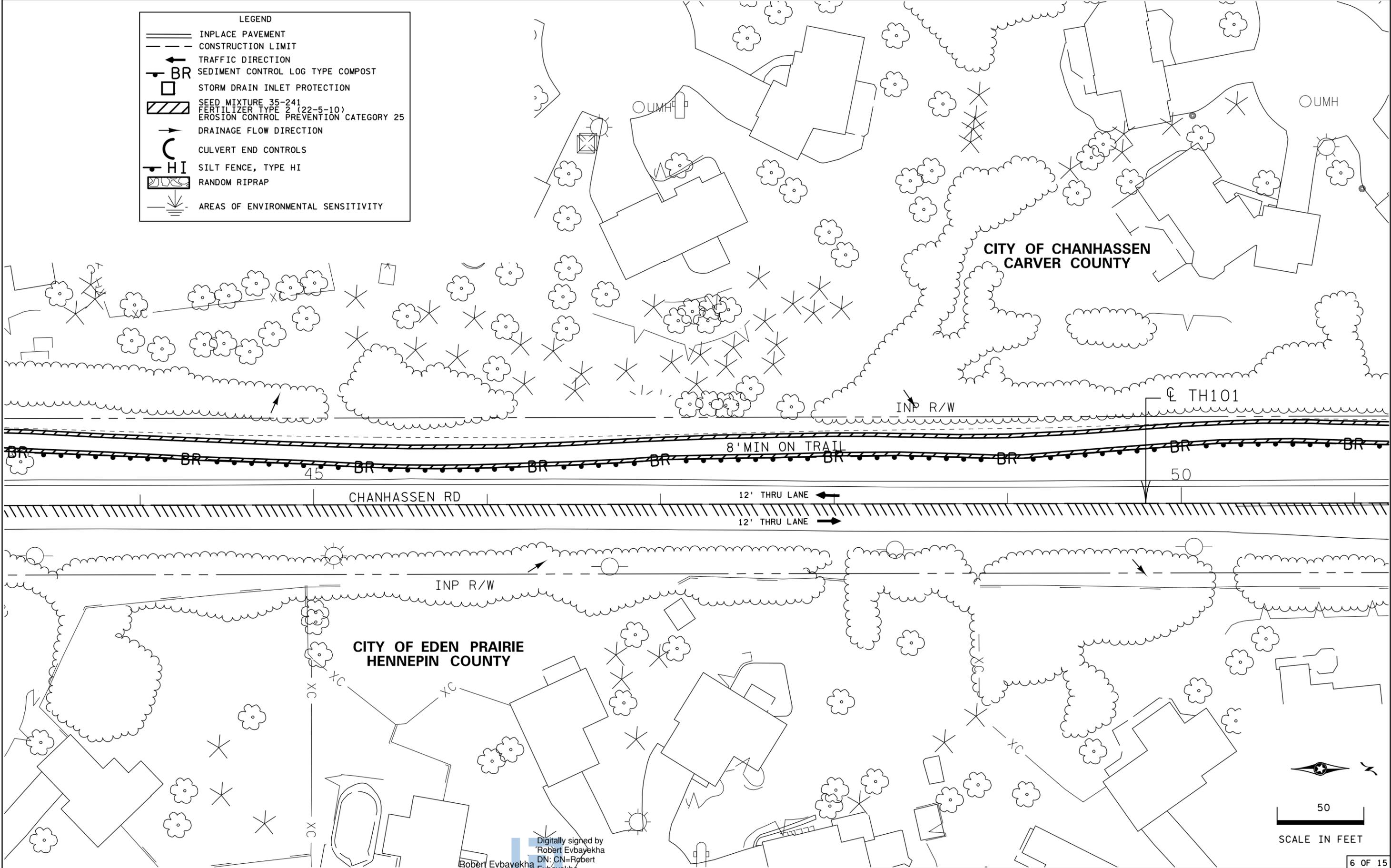
STATE PROJ. NO. 2736-46 (T.H. 101)

SHEET NO. 152 OF 162 SHEETS

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241 FERTILIZER TYPE 2 (22-5-10) EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
PLOT NAME: d273646_er06
FILENAME: Projects\DM_ROS\01\273646\Design\PlanStreets\6_Erosion Control & Turf\273646_er06.dgn



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:55:58-06'00'

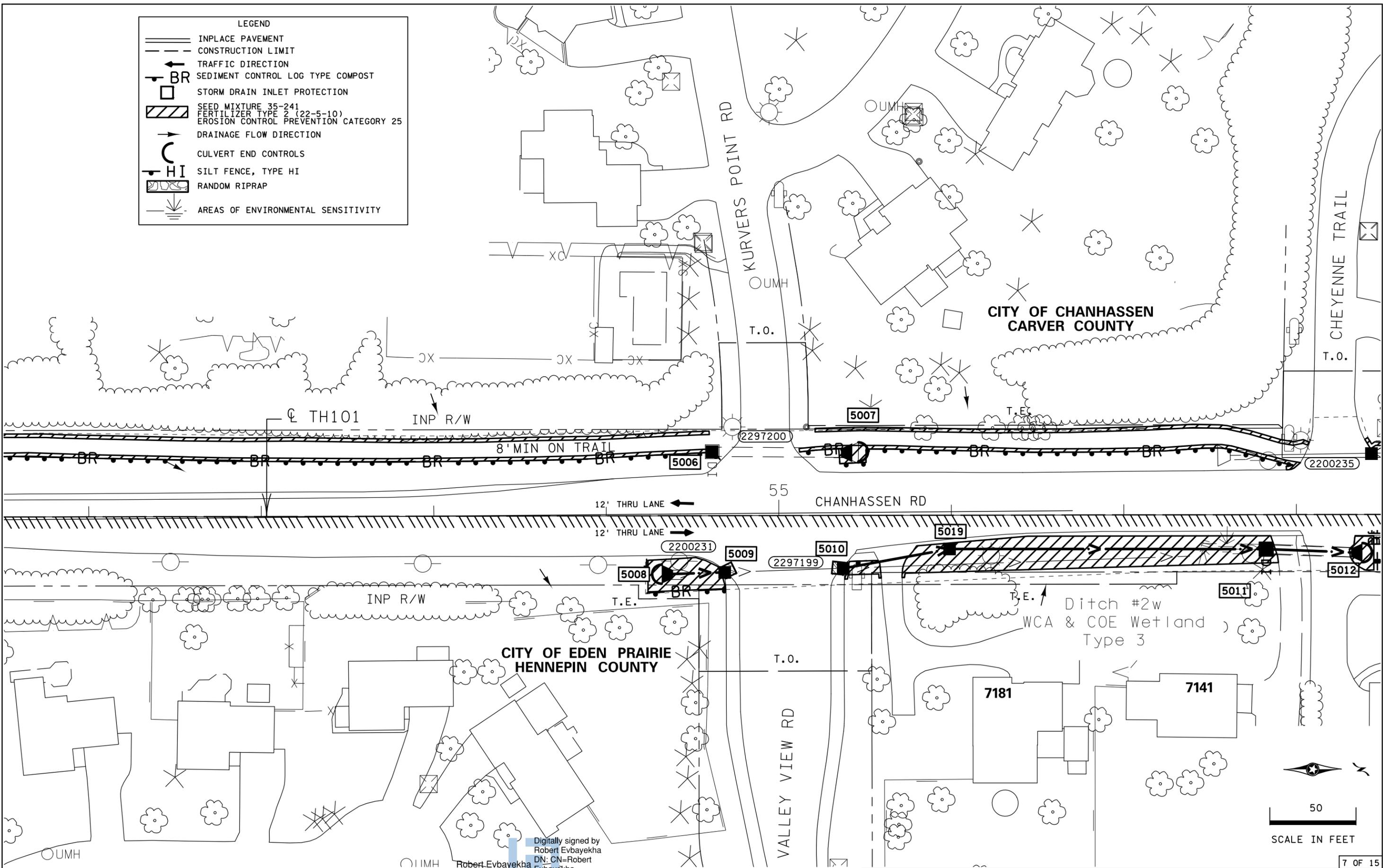
S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241 FERTILIZER TYPE 2 (22-5-10) EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY

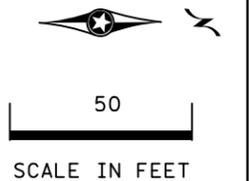
PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
 IPLOT NAME: d273646_er07
 FILENAME: Projects\DM_ROS\01\273646\Design\PlanSheets\6 Erosion Control & Turf\273646_er07.dgn



Digitally signed by
 Robert Evbayekha
 DN: CN=Robert
 Evbayekha
 Date: 2024.01.12
 18:55:58-06'00'

S.A.P. 194-010-017



7 OF 15

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LIC. NO. 25421 DATE 1/5/2024

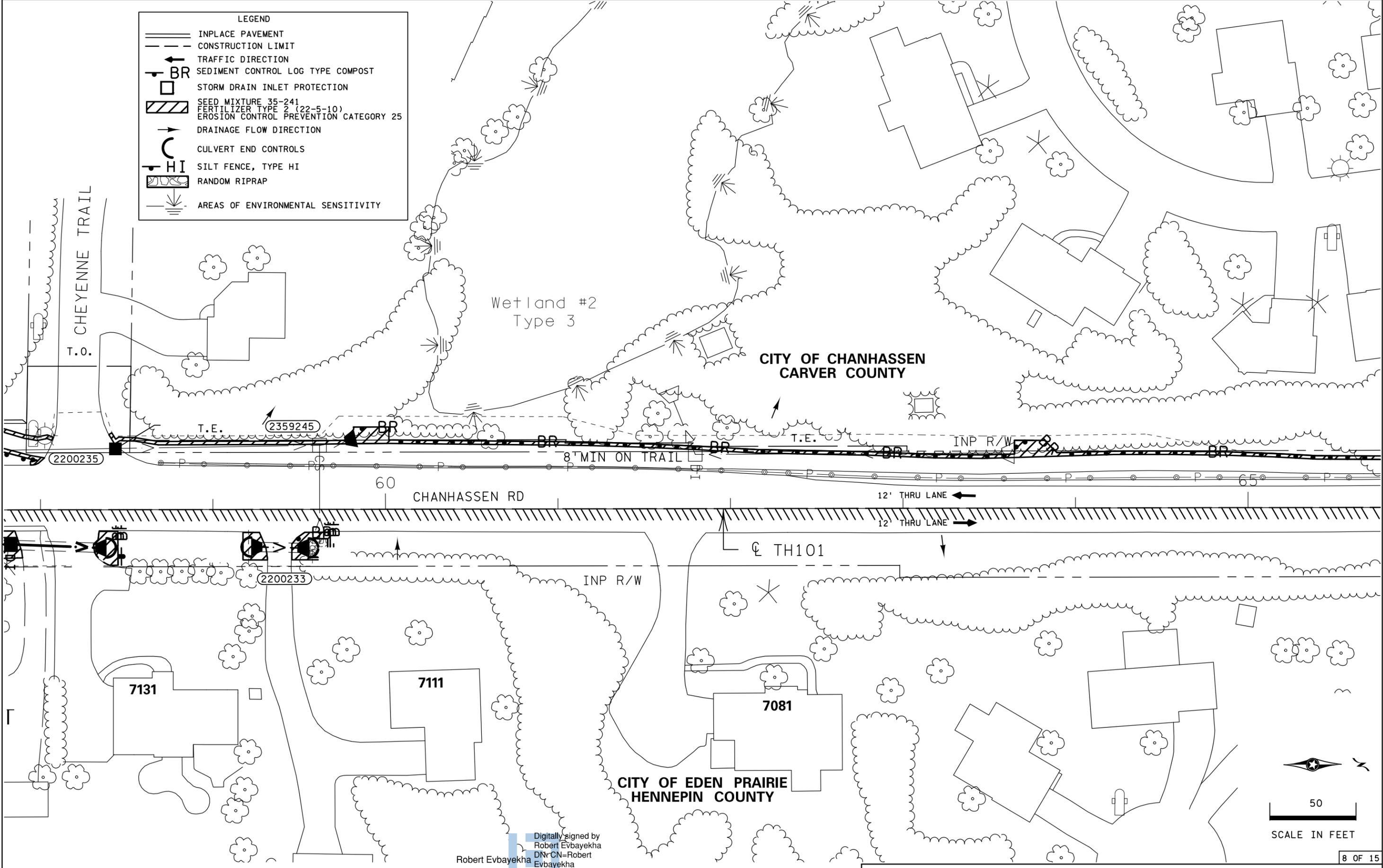
EROSION CONTROL AND TURF ESTABLISHMENT PLANS
 STATE PROJ. NO. 2736-46 (T.H. 101) SHEET NO. 154 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
I/PLOT NAME: d273646_er08
FILENAME: Projects\DM_2736\046\Design\Plan\Streets\6 Erosion Control & Turf\273646_er08.dgn

LEGEND

- INPLACE PAVEMENT
- CONSTRUCTION LIMIT
- TRAFFIC DIRECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- STORM DRAIN INLET PROTECTION
- SEED MIXTURE 35-241
FERTILIZER TYPE 2 (22-5-10)
EROSION CONTROL PREVENTION CATEGORY 25
- DRAINAGE FLOW DIRECTION
- CULVERT END CONTROLS
- SILT FENCE, TYPE HI
- RANDOM RIPRAP
- AREAS OF ENVIRONMENTAL SENSITIVITY



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:55:59-06'00'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LIC. NO. 25421 DATE 1/5/2024

STATE PROJ. NO. 2736-46 (T.H. 101)

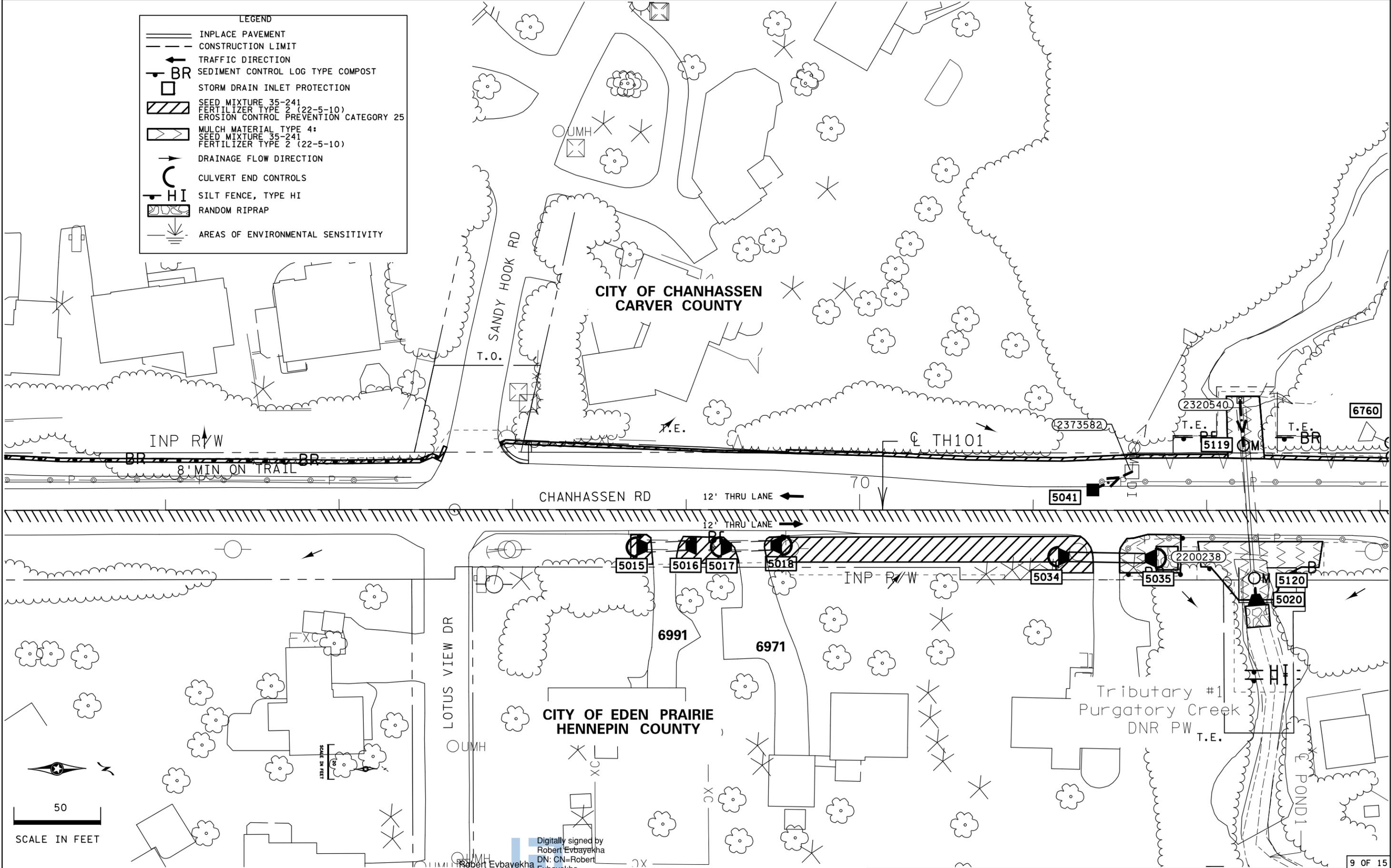
SHEET NO. 155 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
PLOT NAME: d273646_er09
FILENAME: Projects\DM_ROS\01\273646\Design\PlanSheets\6_Erosion Control & Turf\273646_er09.dgn

LEGEND

- INPLACE PAVEMENT
- CONSTRUCTION LIMIT
- TRAFFIC DIRECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- STORM DRAIN INLET PROTECTION
- SEED MIXTURE 35-241
FERTILIZER TYPE 2 (22-5-10)
EROSION CONTROL PREVENTION CATEGORY 25
- MULCH MATERIAL TYPE 4:
SEED MIXTURE 35-241
FERTILIZER TYPE 2 (22-5-10)
- DRAINAGE FLOW DIRECTION
- CULVERT END CONTROLS
- SILT FENCE, TYPE HI
- RANDOM RIPRAP
- AREAS OF ENVIRONMENTAL SENSITIVITY



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:56:00-0600'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

LIC. NO. 25421 DATE 1/5/2024

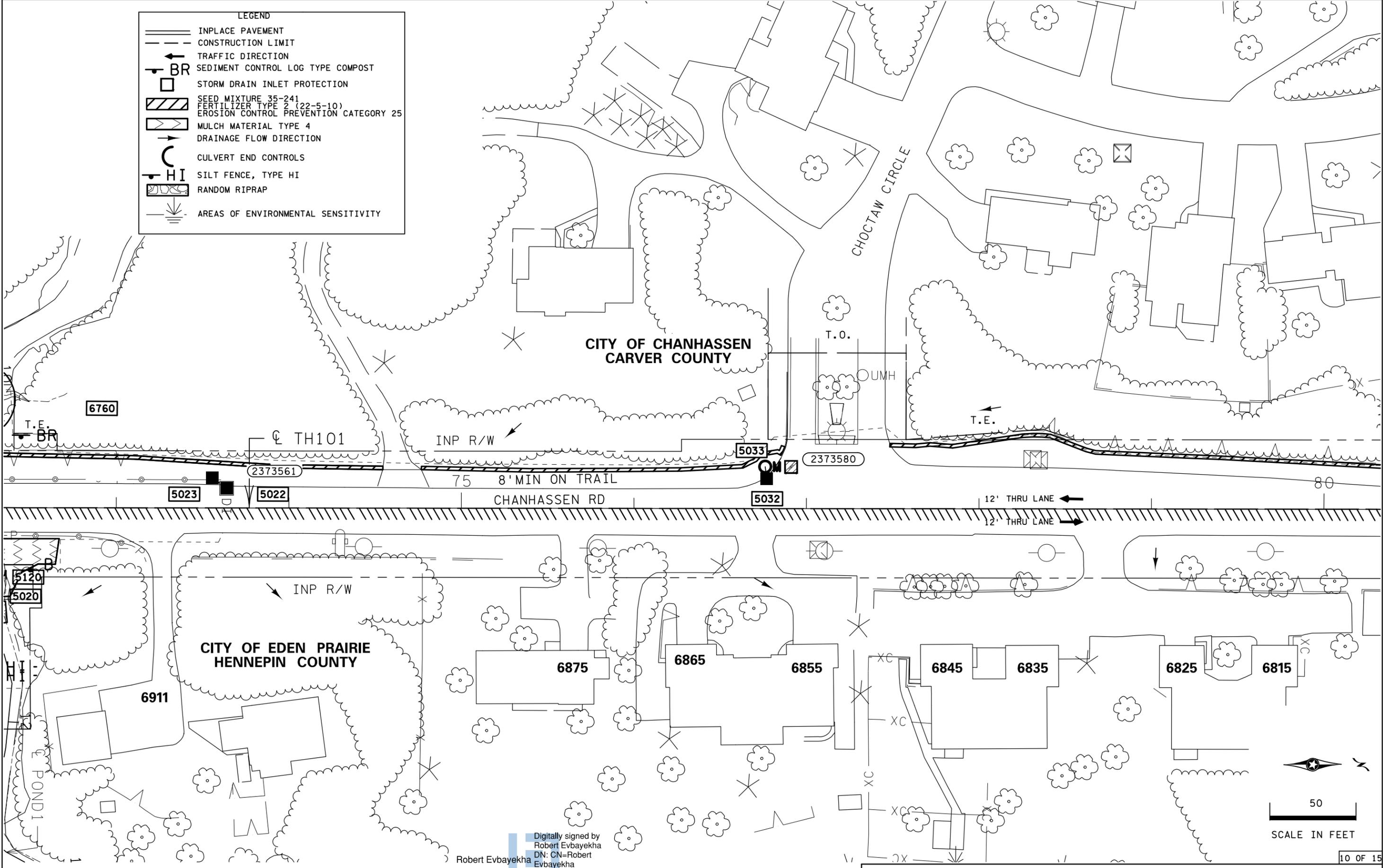
STATE PROJ. NO. 2736-46 (T.H. 101)

SHEET NO. 156 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
PLOT NAME: d273646_eri/0
FILENAME: Projects\DM_273646\Design\PlanStreets\6 Erosion Control & Turf\273646_eri/0.dgn

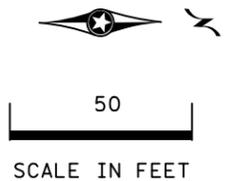
LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241
	FERTILIZER TYPE 2 (22-5-10)
	EROSION CONTROL PREVENTION CATEGORY 25
	MULCH MATERIAL TYPE 4
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:56:01-06'00'

S.A.P. 194-010-017

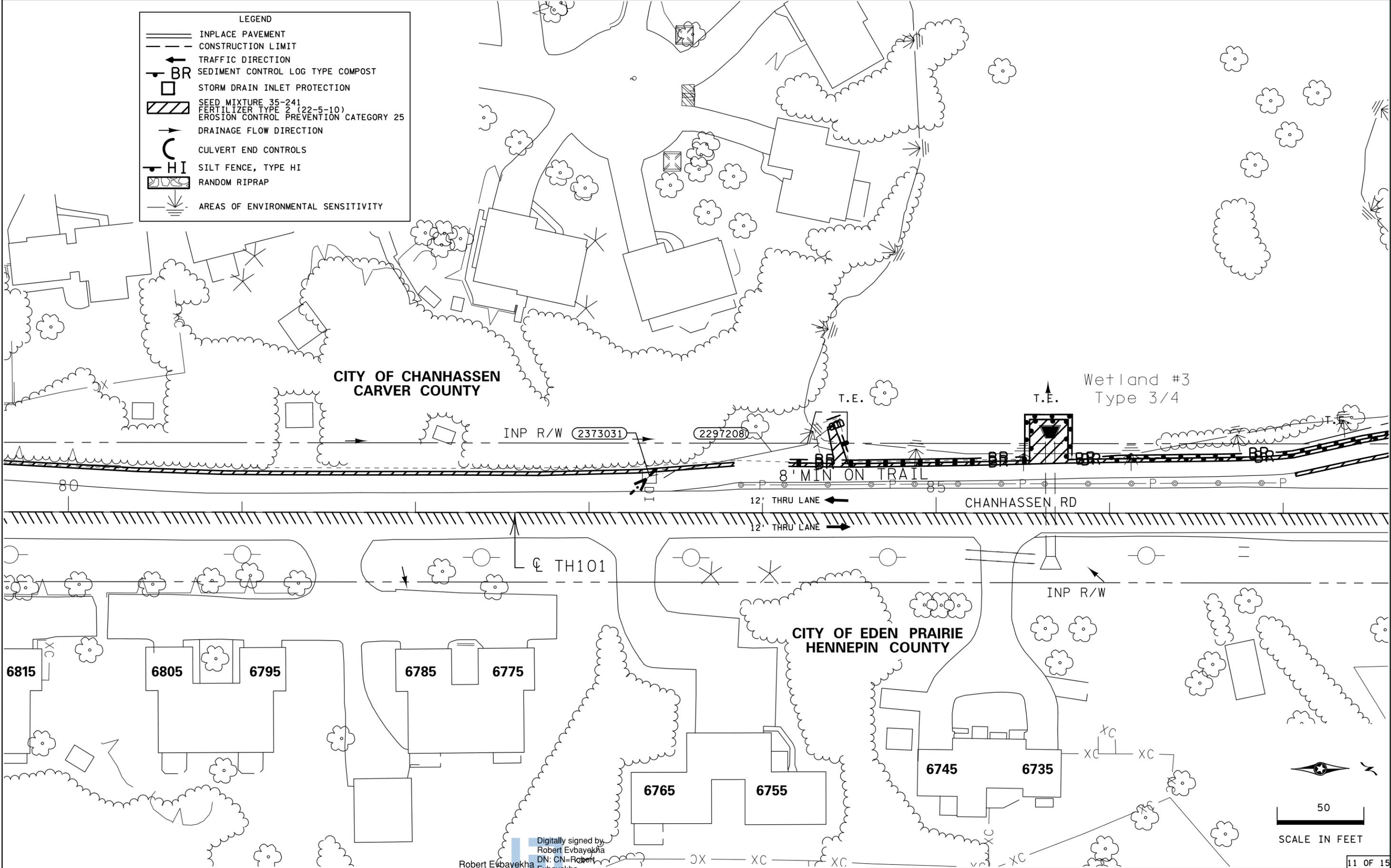
EROSION CONTROL AND TURF ESTABLISHMENT PLANS



LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241 FERTILIZER TYPE 2 (22-5-10) EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY

PLOTTED/REVISED: 11-JAN-2024

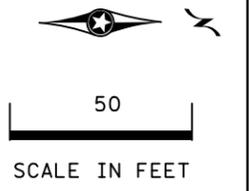
DISTRICT #: Metro
PLOT NAME: d273646_eri
FILENAME: Projects\DM_2736\046\Design\PlanSheets\6 Erosion Control & Turf\273646_eri.dgn



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:56:01-0600'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

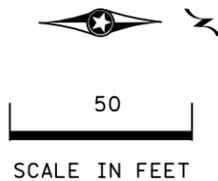
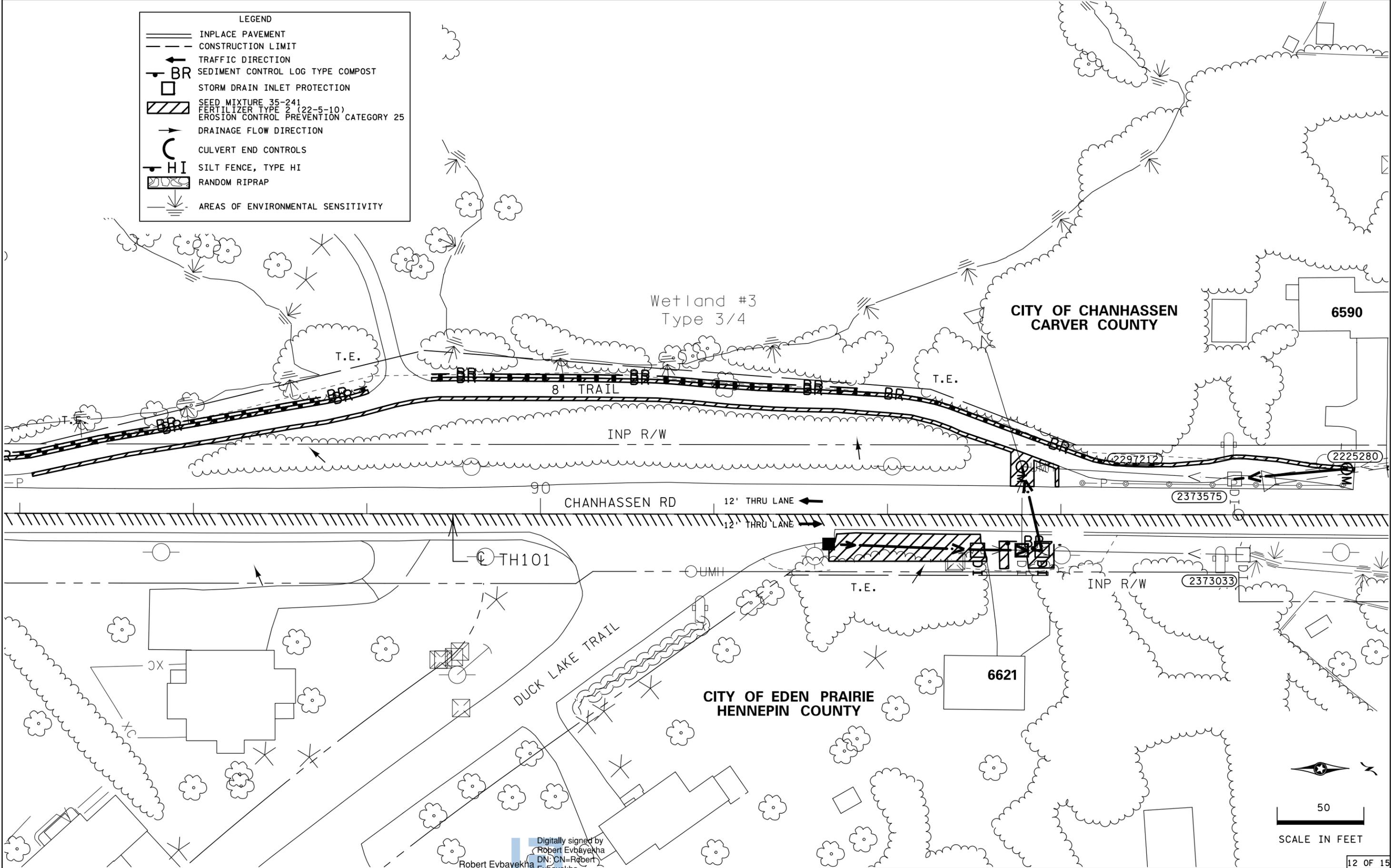


11 OF 15

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241 FERTILIZER TYPE 2 (22-5-10) EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY

PLOTTED/REVISED: 11-JAN-2024

DISTRICT #: Metro
 IPLOT NAME: d273646_eri/2
 FILENAME: Projects\DM_273646\Design\PlanSheets\6_Erosion Control & Turf\273646_eri/2.dgn



Digitally signed by
 Robert Evbayekha
 DN: CN=Robert
 Evbayekha
 Date: 2024.01.12
 18:56:02-06'00'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

DRAWN BY: MS

CHECKED BY: RE

CERTIFIED BY _____

LIC. NO. 25421 DATE 1/5/2024

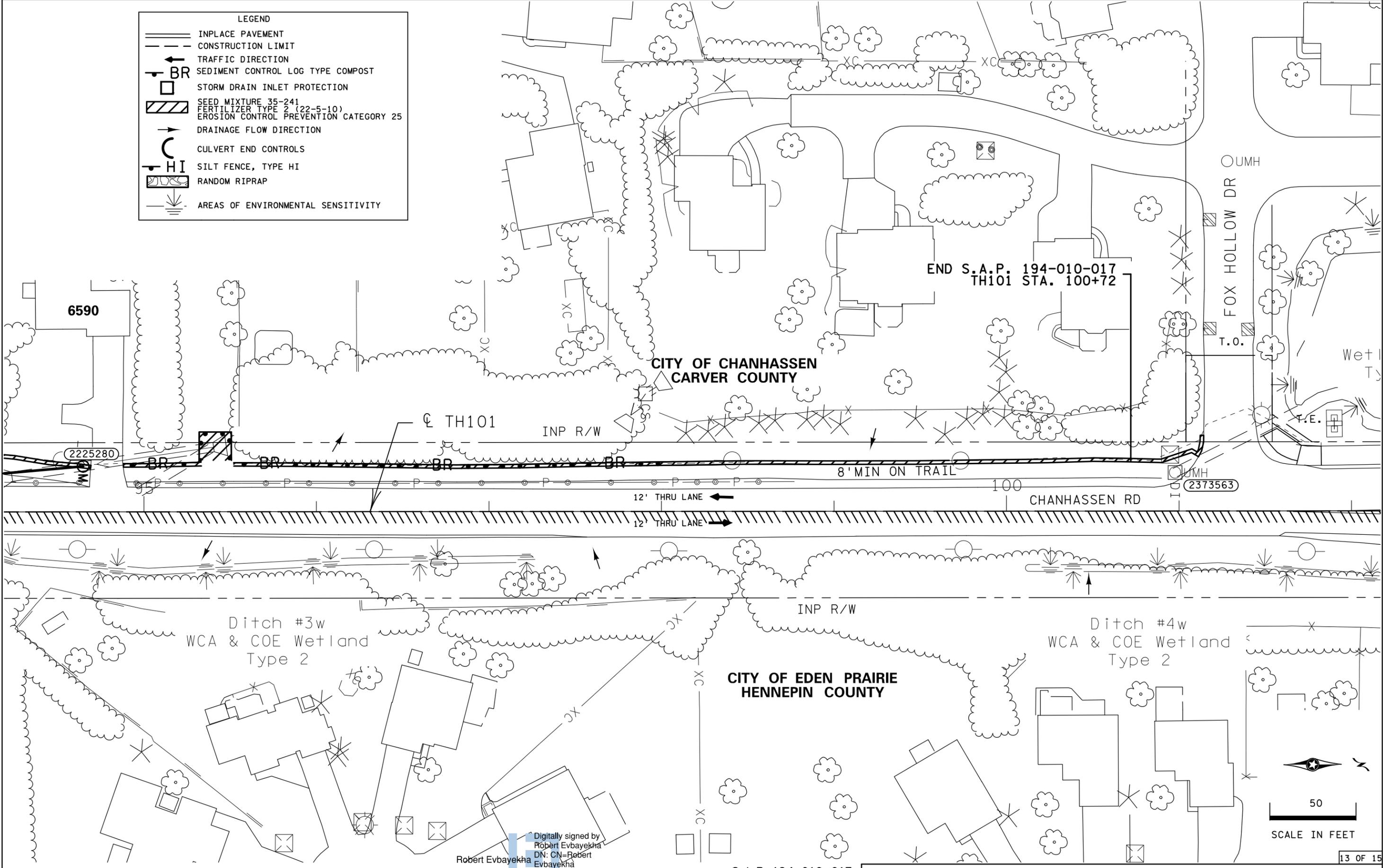
STATE PROJ. NO. 2736-46 (T.H. 101)

SHEET NO. 159 OF 162 SHEETS

PLOTTED/REVISED: 11-JAN-2024

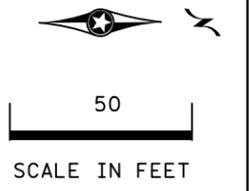
DISTRICT #: Metro
I/PLOT NAME: d273646_eri/3
FILENAME: Projects\DM_R0S\01\2736\046\Design\PlanSheets\6 Erosion Control & Turf\273646_eri/3.dgn

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241
	FERTILIZER TYPE 2 (22-5-10)
	EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:56:03-06'00'

S.A.P. 194-010-017



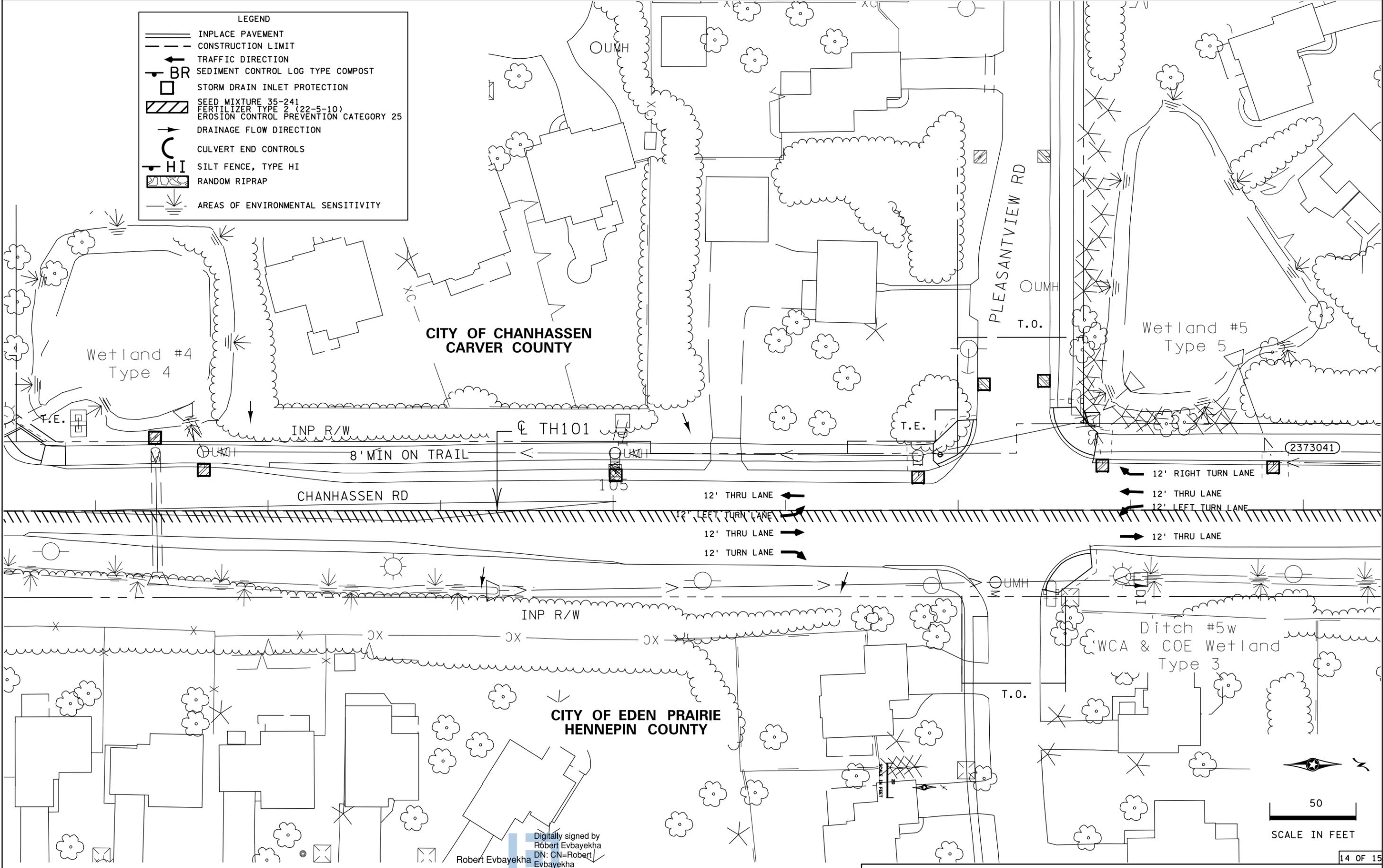
13 OF 15

PLOTTED/REVISED: 11-JAN-2024

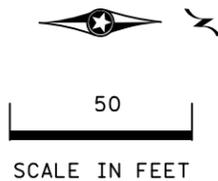
DISTRICT #: Metro
I/PLOT NAME: d273646_eri/4
FILENAME: Projects\DM_2736046\Design\PlanSheets\6_Erosion Control & Turf\273646_eri/4.dgn

LEGEND

- INPLACE PAVEMENT
- CONSTRUCTION LIMIT
- TRAFFIC DIRECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- STORM DRAIN INLET PROTECTION
- SEED MIXTURE 35-241
FERTILIZER TYPE 2 (22-5-10)
EROSION CONTROL PREVENTION CATEGORY 25
- DRAINAGE FLOW DIRECTION
- CULVERT END CONTROLS
- SILT FENCE, TYPE HI
- RANDOM RIPRAP
- AREAS OF ENVIRONMENTAL SENSITIVITY



Digitally signed by
Robert Evbayekha
DN: CN=Robert
Evbayekha
Date: 2024.01.12
18:56:03-06'00'

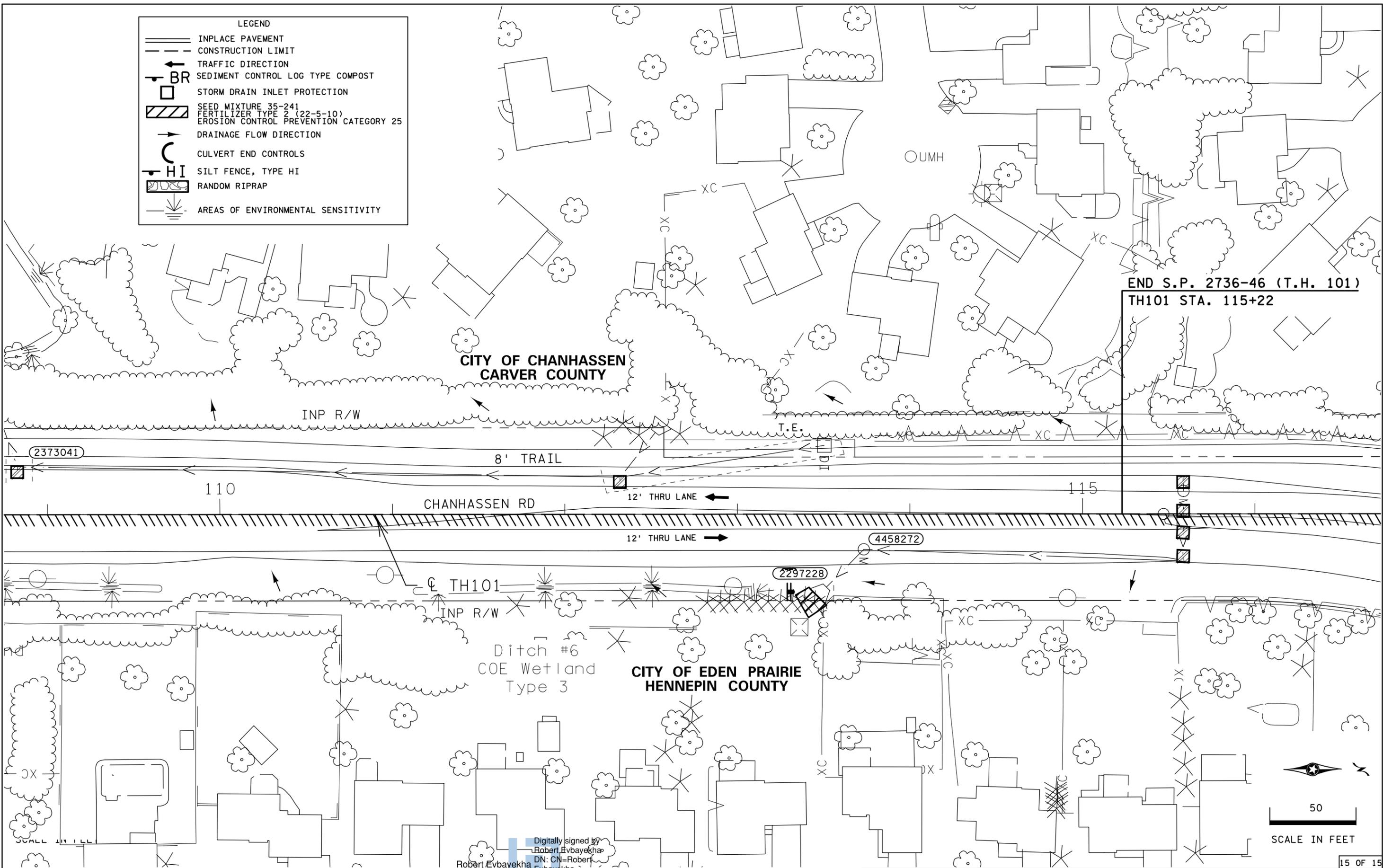


14 OF 15

LEGEND	
	INPLACE PAVEMENT
	CONSTRUCTION LIMIT
	TRAFFIC DIRECTION
	SEDIMENT CONTROL LOG TYPE COMPOST
	STORM DRAIN INLET PROTECTION
	SEED MIXTURE 35-241
	FERTILIZER TYPE 2 (22-5-10)
	EROSION CONTROL PREVENTION CATEGORY 25
	DRAINAGE FLOW DIRECTION
	CULVERT END CONTROLS
	SILT FENCE, TYPE HI
	RANDOM RIPRAP
	AREAS OF ENVIRONMENTAL SENSITIVITY

PLOTTED/REVISED: 11-JAN-2024

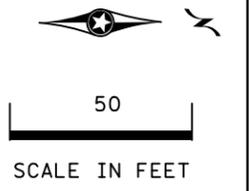
DISTRICT #: Metro
 IPLOT NAME: d273646_eri/5
 FILENAME: Projects\DM_ROS\01\273646\Design\PlanSheets\6_Erosion Control & Turf\273646_eri/5.dgn



END S.P. 2736-46 (T.H. 101)
 TH101 STA. 115+22

CITY OF CHANHASSEN
 CARVER COUNTY

Ditch #6
 COE Wetland
 Type 3
 CITY OF EDEN PRAIRIE
 HENNEPIN COUNTY



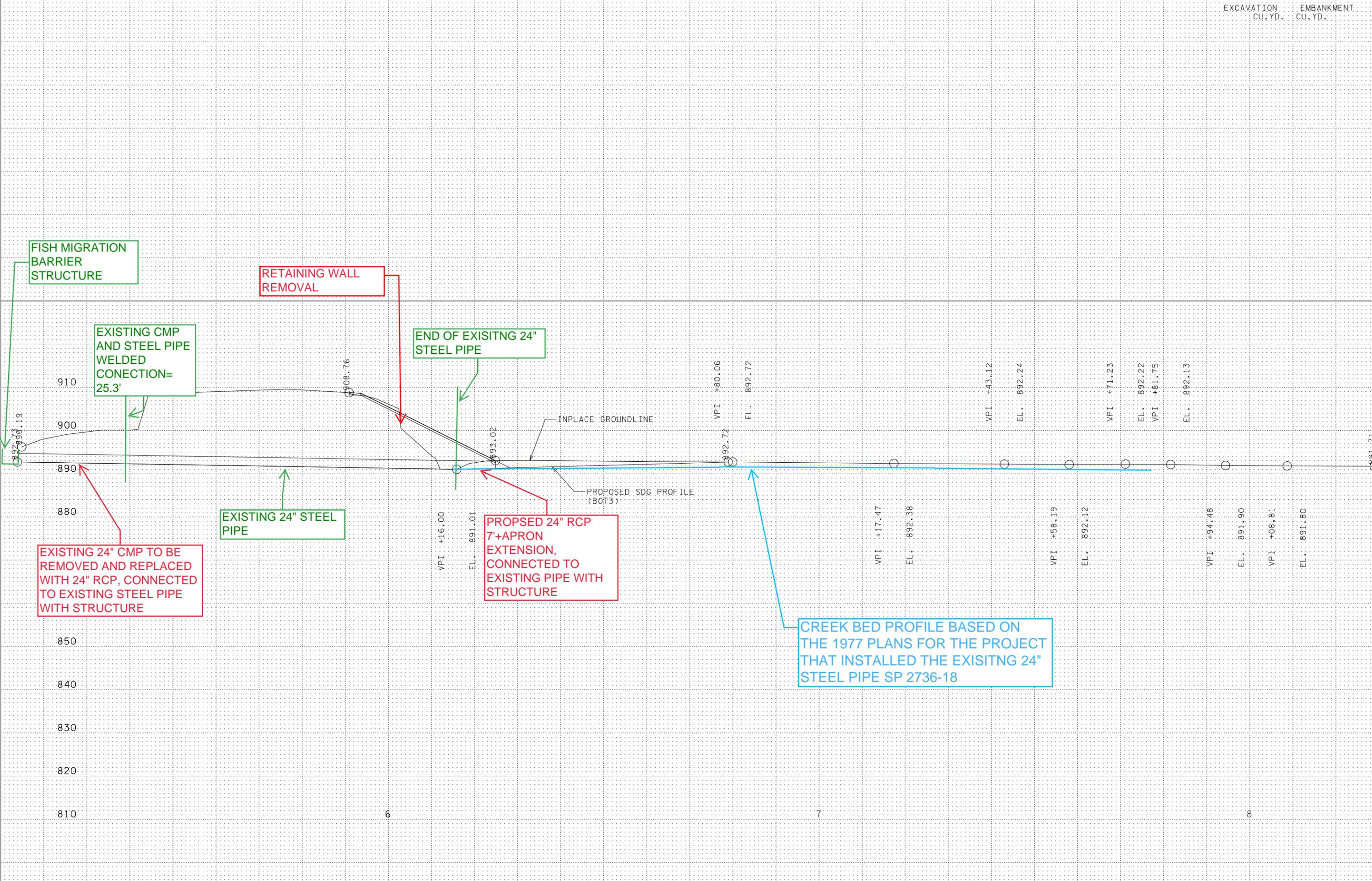
Digitally signed by
 Robert Evbayekha
 DN: CN=Robert
 Evbayekha
 Date: 2024.01.12
 18:56:04-0600'

S.A.P. 194-010-017

EROSION CONTROL AND TURF ESTABLISHMENT PLANS

Compensatory Storage Information

PLOT NAME: 20220914x-d2736046-proj
 PATH & FILENAME: Projects\DM_R05\101\2736\046\Design\3dModel\20220913\20220914x-d2736046-proj.dgn
 PLOTTED/REVISED: 14-SEP-2022



FISH MIGRATION BARRIER STRUCTURE

RETAINING WALL REMOVAL

EXISTING CMP AND STEEL PIPE WELDED CONNECTION= 25.3'

END OF EXISTING 24" STEEL PIPE

EXISTING 24" STEEL PIPE

EXISTING 24" CMP TO BE REMOVED AND REPLACED WITH 24" RCP, CONNECTED TO EXISTING STEEL PIPE WITH STRUCTURE

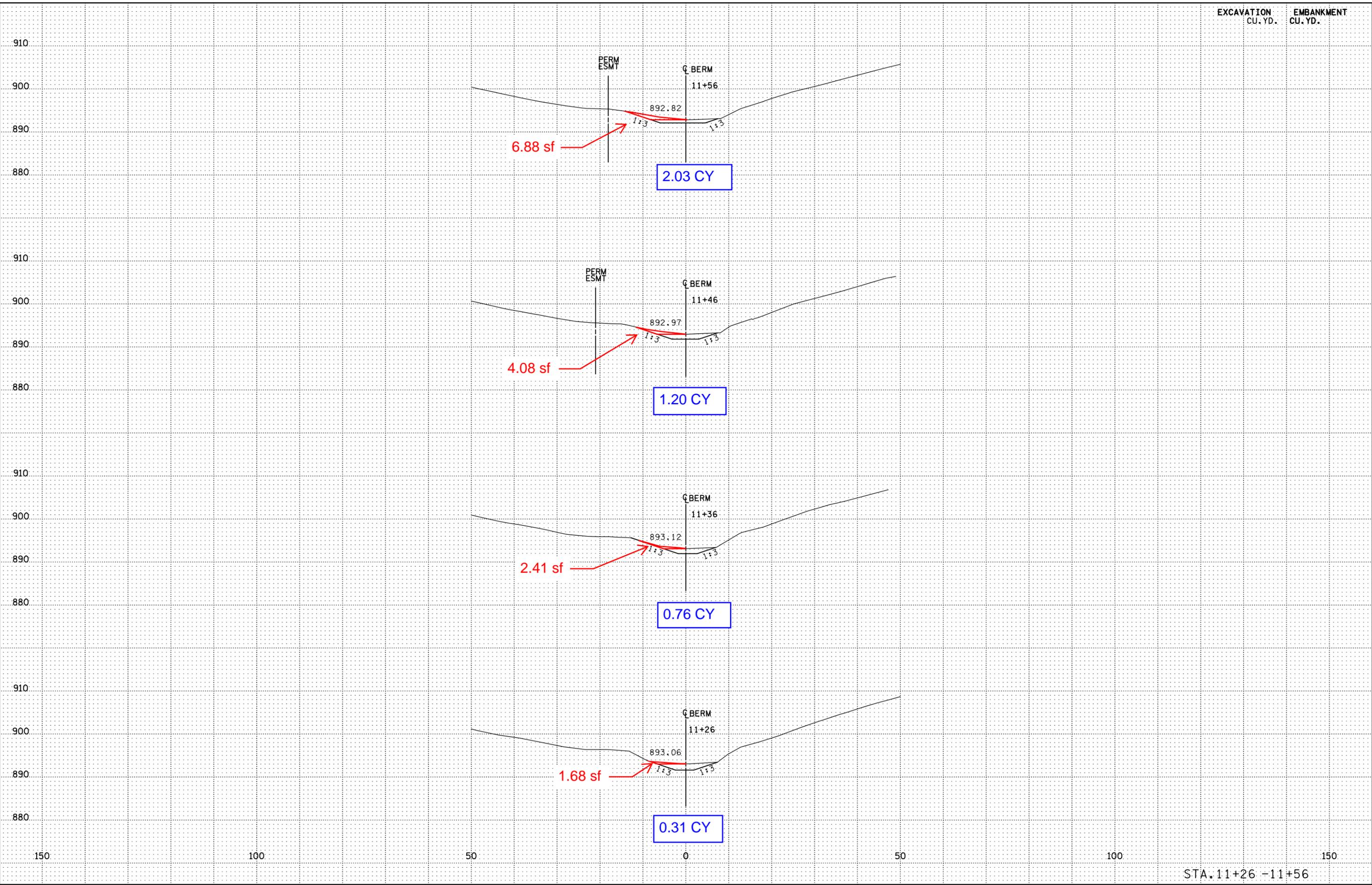
PROPOSED 24" RCP 7'+APRON EXTENSION, CONNECTED TO EXISTING PIPE WITH STRUCTURE

CREEK BED PROFILE BASED ON THE 1977 PLANS FOR THE PROJECT THAT INSTALLED THE EXISTING 24" STEEL PIPE SP 2736-18

EXCAVATION
CU. YD.

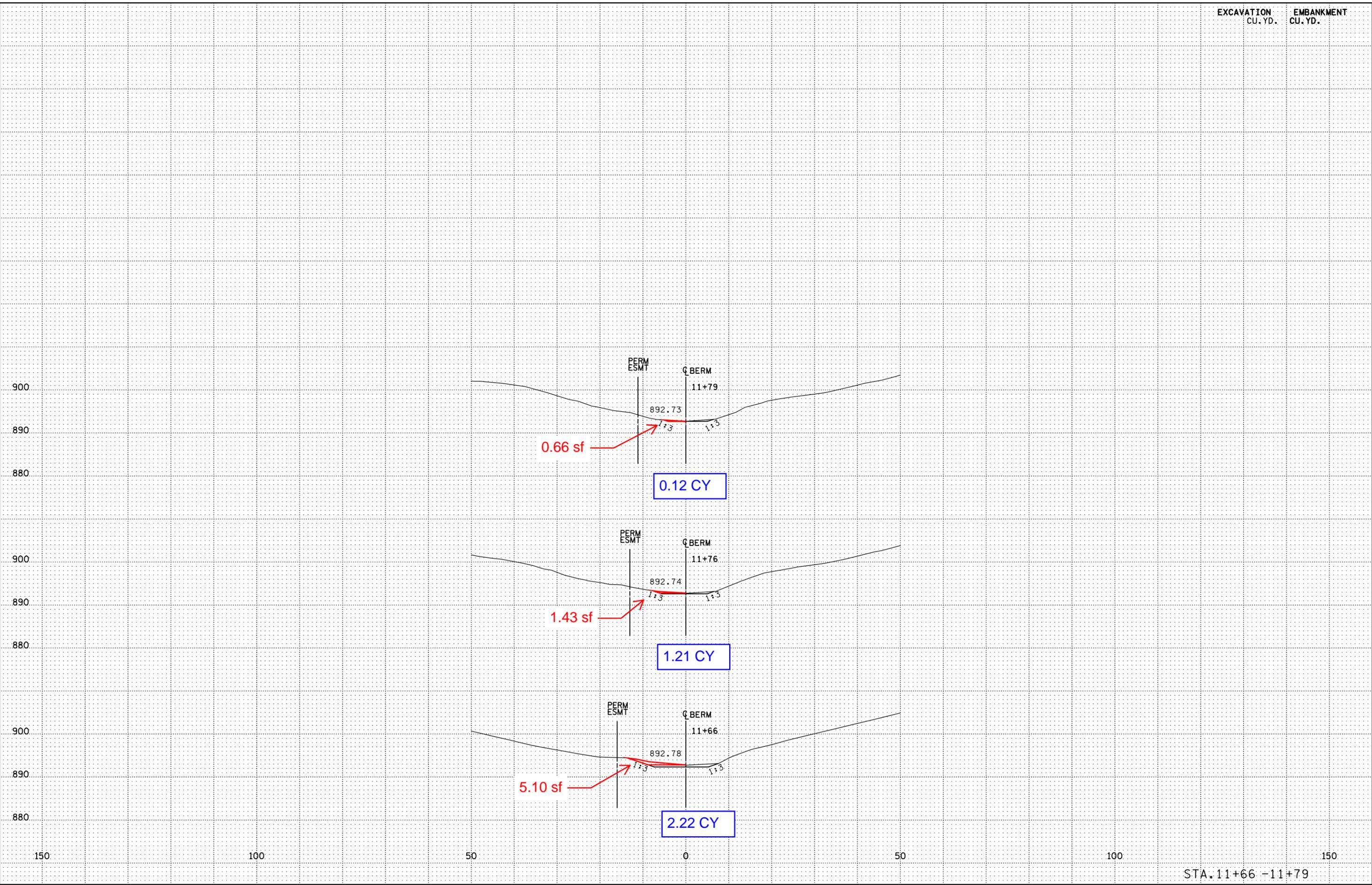
EMBANKMENT
CU. YD.

DISTRICT #: Metro
PLOT NAME: 20230525_d2736046_cm.XS_Sheets
PATH & FILENAME: Projects\DM_R05\101\2736\046\Design\XS\20230525_d2736046_cm.XS_Sheets.dgn



STA. 11+26 -11+56

DISTRICT #: Metro
 PLOT NAME: 20230525_d2736046_cm_xs_sheets
 PATH & FILENAME: Projects\DM_R05\101\2736\046\Design\XS\20230525_d2736046_cm_xs_sheets.dgn



STA. 11+66 - 11+79