

SIGN PANEL TYPE C TABULATION ④						
QUANT.	PANEL		SIGN CODE NO.	PANEL LEGEND	SIGN COLOR	MOUNTING HEIGHT
	SIZE (IN.)	SIZE (SQ. FT.)				
2	24x36	6	R12-1A	BRIDGE LIMIT	BLACK ON WHITE	4'

DESIGN DATA

2007 AND CURRENT INTERIM A.A.S.H.T.O. LRFD DESIGN SPECIFICATIONS AND THE A.A.S.H.T.O. GUIDE FOR DESIGN OF PEDESTRIAN BRIDGES. LRFD METHOD
H-10 VEHICLE (W/ NO IMPACT) OR 85 psf LOADING
MAXIMUM ALLOWABLE DESIGN STRESSES:
REINFORCED CONCRETE:
 $f'_c = 4000$ psi $n = 8$
 $f_y = 60000$ psi REINFORCEMENT
TIMBER MATERIALS INSTALLED SHALL COMPLY WITH OR EXCEED THE FOLLOWING SCHEDULE:
DECK PLANKING: DOUGLAS FIR, NO.1 & BETTER, S4S, $F_b = 1,150$ P.S.I.
STRUCTURAL STEEL: 3309 (UNPAINTED)
STRUCTURAL TUBES: 3361 TYPE C $f_y = 50,000$ psi
DESIGN SPEED: OVER = 20 M.P.H.
APPROXIMATE DECK AREA 1440 ft².

CONSTRUCTION NOTES

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.
THE FIRST TWO DIGITS OF EACH BAR MARK INDICATE THE BAR NUMBER WHICH APPROXIMATES THE NORMAL DIAMETER OF THE BAR IN MILLIMETERS (mm).
BARS MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301.
THE SUBSURFACE UTILITY IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"
ALL HARDWARE TO BE GALVANIZED PER SPEC. 3392.
FINAL ANCHOR ROD LOCATION AT SUBSTRUCTURES WILL BE FURNISHED BY BRIDGE MANUFACTURER.
BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHOR RODS. THE SUPERSTRUCTURE BEAMS SHALL BE ERECTED IN FINAL POSITION PRIOR TO DRILLING HOLES FOR AND PLACING ANCHOR RODS.
THE PILE LOADS SHOWN IN THE PLANS AND THE CORRESPONDING NOMINAL PILE BEARING RESISTANCE (R_n) WERE COMPUTED USING LRFD METHODOLOGY. PILE BEARING RESISTANCE DETERMINED IN THE FIELD SHALL INCORPORATE THE METHODS AND/OR FORMULAS DESCRIBED IN THE SPECIAL PROVISIONS.

LIST OF SHEETS

C1	GENERAL PLAN & ELEVATION
C2 - C4	ABUTMENT DETAILS
C5	DETAILS
C6	AS-BUILT BRIDGE DATA
C7	BRIDGE SURVEY
C8	BRIDGE SURVEY PLAN & PROFILE
C9	SOIL BORINGS

ANOKA COUNTY

BRIDGE NO. 02580

RICE CREEK REGIONAL TRAIL EXPANSION
1.2 MILES SOUTH OF JCT. I-35W AND C.S.A.H. 23

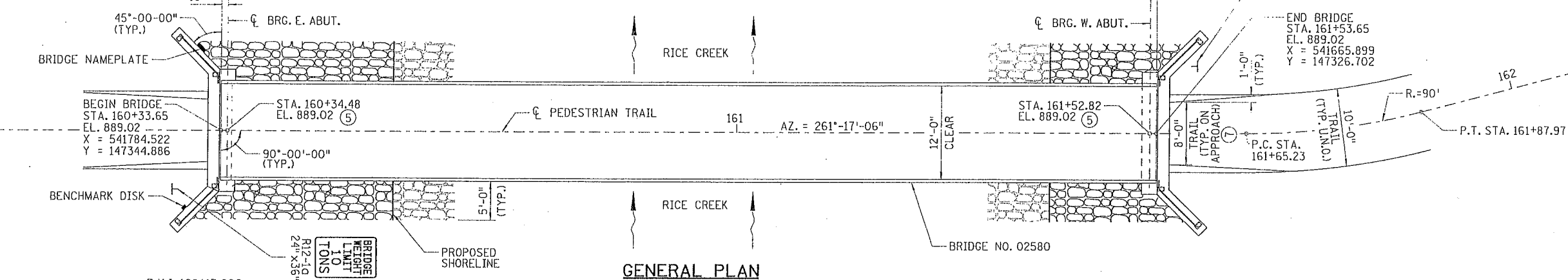
STEEL TRUSS:
120' SPAN
12'-0" DECK

BRIDGE I.D. NO. 302

SEC. 20, T31N, R22W,
ANOKA COUNTY

APPROVED: _____ ANOKA COUNTY ENGINEER DATE _____

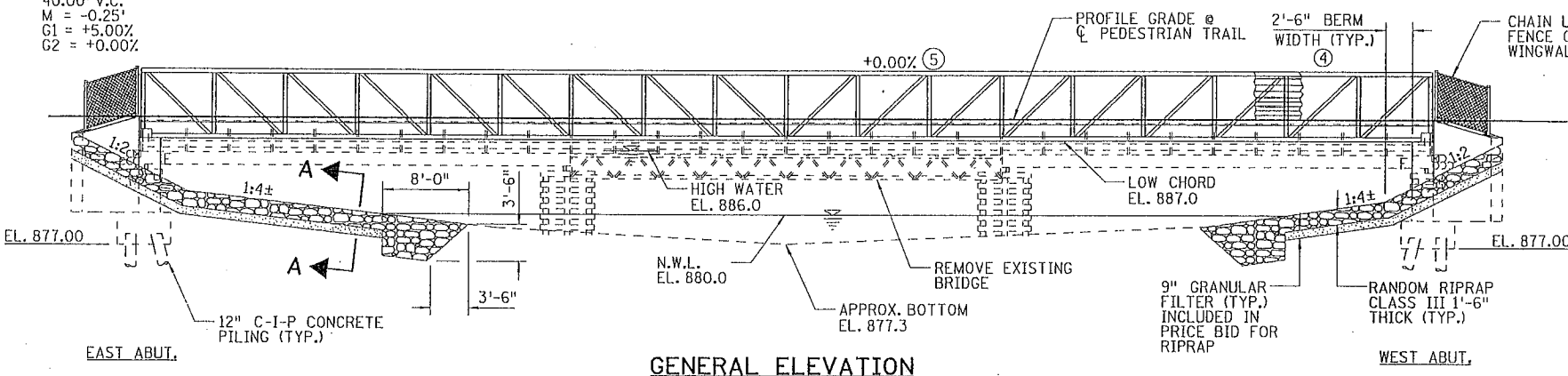
APPROVED: _____ STATE BRIDGE ENGINEER DATE _____



GENERAL PLAN

P.V.I. 160+13.000
P.V.I. EL. 889.022
P.V.C. STA. 159+93.00
P.V.C. EL. 888.02
P.V.T. STA. 160+33.00
P.V.T. EL. 889.02
40.00' V.C.
M = -0.25'
G1 = +5.00%
G2 = +0.00%

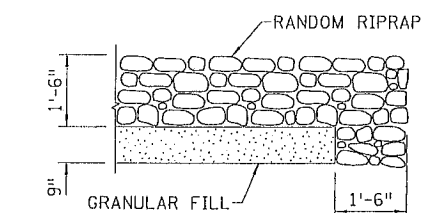
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890
885
880
875



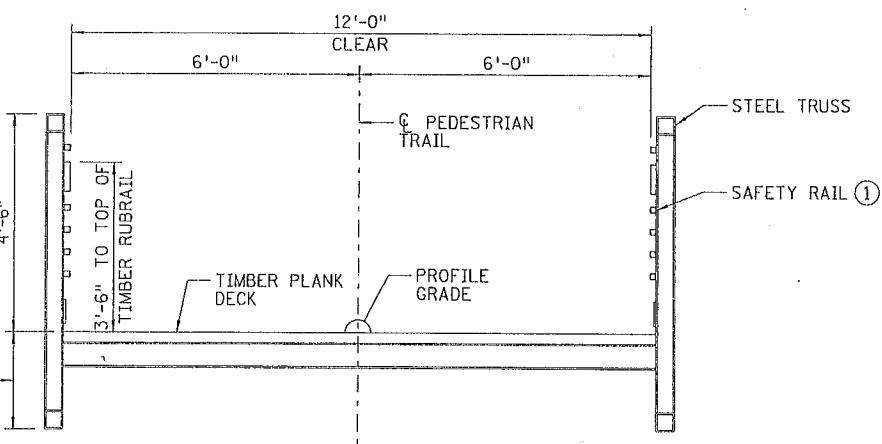
GENERAL ELEVATION

P.V.I. STA. 161+75.000
P.V.I. EL. 889.022
40.00' V.C.
M = -0.25'
G1 = +0.00%
G2 = -5.00%

P.V.T. STA. 161+95.00
P.V.T. EL. 888.02



SECTION A-A



TYPICAL SECTION

SCHEDULE OF QUANTITIES FOR BRIDGE NO. 02580

ITEM NO.	ITEM	UNIT	QUANTITY
⑥③	2104.601 REGULATED WASTE EVALUATION	LUMP SUM	1
	2105.622 SELECT GRANULAR BORROW MOD. 10% (CV)	CU. YD.	105
	2401.501 STRUCTURAL CONCRETE (1A43)	CU. YD.	20 (P)
	2401.501 STRUCTURAL CONCRETE (3Y43)	CU. YD.	41 (P)
	2401.541 REINFORCEMENT BARS	POUND	2080 (P)
	2401.541 REINFORCEMENT BARS (EPOXY COATED)	POUND	3580 (P)
	2401.601 FOUNDATION PREPARATION WEST ABUT	LUMP SUM	1
	2401.601 FOUNDATION PREPARATION EAST ABUT	LUMP SUM	1
	2401.601 STRUCTURE EXCAVATION (TYPE B)	LUMP SUM	1
②	2402.601 PEDESTRIAN BRIDGE (SUPERSTRUCTURE)	LUMP SUM	1
⑥	2442.501 REMOVE EXISTING BRIDGE	LUMP SUM	1
	2452.507 C-I-P CONCRETE PILING DELIVERED 12"	LIN. FT.	420
	2452.508 C-I-P CONCRETE PILING DRIVEN 12"	LIN. FT.	420
	2452.519 C-I-P CONC TEST PILES 80' LONG 12"	EACH	2
	2452.602 PILE ANALYSIS	EACH	2
	2511.501 RANDOM RIPRAP CLASS III	CU. YD.	83 (P)
	2557.501 WIRE FENCE DESIGN W-1 VINYL COATED	LIN. FT.	32 (P)
	2564.531 SIGN PANELS TYPE C	SQ. FT.	12

NOTES:

- RAILING HEIGHT AND SPACING SHALL BE IN ACCORDANCE WITH THE CURRENT Mn/DOT LRFD BRIDGE DESIGN MANUAL FOR PEDESTRIAN BRIDGES WITH BICYCLE TRAFFIC.
- INCLUDES ALL MATERIALS, LABOR AND DESIGN FOR THE PREFABRICATED STEEL TRUSS, SAFETY RAIL, TRUSS BEARINGS, COVER PLATES AND TIMBER DECK COMPLETE IN PLACE AND DESIGNED PER CURRENT AASHTO AND MnDOT LRFD BRIDGE DESIGN SPECIFICATIONS.
- QUANTITY IS FOR "ASBESTOS AND REGULATED WASTE ASSESSMENT".
- BERM SHALL HAVE 1:10 SLOPE IN FRONT OF ABUTMENT.
- ELEVATIONS AND GRADES SHOWN DO NOT ACCOUNT FOR RESIDUAL TRUSS CAMBER AS DESCRIBED IN THE SPECIAL PROVISIONS.
- NON-PARTICIPATING
- SEE TRAIL PLANS FOR 1:50 STRIPING TAPER DETAILS ON EACH APPROACH. DRAWN TAPER EXAGGERATED FOR CLARITY.

B.M. ELEVATION 929.32 (NAVD88)
MNDOT DISK NO. 0280 G IN SE CORNER OF COUNTY ROAD 53 (SUNSET ROAD) BRIDGE 9831 OVER I35W

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Pr Int Name: JEREMY A. WEST
Date: 2/8/10 License #: 42039

STATE PROJ. NO. 91-090-43
BRIDGE NO. 02580
DRAWN BY A. HAUSER
DESIGNED BY J. WEST
CHECKED BY E. HANSON
COMM. NO. 6630

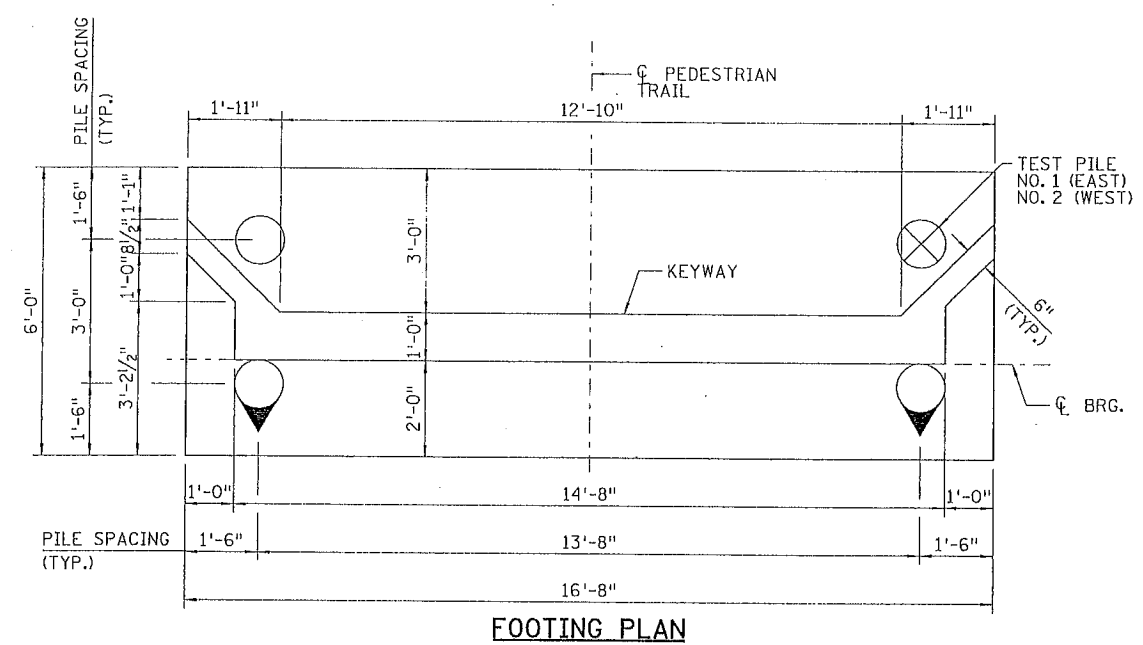
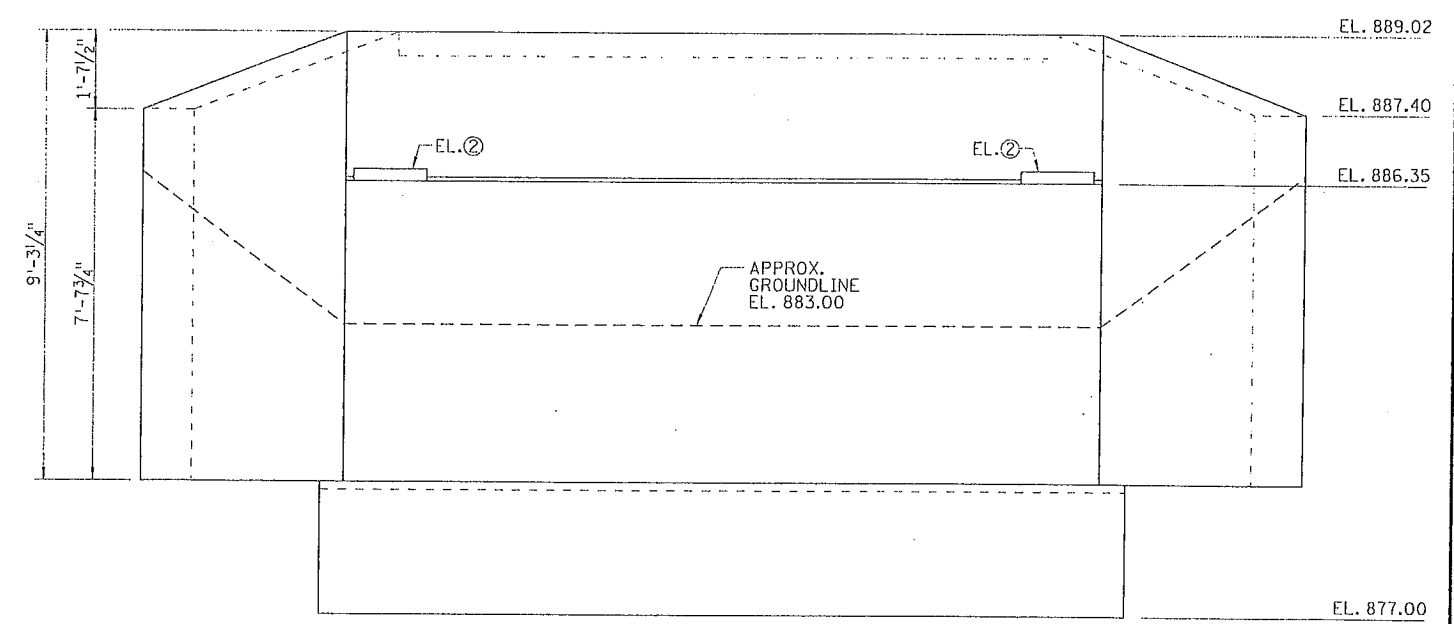
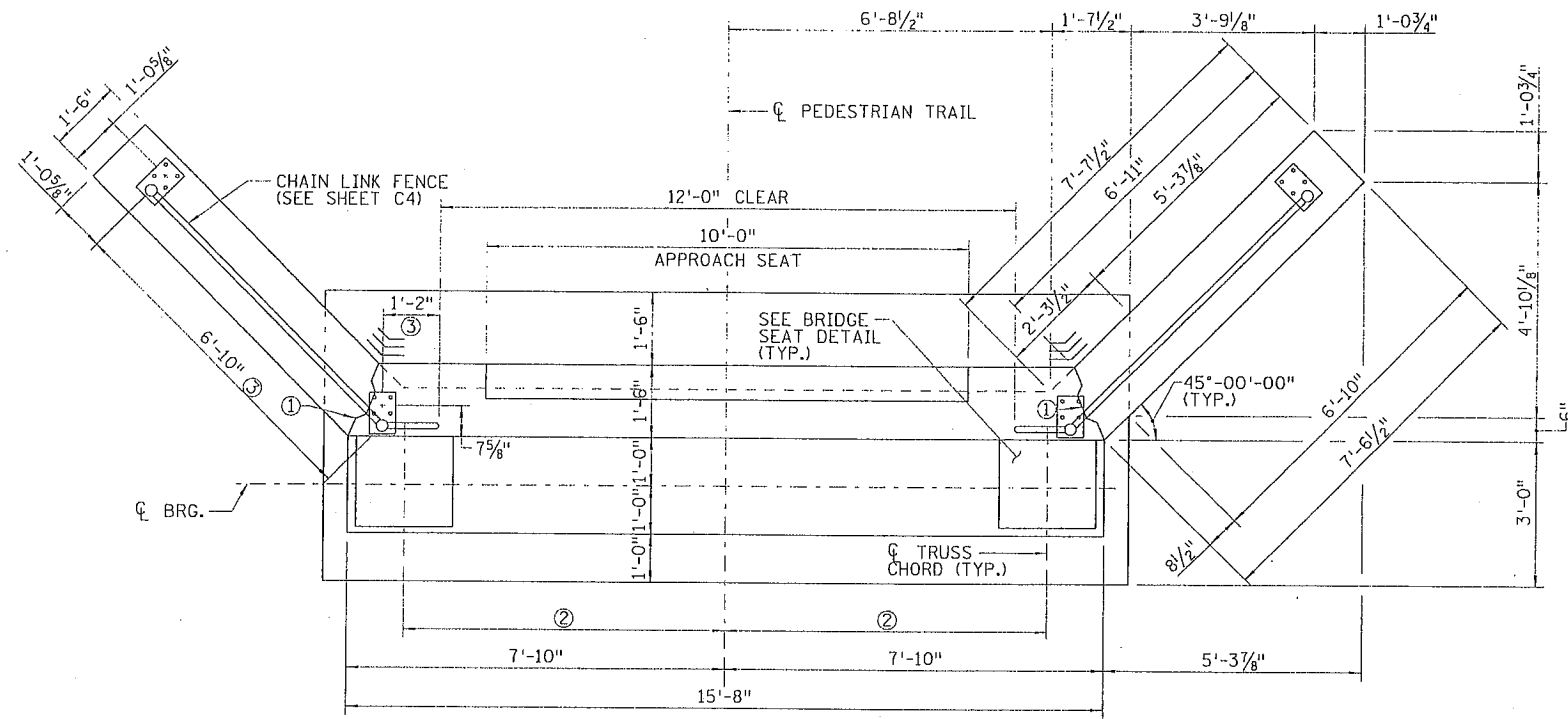


ANOKA COUNTY
RICE CREEK BRIDGE
GENERAL PLAN AND ELEVATION

SHEET
C1
OF
C9

3/5/21 PM
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NO	DATE	BY	CHKD	APPR	REVISION

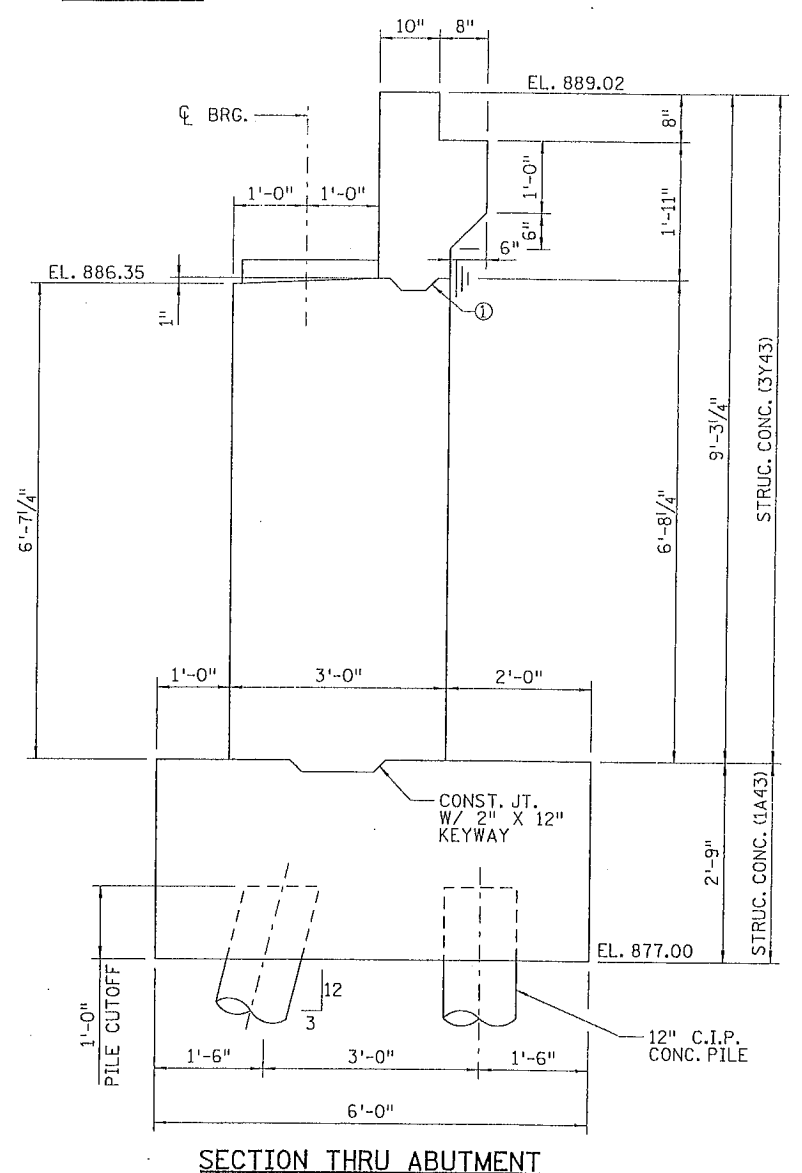


ABUTMENT COMPUTED PILE LOAD - TONS/PILE	
FACTORED DEAD LOAD + EARTH PRESSURE	28.6
FACTORED LIVE LOAD	22.3
* FACTORED DESIGN LOAD = PILE BEARING RESISTANCE	50.9

ABUTMENT REQUIRED NOMINAL PILE BEARING RESISTANCE R_n - TONS/PILE		
FIELD CONTROL METHOD	ϕ	R_n
Mn/DOT NOMINAL RESISTANCE FORMULA	0.40	127.25
PDA	0.65	78.3

PILE NOTES:
 2 - 12" C-I-P TEST PILES, 80 FEET LONG (1 - C-I-P TEST PILE PER ABUTMENT).
 6 - 12" C-I-P PILES, ESTIMATED LENGTH 70- FEET LONG (3 - C-I-P PILES PER ABUTMENT).
 8 - 12" C-I-P PILES REQUIRED FOR EAST AND WEST ABUTMENT COMBINED.
 PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
 FOR PILE SPLICE, SEE DETAIL B201.
 PILES SHALL HAVE A NOMINAL DIAMETER OF 12" WITH A WALL THICKNESS OF 1/4".

NOTES:
 ① CONSTRUCTION JOINT W/ 2" X 6" KEYWAY AND MEMBRANE WATERPROOFING REQUIRED. (A 72 HOUR DELAY IS REQUIRED BETWEEN ADJACENT CONCRETE POURS. TYP.)
 ② TO BE DETERMINED PRIOR TO CONSTRUCTION BY PREFABRICATED TRUSS SUPPLIER AFTER APPROVAL OF SUBMITTALS BY ENGINEER.
 ③ CHAIN LINK FENCE POST OR CANTILEVER END SPACING (TYP.).



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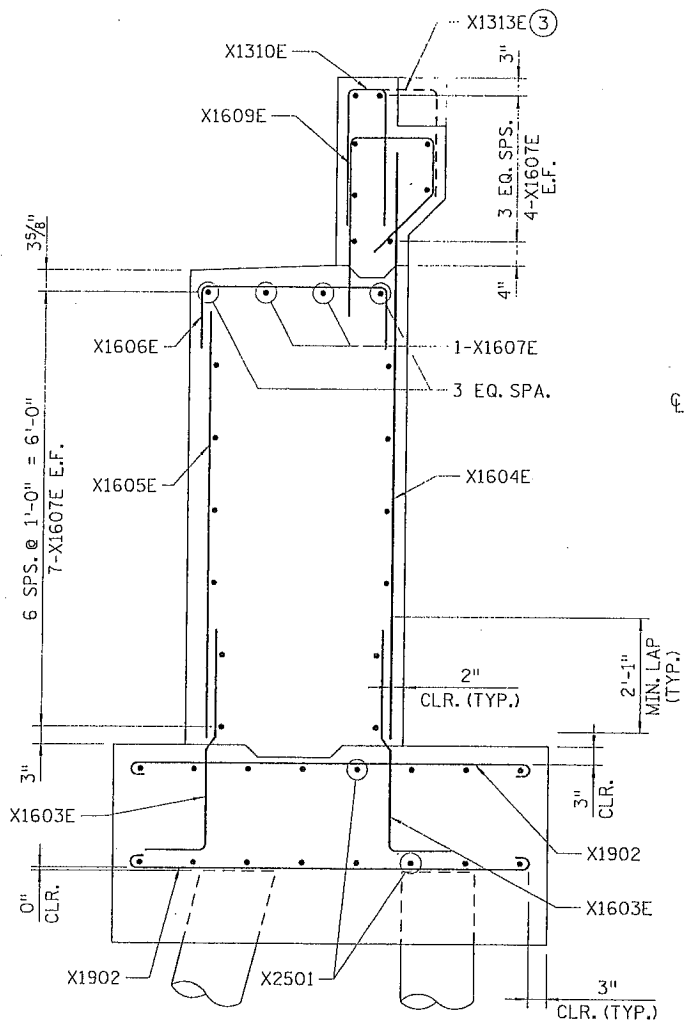
NO	DATE	BY	CKD	APPR	REVISION

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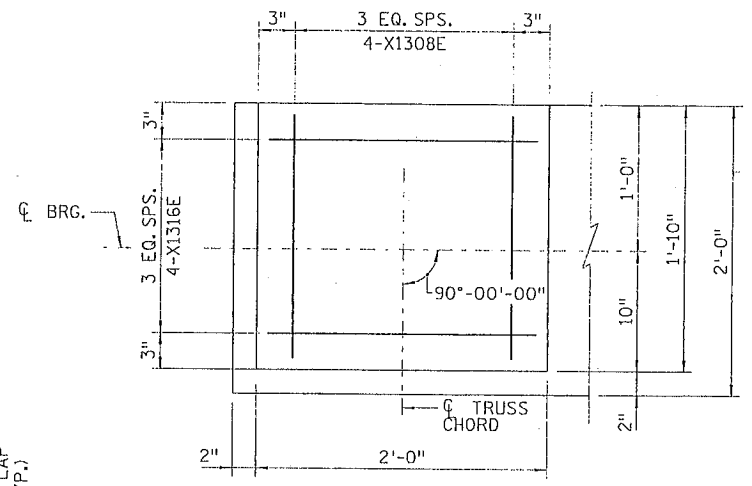
STATE PROJ. NO.
91-090-43
 BRIDGE NO.
02580
 DRAWN BY
B. SIMON
 DESIGNED BY
J. WEST
 CHECKED BY
E. HANSON
 COMM. NO. 6630



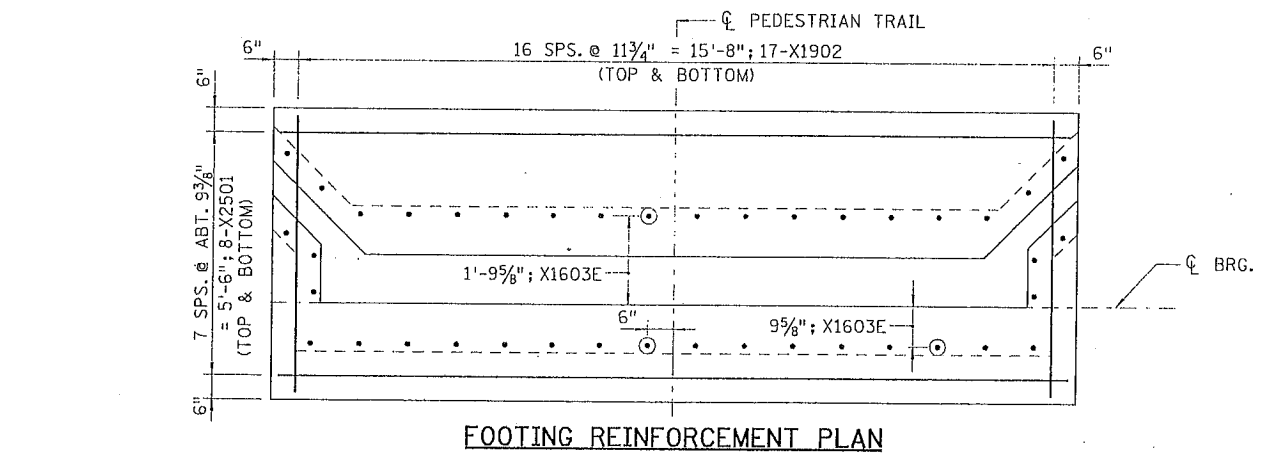
ANOKA COUNTY
 RICE CREEK BRIDGE
 ABUTMENT DETAILS
 (SHEET 1 OF 3)
 SHEET
 C2
 OF
 C9



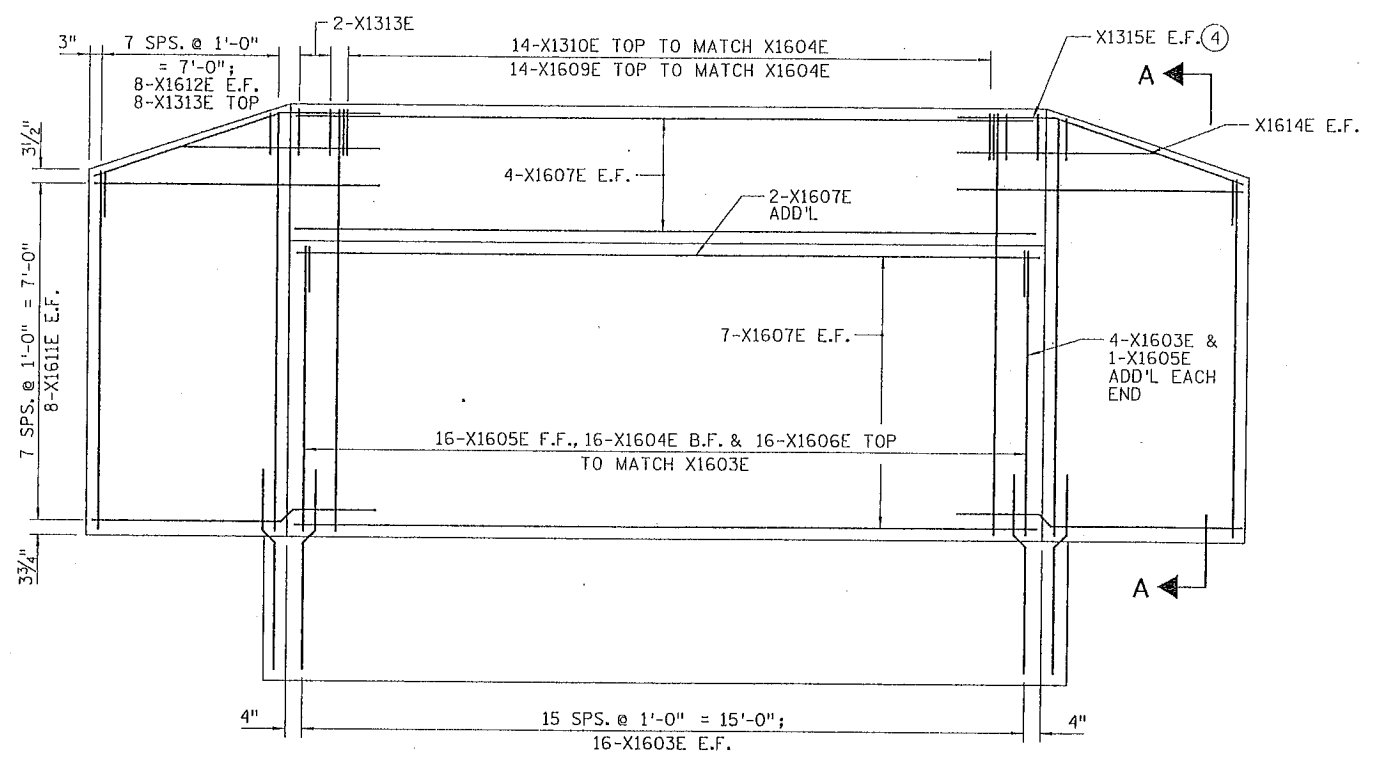
REINFORCEMENT SECTION THRU ABUTMENT



BRIDGE SEAT DETAIL

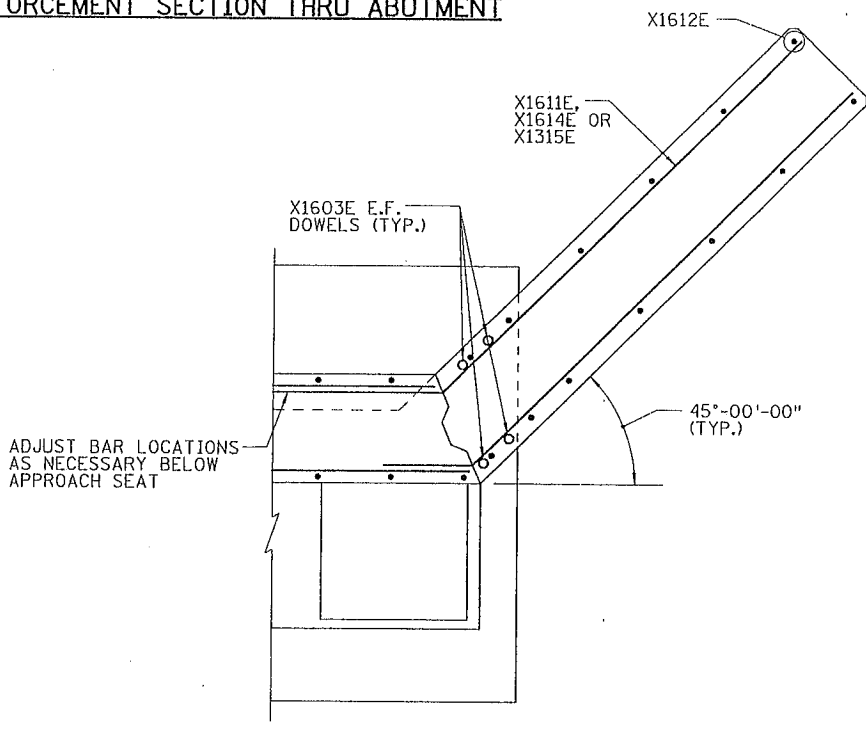


FOOTING REINFORCEMENT PLAN

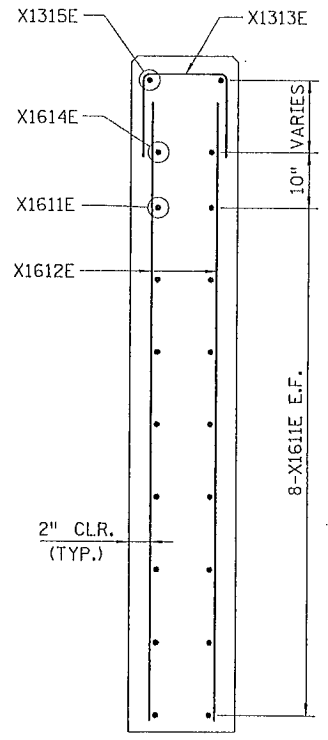


REINFORCEMENT ELEVATION

*WINGWALLS SPLAYED OUT FOR CLARITY



CORNER DETAIL



SECTION A-A

NOTES:

1. PREFABRICATED TRUSS SUPPLIER SHALL REVIEW AND ADJUST BRIDGE SEAT AND TOP OF PARAPET REINFORCEMENT AS NECESSARY FOR ANCHOR ROD PLACEMENT FOR THE ENGINEERS APPROVAL PRIOR TO ABUTMENT CONSTRUCTION.
2. E.F. DENOTES EACH FACE, F.F. DENOTES FRONT FACE, B.F. DENOTES BACK FACE.
- ③ BARS TO BE PLACED EITHER SIDE OF APPROACH SEAT.
- ④ FIELD BEND AS NECESSARY FOR PROPER FIT.

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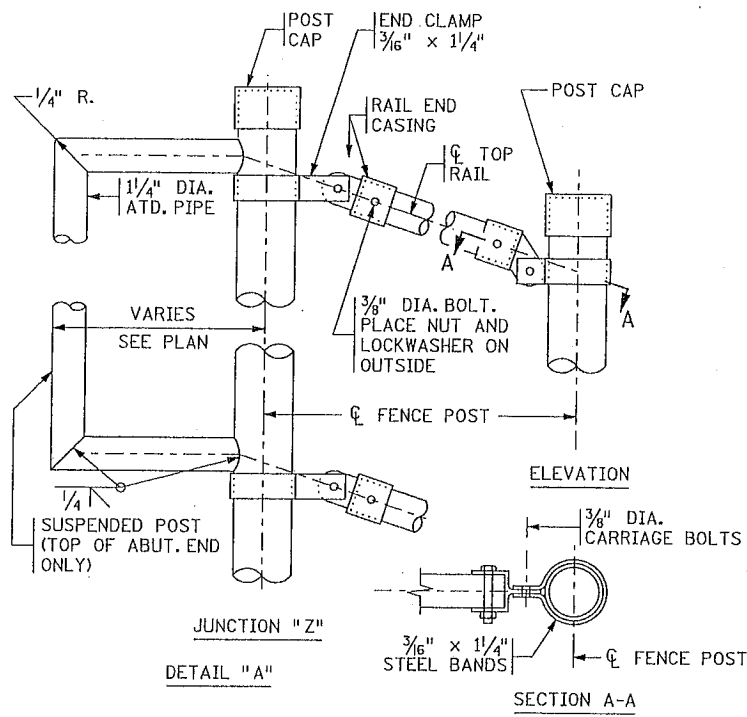
NO	DATE	BY	CKD	APPR	REVISION

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 COMM. NO. 6630

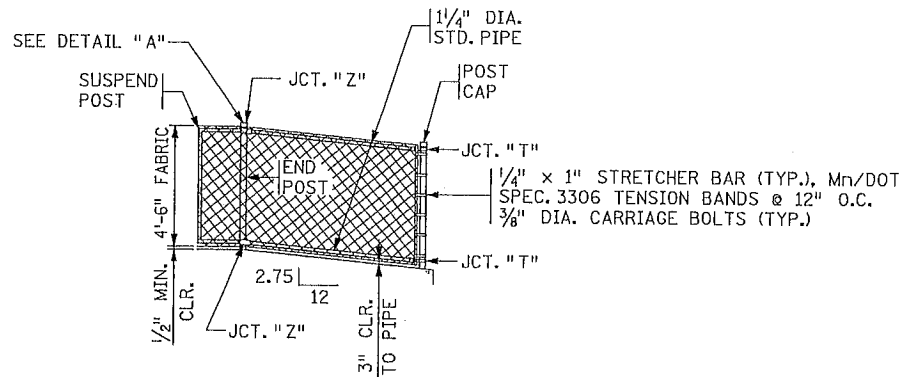


ANOKA COUNTY
 RICE CREEK BRIDGE
 ABUTMENT DETAILS
 (SHEET 2 OF 3)
 SHEET C3 OF C9



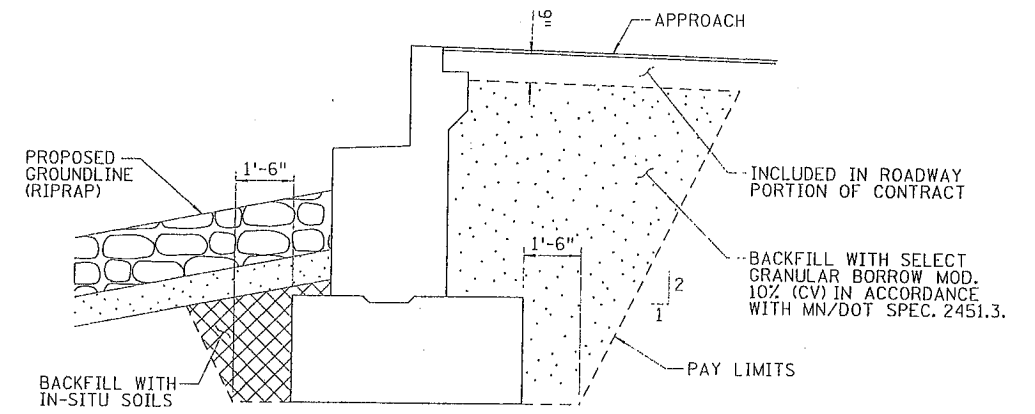
POST CONNECTIONS ON STAIRWAY

AN APPROVED ALTERNATE WILL BE CONSIDERED



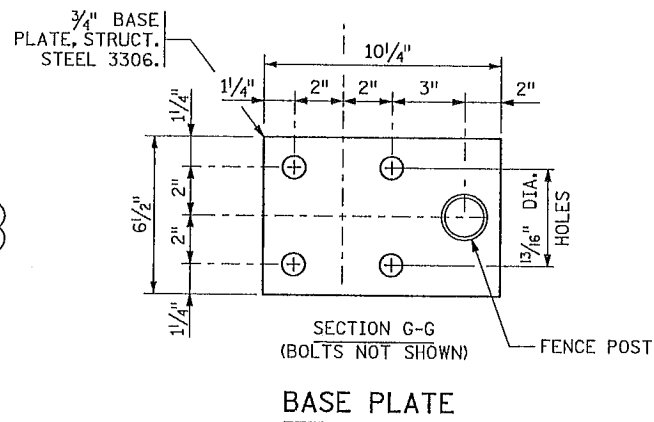
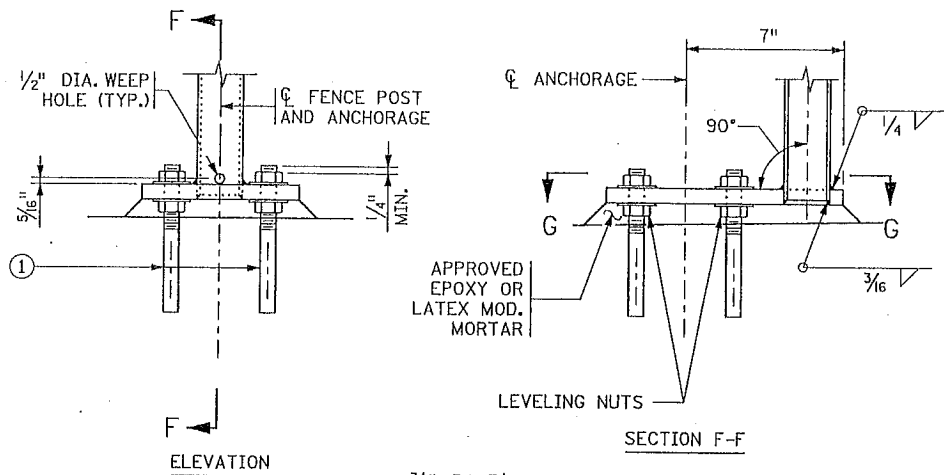
PART ELEVATION ON RAMP

FABRIC SHALL HAVE A KNUCKLED EDGE TOP AND BOTTOM

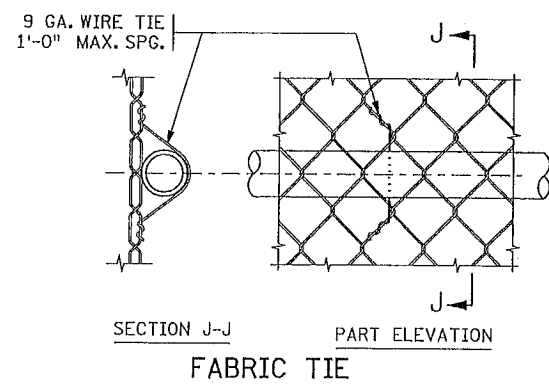


BACKFILL SECTION

BILL OF REINFORCEMENT: EACH ABUTMENT									
MARK	NO	SIZE	LENGTH [FT - IN]	SHAPE	DIMENSION [FT-IN]			LOCATION	
					A	B	C		
X2501	16	25	16 - 2	STR	-	-	-	FOOTING LONG	
X1902	34	19	6 - 10	15	5 - 6	0 - 8	-	FOOTING TRANS	
X1603E	40	16	4 - 10	7	4 - 0	-	-	FOOTING DOWEL	
X1604E	16	16	8 - 3	STR	-	-	-	STEM VERT	
X1605E	18	16	6 - 3	STR	-	-	-	STEM VERT	
X1606E	18	16	5 - 8	6	2 - 8	1 - 6	-	STEM TOP	
X1607E	24	16	15 - 4	STR	-	-	-	STEM HORIZ	
X1308E	8	13	4 - 6	6	1 - 6	1 - 6	-	BRIDGE SEAT	
X1609E	14	16	6 - 2	23	1 - 2	3 - 1	0 - 9	BACKWALL VERT	
X1310E	14	13	3 - 6	6	0 - 6	1 - 6	-	BACKWALL VERT	
X1611E	32	16	9 - 7	11	7 - 3	1 - 0	-	WW LONG	
X1612E	4 SERIES OF 8	16	7 - 4	STR	-	-	-	WW VERT	
			8 - 9						
X1313E	20	13	3 - 2	6	1 - 2	1 - 0	-	WW TOP	
X1614E	4	16	6 - 0	11	3 - 8	1 - 0	-	WW LONG	
X1315E	4	13	9 - 9	11	7 - 5	1 - 2	-	WW DIAG	
X1316E	8	13	4 - 8	6	1 - 6	1 - 6	-	BRIDGE SEAT	



BASE PLATE



FABRIC TIE

GENERAL NOTES

LENGTH OF "WIRE FENCE, DESIGN W-1 VINYL COATED" FOR PAYMENT SHALL BE MEASURED BETWEEN THE CENTERS OF THE END RAILPOSTS.

MAXIMUM SPACING FOR 2 1/2" STANDARD PIPE POSTS IS 8 FT.

ALL PIPE DIAMETERS ARE NOMINAL.

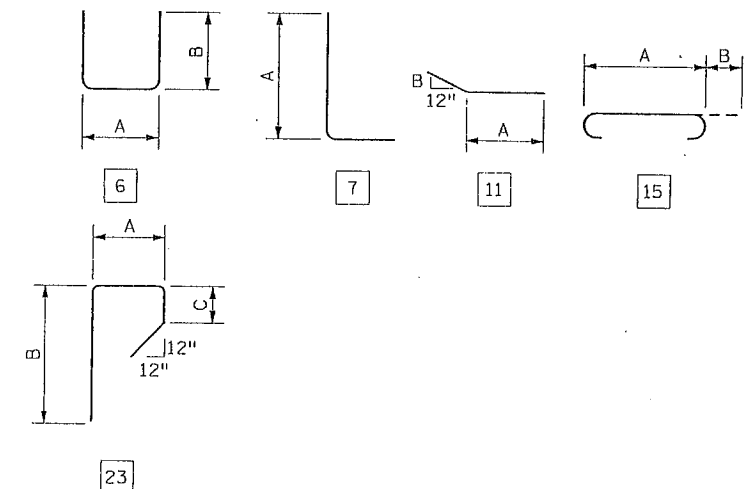
FENCE POSTS AND ANCHORAGES SHALL BE SET VERTICAL UNLESS OTHERWISE NOTED. AT BOLT TYPE ANCHORAGES, PACK SPACE BETWEEN BASE PLATE AND CONCRETE WITH APPROVED MORTAR AFTER NUTS HAVE BEEN ADJUSTED AND TIGHTENED.

FOR POST SPACING AND LOCATION SEE SHEET NO. C2.

FENCE AND ANCHORAGES SHALL BE GALVANIZED AND BLACK VINYL COATED. SEE SPECIAL PROVISIONS.

① 5/8" DIA. CHEMICAL ANCHOR RODS, MN/DOT SPEC. 3385, TYPE A, WITH 3" THREADS, 2 NUTS AND 2 CUT WASHERS PER ROD. MINIMUM ULTIMATE BOND STRENGTH SHALL BE 20,000 POUNDS, WITH A MINIMUM 5" EMBEDMENT LENGTH.

BAR SHAPES:



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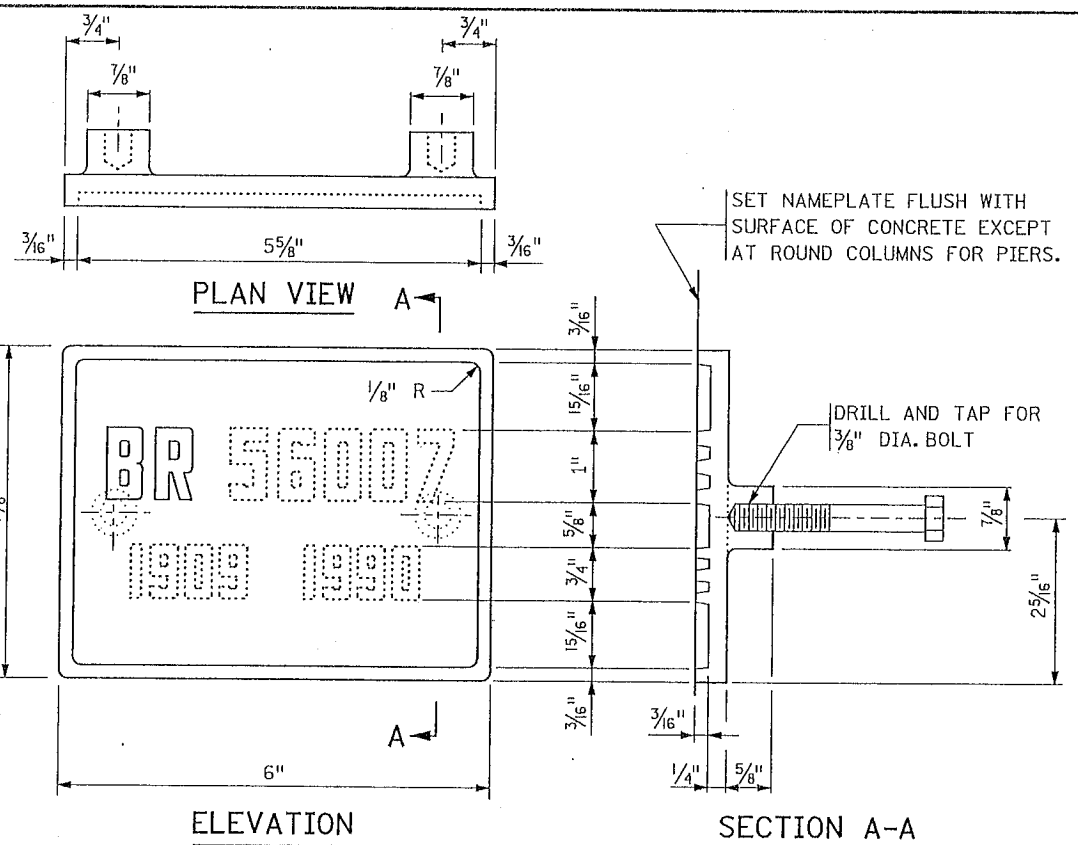
NO	DATE	BY	CHKD	APPR	REVISION

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 Print Name: JEREMY A. WEST
 Date: 2/8/10 License #: 42039

STATE PROJ. NO. 91-090-43
 BRIDGE NO. 02580
 DRAWN BY A. HAUSER
 DESIGNED BY J. WEST
 CHECKED BY E. HANSON
 COMM. NO. 6630



ANOKA COUNTY
 RICE CREEK BRIDGE
 ABUTMENT DETAILS
 (SHEET 3 OF 3)
 SHEET C4 OF C9

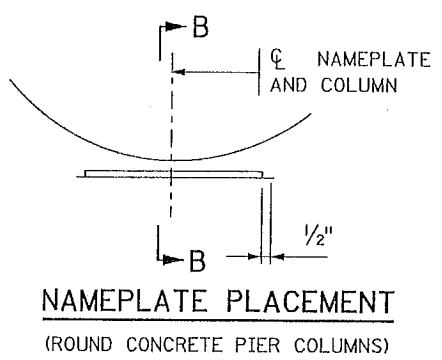


THE DASHED NUMBERS SHOWN ABOVE ARE FOR ILLUSTRATION. DATA TO BE SHOWN ON NAMEPLATE IS AS FOLLOWS:

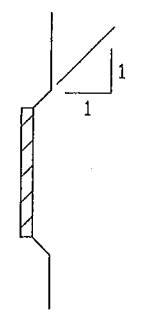
BRIDGE: 02580
YEAR: 2010



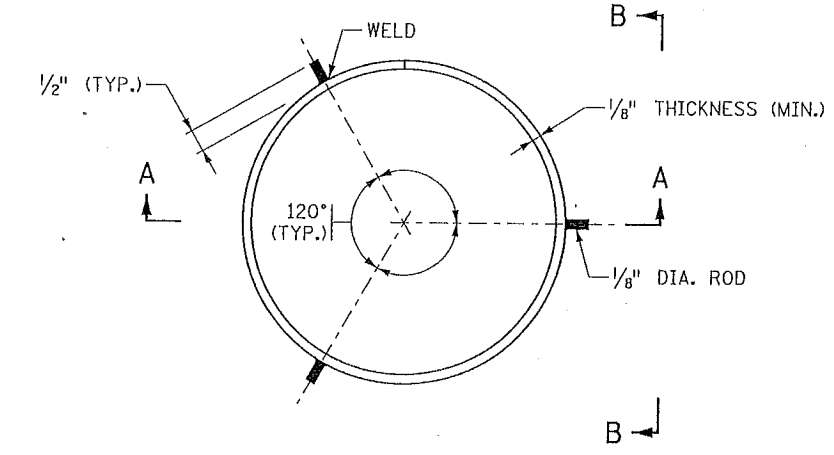
NOTES:
NO SHOP DRAWING REQUIRED.
MATERIAL SHALL COMPLY WITH Mn/DOT SPEC. 3327.
LETTERS AND NUMBERS SHALL CONFORM TO THOSE SHOWN.
DRAFT ON LETTERS AND NUMBERS SHALL NOT BE MORE THAN 3" IN 12".
HORIZONTAL SPACING OF LETTERS AND NUMBERS SHALL PRODUCE A BALANCED LAYOUT IN PROPORTION TO SPACING SHOWN.
TOP SURFACE OF LETTERS, NUMBERS AND FRAMES SHALL BE BURNISHED.
FURNISH 2 STEEL BOLTS 3/8" DIA. x 3" LONG WITH EACH PLATE.
ALL DIMENSIONS FOR 3/4" HIGH LETTERS AND NUMBERS SHALL BE IN DIRECT PROPORTION TO THOSE SHOWN FOR THE 1" HIGH LETTERS AND NUMBERS.
TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.



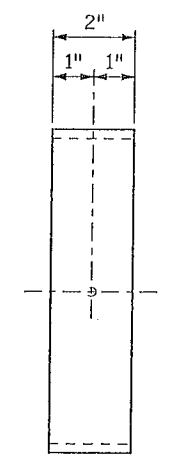
NAMEPLATE PLACEMENT
(ROUND CONCRETE PIER COLUMNS)



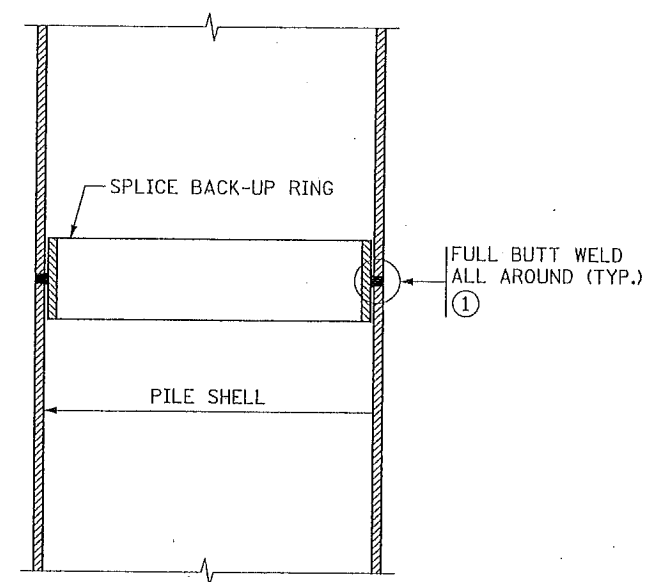
SECTION B-B



PLAN VIEW SPLICE
PILE NOT SHOWN



SECTION B-B
PILE NOT SHOWN



SECTION A-A

NOTES:
APPROVED COMMERCIAL PILE SPLICE BACK-UP RING MAY BE USED IN LIEU OF THE TYPE DETAILED. BACK-UP RING SHALL HAVE A TIGHT FIT.
WELDING ELECTRODES SHALL BE CELLULOSIC TYPE ELECTRODES E-6010 OR E-6011.
ELECTRODES WHICH HAVE BECOME WET, SOILED OR DAMAGED SHALL NOT BE USED.
WELDING SHALL NOT BE DONE WHEN THE AMBIENT TEMPERATURE IS LOWER THAN 0° F. OR WHEN THE PILE IS WET OR EXPOSED TO FALLING RAIN OR SNOW. WHEN THE PILE METAL TEMPERATURE IS BELOW 32° F., THE PILE METAL IN THE AREA OF THE WELD SHALL BE HEATED TO A MINIMUM TEMPERATURE OF 70° F. AND MAINTAINED AT THIS TEMPERATURE DURING WELDING.
① FOR PILE SHELL THICKNESSES GREATER THAN 1/2", USE A B-U4g WELD CONFIGURATION.

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APPROVED: NOVEMBER 22, 2002 <i>Daniel J. Hanson</i> STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION BRIDGE NAMEPLATE (FOR BRIDGE RECONSTRUCTION)	REVISION	DETAIL NO. B102	APPROVED: NOVEMBER 22, 2002 <i>Daniel J. Hanson</i> STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION PILE SPLICE (CAST-IN-PLACE CONCRETE PILES)	REVISION	DETAIL NO. B201
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NO	DATE	BY	CKD	APPR	REVISION

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Print Name: JEREMY A. WEST
Date: 2/3/10 License #: 42039

STATE PROJ. NO.
91-090-43
BRIDGE NO.
02580

DRAWN BY
B. SIMON
DESIGNED BY
J. WEST
CHECKED BY
E. HANSON
COMM. NO. 6630



ANOKA COUNTY
RICE CREEK BRIDGE
DETAILS
SHEET
C5
OF
C9

CONCRETE WEARING COURSE

LOW SLUMP
OTHER
TYPE OR MANUFACTURER

EXPANSION JOINTS

JOINT MANUFACTURER
MANUFACTURER'S IDENTIFICATION
GLAND MANUFACTURER
SIZE OF GLAND
MANUFACTURER'S IDENTIFICATION

ELASTOMERIC BEARING PADS

PAD MANUFACTURER
NAME AND ADDRESS (CITY, STATE)

SPECIAL SURFACE FINISH

SYSTEM:
COLOR:

FINISHING ROADWAY FACES OF BARRIER RAILING

TYPE:
COLOR:

ANTI-GRAFFITI COATING

MANUFACTURER
PRODUCT NAME:
LOCATION:

PAINT SYSTEM

Mn/DOT SPECIFICATION NUMBER
MANUFACTURER
PRIME COAT
INTERMEDIATE COAT
FINISH COAT

PLAN QUALITY

RATE 1 (AGREE), 2 (NEUTRAL), OR 3 (DISAGREE, PLEASE COMMENT BELOW)
DIMENSIONING AND DETAILING ADEQUATELY DESCRIBED REQUIRED CONSTRUCTION.
BAR LISTS AND QUANTITIES WERE TYPICALLY COMPLETE AND FREE OF ERRORS.
SCALE OF DRAWINGS AND OVERALL LEGIBILITY OF LINES AND TEXT WAS GOOD.
(SB) SPECIAL PROVISIONS ADEQUATELY DESCRIBED SPECIAL WORK AND PAYMENT.
COMMENTS:
NUMBER OF BRIDGE SUPPLEMENTAL AGREEMENTS:
COST: \$
LIST SIGNIFICANT ERRORS OR OMISSIONS IN PLAN DETAILS OR PAY QUANTITIES IN THE SPACE PROVIDED AT RIGHT.

BRIDGE REMOVAL / BRIDGE OPENING

NUMBER OF AND DATE OLD BRIDGE WAS REMOVED (IF APPLICABLE):
BRIDGE NUMBER
DATE REMOVED
DATE NEW BRIDGE WAS OPENED TO TRAFFIC
NOTIFY THE BRIDGE OFFICE BRIDGE MANAGEMENT UNIT WITH THIS INFORMATION AS SOON AS POSSIBLE. (651) 366-4557

OTHER ITEMS

UTILITIES ADDED DURING CONSTRUCTION AND SPECIALTY ITEMS.
FINAL QUANTITIES ENTERED ON SCHEDULE OF QUANTITIES:
SUMMARY OF SIGNIFICANT AS-BUILT CHANGES

AS-BUILT DETAILS (AS NEEDED)

REVISION: 10-28-2008
APPROVED: SEPTEMBER 26, 2003
STATE BRIDGE ENGINEER

Table with columns: NO, DATE, BY, CKD, APPR, REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: JEREMY A. WEST
Date: 2/2/10 License # 42039

STATE PROJ. NO. 91-090-43
BRIDGE NO. 02580
DRAWN BY B. SIMON
DESIGNED BY J. WEST
CHECKED BY E. HANSON
COMM. NO. 6630



THE AS-BUILT INFORMATION WAS ADDED TO THE PLAN BY:
INSPECTOR(S) SIGNATURE
DATE
CHECKED BY:
PROJECT ENGINEER/SUPERVISOR SIGNATURE
DATE
AT THE TIME OF THE FINAL, THIS COMPLETED AS-BUILT BRIDGE DATA SHEET MUST BE SUBMITTED TO THE BRIDGE OFFICE - ATTN: REGIONAL CONSTRUCTION ENGINEER (MS610).

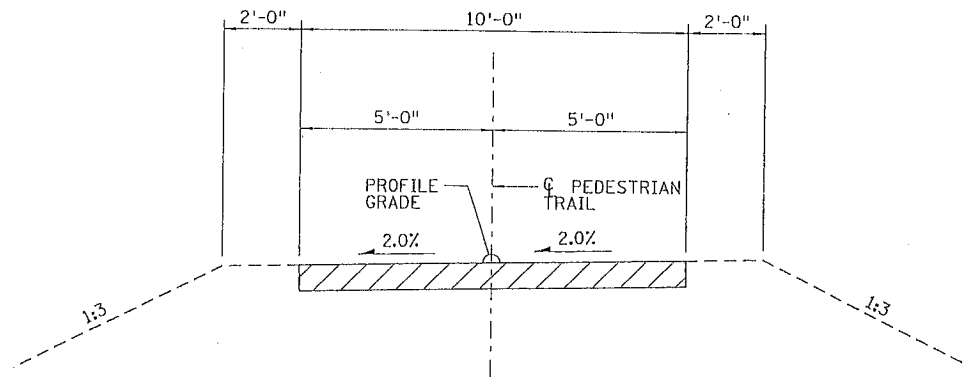
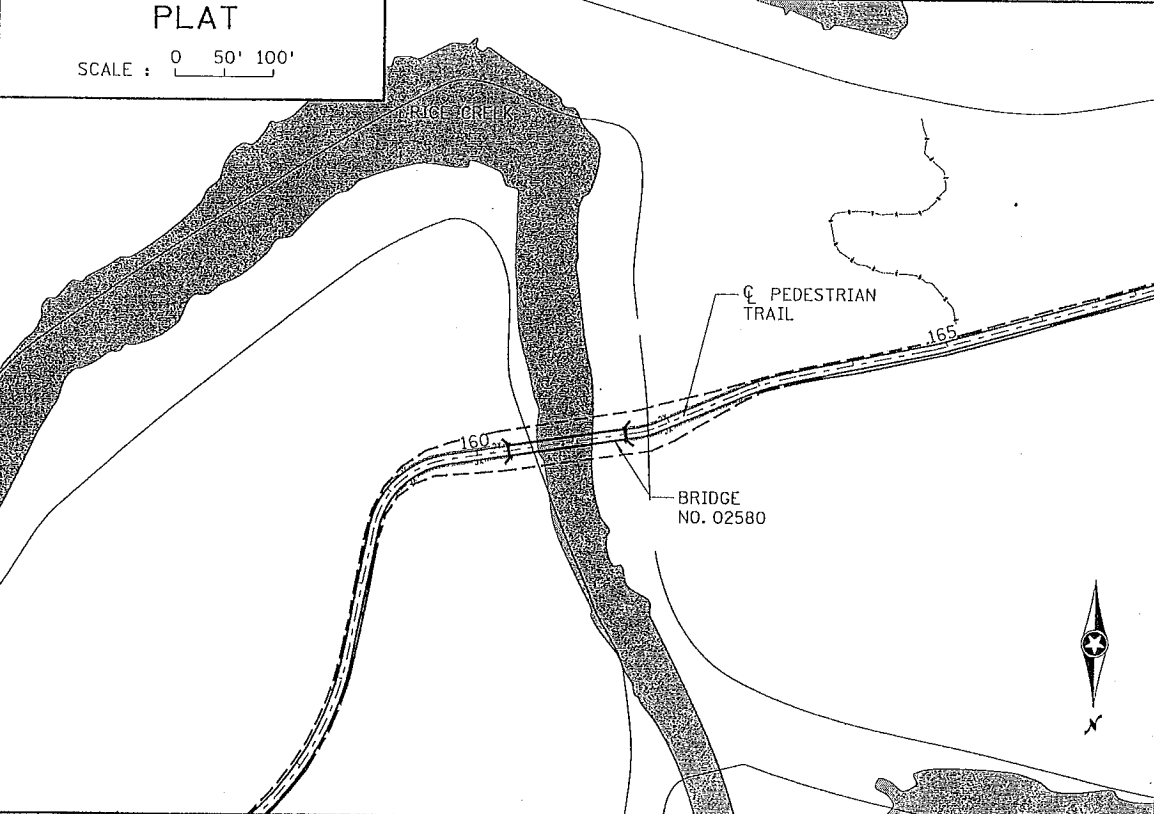
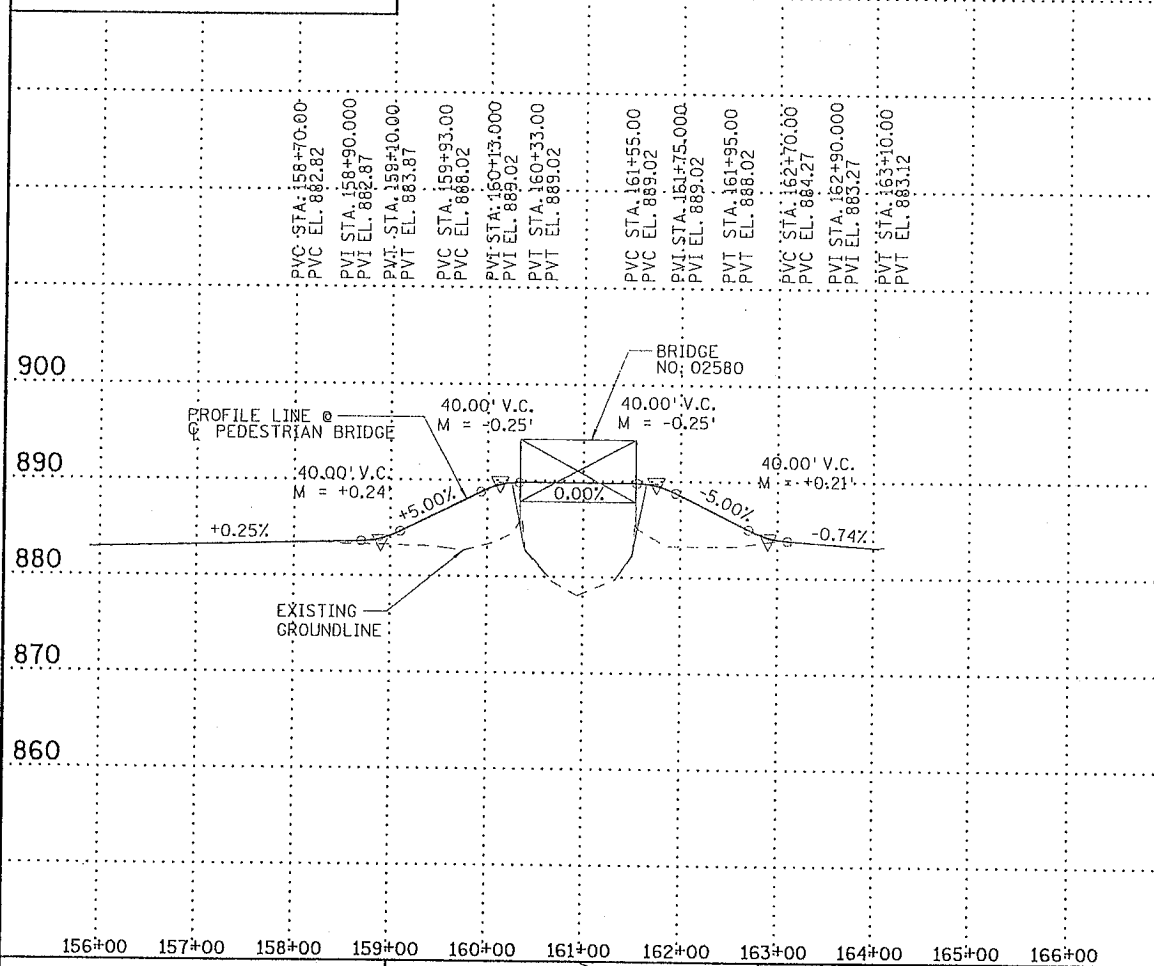
ANOKA COUNTY
RICE CREEK BRIDGE
AS-BUILT BRIDGE DATA
SHEET C6 OF C9

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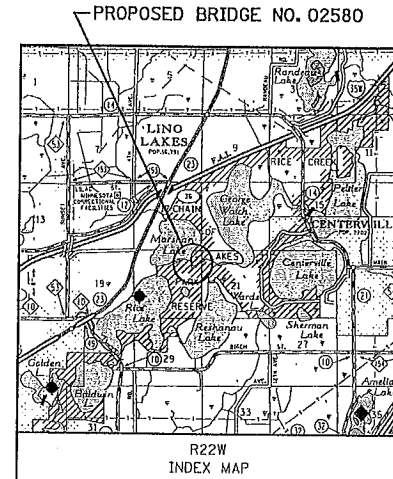
CONTRACTED PROFILE

SCALE : $\frac{1}{480}$ HORIZONTAL $\frac{1}{48}$ VERTICAL

PEDESTRIAN TRAIL



TYPICAL APPROACH SECTION



LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

- SPECIAL FEATURES: WATERFALLS, DAMS, FLOODS, ICE, DEBRIS, SLIDING BANKS, RECREATIONAL BOATING.
- OTHER BRIDGES OR CULVERTS OVER THE SAME STREAM (PARTICULARLY STRUCTURES WHICH CARRY HIGH WATER WITHOUT OVERFLOW OF ROADWAY): GIVEN LOCATION, TYPE, LENGTH, HEIGHT ABOVE HIGH WATER, CROSS-SECTIONAL AREA ETC.
- APPARENT HIGHWATER ELEVATION OBTAINED FROM:
- OTHER DATA: APPROX. VELOCITY OF WATER AT TIME OF SURVEY.

HYDRAULIC ENGINEERS RECOMMENDATION

DATE 5/14/2009
 STREAM OR DITCH DESIGNATION RICE CREEK
 DRAINAGE AREA 4.1 SQ. MILES
 MAX. FLOOD ON RECORD N.A.
 MAXIMUM OBSERVED HIGHWATER ELEVATION N.A.
 DESIGN FLOOD (100 YR. FREQ.) 395 C.F.S.
 DESIGN STAGE ELEVATION 883.66
 DESIGN MEAN VELOCITY THROUGH STRUCTURE 0.8 F.P.S.
 TOTAL STAGE INCREASE 0.00 FT.
 LOW MEMBER AT OR ABOVE ELEVATION 887.00
 FLOWLINE ELEVATION 877.3 SKEW ANGLE 0 DEGREES
 WATERWAY AREA REQUIRED BELOW ELEVATION 883.66 = 525 SQ.FT. AT RIGHT ANGLES TO CHANNEL
 BASIC FLOOD (100 YR. FREQ.) 395 C.F.S.
 STAGE ELEVATION 883.66 FT.
 TOTAL STAGE INCREASE 0.00 FT.
 MEAN VELOCITY THROUGH STRUCTURE 0.8 F.P.S.
 ESTIMATED DEPTH OF PIER SCOUR = 0.0 FT.
 SCOUR CODE = M

BRIDGE SURVEY SHEETS MADE FROM : SURVEY BY SRF

BENCH MARK ELEVATION 929.32 (NAVD88)
 LOCATION MNDOT DISK NO. 0280 G IN SE CORNER OF COUNTY ROAD 53 (SUNSET ROAD) BRIDGE 9831 OVER I35W

2nd BENCH MARK ELEVATION (M.S.L. 1929 ADJ.)
 LOCATION

MINNESOTA
 DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT ON
 PROPOSED BRIDGE LOCATED 1.2 MILES SOUTH OF JCT. I-35W AND C.S.A.H. 23
 SEC 20 TWP 31N R 22W
 TOWNSHIP LINO LAKES COUNTY ANOKA

ANOKA COUNTY
 RICE CREEK BRIDGE
 BRIDGE SURVEY

SHEET
 C7
 OF
 C9

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Print Name: JEREMY A. WEST
 Date: 2/3/10 License #: 42039

STATE PROJ. NO.
 91-090-43

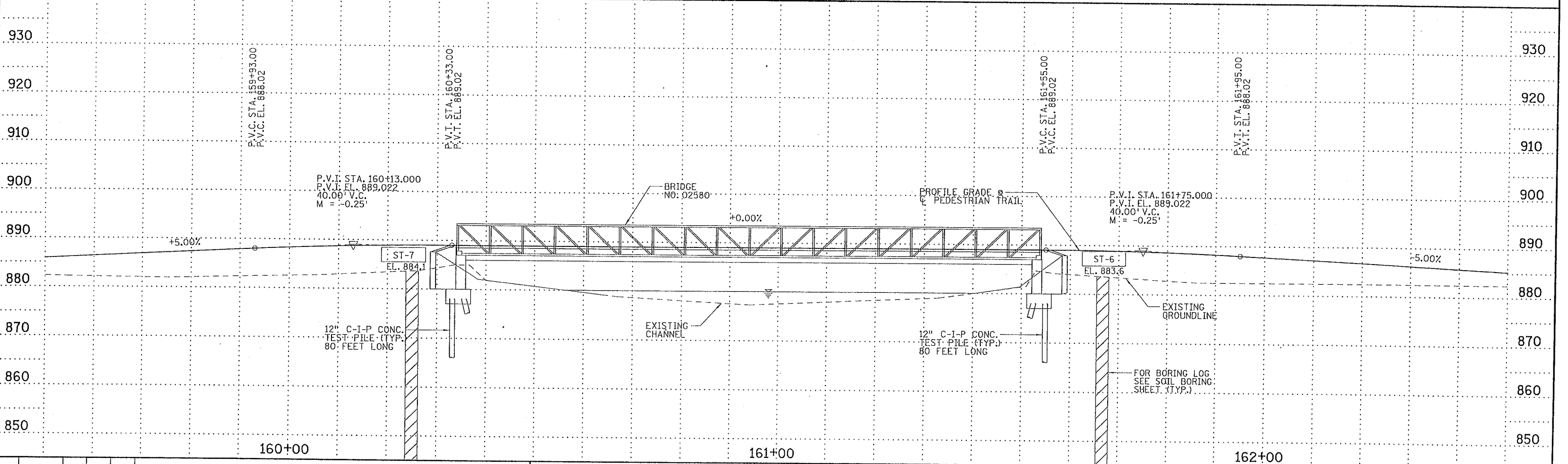
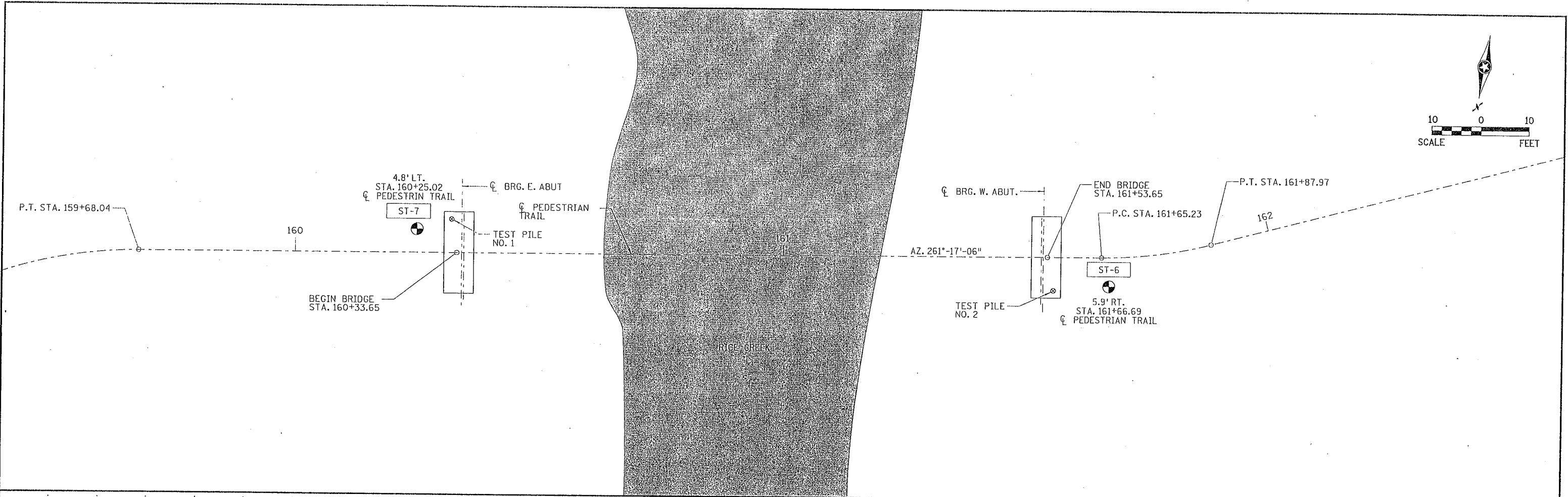
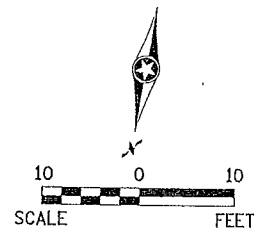
BRIDGE NO.
 02580

DRAWN BY
 A. HAUSER
 DESIGNED BY
 J. WEST
 CHECKED BY
 E. HANSON
 COMM. NO. 6630



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NO	DATE	BY	CHKD	APPR	REVISION



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NO	DATE	BY	CHKD	APPR	REVISION

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 Print Name: JEREMY A. WEST
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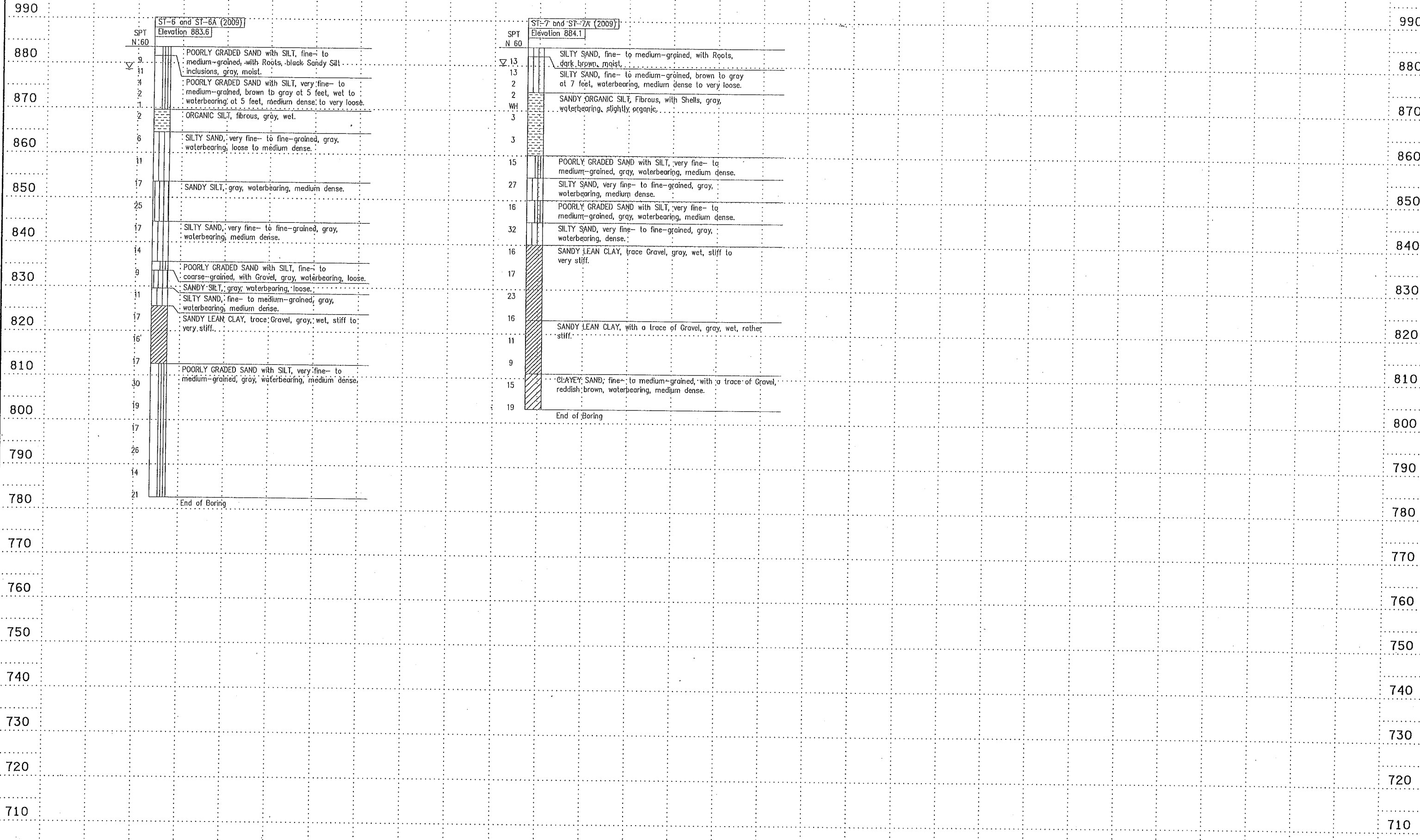
STATE PROJ. NO. 91-090-43
 BRIDGE NO. 02580

DRAWN BY A. HAUSER
 DESIGNED BY J. WEST
 CHECKED BY E. HANSON
 COMM. NO. 6630



ANOKA COUNTY
 RICE CREEK BRIDGE
 BRIDGE SURVEY PLAN & PROFILE

SHEET C8 OF C9



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 2/5/2010
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NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: JEREMY A. WEST
 Date: 2/8/10 License #: 42039

STATE PROJ. NO. 91-090-43
 BRIDGE NO. 02580
 DRAWN BY A. HAUSER
 DESIGNED BY J. WEST
 CHECKED BY E. HANSON
 COMM. NO. 6630



ANOKA COUNTY
 RICE CREEK BRIDGE
 SOIL BORINGS
 SHEET C9 OF C9