

Madison, Wisconsin

# CITY OF MADISON

## CITY ENGINEERING DIVISION

### DEPARTMENT OF PUBLIC WORKS

# PLAN OF PROPOSED IMPROVEMENT

#### INDEX OF SHEETS

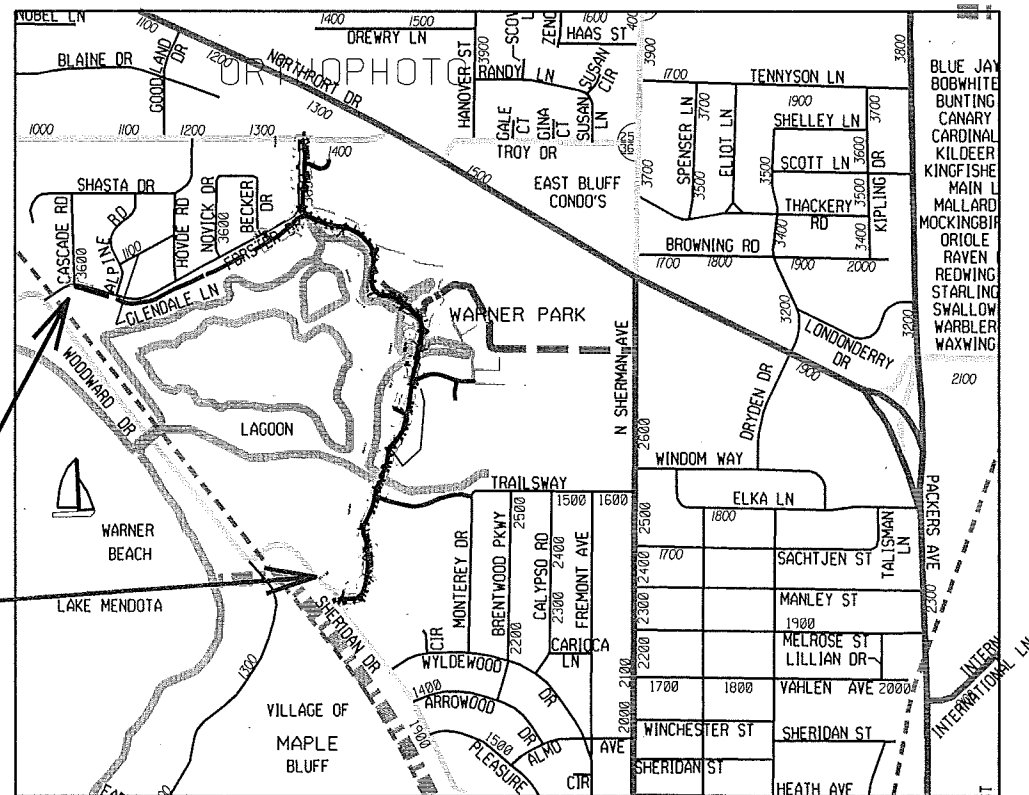
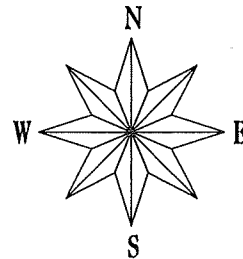
SHEET NO.	TITLE
SHEET NO. 1	GENERAL OVERVIEW & RESURFACING PLAN
SHEET NO. G-1	TYPICAL SECTIONS
SHEET NO. D1	DETAILS AND RINK GRADING PLAN
SHEET NO. D2 - D4	WARNER PATH PLAN & PROFILE
SHEET NO. P1-P9	EROSION CONTROL PLANS
SHEET NO. EC-1 - EC-11	STRUCTURE PLANS SOUTH BRIDGE
SHEET NO. S1-S7	STRUCTURE PLANS NORTH BRIDGE
SHEET NO. S8-S14	CROSS SECTIONS

## WARNER PARK PATH RECONSTRUCTION AND BRIDGE REPLACEMENT

CITY PROJECT NO. 53W1480

CITY CONTRACT NO. 6985

CONVENTIONAL SIGNS	
FIELD VERIFY ALL UTILITY LOCATIONS	
GAS	— G —
STORM SEWER	— ST —
SANITARY SEWER	— SAN —
WATER	— W —
OVERHEAD ELECTRIC	— OH —
POWER POLE	⊕
ADA COMPLIANT RAMP W/ DETECTABLE WARNING FIELD	
COMBUSTIBLE FLUIDS	



## CONSTRUCTION PROJECT LOCATION

#### NOTES:

ALL GUTTERS SHALL DRAIN WITH A MINIMUM GRADE OF 0.50% TOWARD STORM SEWER INLETS.

SIDEWALK RAMPS AND CURB THRU SIDEWALK RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1" PER 12". SIDEWALK AND CURB RAMPS SHALL BE CONSTRUCTED WITH A SIDE SLOPE OF 2.00%. SIDEWALK SHALL HAVE A MINIMUM LONGITUDINAL SLOPE OF 0.50% AND A MAXIMUM LONGITUDINAL SLOPE OF 5.00% EXCEPT WHERE STREET GRADES EXCEED 5.00%.

EARTH WORK SUMMARY - WARNER PATH:

CUT (PLAN QUANTITY FROM CROSS SECTIONS).....	1325 C.Y.
LESS ASPHALT PAVT. REMOVAL .....	310 C.Y.
NET CUT .....	1015 C.Y.
RAW FILL (FROM CROSS SECTIONS) .....	466 C.Y.
ADJUSTED FILL (FACTOR 1.25) .....	583 C.Y.
ESTIMATED EXCESS MATERIAL FOR RINK GRADING ..	432 C.Y.
ESTIMATED UNDISTRIBUTED UNDERCUT.....	770 C.Y.
TOTAL EXCAVATION CUT (PAY ITEM) .....	2095 C.Y.

PUBLIC IMPROVEMENT PROJECT APPROVED

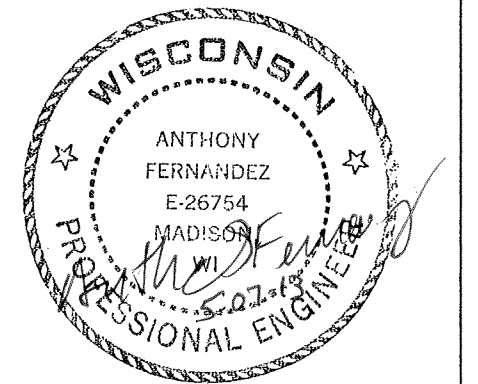
April 30, 2013

BY THE COMMON COUNCIL OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN APPROVED BY:

*Christy Bachma* 5-10-13  
City Engineer Date

PATHS DESIGNED BY:



STORM SEWER DESIGNED BY:



RINK GRADING DESIGNED BY:

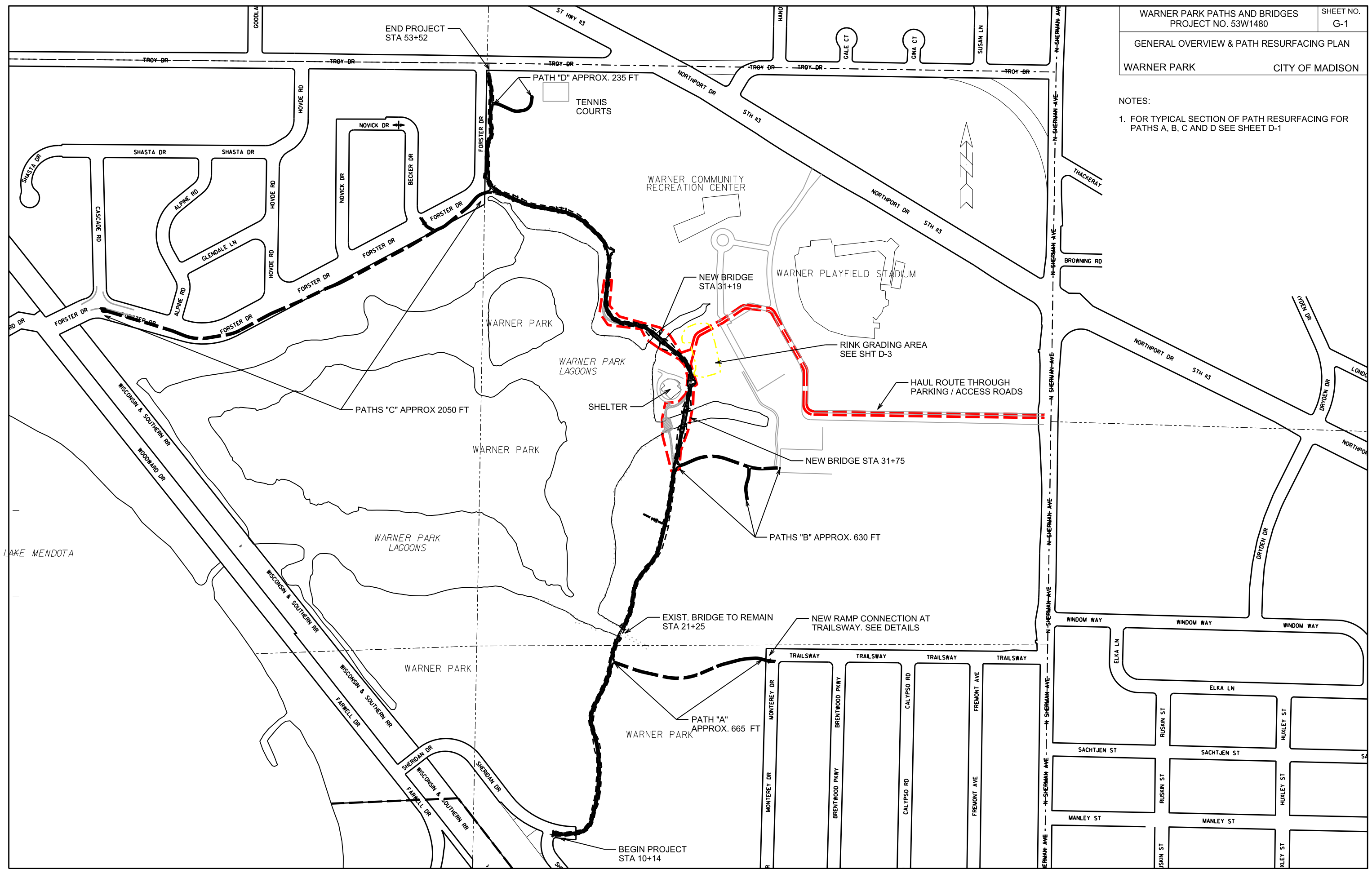
PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

NOTES:  
1. FOR TYPICAL SECTION OF PATH RESURFACING FOR PATHS A, B, C AND D SEE SHEET D-1

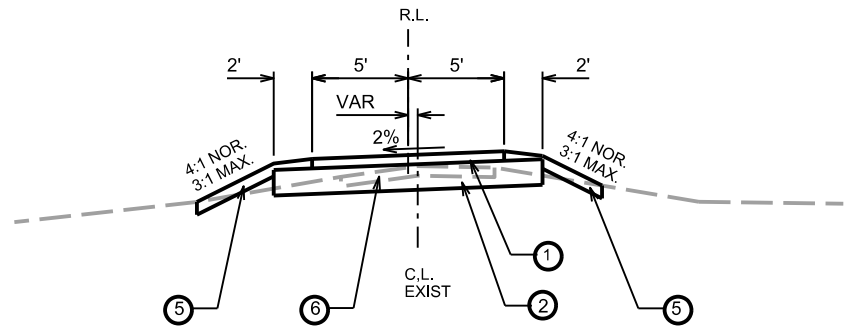


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 ORIGINATOR: CITY OF MADISON, STREETS DIVISION

TYPICAL SECTIONS

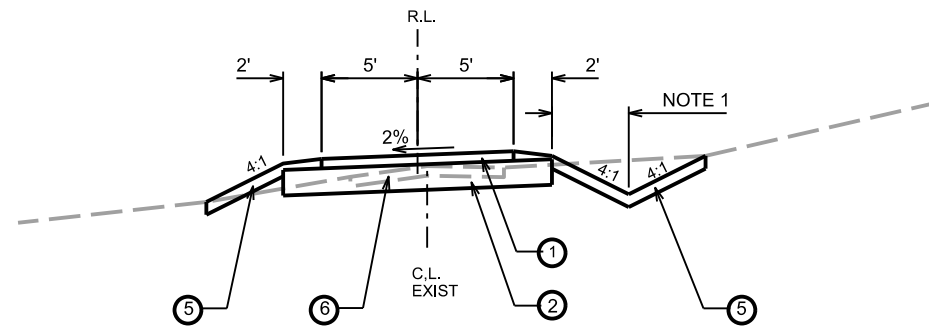
ALL PATHS

CITY OF MADISON



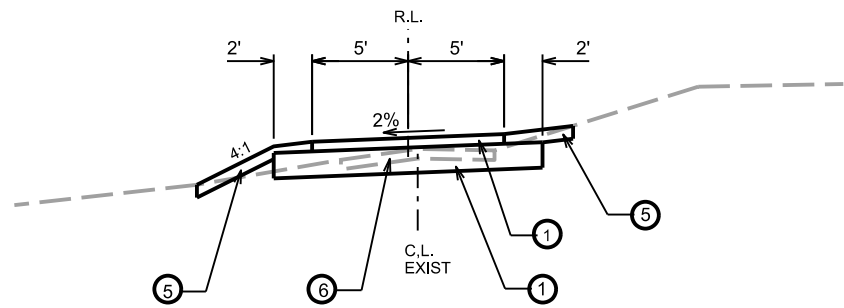
PROPOSED TYPICAL SECTION

WARNER PATH STA 10+25 TO STA 11+75  
 WARNER PATH STA 11+75 TO STA 12+50 (OPP. HAND)  
 WARNER PATH STA 16+25 TO STA 16+50  
 WARNER PATH STA 16+50 TO STA 17+50 (OPP. HAND)  
 WARNER PATH STA 17+50 TO STA 22+00  
 WARNER PATH STA 23+50 TO STA 25+25  
 WARNER PATH STA 32+25 TO STA 33+25 (OPP. HAND)  
 WARNER PATH STA 33+25 TO STA 47+50  
 WARNER PATH STA 47+50 TO STA 48+25 (OPP. HAND)



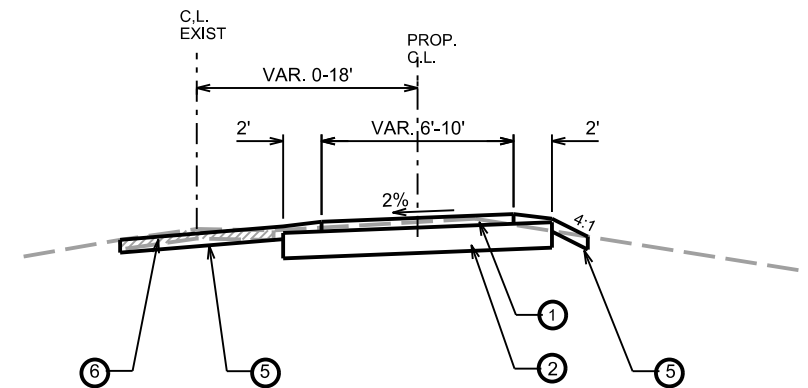
PROPOSED TYPICAL SECTION

WARNER PATH STA 12+50 TO STA 16+25  
 WARNER PATH STA 25+25 TO STA 31+00



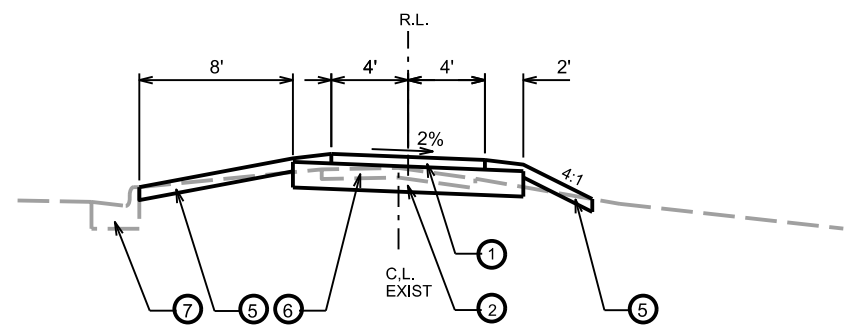
PROPOSED TYPICAL SECTION

WARNER PATH STA 22+00 TO STA 23+50  
 WARNER PATH STA 48+25 TO STA 48+90 (OPP. HAND)



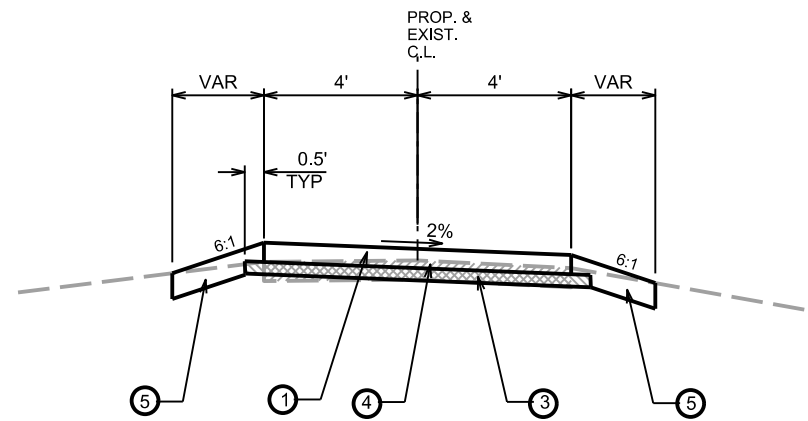
PROPOSED TYPICAL SECTION

PATH "A" TRAILWAY CONNECTOR



PROPOSED TYPICAL SECTION

WARNER PATH STA 48+90 TO STA 53+53



PROPOSED TYPICAL SECTION

RESURFACING PATHS "A", "B", "C" AND "D"

LEGEND

- ① 3" HMA PAVEMENT (NOTE 1)
- ② 8" CRUSHED AGGREGATE BASE COURSE (GRAD. NO. 2)
- ③ PULVERIZED ASPHALT, GRADED AND COMPACTED (NOTE 2)
- ④ PULVERIZE EXISTING ASPHALT 3" APPROX.
- ⑤ 4-INCH MIN. TOPSOIL, SEED AND MATTING
- ⑥ REMOVE EXIST. ASPHALT PATH (EXCAVATION CUT)
- ⑦ EXISTING CONCRETE CURB TO REMAIN

NOTES:

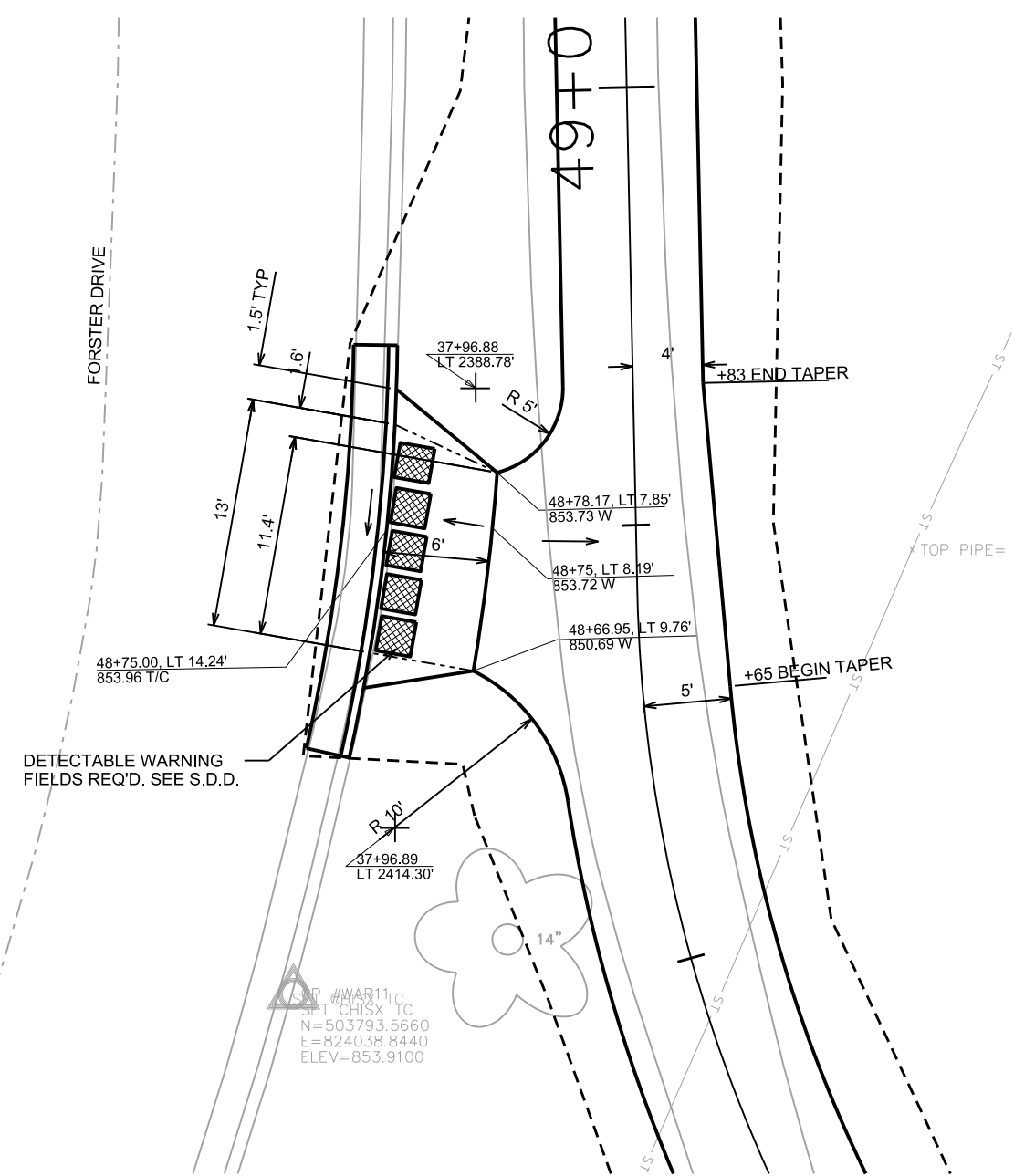
1. WHERE DITCH ELEVATIONS NOT SHOWN ON CROSS SECTIONS OFFSET TO DITCH IS 2' AND FLOW LINE ELEVATION IS 0.5' BELOW SHOULDER POINT.
2. FILL SLOPES FOR MAIN PATH ARE 4:1 UNLESS OTHERWISE SHOWN ON ON CROSS SECTIONS.

PLOT SCALE: \_\_\_\_\_

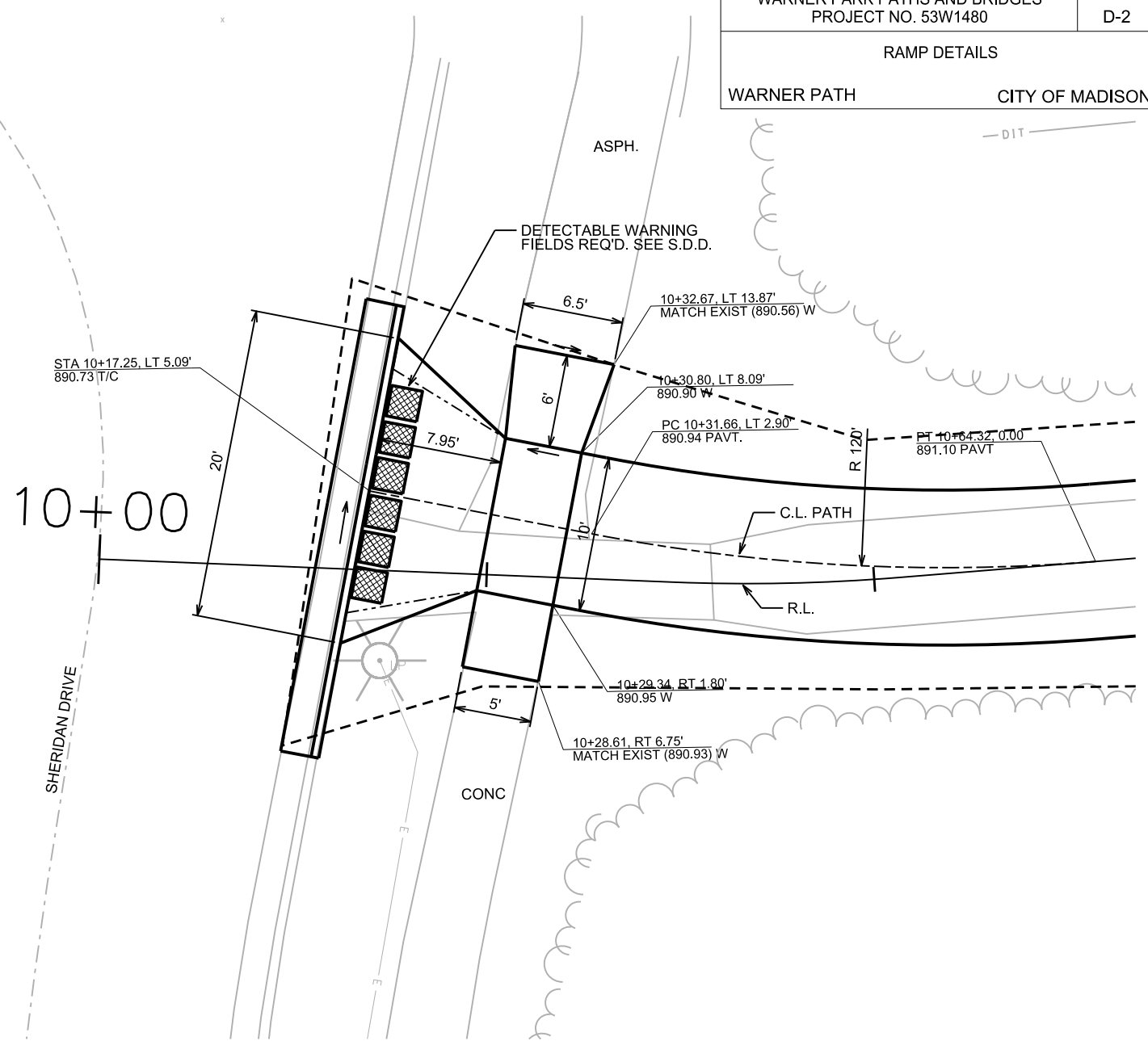
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REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



**RAMP DETAIL STA 48+75**

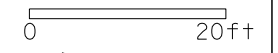


**RAMP DETAIL STA 10+17**

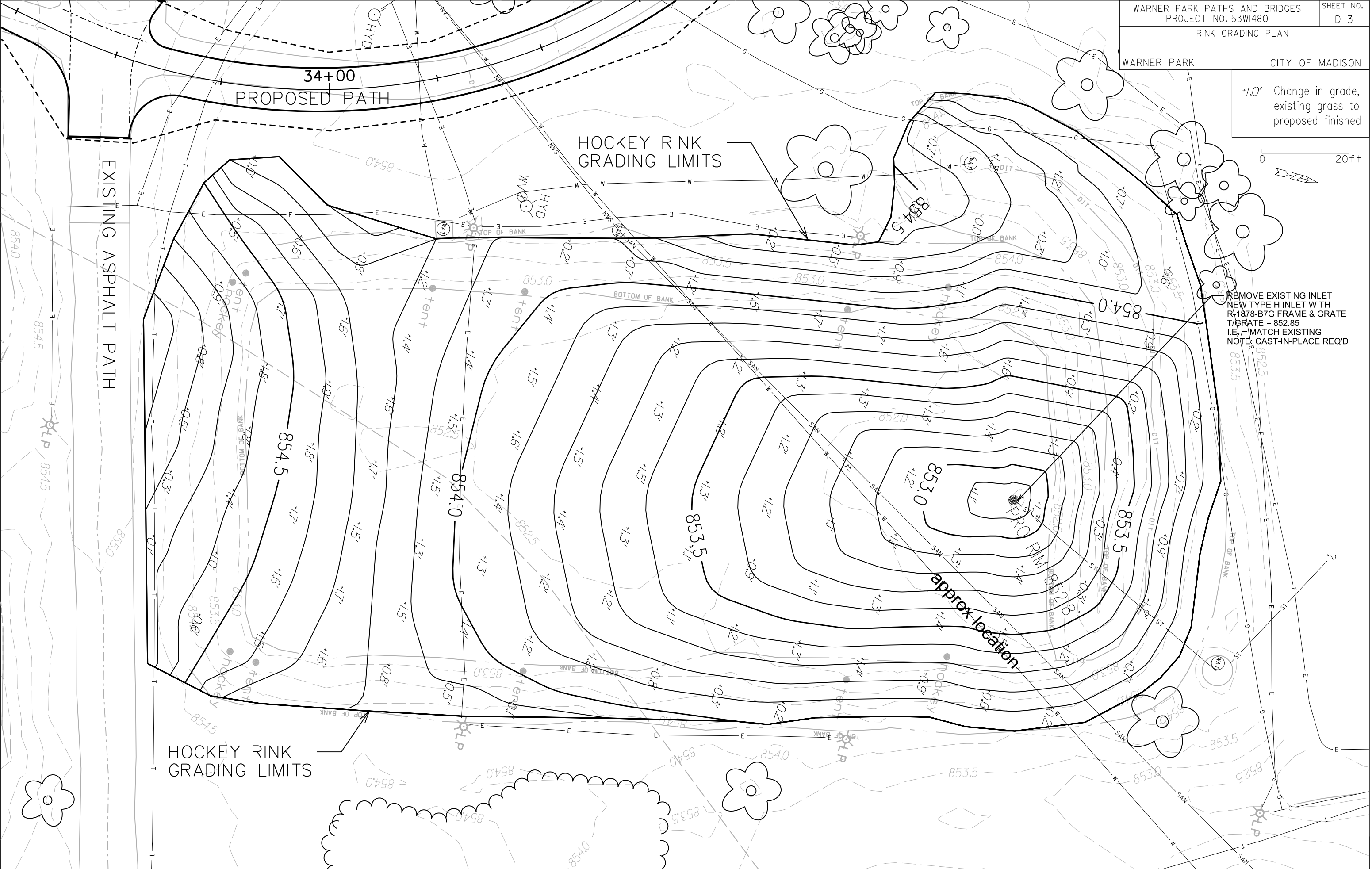
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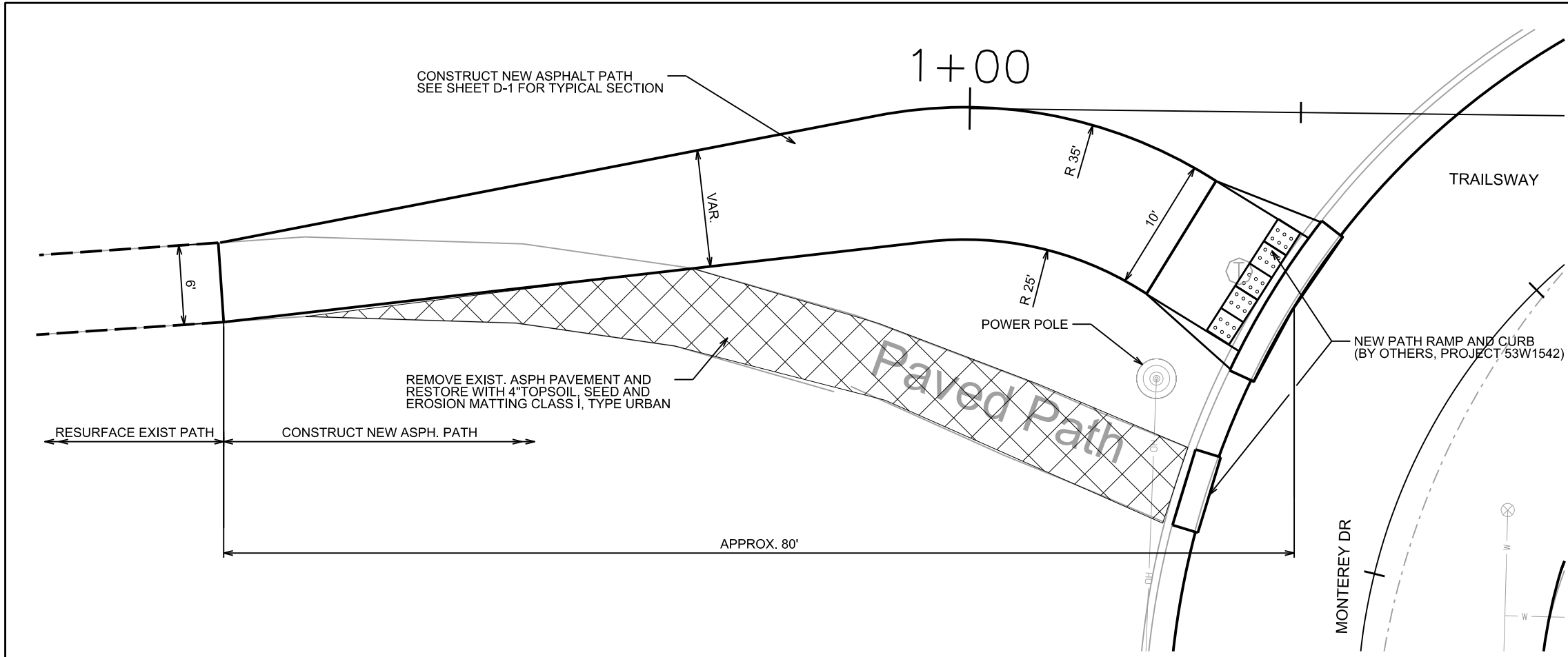
+1.0' Change in grade,  
existing grass to  
proposed finished



REMOVE EXISTING INLET  
NEW TYPE H INLET WITH  
R-1878-B7G FRAME & GRATE  
T/GRATE = 852.85  
I.E. = MATCH EXISTING  
NOTE: CAST-IN-PLACE REQ'D



PLOT SCALE: \_\_\_\_\_  
PLOT NAME: \_\_\_\_\_  
REV. DATE: \_\_\_\_\_



**PATH "A" RAMP CONNECTION DETAIL AT TRAILSWAY**

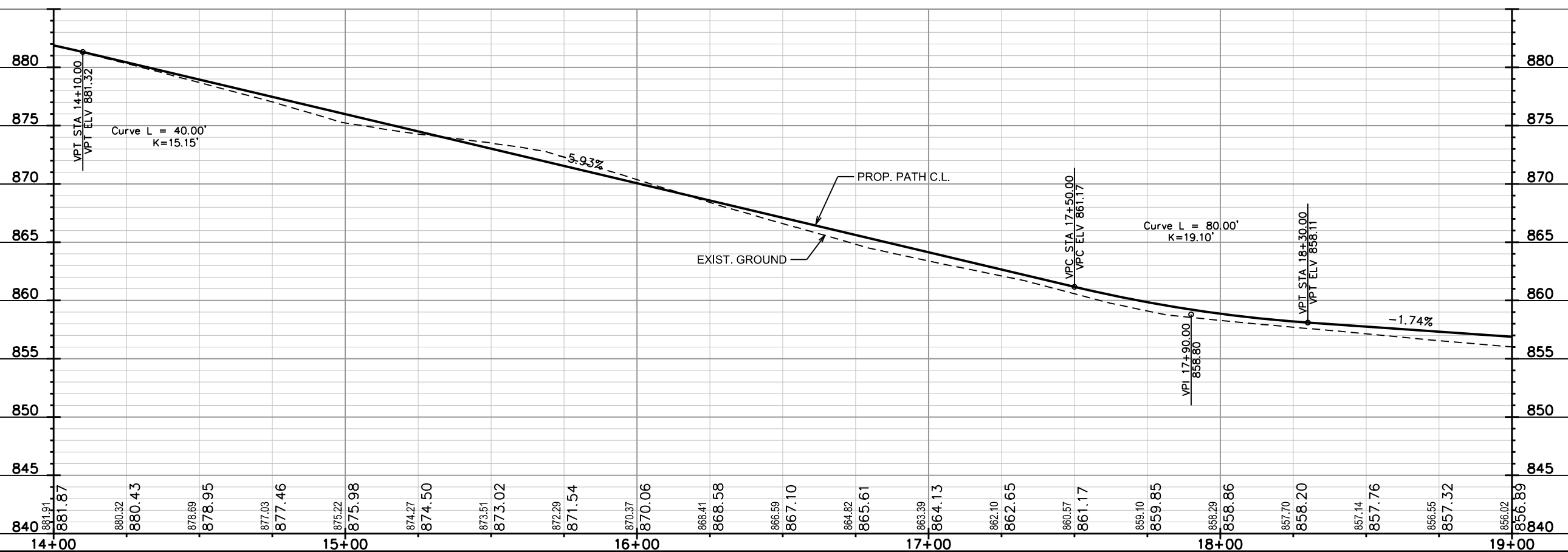
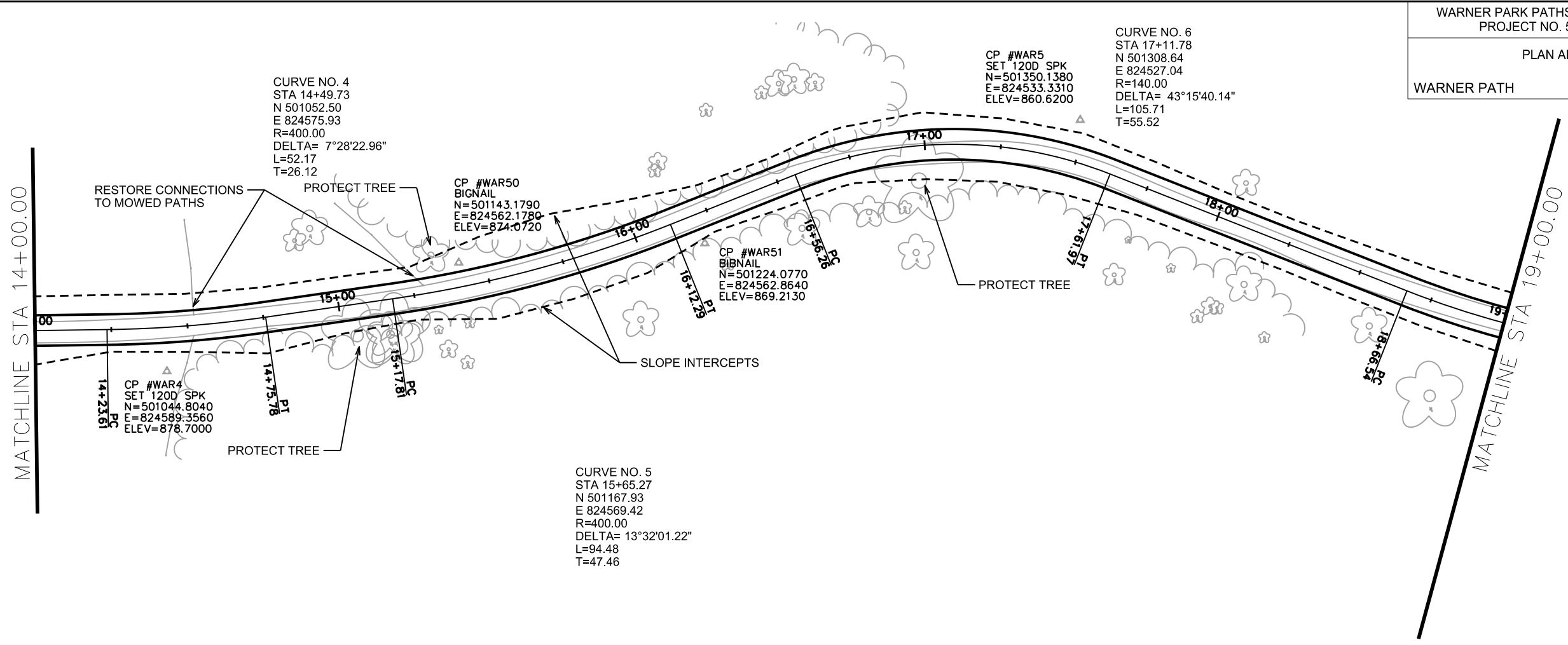
PLOT SCALE: \_\_\_\_\_

PLOT NAME: \_\_\_\_\_

REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION





ORIGINATOR: CITY OF MADISON, STREETS DIVISION

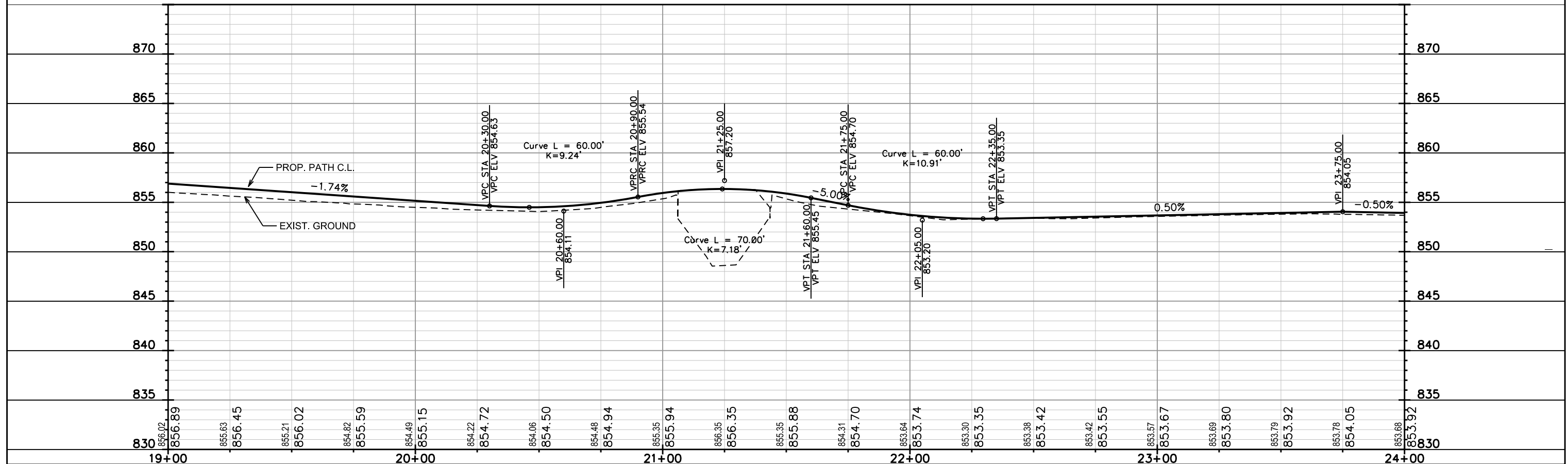
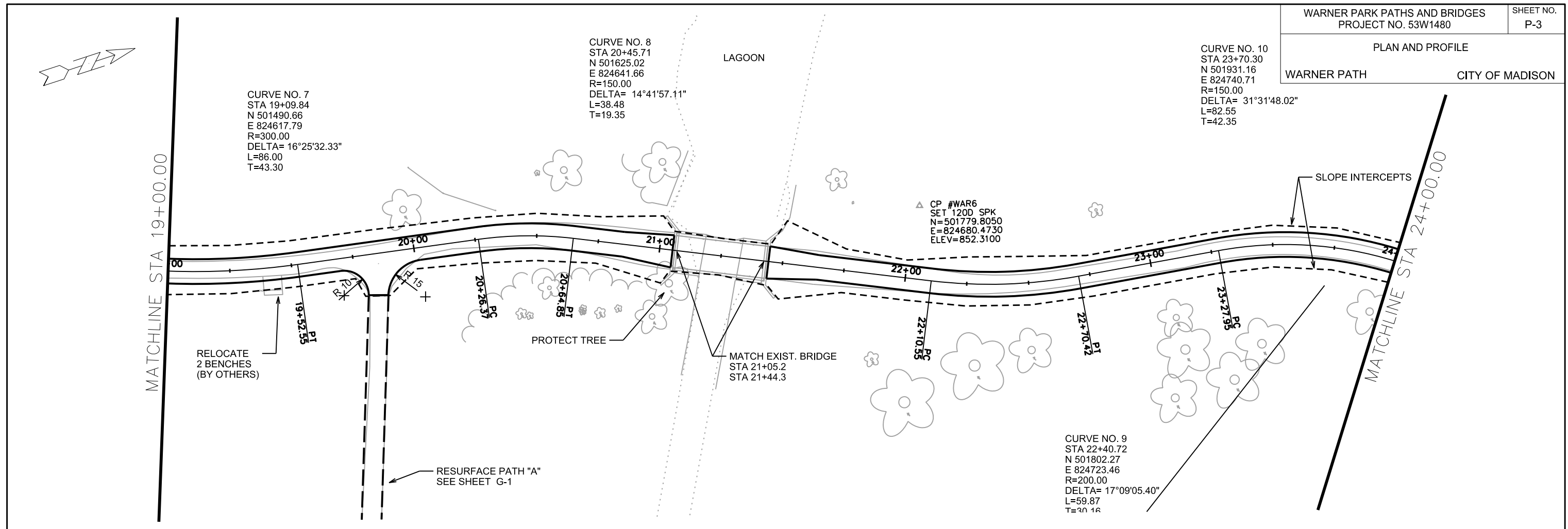
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PLOT NAME: \_\_\_\_\_

PLOT SCALE: \_\_\_\_\_



PLAN AND PROFILE  
WARNER PATH CITY OF MADISON



ORIGINATOR: CITY OF MADISON, STREETS DIVISION  
REV. DATE:  
PLOT NAME:  
PLOT SCALE:



CURVE NO. 11  
STA 25+32.48  
N 502058.59  
E 824844.46  
R=180.00  
DELTA= 25°04'10.62"  
L=78.76  
T=40.02

NOTE: LOCATION OF DITCH DAYLIGHT IS APPROXIMATE. EXACT LOCATION TO BE DETERMINED BY CONSTR. ENGINEER

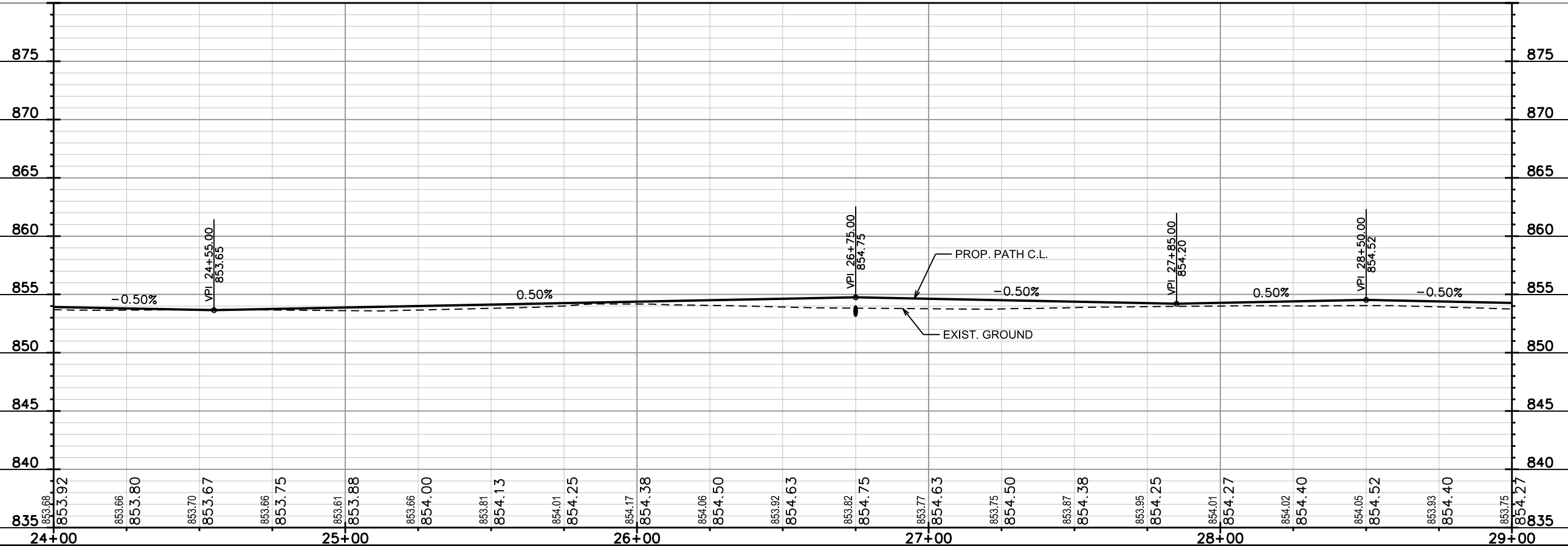
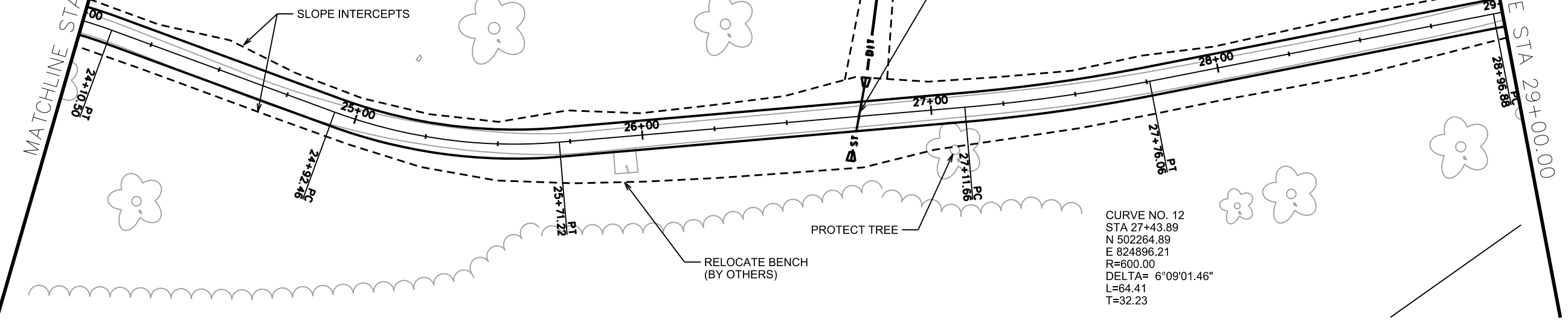
SPECIAL DITCH AT 0.4% TO DAYLIGHT. DEPTH VARIES 0' TO APPROX. 1.0'. USE 2' FLAT BOTTOM, 6:1 SIDE SLOPES. RESTORE WITH 4" TOPSOIL, TERRACE SEED AND EROSION MATTING CLASS I TYPE URBAN

P-1  
STA 26+75, SKEW 15° LHF  
26" - 8" SDR 26 PVC PIPE  
I.E. RT = 853.05 I.E. LT = 852.90  
CUT ENDS TO MATCH SLOPE OF EMBANKMENT

CURVE NO. 12  
STA 27+43.89  
N 502264.89  
E 824896.21  
R=600.00  
DELTA= 6°09'01.46"  
L=64.41  
T=32.23

MATCHLINE STA 24+00.00

MATCHLINE STA 29+00.00

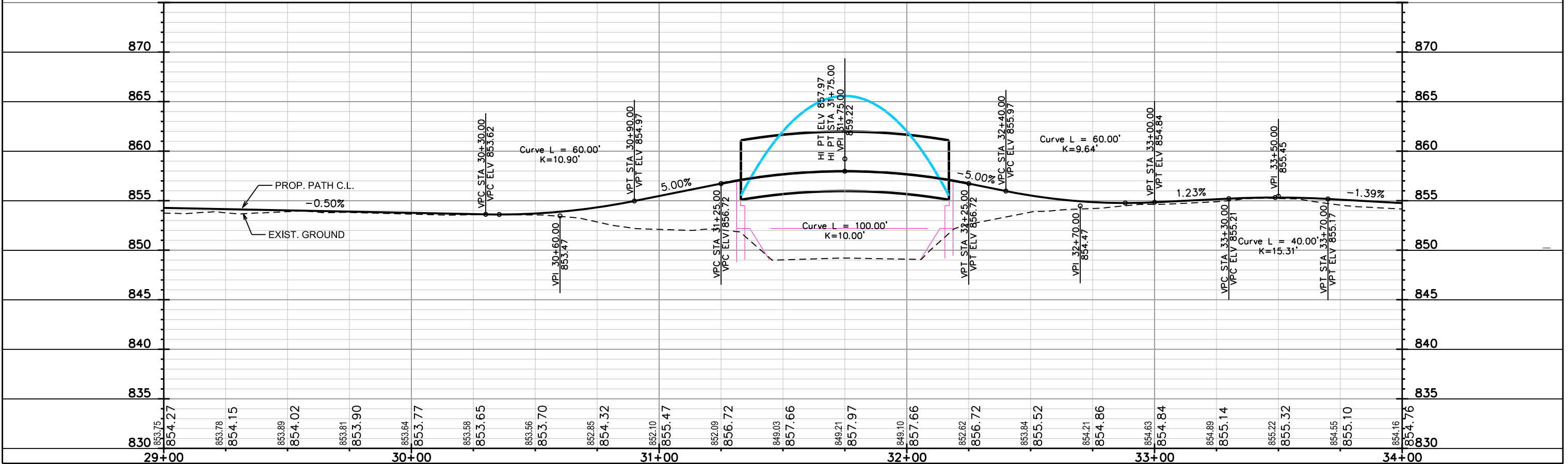
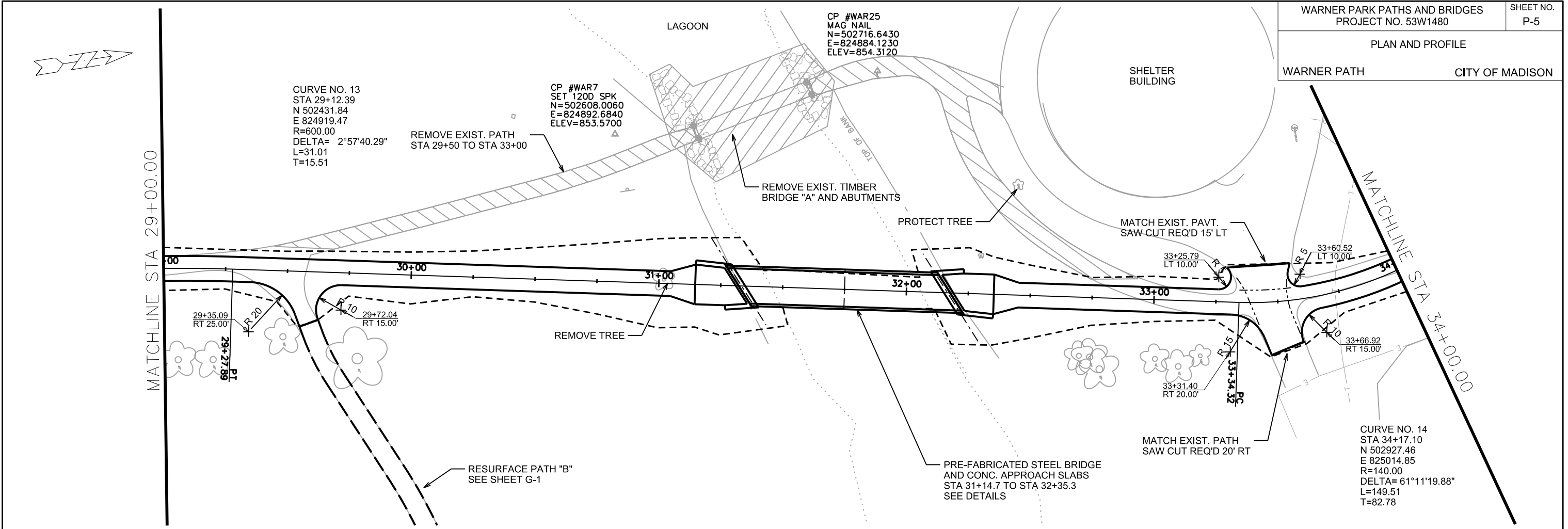


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PLOT NAME: \_\_\_\_\_

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PLOT SCALE: \_\_\_\_\_  
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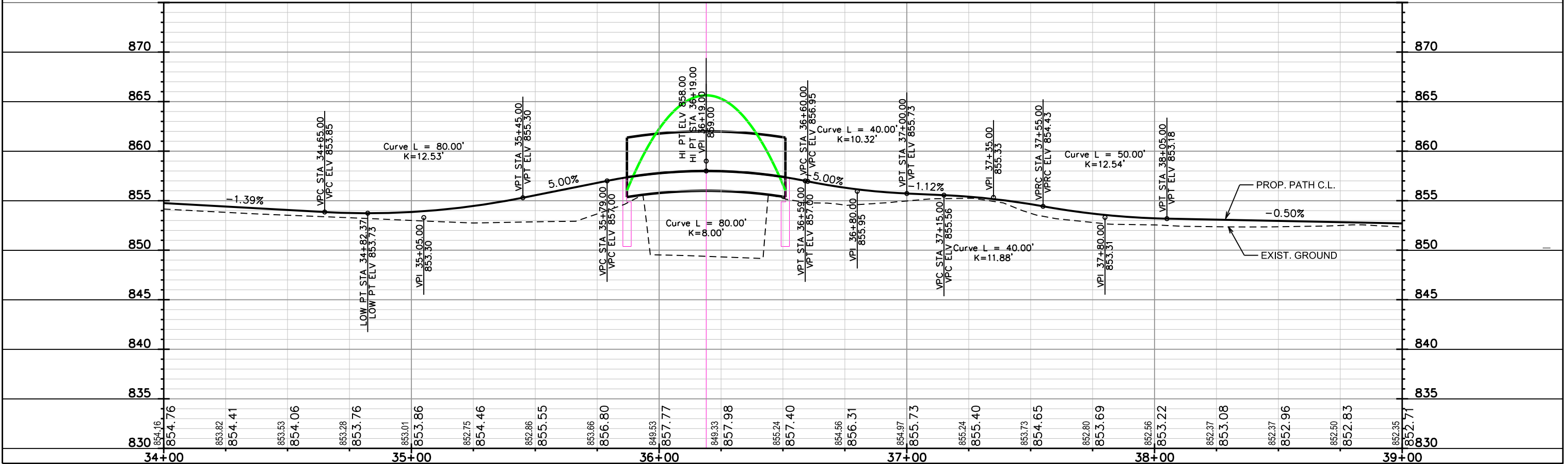
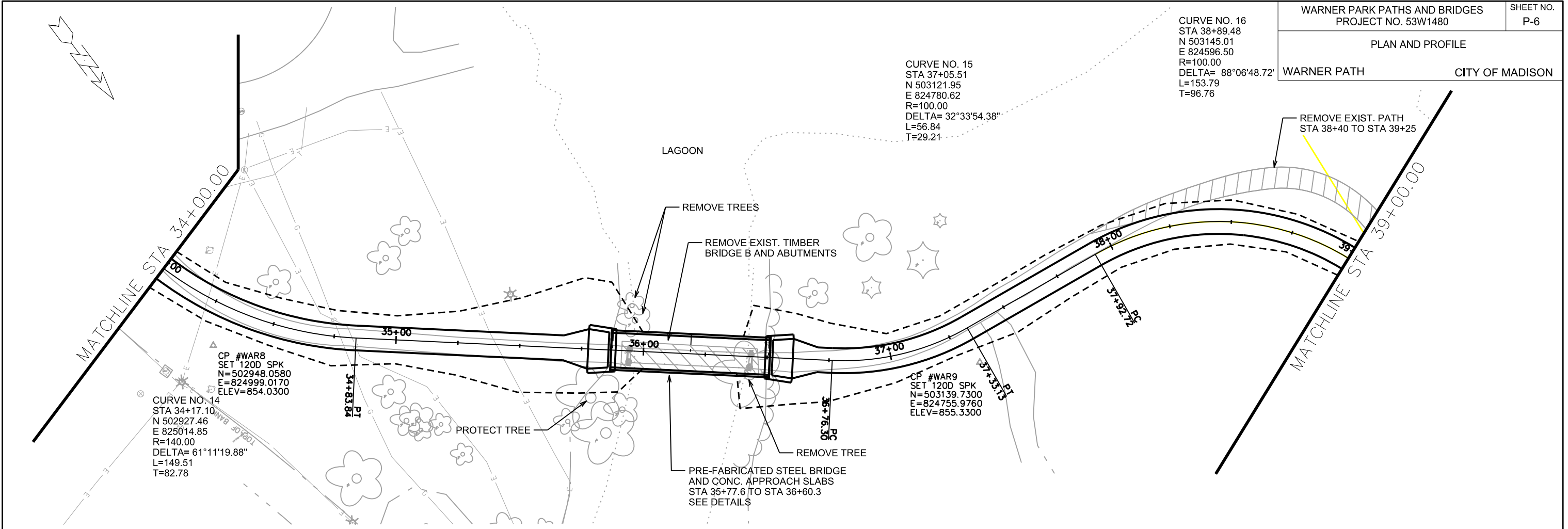
CURVE NO. 16  
STA 38+89.48  
N 503145.01  
E 824596.50  
R=100.00  
DELTA= 88°06'48.72"  
L=153.79  
T=96.76

CURVE NO. 15  
STA 37+05.51  
N 503121.95  
E 824780.62  
R=100.00  
DELTA= 32°33'54.38"  
L=56.84  
T=29.21

CURVE NO. 14  
STA 34+17.10  
N 502927.46  
E 825014.85  
R=140.00  
DELTA= 61°11'19.88"  
L=149.51  
T=82.78

CP #WAR8  
SET 120D SPK  
N=502948.0580  
E=824999.0170  
ELEV=854.0300

CP #WAR9  
SET 120D SPK  
N=503139.7300  
E=824755.9760  
ELEV=855.3300

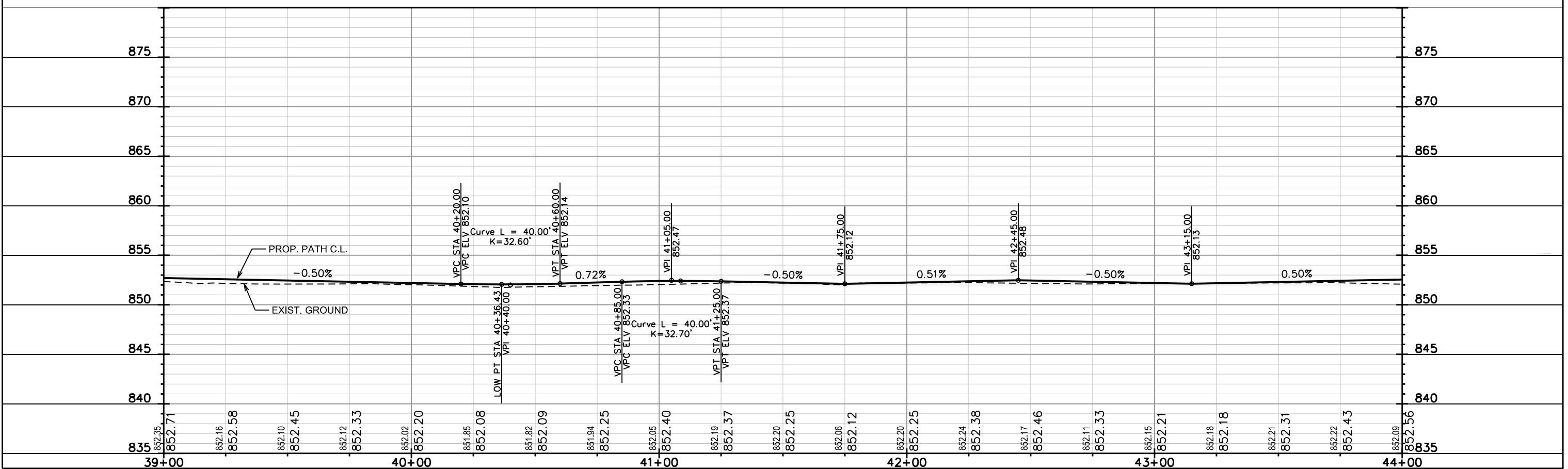
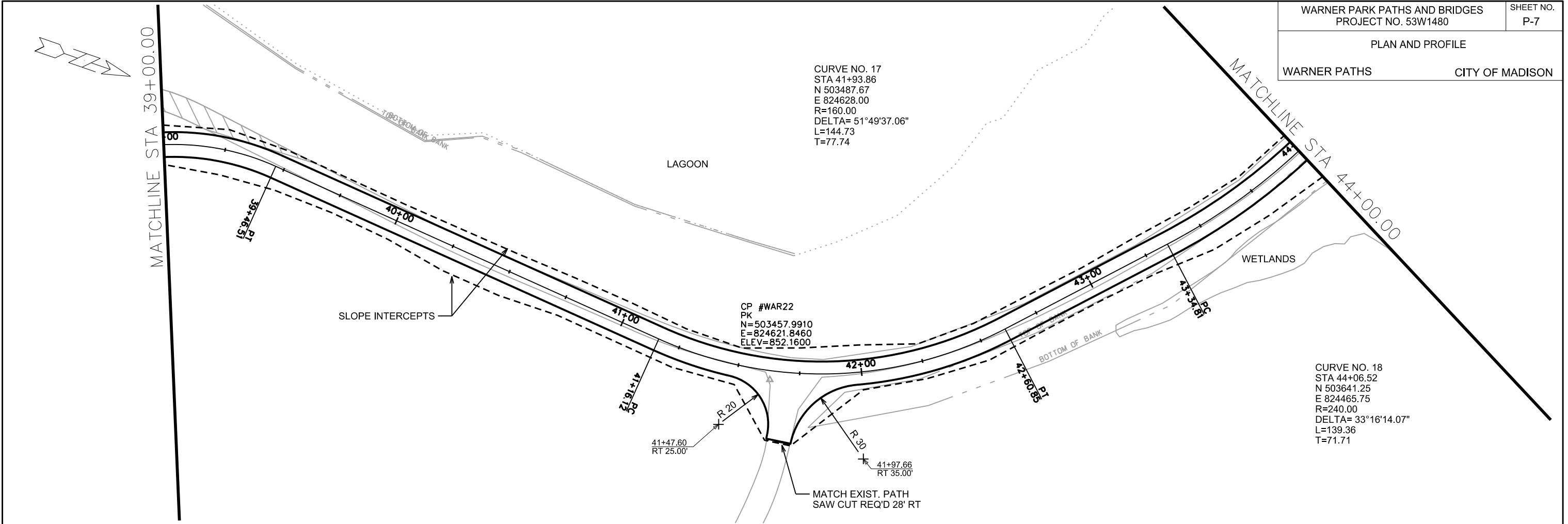


PLOT SCALE: \_\_\_\_\_

PLOT NAME: \_\_\_\_\_

REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



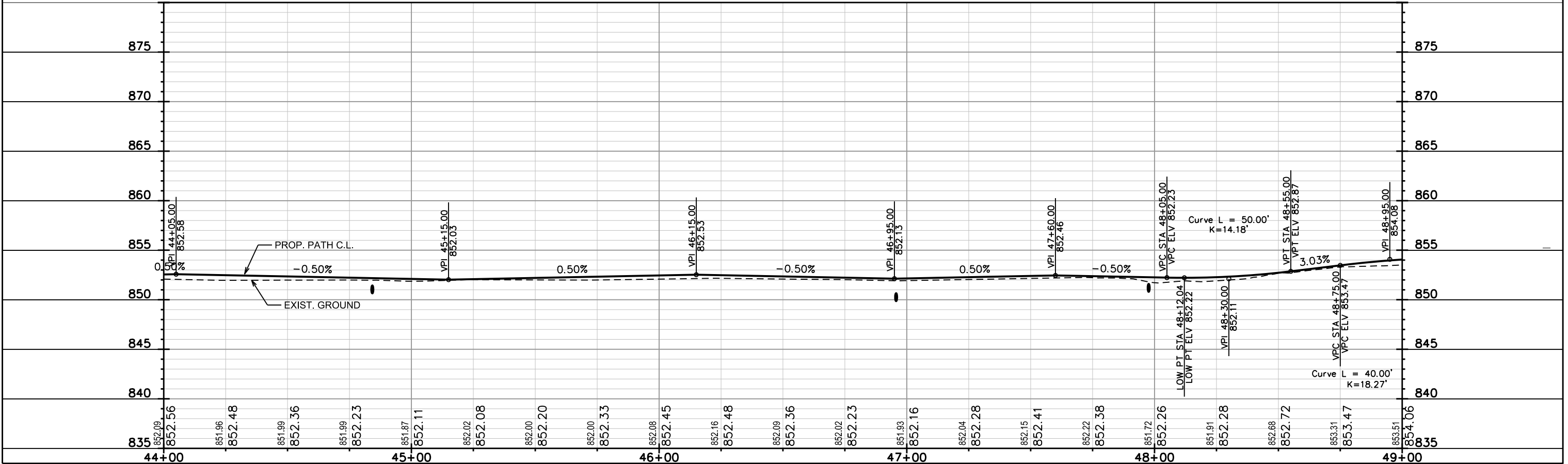
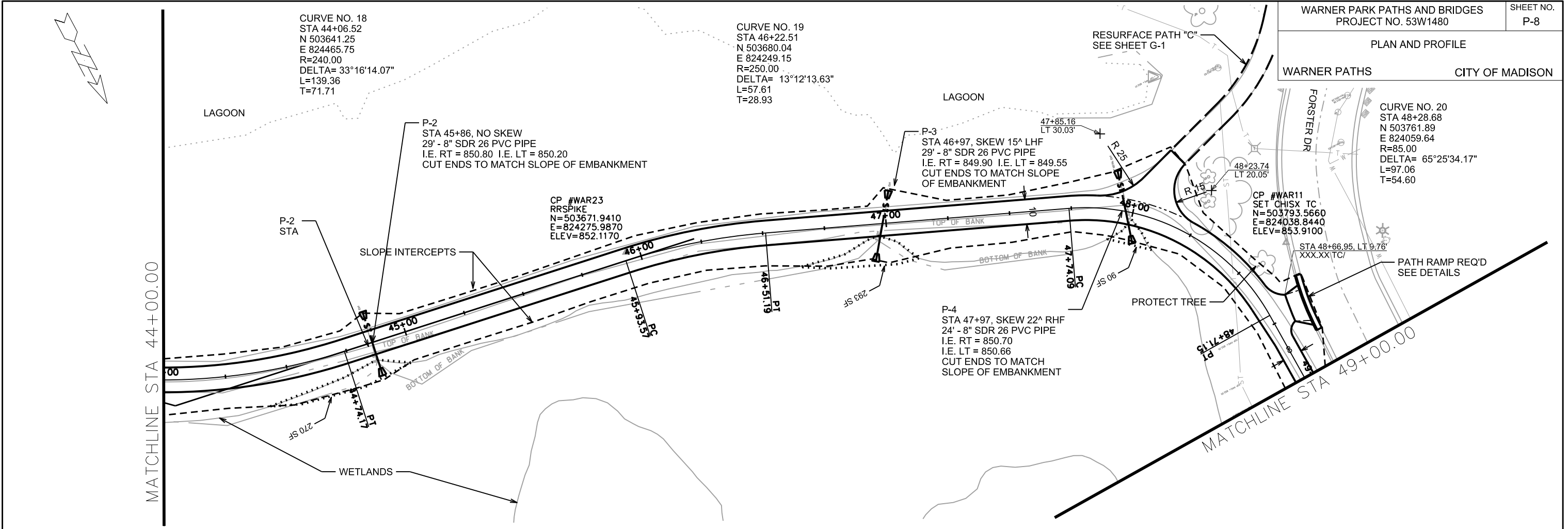
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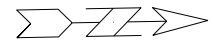
ORIGINATOR: CITY OF MADISON, STREETS DIVISION

PLAN AND PROFILE  
WARNER PATHS CITY OF MADISON



PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_  
 ORIGINATOR: CITY OF MADISON, STREETS DIVISION

PLAN AND PROFILE  
WARNER PATH CITY OF MADISON



CURVE NO. 21  
STA 50+14.86  
N 503960.15  
E 824055.43  
R=90.00  
DELTA= 25°45'36.26"  
L=40.46  
T=20.58

CURVE NO. 22  
STA 50+73.29  
N 504013.93  
E 824079.99  
R=90.00  
DELTA= 35°44'47.70"  
L=56.15  
T=29.02

CURVE NO. 23  
STA 51+26.02  
N 504067.52  
E 824069.38  
R=150.00  
DELTA= 13°45'33.80"  
L=36.02  
T=18.10

CURVE NO. 24  
STA 52+78.68  
N 504220.20  
E 824076.20  
R=120.00  
DELTA= 17°00'58.98"  
L=35.64  
T=17.95

CURVE NO. 25  
STA 53+28.08  
N 504268.29  
E 824063.80  
R=120.00  
DELTA= 14°33'28.02"  
L=30.49  
T=15.33

CP #WAR24  
X ON SW  
N=504107.6690  
E=824007.9180  
ELEV=856.4650

P.O.T. STA 53+99.69  
N 504340.06  
E 824063.92

SECTION CORNER  
N=504339.6030  
E=824056.0330

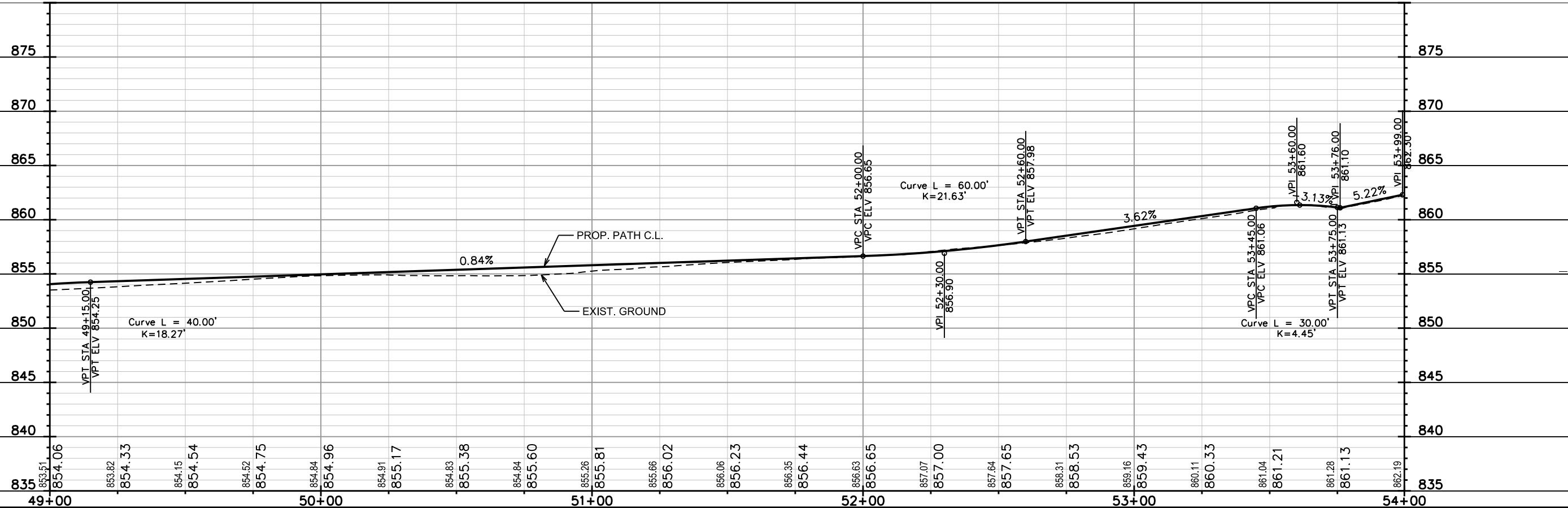
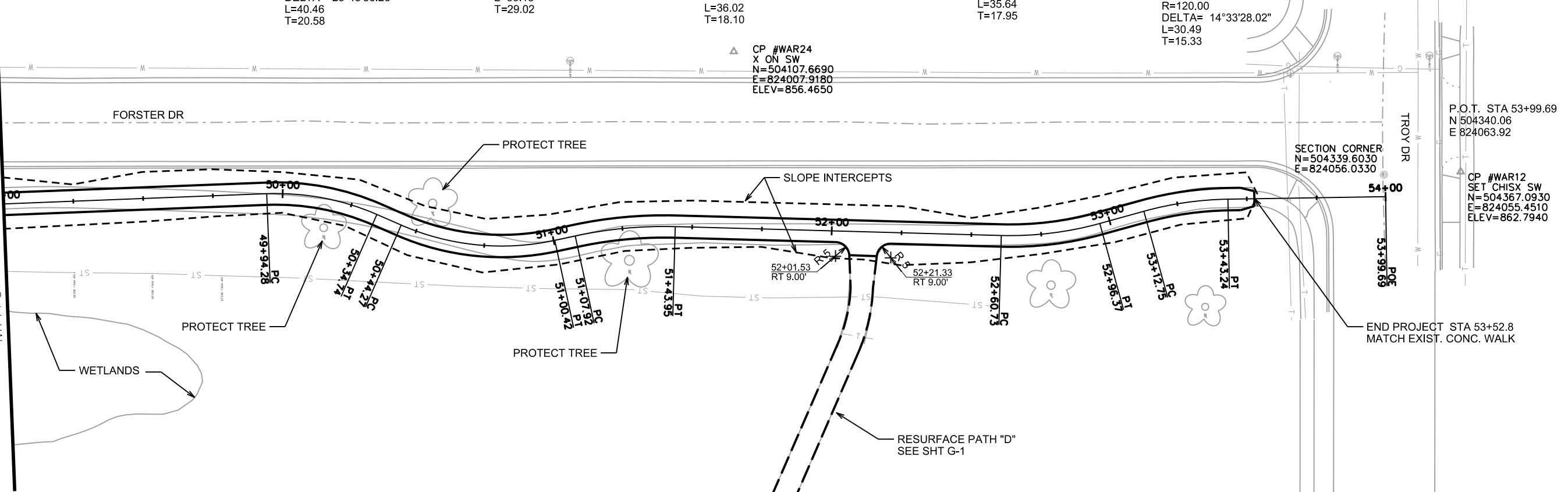
CP #WAR12  
SET CHISX SW  
N=504367.0930  
E=824055.4510  
ELEV=862.7940

MATCHLINE STA 49+00.00

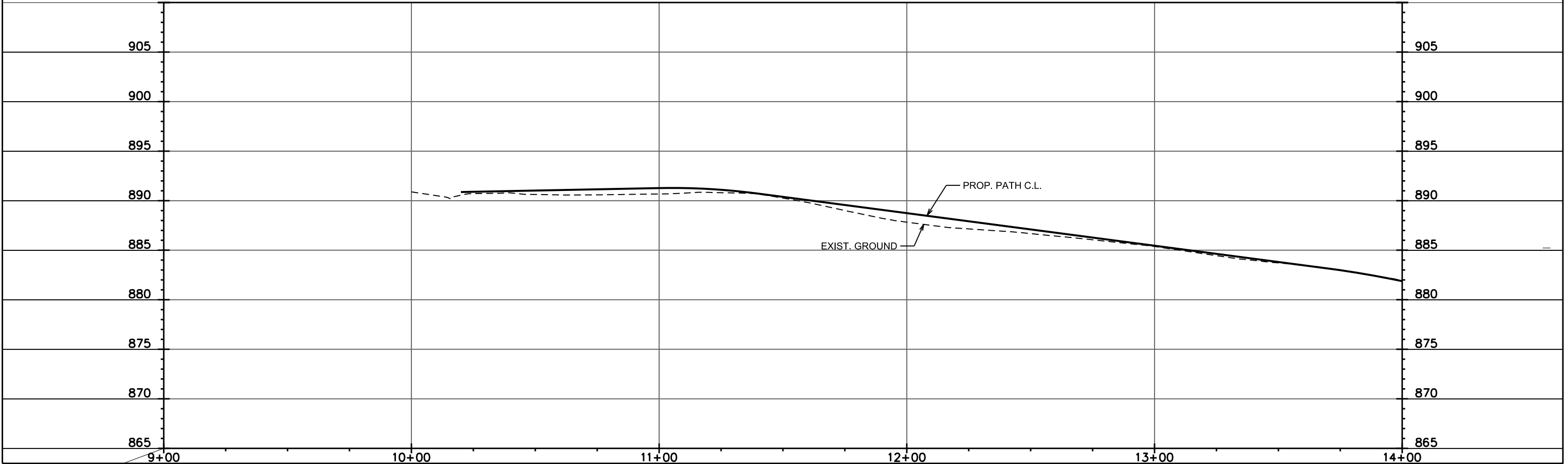
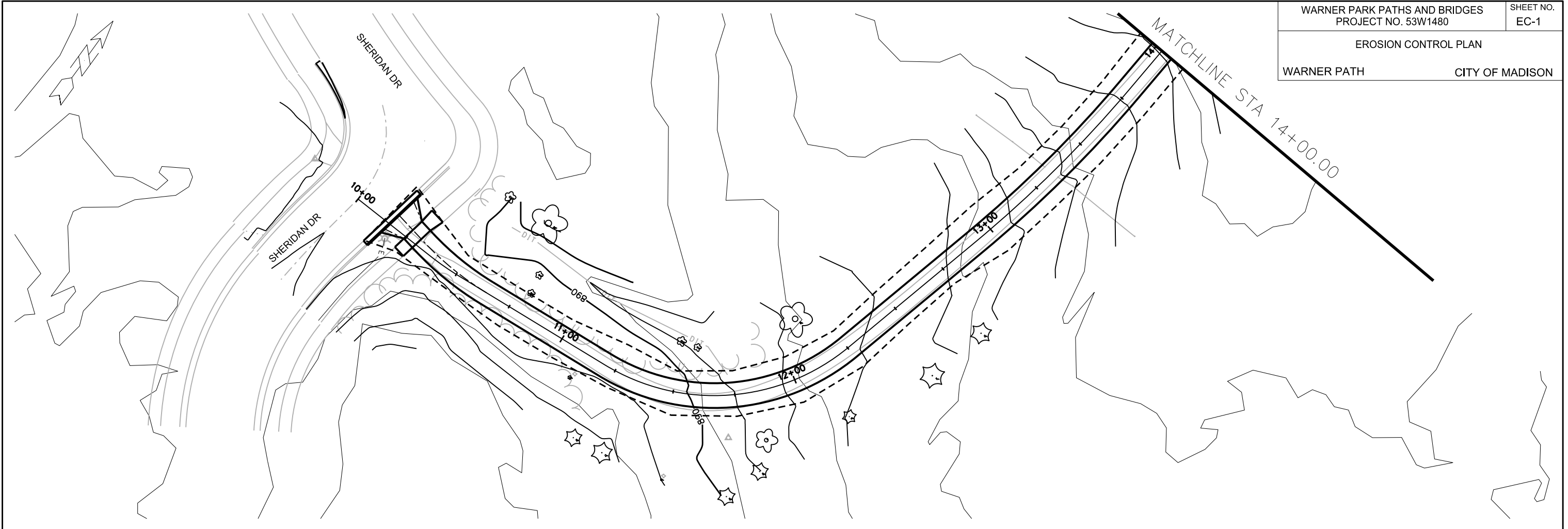
FORSTER DR

TROY DR

END PROJECT STA 53+52.8  
MATCH EXIST. CONC. WALK



PLOT SCALE: \_\_\_\_\_  
PLOT NAME: \_\_\_\_\_  
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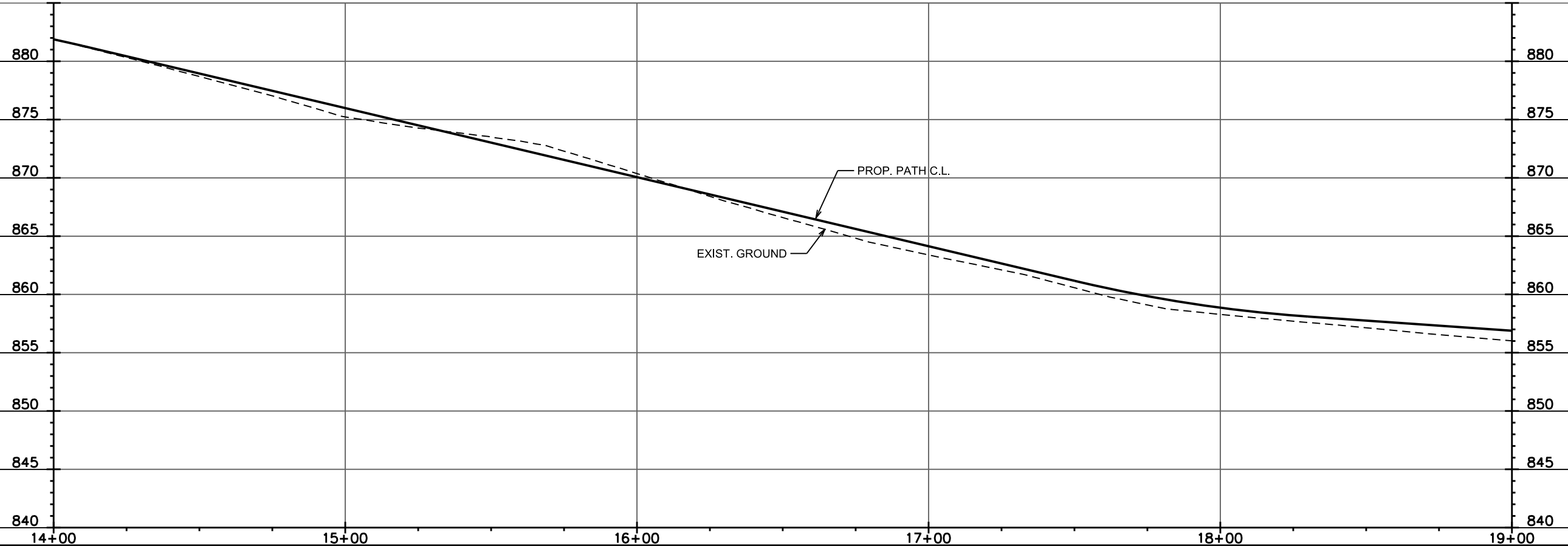
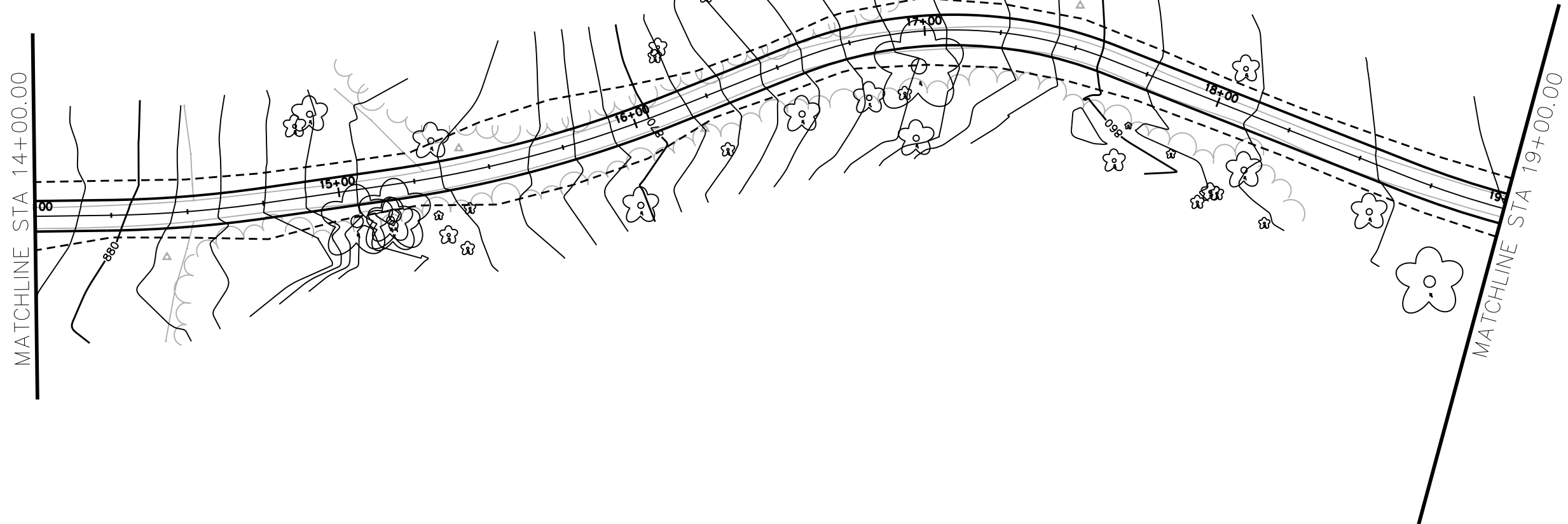
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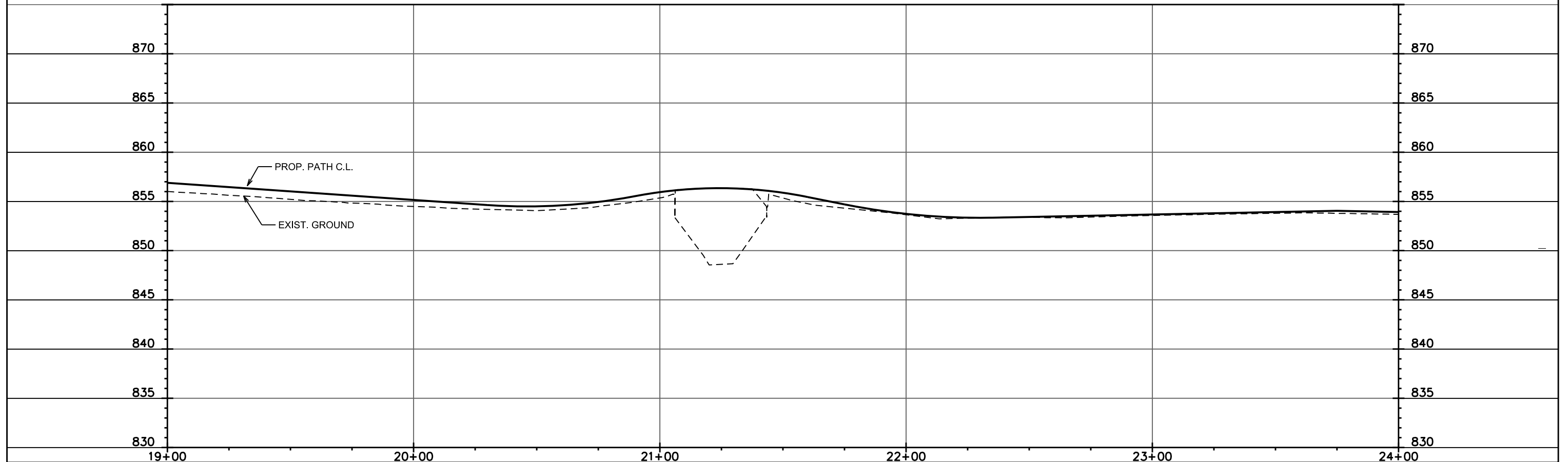
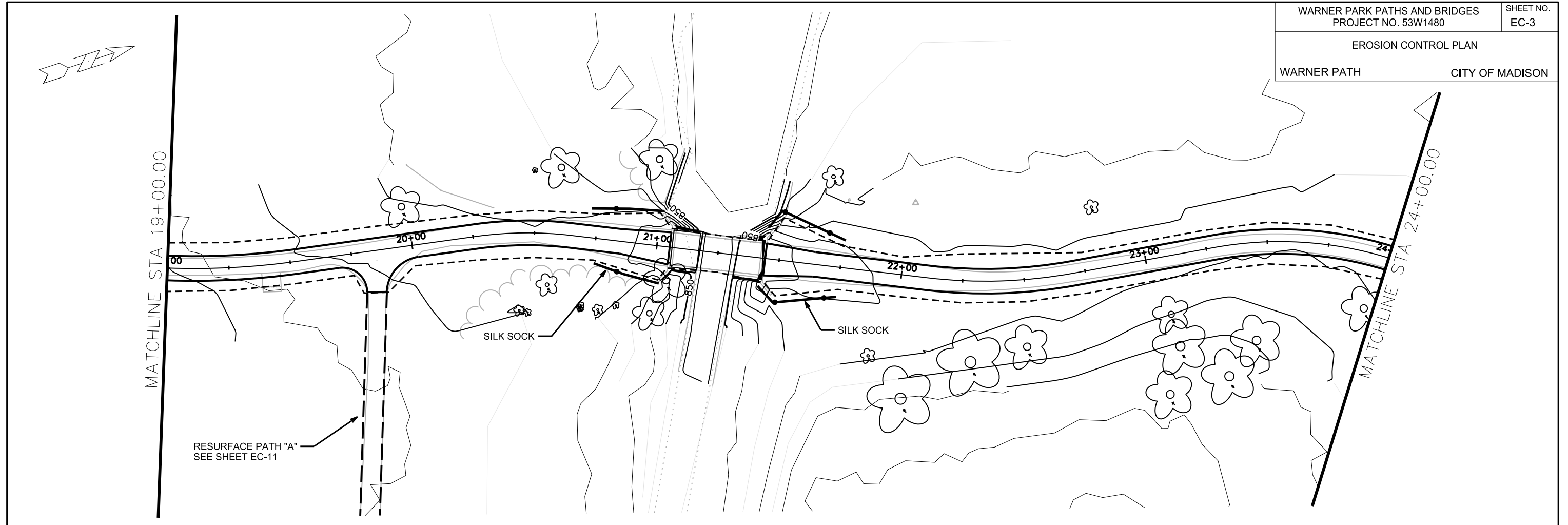


PLOT NAME: \_\_\_\_\_  
 PLOT SCALE: \_\_\_\_\_  
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 ORIGINATOR: CITY OF MADISON, STREETS DIVISION

EROSION CONTROL PLAN

WARNER PATH

CITY OF MADISON



PLOT SCALE: \_\_\_\_\_

PLOT NAME: \_\_\_\_\_

REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

EROSION CONTROL PLAN

WARNER PATH

CITY OF MADISON

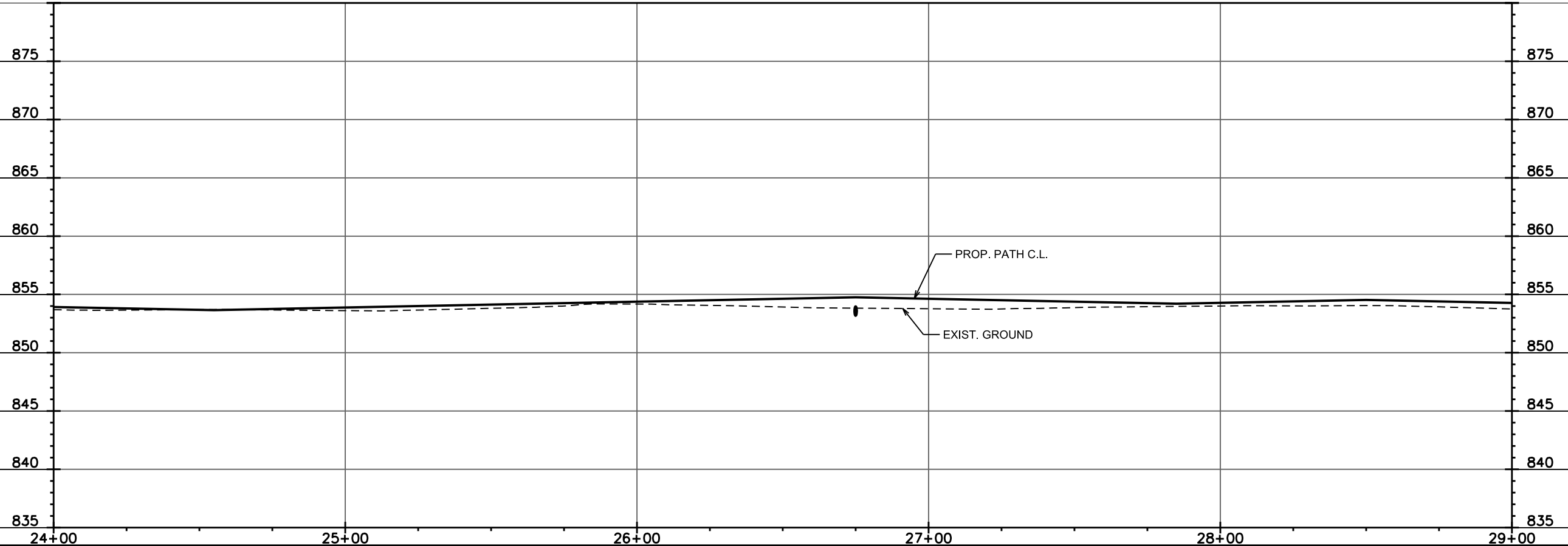
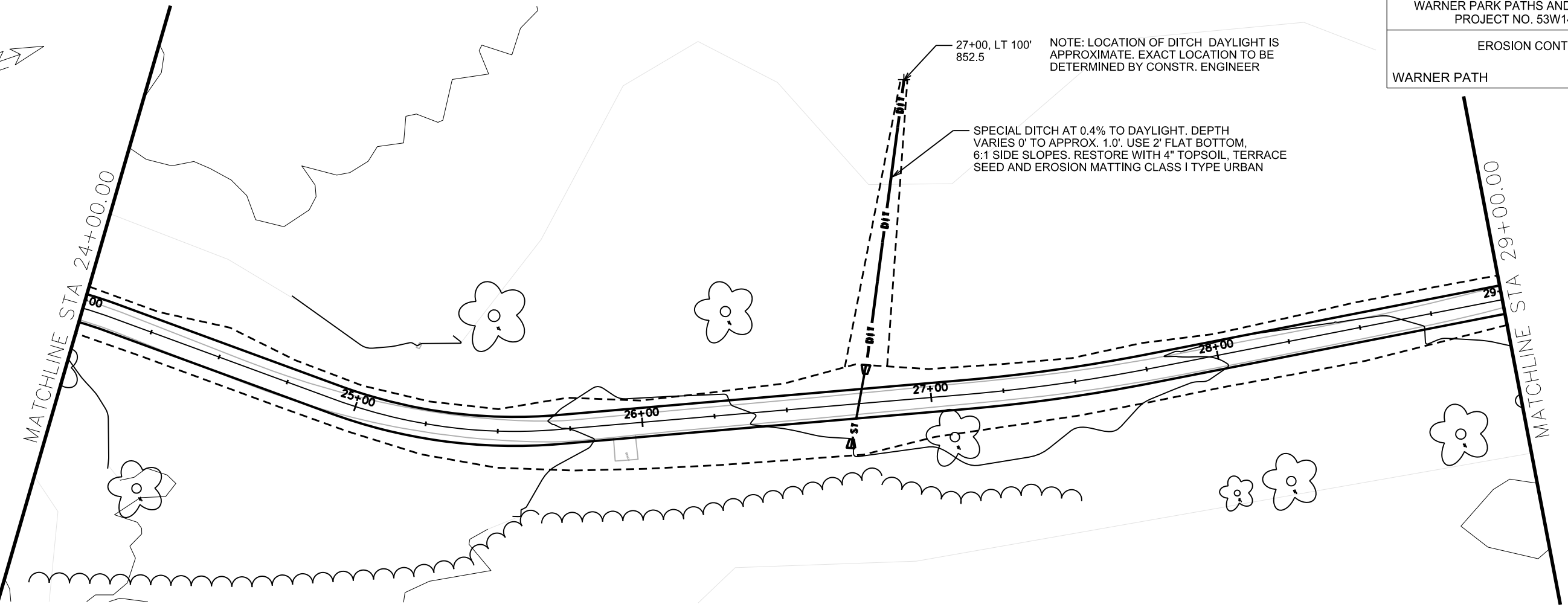


MATCHLINE STA 24+00.00

MATCHLINE STA 29+00.00

27+00, LT 100'  
852.5  
NOTE: LOCATION OF DITCH DAYLIGHT IS APPROXIMATE. EXACT LOCATION TO BE DETERMINED BY CONSTR. ENGINEER

SPECIAL DITCH AT 0.4% TO DAYLIGHT. DEPTH VARIES 0' TO APPROX. 1.0'. USE 2" FLAT BOTTOM, 6:1 SIDE SLOPES. RESTORE WITH 4" TOPSOIL, TERRACE SEED AND EROSION MATTING CLASS I TYPE URBAN

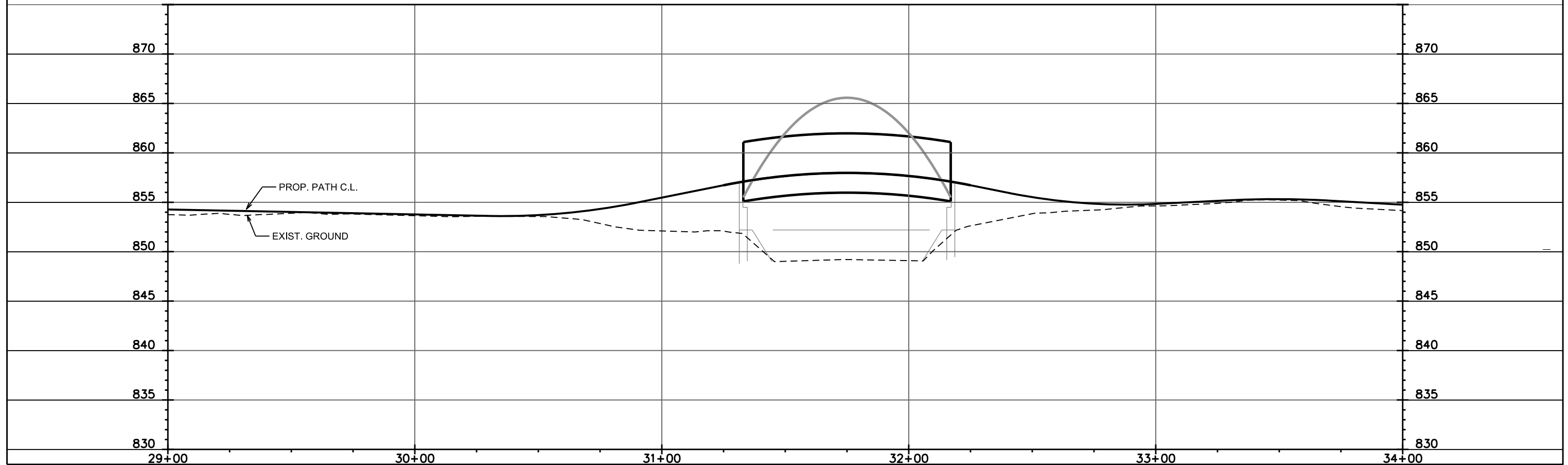
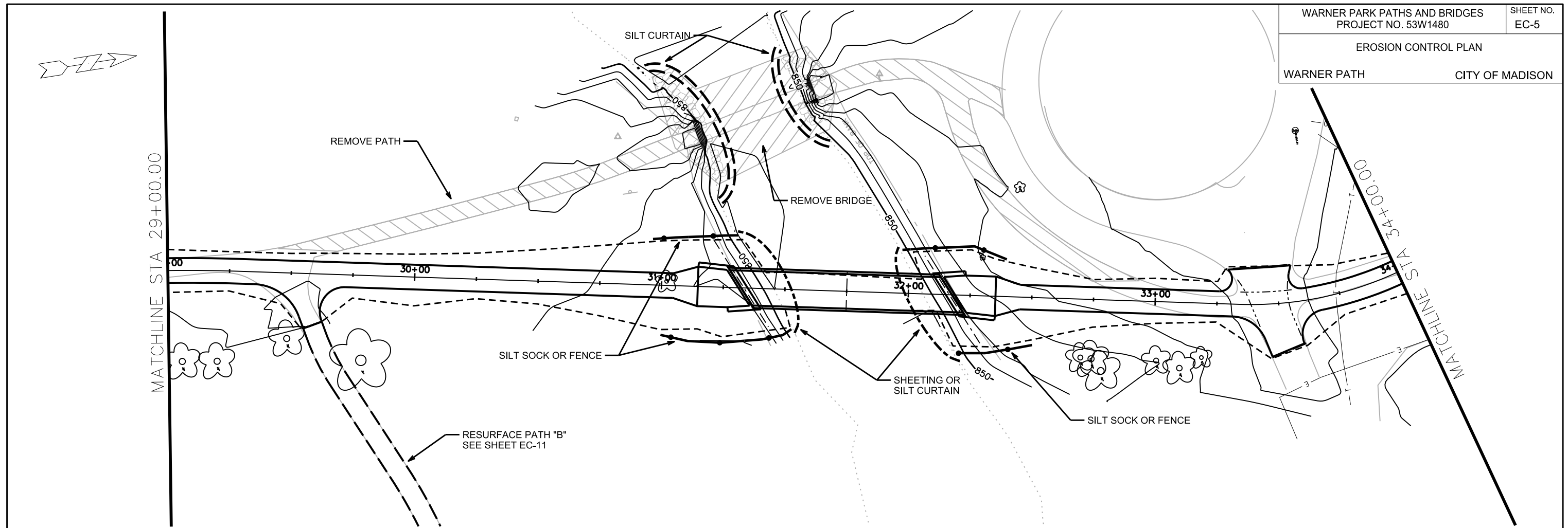


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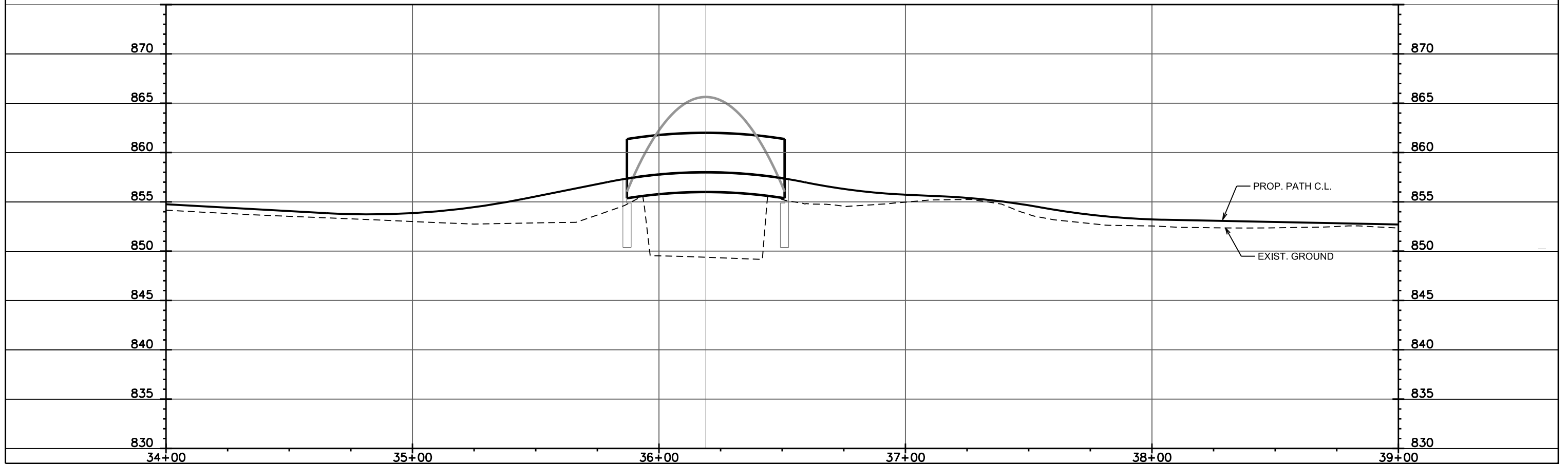
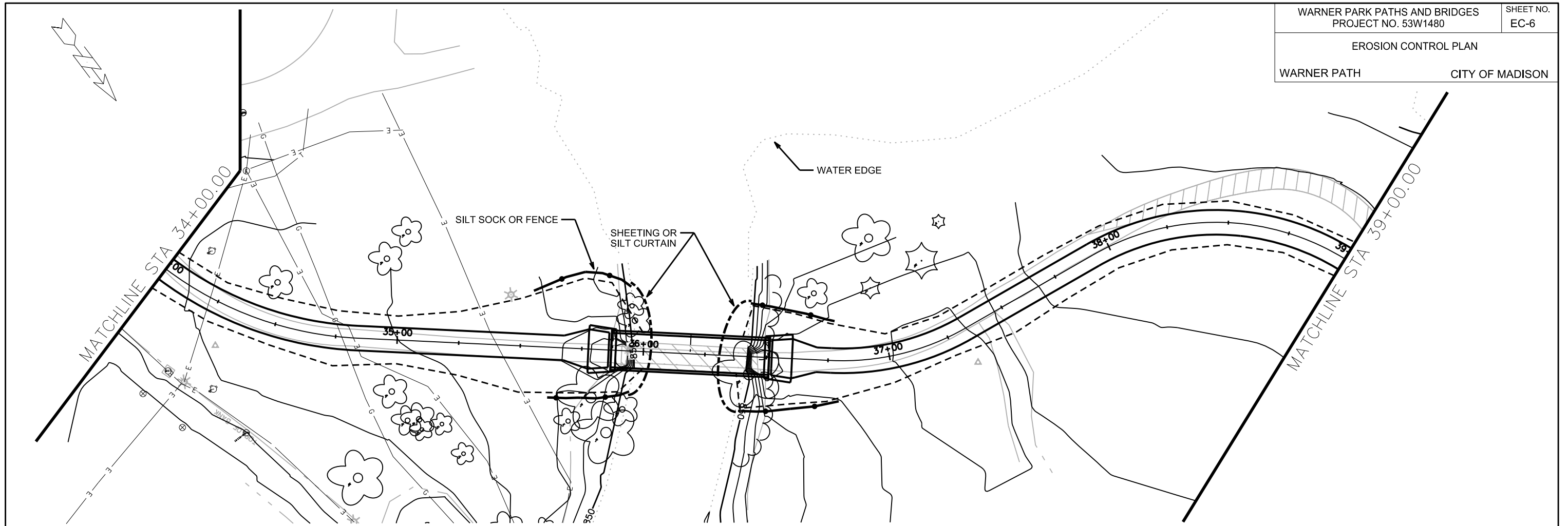
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EROSION CONTROL PLAN

WARNER PATH

CITY OF MADISON

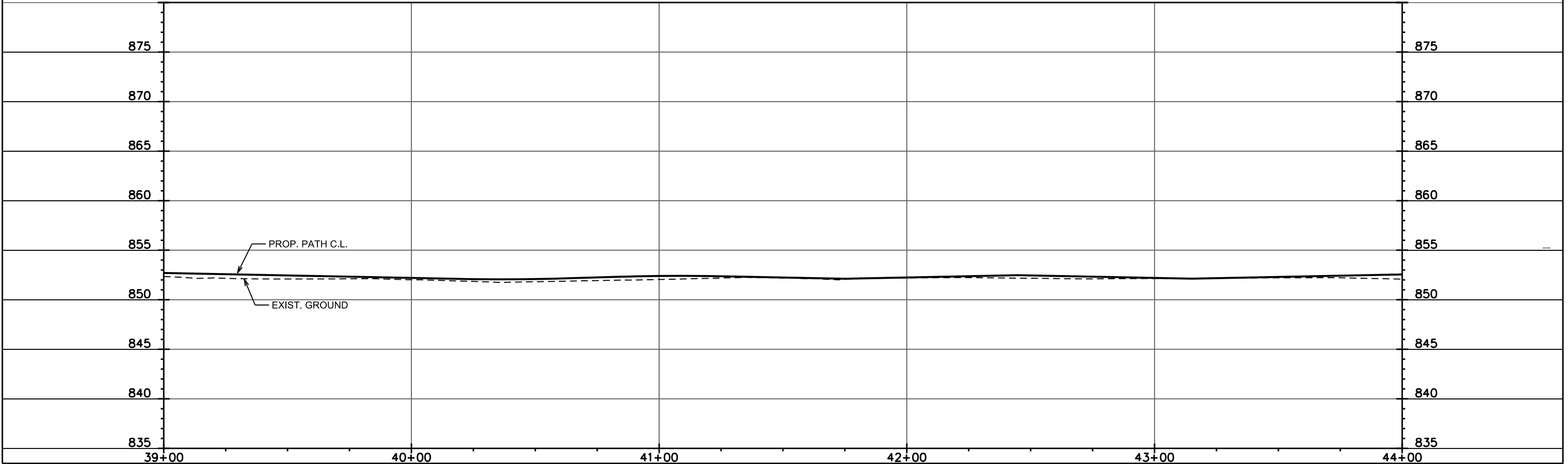
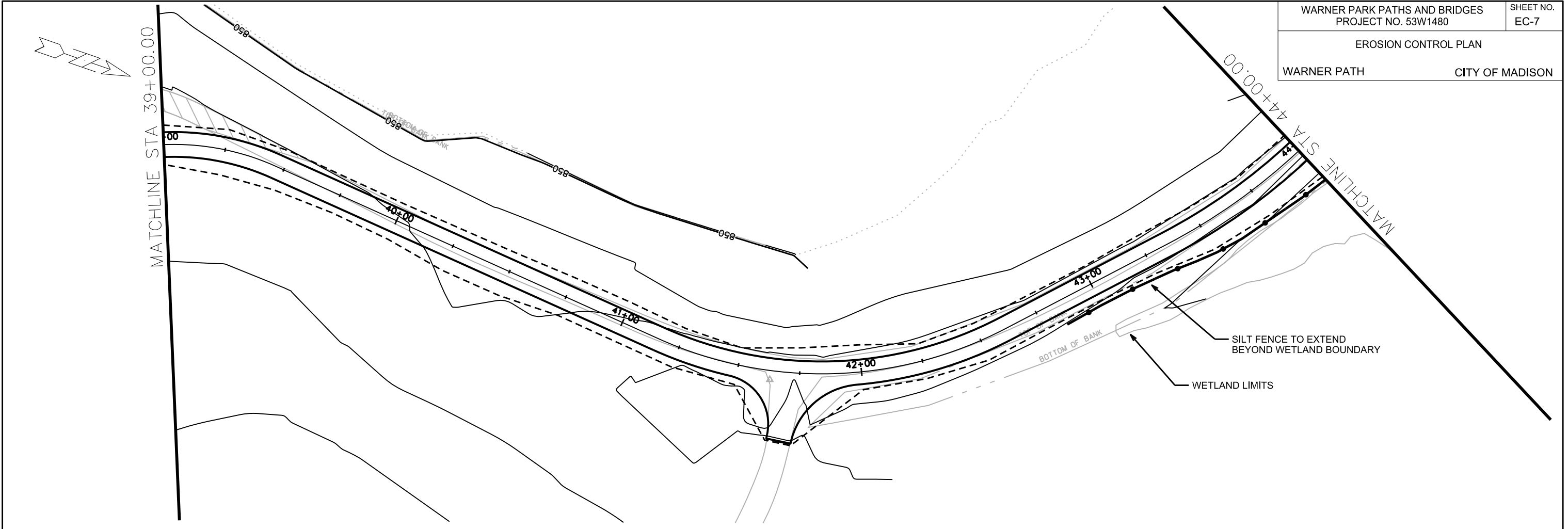


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PLOT SCALE: \_\_\_\_\_

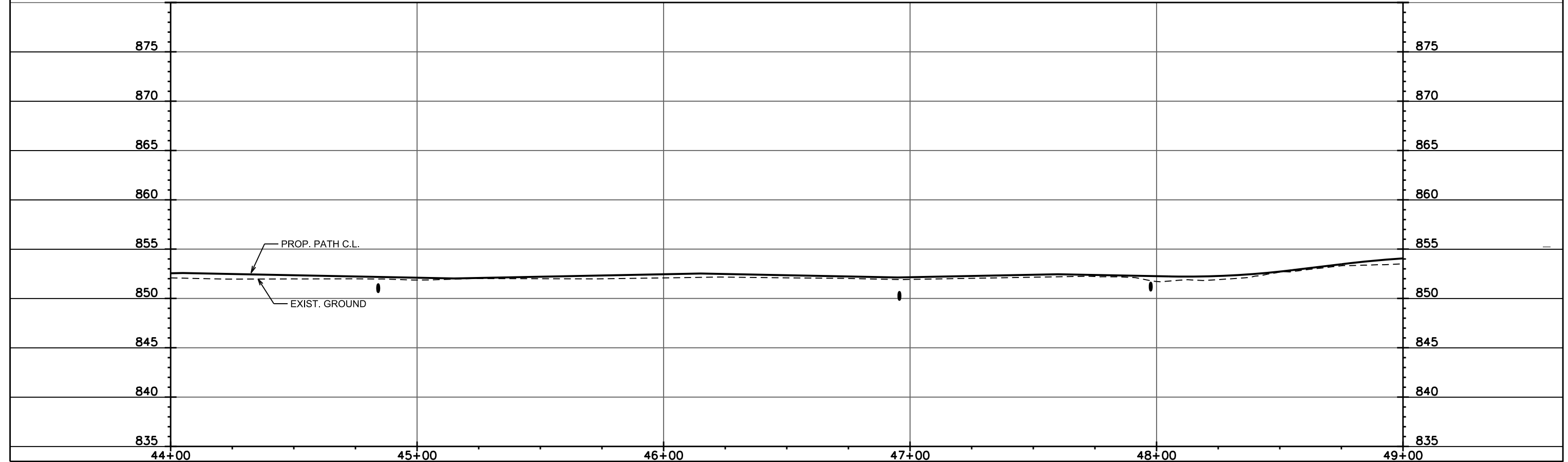
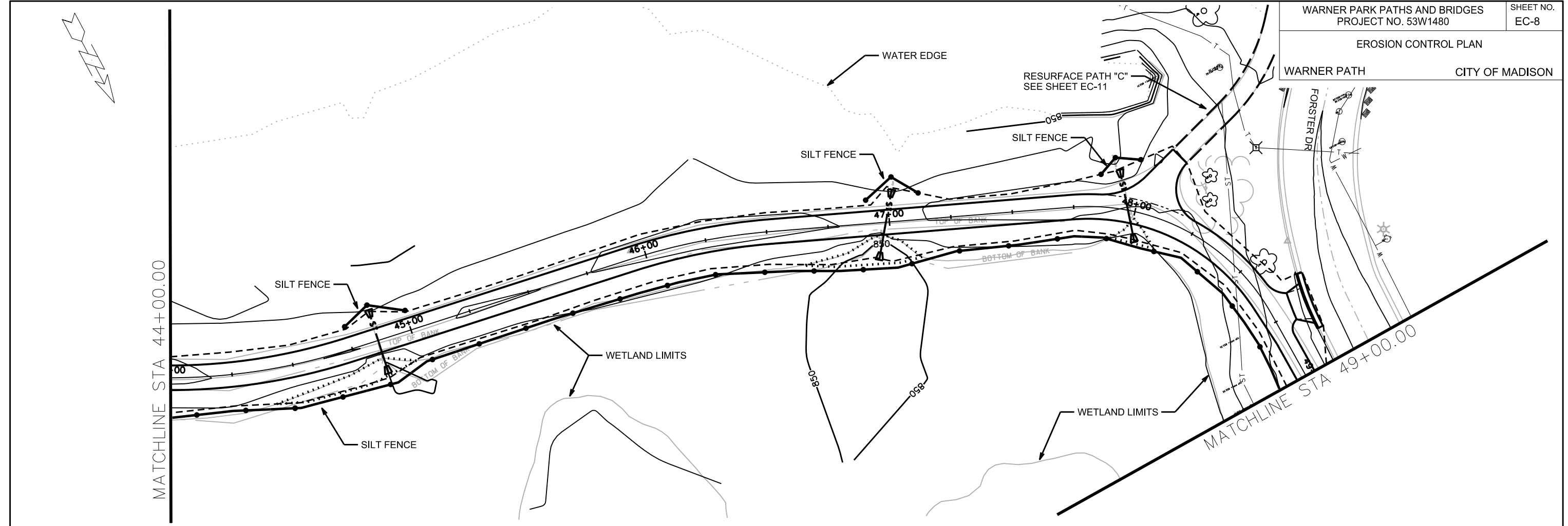
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REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

EROSION CONTROL PLAN

WARNER PATH CITY OF MADISON

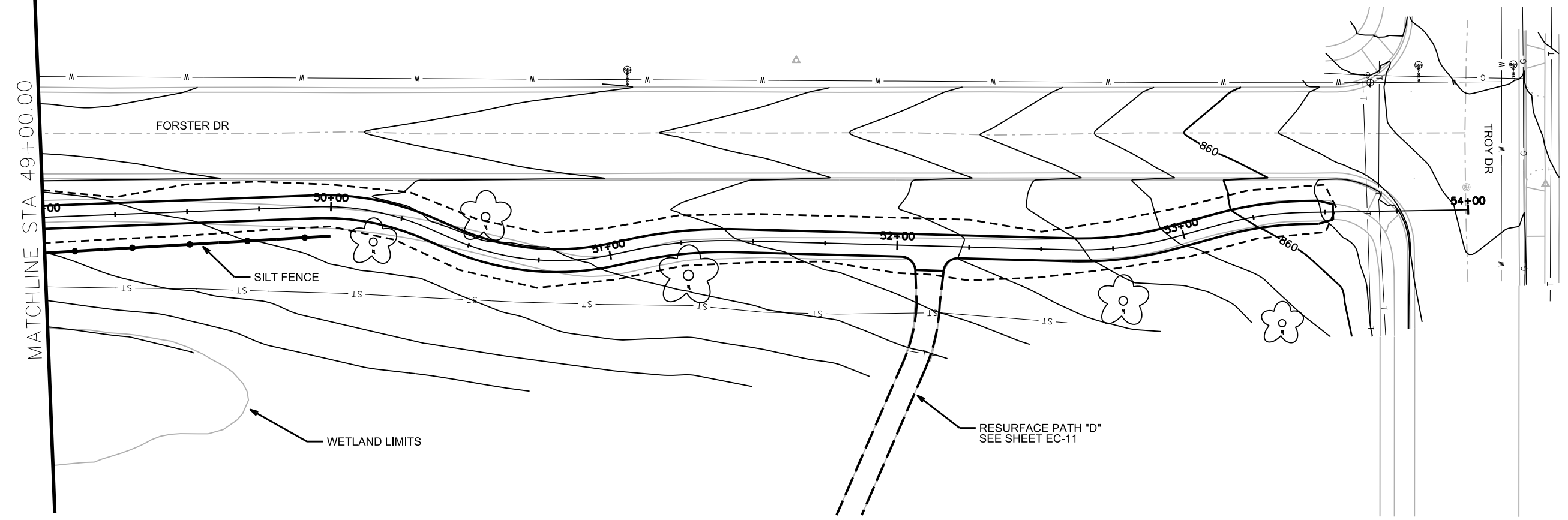
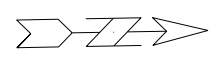


PLOT NAME: \_\_\_\_\_ PLOT SCALE: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_  
 ORIGINATOR: CITY OF MADISON, STREETS DIVISION

EROSION CONTROL PLAN

WARNER PATH

CITY OF MADISON



MATCHLINE STA 49+00.00

FORSTER DR

TROY DR

SILT FENCE

WETLAND LIMITS

RESURFACE PATH "D"  
SEE SHEET EC-11

875

870

865

860

855

850

845

840

835

875

870

865

860

855

850

845

840

835

PROP. PATH C.L.

EXIST. GROUND

49+00

50+00

51+00

52+00

53+00

54+00

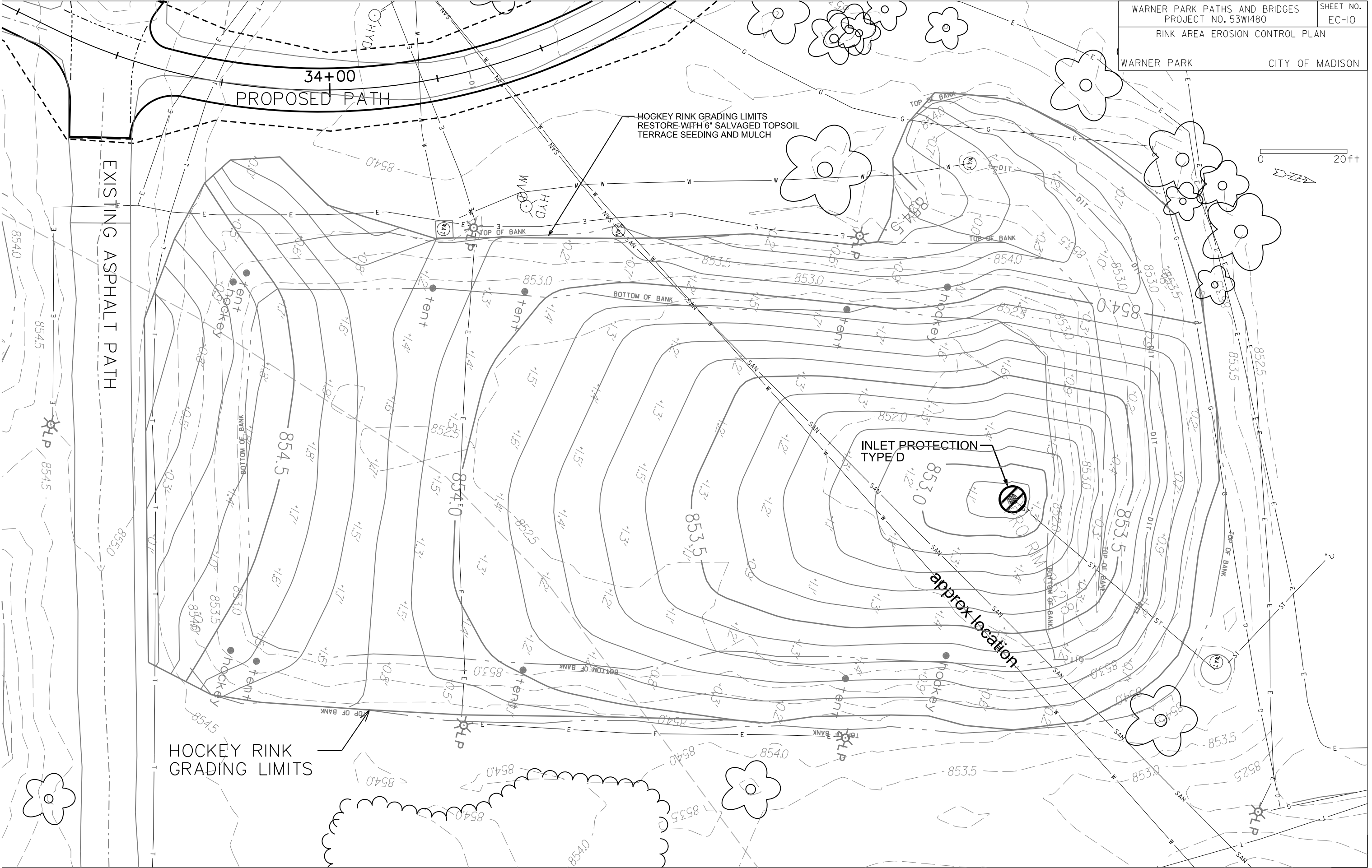
PLOT SCALE: \_\_\_\_\_

PLOT NAME: \_\_\_\_\_

REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



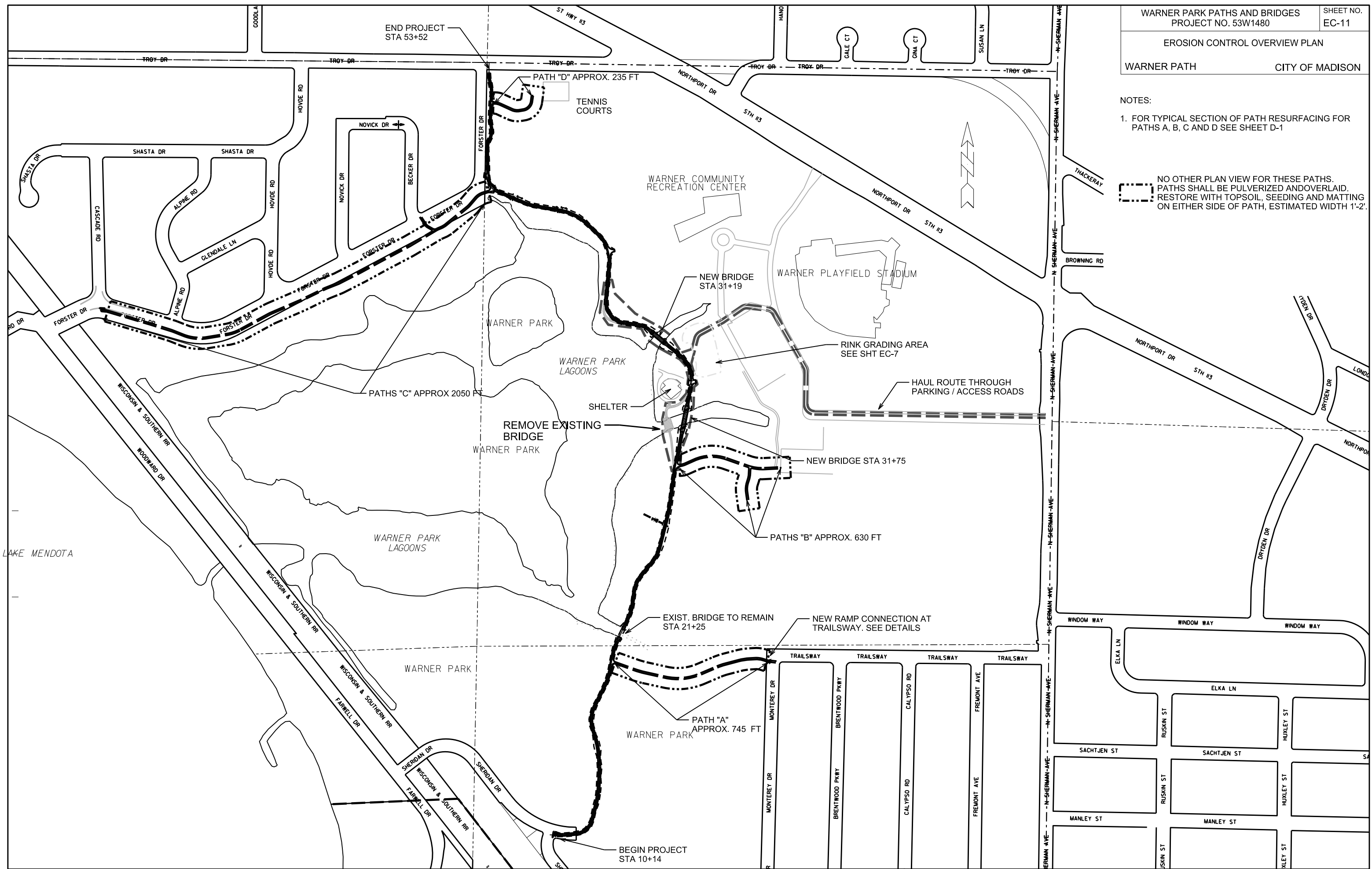


PLOT SCALE: \_\_\_\_\_  
 PLOT NAME: \_\_\_\_\_  
 REV. DATE: \_\_\_\_\_

EROSION CONTROL OVERVIEW PLAN  
WARNER PATH CITY OF MADISON

NOTES:  
1. FOR TYPICAL SECTION OF PATH RESURFACING FOR PATHS A, B, C AND D SEE SHEET D-1

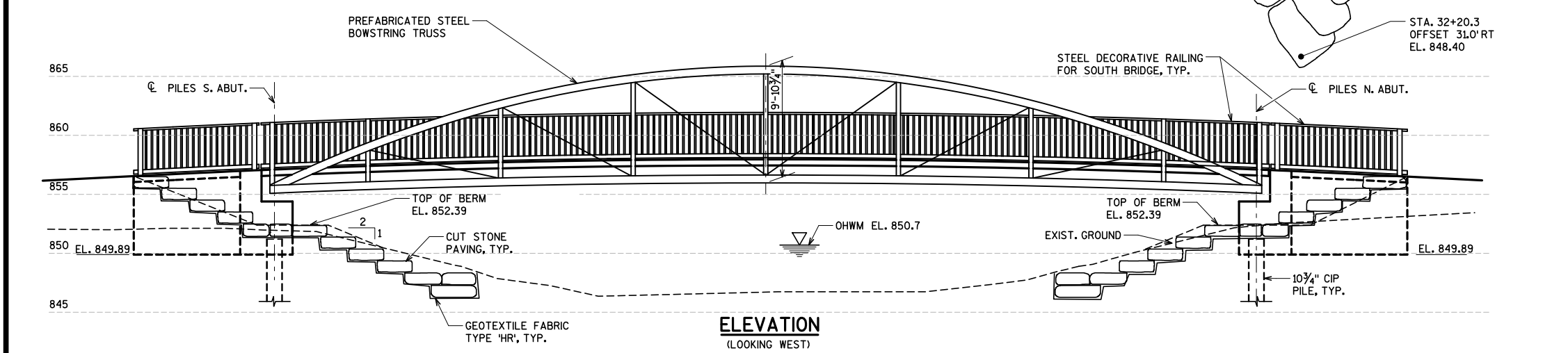
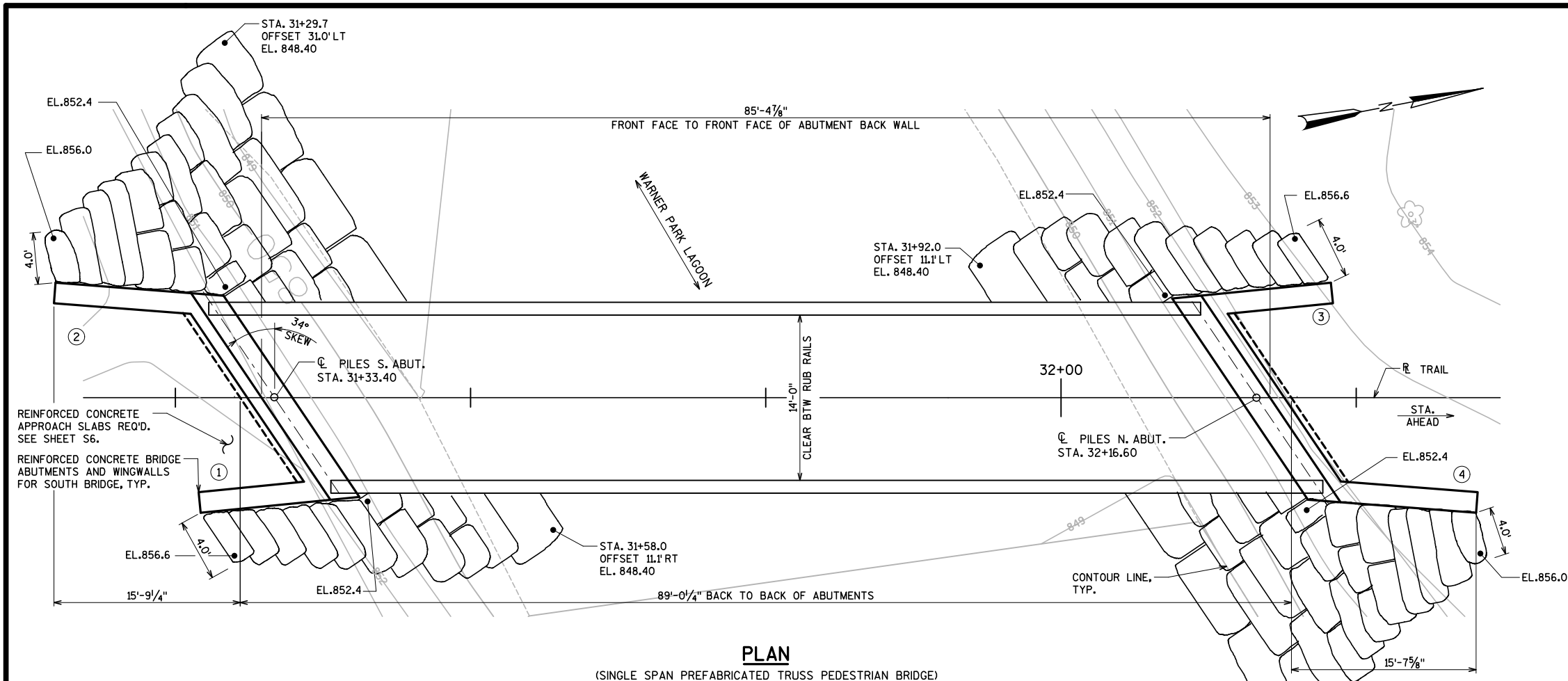
NO OTHER PLAN VIEW FOR THESE PATHS. PATHS SHALL BE PULVERIZED AND OVERLAID. RESTORE WITH TOPSOIL, SEEDING AND MATTING ON EITHER SIDE OF PATH, ESTIMATED WIDTH 1'-2'.



PLOT SCALE: \_\_\_\_\_

REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON - STREETS DIVISION



**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

AT THE BACKFACE OF ABUTMENT ALL VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURAL BACKFILL.

FABRICATION, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WISCONSIN DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, 2013.

THE FINISHED GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

ALL DIMENSIONS ARE IN FEET AND INCHES, UNLESS OTHERWISE NOTED.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH CUT STONES AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THIS SHEET. CUT STONE AND GEOTEXTILE FABRIC TYPE HR SHALL BE INCLUDED IN THE BID ITEM "CUT STONE REVETMENT FOR SOUTH BRIDGE".

THE IPE HARDWOOD RUBRAIL, SAFETY RAIL, AND TOE PLATE SHALL BE INCLUDED IN THE BID ITEM "STEEL RAILING FOR SOUTH BRIDGE".

STEEL RAILING FOR BRIDGE AND ABUTMENT WINGWALLS SHALL BE GALVANIZED AND PAINTED AND INCLUDED IN THE BID ITEM "STEEL RAILING FOR SOUTH BRIDGE" AND SHALL BE FURNISHED BY THE FABRICATOR FOR THE STEEL TRUSS BRIDGE.

THE CONCRETE DECK AND COATED BAR STEEL REINFORCEMENT IN THE DECK SHALL BE INCLUDED IN THE BID ITEM "PREFABRICATED STEEL TRUSS BRIDGE FURNISHED AND INSTALLED, SOUTH BRIDGE".

THE PREFABRICATED STEEL TRUSS BRIDGE SHALL CONFORM TO THE PROFILE ON SHEET S2 PLUS A MINIMAL CAMBER FOR DEAD LOAD DEFLECTION.

THE EXISTING TIMBER BRIDGE A IS LOCATED WEST OF THE PROPOSED BRIDGE AND SHALL BE REMOVED UNDER BID ITEM "REMOVE EXISTING TIMBER BRIDGE A".

○ WINGWALL NUMBER

**DESIGN DATA**

VEHICLE: AASHTO H-10 (20,000 LBS)  
 PEDESTRIAN: 90 PSF

ULTIMATE DESIGN STRESSES:

CONCRETE  
 SUBSTRUCTURES..... $f'_c = 3,500$  psi  
 CONCRETE DECK..... $f'_c = 4,000$  psi

HIGH STRENGTH BAR STEEL  
 REINFORCEMENT (GRADE 60)..... $f_y = 60,000$  psi

THE STEEL FOR THE PREFABRICATED STEEL TRUSS:  
 W SHAPES (ASTM A992)..... $f_y = 50,000$  psi  
 RECTANGULAR HSS  
 (ASTM A500, GR. B)..... $f_y = 46,000$  psi  
 CHANNELS AND ANGLES  
 (ASTM A36)..... $f_y = 36,000$  psi

**FOUNDATION DATA**

ABUTMENTS TO BE SUPPORTED ON 10 3/4" DIA. CAST-IN-PLACE PIPE PILING.

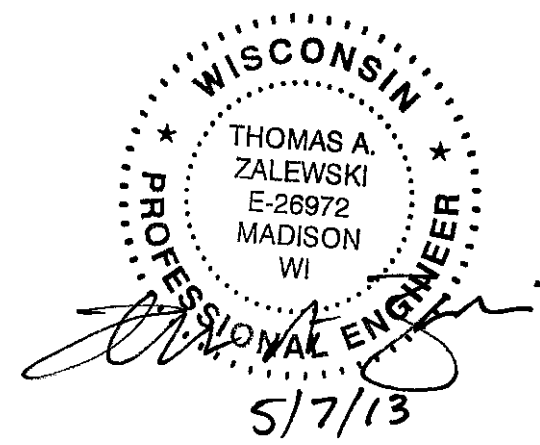
REQUIRED DRIVING RESISTANCE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA IS 75 TONS PER PILE.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LNTH = 45 FT.

**LIST OF DRAWINGS**

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTIONS AND QUANTITIES
3. ABUTMENT DETAILS
4. ABUTMENT REINFORCEMENT DETAILS
5. BILL OF BARS
6. APPROACH SLAB DETAILS
7. SUBSURFACE EXPLORATION

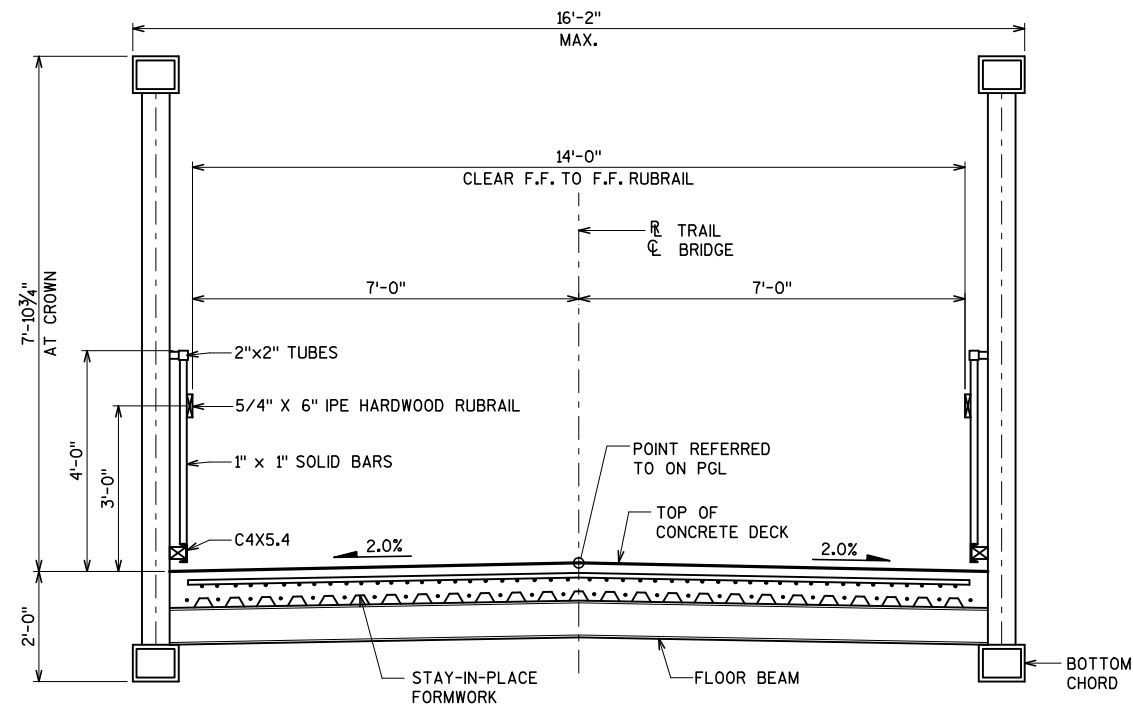


NO.	DATE	REVISIONS

**BLOOM COMPANIES, LLC**  
 Affiliated with Bloomington and Agency  
 10501 W. Research Drive • Milwaukee, WI 53228  
 Phone: (414) 771-3390 Fax: (414) 771-4490

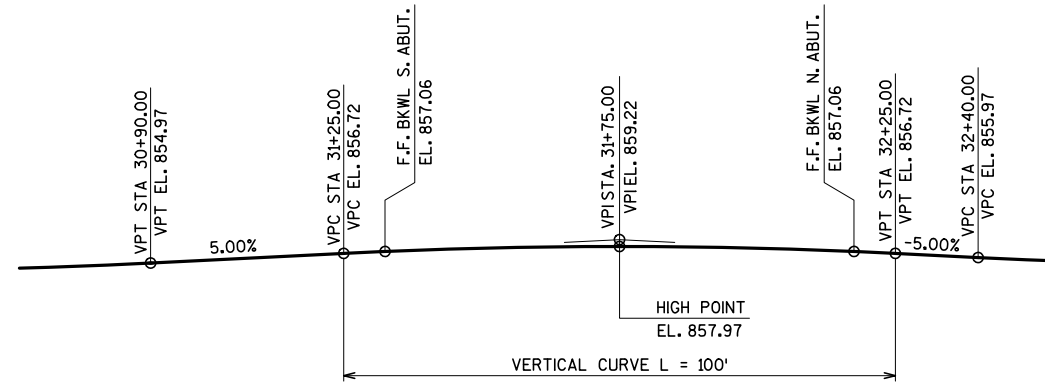
GENERAL PLAN AND ELEVATION  
 SOUTH BRIDGE  
 CITY OF MADISON

PROJECT NO. BMI-1017  
 SHEET NO. S1



**TYPICAL SECTION - BOWSTRING TRUSS - AT MIDSPAN**

(LOOKING NORTH)



**PROFILE GRADE LINE**

**TOTAL ESTIMATED QUANTITIES**

ITEM	TYPE OF WORK	QUANTITIES	
90006	REMOVE EXISTING TIMBER BRIDGE A	1	LS
20101	CUTSTONE REVETMENT FOR SOUTH BRIDGE	180	SY
20701	C.I.P. PILES DELIVERED AND INSTALLED FOR SOUTH BRIDGE	360	LF
21002	REINFORCED CONCRETE BRIDGE ABUTMENTS AND WINGWALLS FOR SOUTH BRIDGE	1	LS
40102	PREFABRICATED STEEL TRUSS BRIDGE FURNISHED AND INSTALLED, SOUTH	1	LS
90002	REINFORCED CONCRETE APPROACH SLABS FOR SOUTH BRIDGE	56	SY
90002	STEEL RAILINGS FOR SOUTH BRIDGE	216	LF

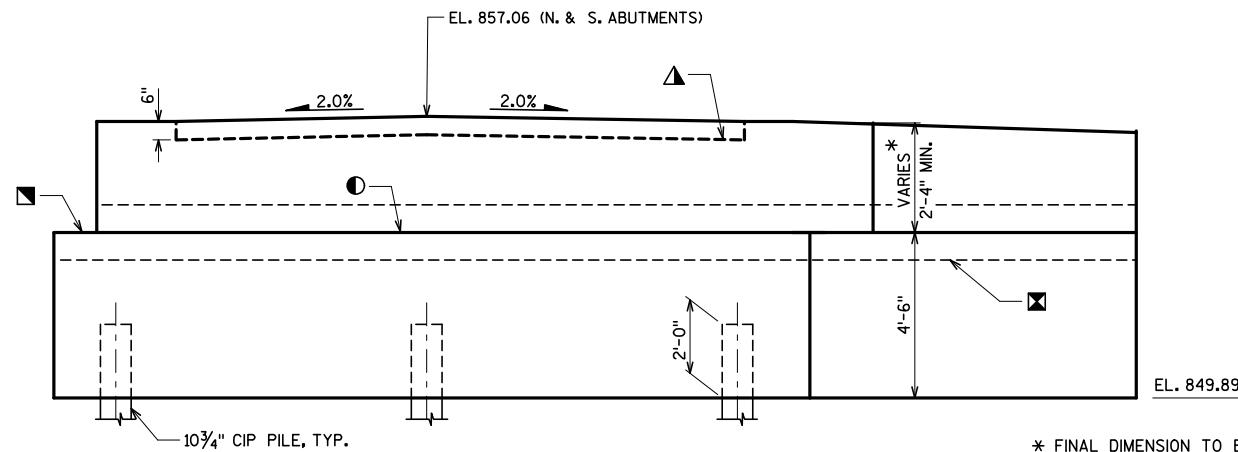
DESIGNED BY:	BDT	NO.	REVISIONS	DATE
DRAWN BY:	TAL			
CHECKED BY:	TAZ			
APPROVED BY:				
DATE:				
PHASE:				

GRAPHIC SCALE  
SCALE OF DRAWING  
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PER STANDARD INCH

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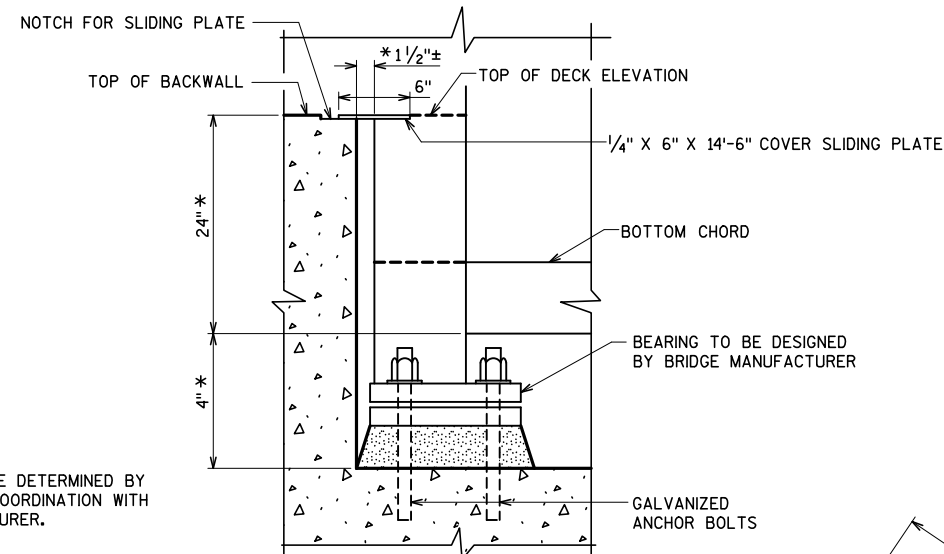
TYPICAL SECTIONS AND QUANTITIES  
SOUTH BRIDGE  
CITY OF MADISON

PROJECT NO.  
BMI-1017  
SHEET NO.  
**S2**

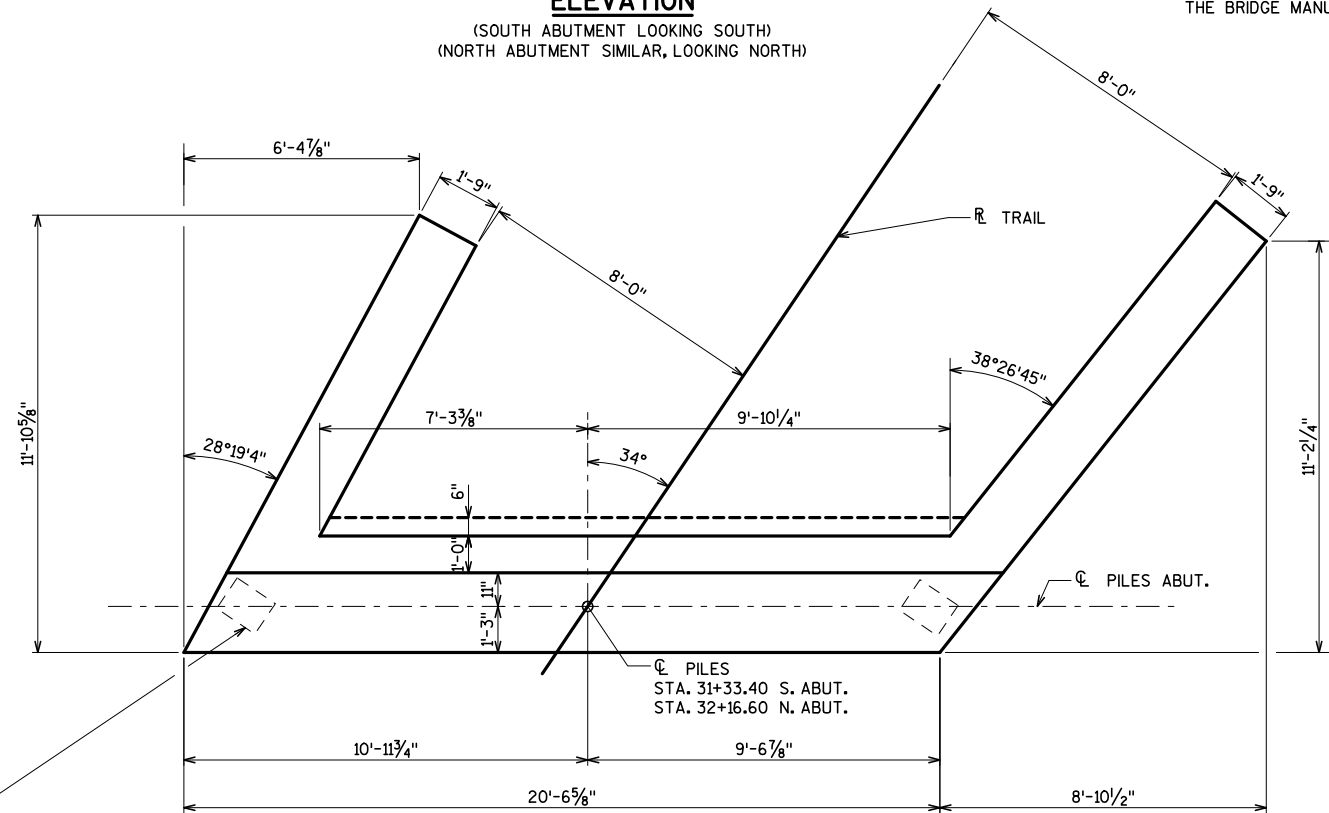


**ELEVATION**  
(SOUTH ABUTMENT LOOKING SOUTH)  
(NORTH ABUTMENT SIMILAR, LOOKING NORTH)

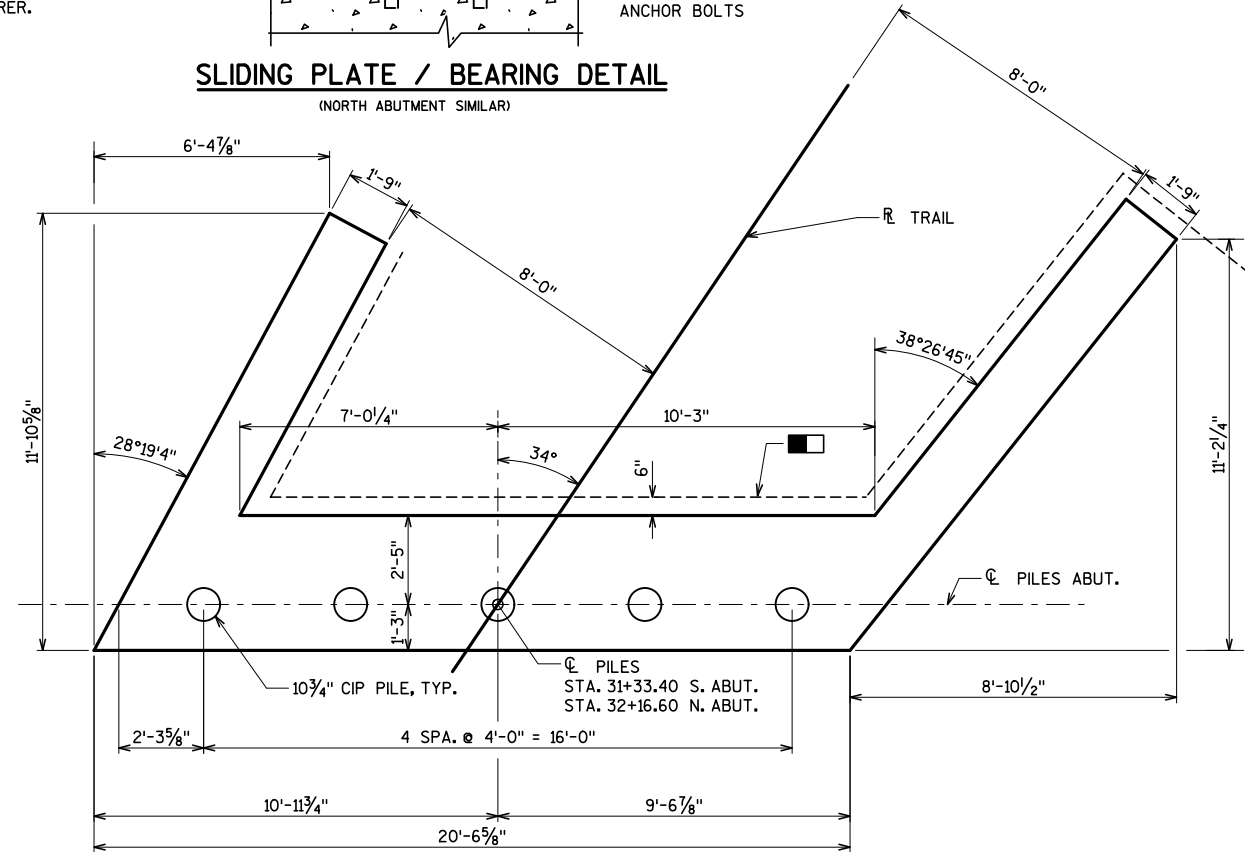
\* FINAL DIMENSION TO BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH THE BRIDGE MANUFACTURER.



**SLIDING PLATE / BEARING DETAIL**  
(NORTH ABUTMENT SIMILAR)

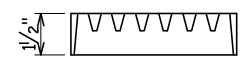


**PLAN**

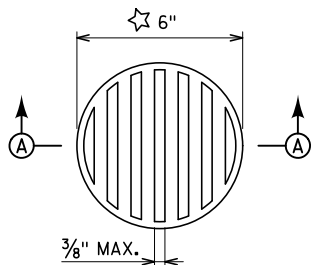


**FOOTING PLAN**

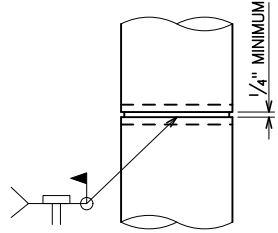
ANCHOR BOLTS AND BASE PLATES FURNISHED BY THE STEEL TRUSS MANUFACTURER AND INSTALLED BY THE CONCRETE CONTRACTOR



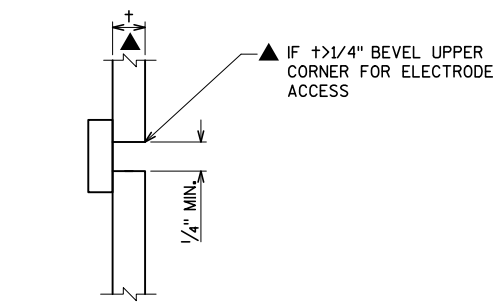
**SECTION A-A**



**RODENT SHIELD**



**CAST-IN-PLACE PIPE PILE**



**CIP WELD DETAIL**

☆ DIMENSIONS ARE APPROXIMATE, THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SHIELD SO SLOTS ARE VERTICAL.

COST OF RODENT SHIELD AND ALL FITTINGS TO BE INCLUDED IN THE BID ITEM "REINFORCED CONCRETE BRIDGE ABUTMENTS AND WINGWALLS FOR SOUTH BRIDGE"

**LEGEND**

- OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 6".
- ▲ CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE ABOVE FOOTING.
- ▣ PIPE UNDERDRAIN, WRAPPED (6-INCH), SLOPE MIN. 0.5% TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE.

**NOTES**

THE CONTRACTOR SHALL DEWATER THE ABUTMENT/WINGWALL FORMWORK, IF NECESSARY, PRIOR TO THE CONCRETE FOOTING POUR. DEWATERING INCLUDED IN THE BID ITEM "REINFORCED CONCRETE BRIDGE ABUTMENTS AND WINGWALLS FOR SOUTH BRIDGE".

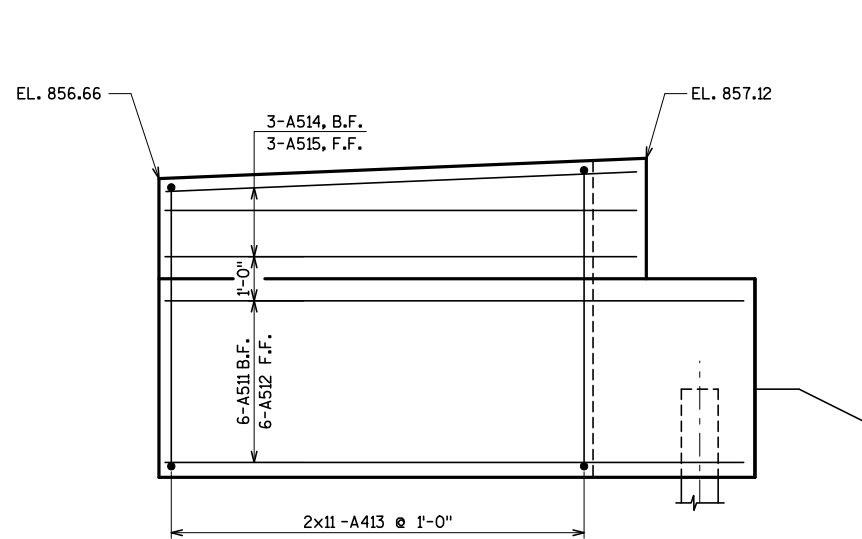
SLIDING PLATES AND BEARINGS, INCLUDING ALL COMPONENTS, SHALL BE DESIGNED AND FURNISHED BY THE BRIDGE MANUFACTURER.

NO.	REVISIONS	DATE

DESIGNED BY: BDT	NO.
DRAWN BY: TAL	NO.
CHECKED BY: TAZ	NO.
APPROVED BY:	NO.
DATE:	NO.
PHASE:	NO.

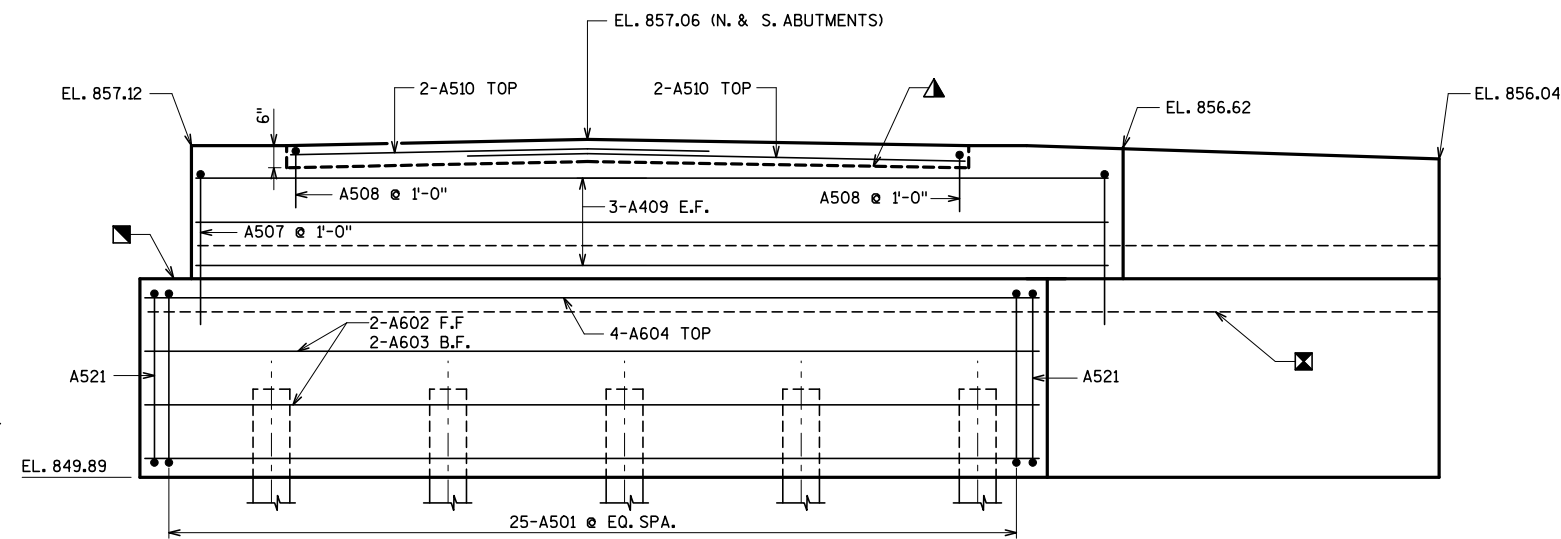
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Infrastructure, Remediation and Regulatory  
10501 W. Research Drive • Milwaukee, WI 53228  
Phone: (414) 771-3390 Fax: (414) 771-4490

ABUTMENT DETAILS  
SOUTH BRIDGE  
CITY OF MADISON



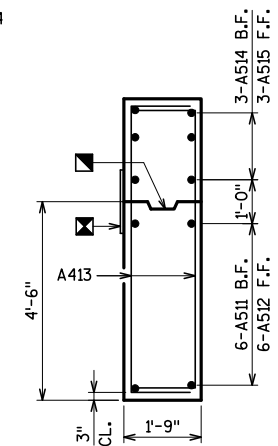
**WING ELEVATION**

(LOOKING AT FRONT FACE OF WINGS 1 AND 3)



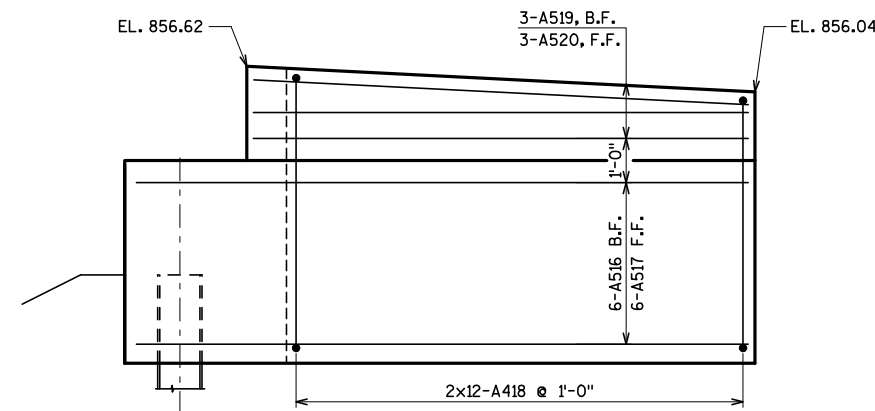
**ELEVATION**

(SOUTH ABUTMENT LOOKING SOUTH)  
(NORTH ABUTMENT SIMILAR, LOOKING NORTH)



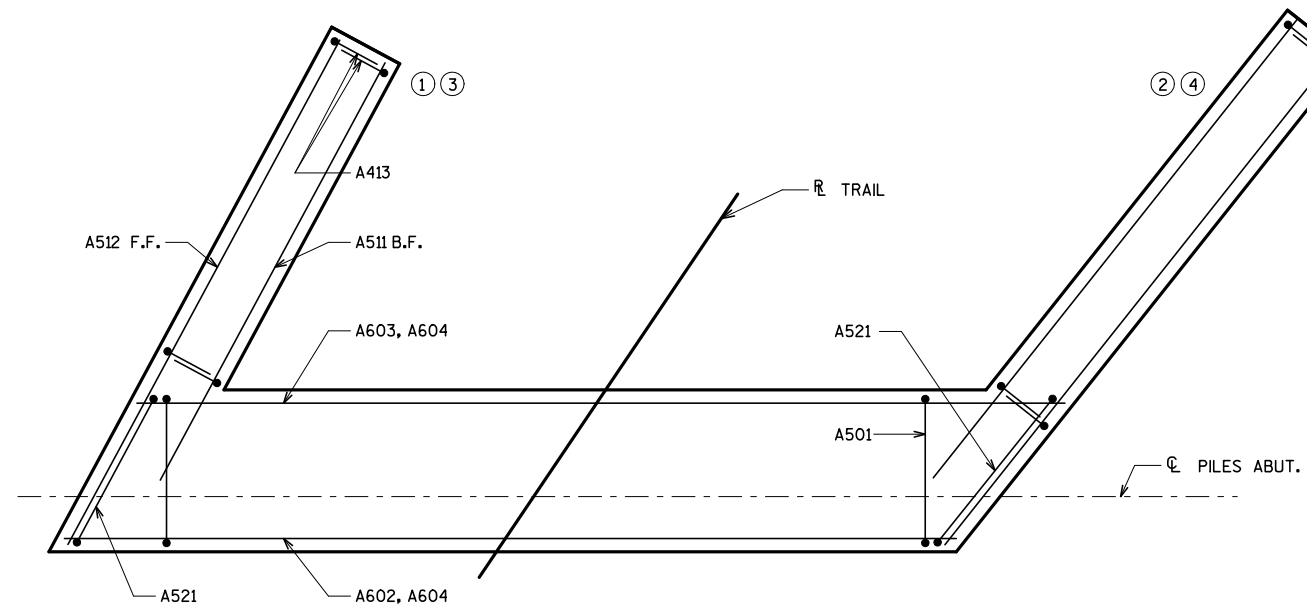
**SECTION THRU WING**

(WINGS 1 AND 3)

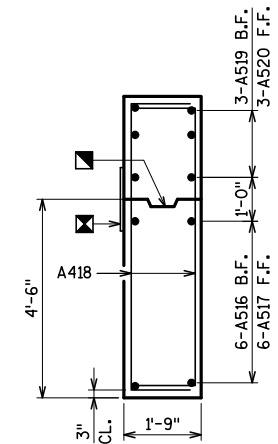


**WING ELEVATION**

(LOOKING AT FRONT FACE OF WINGS 2 AND 4)

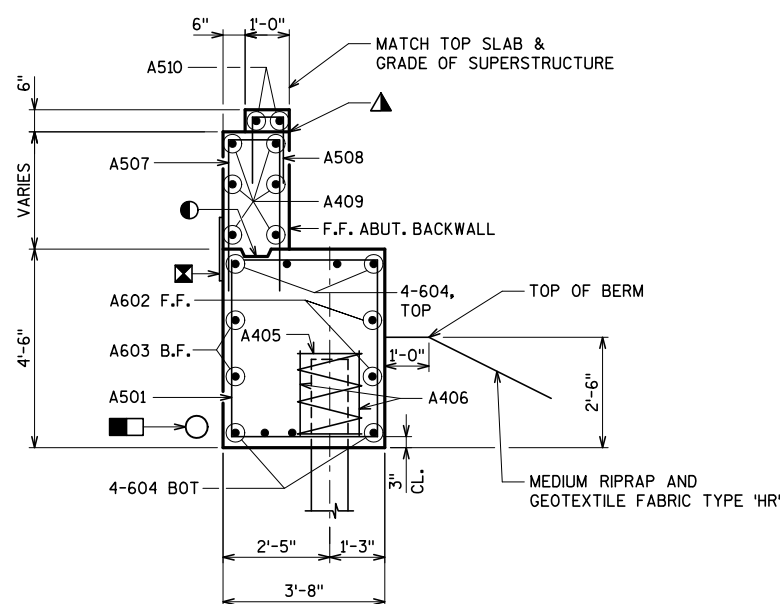


**PLAN**



**SECTION THRU WING**

(WINGS 2 AND 4)



**TYPICAL SECTION THRU BODY**

**ABUTMENT ESTIMATED QUANTITIES (SEE NOTE 1)**

FOR INFORMATION PURPOSES ONLY

ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.1000	EXCAVATION FOR STRUCTURES	LS	1
210.0100	BACKFILL STRUCTURES	CY	400
502.0100	CONCRETE MASONRY BRIDGES	CY	48
505.0405	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,040
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6.2
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	48

TOTALS SHOWN ARE FOR 2 ABUTMENTS.

**LEGEND**

- ◐ PIPE UNDERDRAINS, WRAPPED 6-INCH. SLOPE MIN. 0.5% TO SUITABLE DRAIN.
- ◑ OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.
- ▲ CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- ◑ OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- ◑ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- DENOTES WING NUMBER

**NOTE 1**

ALL ITEMS IN ESTIMATE QUANTITIES ON THIS SHEET SHALL BE INCLUDED IN THE BID ITEM "REINFORCED CONCRETE BRIDGE ABUTMENTS FOR NORTH BRIDGE" AND SHALL CONFORM TO THE SPECIFICATIONS FOR EACH INDIVIDUAL BID ITEM CONTAINED WITHIN THE WISDOT "2013 STANDARD SPECIFICATIONS".

NO.	REVISIONS	DATE

DESIGNED BY: BDT  
DRAWN BY: TAL  
CHECKED BY: TAZ  
APPROVED BY: [Signature]  
DATE: [Blank]  
PHASE: [Blank]

GRAPHIC SCALE  
SCALE OF DRAWING  
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**ABUTMENT REINFORCEMENT DETAILS**  
**SOUTH BRIDGE**  
**CITY OF MADISON**

**BILL OF BARS**

FOR INFORMATION PURPOSES ONLY

BAR MARK	COAT	QTY	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	50	15'-4"	X	-	ABUT. BODY STIRRUP
A602	X	4	20'-2"	-	-	ABUT. BODY HORIZ., F.F.
A603	X	4	21'-0"	X	-	ABUT. BODY HORIZ., B.F.
A604	X	16	20'-7"	-	▲	ABUT. BODY , TOP AND BOTTOM
A405	X	10	28'-0"	X	-	AROUND PILE
A406	X	20	2'-3"	-	-	SIDE OF PILE
A507	X	42	8'-11"	X	-	BACKWALL VERT.
A508	X	36	3'-5"	X	-	PAVING NOTCH VERT.
A409	X	12	20'-9"	-	-	BACKWALL HORIZ.
A510	X	8	12'-10"	-	-	PAVING NOTCH HORIZ.
A511	X	12	10'-0"	-	-	WING 1 AND 3, HORIZ., B.F.
A512	X	12	13'-0"	-	-	WING 1 AND 3, HORIZ., F.F.
A413	X	40	8'-11"	X	▲	WING 1 AND 3, VERT.
A514	X	6	9'-10"	-	-	WING 1 AND 3, HORIZ., B.F.
A515	X	6	10'-6"	-	-	WING 1 AND 3, HORIZ., F.F.
A516	X	12	12'-6"	-	-	WING 2 AND 4, HORIZ., B.F.
A517	X	12	14'-0"	-	-	WING 2 AND 4, HORIZ., F.F.
A418	X	48	8'-5"	X	▲	WING 2 AND 4, VERT.
A519	X	6	12'-4"	-	-	WING 2 AND 4, HORIZ., B.F.
A520	X	6	11'-3"	-	-	WING 2 AND 4, HORIZ., F.F.
A521	X	4	16'-2"	X	-	ABUT. BODY STIRRUP

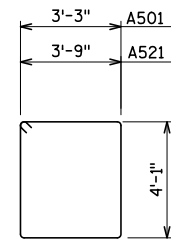
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

QUANTITIES SHOWN ARE FOR TWO ABUTMENTS.

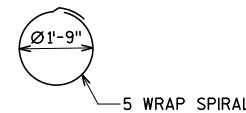
**BAR SERIES TABLE**

BAR MARK	NUMBER REQUIRED	LENGTH
A604	4 SERIES OF 4	20'-2" TO 21'-0"
A413	2 SERIES OF 11	8'-9" TO 9'-0"
A418	2 SERIES OF 12	8'-2" TO 8'-7"

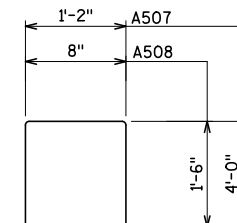
BUNDLE AND TAG EACH SERIES SEPARATELY



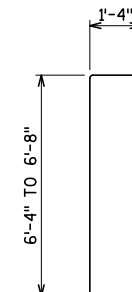
**A501, A521**



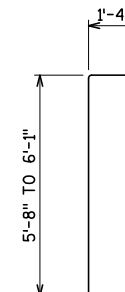
**A405**



**A507, A508**



**A413**



**A418**

**BENDING DIAGRAMS**

DESIGNED BY:	NO.	REVISIONS	DATE
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CHECKED BY:			
APPROVED BY:			
DATE:			
PHASE:			

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SCALE OF DRAWING  
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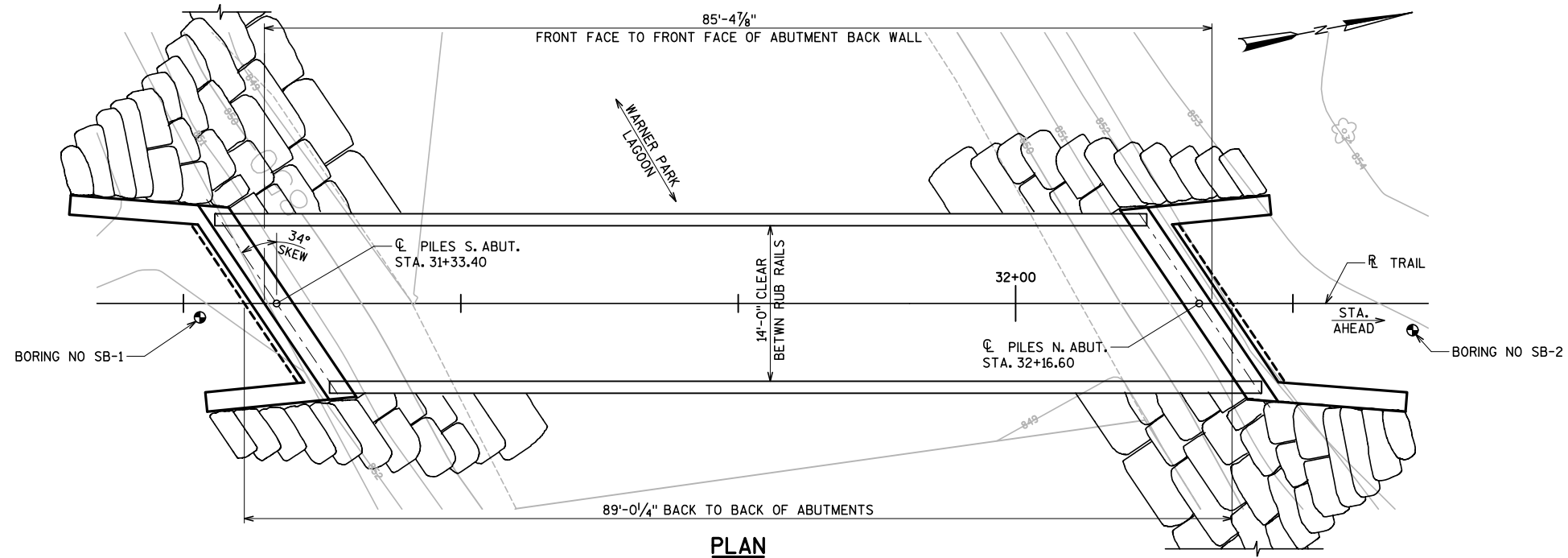
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Infrastructure, Remediation and Regulatory  
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BILL OF BARS  
SOUTH BRIDGE  
CITY OF MADISON

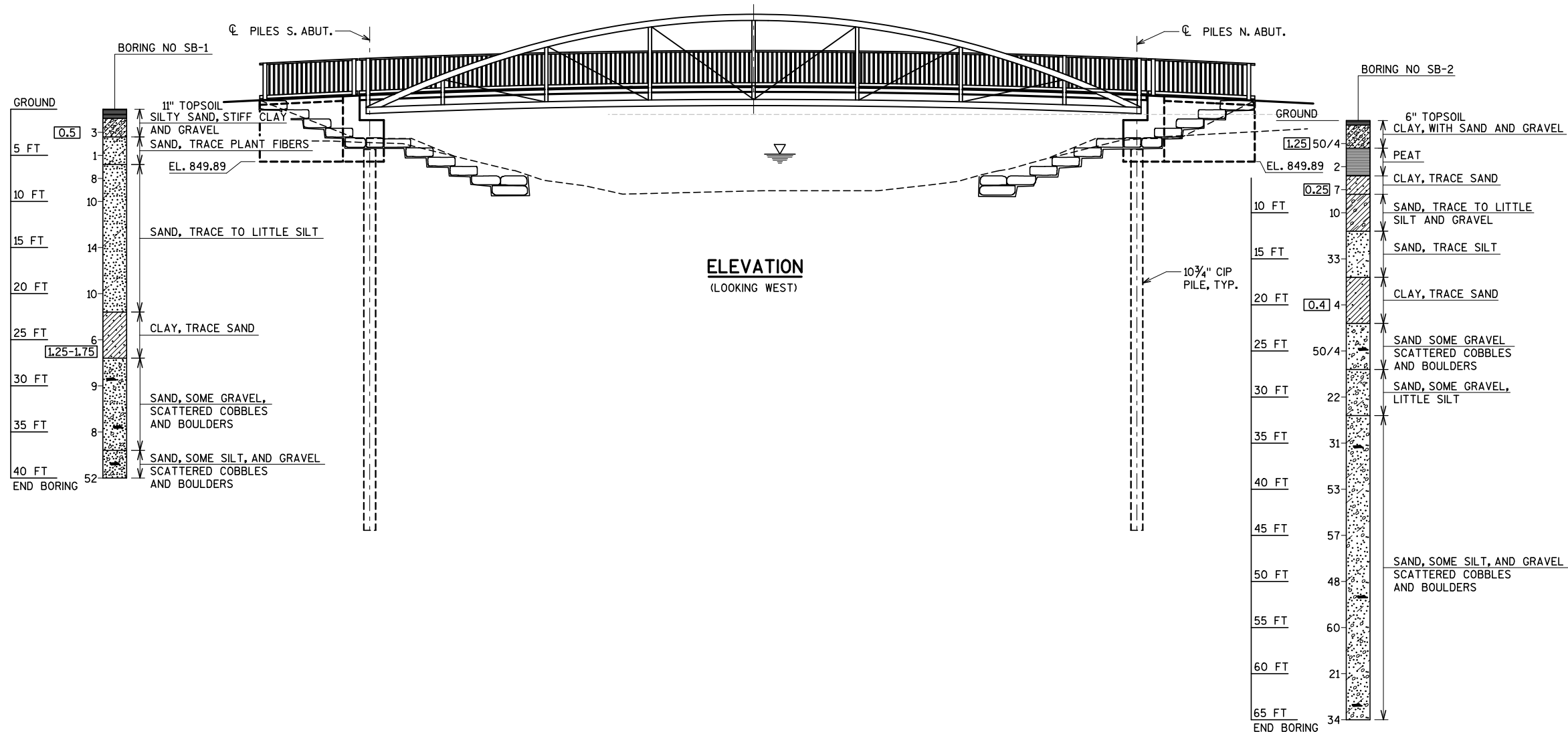
PROJECT NO. <b>BM6-1017</b>
SHEET NO. <b>S5</b>







**PLAN**  
(SINGLE SPAN PREFABRICATED TRUSS PEDESTRIAN BRIDGE)



**ELEVATION**  
(LOOKING WEST)

**ABBREVIATIONS**

F— FINE	M— MEDIUM	C— COARSE
WS— WEATHERED	SO— SOUND	

**MATERIAL SYMBOLS**


**LEGEND OF PROBING**

PROBING NO. \_\_\_\_\_  
STA. \_\_\_\_\_  
ELEVATION \_\_\_\_\_  
7 AVERAGE BLOWS PER FOOT  
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

**LEGEND OF BORING**

BORING NO. \_\_\_\_\_  
STA. \_\_\_\_\_  
ELEV. \_\_\_\_\_

UNCONFINED STRENGTH 7.7  
BLOWS PER FT. USING 140# WT. FALLING 30"

WASH SAMPLE

SHELBY TUBE — S.T.

GROUND WATER ELEVATION

NO GROUND WATER OBSERVED ABOVE THIS ELEVATION

SANDY GRAVEL  
F. BOULDERS OR COBBLES  
SAND  
SILTY CLAY  
SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

**SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION**

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

SUBSURFACE INFORMATION PRESENTED ON THIS SHEET IS OBTAINED FROM THE GEOTECHNICAL REPORT PREPARED BY CGC, INC. DATED MARCH 28, 2013. SOIL BORING WERE PERFORMED BY CGC, INC. BETWEEN FEBRUARY 27, 2013.

DATE	NO.	REVISIONS

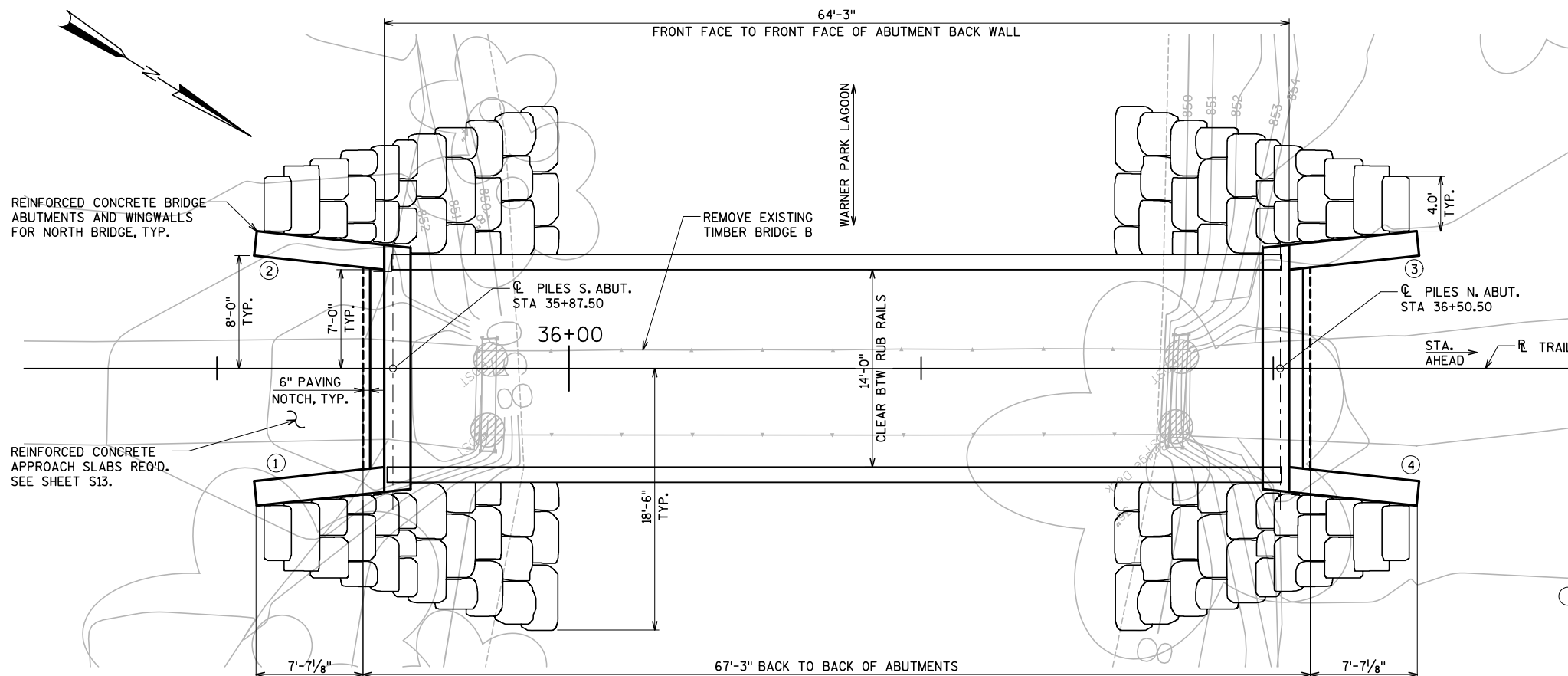
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PER STANDARD INCH

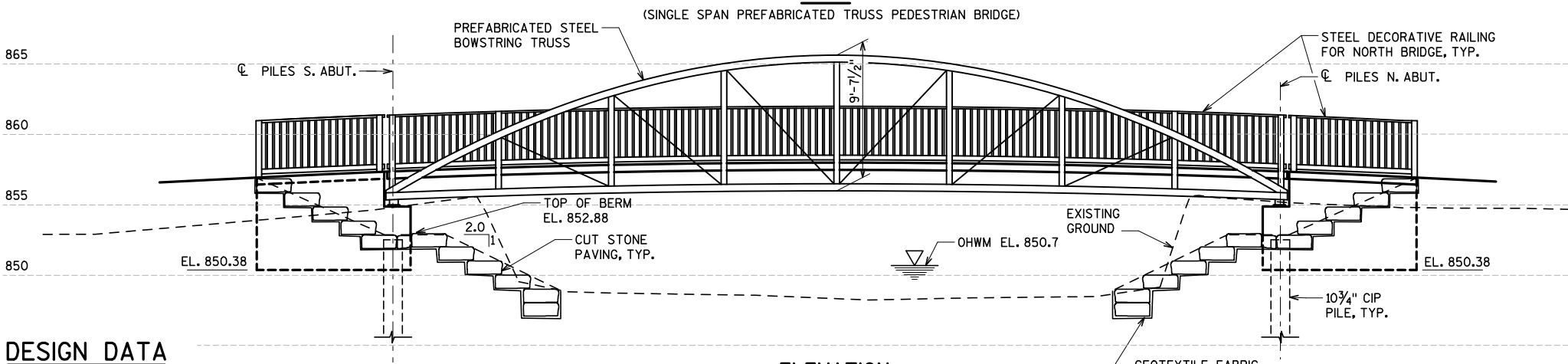
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Infrastructure, Remediation and Regulatory  
10501 W. Research Drive • Milwaukee, WI 53228  
Phone: (414) 771-3390 Fax: (414) 771-4490

SUBSURFACE EXPLORATION  
SOUTH BRIDGE  
CITY OF MADISON

PROJECT NO. BM-1017  
SHEET NO. S7



**PLAN**



**ELEVATION**  
(LOOKING WEST)

**DESIGN DATA**

VEHICLE: AASHTO H-10 (20,000 LBS)  
PEDESTRIAN: 90 PSF

ULTIMATE DESIGN STRESSES:

CONCRETE  
SUBSTRUCTURES.....f'c = 3,500 psi  
CONCRETE DECK.....f'c = 4,000 psi

HIGH STRENGTH BAR STEEL  
REINFORCEMENT (GRADE 60).....fy = 60,000 psi

THE STEEL FOR THE PREFABRICATED STEEL TRUSS:  
W SHAPES (ASTM A992).....Fy = 50,000 psi  
RECTANGULAR HSS  
(ASTM A500, GR. B).....Fy = 46,000 psi  
CHANNELS AND ANGLES  
(ASTM A36).....Fy = 36,000 psi

**FOUNDATION DATA**

ABUTMENTS TO BE SUPPORTED ON 10 3/4" DIA.  
CAST-IN-PLACE PIPE PILING.

REQUIRED DRIVING RESISTANCE AS DETERMINED BY  
THE MODIFIED GATES DYNAMIC FORMULA IS 70 TONS  
PER PILE.

THE FACTORED AXIAL RESISTANCE OF PILES IN  
COMPRESSION USED FOR DESIGN IS THE REQUIRED  
DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE  
FACTOR OF 0.5 USING MODIFIED GATES TO  
DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LNTH IS = 50 FT.

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

AT THE BACKFACE OF ABUTMENT ALL VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURAL BACKFILL.

FABRICATION, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WISCONSIN DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, 2013.

THE FINISHED GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

ALL DIMENSIONS ARE IN FEET AND INCHES, UNLESS OTHERWISE NOTED.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH CUT STONES AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THIS SHEET. CUT STONE AND GEOTEXTILE FABRIC TYPE HR SHALL BE INCLUDED IN THE BID ITEM "CUT STONE REVETMENT FOR NORTH BRIDGE".

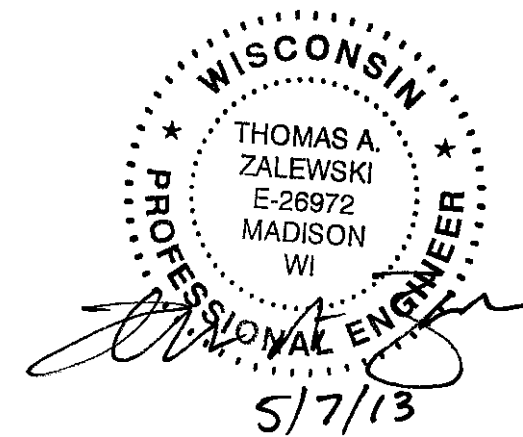
THE IPE HARDWOOD RUBRAIL, AND SAFETY RAIL SHALL BE INCLUDED IN THE BID ITEM "STEEL RAILING FOR NORTH BRIDGE".

STEEL RAILING FOR BRIDGE AND ABUTMENT WINGWALLS SHALL BE GALVANIZED AND PAINTED AND INCLUDED IN THE BID ITEM "STEEL RAILING FOR NORTH BRIDGE" AND SHALL BE FURNISHED BY THE FABRICATOR FOR THE STEEL TRUSS BRIDGE.

THE CONCRETE DECK AND COATED BAR STEEL REINFORCEMENT IN THE DECK SHALL BE INCLUDED IN THE BID ITEM "PREFABRICATED STEEL TRUSS BRIDGE FURNISHED AND INSTALLED, NORTH BRIDGE".

THE PREFABRICATED STEEL TRUSS BRIDGE SHALL CONFORM TO THE PROFILE ON SHEET S9 PLUS A MINIMAL CAMBER FOR DEAD LOAD DEFLECTION.

○ WINGWALL NUMBER



**LIST OF DRAWINGS**

8. GENERAL PLAN AND ELEVATION
9. TYPICAL SECTIONS AND QUANTITIES
10. ABUTMENT DETAILS
11. ABUTMENT REINFORCEMENT DETAILS
12. BILL OF BARS
13. APPROACH SLAB DETAILS
14. SUBSURFACE EXPLORATION

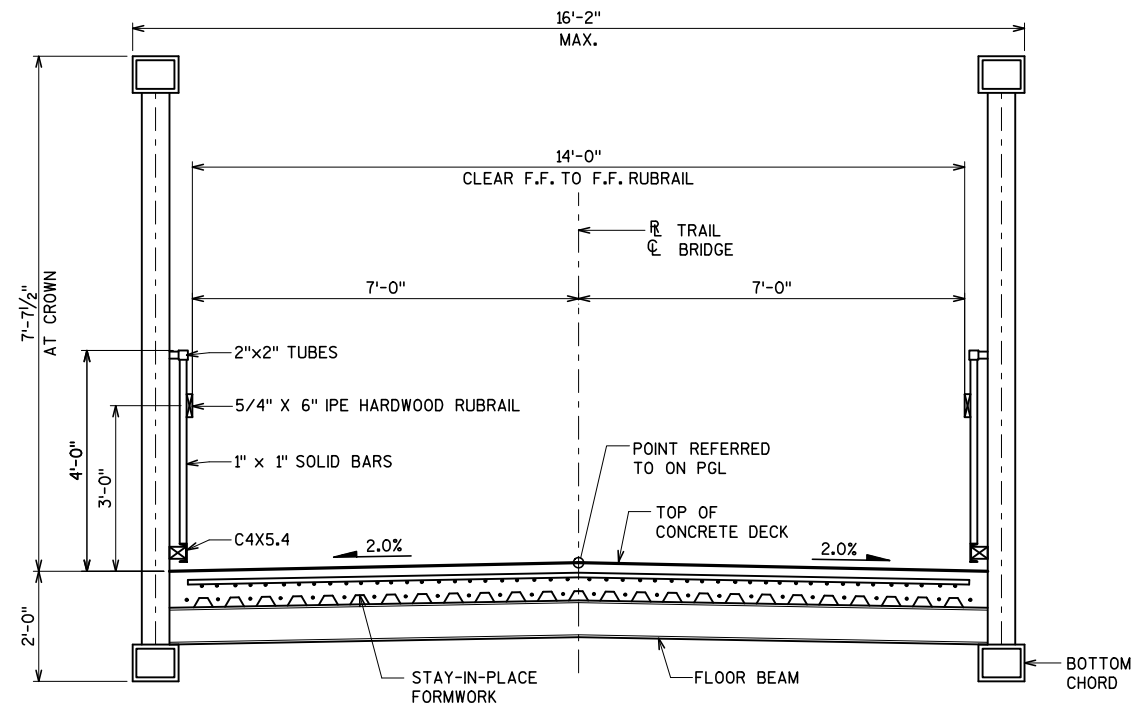
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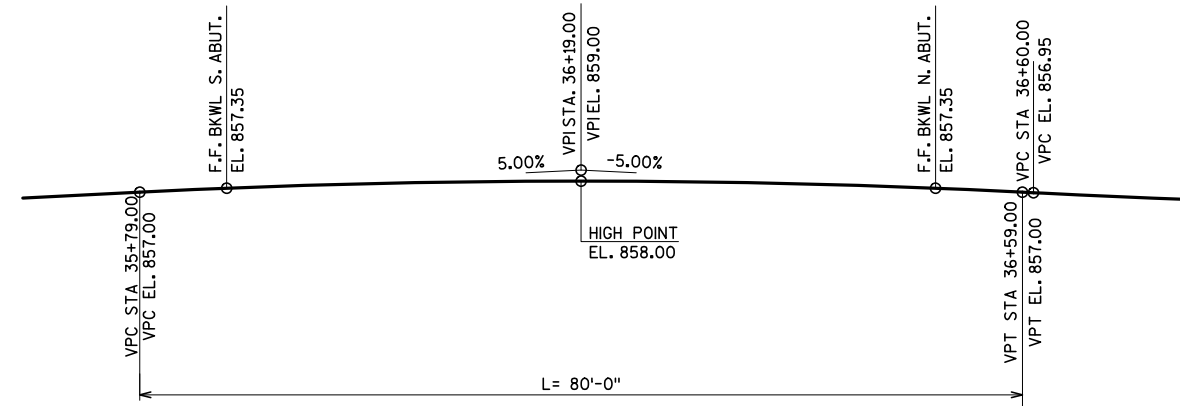
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 Affiliations: Wisconsin and Agency  
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 Phone: (414) 771-3390 Fax: (414) 771-4490

GENERAL PLAN AND ELEVATION  
 NORTH BRIDGE  
 CITY OF MADISON

PROJECT NO. BM6-1017  
 SHEET NO. S8



**TYPICAL SECTION - BOWSTRING TRUSS - AT MIDSPAN**  
(LOOKING NORTH)



**PROFILE GRADE LINE**

**TOTAL ESTIMATED QUANTITIES**

ITEM	TYPE OF WORK	QUANTITIES	
90006	REMOVE EXISTING TIMBER BRIDGE B	1	LS
20101	CUTSTONE REVETMENT FOR NORTH BRIDGE	111	SY
20701	C.I.P. PILES DELIVERED AND INSTALLED FOR NORTH BRIDGE	400	LF
21002	REINFORCED CONCRETE BRIDGE ABUTMENTS AND WINGWALLS FOR NORTH BRIDGE	1	LS
40102	PREFABRICATED STEEL TRUSS BRIDGE FURNISHED AND INSTALLED, NORTH	1	LS
90002	REINFORCED CONCRETE APPROACH SLABS FOR NORTH BRIDGE	28	SY
90002	STEEL RAILINGS FOR NORTH BRIDGE	166	LF

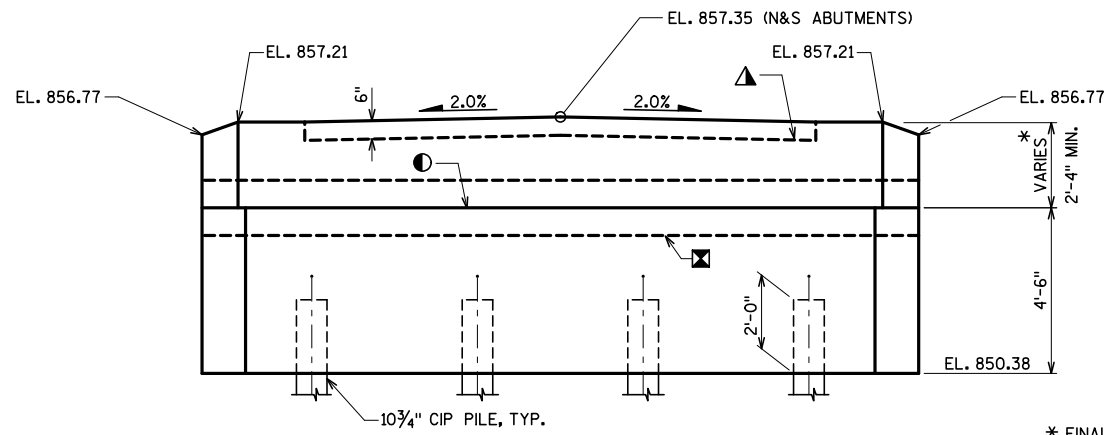
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TYPICAL SECTIONS AND QUANTITIES  
NORTH BRIDGE  
CITY OF MADISON

PROJECT NO.  
BM6-1017  
SHEET NO.  
S9



**ELEVATION**  
(SOUTH ABUTMENT LOOKING SOUTH)  
(NORTH ABUTMENT SIMILAR, LOOKING NORTH)

\* FINAL DIMENSION TO BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH THE BRIDGE MANUFACTURER.

**NOTES**

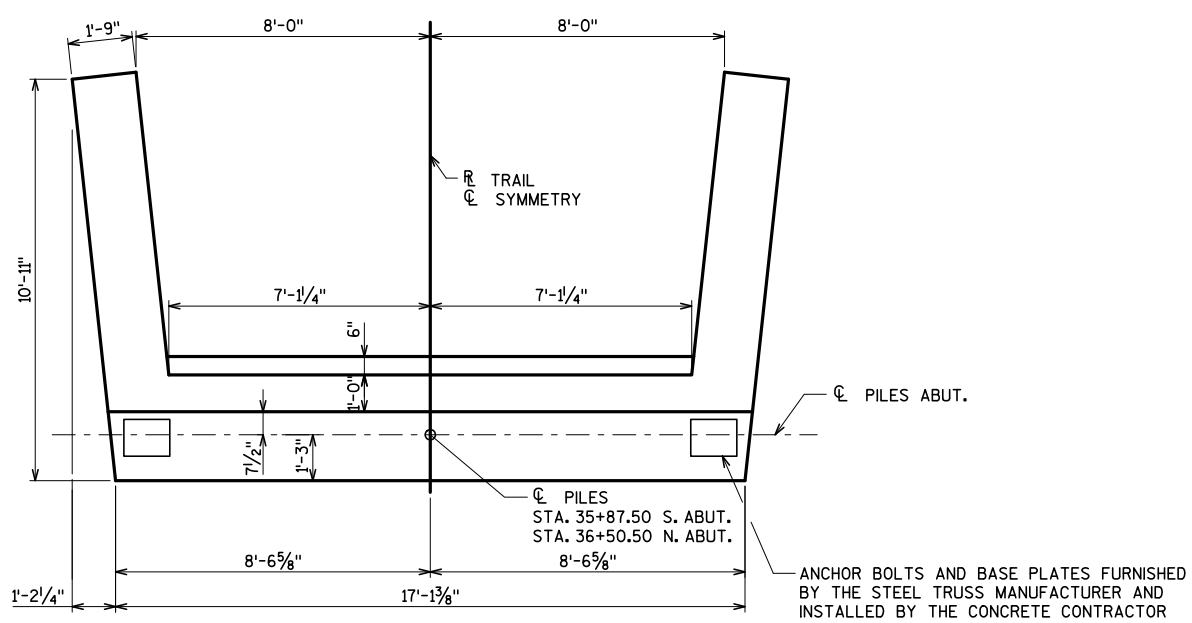
THE CONTRACTOR SHALL DEWATER THE ABUTMENT/WINGWALL FORMWORK, IF NECESSARY, PRIOR TO THE CONCRETE FOOTING POUR. DEWATERING INCLUDED IN THE BID ITEM "REINFORCED CONCRETE BRIDGE ABUTMENTS AND WINGWALLS FOR NORTH BRIDGE".

SLIDING PLATES AND BEARINGS, INCLUDING ALL COMPONENTS, SHALL BE DESIGNED AND FURNISHED BY THE BRIDGE MANUFACTURER.

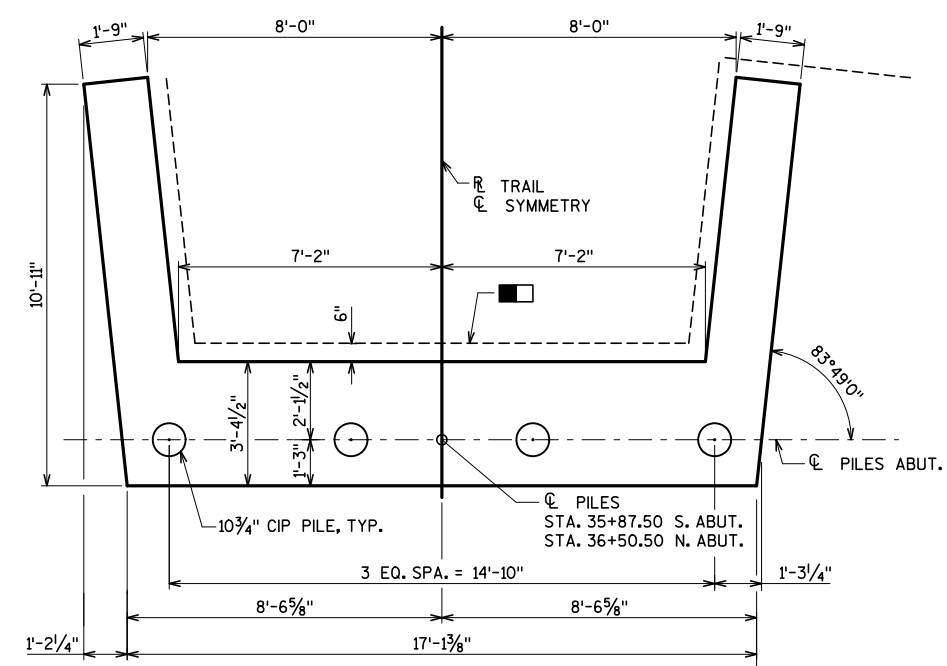
\* THIS DIMENSION SHALL BE DESIGNED BY THE BRIDGE MANUFACTURER.

**LEGEND**

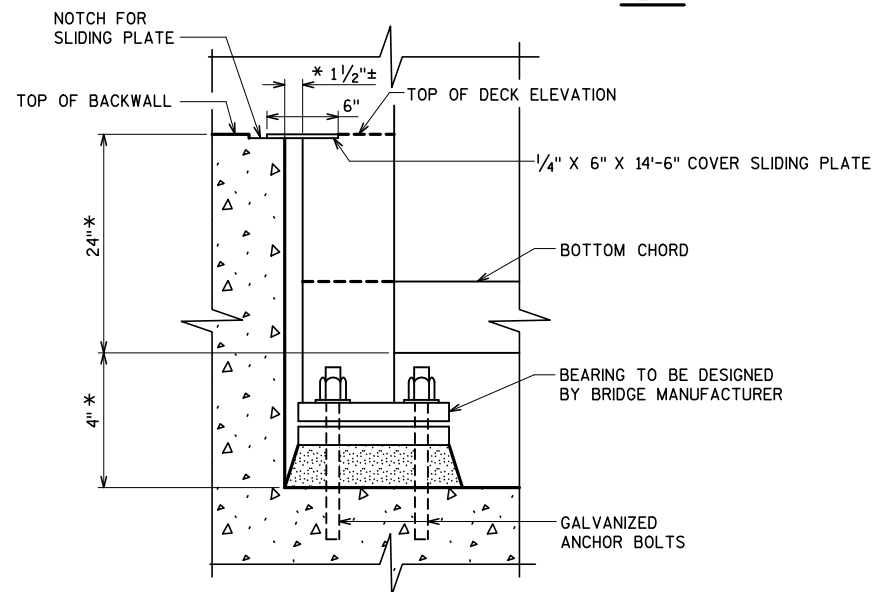
- OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 6".
- ▲ CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- ☒ 18" RUBBERIZED MEBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE ABOVE FOOTING.
- PIPE UNDERDRAIN, WRAPPED (6-INCH), SLOPE MIN. 0.5% TO SUITABLE DRAINAGE. ATTACH RODENT SHEILD AT ENDS OF PIPE.



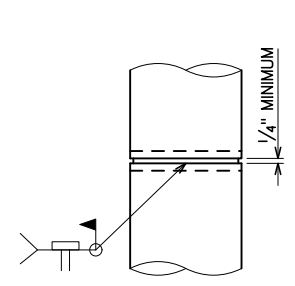
**PLAN**



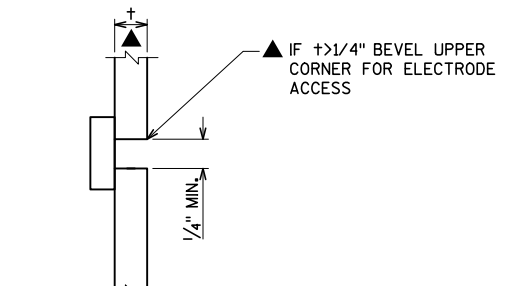
**FOOTING PLAN**



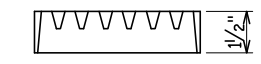
**SLIDING PLATE / BEARING DETAIL**  
(NORTH ABUTMENT SIMILAR)



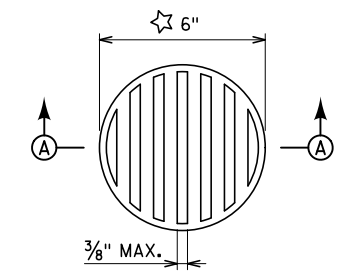
**CAST-IN-PLACE PIPE PILE**



**CIP WELD DETAIL**



**SECTION A-A**



**RODENT SHIELD**

☆ DIMENSIONS ARE APPROXIMATE, THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SHIELD SO SLOTS ARE VERTICAL.

COST OF RODENT SHIELD AND ALL FITTINGS TO BE INCLUDED IN THE BID ITEM "REINFORCED CONCRETE BRIDGE ABUTMENTS AND WINGWALLS FOR NORTH BRIDGE"

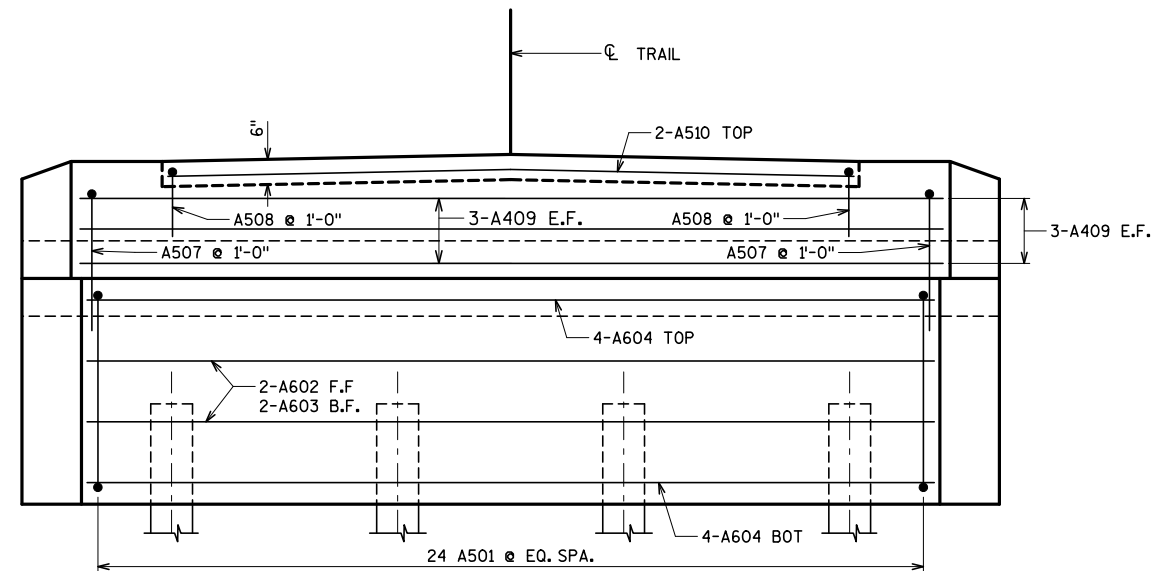
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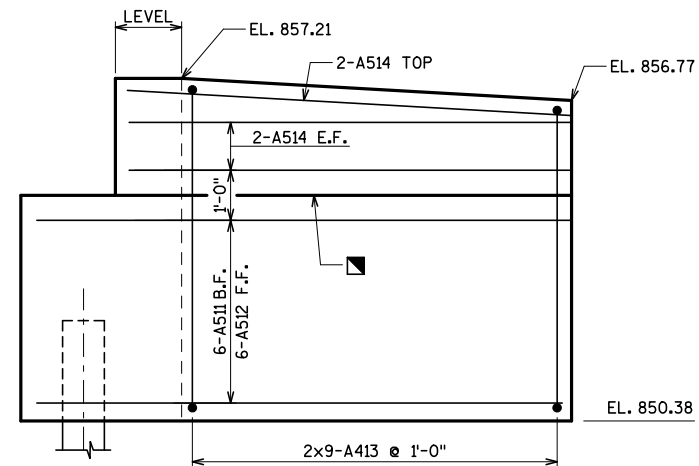
ABUTMENT DETAILS  
NORTH BRIDGE  
CITY OF MADISON

PROJECT NO. <b>BM6-1017</b>
SHEET NO. <b>S10</b>



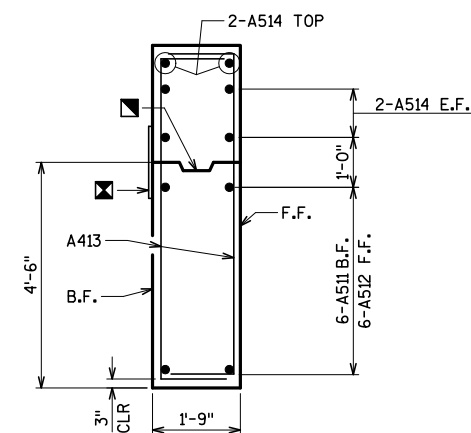
**ELEVATION**

(SOUTH ABUTMENT LOOKING SOUTH)  
(NORTH ABUTMENT SIMILAR LOOKING NORTH)

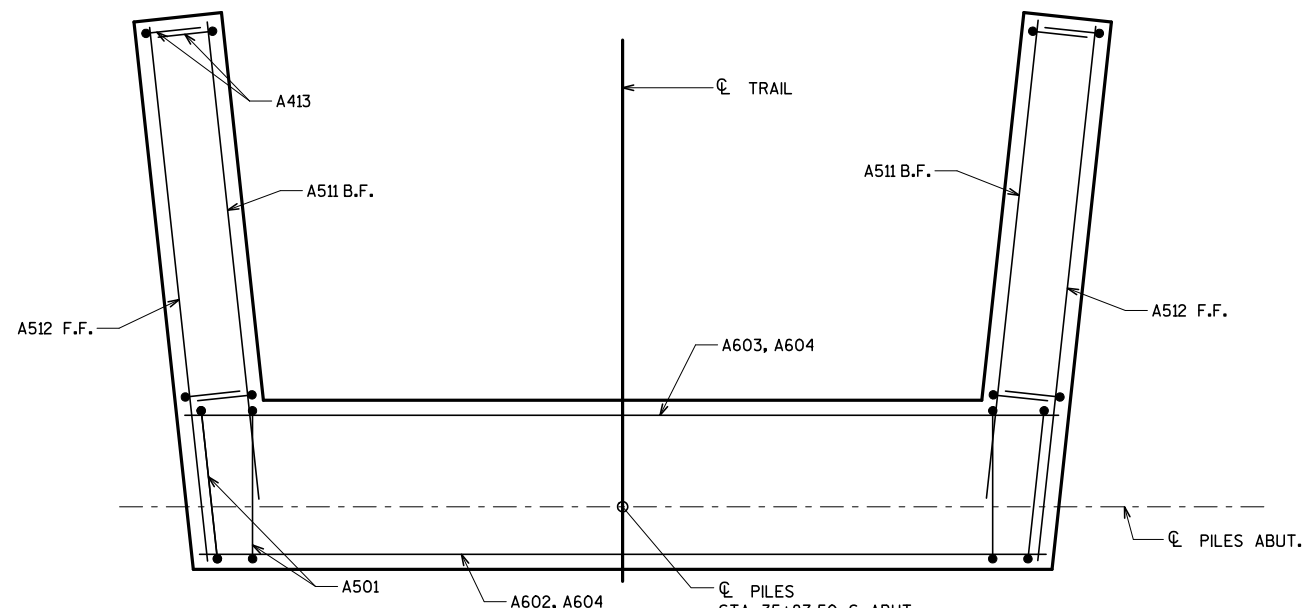


**WING ELEVATION**

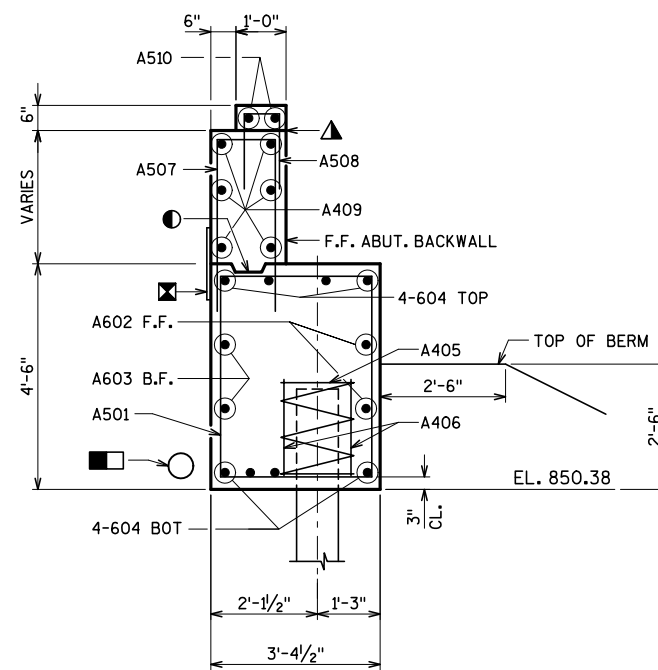
(LOOKING AT FRONT FACE OF WALL)



**SECTION THRU WING**



**PLAN**



**TYPICAL SECTION THRU BODY**

**NOTE 1**

ALL ITEMS IN ESTIMATE QUANTITIES ON THIS SHEET SHALL BE INCLUDED IN THE BID ITEM "REINFORCED CONCRETE BRIDGE ABUTMENTS FOR NORTH BRIDGE" AND SHALL CONFORM TO THE SPECIFICATIONS FOR EACH INDIVIDUAL BID ITEM CONTAINED WITHIN THE WISDOT "2013 STANDARD SPECIFICATIONS".

**ABUTMENT ESTIMATED QUANTITIES (SEE NOTE 1)**

FOR INFORMATION PURPOSES ONLY

ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.1000	EXCAVATION FOR STRUCTURES	LS	1
210.0100	BACKFILL STRUCTURES	CY	350
502.0100	CONCRETE MASONRY BRIDGES	CY	36
505.0405	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3,340
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	5
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	40

TOTALS SHOWN ARE FOR 2 ABUTMENTS.

**LEGEND**

- OPTIONAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.
  - ▲ CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
  - OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
  - ▣ PIPE UNDERDRAIN, WRAPPED (6-INCH), SLOPE MIN. 0.5% TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE.
  - ▣ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- F.F. - FRONT FACE  
B.F. - BACK FACE  
E.F. - EACH FACE

DESIGNED BY:	BID NO.	REVISIONS	DATE
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Infrastructure, Construction and Agency  
10501 W. Research Drive • Milwaukee, WI 53228  
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**ABUTMENT REINFORCEMENT DETAILS**  
**NORTH BRIDGE**  
**CITY OF MADISON**

PROJECT NO. <b>BM6-1017</b>
SHEET NO. <b>S11</b>

**BILL OF BARS**

FOR INFORMATION PURPOSES ONLY

BAR MARK	COAT	QTY	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	48	14'-8"	X	-	ABUT. BODY STIRRUP
A602	X	4	16'-9"	-	-	ABUT. BODY HORIZ.
A603	X	4	17'-5"	-	-	ABUT. BODY HORIZ.
A604	X	16	17'-1"	-	▲	ABUT. BODY HORIZ.
A405	X	8	28'-0"	X	-	AROUND PILE
A406	X	16	2'-3"	-	-	SIDE OF PILE
A507	X	36	8'-11"	X	-	BACKWALL VERT.
A508	X	30	3'-5"	X	-	PAVING NOTCH VERT.
A409	X	12	17'-2"	-	-	BACKWALL HORIZ.
A510	X	4	17'-2"	-	-	PAVING NOTCH HORIZ.
A511	X	24	9'-9"	-	-	WING HORIZ., B.F.
A512	X	24	10'-8"	-	-	WING HORIZ., F.F.
A413	X	72	8'-8"	X	▲	WING VERT.
A514	X	24	8'-9"	-	-	WING HORIZ.

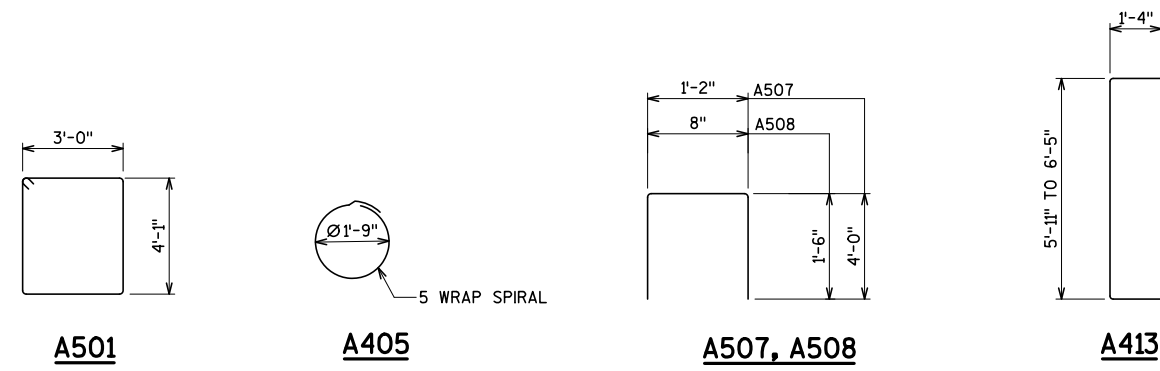
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

QUANTITIES SHOWN ARE FOR TWO ABUTMENTS.

**BAR SERIES TABLE**

BAR MARK	NUMBER REQUIRED	LENGTH
A604	4 SERIES OF 4	16'-9" TO 17'-5"
A413	8 SERIES OF 9	8'-5" TO 8'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY



**BENDING DIAGRAMS**

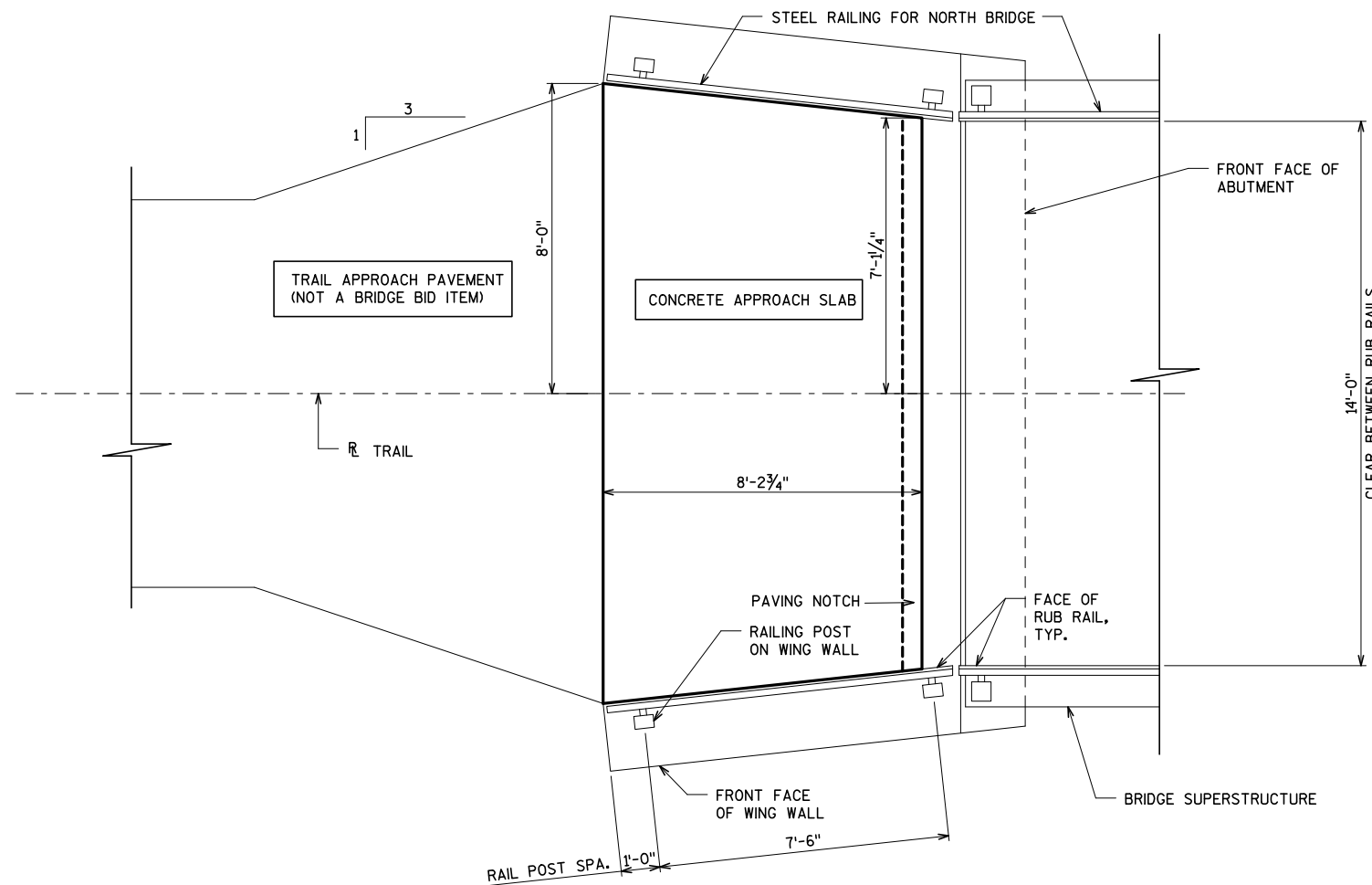
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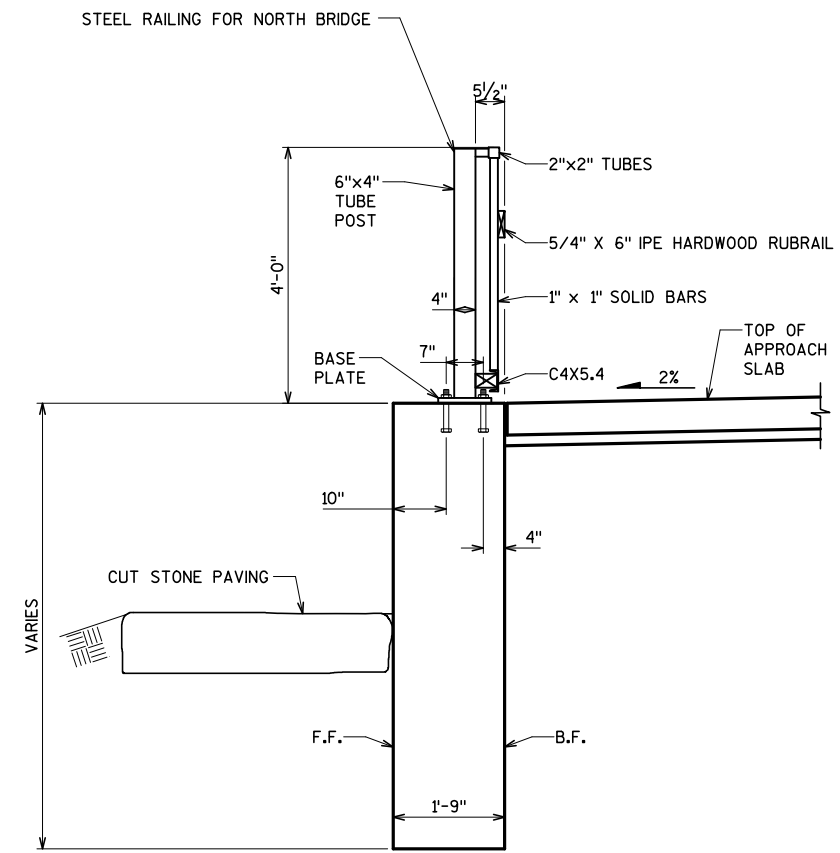
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BILL OF BARS  
NORTH BRIDGE  
CITY OF MADISON

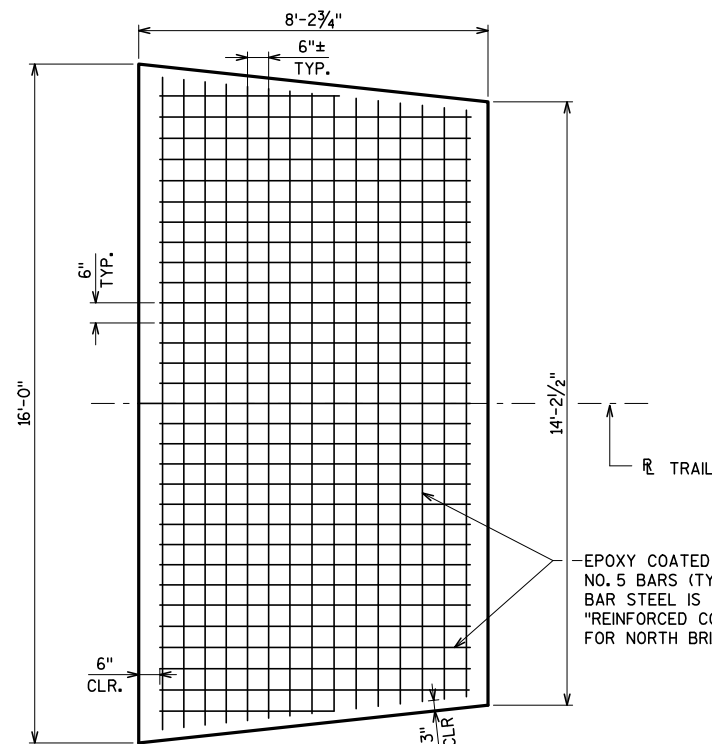
PROJECT NO.  
**BM6-1017**  
SHEET NO.  
**S12**



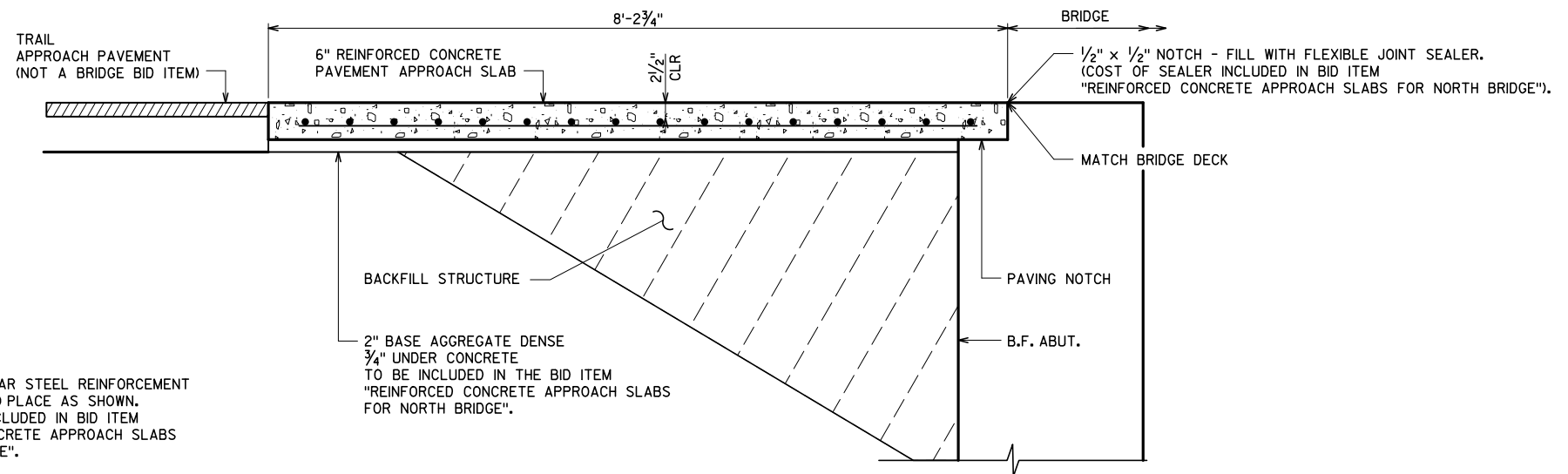
**APPROACH SLAB PLAN**



**SECTION THRU WING**



**APPROACH SLAB PLAN - REINFORCEMENT**



**APPROACH SLAB ELEVATION**

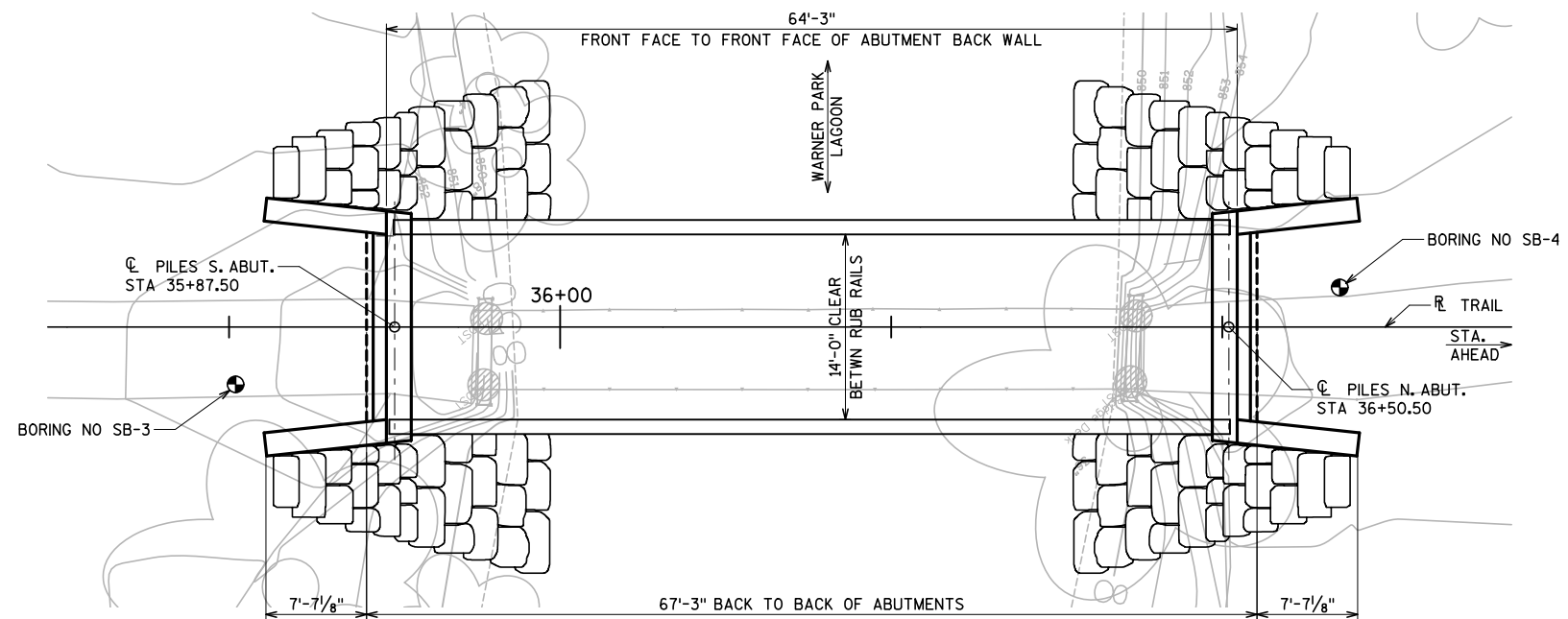
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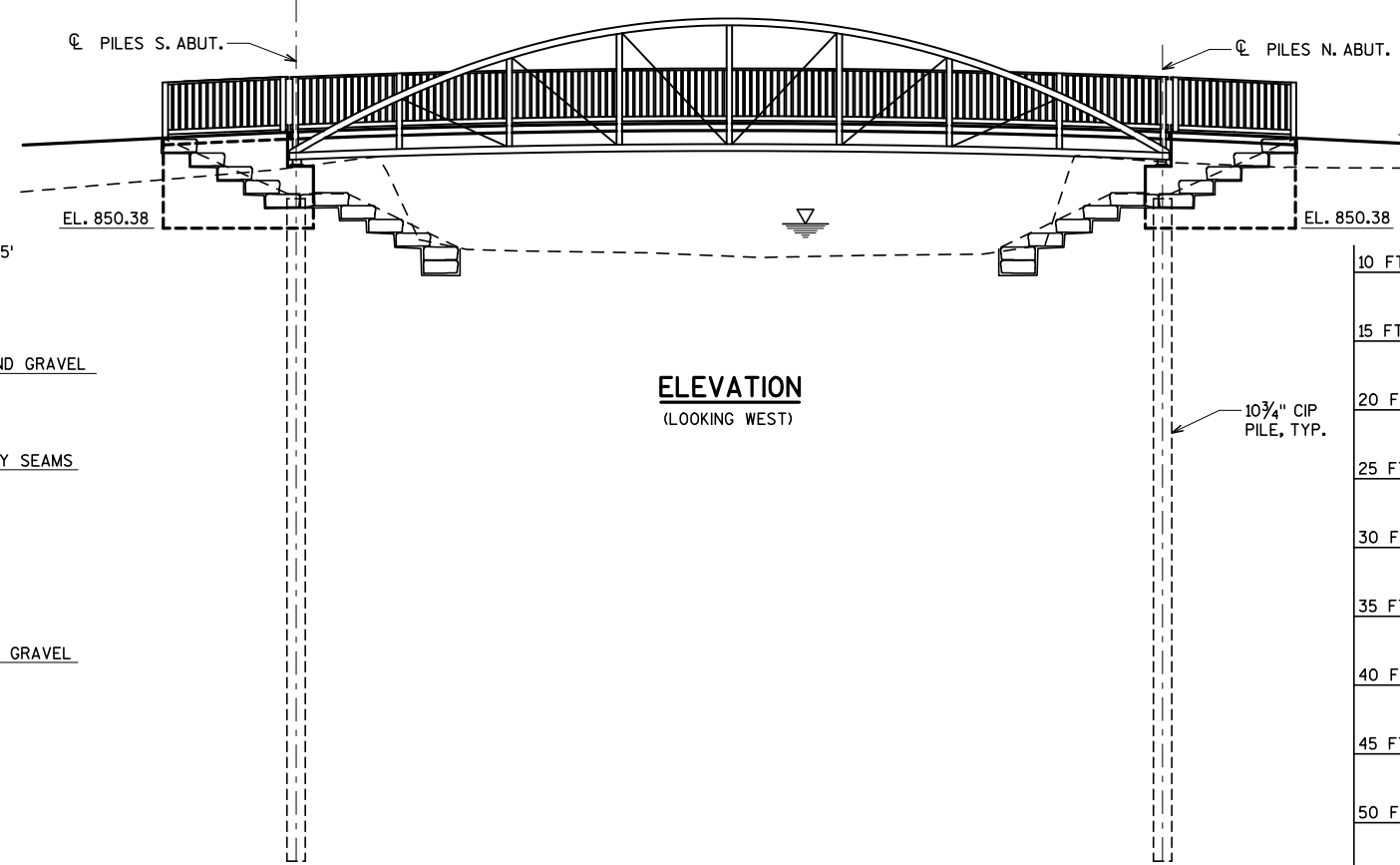
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APPROACH SLAB DETAILS  
 NORTH BRIDGE  
 CITY OF MADISON

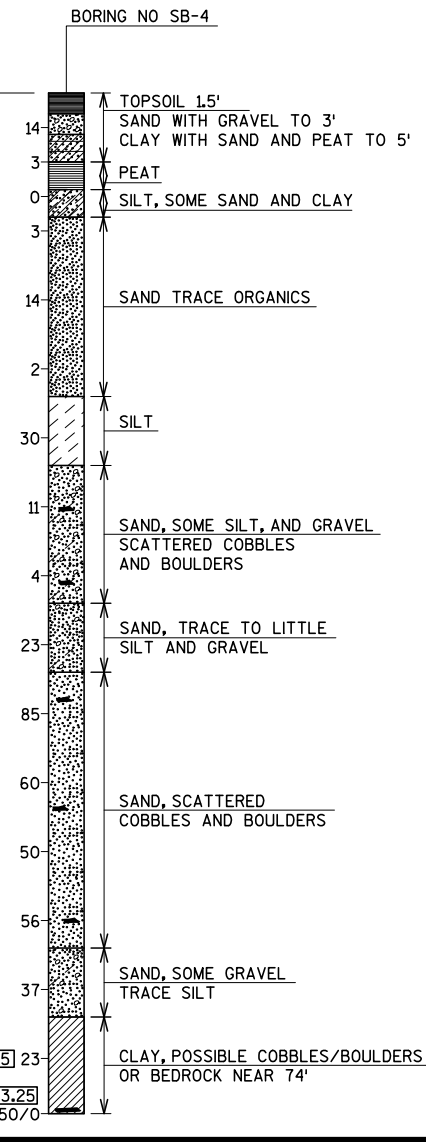
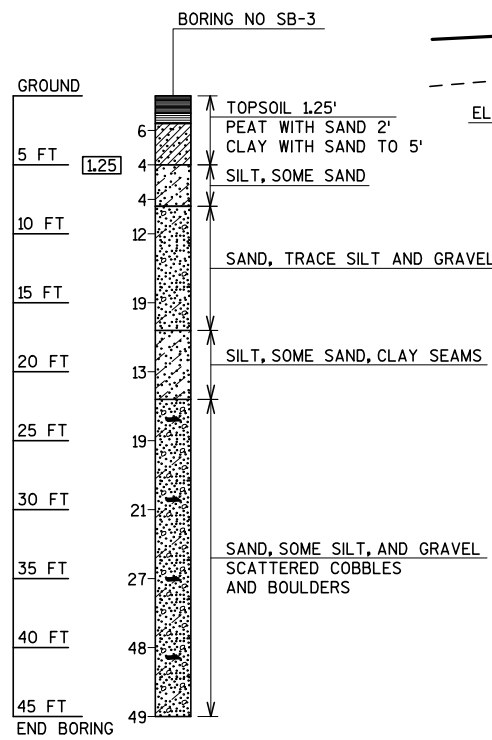
PROJECT NO. BM6-1017
SHEET NO. S13



**PLAN**  
(SINGLE SPAN PREFABRICATED TRUSS PEDESTRIAN BRIDGE)



**ELEVATION**  
(LOOKING WEST)



**ABBREVIATIONS**

F— FINE WS— WEATHERED M— MEDIUM C— COARSE SO— SOUND

**MATERIAL SYMBOLS**

TOPSOIL	SILT	SANDSTONE
SAND	PEAT	LIMESTONE
GRAVEL	CLAY	IGNEOUS ROCK

**LEGEND OF PROBING**

PROBING NO. STA. ELEVATION

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

7 AVERAGE BLOWS PER FOOT

REFUSAL 95/6

**LEGEND OF BORING**

BORING NO. STA. ELEV.

UNCONFINED STRENGTH 7.7

BLOWS PER FT. USING 140# WT. FALLING 30"

WASH SAMPLE

SHELBY TUBE — S.T.

GROUND WATER ELEVATION

NO GROUND WATER OBSERVED ABOVE THIS ELEVATION

SANDY GRAVEL

F. BOULDERS OR COBBLES

SAND

SILT

SO LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

**SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION**

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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GRAPHIC SCALE

SCALE OF DRAWING

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SUBSURFACE EXPLORATION

NORTH BRIDGE

CITY OF MADISON

PROJECT NO. BM6-1017

SHEET NO. S14



CROSS SECTIONS

WARNER PATH

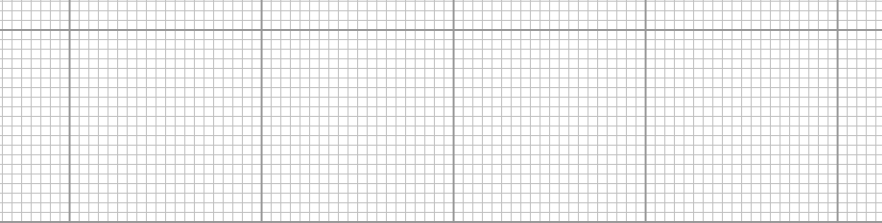
CITY OF MADISON

PLOT SCALE:

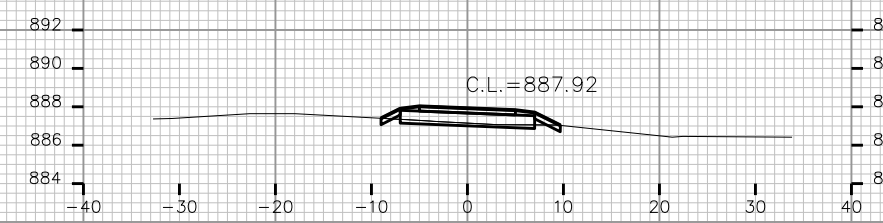
PLOT NAME:

REV. DATE:

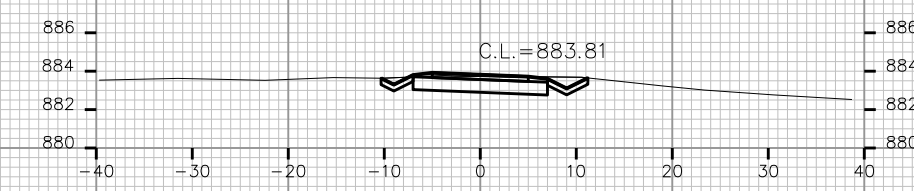
ORIGINATOR: CITY OF MADISON, STREETS DIVISION



STA. 11+00



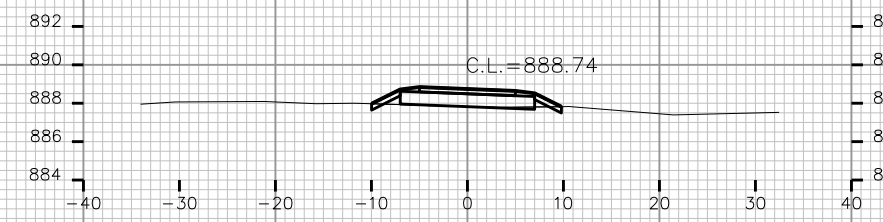
STA. 12+25



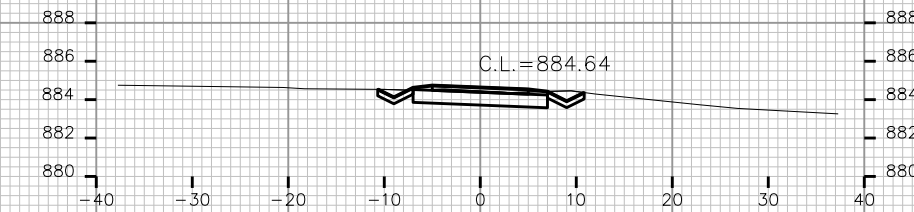
STA. 13+50



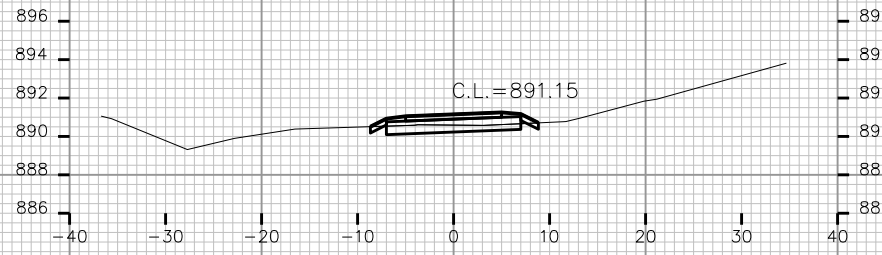
STA. 10+75



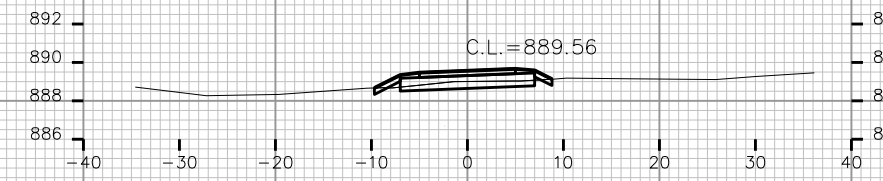
STA. 12+00



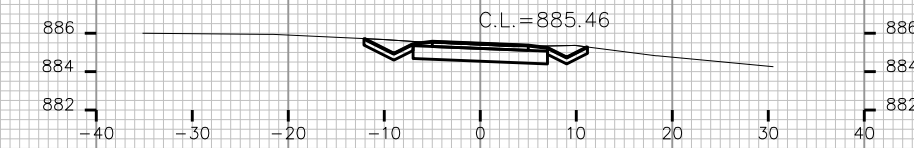
STA. 13+25



STA. 10+50



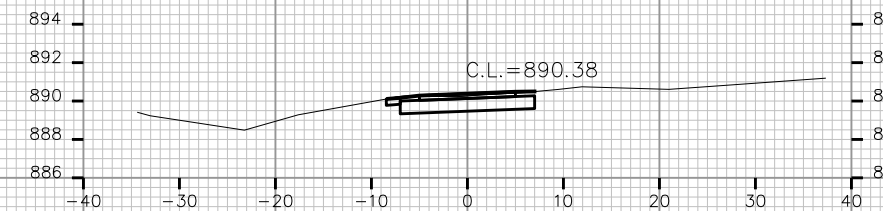
STA. 11+75



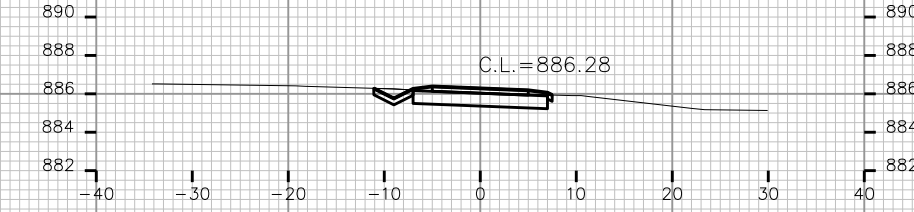
STA. 13+00



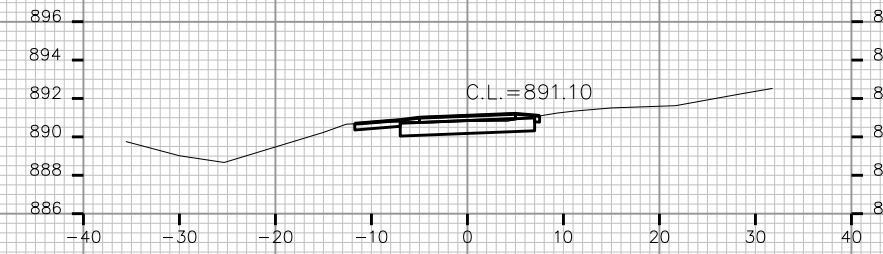
STA. 10+25



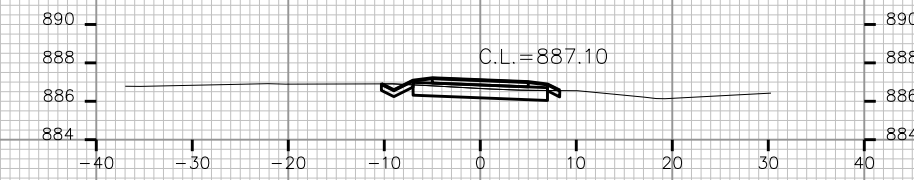
STA. 11+50



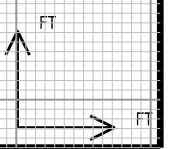
STA. 12+75



STA. 11+25



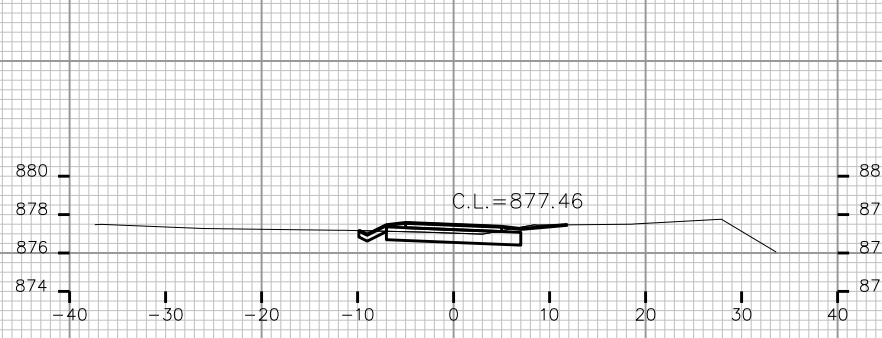
STA. 12+50



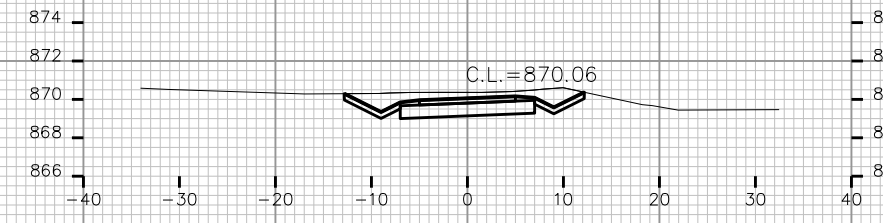
CROSS SECTIONS

WARNER PATH

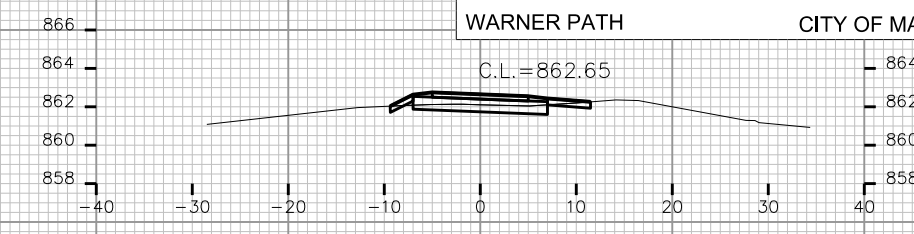
CITY OF MADISON



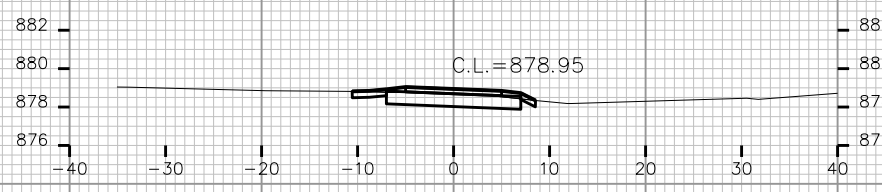
STA. 14+75



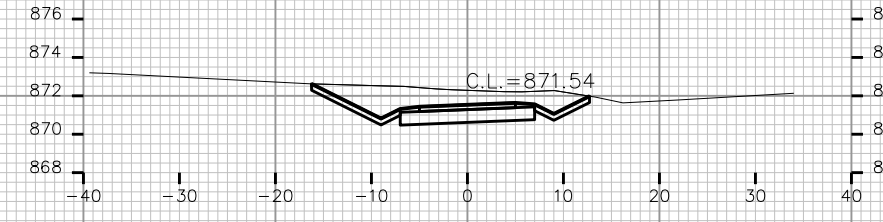
STA. 16+00



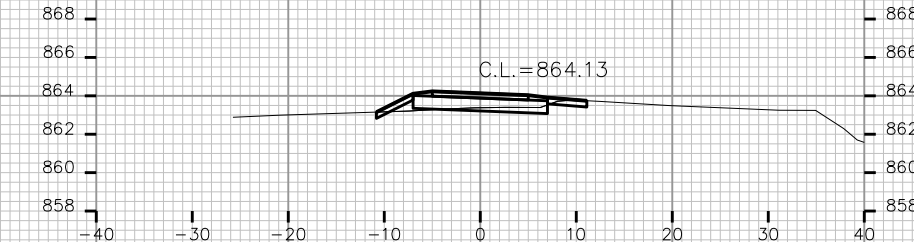
STA. 17+25



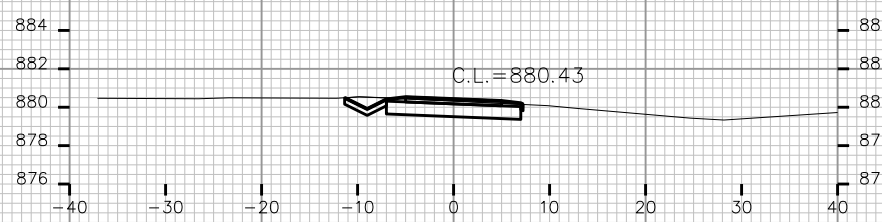
STA. 14+50



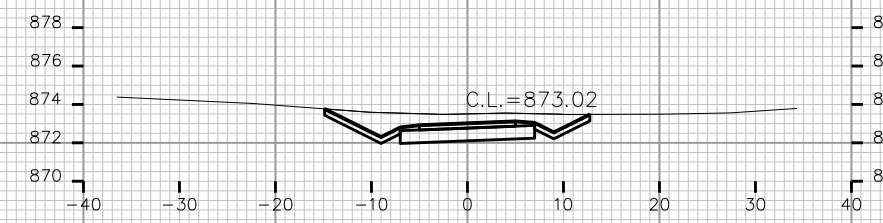
STA. 15+75



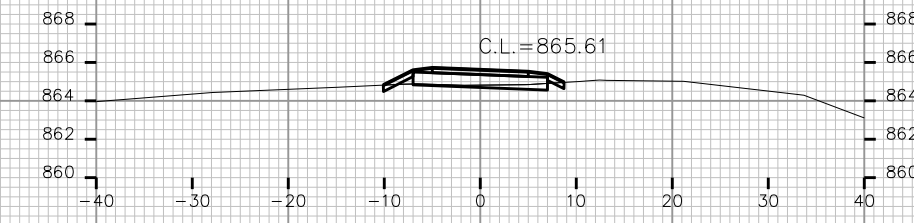
STA. 17+00



STA. 14+25



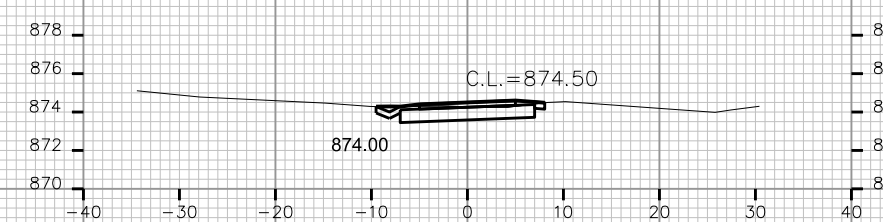
STA. 15+50



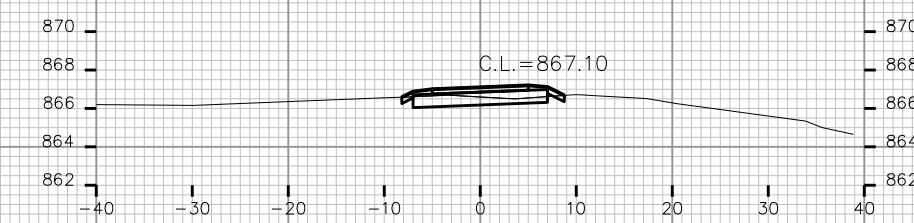
STA. 16+75



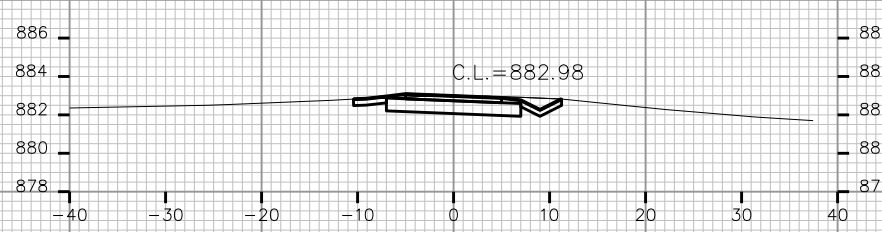
STA. 14+00



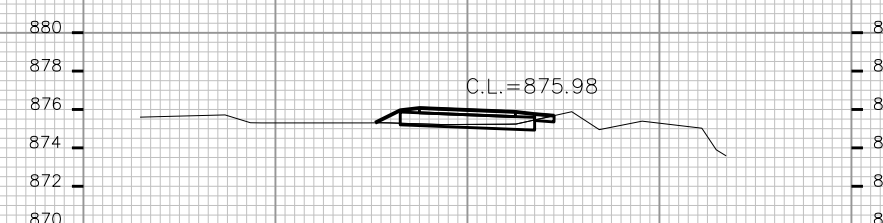
STA. 15+25



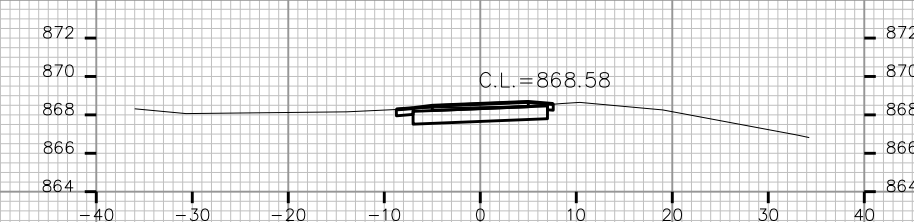
STA. 16+50



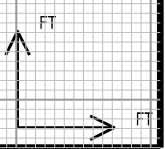
STA. 13+75



STA. 15+00



STA. 16+25



PLOT SCALE:

PLOT NAME:

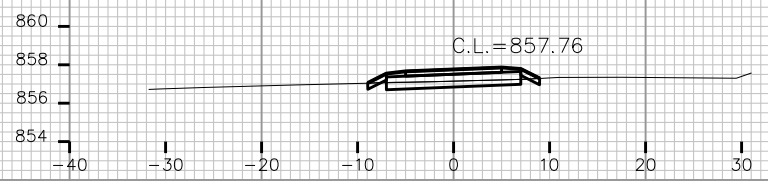
REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

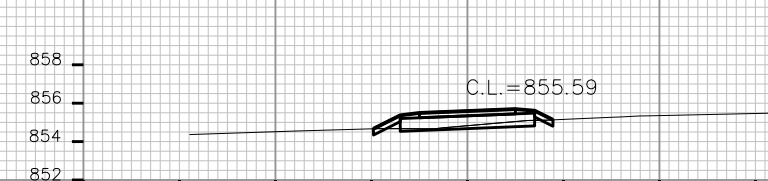
CROSS SECTIONS

WARNER PATH

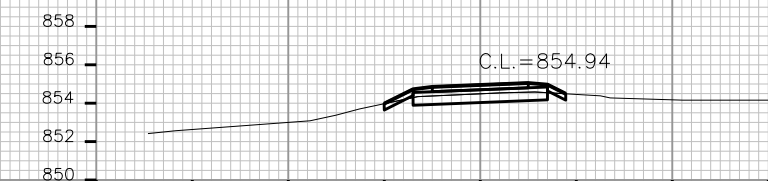
CITY OF MADISON



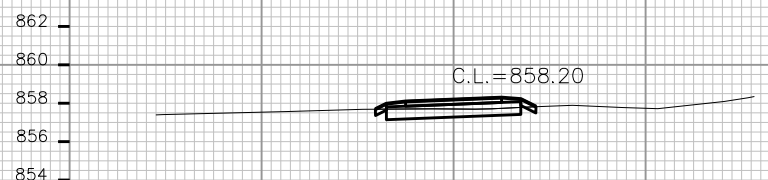
STA. 18+50



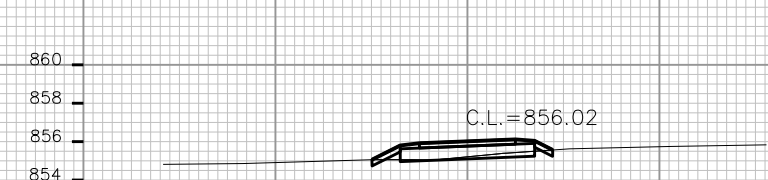
STA. 19+75



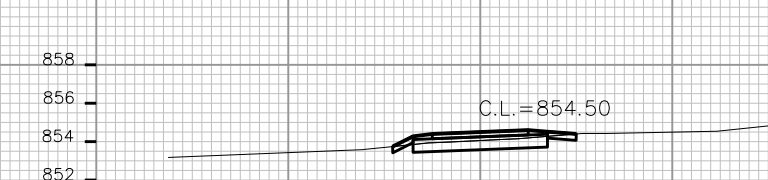
STA. 20+75



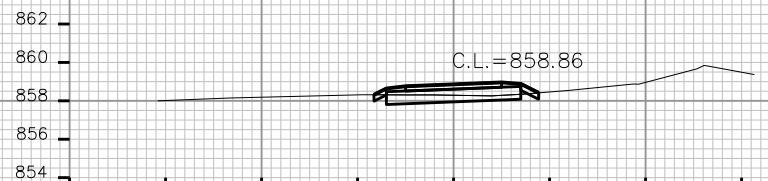
STA. 18+25



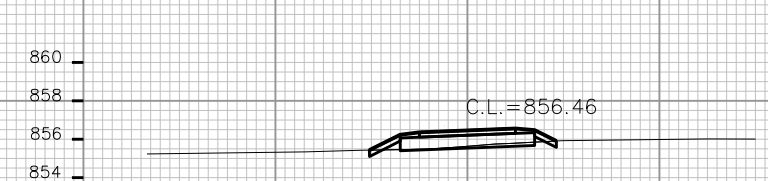
STA. 19+50



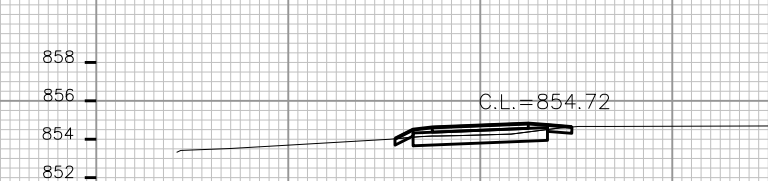
STA. 20+50



STA. 18+00



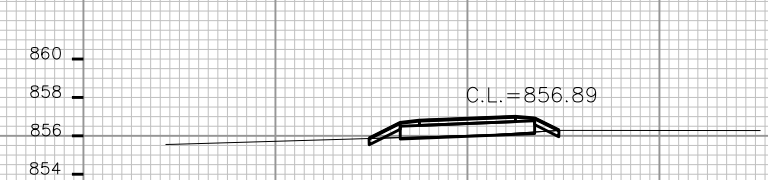
STA. 19+25



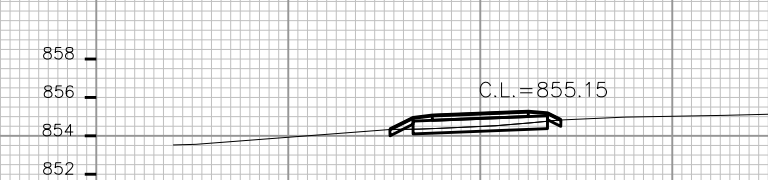
STA. 20+25



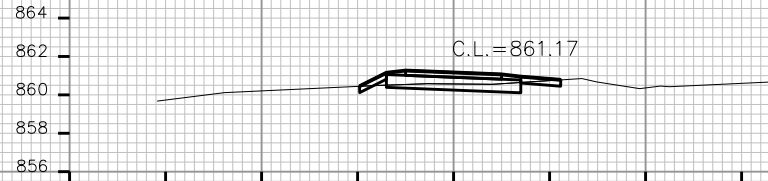
STA. 17+75



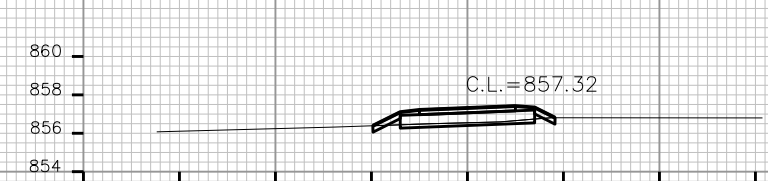
STA. 19+00



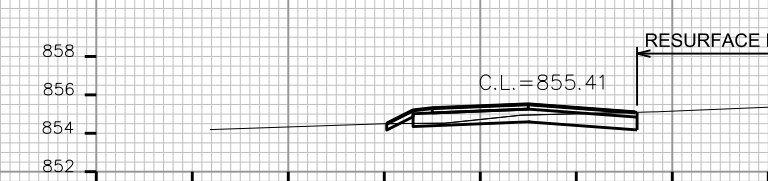
STA. 20+00



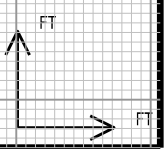
STA. 17+50



STA. 18+75



STA. 19+85



PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

CROSS SECTIONS

WARNER PATH

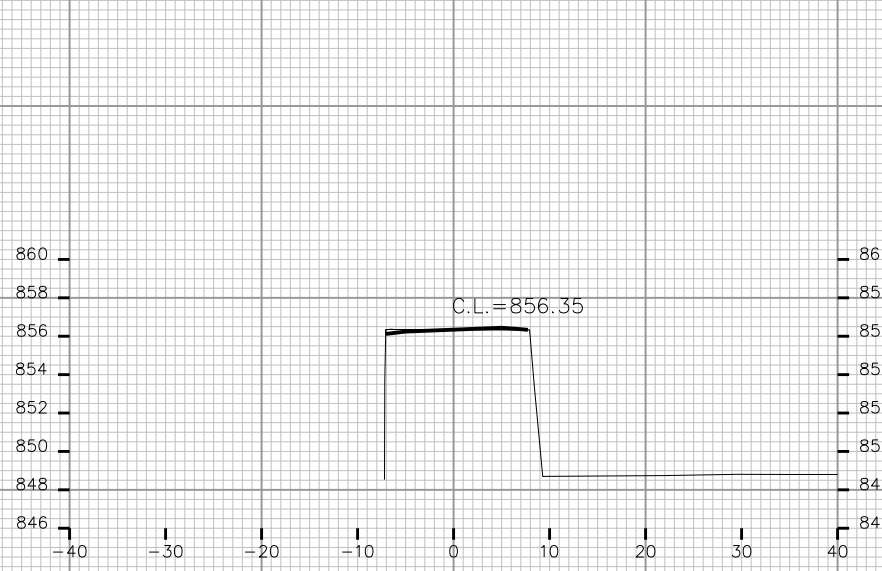
CITY OF MADISON

PLOT SCALE:

PLOT NAME:

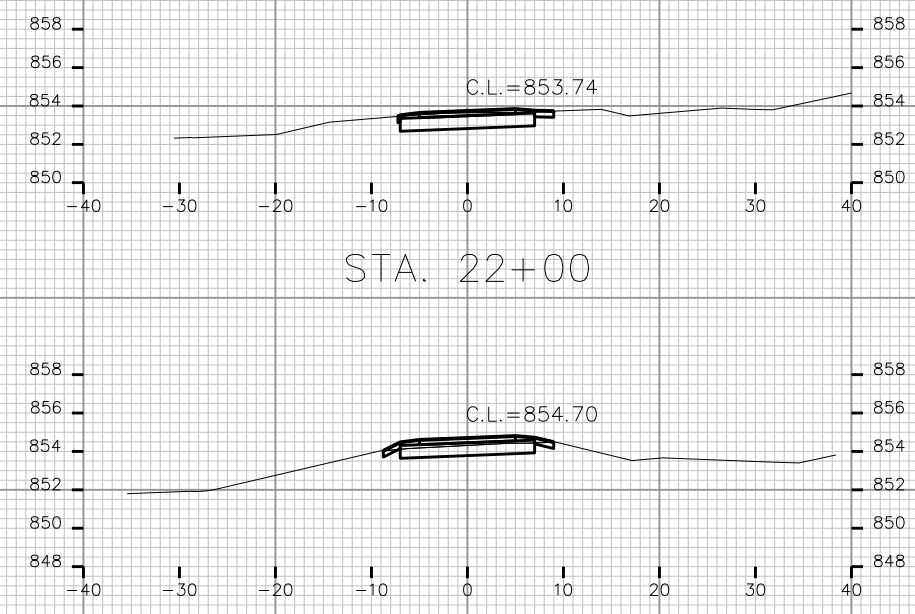
REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

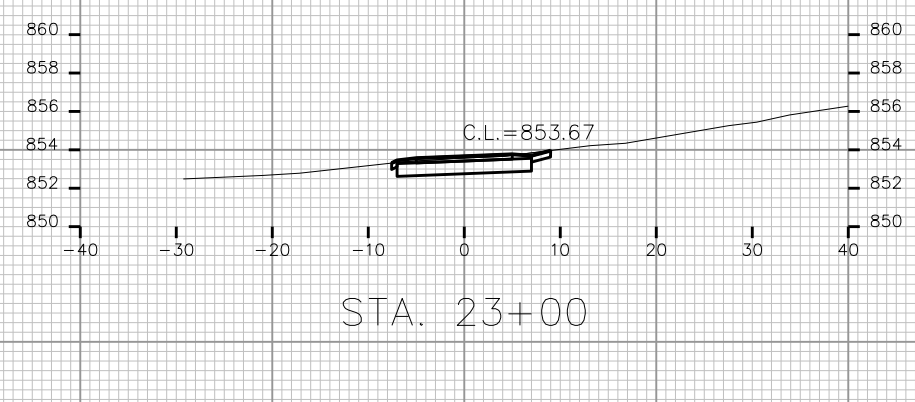


STA. 21+25

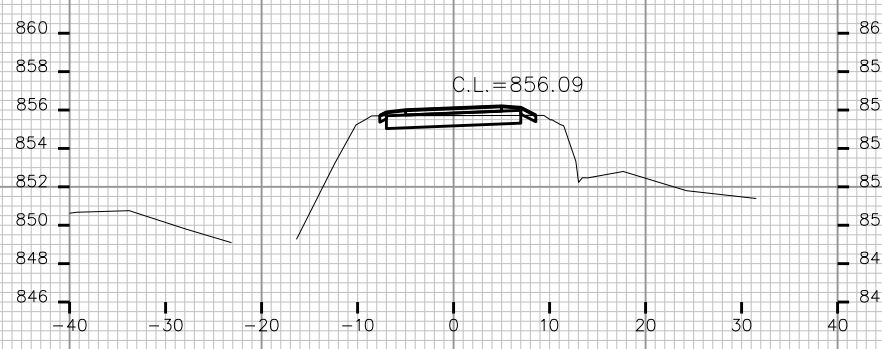
MATCH EXIST. BRIDGE



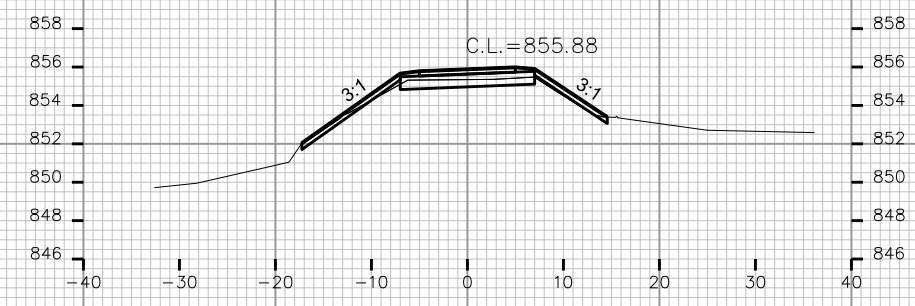
STA. 21+75



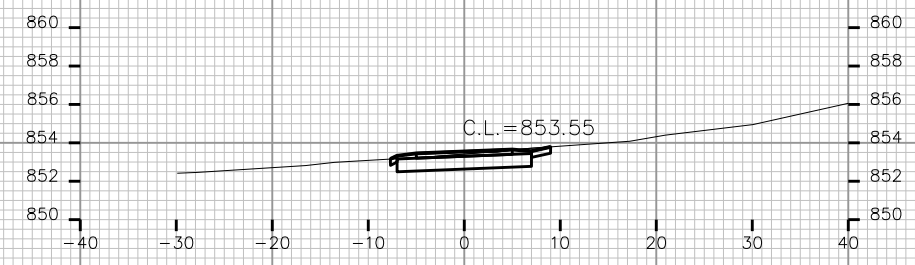
STA. 23+00



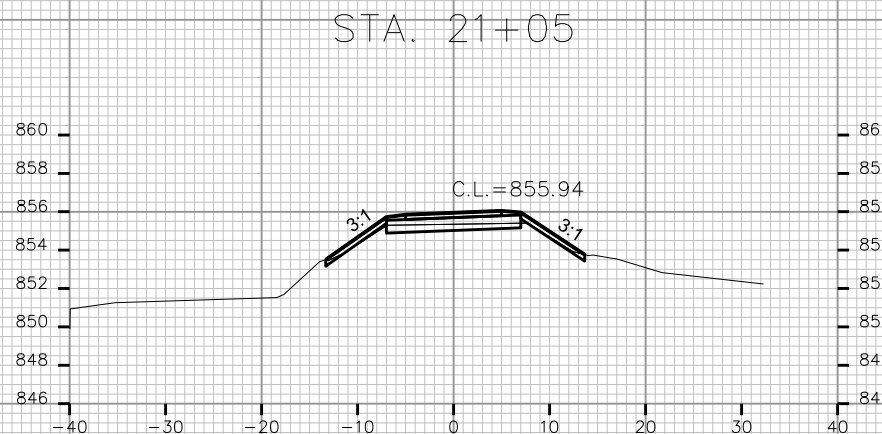
STA. 21+05



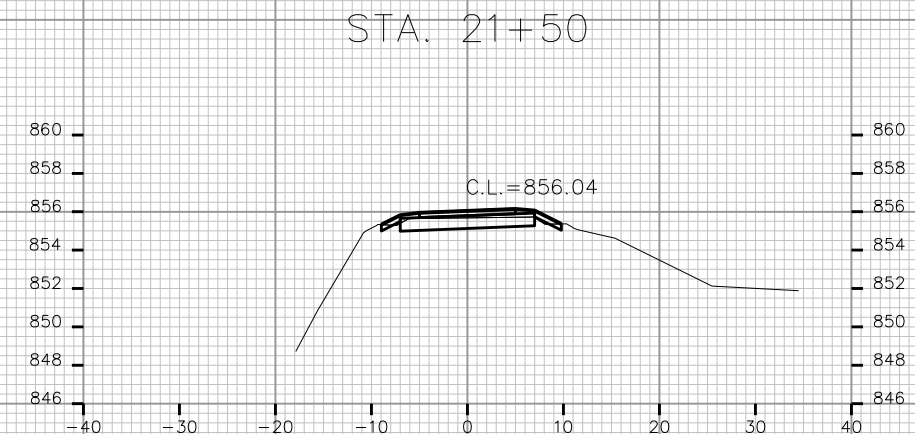
STA. 21+50



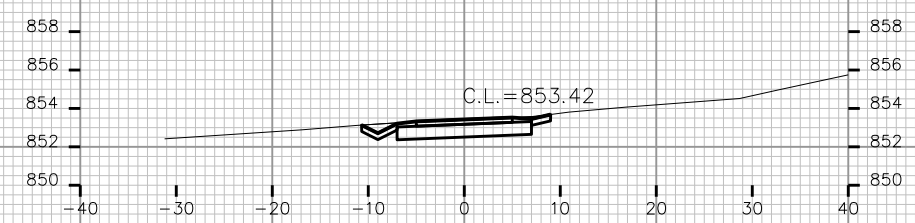
STA. 22+75



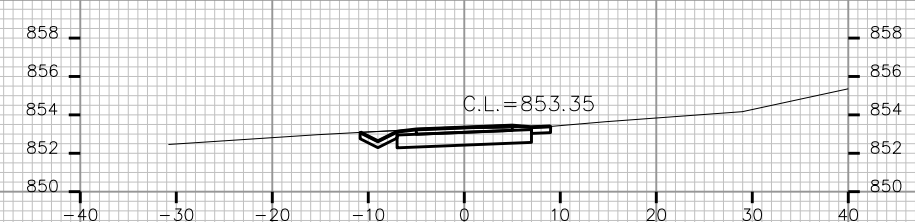
STA. 21+00



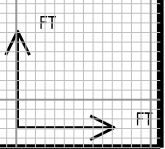
STA. 21+45



STA. 22+50



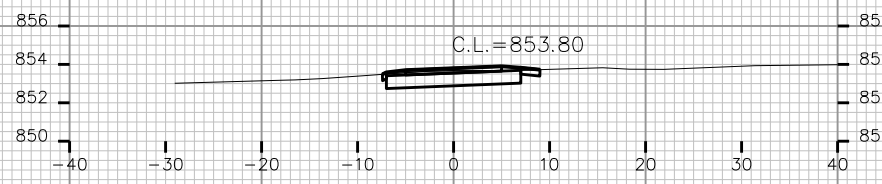
STA. 22+25



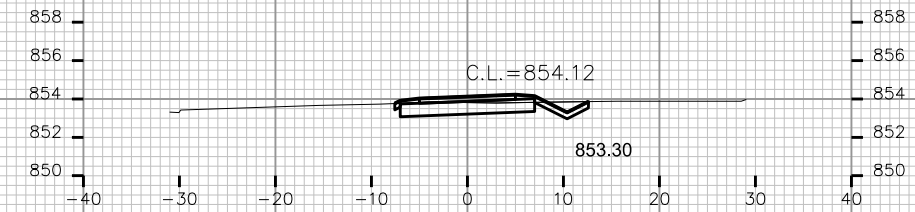
CROSS SECTIONS

WARNER PATH

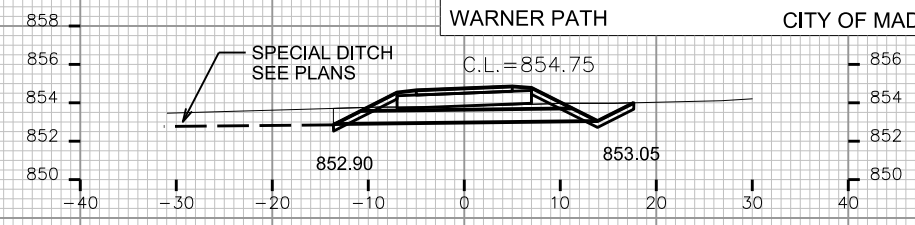
CITY OF MADISON



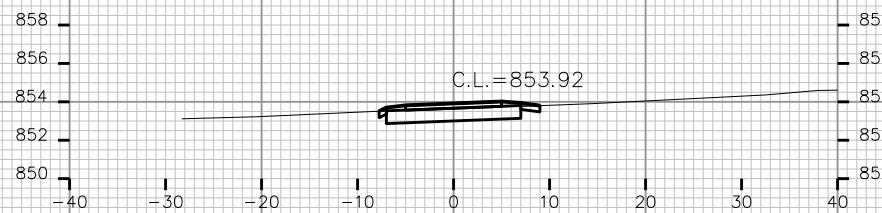
STA. 24+25



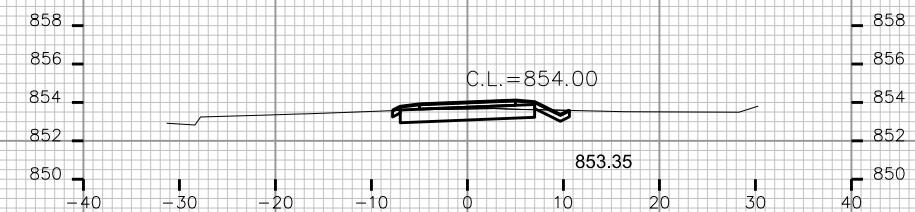
STA. 25+50



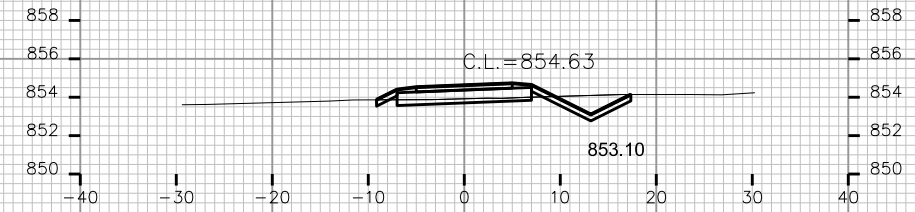
STA. 26+75



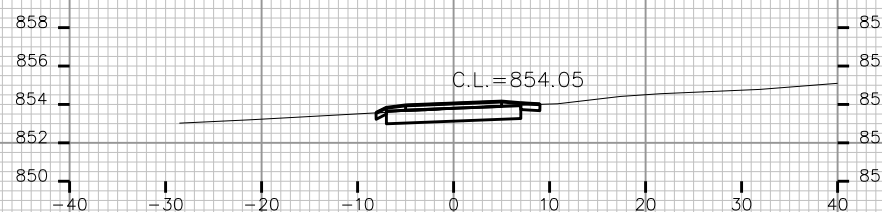
STA. 24+00



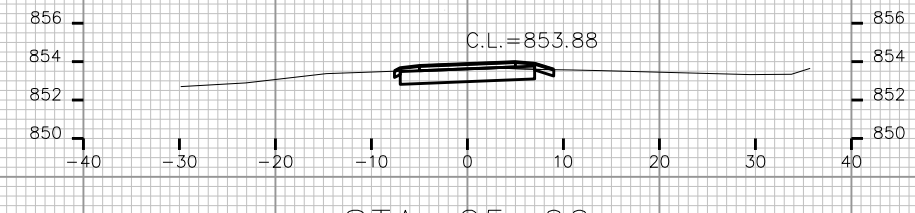
STA. 25+25



STA. 26+50



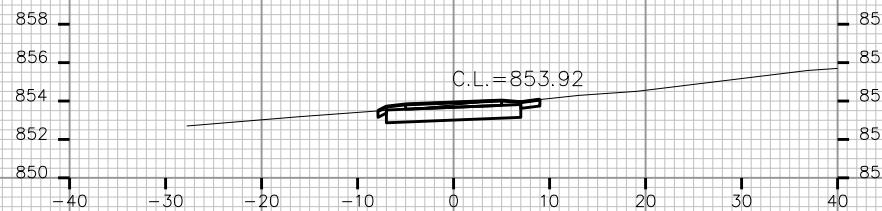
STA. 23+75



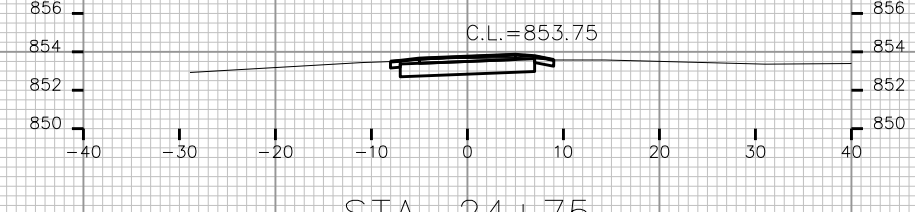
STA. 25+00



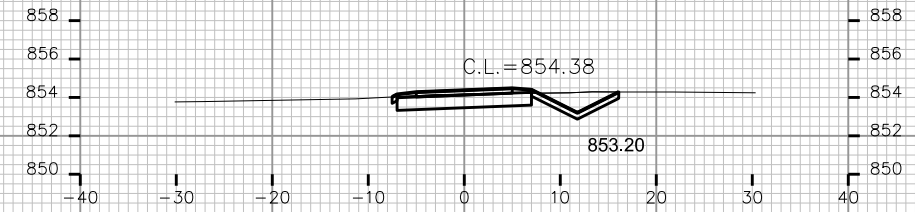
STA. 26+25



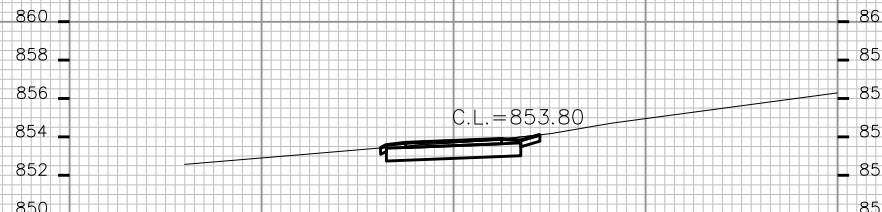
STA. 23+50



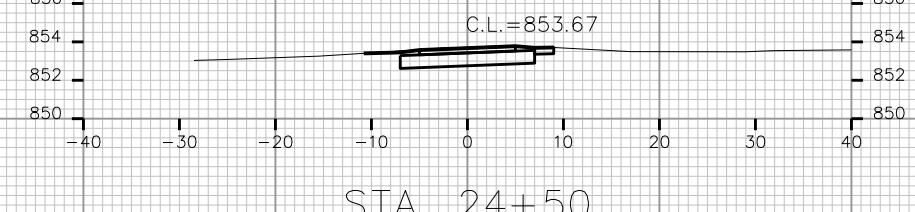
STA. 24+75



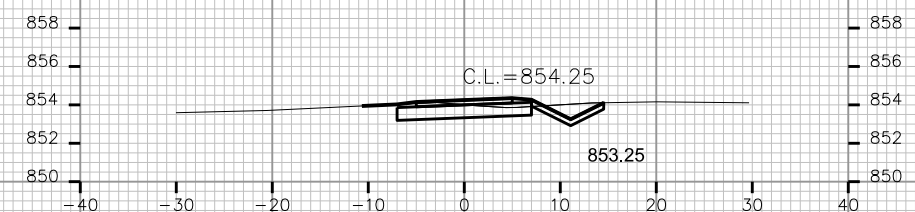
STA. 26+00



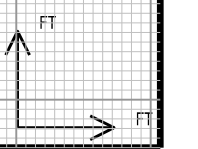
STA. 23+25



STA. 24+50



STA. 25+75



PLOT SCALE:

PLOT NAME:

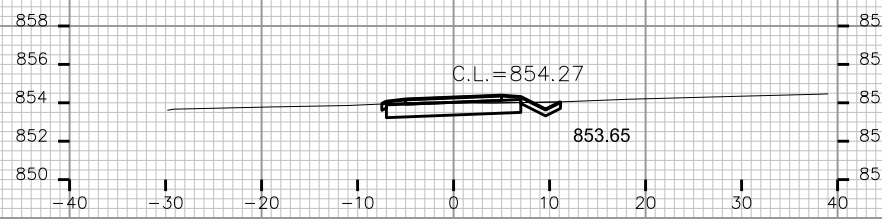
REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

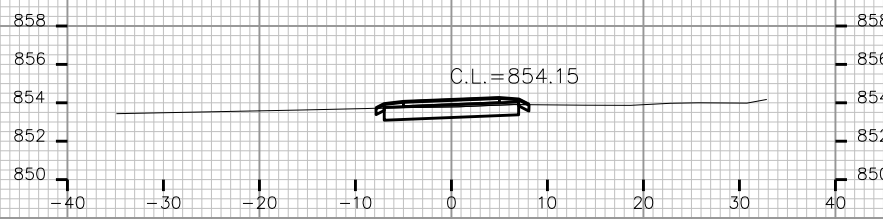
CROSS SECTIONS

WARNER PATH

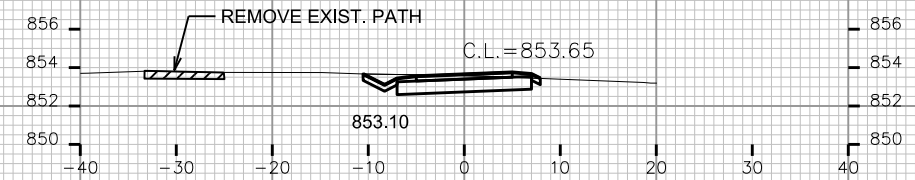
CITY OF MADISON



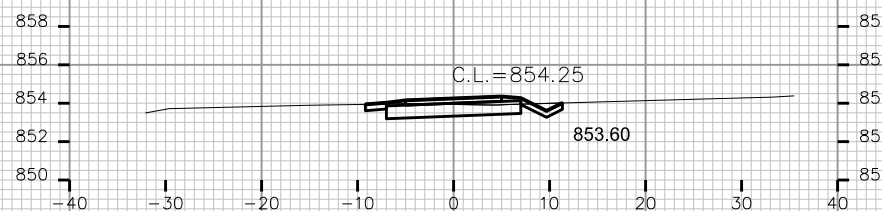
STA. 28+00



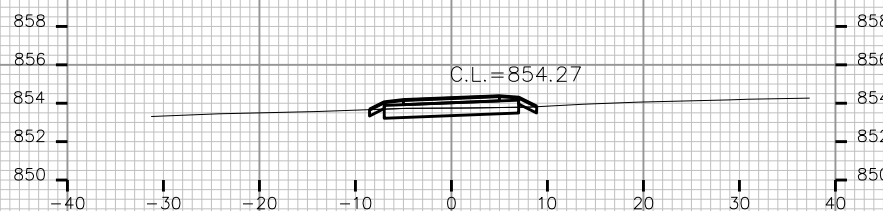
STA. 29+25



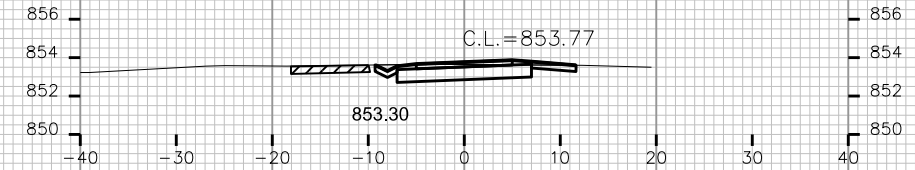
STA. 30+25



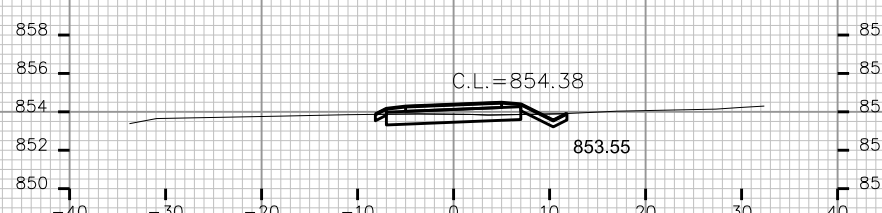
STA. 27+75



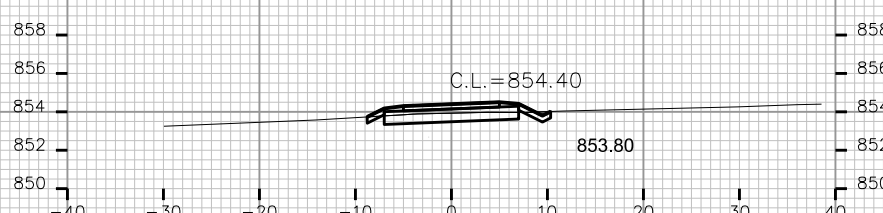
STA. 29+00



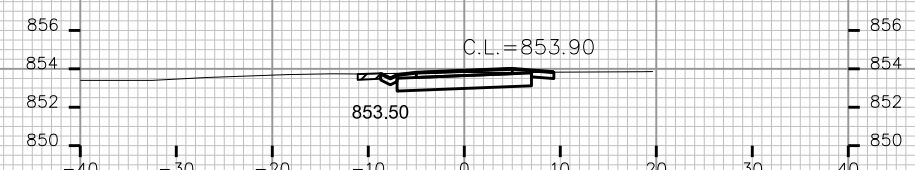
STA. 30+00



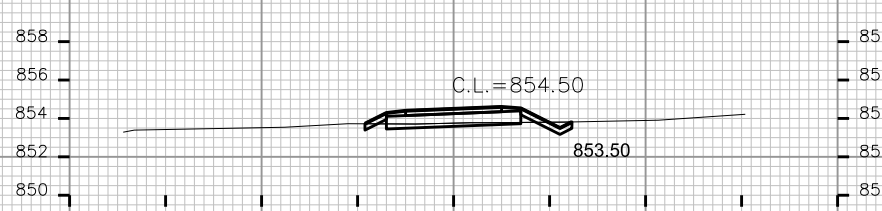
STA. 27+50



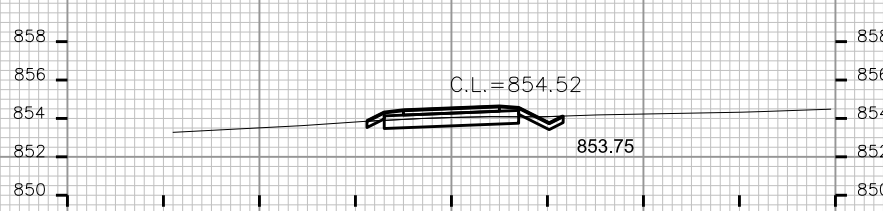
STA. 28+75



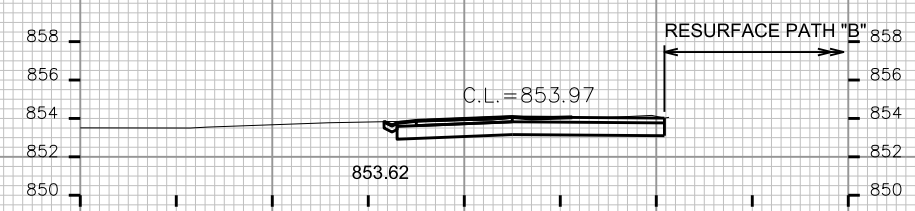
STA. 29+75



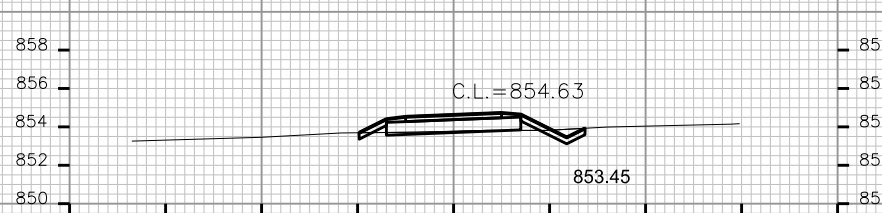
STA. 27+25



STA. 28+50



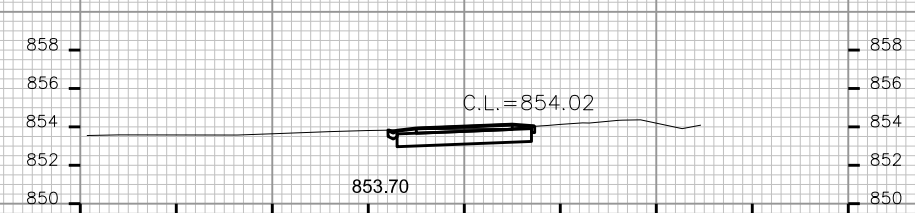
STA. 29+60



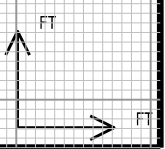
STA. 27+00



STA. 28+25



STA. 29+50



PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

CROSS SECTIONS

WARNER PATH

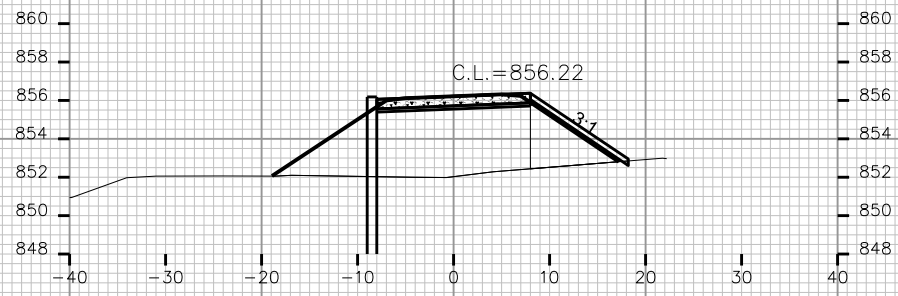
CITY OF MADISON

PLOT SCALE:

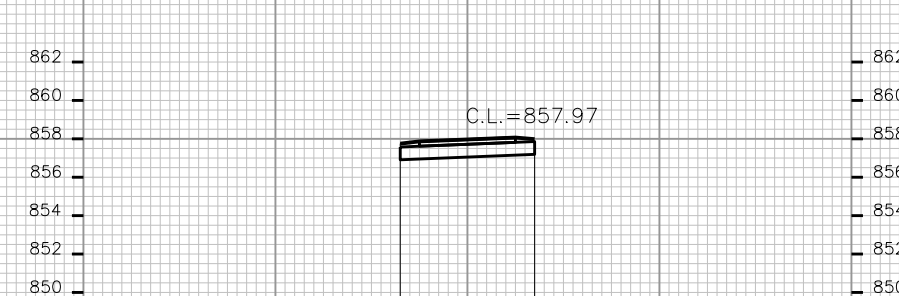
PLOT NAME:

REV. DATE:

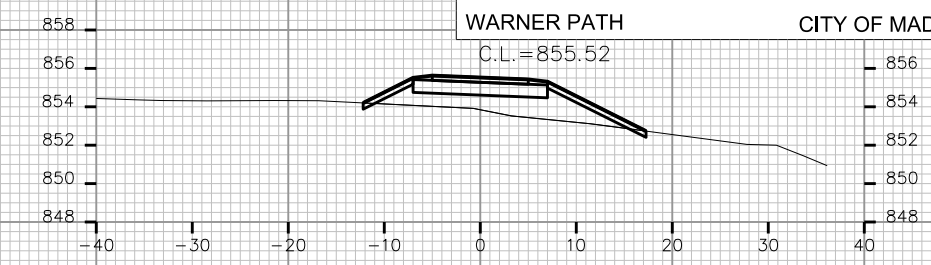
ORIGINATOR: CITY OF MADISON, STREETS DIVISION



STA. 31+15



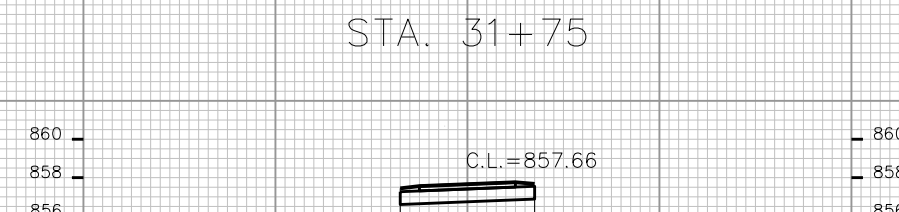
STA. 31+75



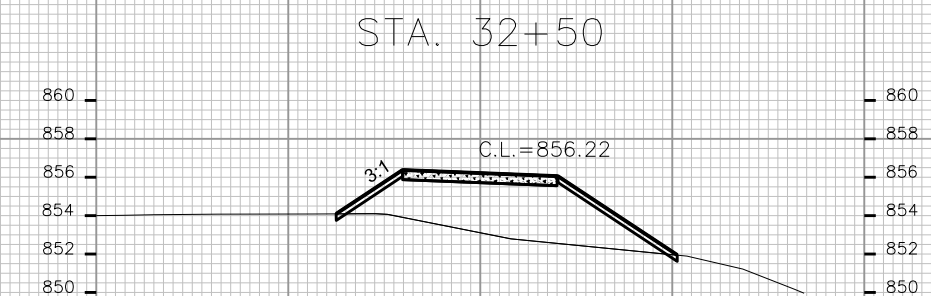
STA. 32+50



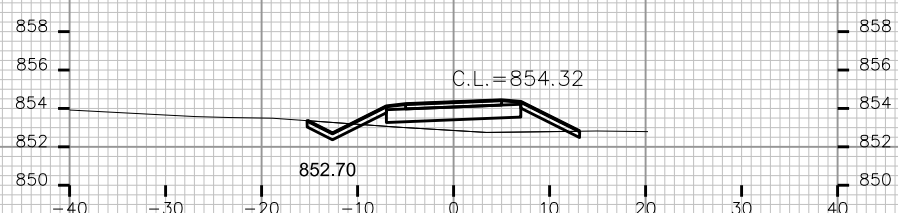
STA. 31+00



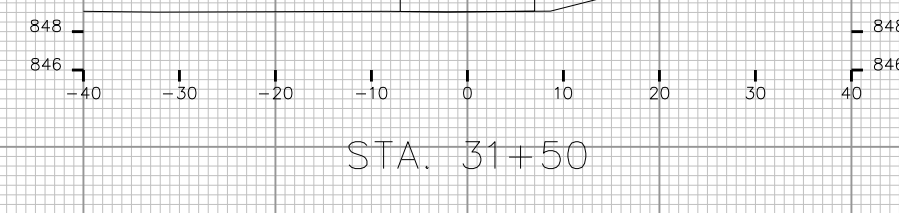
STA. 31+50



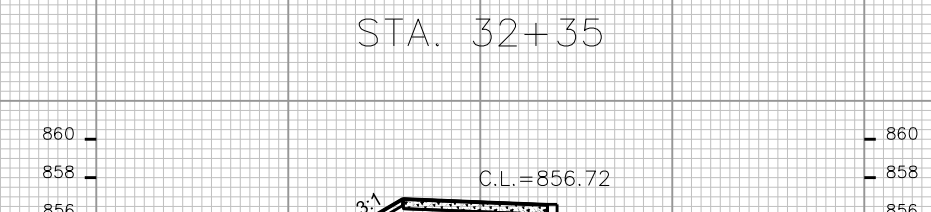
STA. 32+35



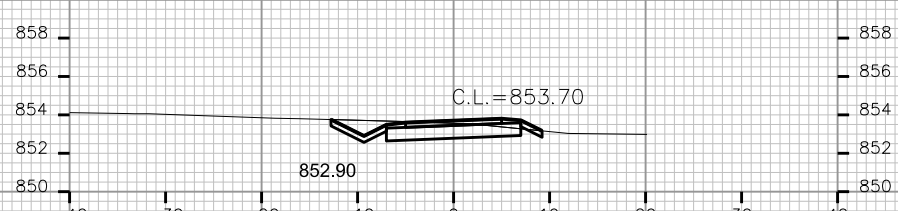
STA. 30+75



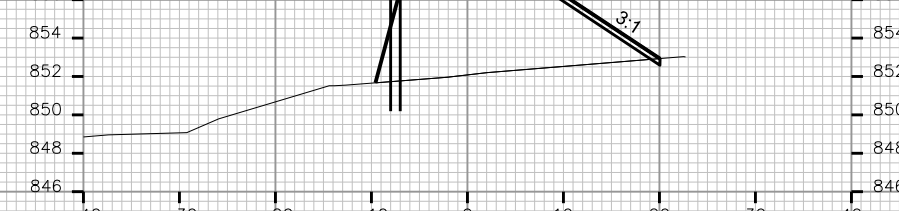
STA. 31+25



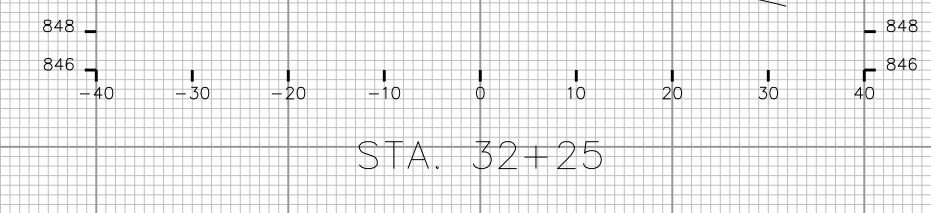
STA. 32+25



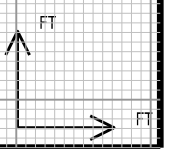
STA. 30+50



STA. 31+00



STA. 32+00



CROSS SECTIONS

WARNER PATH

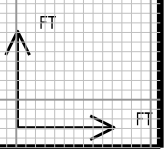
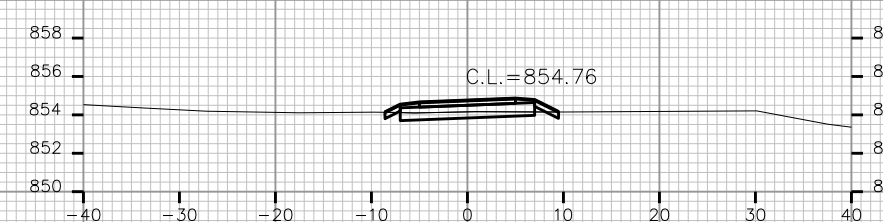
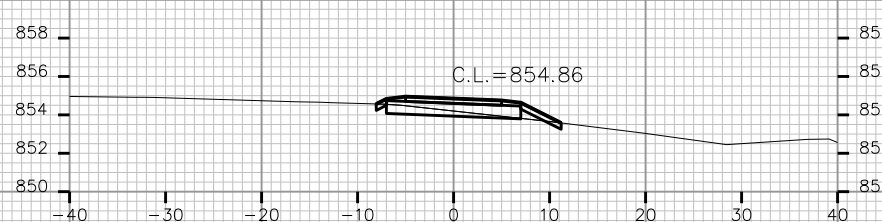
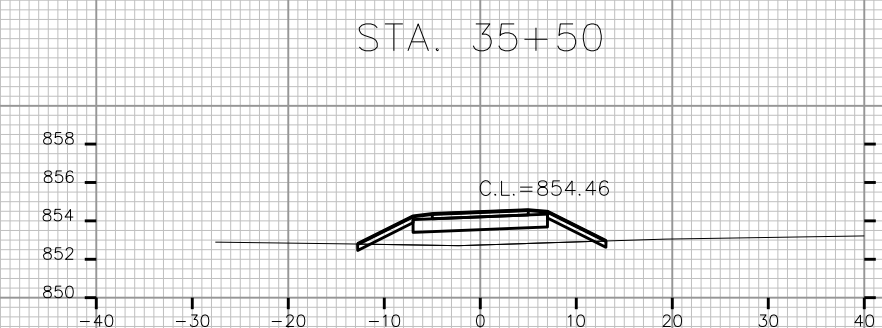
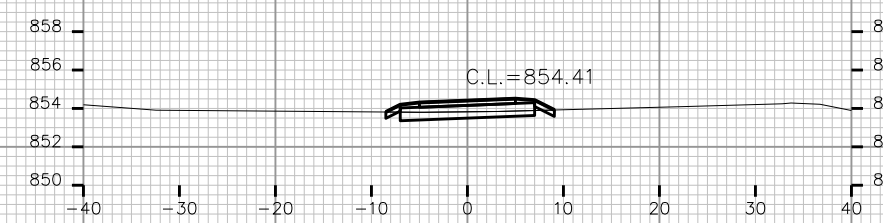
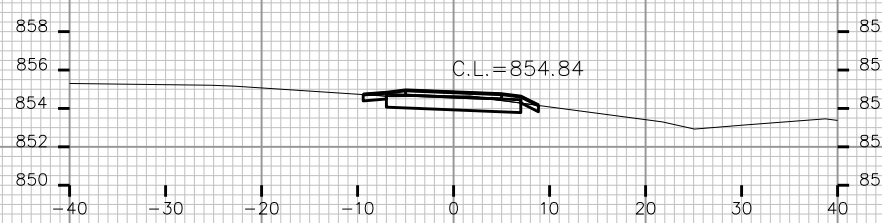
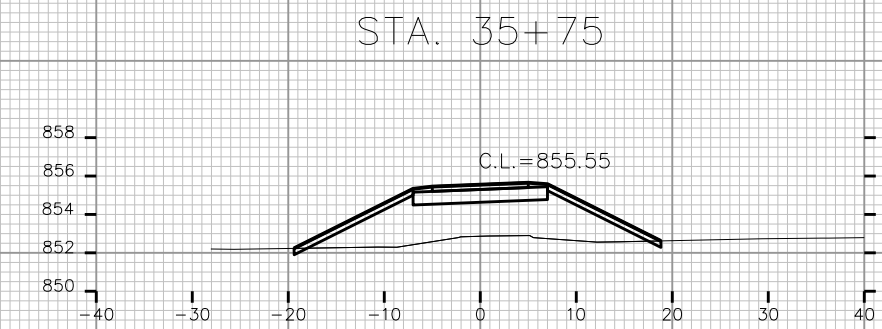
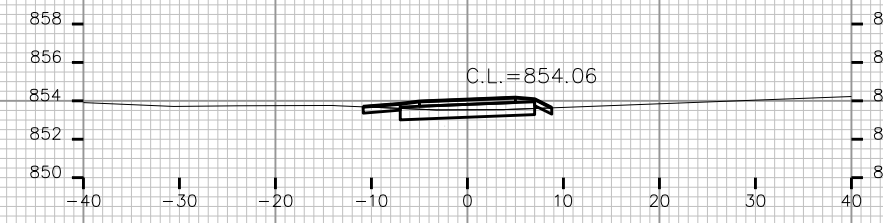
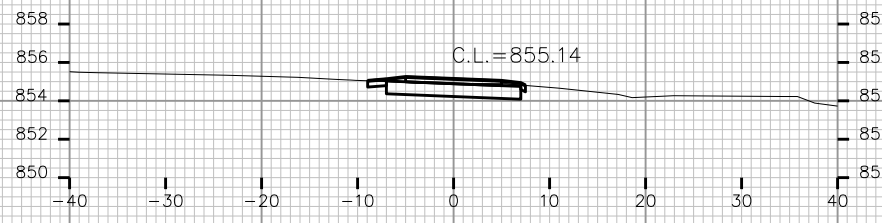
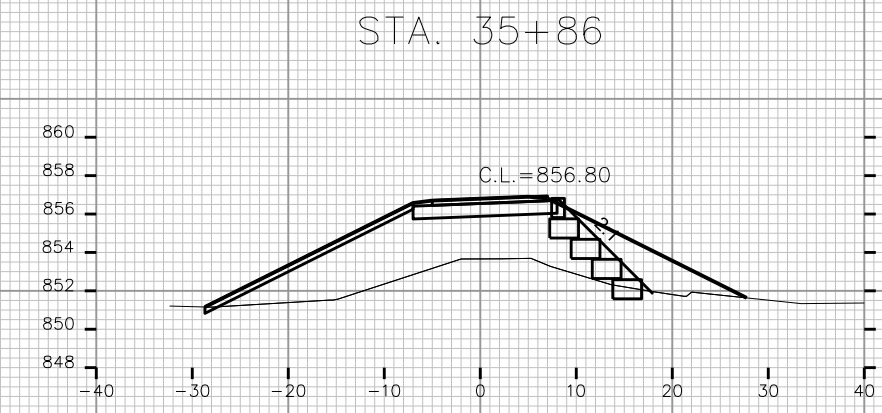
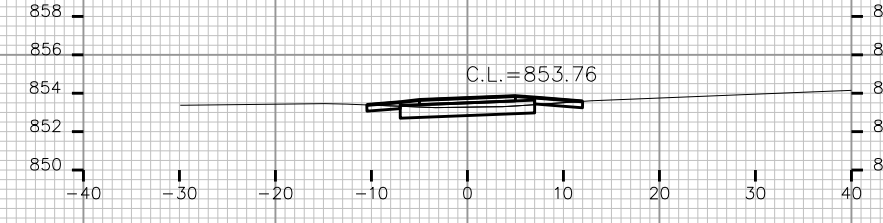
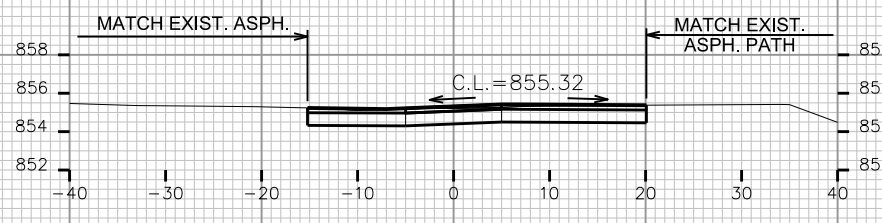
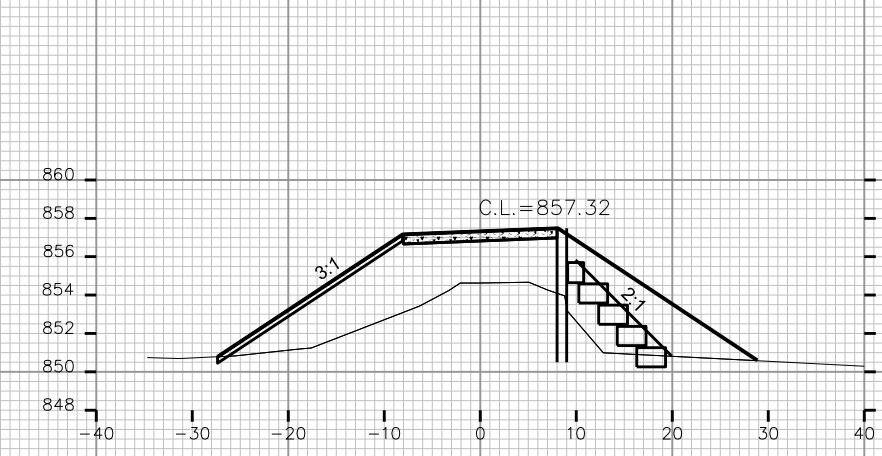
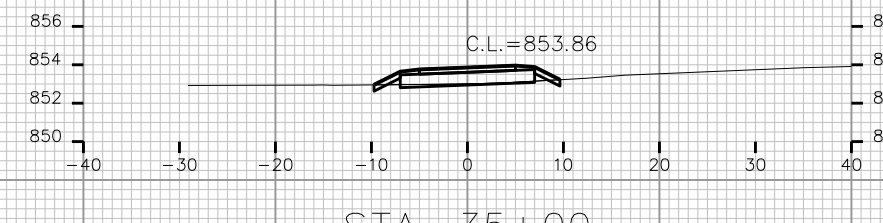
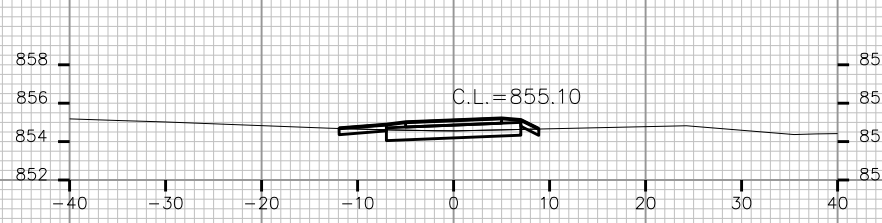
CITY OF MADISON

PLOT SCALE:

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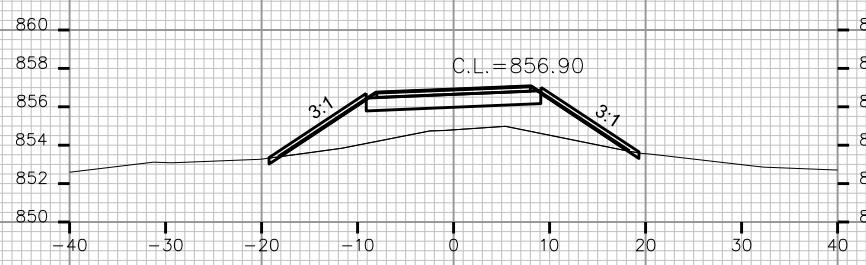




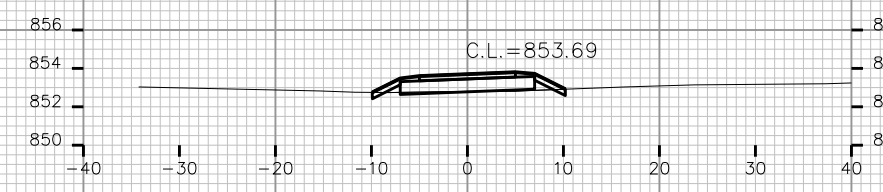
CROSS SECTIONS

WARNER PATH

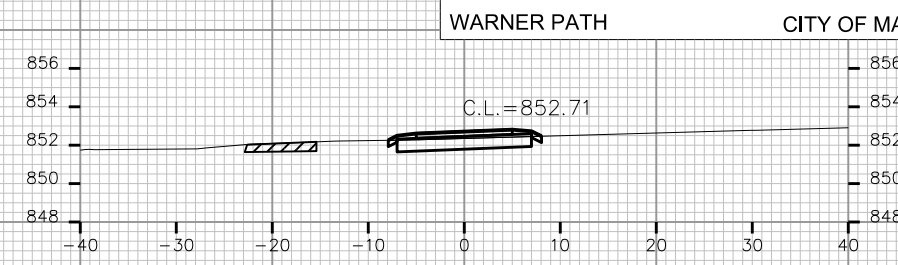
CITY OF MADISON



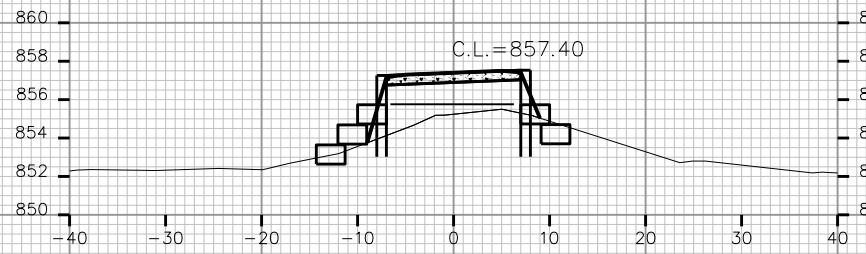
STA. 36+61



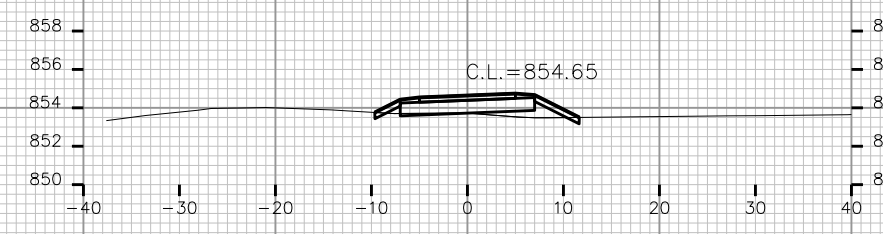
STA. 37+75



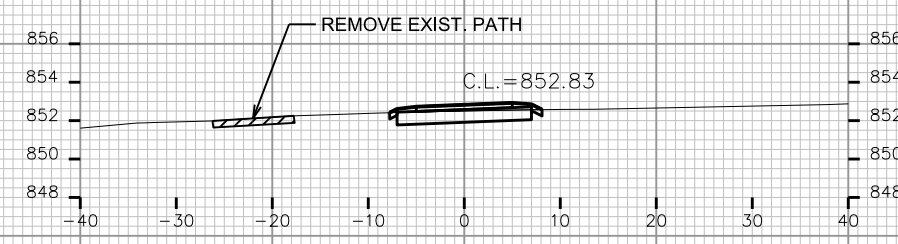
STA. 39+00



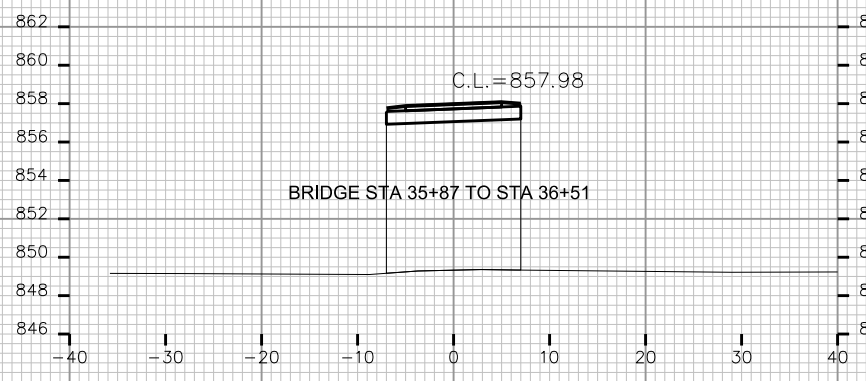
STA. 36+50



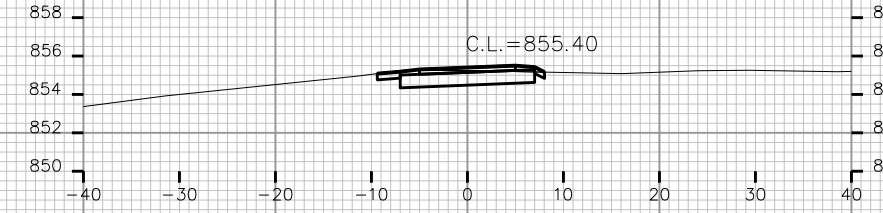
STA. 37+50



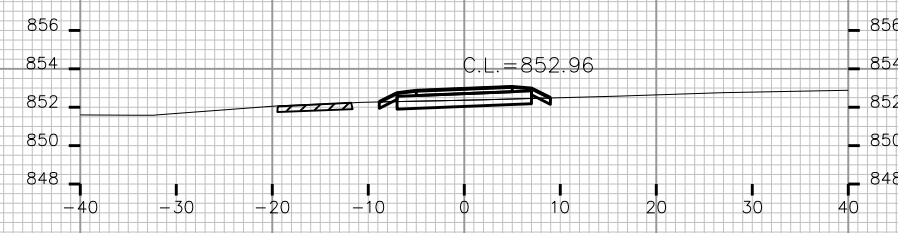
STA. 38+75



STA. 36+25



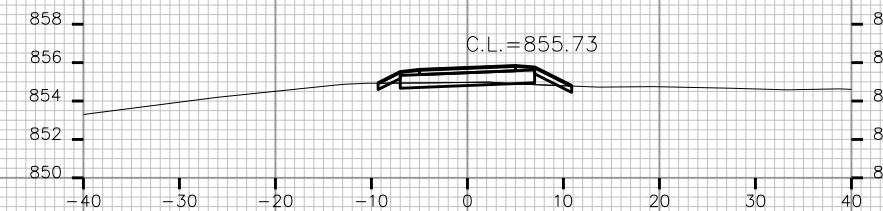
STA. 37+25



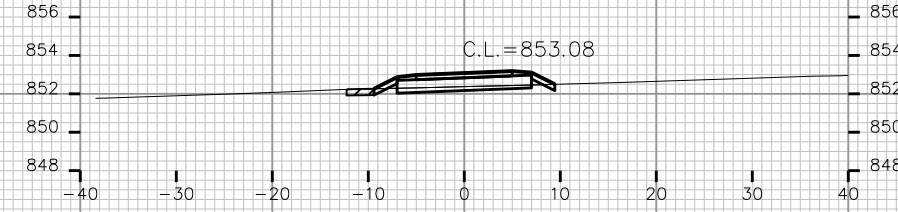
STA. 38+50



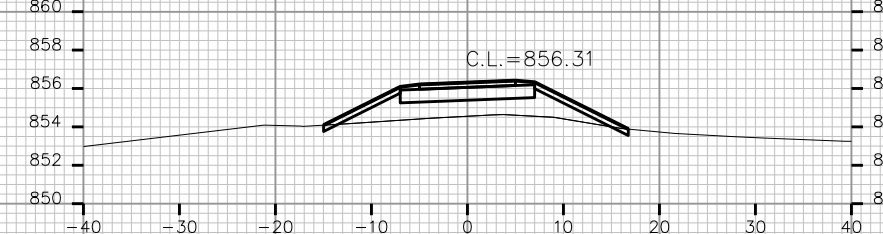
STA. 36+00



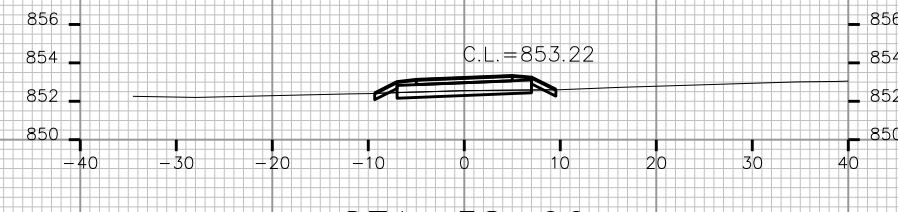
STA. 37+00



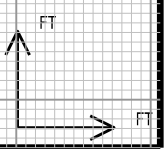
STA. 38+25



STA. 36+75



STA. 38+00



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CROSS SECTIONS

WARNER PATH

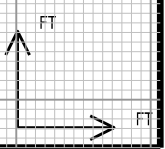
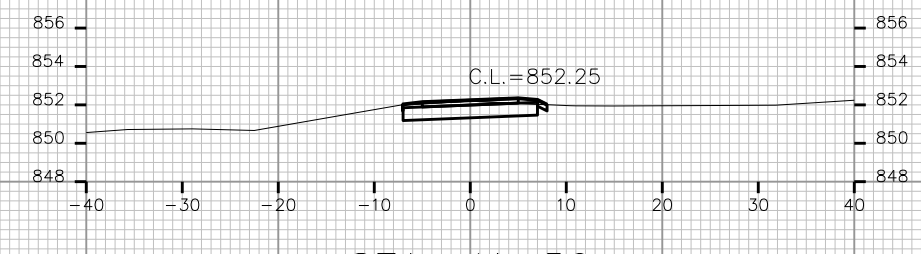
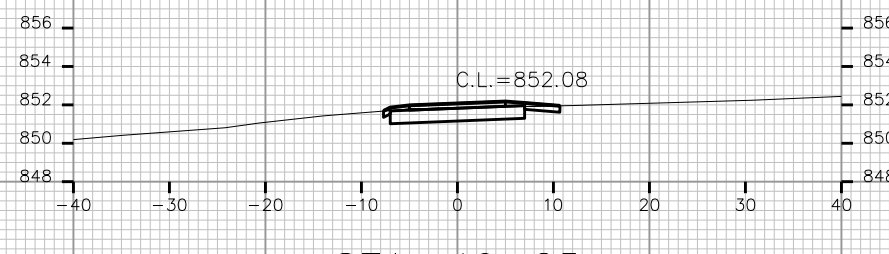
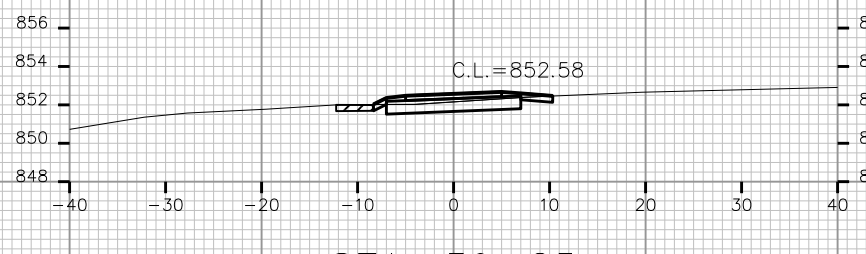
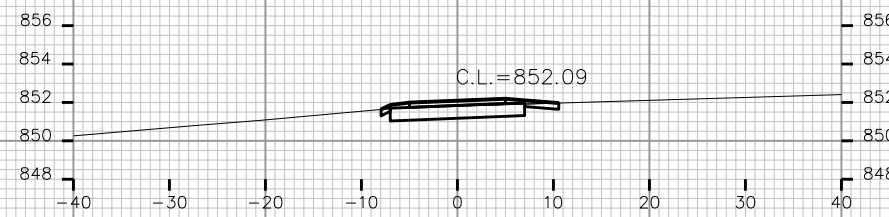
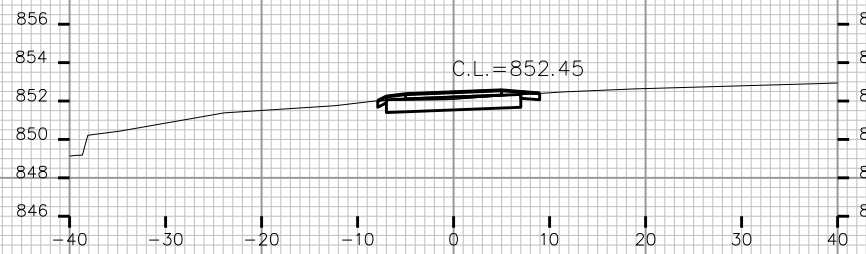
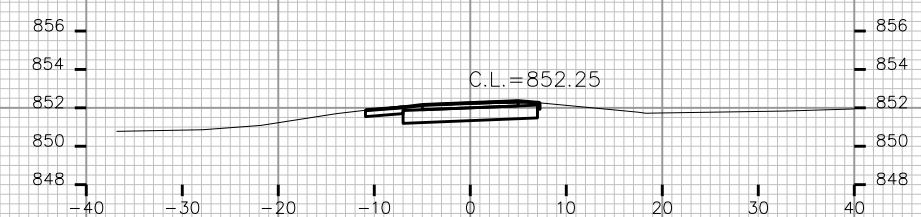
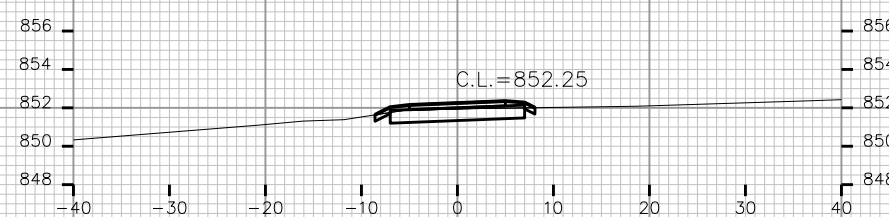
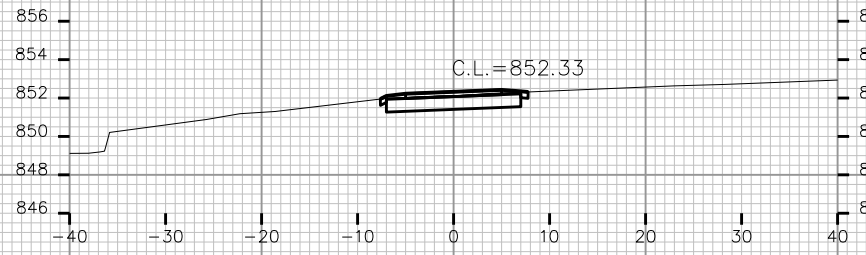
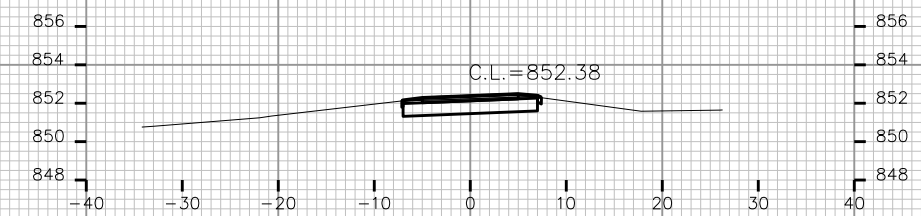
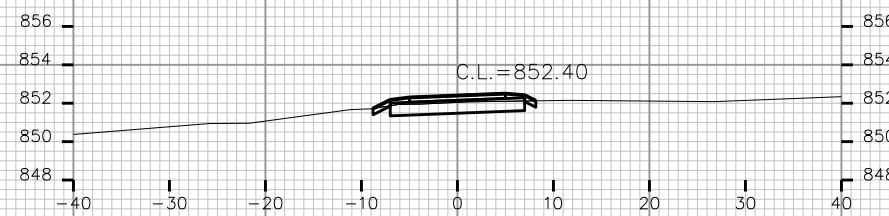
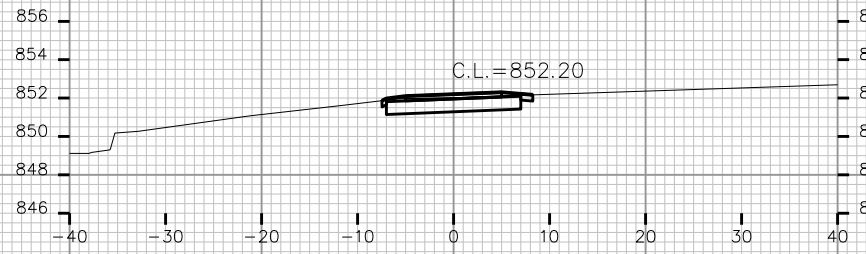
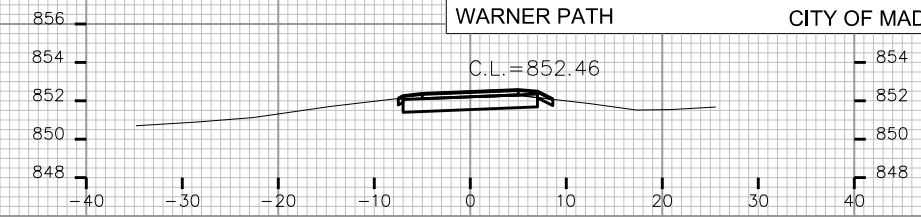
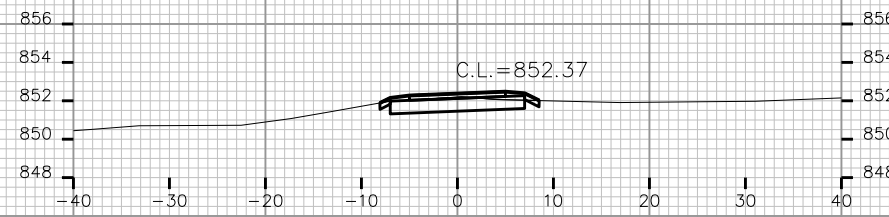
CITY OF MADISON

PLOT SCALE:

PLOT NAME:

REV. DATE:

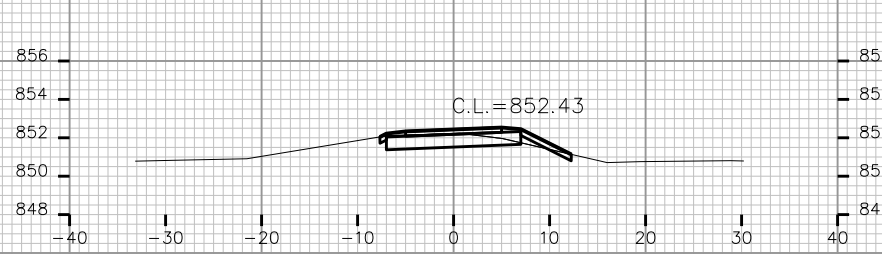
ORIGINATOR: CITY OF MADISON, STREETS DIVISION



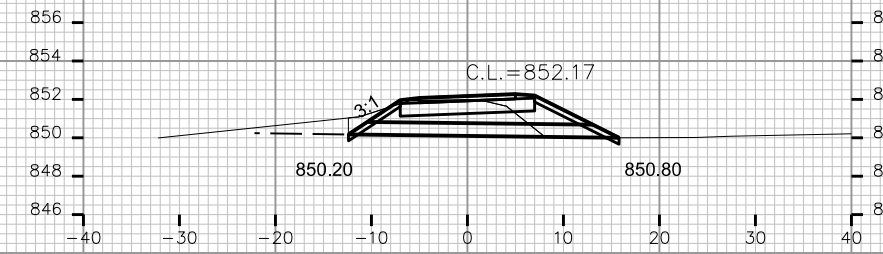
CROSS SECTIONS

WARNER PATH  
C.L. = 852.46

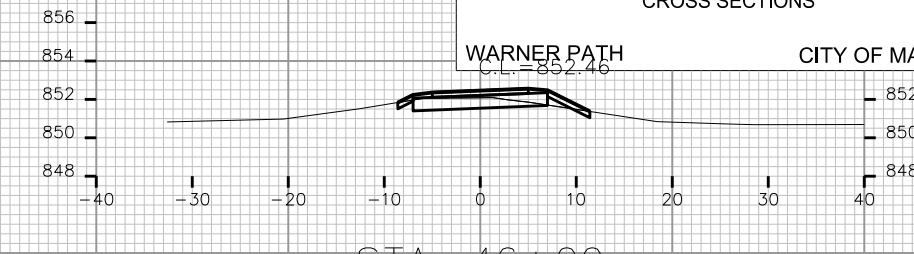
CITY OF MADISON



STA. 43+75



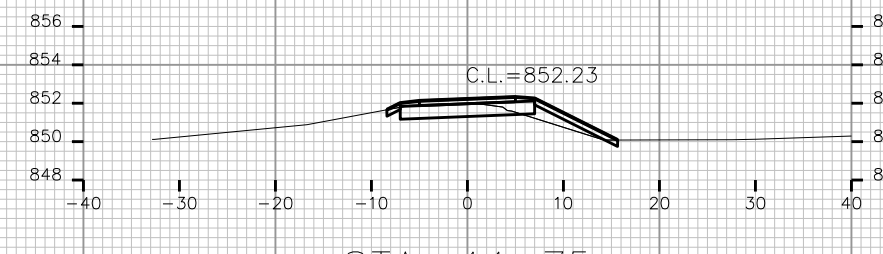
STA. 44+86



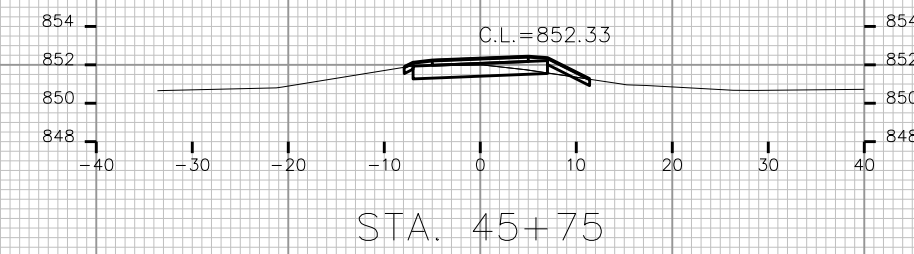
STA. 46+00



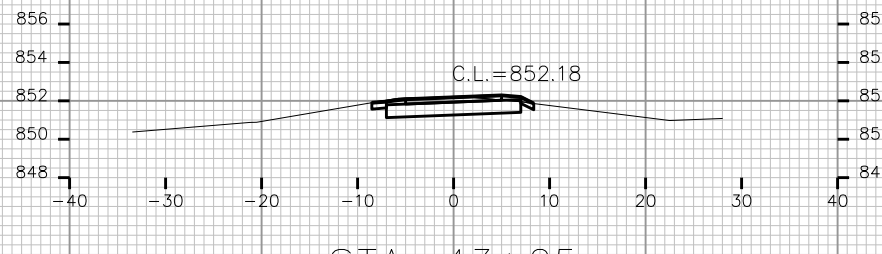
STA. 43+50



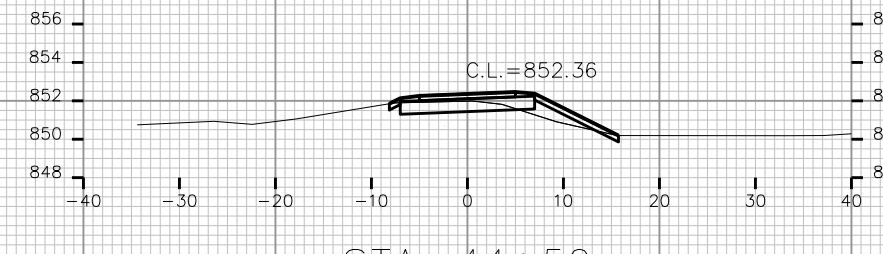
STA. 44+75



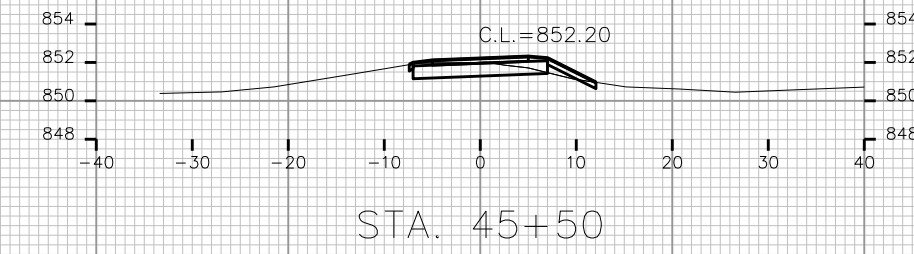
STA. 45+75



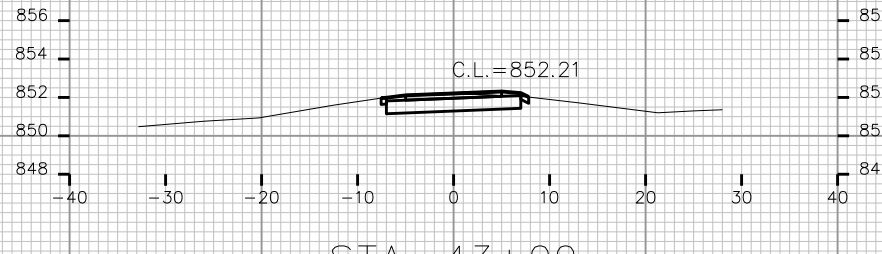
STA. 43+25



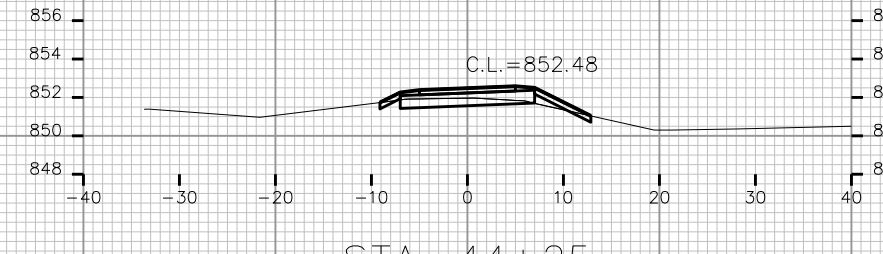
STA. 44+50



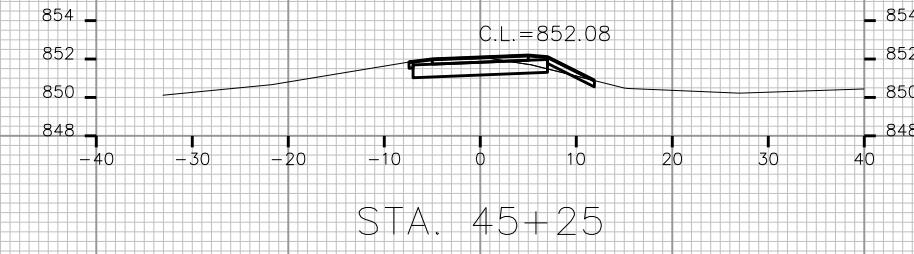
STA. 45+50



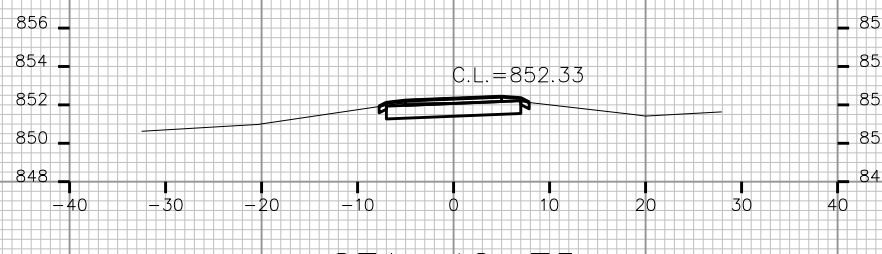
STA. 43+00



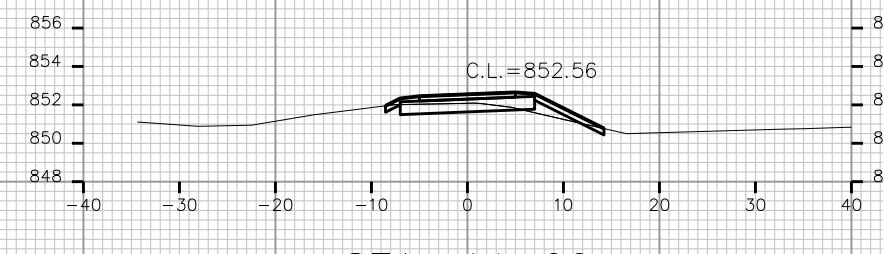
STA. 44+25



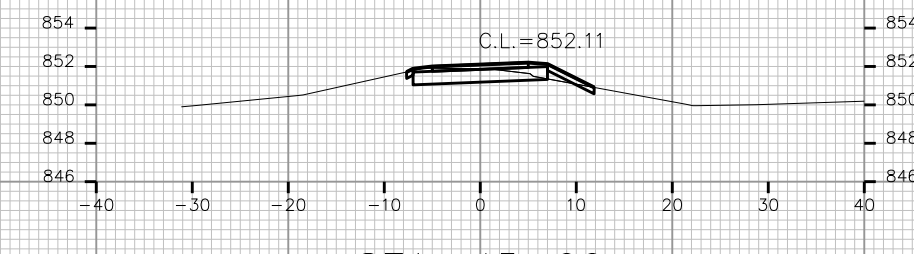
STA. 45+25



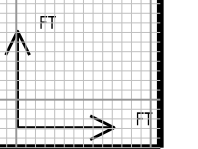
STA. 42+75



STA. 44+00



STA. 45+00



PLOT SCALE:

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CROSS SECTIONS

WARNER PATH

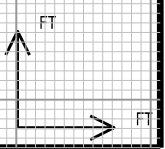
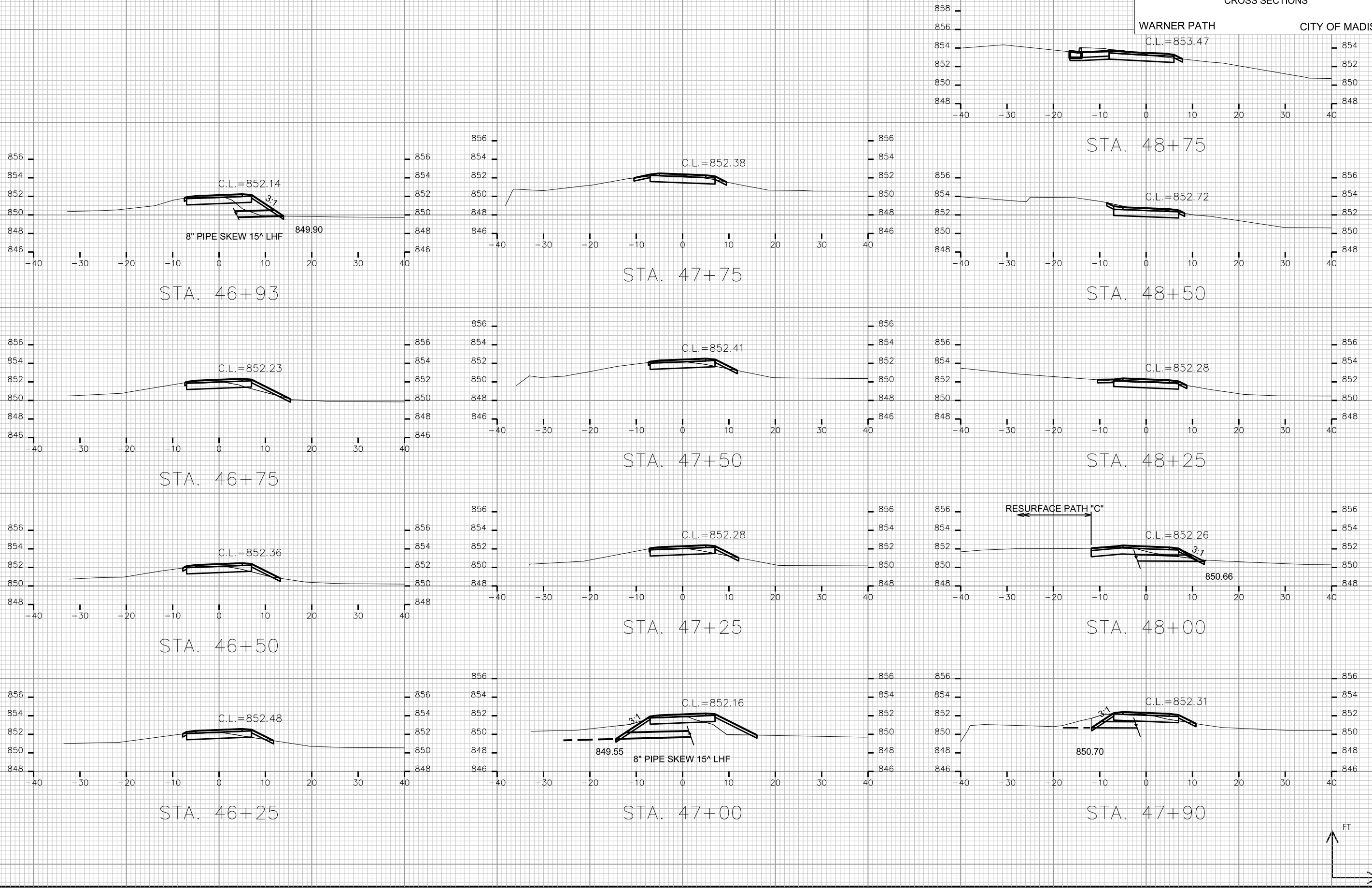
CITY OF MADISON

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



CROSS SECTIONS

WARNER PATH CITY OF MADISON

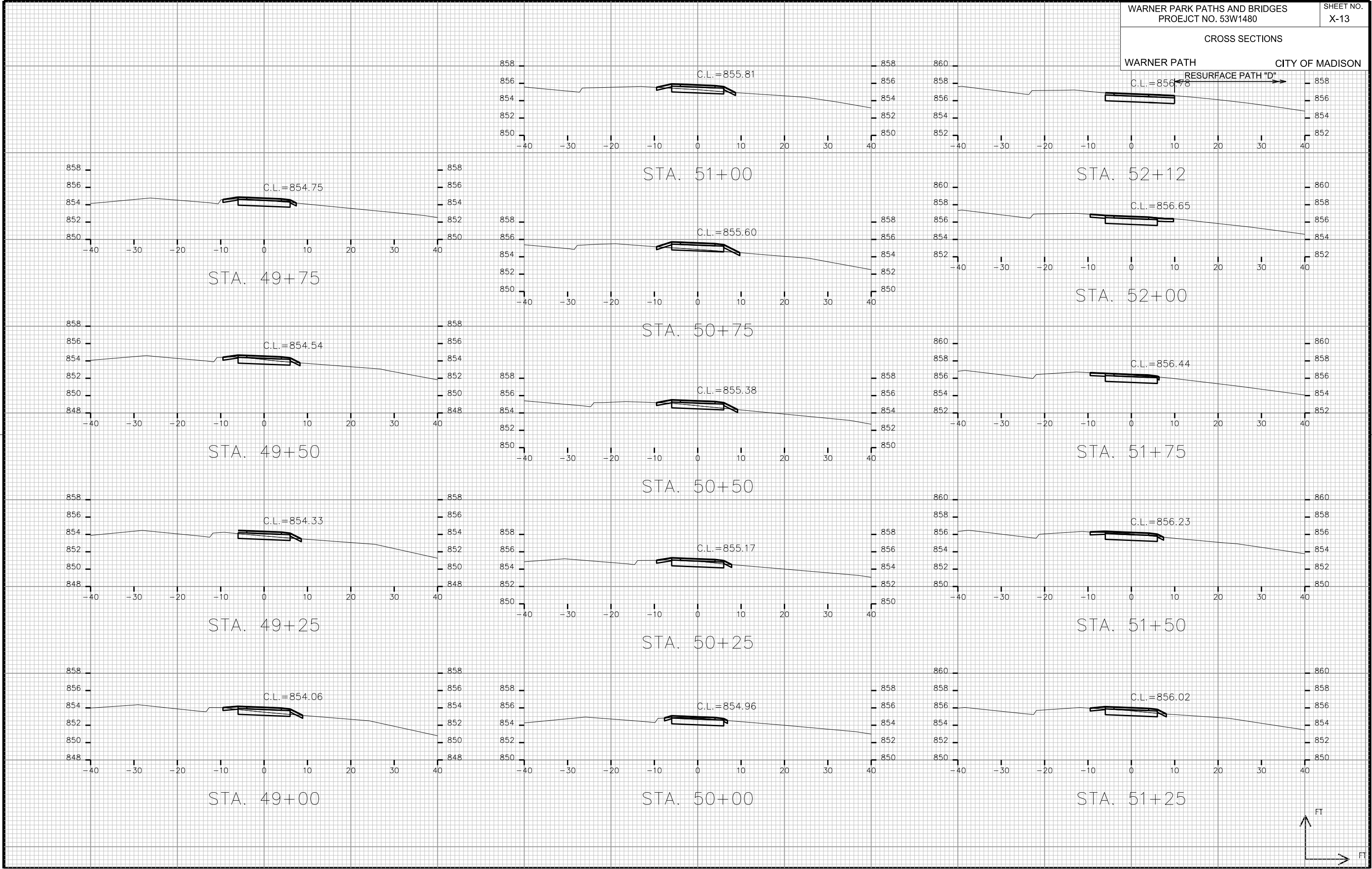
RESURFACE PATH "D"

PLOT SCALE:

PLOT NAME:

REV. DATE:

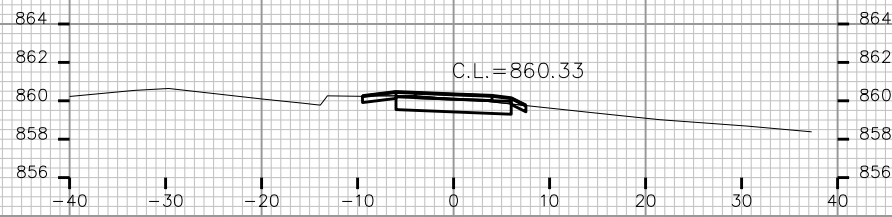
ORIGINATOR: CITY OF MADISON, STREETS DIVISION



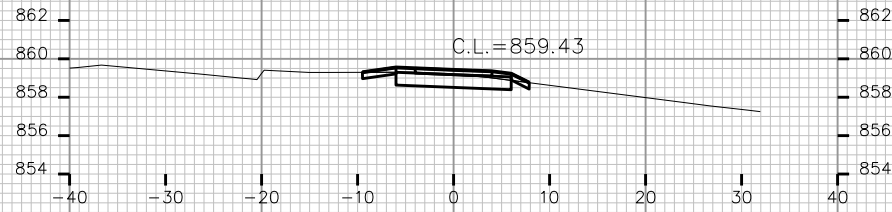
CROSS SECTIONS

WARNER PATH

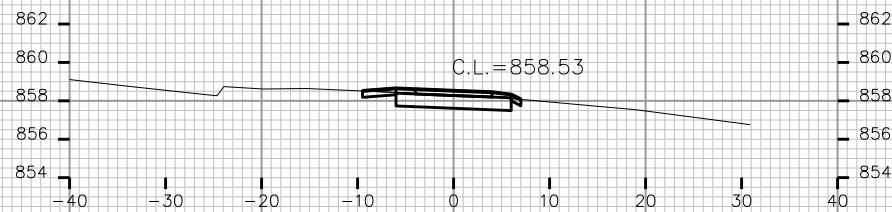
CITY OF MADISON



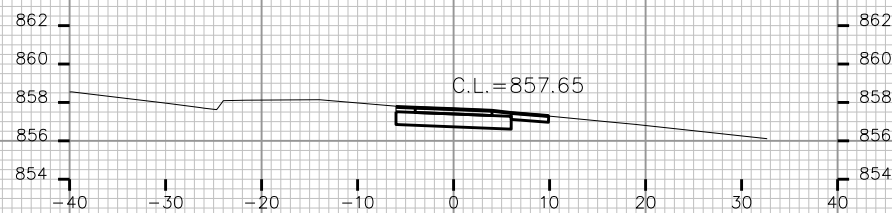
STA. 53+25



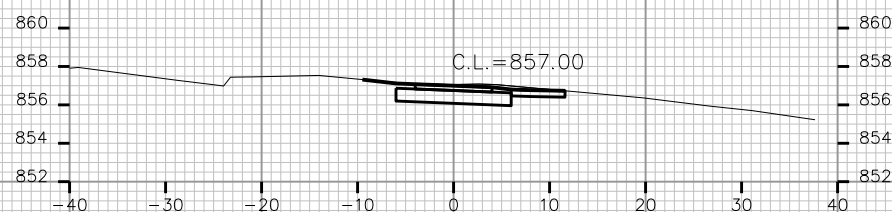
STA. 53+00



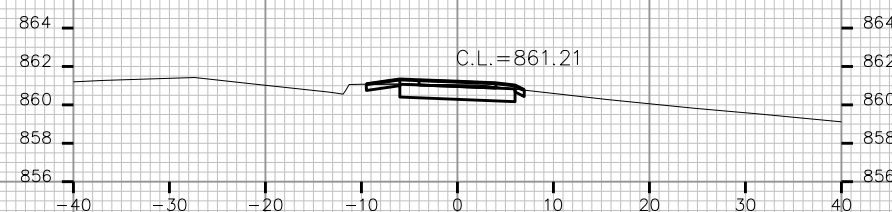
STA. 52+75



STA. 52+50

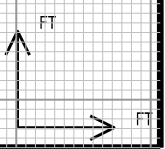


STA. 52+25



STA. 53+50

MATCH EXIST. CONCRETE  
WALK STA 53+53



PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION