

Applicant: Josh Bowe; Three Rivers Park District
Consultant: Toby Muse; SEH
Project: Nine Mile Creek Regional Trail; Minnetonka-Edina Segment
Location: East and west of T.H. 169 and Nine Mile Creek: Edina and Minnetonka
Rule(s): 2,3,5, 6 and 10
Reviewer: BCO

General Background & Comments

The project proposes the construction of the 10 foot wide multi-use (walking and biking), non-motorized trail segment of the Nine Mile Creek Regional Trail connecting the portions of the trail previously permitted by the District – Permits #2009-53 and #2015-53. This portion of the trail will consist of approximately 1,100 lineal feet of boardwalk from the west terminus of the trail (approximately 200 feet west of T.H. 169) in Minnetonka, through the 14 foot x 10 foot box culvert underpass constructed as part of the T.H. 169 causeway project, continuing through the wetland complex east of T.H. 169 to the Lincoln Drive cul-de-sac in Edina. From this point, 370 lineal feet of bituminous trail will be constructed to the south connecting with the existing trail.

With regard to wetland impacts, it is important to note that a portion of the project in Minnetonka, where the city is the Wetland Conservation Act LGU, and a portion is in Edina, where NMCWD is the LGU.

The District’s requirements for both storm water management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5000 square feet or more of surface area is altered, Rules 4.2.1a and b and 5.2.1a and b.

The following District Rules apply to the project; Rule 2 – Floodplain Management and Drainage Alterations, Rule 3 – Wetlands Management, Rule 4 – Stormwater Management, Rule 5 – Erosion and Sediment Control, Rule 6 – Waterbody Crossings and Structures and Rule 10 – Variances and Exceptions.

The permit agent, SEH, has indicated that the Cities of Edina and Minnetonka and the Minnesota Department of Transportation (MnDOT) have given permission to Three Rivers to construct their trail on city and MnDOT property.

Exhibits

1. Permit Application dated June 12, 2020.
2. Storm water computations, project narrative and plans prepared by SEH submitted on June 15, 2020 and revised dated July 21, 2020.

3. Notice of Decision dated July 30, 2020 for the approval of the wetland boundary and type determination in Minnetonka and an application for approval of an exemption for fill within a Type 2 wetland associated with the boardwalk footings issued by the City of Minnetonka being the LGU administering the requirements of WCA for Minnetonka and MnDOT.
4. Notice of Decision dated August 4, 2020 for the approval of the wetland boundary and type determination by the NMCWD being the LGU administering the requirements of WCA in Edina.
5. A Minnesota “No Rise” Certification for work proposed by the project within the floodplain and the two crossings of the creek prepared by SEH dated May 1, 2020.
6. Variance request dated July 21, 2020 prepared by SEH.

2.0 Floodplain Management and Drainage Alterations

A 100-year frequency floodplain has been established along the entire corridor of Nine Mile Creek. Floodplain impacts in the amount of 258 cubic yards (105 cubic yards in Minnetonka and 153 cubic yards in Edina) are proposed by the project. The floodplain impacts result from;

- Sections of the boardwalk installed below the 100-year frequency flood elevation both east and west of the existing box culvert underpass that are to “ramp-up” to elevated reaches of the existing trail that are above the designated floodplain yet comply with requirements of the American Disabilities Act (ADA) and,
- Construction of pipe piles and bracing for the boardwalk and bridge crossings of the creek.

Floodplain mitigation in the amount of 332 cubic yards (163 cubic yards in Minnetonka and 169 cubic yards in Edina) is proposed to be provided. The compensatory volume is to be provided within +/- 1 foot vertical elevation of the proposed floodplain fill complying with Rule 2.3.2.

The trail width is 10 feet and designed for non-motorize use, making it exempt from Rule 2.3.4 requiring no structure be placed, constructed or reconstructed and no surface maybe paved within 50 feet of the centerline of any water course.

The project has been designed to minimize hydraulic impacts by elevating the boardwalk a minimum of 31-inches (deck to water surface) above the calculated floodplain for the creek. With the exception of 306 lineal feet (72 lineal feet in Minnetonka and 234 lineal feet in Edina) of the proposed boardwalk as described above, will not be constructed above the 100-year flood elevation. These sections of trails are not creek crossing(s) but floodplain, or flood fringe, areas for flood storage. The applicant is requesting a variance from compliance with Rule 2.3.1 for these reaches of boardwalk constructed below an elevation 2 feet above the 100-year flood elevation for the creek. (A boardwalk by definition is a “structure” which cannot be constructed less than 2 feet above the 100-year floodplain elevation). A copy of the variance request is attached for reference.

Since construction activities do not propose any work within the channel of Nine Mile Creek or will not alter or disturb surface flows of the creek, therefore the project will not have an adverse impact on any upstream or downstream landowner(s), or adversely affect flood risk, basin or

channel stability, groundwater hydrology, stream base-flow, water quality or aquatic or riparian habitat, Rule 2.3.3

The District's XP-SWMM model for the creek was provided to SEH and the floodplain fill, mitigation and two (2) creek crossings were added to the model. The modelling output indicates that the project will not result in a rise of the flood elevation for the creek along the proposed trail alignment.

3.0 Wetlands Management

The project proposes 266.2 square feet of wetland impacts, resulting from the boardwalk helical piers (totaling 6.2 square feet – NMCWD has considered the installation of helical piers within a wetland as an impact even though this impact is exempt by WCA) throughout the project and fill material to provide structural support and a gradual slope transition from the boardwalk section to the existing bituminous trail (260 square feet in Minnetonka). An exemption request has been submitted by the Three Rivers Park District for the proposed wetland impacts. The City of Minnetonka and the Nine Mile Creek Watershed District will retain jurisdiction as the LGU for wetland type and boundary determinations. MnDOT waived their LGU responsibilities to Minnetonka. Since only 6.2 square feet of the proposed impact is in Edina, it was determined that the de minimis wetland impacts under 8420.0420 Supt. 8 (A) (3) (c) be assumed by Minnetonka. The TEP met for an on-site review on July 15, 2020. The City of Minnetonka agreed with the wetland boundary and type determination and approved 266.2 square feet of wetland fill in a Type 2 wetland for the boardwalk construction as a WCA de minimis exemption, 840.0420 Subp. 8(A)(3)(c). The NMCWD approved the wetland type and boundary determination as the LGU in Edina on August 4, 2020.

Additional work within wetland includes 3,046 square feet of tree clearing (not regulated) and excavation of 2,664 square feet of Type 2 wetland for floodplain storage. TEP members concurred that all three areas proposed to be excavated for floodplain storage (East Option 1, East Option 2 and West) are located within Type 2 wetland. According to MN Rule 8420.0105 Subpart 1, the WCA does not regulate excavation in Type 2 wetland if the excavation does not result in filling, draining or conversion to non-wetland. The proposed excavation for floodplain storage will be approximately 2 feet deep and will result in a change of wetland type from Type 2 to Type 3, but will not convert wetland to non-wetland. Therefore, the proposed compensatory floodplain storage activity is not regulated by the WCA.

Rule 3.4 states that any activity for which a permit is required under any District rule(s) must provide buffer on all wetlands disturbed by the activity and on all wetland down gradient from the activity. Three Rivers Park District maintains that the agreement it entered with Edina, Minnetonka and MnDOT and Three Rivers Park District for the trail construction does not extend rights to Three Rivers Park District to establish wetland buffer, therefore under section 3.4.4, buffer is not required.

4.0 Storm Water Management

The project will create 0.34 acres new impervious area for the construction of the 1,100 lineal feet of boardwalk and 370 lineal feet of bituminous trail. Subsection 4.2.4 states the requirements of the stormwater rule are applicable only to a linear project that creates more than one acre of new or additional impervious surface. (Stormwater management was required

and provided (Permit #2015-53) for the previous section of the trail that created more than one acre of impervious area.)

5.0 Erosion and Sediment Control

The requirements of Rule 5 are applicable since land-disturbing activities will involve excavation of more than 50 cubic yards of material and will disturb 5,000 square feet of more of surface area or vegetation, Rules 5.2.1a and b. Erosion control measures include silt fence, bio rolls, compost logs and rock construction entrances. The project contact is Toby Muse, SEH.

6.0 Waterbody Crossings and Structures

There are two proposed bridge crossings of the creek along the trail alignment. The crossings are elevated 31-inches above the 100-year flood elevation of the creek at the crossing location and will not contact the bed or bank of the creek. The requirements of Rule 6 therefore do not apply.

10.0 Variances and Exceptions

As stated in the Floodplain Management and Drainage Alteration discussion, there are two areas of the proposed boardwalk (a structure by definition) that will be constructed below the 100-year frequency flood elevation of the creek. These areas are; a 72 foot section of trail west of T.H. 169 and a 234 foot section of trail east of T.H. 169. The location of these areas is, 1) the connection of the trail with the in-place 14 foot x 10 foot box culvert underpass constructed as part of the T.H. 169 causeway project and 2) dictated by compliance with ADA requirements.

Rule 2.3.1 requires the boardwalk, a structure, to be constructed 2 feet above the 100-year flood elevation for the creek.

A copy of the variance request is attached for reference. With the documentation provided, showing compliance with the fill/mitigation activities within the floodplain being met (Rule 2.3.2), and no work proposed within the channel of Nine Mile Creek that would have an adverse impact on the criteria of Rule 2.3.3, the engineer is supportive of the approval of the variance requested by Three River Perk District.

11.0 Fees

Because the property owner is a public entity, no fees are charged.

Rules 2.0-6.0 \$0

12.0 Sureties

Because the property owner is a public entity, the District's financial assurance requirements do not apply.

Sureties for the project are: \$0

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. Rule 2, 3, and 5 are met.
3. The applicant has requested a variance from compliance with the requirement of structures being a minimum of 2 feet above the flood elevation of the creek, Rule 2.3.2 (and 4.3.2).

Approval, contingent upon:

1. General Conditions

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule 4.5.6, an as-built drawing of the floodplain mitigation areas conforming to the design specifications as approved by the District must be submitted.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2020-73 with the conditions recommended by staff.



Three Rivers

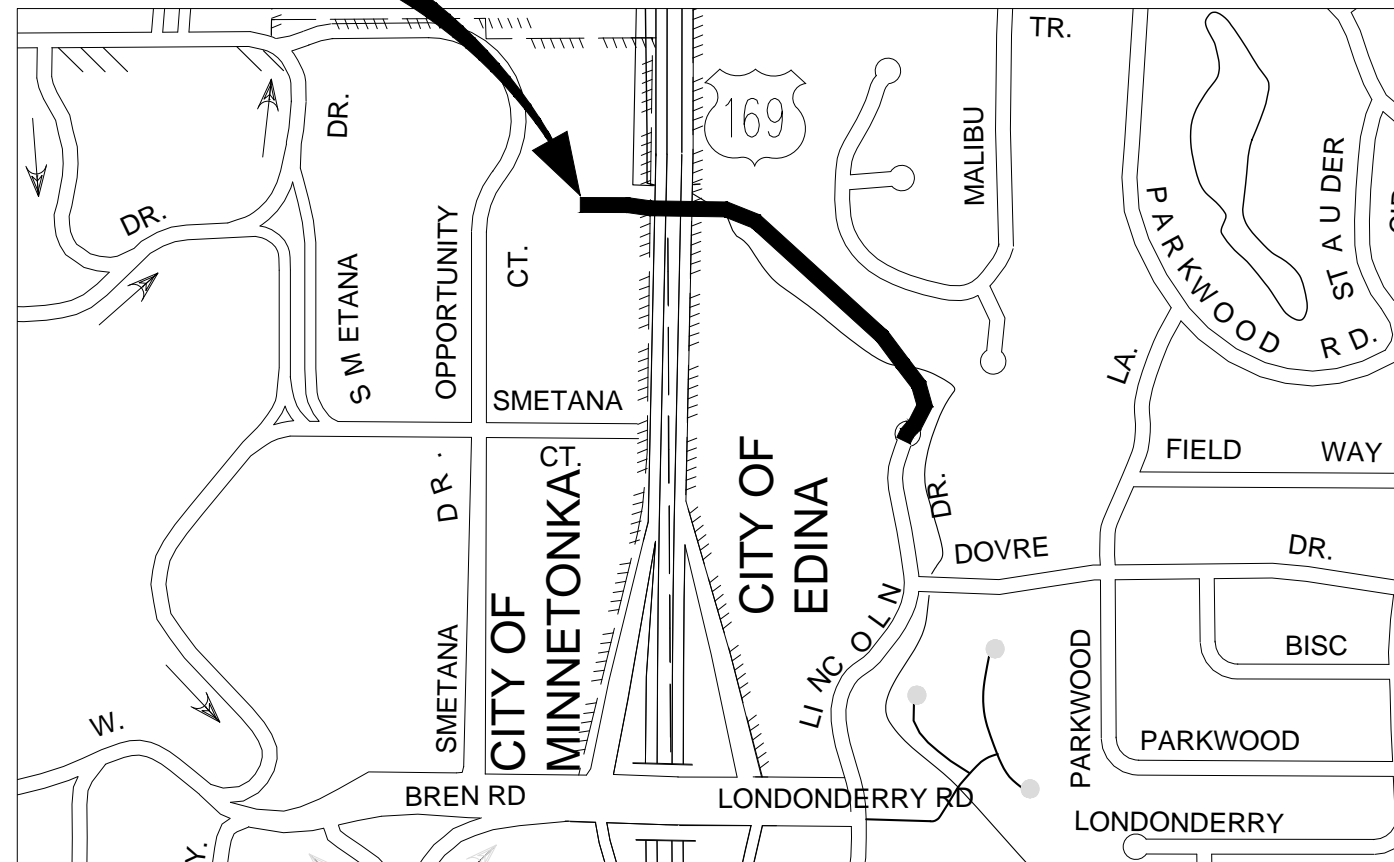
PARK DISTRICT

NINE MILE CREEK REGIONAL TRAIL TH 169 UNDERPASS CONNECTION

GRADING, BITUMINOUS TRAIL, AND BOARDWALK

THREE RIVERS PARK DISTRICT
PROJECT NO. TNM 1901
SEH PROJECT NO. 153190

PROJECT LOCATION



NOTE:
THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D.
THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE
GUIDELINES OF CI/ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE
COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

THE CONTRACTOR SHALL CALL THE GOPHER STATE ONE CALL SYSTEM AT
811 BEFORE COMMENCING EXCAVATION.



Know what's below.
Call before you dig.

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF
TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION"
SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE
MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST
FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3	STATEMENT OF ESTIMATED QUANTITIES
4	STANDARD PLATES SOIL CONSTRUCTION NOTES
5	TABLATIONS
6-8	CONSTRUCTION DETAILS
9	TYPICAL SECTIONS
10	INPLACE TOPOGRAPHY AND REMOVALS PLAN
11	CONSTRUCTION ACCESS PLAN
12-13	CONSTRUCTION PLANS
14	GRADING PLAN
15	TRAFFIC CONTROL PLAN
16	EROSION CONTROL AND TURF ESTABLISHMENT PLAN
17	SIGNING AND STRIPING PLAN
18-21	CROSS SECTIONS

B1-B13 BRIDGE NOS. R0865 & R0866

THIS PLAN CONTAINS 34 SHEETS.

PROJECT LOCATION



CITIES OF EDINA AND
MINNETONKA, MN
HENNEPIN COUNTY

APPROVED: _____

THREE RIVERS PARK DISTRICT _____ DATE _____

APPROVED: _____

CITY ENGINEER OF EDINA _____ DATE _____

APPROVED: _____

CITY ENGINEER OF MINNETONKA _____ DATE _____

THREE RIVERS PARK DISTRICT

SEH
PHONE: 952.912.2600
10901 RED CIRCLE DRIVE,
SUITE 300
MINNETONKA, MN 55343
www.sehinc.com

PRELIMINARY	FILE NO. 153190
	1 21

Date: _____ Lic. No. _____



N.T.S.



LEGEND	
	INPLACE TOPOGRAPHY AND REMOVALS PLAN
	CONSTRUCTION ACCESS PLAN
	CONSTRUCTION PLANS
	GRADING PLAN
	TRAFFIC CONTROL PLAN
	EROSION CONTROL AND TURF ESTABLISHMENT PLAN
	SIGNING AND STRIPING PLAN

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DRAWN BY:	SS
DESIGNER:	KM
CHECKED BY:	TM
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

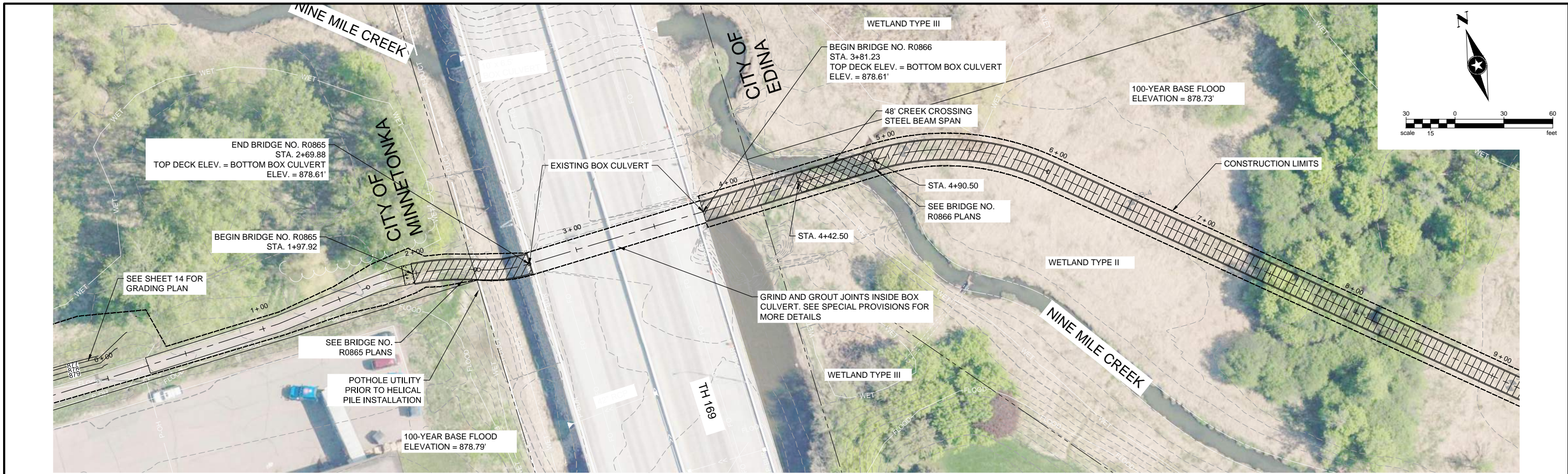


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRELIMINARY
 Date: 6/15/2020 License No.: 43364

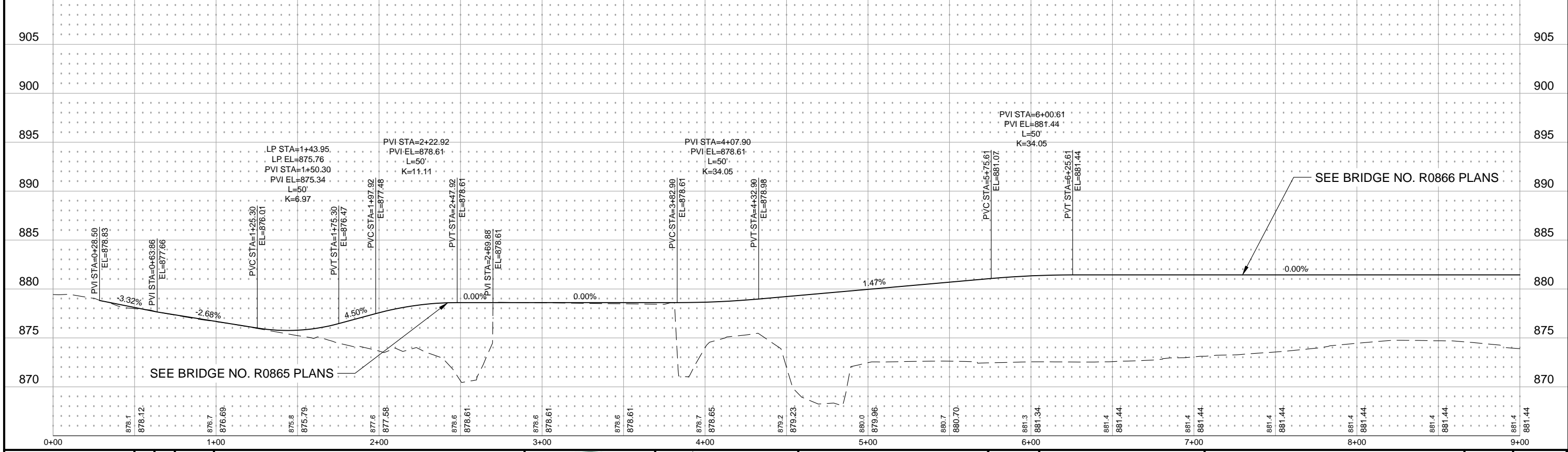
TH 169 UNDERPASS CONNECTION

GENERAL LAYOUT

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TH 169 UNDERPASS CONNECTION



DRAWN BY: SS
 DESIGNER: KM
 CHECKED BY: TM

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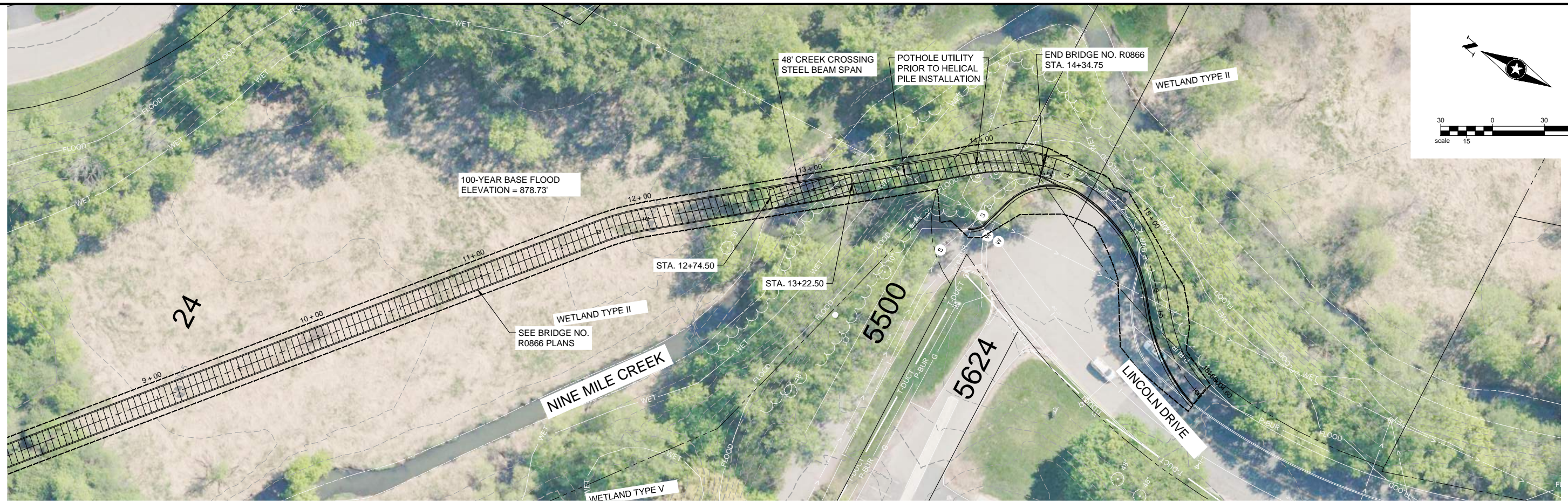
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TH 169 UNDERPASS CONNECTION

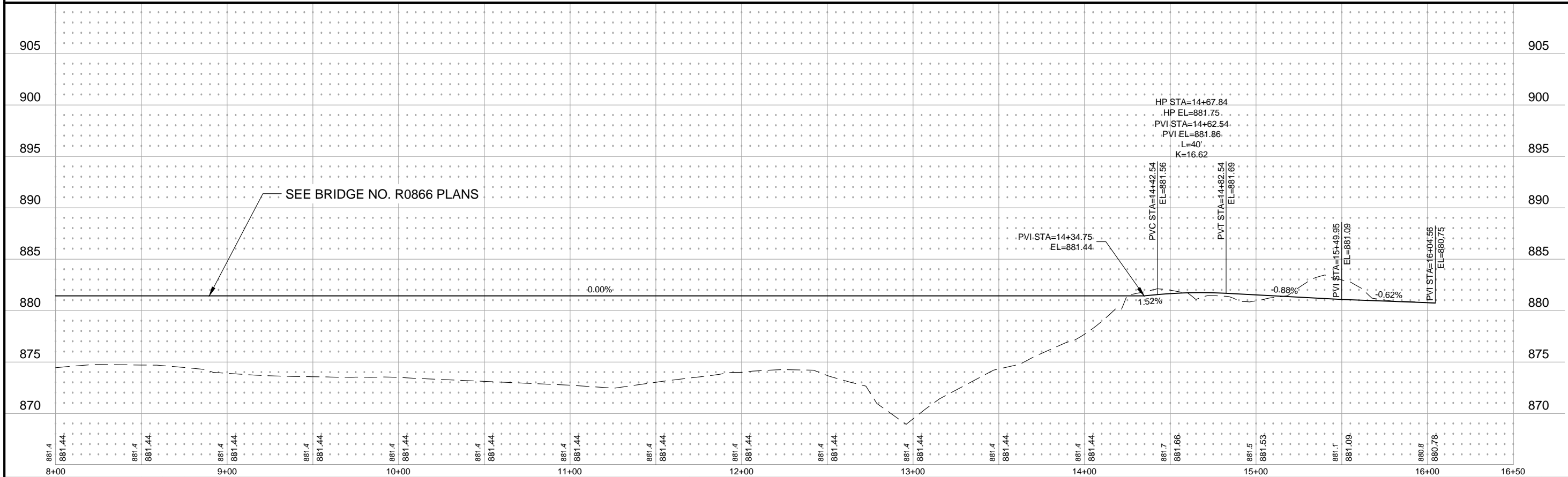
CONSTRUCTION PLANS

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TH 169 UNDERPASS CONNECTION



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 DESIGNER: KM
 CHECKED BY: TM

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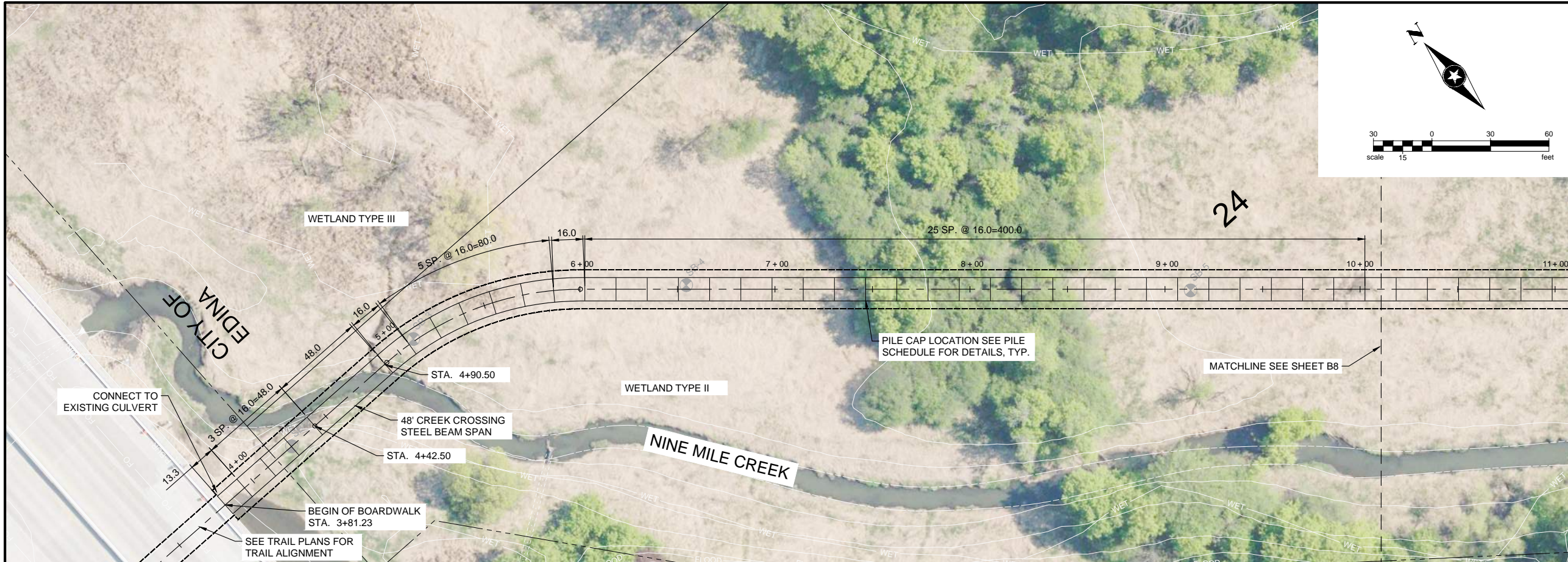
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PRELIMINARY
 Date: 11/20/2020 Lic. No. 43364

TH 169 UNDERPASS CONNECTION

CONSTRUCTION PLANS

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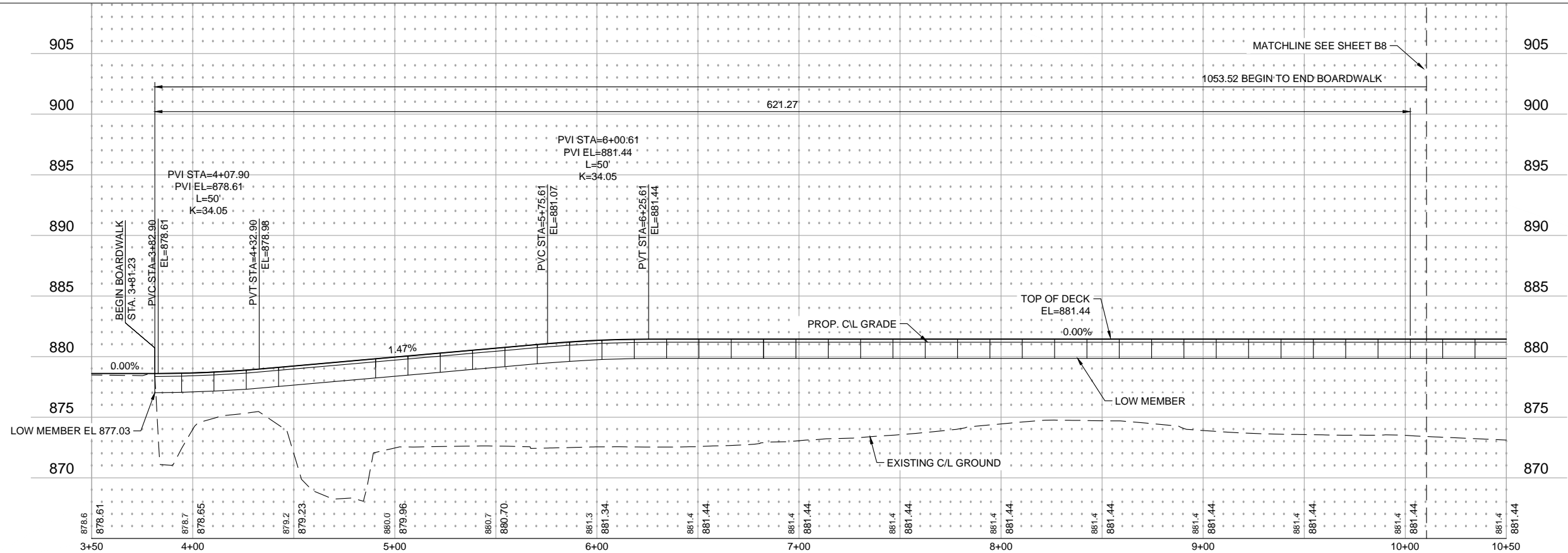
DESIGN DATA
 2020 AND CURRENT INTERIM A.A.S.H.T.O. LRFD BRIDGE DESIGN SPECIFICATIONS AND 2009 LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES.
 LOAD AND RESISTANCE FACTOR DESIGN METHOD.
 DESIGN LOADING: PEDESTRIAN LOADING 90 PSF OR 20,000 POUND VEHICLE LIVE LOAD (H10 TRUCK).
 DESIGN SPEED 20 MPH.
 APPROX. DECK AREA 12,642 SQ. FT.
 MATERIALS:
 STRUCTURAL STEEL SHALL BE MNDOT 3310 CONFORMING TO ASTM A709 GRD 50, HOT-DIP GALVANIZED IN ACCORDANCE WITH MNDOT 3394.
 SEE TRUSS SPAN DETAILS FOR ADD'L INFORMATION.
 TIMBER MATERIALS AND TREATMENT SHALL BE:

ITEM	DESCRIPTION
STRINGERS	DOUGLAS FIR, SELECT
DIAPHRAGMS	STR. ROUGH SAWN, Fb=1,500 PSI
PILE CAP	ACQ OR MCA WITH RETENTION FOR USE CATEGORY - UC4C (GROUND CONTACT, CRITICAL STRUCTURAL COMPONENTS). DOUGLAS FIR SHALL BE INCISED.
DECK PLANKING & ABUTMENT BACKING PLANK	DOUGLAS FIR OR SOUTHERN YELLOW PINE, NO. 1 & BETTER, S4S Fb=1,200 PSI TREATMENT SAME AS ABOVE
RAIL POST, RAILS & POST SPACER BLOCK	SOUTHERN YELLOW PINE NO. 2 OR BETTER, S4S Fb=850 PSI ACQ WITH RETENTION USE CATEGORY - UC3 (EXTERIOR ABOVE GROUND)
TOP RAIL CAP	SOLID COMPOSITE (IE TREX) OR TROPICAL HARDWOOD (IE IPE OR CUMARU)

BRIDGE NO. R0866

CONSTRUCTION NOTES
 THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION."

SHEET INDEX	
B7	PLAN & PROFILE - BOARDWALK EAST 1
B8	PLAN & PROFILE - BOARDWALK EAST 2
B9	BOARDWALK LAYOUT & QUANTITIES
B10	GENERAL DETAILS & TYPICAL SECTIONS
B11	ABUTMENT & SUBSTRUCTURE DETAILS
B12	APPROACH & RAILING DETAILS



DATE: _____
 APPROVED: THREE RIVERS PARK DISTRICT ENGINEER

BRIDGE NO. R0866
 LOCATED IN EDINA ALONG & OVER NINE MILE CREEK, TIMBER & STEEL BEAMS, 16' & 48' SPANS, 12' WIDE TRAIL, PEDESTRIAN RAILING, 0°00'00" SKEW IDENTIFICATION NO. 301 & 701

GENERAL PLAN AND ELEVATION

SEC. 31 T 117 N R 21 W
 CITY: EDINA COUNTY: HENNEPIN
 DATE: _____
 APPROVED: STATE BRIDGE ENGINEER

DRAWN BY: RAD
 DESIGNER: JAJ
 CHECKED BY: JAJ

NO.	BY	DATE	REVISIONS



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.
 DATE: 02/02/2020
 Lic. No. 17280

TH 169 UNDERPASS CONNECTIONS

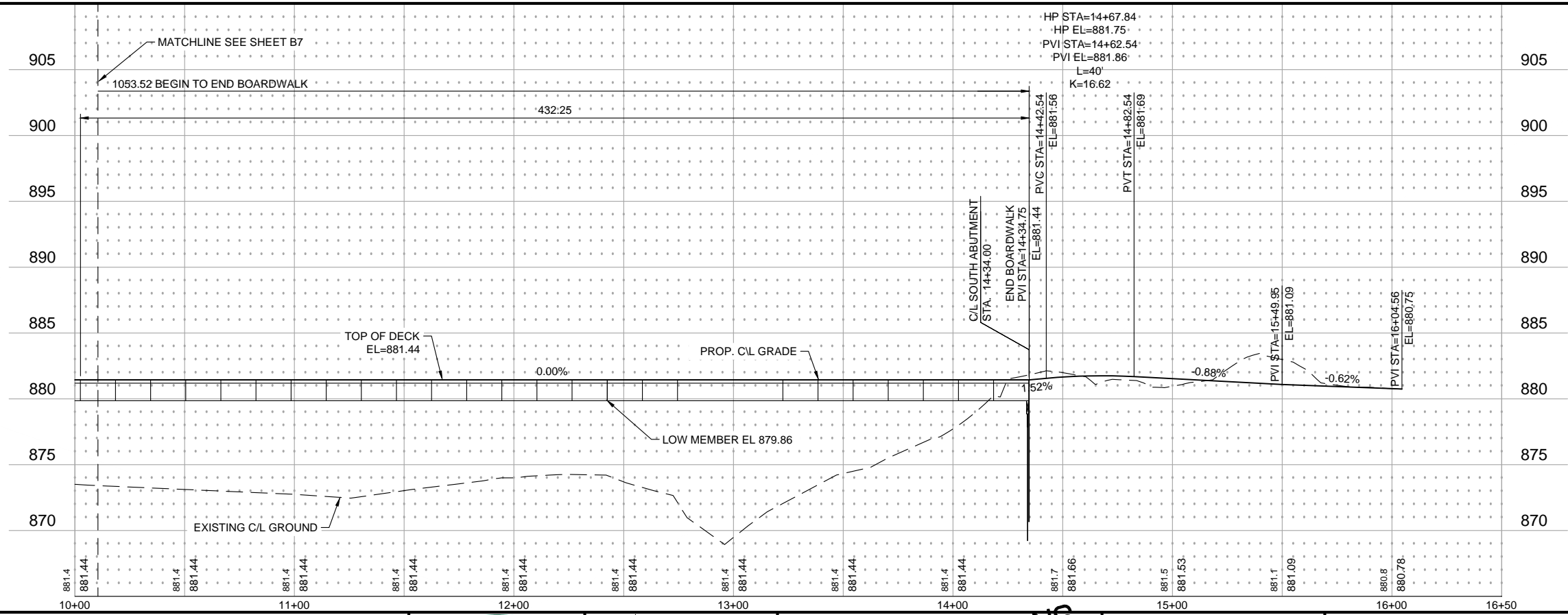
PLAN & PROFILE - BOARDWALK EAST 1

FILE NO. TH153190
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BRIDGE NO. R0866



DRAWN BY: RAD
 DESIGNER: JAJ
 CHECKED BY: JAJ

NO.	BY	DATE	REVISIONS



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.
 DATE: 12/02/2020
 PROJECT: TH 169 UNDERPASS CONNECTIONS
 ENGINEER: JEFFREY JOHNSON, PE
 Lic. No. 17280

TH 169 UNDERPASS CONNECTIONS

PLAN & PROFILE - BOARDWALK EAST 2

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