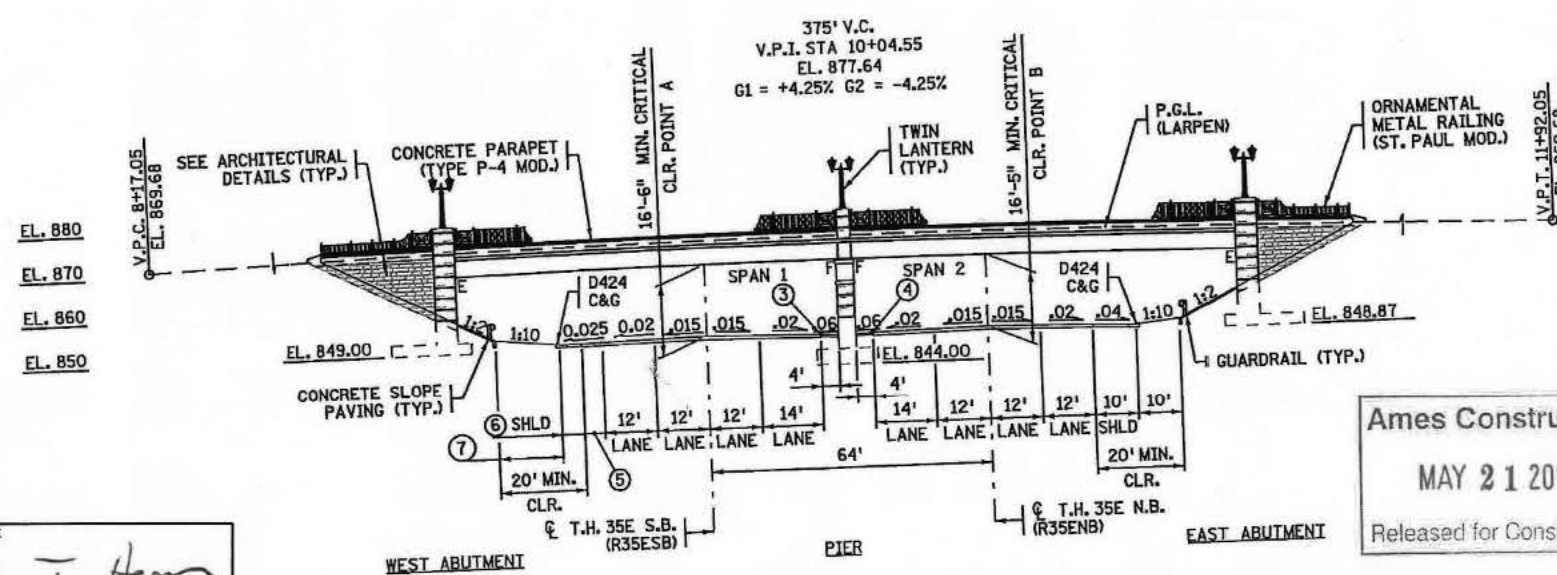


GENERAL PLAN

0 20'



GENERAL ELEVATION

0 20'

NOTES:

- TRAFFIC ON LARPELVEUR AVE. TO BE DETOURED DURING CONSTRUCTION.
- AZIMUTH OF ALL SUBSTRUCTURES TO BE 357°59'41.9".
- FOR EXISTING GROUND LINES AND UTILITIES SEE SHEET 54.
- ① C T.H. 35E S.B. STA 541+64.52 = C LARPELVEUR AVE. STA. 9+74.39  
X = 576,050.659 Y = 173,325.222  
AZ = 87°47'11.7"
- ② C T.H. 35E N.B. STA 541+62.05 = C LARPELVEUR AVE. STA. 10+38.44  
X = 576,114.706 Y = 173,324.989  
AZ = 87°47'11.7"
- ③ PROFILE GRADE (T.H. 35E S.B.) (R35ESB)
- ④ PROFILE GRADE (T.H. 35E N.B.) (R35ENB)
- ⑤ ACCELERATION LANE VARIES 5.5' NORTH EDGE OF BRIDGE TO 4' SOUTH EDGE OF BRIDGE.
- ⑥ VARIES 4.5' NORTH EDGE OF BRIDGE TO 6' SOUTH EDGE OF BRIDGE.
- ⑦ VARIES 15.5' NORTH EDGE OF BRIDGE TO 14' SOUTH EDGE OF BRIDGE.
- ⑧ SEE SHEET 51 FOR BRIDGE MOUNTED SIGN DETAILS.

CONSTRUCTION NOTES:

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

THE BAR SIZES SHOWN IN THE PLAN ARE IN U.S. CUSTOMARY DESIGNATIONS.

BARS MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301.

BARS MARKED WITH THE SUFFIX "S" SHALL BE STAINLESS STEEL, SEE SPECIAL PROVISIONS.

ALL SUBSURFACE UTILITIES SHOWN IN THIS PLAN, EXCEPT SEWERS, DEPICTED AT QUALITY LEVEL B UNLESS OTHERWISE NOTED. SEWER UTILITIES SHOWN IN THIS PLAN DEPICTED AT QUALITY LEVEL C UNLESS OTHERWISE NOTED. THIS UTILITY QUALITY WAS DETERMINED ACCORDING TO GUIDELINES OF CI/ACSE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA". SEE SHEET 50 FOR IN PLACE UTILITIES.

SUPERSTRUCTURE TO BE CONSTRUCTED IN TEMPORARY LOCATION AND MOVED TRANSVERSELY INTO FINAL LOCATION.

OPTICAL SETTLEMENT MONITORING TARGETS SHALL BE PLACED ON ACCESSIBLE POINTS OF EACH SUBSTRUCTURE. A MINIMUM OF 3 TARGETS (AT THE CENTER AND EACH END) SHALL BE INSTALLED PER STRUCTURE. SETTLEMENT MEASUREMENTS SHALL BE TAKEN PRIOR TO THE BRIDGE MOVE, DURING THE MOVE, IMMEDIATELY AFTER THE BRIDGE MOVE AND EACH MONTH FOR A YEAR THEREAFTER.

DESIGN DATA

2012 AND CURRENT INTERIM AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

LOAD AND RESISTANCE FACTOR DESIGN METHOD HL 93 LIVE LOAD

DEAD LOAD INCLUDES 20 PSF ALLOWANCE FOR FUTURE WEARING COURSE MODIFICATIONS

MATERIAL DESIGN PROPERTIES:  
 REINFORCED CONCRETE:  
 f'c = 4 ksi n = 8  
 f'y = 60 ksi REINFORCEMENT  
 PRESTRESSED CONCRETE:  
 f'c = 8.5 ksi n = 1  
 fpu = 270 KSI LOW RELAXATION STRANDS  
 0.75 fpu FOR INITIAL PRESTRESS

DESIGN SPEED  
 OVER = 40 MPH  
 UNDER = 60 MPH

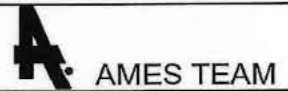
APPROXIMATE DECK AREA = 14,190 SQ. FT.  
 OPERATING RATING FACTOR = 1.534 (LRFR)

LIST OF SHEETS

NO.	TITLE
1	GENERAL PLAN & ELEVATION
2	TRANSVERSE SECTION
3	BRIDGE LAYOUT
4-8	WEST ABUTMENT DETAILS
9-13	WEST ABUTMENT REINFORCEMENT
14-18	EAST ABUTMENT DETAILS
19-23	EAST ABUTMENT REINFORCEMENT
24	PIER DETAILS
25-28	PIER REINFORCEMENT
29	FRAMING PLAN
30	MN45 PRESTRESSED CONCRETE BEAM
31-38	SUPERSTRUCTURE DETAILS & REINF.
39-44	ORNAMENTAL METAL RAILING (ST. PAUL MOD.) CONCRETE PARAPET (TYPE P-1 MOD.) CONCRETE PARAPET (TYPE P-4 MOD.) PILASTER DETAILS
45	CONCRETE SLOPE PAVING UNDER BRIDGES
46-47	BEARING DETAILS
48-50	DETAILS
51	BRIDGE MOUNTED SIGN
52	AS-BUILD BRIDGE DATA
53-55	BRIDGE SURVEY

2030 PROJECTED TRAFFIC VOLUMES

ROADWAY OVER	AADT	ROADWAY UNDER	DHV	ADTT
7,900	145,900	1,548	12,704	6,362
158				



MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 62646  
 LARPELVEUR AVENUE OVER T.H. 35E  
 1.3 MI SOUTH OF JCT. OF T.H. 36  
 SPAN ID NO. 501

GENERAL PLAN & ELEVATION

SEC. 19 TWP. 29 N. R. 22 W.  
 CITY OF ST. PAUL RAMSEY COUNTY

*Nancy Dambinger* 7/3/2014  
 STATE BRIDGE ENGINEER DATE

MINDOT ACCEPTANCE

SIGNATURE: *D J Henn*

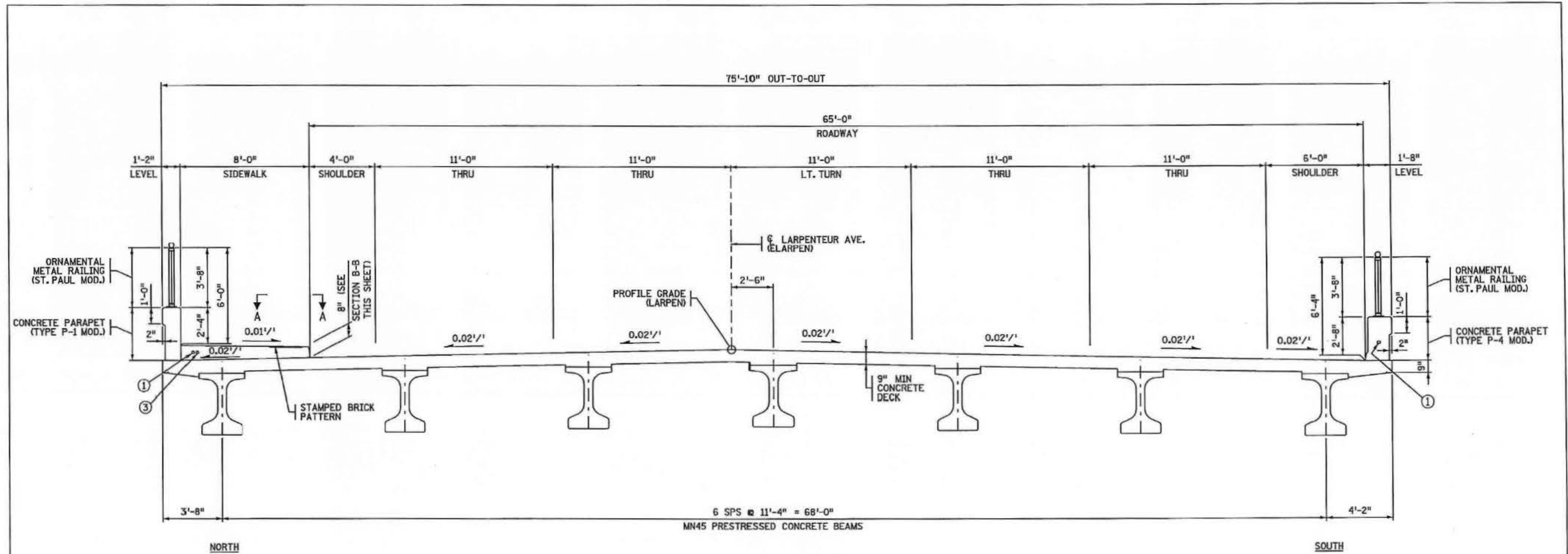
DATE: 5/21/14

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.

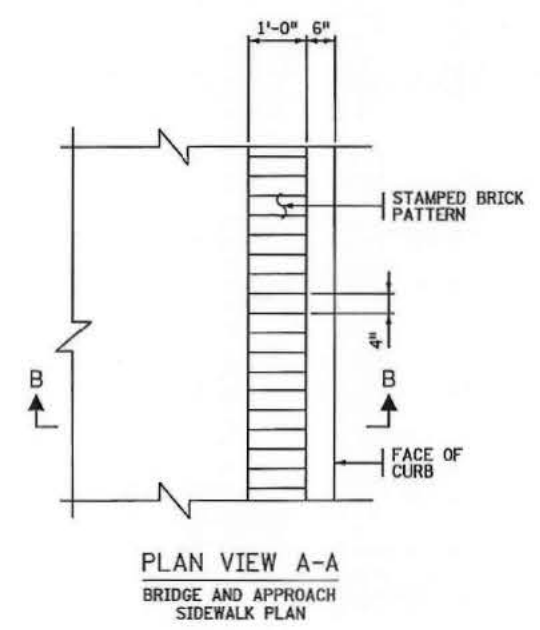
PRINT NAME: GEORGE W. GORRILL

DATE: 5/21/14 LICENSE: 45863

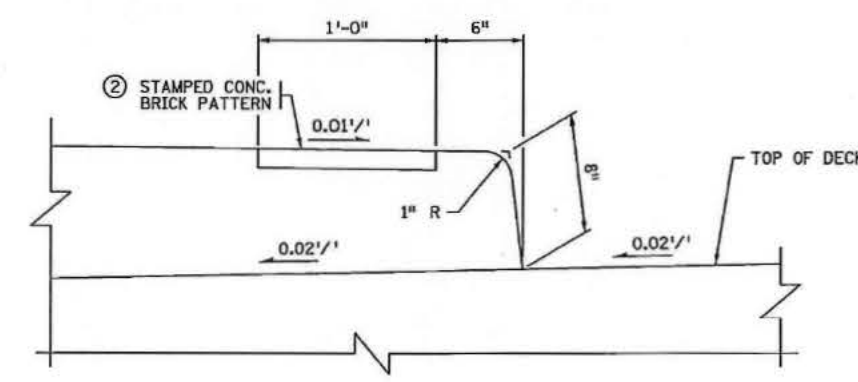
NO.	DATE	BY	CKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	REVISED TITLE BLOCK (NDC008)



TRANSVERSE SECTION



PLAN VIEW A-A  
BRIDGE AND APPROACH  
SIDEWALK PLAN



SECTION B-B  
SIDEWALK SECTION

- NOTES:**
- ① 1/2" R.S.C. LIGHTING CONDUIT, SEE LIGHTING PLAN FOR DETAILS.
  - ② ARCHITECTURAL CONCRETE PAVEMENT. SEE SPECIAL PROVISIONS.
  - ③ 2" R.S.C. SIGNAL CONDUIT, SEE SIGNAL PLANS FOR DETAILS.

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APR 11 2014  
Released for Construction

DES:	AW	DR:	MMF	APPROVED:
CHK:	ZAT	CHK:	ZAT	

NO.	DATE	BY	CKD	APPR	REVISION

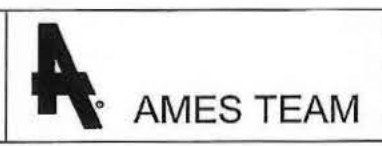
DRAWING NO. 1

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: GEORGE W. CORBILL  
DATE: 4/10/14 LICENSE # 46863

AND DOT ACCEPTANCE

SIGNATURE: [Signature]  
DATE: 4/11/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 2 OF 55
TRANSVERSE SECTION		



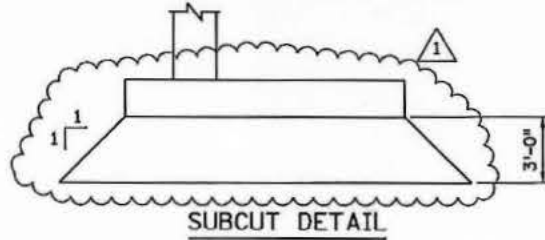
**WEST ABUTMENT SPREAD FOOTING LOAD DATA**

FACTORED DESIGN BEARING PRESSURE	3.1 TONS/ SQ. FT.
EFFECTIVE WIDTH B'	12.5 FT.
FACTORED BEARING RESISTANCE $\phi_b \cdot q_n$	3.1 TONS/ SQ. FT.

• BASED ON STR IV LOAD COMBINATION

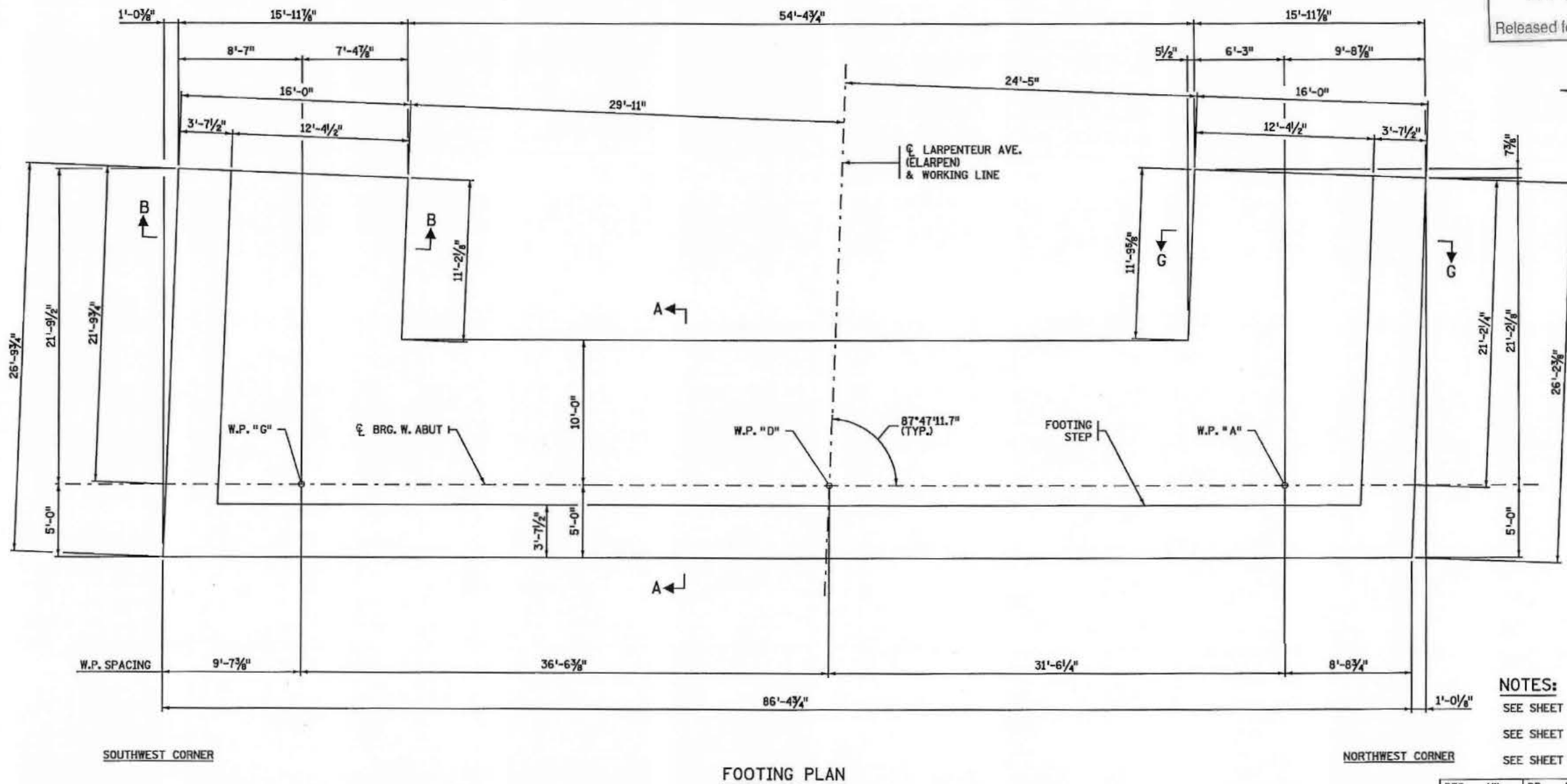
**FOOTING NOTES:**

A PORTION OF THE IN-PLACE BRIDGE FOUNDATION IS WITHIN THE LIMITS OF THE PROPOSED BRIDGE FOUNDATION. EXISTING TIMBER PILES SHOULD BE CUT OFF 3 FEET BELOW THE LEVEL OF THE PROPOSED BOTTOM OF FOOTING ELEVATION. REMOVE MARGINAL SOILS 3 FEET BELOW PROPOSED BOTTOM OF FOOTING ELEVATION AND REPLACE WITH SELECT GRANULAR BORROW THAT MEETS MNDOT SPEC. 3149.2B2 AND PLACE IN ACCORDANCE WITH MNDOT SPEC. 2105.



SUMMARY OF QUANTITIES FOR WEST ABUTMENT			
ITEM NO.	ITEM	QTY.	UNIT
2401.501	STRUCTURAL CONCRETE (1A43)	190	CU. YD.
2401.501	STRUCTURAL CONCRETE (3Y43)	248	CU. YD.
2401.541	REINFORCEMENT BARS	20,362	POUND
2401.541	REINFORCEMENT BARS (EPOXY COATED)	23,381	POUND
2411.618	ARCHITECTURAL CONCRETE TEXTURE (CUT STONE)	1330	SQ. FT.
2411.618	ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE)	1085	SQ. FT.
2411.618	ARCHITECTURAL SURFACE FINISH (MULTI-COLOR)	2415	SQ. FT.
2411.618	ANTI-GRAFFITI COATING	2415	SQ. FT.

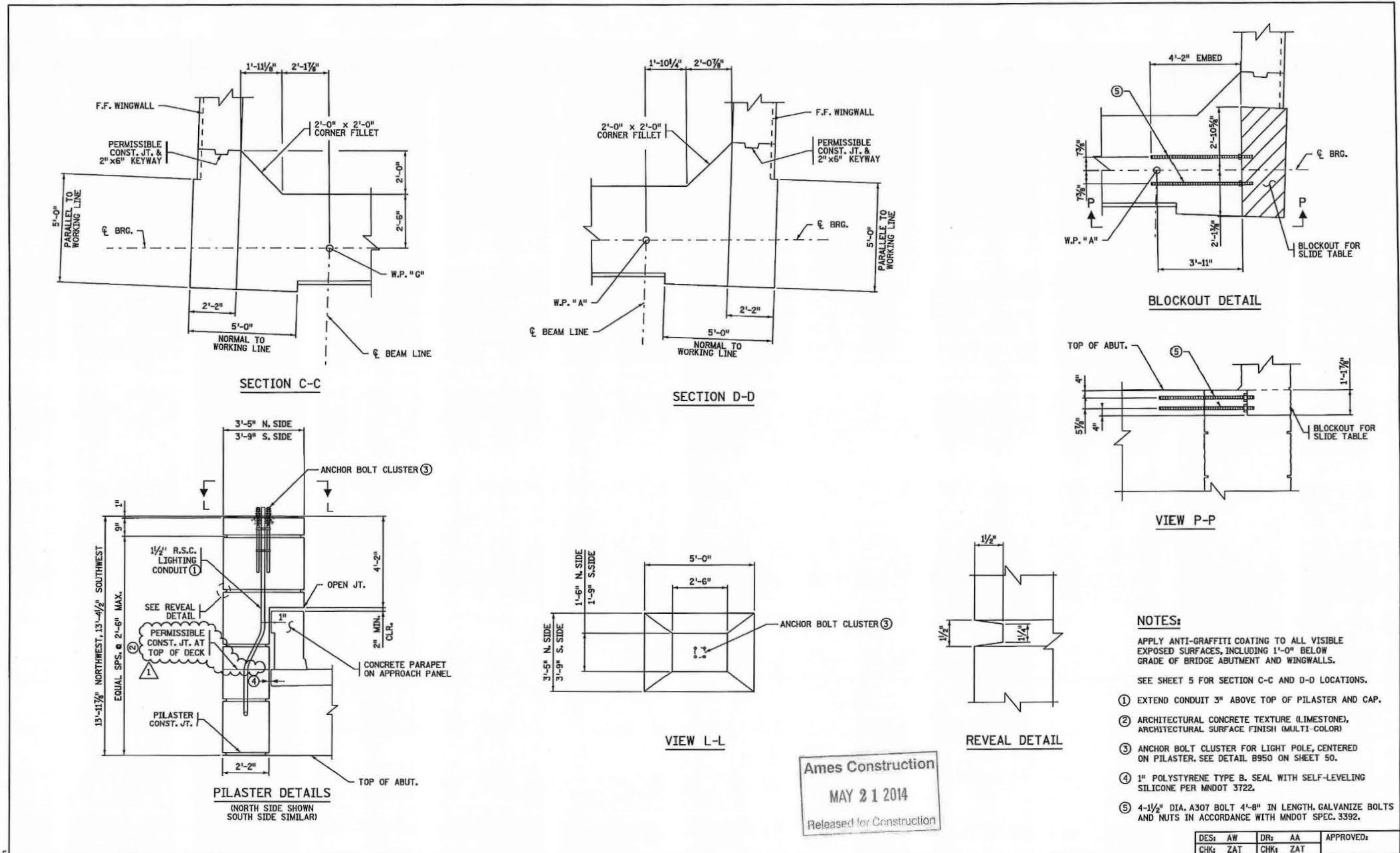
**Ames Construction**  
MAY 21 2014  
Released for Construction



**NOTES:**  
SEE SHEET 5 FOR SECTION A-A.  
SEE SHEET 7 FOR SECTION B-B.  
SEE SHEET 8 FOR SECTION G-G.

<p>16184 12-MAY-2014 02-62646-21-04.dgn</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">A</td> <td style="width: 10%;">5/5/14</td> <td style="width: 5%;">JLJ</td> <td style="width: 5%;">ZAT</td> <td style="width: 5%;">JWD</td> <td style="width: 50%;">SUBCUT REVISION (NDC008)</td> </tr> <tr> <td>NO</td> <td>DATE</td> <td>BY</td> <td>CKD</td> <td>APPR</td> <td>REVISION</td> </tr> <tr> <td colspan="6">DRAWING NO. *</td> </tr> </table>	A	5/5/14	JLJ	ZAT	JWD	SUBCUT REVISION (NDC008)	NO	DATE	BY	CKD	APPR	REVISION	DRAWING NO. *						<p>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.</p> <p>PRINT NAME: <u>GEORGE W. GORRILL</u></p> <p>SIGNATURE: <i>[Signature]</i></p> <p>DATE: <u>5/20/14</u> LICENSE # <u>46863</u></p>	<p>MNDOT ACCEPTANCE</p> <p>SIGNATURE: <i>[Signature]</i></p> <p>DATE: <u>5/21/14</u></p>		<p>S.P. NO. 6280-62646</p> <p>BRIDGE NO. 62646</p> <p>WEST ABUTMENT DETAILS</p>	<p>APPROVED:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DES: AW</td> <td>DR: MMF</td> </tr> <tr> <td>CHK: ZAT</td> <td>CHK: ZAT</td> </tr> </table>	DES: AW	DR: MMF	CHK: ZAT	CHK: ZAT	<p>SHEET</p> <p style="font-size: 24pt;">4</p> <p>OF</p> <p style="font-size: 24pt;">55</p>
A	5/5/14	JLJ	ZAT	JWD	SUBCUT REVISION (NDC008)																								
NO	DATE	BY	CKD	APPR	REVISION																								
DRAWING NO. *																													
DES: AW	DR: MMF																												
CHK: ZAT	CHK: ZAT																												





- NOTES:**
- APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALLS.
  - SEE SHEET 5 FOR SECTION C-C AND D-D LOCATIONS.
  - ① EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.
  - ② ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE), ARCHITECTURAL SURFACE FINISH (MULTI-COLOR)
  - ③ ANCHOR BOLT CLUSTER FOR LIGHT POLE, CENTERED ON PILASTER. SEE DETAIL B950 ON SHEET 50.
  - ④ 1" POLYSTYRENE TYPE B. SEAL WITH SELF-LEVELING SILICONE PER MNDOT 3722.
  - ⑤ 4-1/2" DIA. A307 BOLT 4'-8" IN LENGTH. GALVANIZE BOLTS AND NUTS IN ACCORDANCE WITH MNDOT SPEC. 3392.

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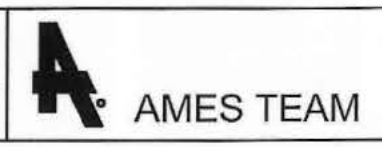
DES: AW	DR: AA	APPROVED:
CHK: ZAT	CHK: ZAT	
S.P. NO. 6280-62646		BRIDGE NO. 62646
WEST ABUTMENT DETAILS		SHEET 6 OF 55

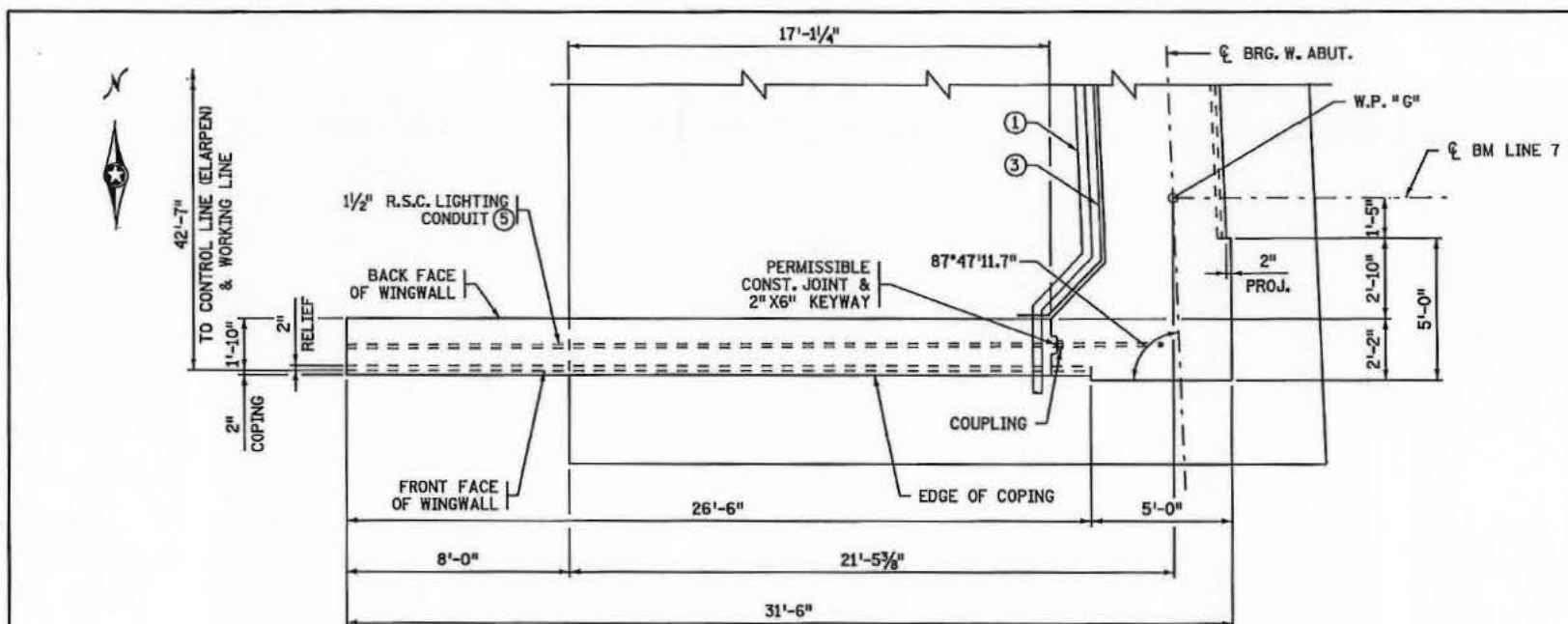
NO	DATE	BY	CKD	APPR	REVISION
	5/5/14	JLJ	ZAT	JWD	ADDED PILASTER CONST. JT. (NDC008)

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.

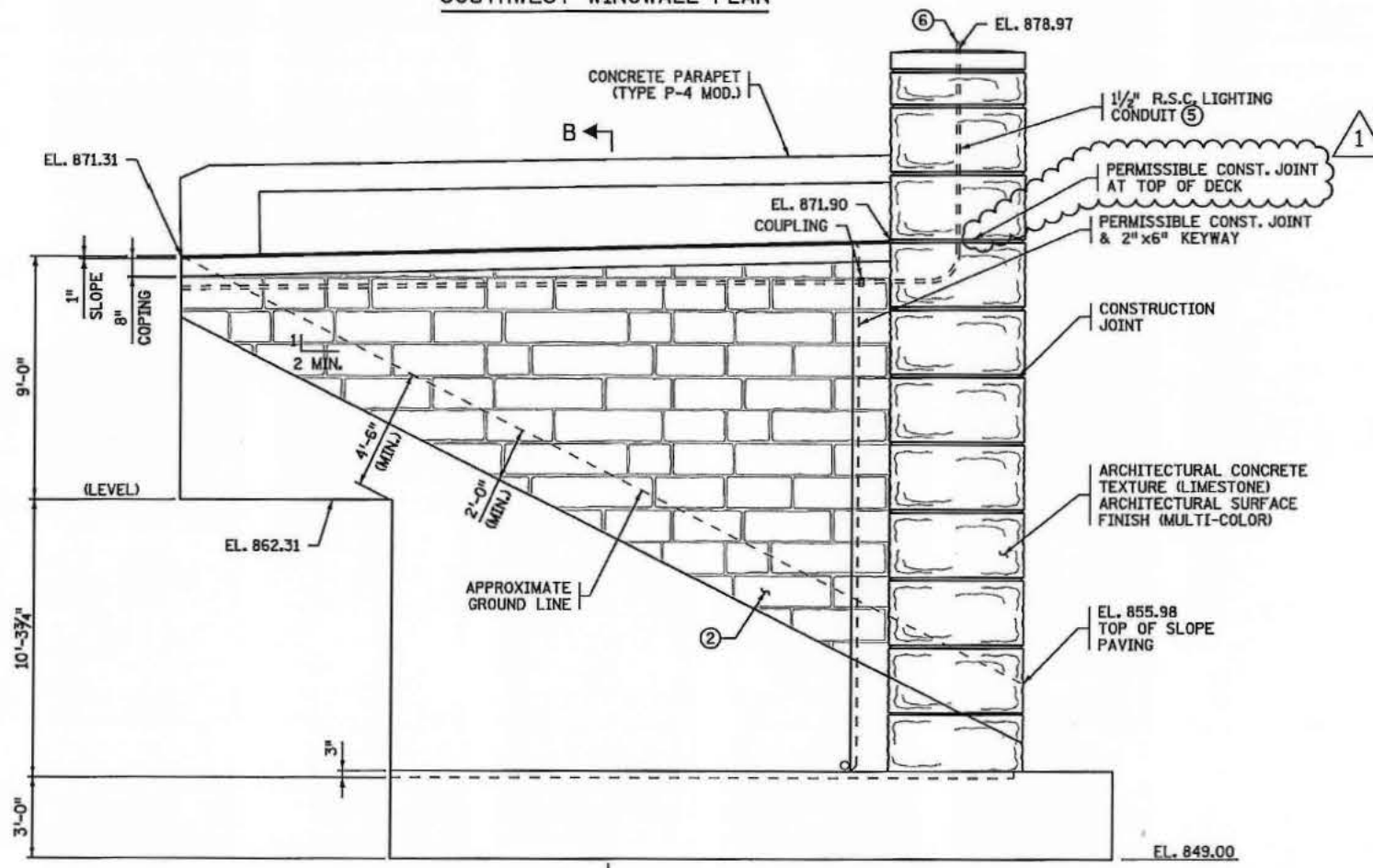
PRINT NAME: GEORGE W. GORRILL  
 SIGNATURE: [Signature]  
 DATE: 5/21/14 LICENSE: 46863

MNDOT ACCEPTANCE  
 SIGNATURE: [Signature]  
 DATE: 5/21/14

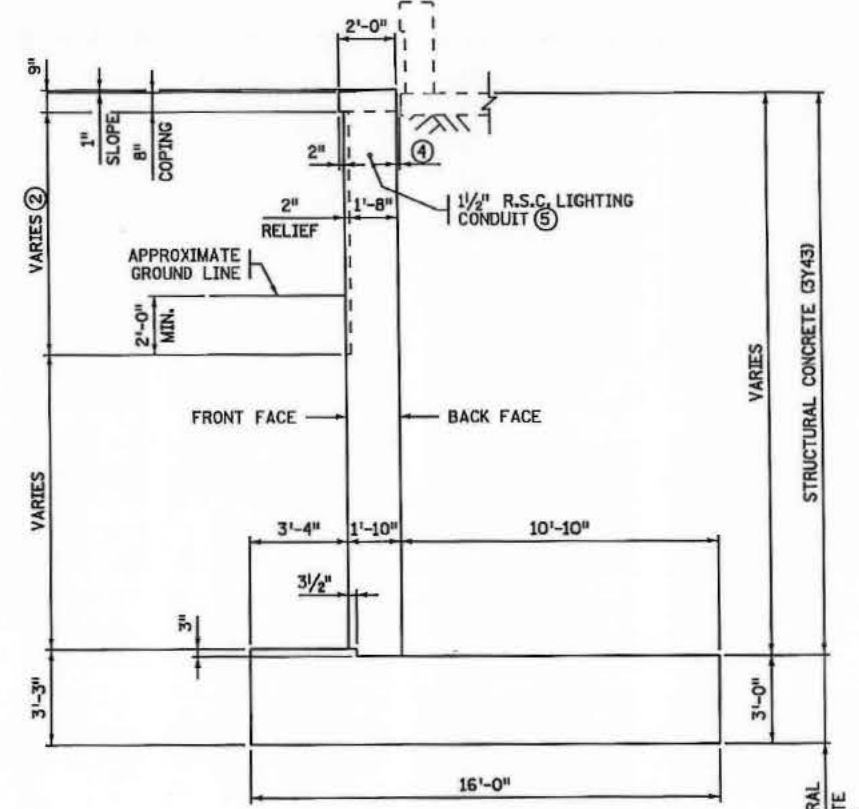




SOUTHWEST WINGWALL PLAN



SOUTHWEST WINGWALL ELEVATION



SECTION B-B

- NOTES:**
- TOP OF WINGWALL ELEVATIONS ARE GIVEN AT BACKFACE OF WINGWALL.
  - APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALL.
  - WINGWALL DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO CONTROL LINE (ELARPEN).
  - ① 4" NOMINAL DIA. PERFORATED PIPE INCLUDED IN DRAINAGE SYSTEM TYPE B910.
  - ② ARCHITECTURAL CONCRETE TEXTURE (CUT STONE), ARCHITECTURAL SURFACE FINISH (MULTI COLOR).
  - ③ MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.3B.
  - ④ 1" POLYSTYRENE TYPE B AT APPROACH PANEL. SEAL WITH SELF LEVELING SILICONE PER MNDOT 3722. REFER TO GRADING APPROACH PANEL DETAILS UNDER GRADING PORTION OF CONTRACT.
  - ⑤ SEE LIGHTING PLAN FOR DETAILS.
  - ⑥ EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.

Ames Construction  
MAY 21 2014  
Released for Construction

NO.	DATE	BY	CKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	ADDED PILASTER CONST. JT. (NDC008)

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.

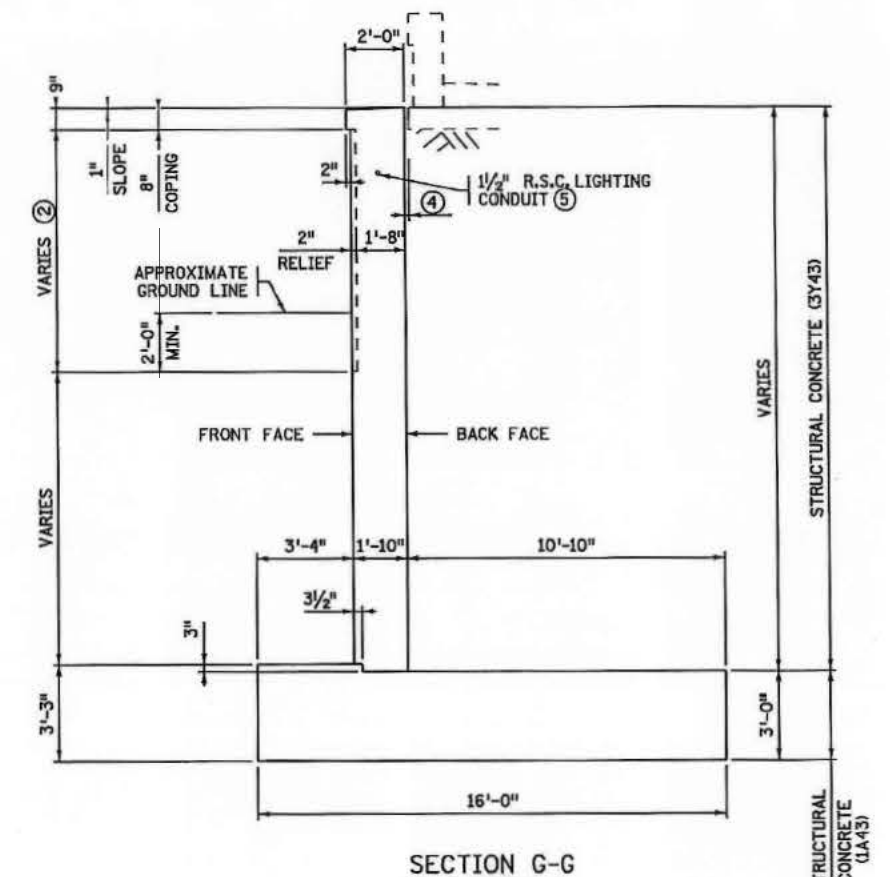
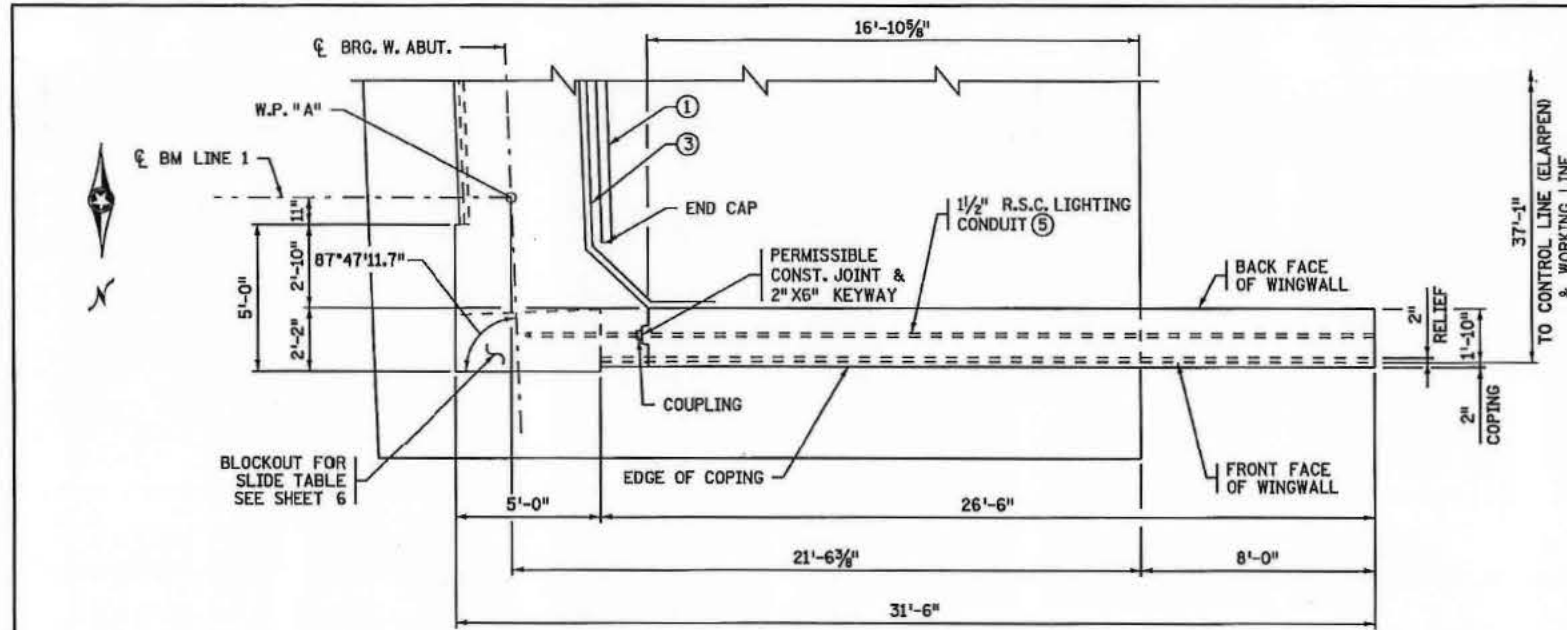
PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE # 46863

MNDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 5/21/14



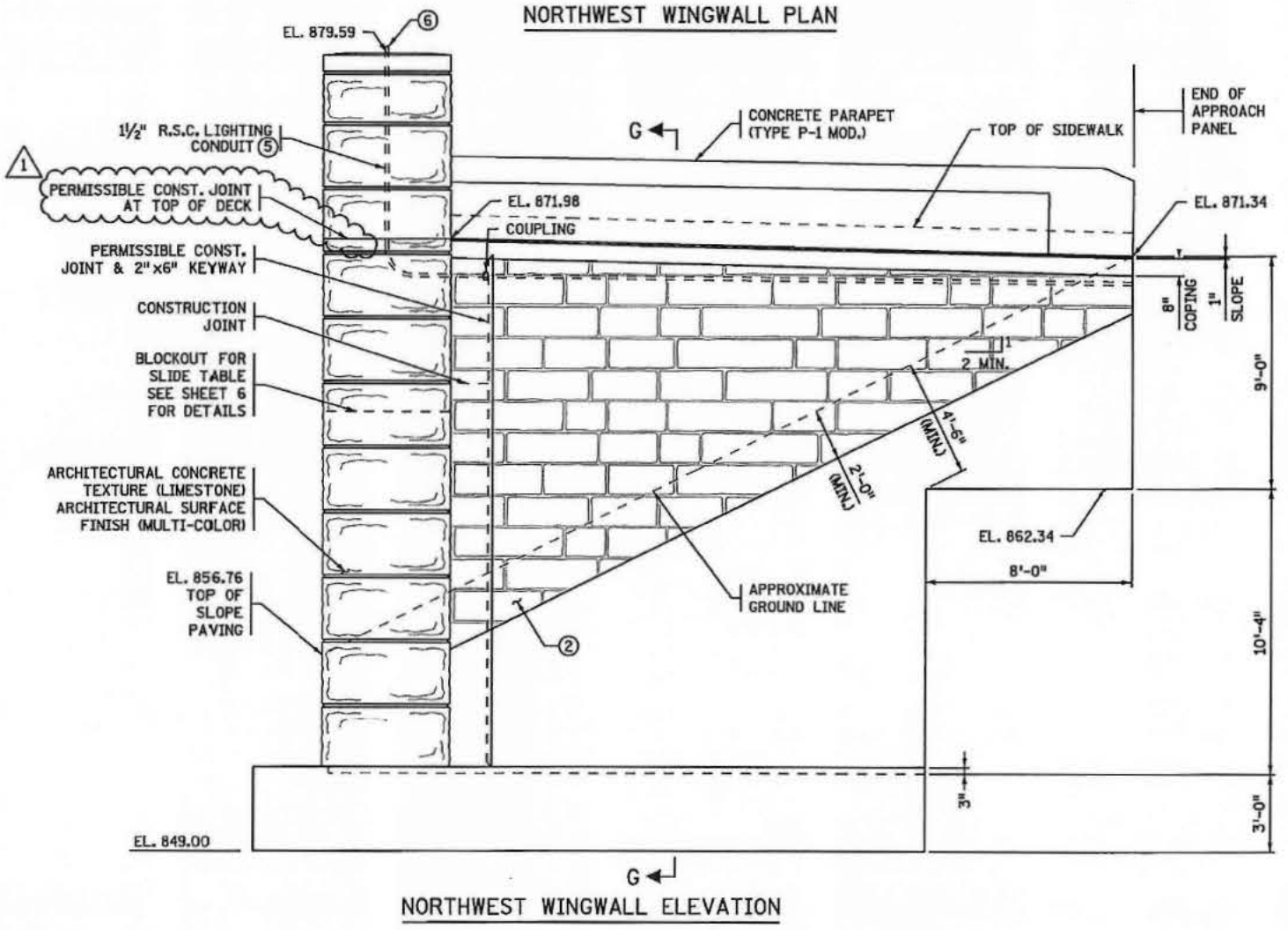
S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 7 OF 55
WEST ABUTMENT DETAILS		

DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	



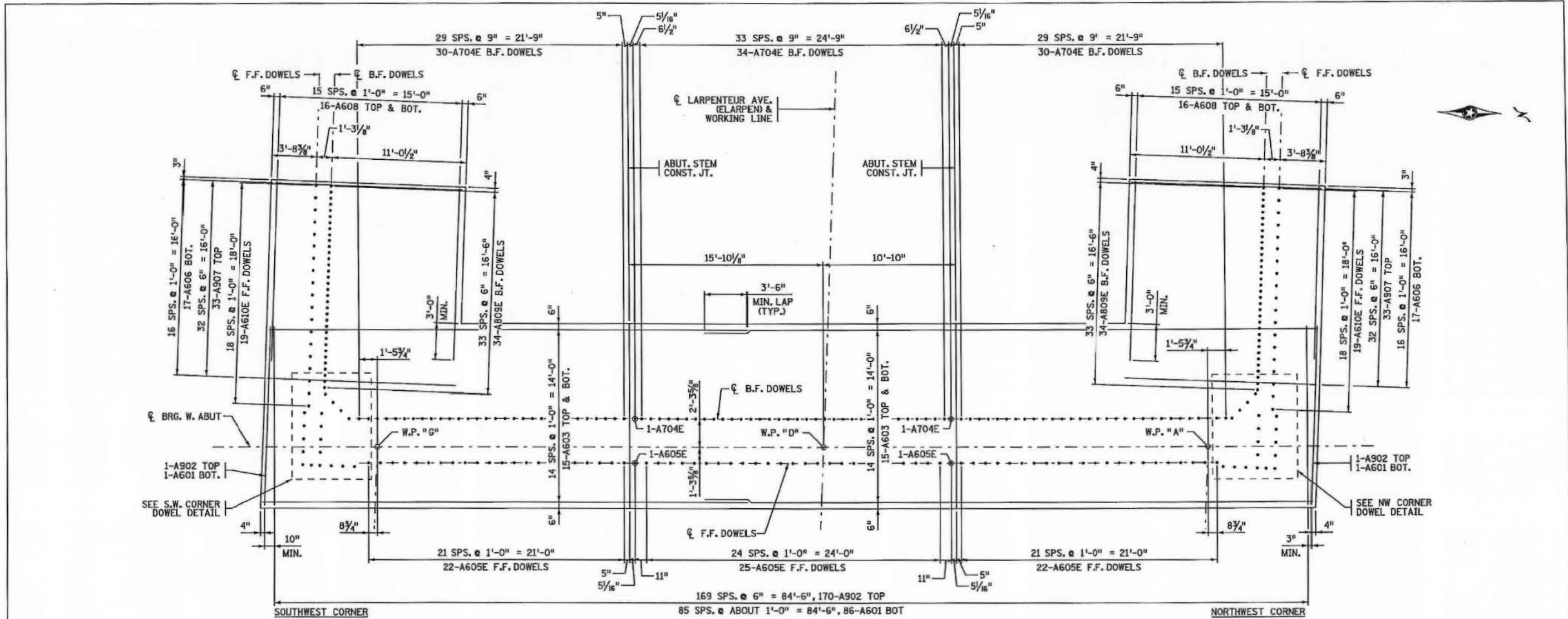
- NOTES:**
- TOP OF WINGWALL ELEVATIONS ARE GIVEN AT BACKFACE OF WINGWALL.
  - APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALL.
  - WINGWALL DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO CONTROL LINE (ELARPEN).
  - 4" NOMINAL DIA. PERFORATED PIPE INCLUDED IN DRAINAGE SYSTEM TYPE B910.
  - ARCHITECTURAL CONCRETE TEXTURE (CUT STONE), ARCHITECTURAL SURFACE FINISH (MULTI COLOR).
  - MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.3B.
  - 1" POLYSTYRENE TYPE B AT APPROACH PANEL. SEAL WITH SELF LEVELING SILICONE PER MNDOT 3722. REFER TO GRADING APPROACH PANEL DETAILS UNDER GRADING PORTION OF CONTRACT.
  - SEE LIGHTING PLAN FOR DETAILS.
  - EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.

Ames Construction  
 MAY 21 2014  
 Released for Construction

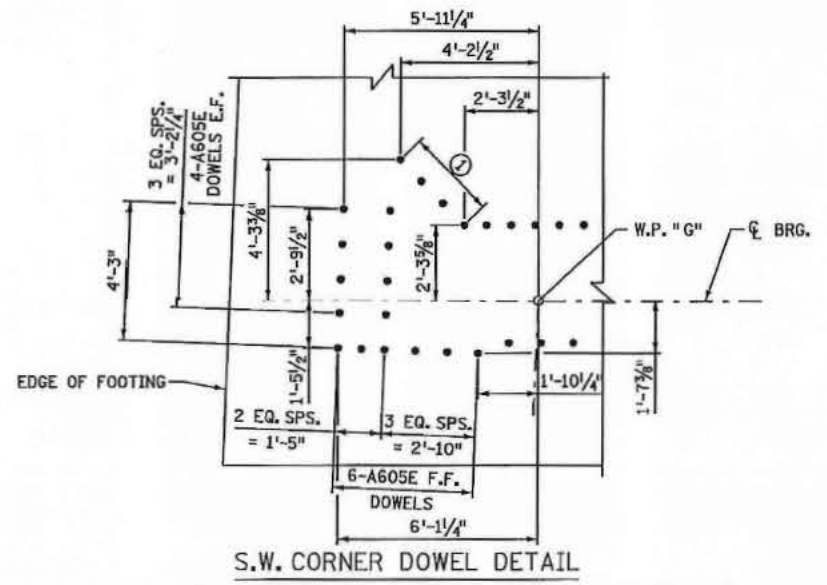


151856 12-MAY-2014 C81-62646-011-08.dgn	5/5/14	JLJ	ZAT	JWD	ADDED PILASTER CONST. JT. (NOC008)	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	MNDOT ACCEPTANCE	DES: AW CHK: ZAT	DR: MMF CHK: JLJ	APPROVED:	S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 8 OF 55
NO	DATE	BY	CKD	APPR	REVISION	PRINT NAME: GEORGE W. GORRILL	SIGNATURE: <i>George W. Gorrill</i>	AMES TEAM		WEST ABUTMENT DETAILS			
						DATE: 5/20/14	DATE: 5/21/14	LICENSE # 45863					

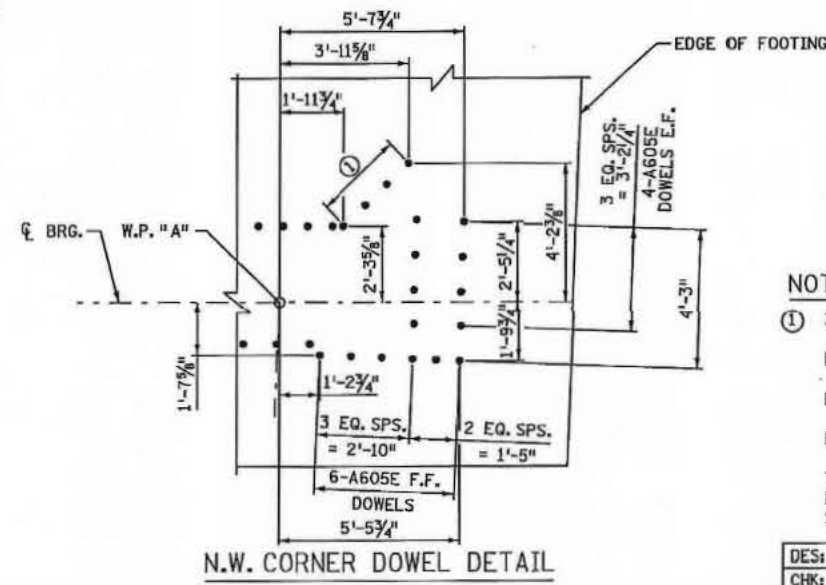




FOOTING REINFORCEMENT PLAN



S.W. CORNER DOWEL DETAIL



N.W. CORNER DOWEL DETAIL

Ames Construction  
 APR 11 2014  
 Released for Construction

- NOTES:  
 ① 3 SPS. @ 11" = 2'-9", 4-A704E DOWELS  
 B.F. DENOTES BACK FACE  
 F.F. DENOTES FRONT FACE  
 E.F. DENOTES EACH FACE  
 THE MINIMUM DISTANCE BETWEEN REINFORCEMENT AND FACE OF CONCRETE SHALL BE 3" UNLESS NOTED OTHERWISE.

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 9 OF 55
WEST ABUTMENT REINFORCEMENT		

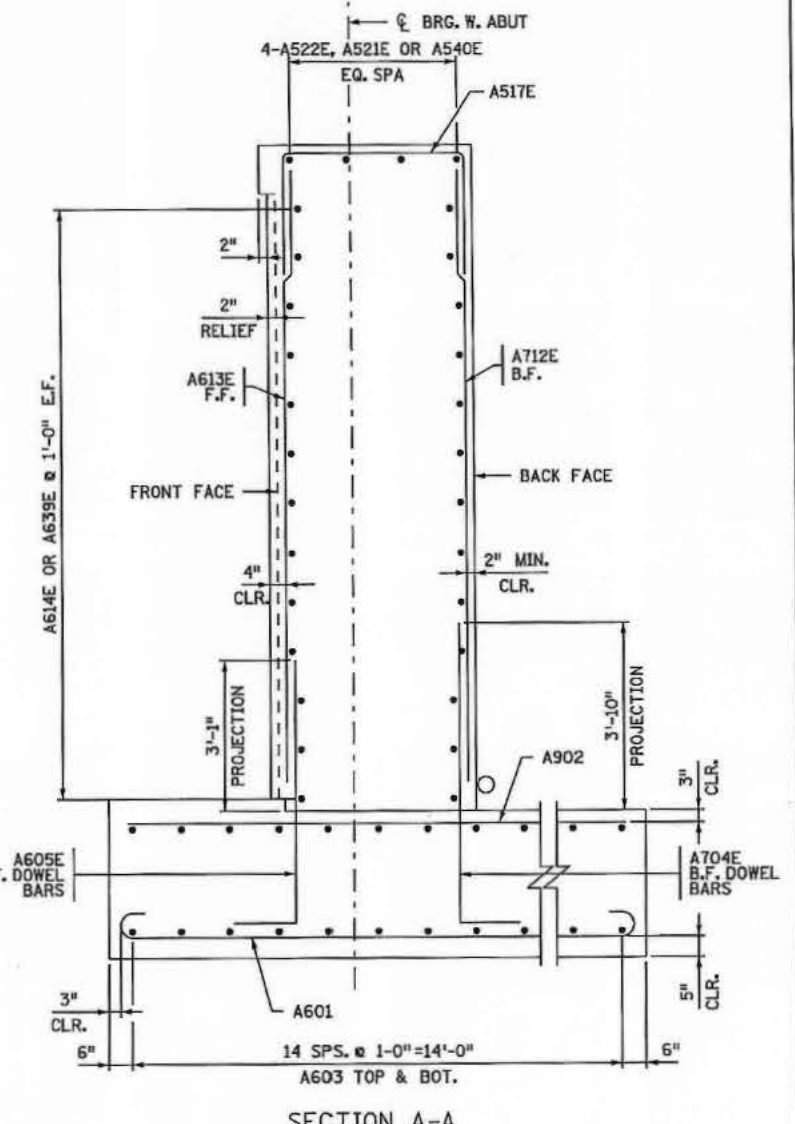
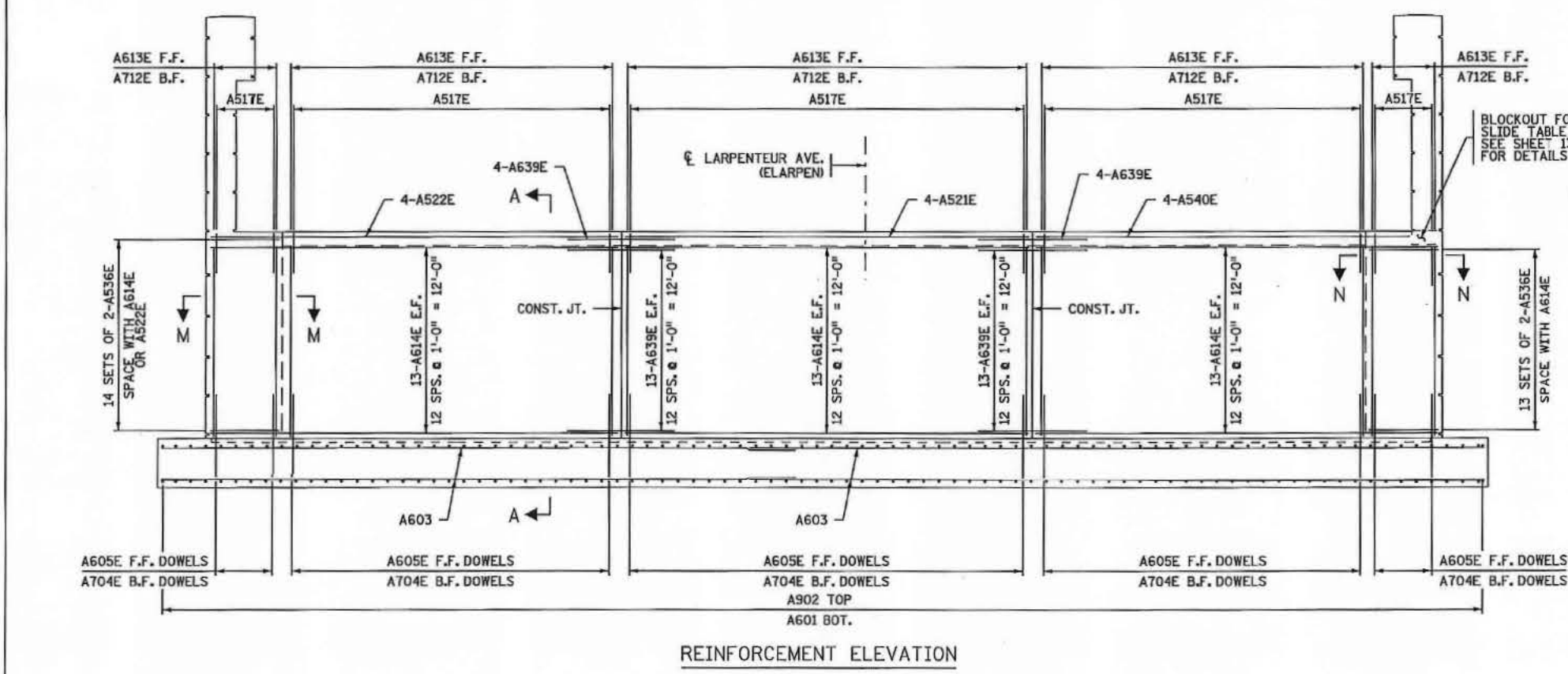
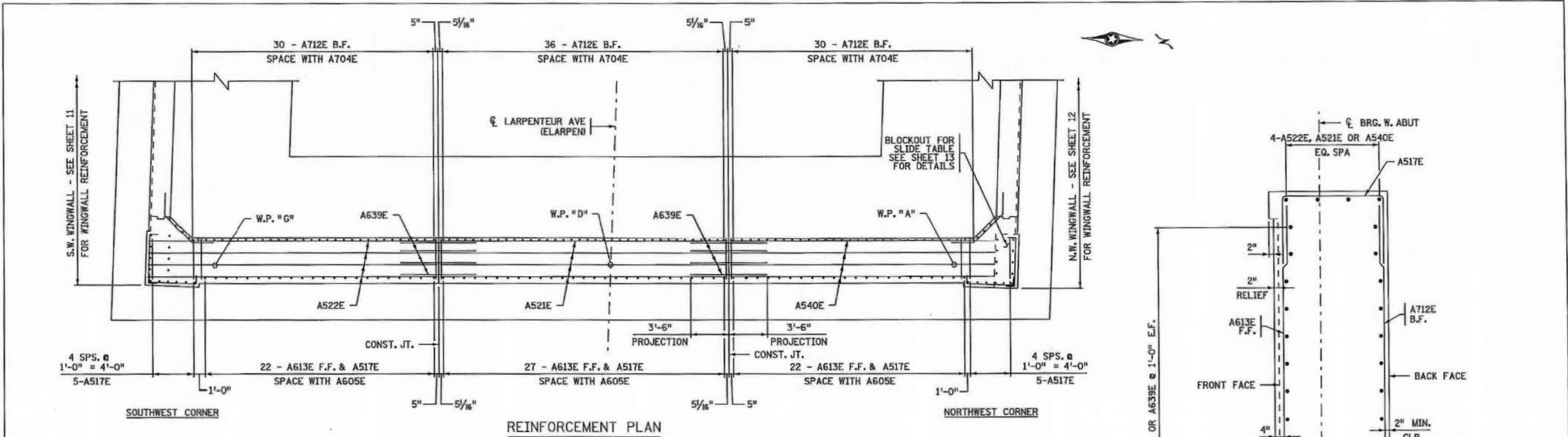


MODOT ACCEPTANCE  
 SIGNATURE: *D.J. Aron*  
 DATE: 4/11/14

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: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE # 45863

NO	DATE	BY	CKD	APPR	REVISION

DRAWING NO. 1



**NOTES:**  
 F.F. DENOTES FRONT FACE.  
 B.F. DENOTES BACK FACE.  
 E.F. DENOTES EACH FACE.  
 SEE SHEET 13 FOR SECTIONS M-M AND N-N

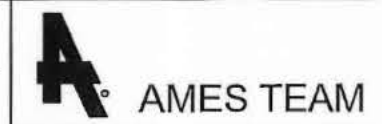
Ames Construction  
 APR 11 2014  
 Released for Construction

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	

NO	DATE	BY	CKD	APPR	REVISION

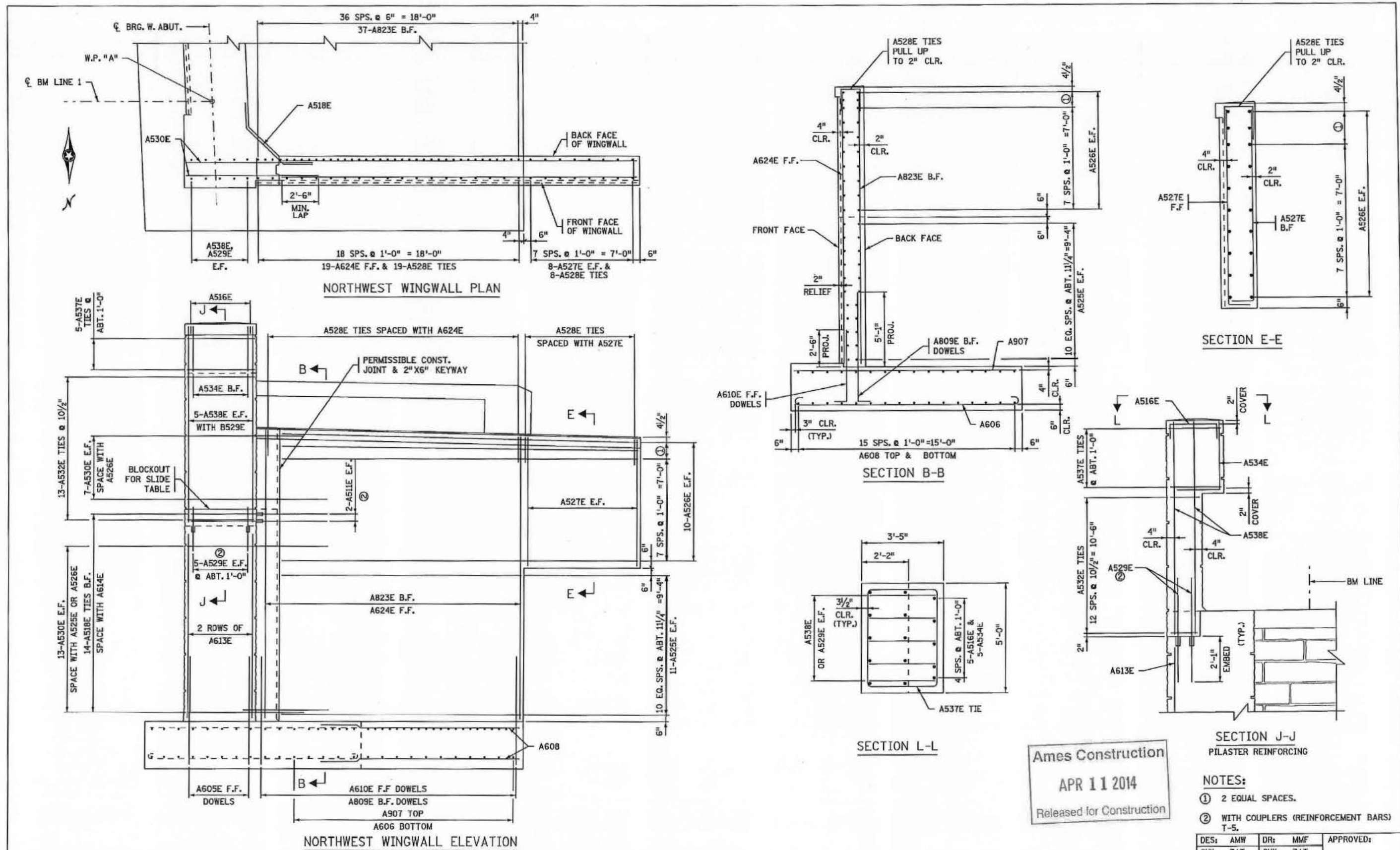
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 PRINT NAME: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE: 46863

MINOT ACCEPTANCE  
 SIGNATURE: *DWJ*  
 DATE: 4/11/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 1.0 OF 5.5
WEST ABUTMENT REINFORCEMENT		





Ames Construction  
 APR 11 2014  
 Released for Construction

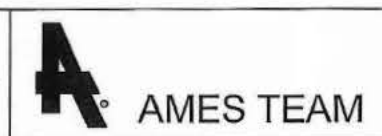
- NOTES:  
 ① 2 EQUAL SPACES.  
 ② WITH COUPLERS (REINFORCEMENT BARS) T-S.

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	

NO	DATE	BY	CKD	APPR	REVISION

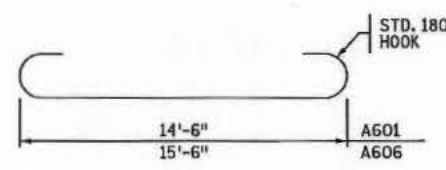
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: GEORGE W. GOBRILL  
 DATE: 4/11/14 LICENSE: 46863

MINDOT ACCEPTANCE  
 SIGNATURE: *Don J. Horn*  
 DATE: 4/11/14

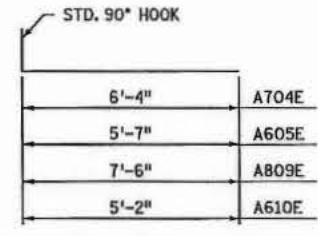


S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 12 OF 55
WEST ABUTMENT REINFORCEMENT		

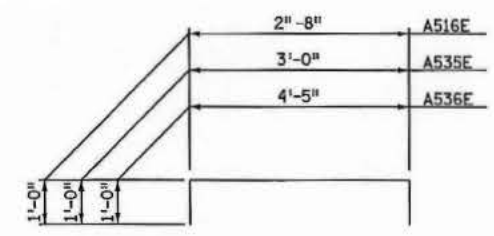
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 08-APR-2014  
 03-62646-1112.dgn



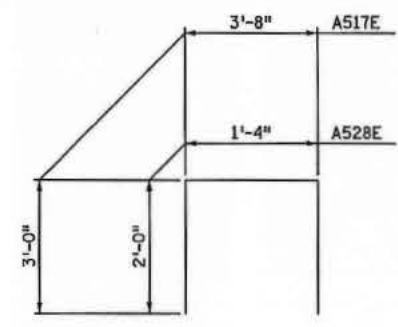
A601 & A606



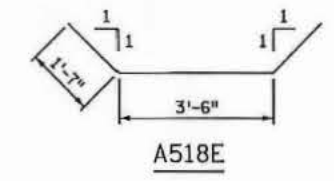
A704E, A605E, A809E & A610E  
(VERTICAL DOWELS)



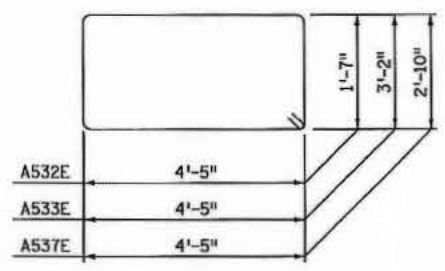
A516E, A535E & A536E



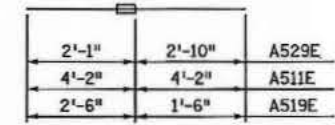
A517E & A528E



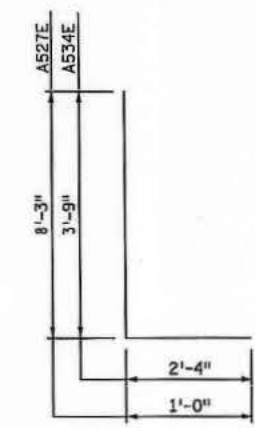
A518E



A532E, A533E & A537E



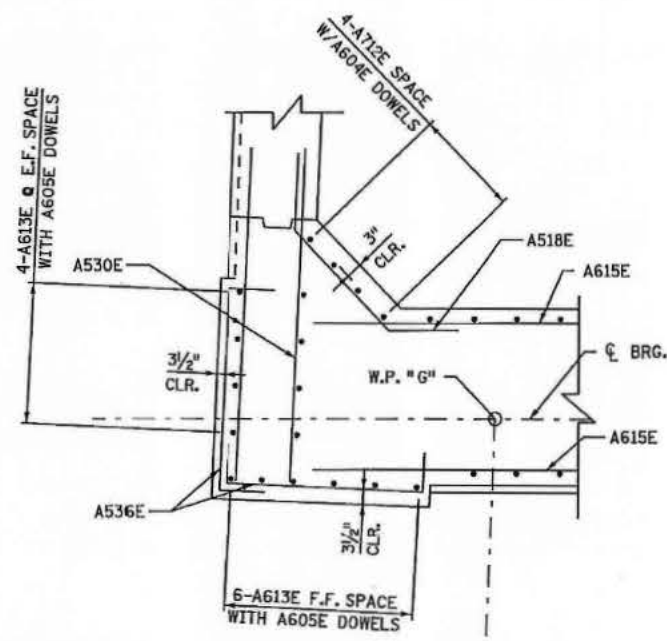
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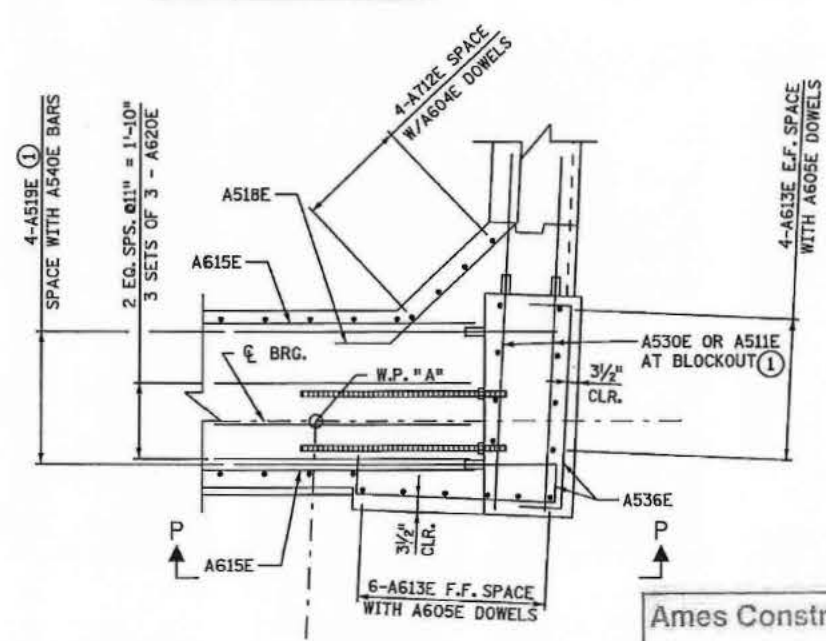
A534E & A527E

BILL OF REINFORCEMENT FOR WEST ABUTMENT

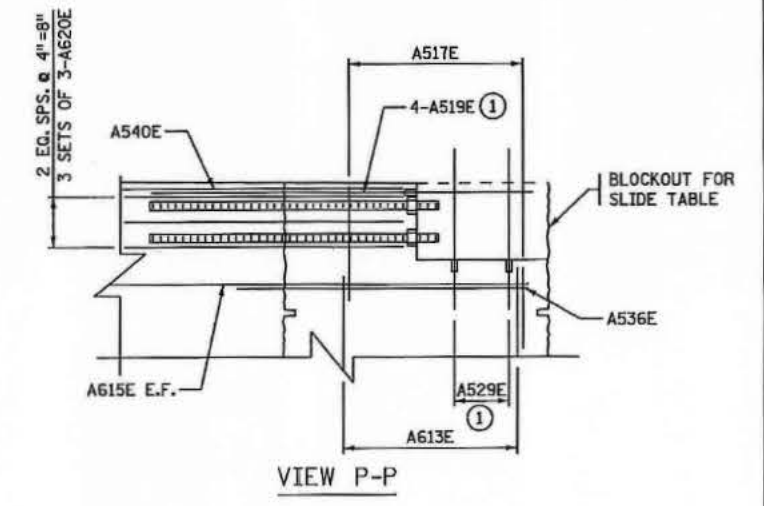
BAR	NO.	LENGTH	SHAPE	LOCATION
A601	88	15'-10"		FOOTING TRANSVERSE BOTTOM MAT
A902	172	14'-6"		FOOTING TRANSVERSE TOP MAT
A603	60	44'-8"		FOOTING LONGITUDINAL TOP & BOTTOM
A704E	104	7'-6"		FOOTING DOWELS BACK FACE
A605E	99	6'-7"		FOOTING DOWELS FRONT FACE
A606	34	16'-10"		WINGWALL FOOTING TRANSVERSE BOT
A907	66	15'-6"		WINGWALL FOOTING TRANSVERSE TOP
A608	64	14'-10"		WINGWALL FOOTING LONGITUDINAL
A809E	68	8'-10"		WINGWALL FOOTING DOWELS B.F.
A610E	38	6'-2"		WINGWALL FOOTING DOWELS F.F.
A511E	4	8'-4"		STEM TO W.W. DOWELS @BLOCKOUT
A712E	104	12'-0"		STEM BACK FACE VERTICAL
A613E	99	12'-0"		STEM FRONT FACE VERTICAL
A614E	78	26'-2"		STEM HORIZONTAL
A516E	5	4'-8"		NORTH PILASTER CAP TIES - TOP
A517E	81	9'-8"		STEM TIES TOP
A518E	28	6'-8"		FILLET TIE HORIZONTAL
A519E	4	4'-0"		STEM TO BLOCKOUT DOWEL
A620E	9	6'-6"		STEM HORIZONTAL @ BLOCKOUT
A521E	4	26'-2"		STEM HORIZONTAL
A522E	4	26'-6"		STEM HORIZONTAL
A823E	74	19'-0"		WINGWALL VERTICAL BACK FACE
A624E	38	19'-0"		WINGWALL VERTICAL FRONT FACE
A525E	44	16'-6"		WINGWALL HORIZONTAL
A526E	40	24'-6"		WINGWALL HORIZONTAL
A527E	32	9'-3"		WINGWALL CANTILEVER VERTICAL
A528E	54	5'-4"		WINGWALL TIES TOP
A529E	20	4'-11"		PILASTER DOWELS VERTICAL
A530E	82	9'-0"		STEM TO WINGWALL DOWELS HORIZ.
A531E	10	13'-0"		PILASTER VERTICAL
A532E	24	12'-11"		PILASTER TIES HORIZONTAL-LOWER
A533E	5	16'-1"		SOUTH PILASTER TIES HORIZONTAL-UPPER
A534E	10	6'-1"		PILASTER VERTICAL B.F.
A535E	5	5'-0"		SOUTH PILASTER CAP TIES - TOP
A536E	54	6'-5"		STEM CORNER TIES HORIZONTAL
A537E	5	15'-5"		NORTH PILASTER TIES HORIZONTAL-UPPER
A538E	10	14'-6"		PILASTER VERTICAL
A639E	60	7'-0"		STEM HORIZONTAL DOWELS
A540E	4	24'-0"		STEM HORIZONTAL



SECTION M-M



SECTION N-N



VIEW P-P

Ames Construction  
APR 11 2014  
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NOTES:

- ① WITH COUPLERS (REINFORCEMENT BARS) T-5.
- SEE SHEET 10 FOR LOCATION OF SECTIONS M-M AND N-N.
- B.F. DENOTES BACKFACE.
- F.F. DENOTES FRONT FACE.
- E.F. DENOTES EACH FACE.

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 13 OF 55
WEST ABUTMENT REINFORCEMENT		

1815E 08-APR-2014 CB-62646-RT-13.dgn

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: GEORGE W. GORRILL  
DATE: 4/6/14 LICENSE: 46863

AND/OR ACCEPTANCE  
SIGNATURE: *D. J. Berry*  
DATE: 4/11/14

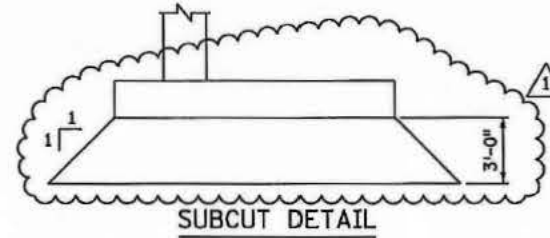


EAST ABUTMENT SPREAD FOOTING LOAD DATA	
FACTORED DESIGN BEARING PRESSURE	3.3 TONS/ SQ. FT.
EFFECTIVE WIDTH B'	12.2 FT.
FACTORED BEARING RESISTANCE $\phi_b \cdot q_n$	4.7 TONS/ SQ. FT.
* BASED ON STR IV LOAD COMBINATION	

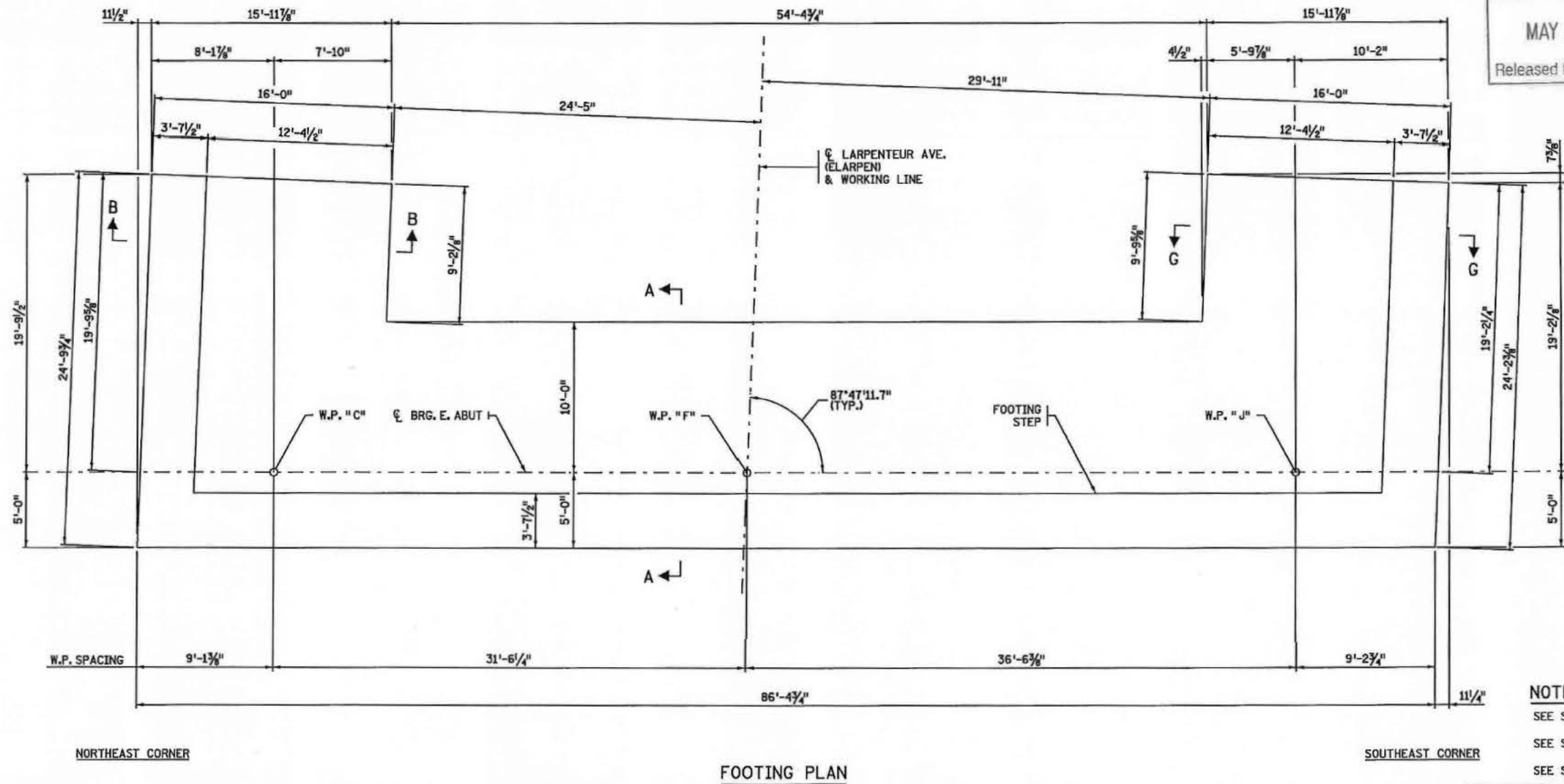
**FOOTING NOTES:**

A PORTION OF THE IN-PLACE BRIDGE FOUNDATION IS WITHIN THE LIMITS OF THE PROPOSED BRIDGE FOUNDATION. EXISTING TIMBER PILES SHOULD BE CUT OFF 3 FEET BELOW THE LEVEL OF THE PROPOSED BOTTOM OF FOOTING ELEVATION. REMOVE MARGINAL SOILS 3 FEET BELOW PROPOSED BOTTOM OF FOOTING ELEVATION AND REPLACE WITH SELECT GRANULAR BORROW THAT MEETS MNDOT SPEC. 3149.2B2 AND PLACE IN ACCORDANCE WITH MNDOT SPEC. 2105.

SUMMARY OF QUANTITIES FOR EAST ABUTMENT			
ITEM NO.	ITEM	QTY.	UNIT
2401.501	STRUCTURAL CONCRETE (1A43)	183	CU. YD.
2401.501	STRUCTURAL CONCRETE (3Y43)	250	CU. YD.
2401.541	REINFORCEMENT BARS	19,663	POUND
2401.541	REINFORCEMENT BARS (EPOXY COATED)	22,441	POUND
2411.618	ARCHITECTURAL CONCRETE TEXTURE (CUT STONE)	1260	SQ. FT.
2411.618	ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE)	1090	SQ. FT.
2411.618	ARCHITECTURAL SURFACE FINISH (MULTI-COLOR)	2350	SQ. FT.
2411.618	ANTI-GRAFFITI COATING	2350	SQ. FT.



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**NOTES:**  
SEE SHEET 15 FOR SECTION A-A.  
SEE SHEET 17 FOR SECTION B-B.  
SEE SHEET 18 FOR SECTION G-G.

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	

NO.	DATE	BY	CKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	SUBCUT REVISION (NDC008)

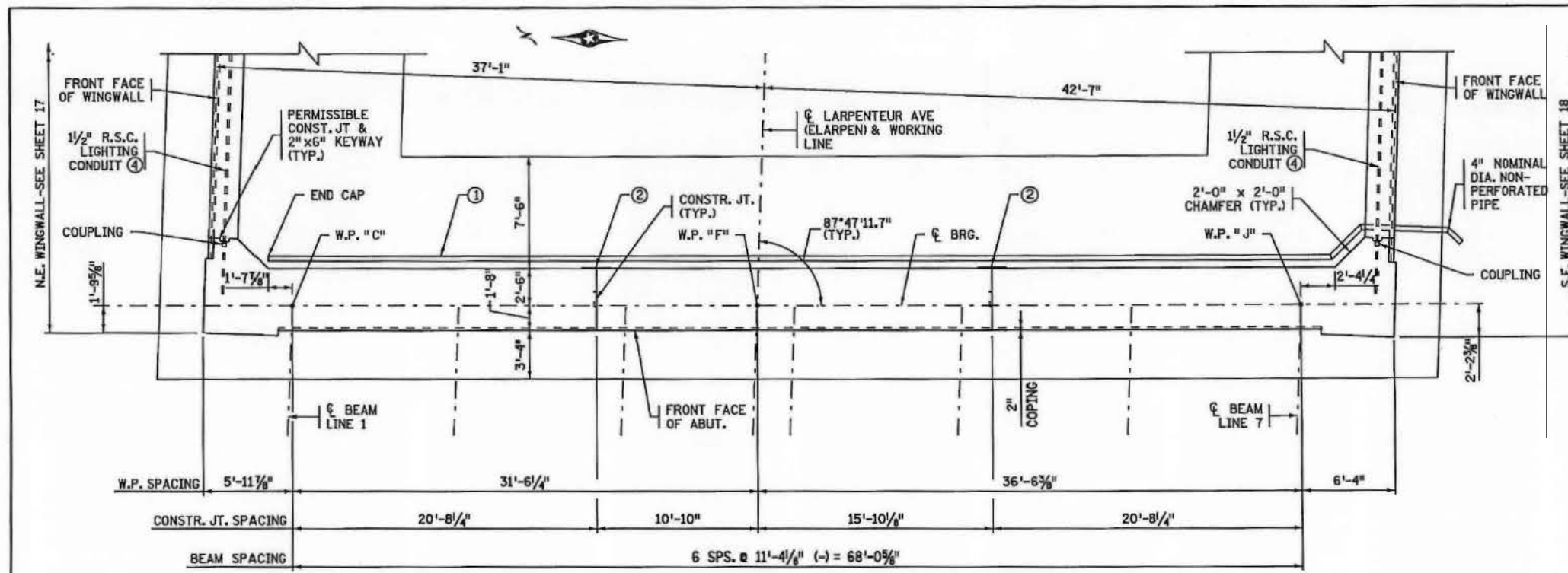
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE #: 46863

MNDOT ACCEPTANCE  
SIGNATURE: *D.J. Horn*  
DATE: 5/21/14

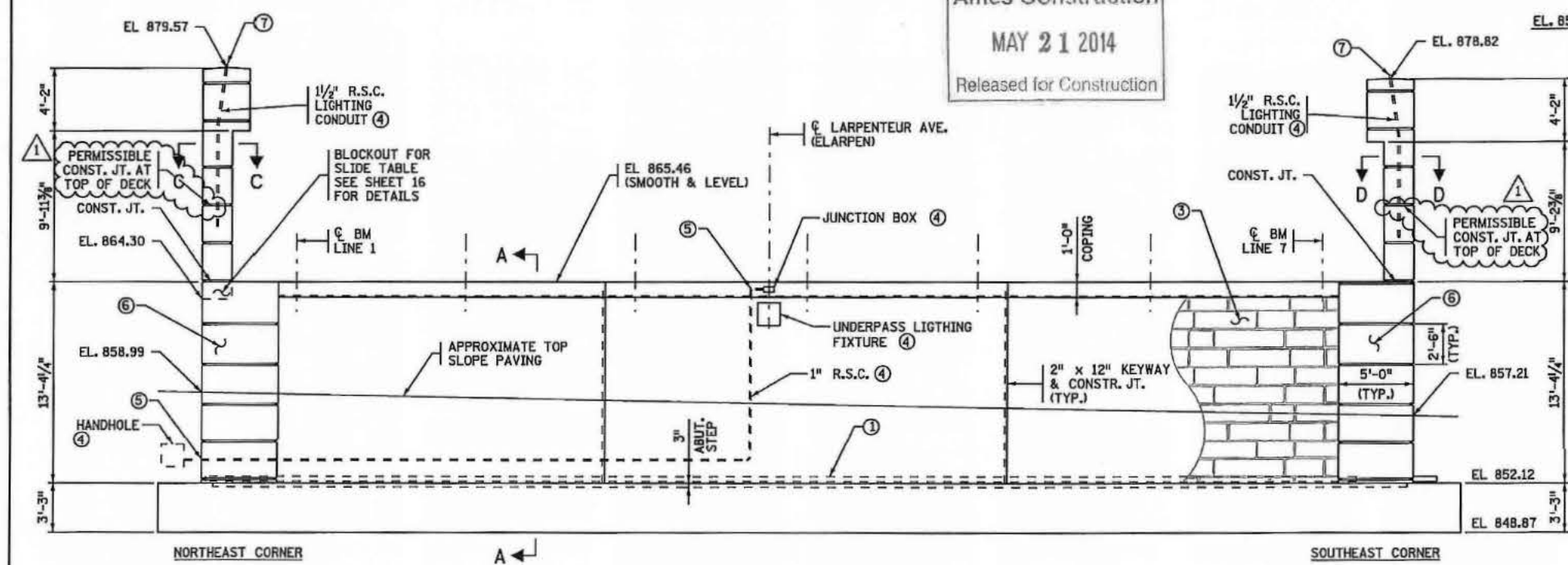


S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 14 OF 55  
EAST ABUTMENT DETAILS

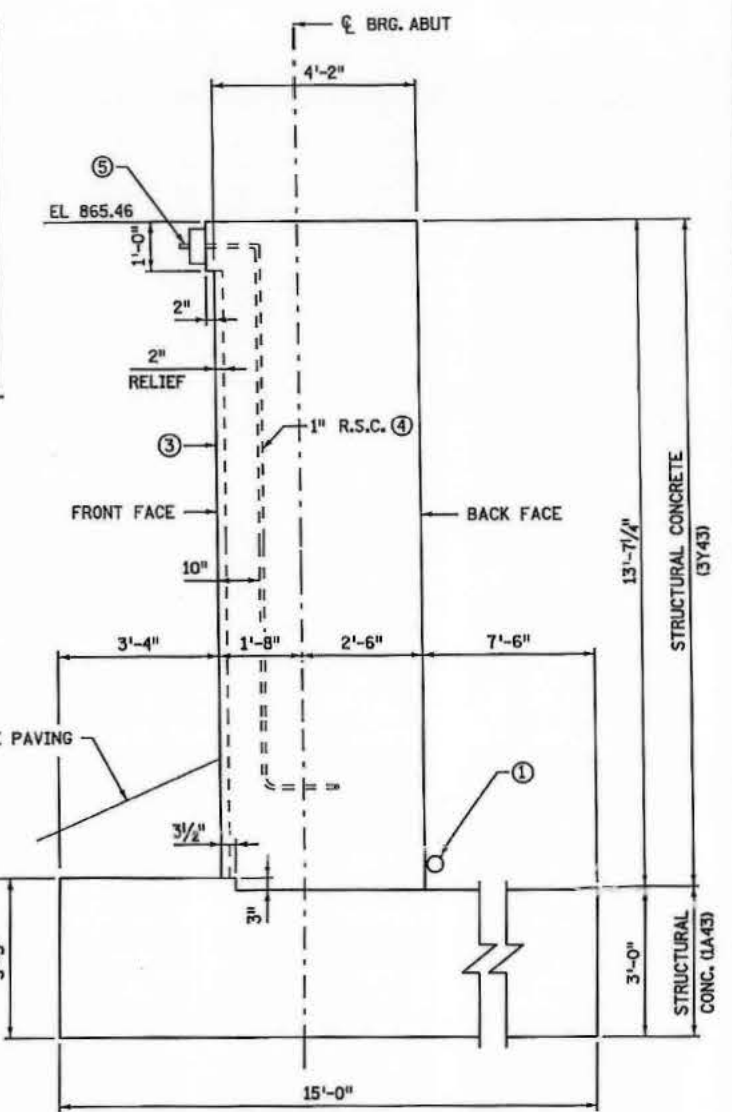


ABUTMENT PLAN

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MAY 21 2014  
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ABUTMENT ELEVATION



SECTION A-A

- NOTES:**
- PROVIDE A 3/4" CHAMFER ON ALL HORIZONTAL OR VERTICAL CORNERS / EDGES OF 90° OR LESS UNLESS OTHERWISE NOTED.
  - APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALLS.
  - SEE SHEET 16 FOR SECTION C-C AND D-D.
  - ① 4" NOMINAL DIA. PERFORATED PIPE. SEE DETAIL B910 ON SHEET 50.
  - ② MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.38.
  - ③ ARCHITECTURAL CONCRETE TEXTURE (CUT STONE) ARCHITECTURAL SURFACE FINISH (MULTI-COLOR).
  - ④ SEE LIGHTING PLAN FOR DETAILS.
  - ⑤ EXTEND CONDUIT 3" PAST CONCRETE SURFACES.
  - ⑥ ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE), ARCHITECTURAL SURFACE FINISH (MULTI-COLOR).
  - ⑦ EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.

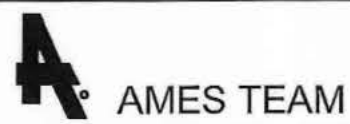
NO	DATE	BY	CHKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	ADDED PILASTER CONST. JT. (NDC00B)

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.

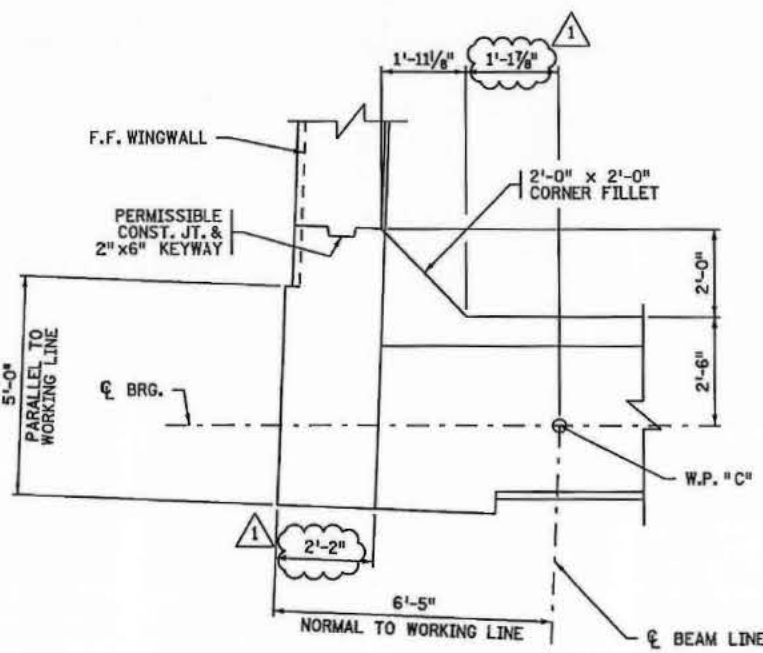
PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE # 46863

AND/OR ACCEPTANCE

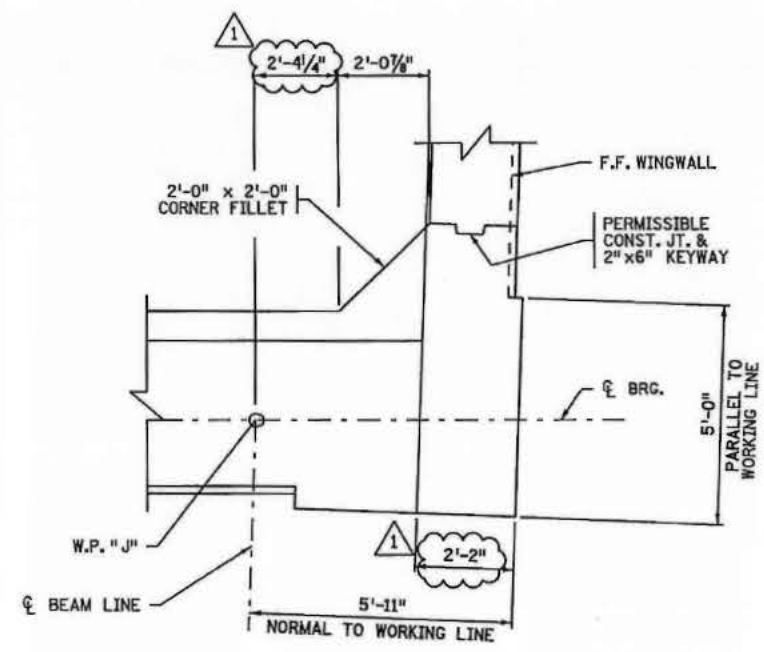
SIGNATURE: Dan J. Horn  
DATE: 5/21/14



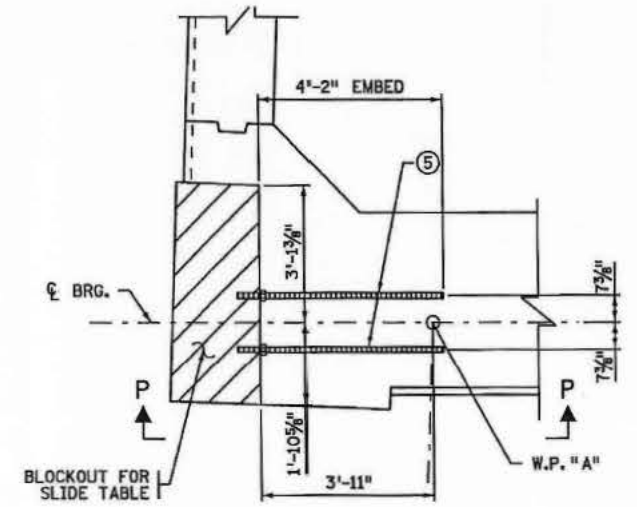
DES: AMW CHK: ZAT	DR: MMF CHK: ZAT	APPROVED:
S.P. NO. 6280-62646		BRIDGE NO. 62646
EAST ABUTMENT DETAILS		SHEET 15 OF 55



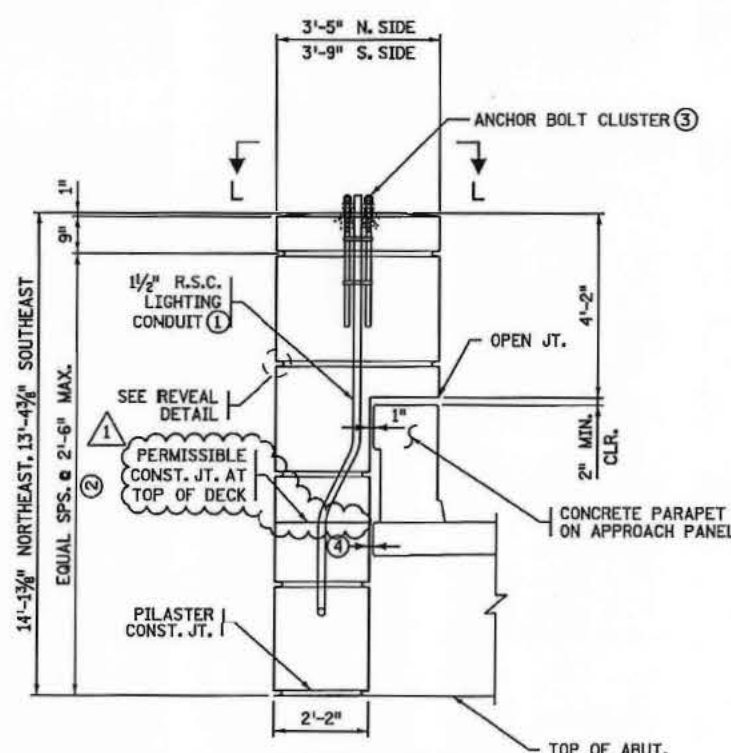
SECTION C-C



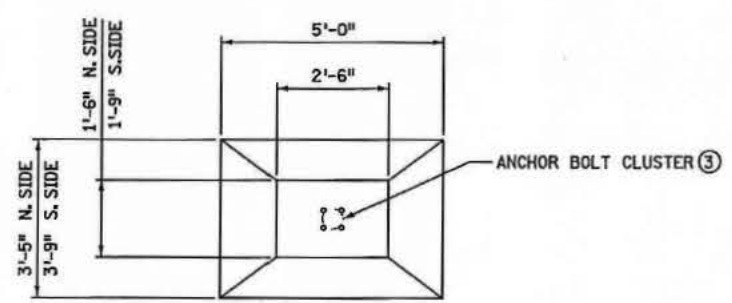
SECTION D-D



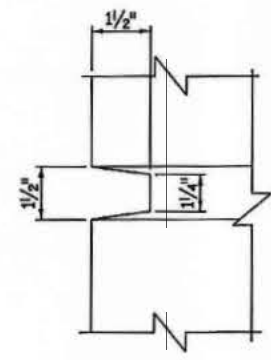
BLOCKOUT DETAIL



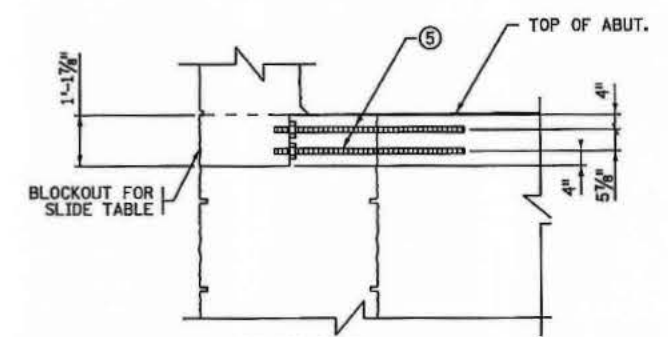
PILASTER DETAILS  
(NORTH SIDE SHOWN  
SOUTH SIDE SIMILAR)



VIEW L-L



REVEAL DETAIL



VIEW P-P

NOTES:

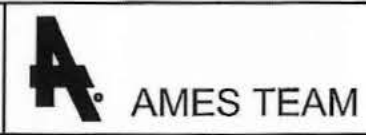
- APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALLS.
- SEE SHEET 15 FOR SECTION C-C AND D-D LOCATIONS.
- ① EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.
- ② ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE), ARCHITECTURAL SURFACE FINISH (MULTI-COLOR)
- ③ ANCHOR BOLT CLUSTER FOR LIGHT POLE, CENTERED ON PILASTER, SEE DETAIL B950 ON SHEET 50.
- ④ 1" POLYSTYRENE TYPE B. SEAL WITH SELF-LEVELING SILICONE PER MNDOT 3722.
- ⑤ 4-1/2" DIA. A307 BOLT 4'-8" IN LENGTH. GALVANIZE BOLTS AND NUTS IN ACCORDANCE WITH MNDOT SPEC. 3392.

Ames Construction  
MAY 21 2014  
Released for Construction

NO.	DATE	BY	CHKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWO	REVISED CORNER DIMENSIONS. ADDED PILASTER CONST. JT. (NDC008)

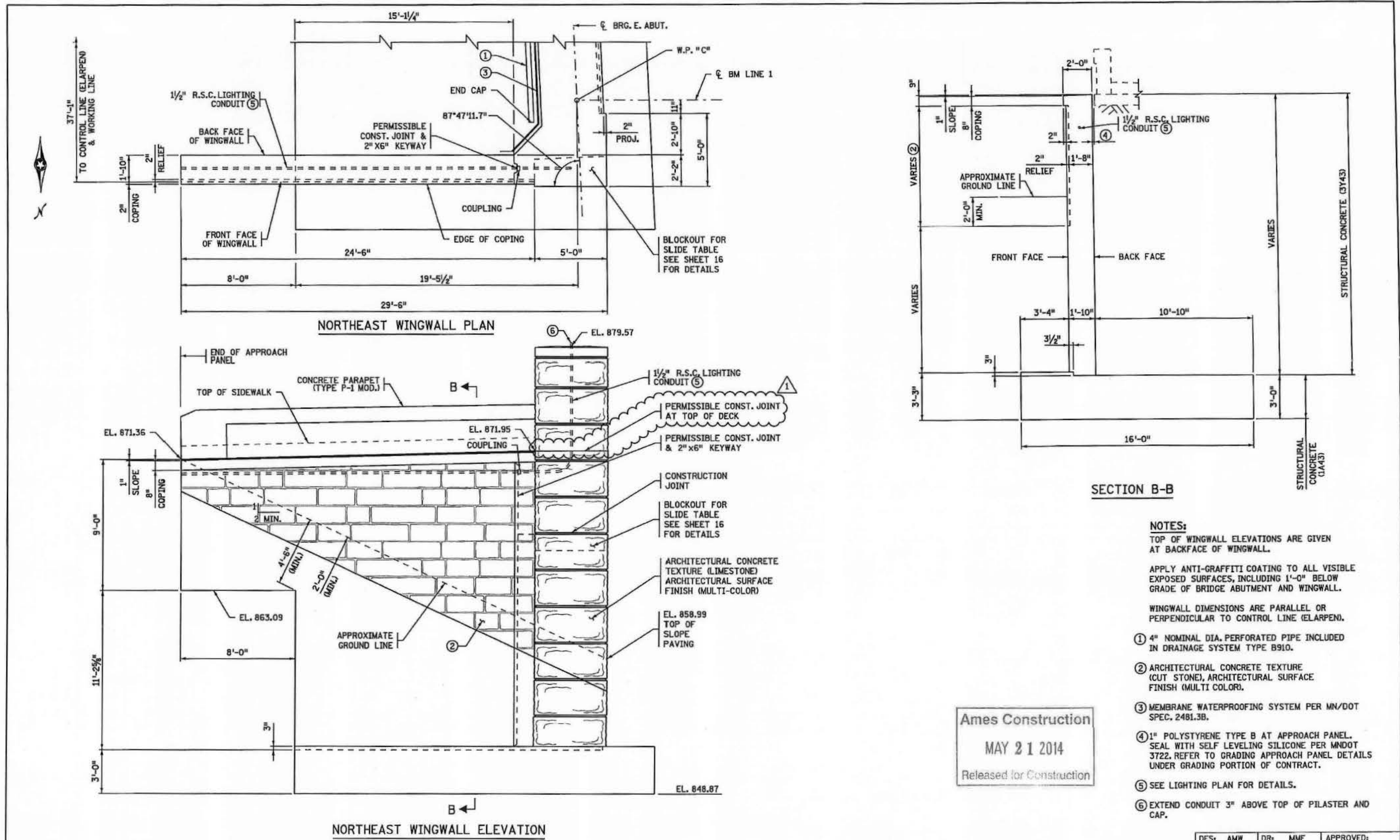
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE: 48863

MNDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 5/21/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 16 OF 55
EAST ABUTMENT DETAILS		





SECTION B-B

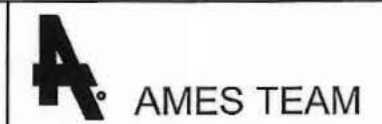
- NOTES:**  
 TOP OF WINGWALL ELEVATIONS ARE GIVEN AT BACKFACE OF WINGWALL.  
 APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALL.  
 WINGWALL DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO CONTROL LINE (ELARPEN).  
 ① 4" NOMINAL DIA. PERFORATED PIPE INCLUDED IN DRAINAGE SYSTEM TYPE B910.  
 ② ARCHITECTURAL CONCRETE TEXTURE (CUT STONE), ARCHITECTURAL SURFACE FINISH (MULTI COLOR).  
 ③ MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.3B.  
 ④ 1" POLYSTYRENE TYPE B AT APPROACH PANEL. SEAL WITH SELF LEVELING SILICONE PER MNDOT 3722, REFER TO GRADING APPROACH PANEL DETAILS UNDER GRADING PORTION OF CONTRACT.  
 ⑤ SEE LIGHTING PLAN FOR DETAILS.  
 ⑥ EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.

Ames Construction  
 MAY 21 2014  
 Released for Construction

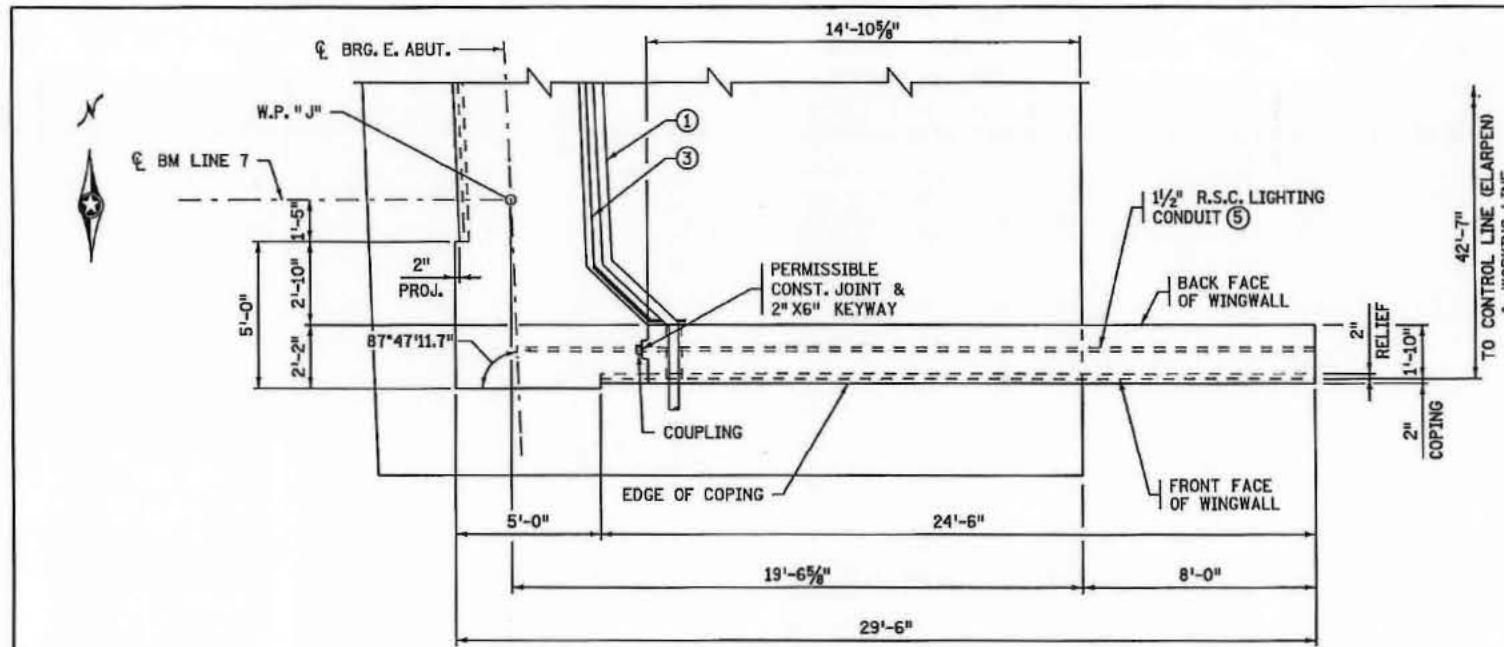
NO.	DATE	BY	CHKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	ADDED PILASTER CONST. JT. (NDC00B)

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: GEORGE W. GORRILL  
 DATE: 5/20/14 LICENSE: 46863

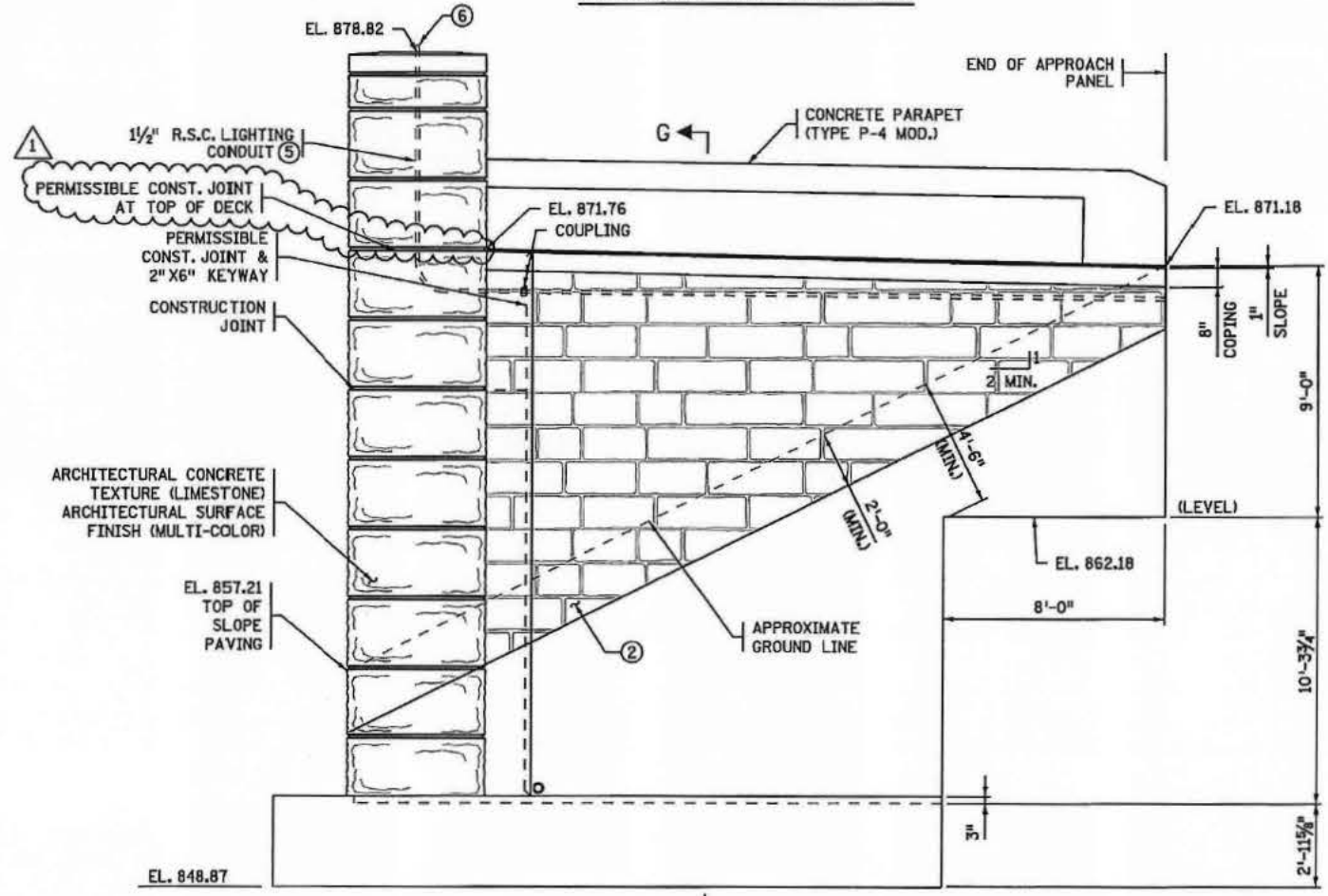
MNDOT ACCEPTANCE  
 SIGNATURE: *D.W.J. Horn*  
 DATE: 5/21/14



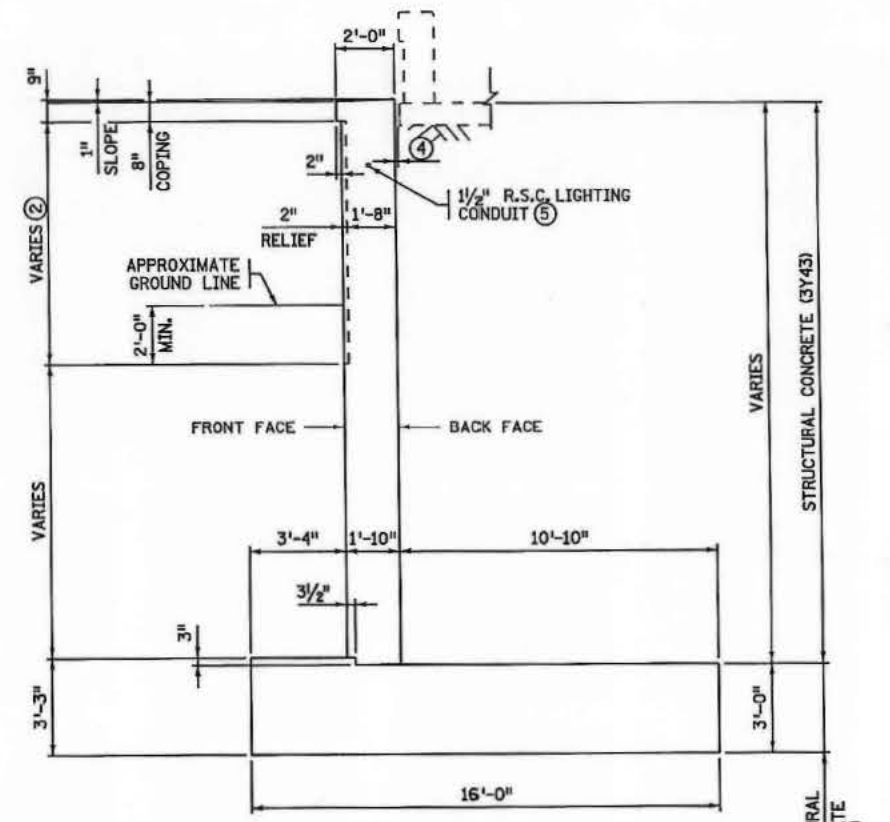
DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	
S.P. NO. 6280-62646		BRIDGE NO. 62646
EAST ABUTMENT DETAILS		SHEET 17 OF 55



SOUTHEAST WINGWALL PLAN



SOUTHEAST WINGWALL ELEVATION



SECTION G-G

- NOTES:**
- TOP OF WINGWALL ELEVATIONS ARE GIVEN AT BACKFACE OF WINGWALL.
  - APPLY ANTI-GRAFFITI COATING TO ALL VISIBLE EXPOSED SURFACES, INCLUDING 1'-0" BELOW GRADE OF BRIDGE ABUTMENT AND WINGWALL.
  - WINGWALL DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO CONTROL LINE (ELARPEN).
  - ① 4" NOMINAL DIA. PERFORATED PIPE INCLUDED IN DRAINAGE SYSTEM TYPE B910.
  - ② ARCHITECTURAL CONCRETE TEXTURE (CUT STONE), ARCHITECTURAL SURFACE FINISH (MULTI COLOR).
  - ③ MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.3B.
  - ④ 1" POLYSTYRENE TYPE B AT APPROACH PANEL. SEAL WITH SELF LEVELING SILICONE PER MNDOT 3722. REFER TO GRADING APPROACH PANEL DETAILS UNDER GRADING PORTION OF CONTRACT.
  - ⑤ SEE LIGHTING PLAN FOR DETAILS.
  - ⑥ EXTEND CONDUIT 3" ABOVE TOP OF PILASTER AND CAP.

Ames Construction  
MAY 21 2014  
Released for Construction

NO	DATE	BY	CHKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	ADDED PILASTER CONST. JT. (NDC008)

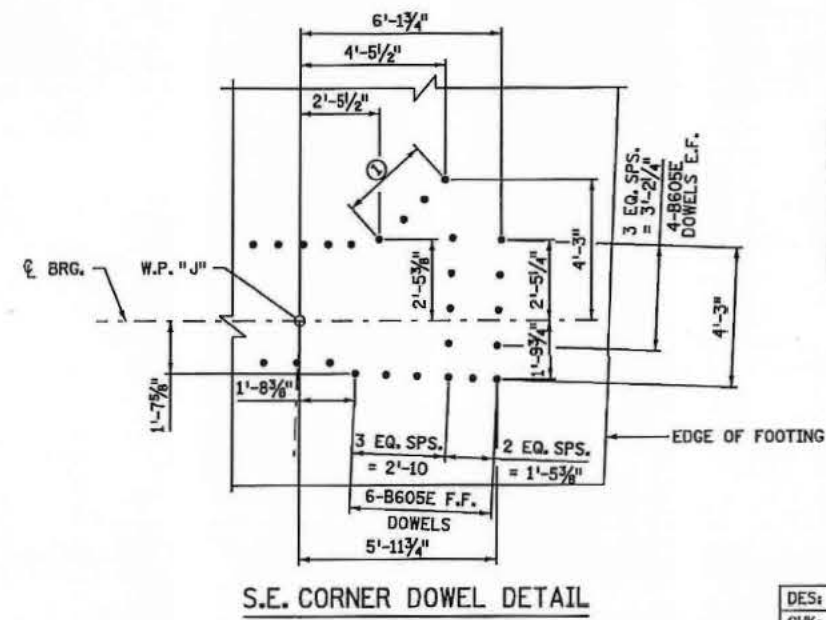
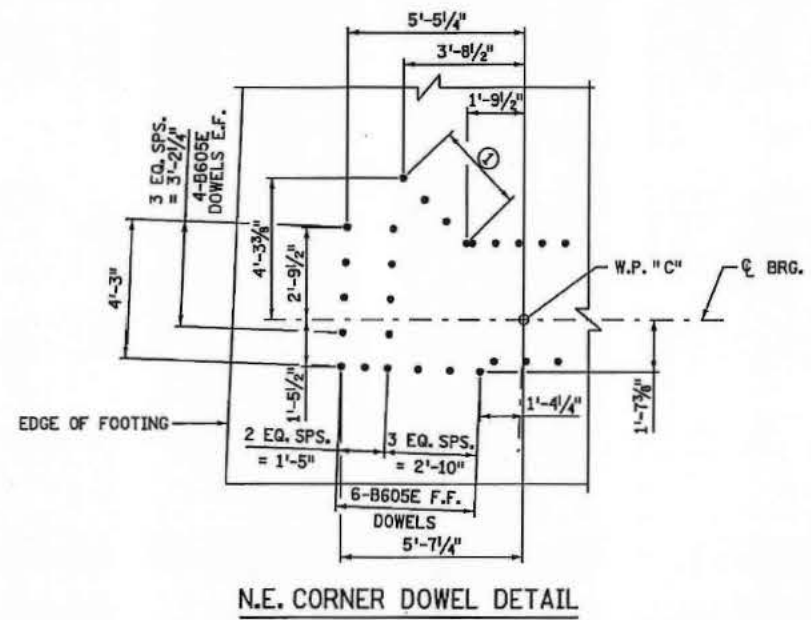
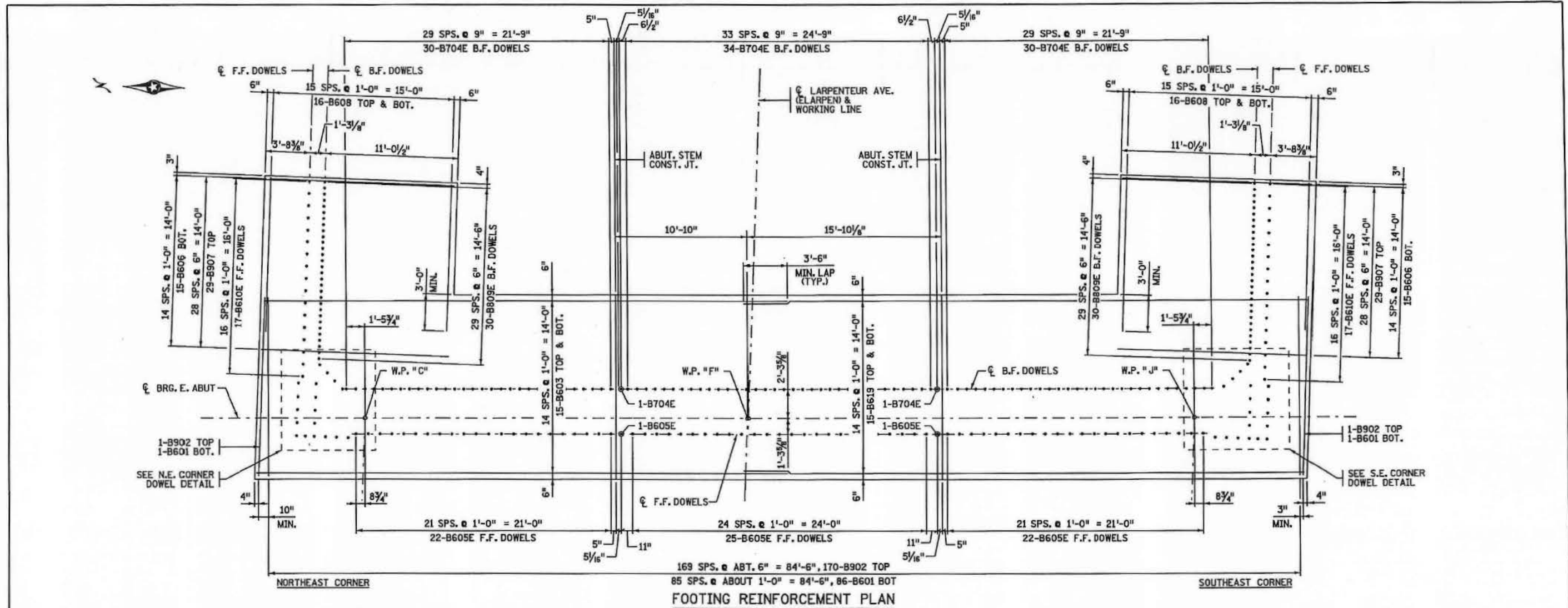
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE # 45863

MNDOT ACCEPTANCE  
SIGNATURE: *David J. Hermy*  
DATE: 5/21/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 18 OF 55
EAST ABUTMENT DETAILS		



Ames Construction  
APR 11 2014  
Released for Construction

- NOTES:**
- ① 3 SPS. @ 11" = 2'-9"
  - 4-B704E DOWELS
  - F.F. DENOTES FRONT FACE
  - B.F. DENOTES BACK FACE
  - E.F. DENOTES EACH FACE

NO	DATE	BY	CHKD	APPR	REVISION

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: AMW	

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.

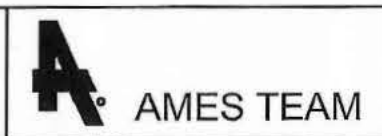
PRINT NAME: GEORGE W. GORRILL

DATE: 4/11/14 LICENSE # 45863

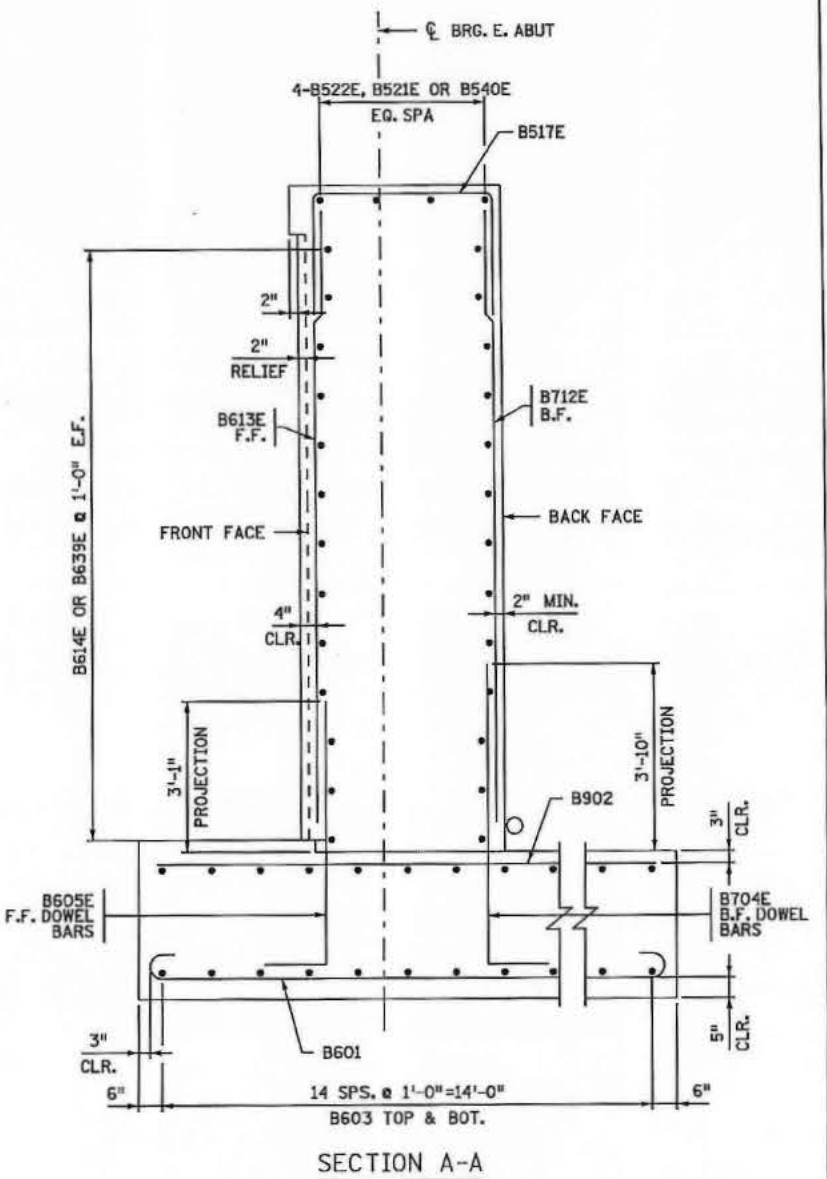
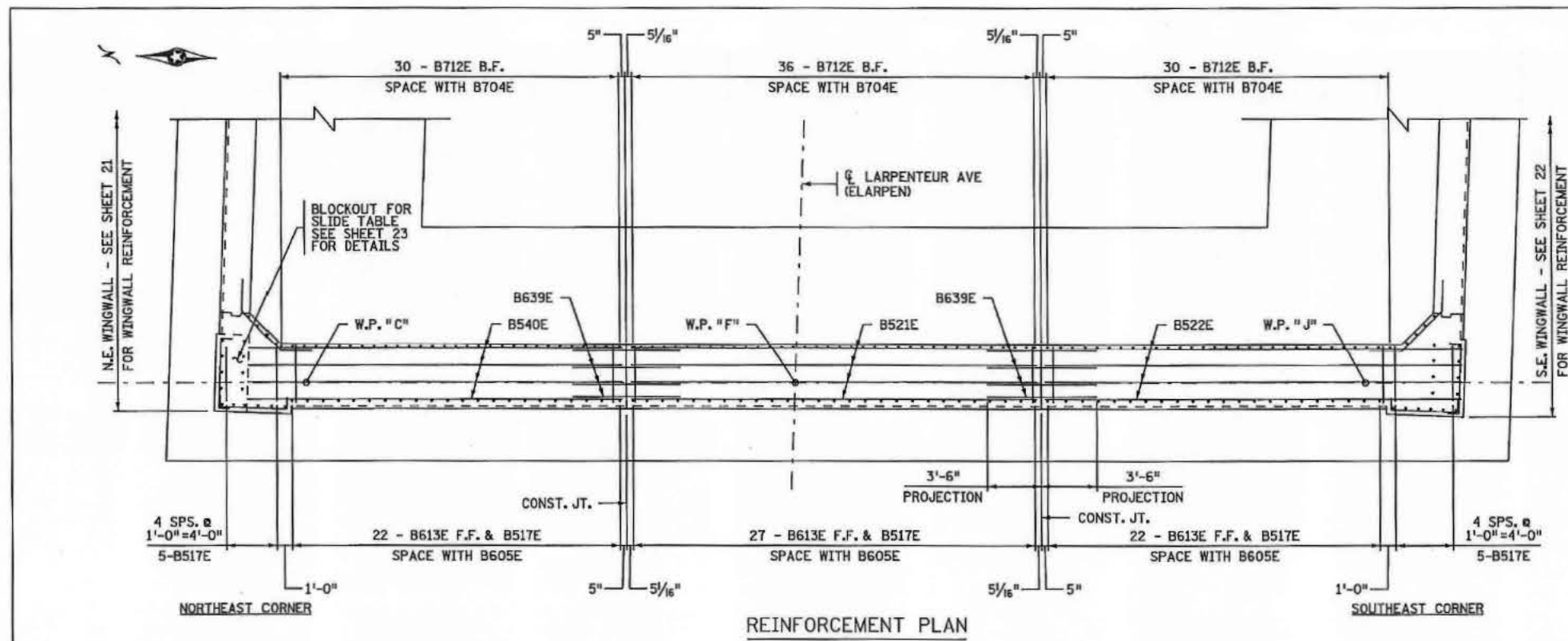
MINDOT ACCEPTANCE

SIGNATURE: [Signature]

DATE: 4/11/14

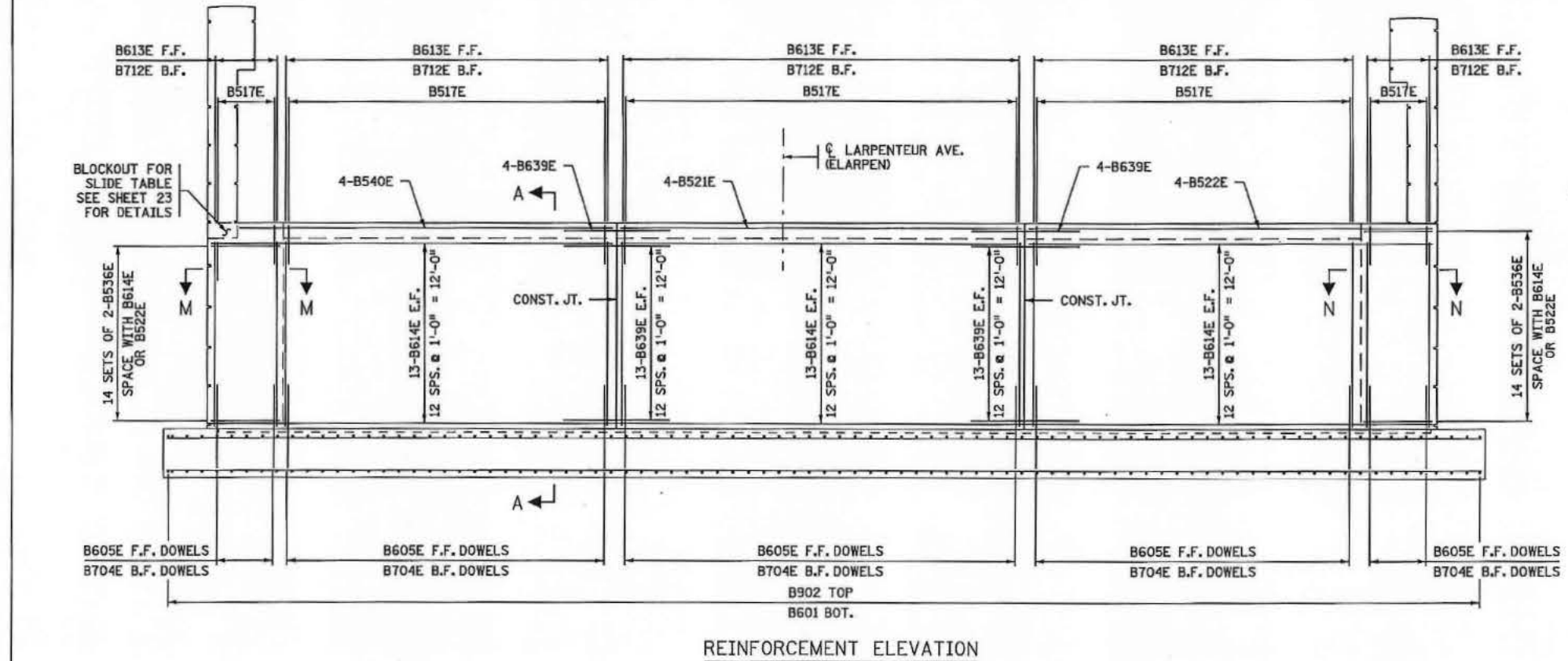


S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 19 OF 55
EAST ABUTMENT REINFORCEMENT		



Ames Construction  
 APR 11 2014  
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**NOTES:**  
 F.F. DENOTES FRONT FACE.  
 B.F. DENOTES BACK FACE.  
 E.F. DENOTES EACH FACE.  
 SEE SHEET 23 FOR SECTIONS M-M AND N-N



NO	DATE	BY	CHKD	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 FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE W. GORRILL

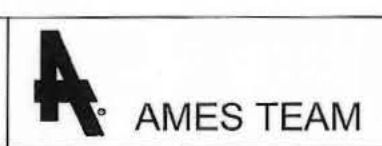
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DATE: 4/11/14 LICENSE # 45863

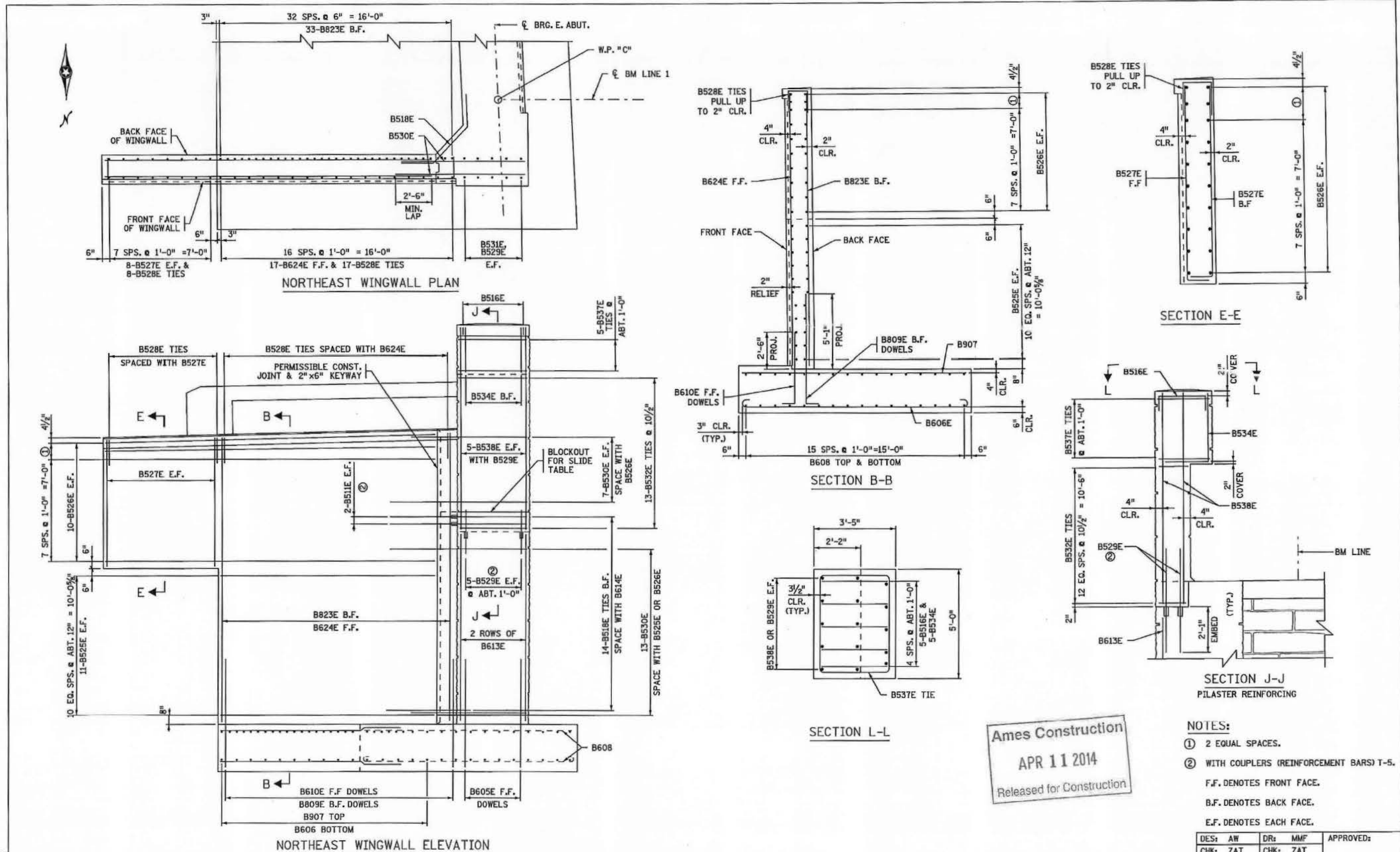
MINDOT ACCEPTANCE

SIGNATURE: [Signature]

DATE: 4/11/14



DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	
S.P. NO. 6280-62646		BRIDGE NO. 62646
EAST ABUTMENT REINFORCEMENT		SHEET 20 OF 55



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- NOTES:**
- ① 2 EQUAL SPACES.
  - ② WITH COUPLERS (REINFORCEMENT BARS) T-5.
- F.F. DENOTES FRONT FACE.  
 B.F. DENOTES BACK FACE.  
 E.F. DENOTES EACH FACE.

DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET
EAST ABUTMENT REINFORCEMENT		21
		OF
		55

NO	DATE	BY	CKD	APPR	REVISION

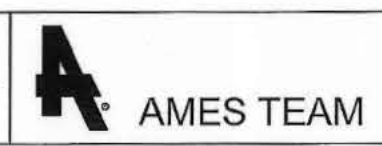
DRAWING NO. 1

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

PRINT NAME: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE # 46863

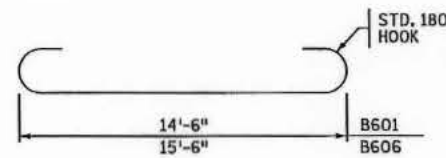
AND/OR ACCEPTANCE

SIGNATURE: *David J. Heron*  
 DATE: 4/11/14

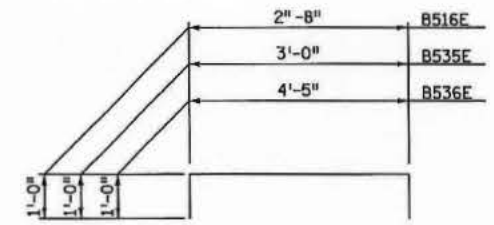


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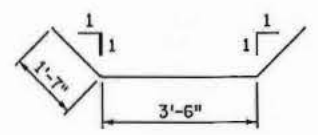




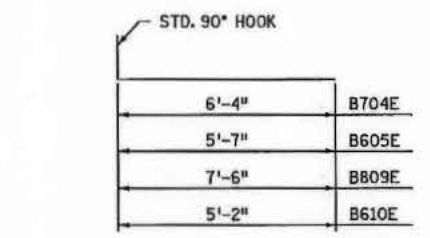
B601 & B606



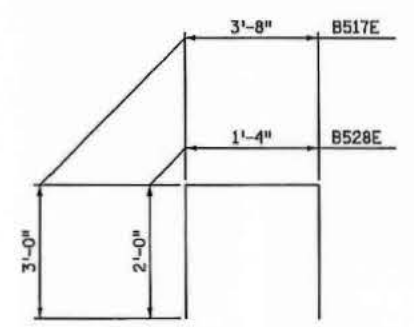
B516E, B535E & B536E



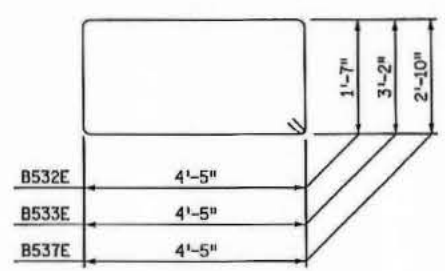
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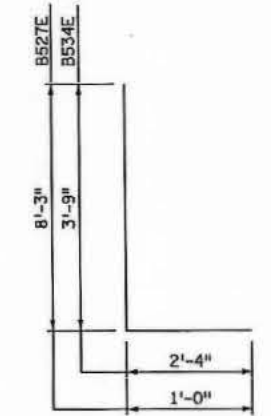
B704E, B605E, B809E & B610E  
(VERTICAL DOWELS)



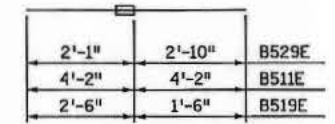
B517E & B528E



B532E, B533E & B537E



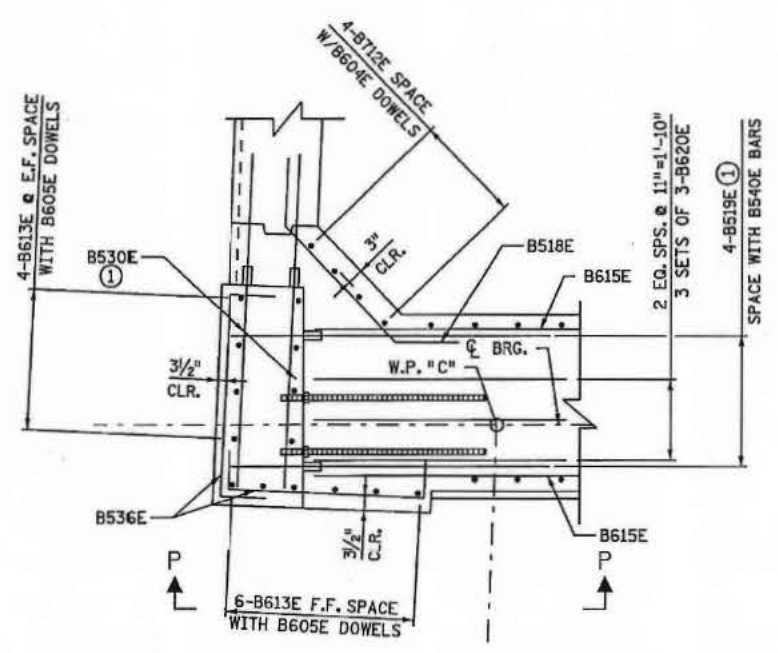
B534E & B527E



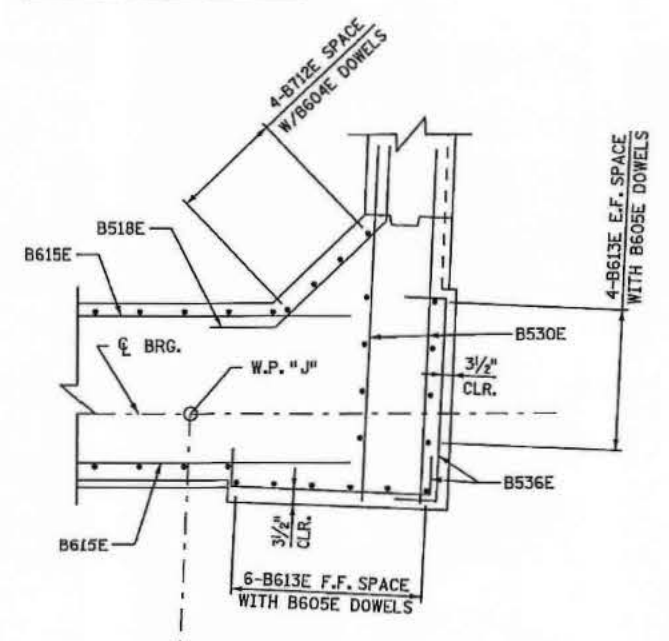
B529E, B511E & B519E

BILL OF REINFORCEMENT FOR EAST ABUTMENT

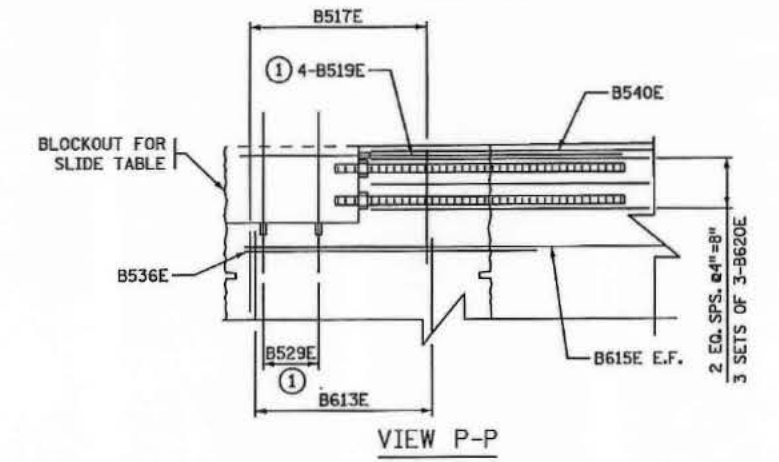
BAR	NO.	LENGTH	SHAPE	LOCATION
B601	88	15'-10"		FOOTING TRANSVERSE BOTTOM MAT
B902	172	14'-6"		FOOTING TRANSVERSE TOP MAT
B603	60	44'-8"		FOOTING LONGITUDINAL TOP & BOTTOM
B704E	104	7'-6"		FOOTING DOWELS BACK FACE
B605E	99	6'-7"		FOOTING DOWELS FRONT FACE
B606	30	16'-10"		WINGWALL FOOTING TRANSVERSE BOT
B907	58	15'-6"		WINGWALL FOOTING LONGITUDINAL
B608	64	13'-0"		WINGWALL FOOTING LONGITUDINAL
B809E	60	8'-10"		WINGWALL FOOTING DOWELS B.F.
B610E	34	6'-2"		WINGWALL FOOTING DOWELS F.F.
B511E	4	8'-4"		STEM TO W.W. DOWEL @ BLOCKOUT
B712E	104	12'-0"		STEM BACK FACE VERTICAL
B613E	99	12'-0"		STEM FRONT FACE VERTICAL
B614E	78	26'-2"		STEM HORIZONTAL
B516E	5	4'-8"		NORTH PILASTER CAP TIES - TOP
B517E	81	9'-8"		STEM TIES TOP
B518E	28	6'-8"		FILLET TIE HORIZONTAL
B519E	4	4'-0"		STEM TO BLOCKOUT DOWEL
B620E	9	6'-6"		STEM HORIZONTAL @ BLOCKOUT
B521E	4	26'-2"		STEM HORIZONTAL
B522E	4	26'-6"		STEM HORIZONTAL
B823E	66	19'-0"		WINGWALL VERTICAL BACK FACE
B624E	34	19'-0"		WINGWALL VERTICAL FRONT FACE
B525E	44	14'-6"		WINGWALL HORIZONTAL
B526E	40	22'-6"		WINGWALL HORIZONTAL
B527E	32	9'-3"		WINGWALL CANTILEVER VERTICAL
B528E	50	5'-4"		WINGWALL TIES TOP
B529E	20	4'-11"		PILASTER DOWELS VERTICAL
B530E	82	9'-0"		STEM TO WINGWALL DOWELS HORIZ.
B531E	10	13'-0"		PILASTER VERTICAL
B532E	24	12'-11"		PILASTER TIES HORIZONTAL-LOWER
B533E	5	16'-1"		SOUTH PILASTER TIES HORIZONTAL-UPPER
B534E	10	6'-1"		PILASTER VERTICAL B.F.
B535E	5	5'-0"		SOUTH PILASTER CAP TIES - TOP
B536E	54	6'-5"		STEM CORNER TIES HORIZONTAL
B537E	5	15'-5"		NORTH PILASTER TIES HORIZONTAL-UPPER
B538E	10	14'-9"		PILASTER VERTICAL
B639E	60	7'-0"		STEM HORIZONTAL DOWELS
B540E	4	24'-0"		STEM HORIZONTAL



SECTION M-M



SECTION N-N



VIEW P-P

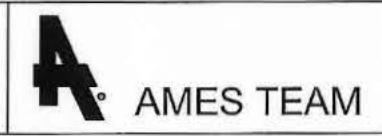
NOTE:  
SEE SHEET 20 FOR LOCATION OF SECTIONS M-M AND N-N.  
① WITH COUPLERS (REINFORCEMENT BARS) T-5.  
B.F. DENOTES BACKFACE.  
F.F. DENOTES FRONT FACE.  
E.F. DENOTES EACH FACE.

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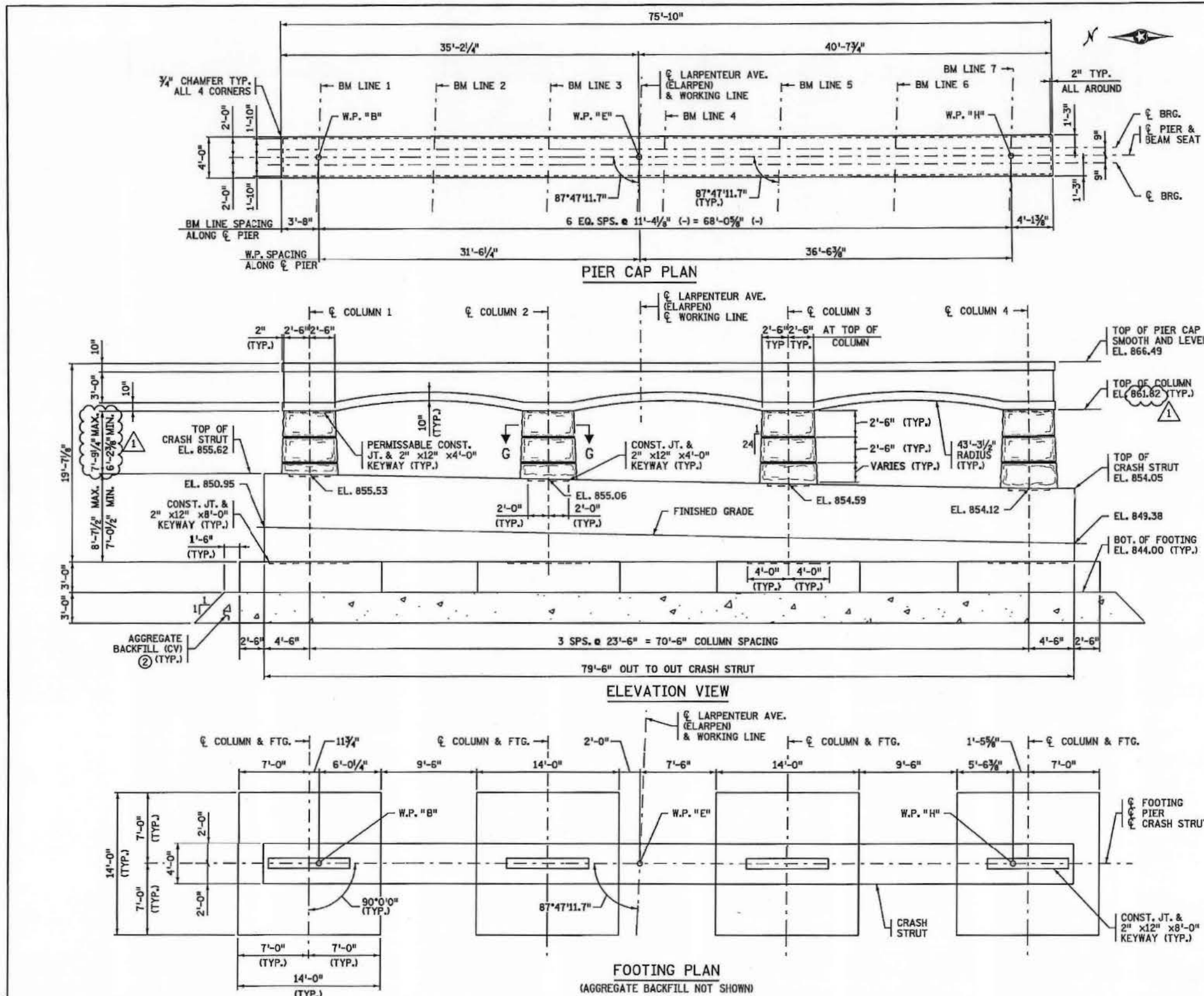
NO.	DATE	BY	CKD	APPR	REVISION

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: GEORGE W. GORRILL  
DATE: 4/11/14 LICENSE # 46863

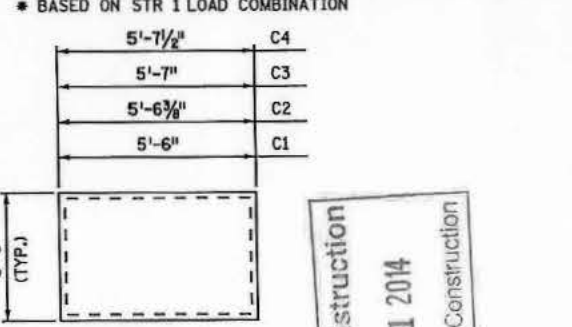
ANDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 4/11/14



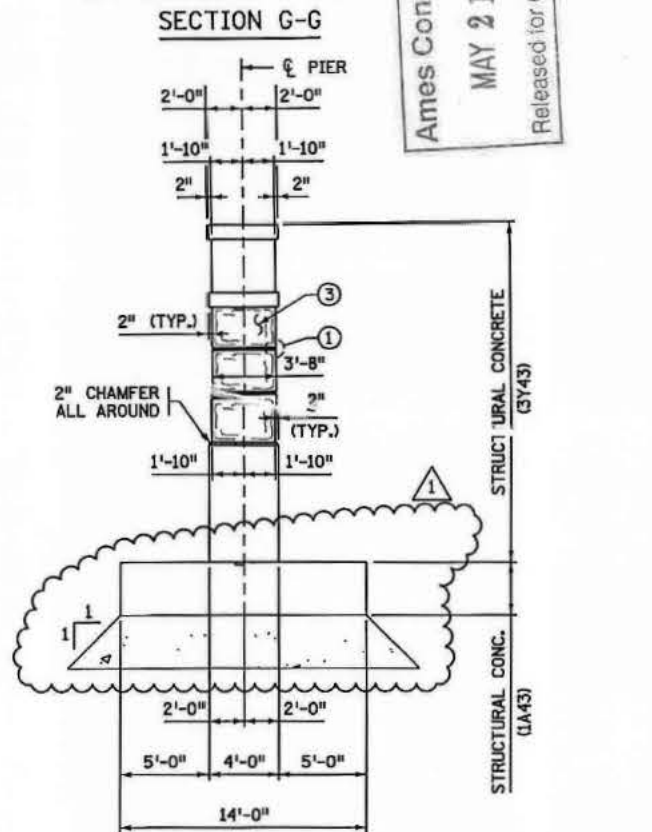
DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLL	
S.P. NO. 6280-62646		BRIDGE NO. 62646
EAST ABUTMENT REINFORCEMENT		SHEET 23 OF 55



PIER SPREAD FOOTING LOAD DATA	
FACTORED DESIGN BEARING PRESSURE	4.1 TONS/ SQ. FT.
EFFECTIVE WIDTH B' (PERPENDICULAR TO PIER)	12.6 FT.
EFFECTIVE LENGTH L' (PARALLEL TO PIER)	12.6 FT.
FACTORED BEARING RESISTANCE $\phi_D \cdot q_n$	4.3 TONS/ SQ. FT.



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- NOTES:**
- UNLESS OTHERWISE NOTED, PROVIDE 3/4" CHAMFER ON ALL HORIZONTAL OR VERTICAL CORNERS/EDGES OF 90° OR LESS.
  - ① SEE SHEET 6 FOR REVEAL DETAIL.
  - ② SEE SPECIAL PROVISIONS.
  - ③ ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE), ARCHITECTURAL SURFACE FINISH (MULTI COLOR).

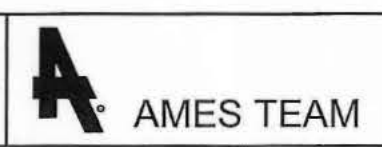
NO.	DATE	BY	CRD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	REVISED COLUMN HEIGHTS AND TOP OF COLUMN ELEVATION (NDC008)

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: GEORGE W. GORRILL  
 DATE: 5/20/14 LICENSE # 46863

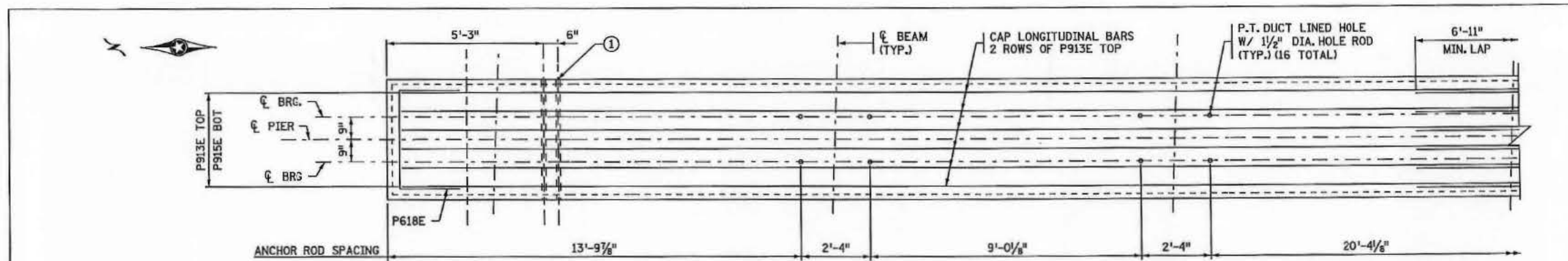
ANDOT ACCEPTANCE

SIGNATURE: *D.W. J. Heron*  
 DATE: 5/21/14

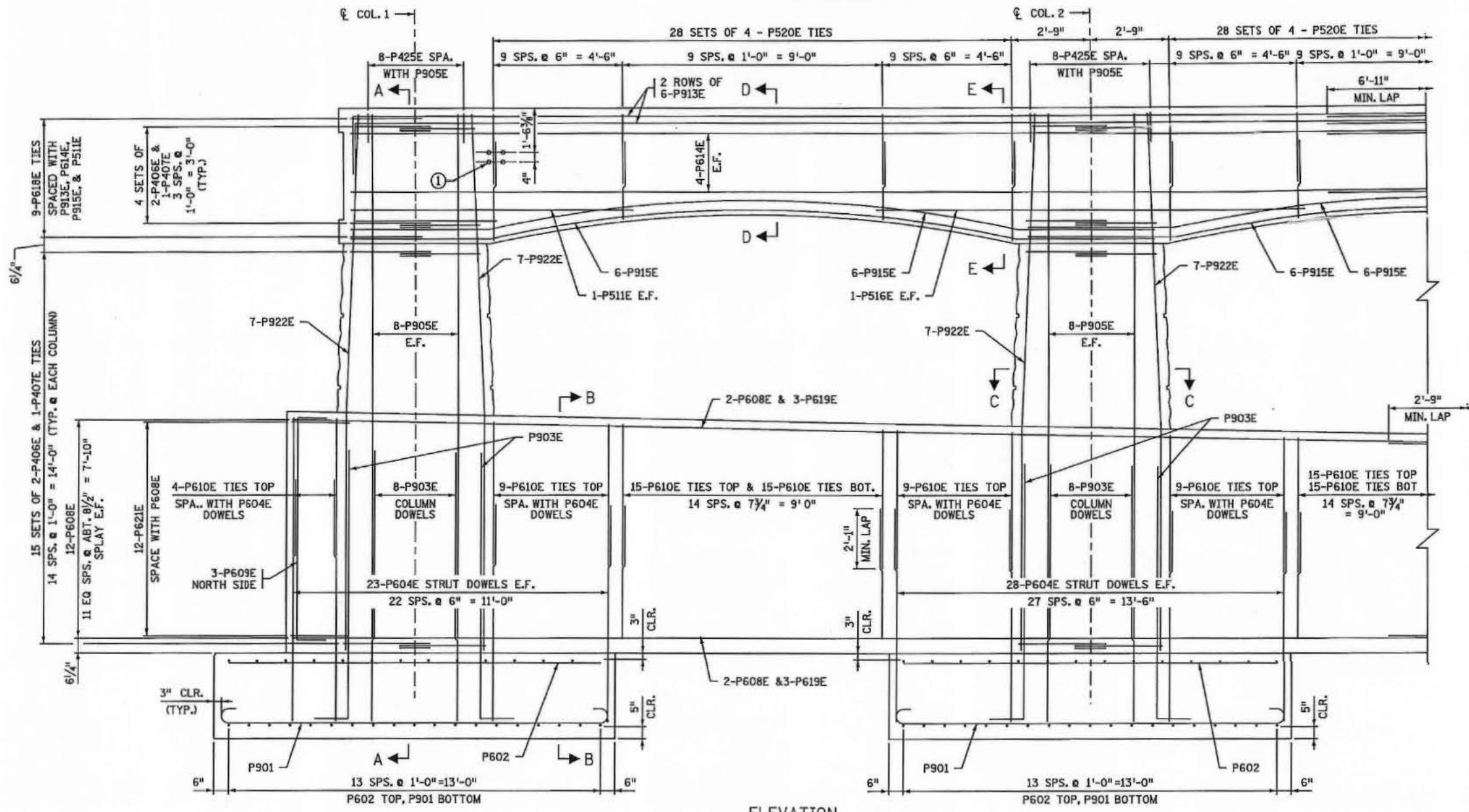


DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	
S.P. NO. 6280-62646		BRIDGE NO. 62646
PIER DETAILS		SHEET 24 OF 55





PLAN-PIER CAP



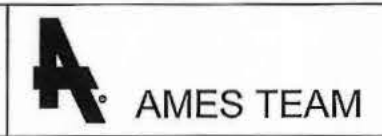
ELEVATION

Ames Construction  
 APR 11 2014  
 Released for Construction

- NOTES:
- ① 1 5/8" INNER DIA. GALVANIZED SLEEVE. GALVANIZE IN ACCORDANCE WITH MNDOT SPEC. 3392. FILL SLEEVES FLUSH WITH NON-SHRINK GROUT WHEN BRIDGE IS IN FINAL LOCATION.
  - SEE SHEET 47 FOR EMBEDDED ANCHOR ROD DETAIL.
  - SEE SHEET 28 FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E.

DES: ZAT	DR: MMF	APPROVED:
CHK: AMW	CHK: ZAT	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 25 OF 55
PIER REINFORCEMENT		

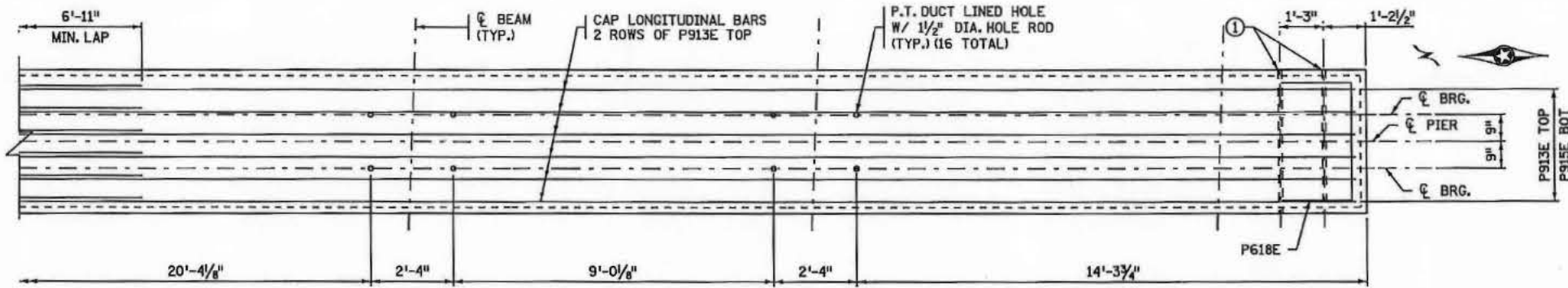


ANDOT ACCEPTANCE  
 SIGNATURE: *Dan J. Heron*  
 DATE: 4/11/14

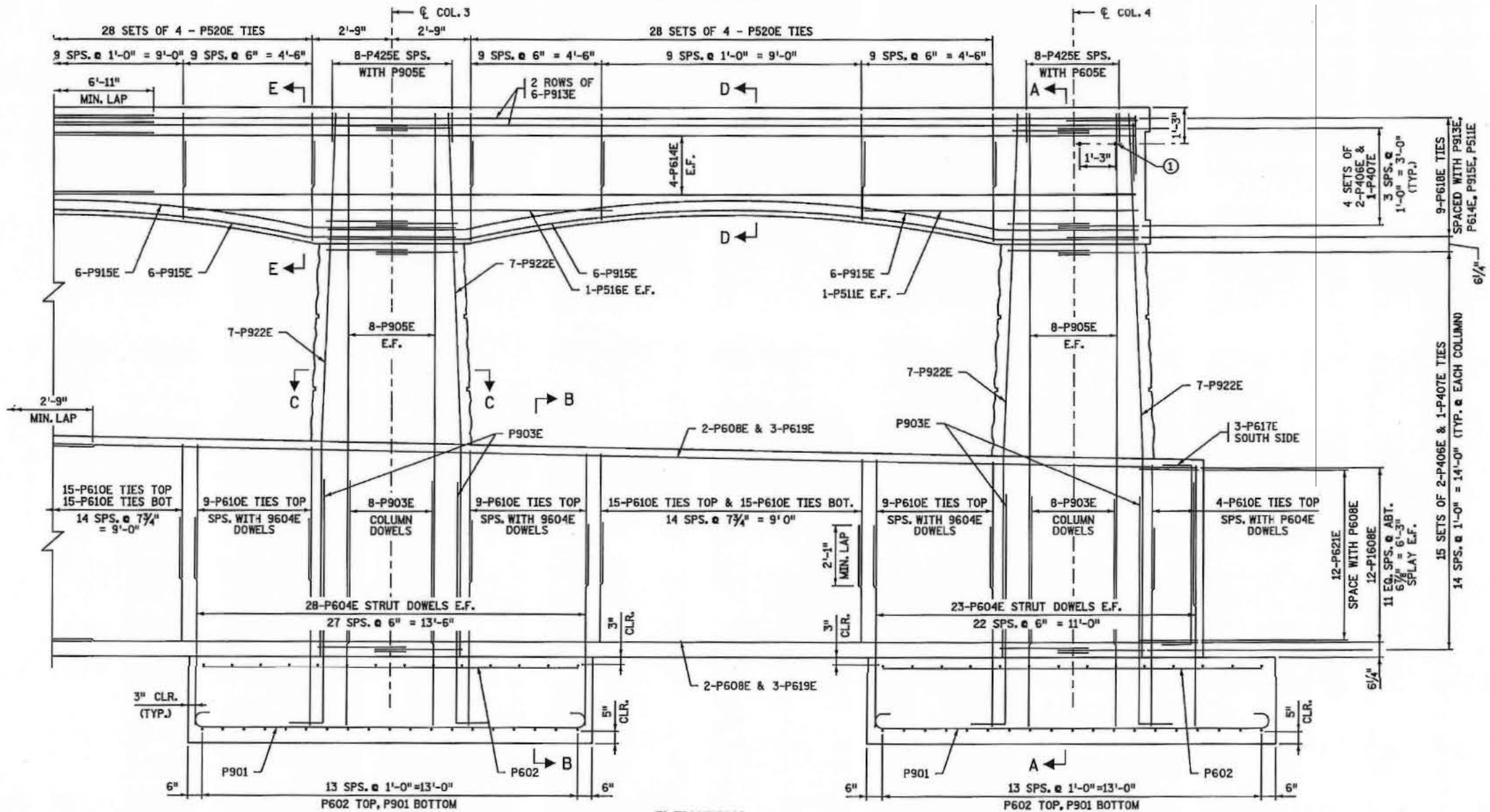
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: GEORGE W. GOBRILL  
 DATE: 4/10/14 LICENSE # 46663

NO	DATE	BY	CKD	APPR	REVISION

DRAWING NO. 1



PLAN-PIER CAP



ELEVATION

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 MAY 21 2014  
 Released for Construction

NOTES:  
 SEE SHEET 25 FOR PIER REINFORCING NOTES.

① 1/2" INNER DIA. GALVANIZED SLEEVE. FILL SLEEVES FLUSH WITH NON-SHRINK GROUT.

DES: ZAT	DR: MMF	APPROVED:
CHK: AW	CHK: ZAT	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 26 OF 55
PIER REINFORCEMENT		

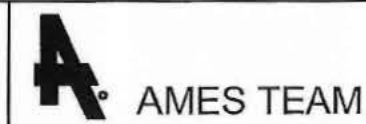
NO.	DATE	BY	CHK	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	GALVANIZED SLEEVE ADDITION/REVISION (NDC008)

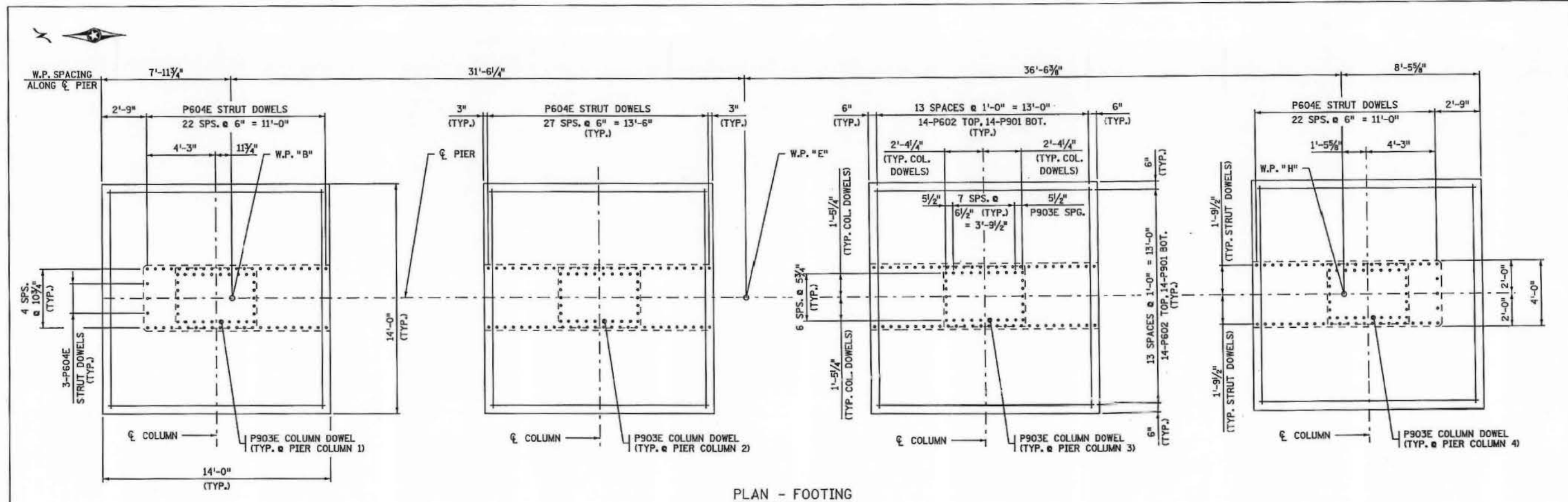
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE V. GORRILL  
 DATE: 5/20/14 LICENSE: 46863

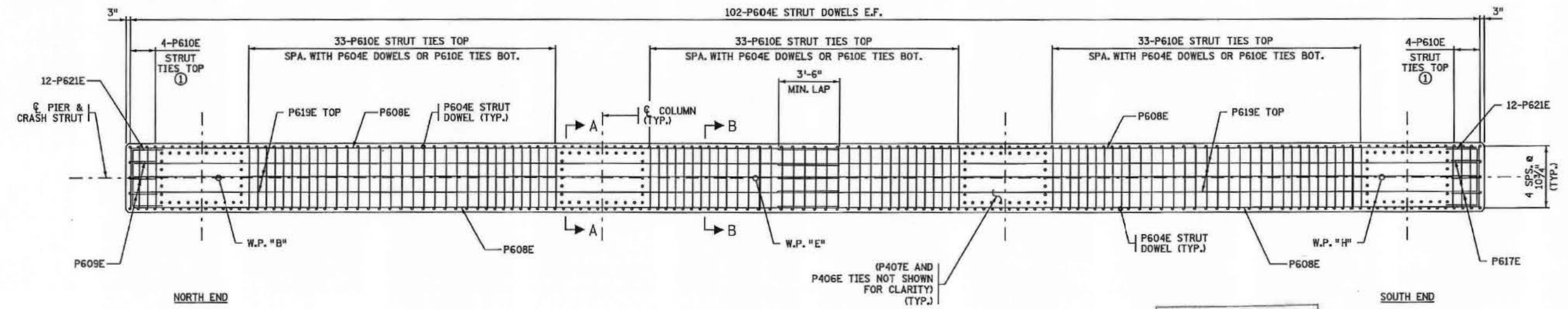
MMDOT ACCEPTANCE

SIGNATURE: *D.J. Horn*  
 DATE: 5/21/14





PLAN - FOOTING

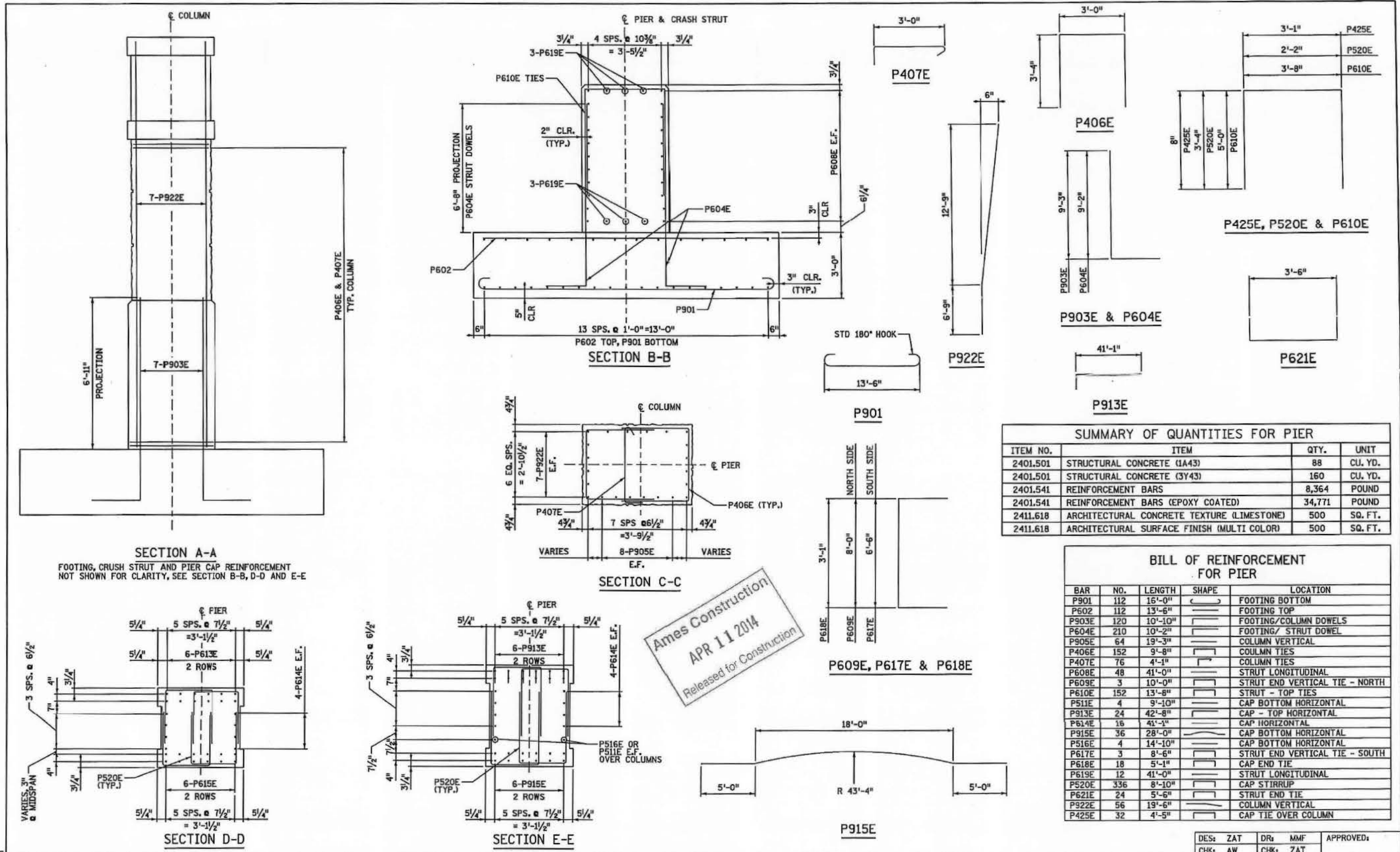


PLAN - CRASH STRUT

Ames Construction  
 APR 11 2014  
 Released for Construction

NOTES:  
 SEE SHEET 28 FOR SECTIONS A-A AND B-B.  
 ① SPACE WITH P604E STRUT DOWELS.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: <u>GEORGE W. GORRILL</u> DATE: <u>4/10/14</u> LICENSE # <u>46863</u>					WADOT ACCEPTANCE SIGNATURE: <u>[Signature]</u> DATE: <u>4/11/14</u>		DES: AMW DR: MMF APPROVED: CHK: ZAT CHK: ZAT		S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 27 OF 55 PIER REINFORCEMENT	
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**SUMMARY OF QUANTITIES FOR PIER**

ITEM NO.	ITEM	QTY.	UNIT
2401.501	STRUCTURAL CONCRETE (1A43)	88	CU. YD.
2401.501	STRUCTURAL CONCRETE (3Y43)	160	CU. YD.
2401.541	REINFORCEMENT BARS	8,364	POUND
2401.541	REINFORCEMENT BARS (EPOXY COATED)	34,771	POUND
2411.618	ARCHITECTURAL CONCRETE TEXTURE (LIMESTONE)	500	SQ. FT.
2411.618	ARCHITECTURAL SURFACE FINISH (MULTI COLOR)	500	SQ. FT.

**BILL OF REINFORCEMENT FOR PIER**

BAR	NO.	LENGTH	SHAPE	LOCATION
P901	112	15'-0"	( )	FOOTING BOTTOM
P602	112	13'-6"	( )	FOOTING TOP
P903E	120	10'-10"	( )	FOOTING/COLUMN DOWELS
P604E	210	10'-2"	( )	FOOTING/ STRUT DOWEL
P905E	64	19'-3"	( )	COLUMN VERTICAL
P406E	152	9'-8"	( )	COLUMN TIES
P407E	76	4'-1"	( )	COLUMN TIES
P608E	48	41'-0"	( )	STRUT LONGITUDINAL
P609E	3	10'-0"	( )	STRUT END VERTICAL TIE - NORTH
P610E	152	13'-8"	( )	STRUT - TOP TIES
P511E	4	9'-10"	( )	CAP BOTTOM HORIZONTAL
P913E	24	42'-8"	( )	CAP - TOP HORIZONTAL
P614E	16	41'-1"	( )	CAP HORIZONTAL
P915E	36	28'-0"	( )	CAP BOTTOM HORIZONTAL
P516E	4	14'-10"	( )	CAP BOTTOM HORIZONTAL
P617E	3	8'-6"	( )	STRUT END VERTICAL TIE - SOUTH
P618E	18	5'-1"	( )	CAP END TIE
P619E	12	41'-0"	( )	STRUT LONGITUDINAL
P520E	336	8'-10"	( )	CAP STIRRUP
P621E	24	5'-6"	( )	STRUT END TIE
P922E	56	19'-6"	( )	COLUMN VERTICAL
P425E	32	4'-5"	( )	CAP TIE OVER COLUMN

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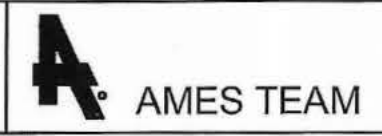
NO.	DATE	BY	CKD	APPR	REVISION

DRAWING NO. 1

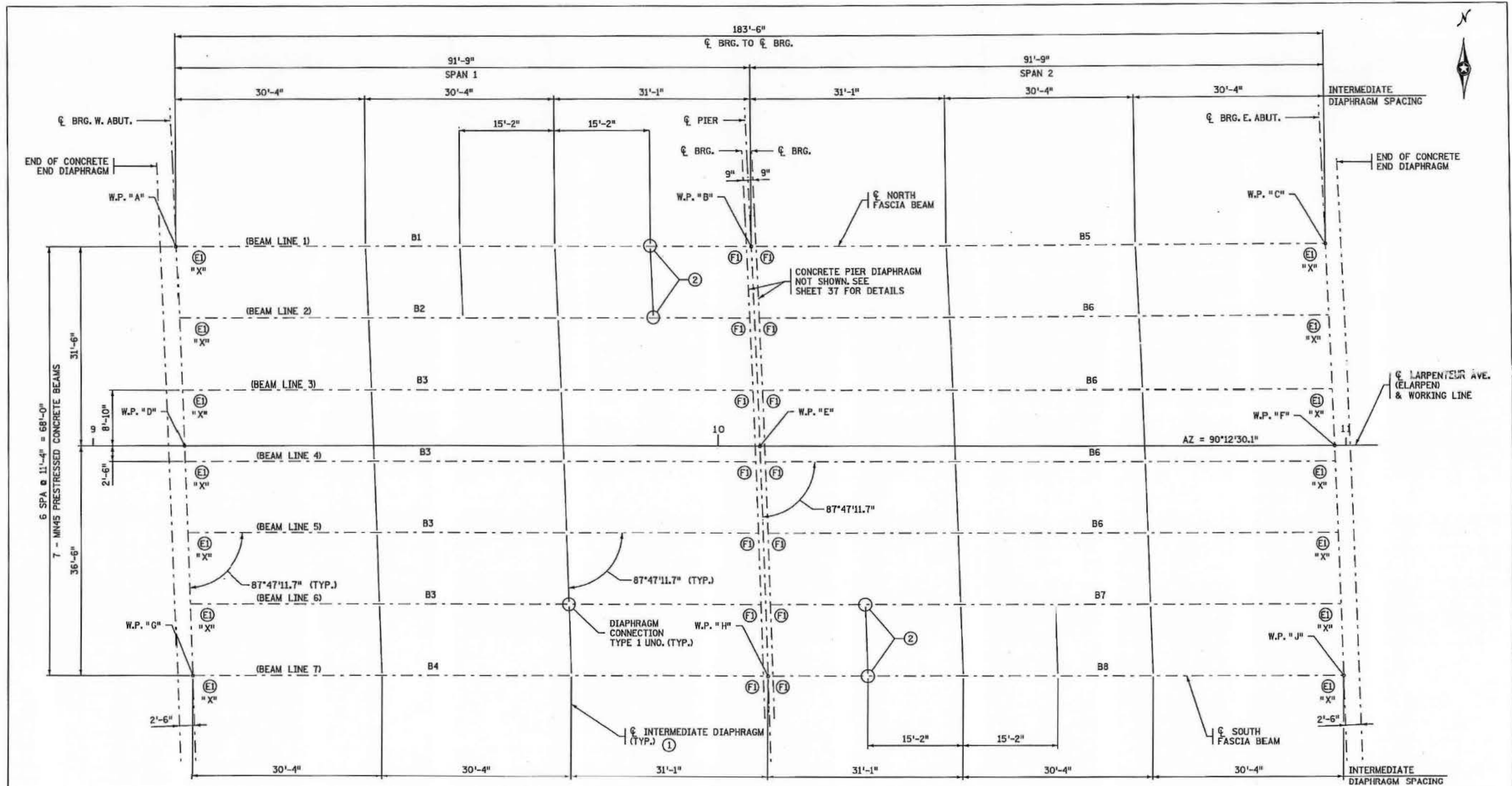
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE: 46863

INDOT ACCEPTANCE  
 SIGNATURE: [Signature]  
 DATE: 4/11/14



DES: ZAT	DR: MMF	APPROVED:
CHK: AW	CHK: ZAT	
S.P. NO. 6280-62646		BRIDGE NO. 62646
PIER REINFORCEMENT		SHEET 28 OF 55



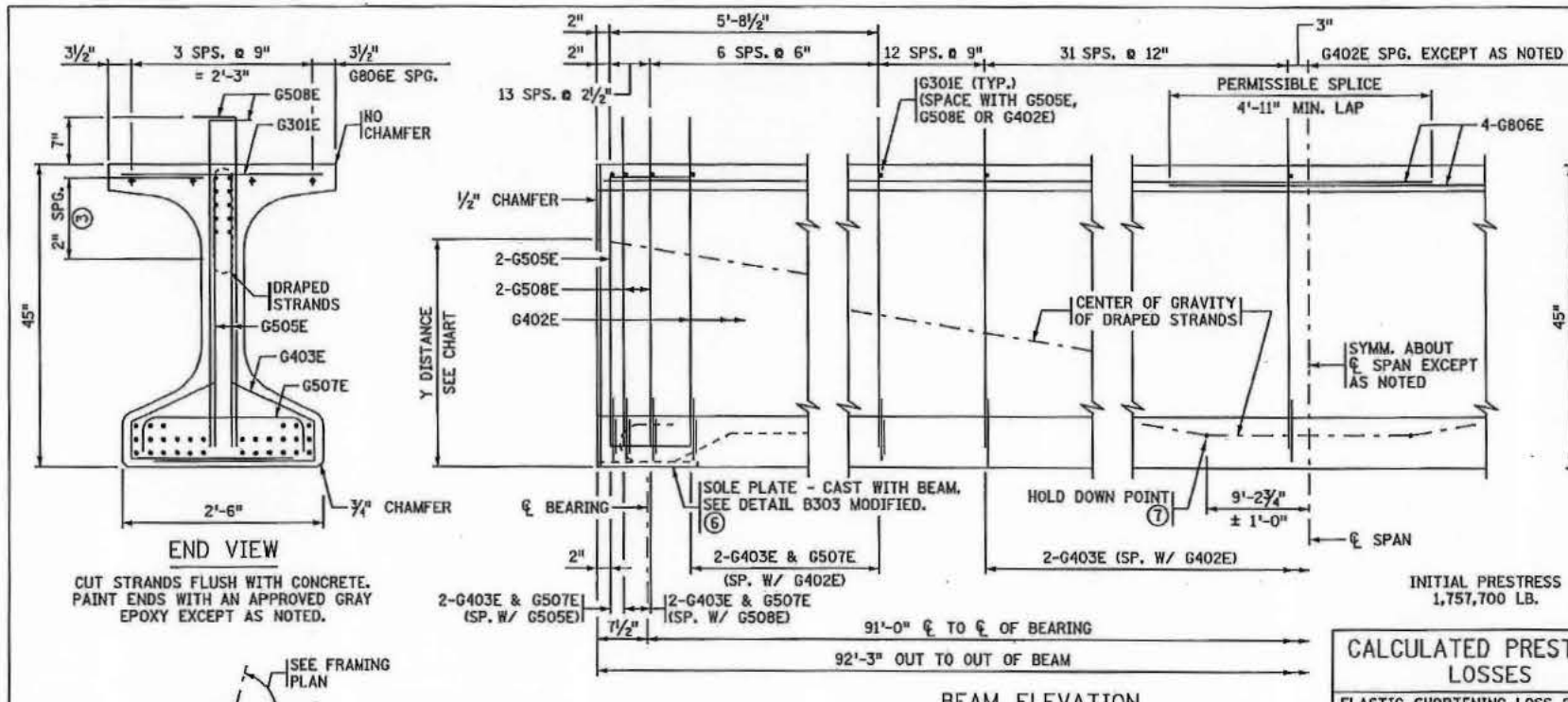
FRAMING PLAN

NOTES:

Ames Construction  
 APR 11 2014  
 Released for Construction

- SEE SHEET 47 FOR BEAM BEARING DETAILS.
- SEE BRIDGE LAYOUT SHEET FOR WORKING POINT ("W.P.") INFORMATION.
- "X" DENOTES END OF BEAM.
- ALL DIMENSIONS ARE PARALLEL OR ORTHOGONAL TO WORKING LINE.
- EI DENOTES EXPANSION BEARING, F1 DENOTES FIXED BEARING.
- UNO = UNLESS NOTED OTHERWISE.
- ① SEE SHEET 48 FOR INTERMEDIATE DIAPHRAGM DETAIL B403.
- ② SEE SHEET 48 FOR DIAPHRAGM CONNECTION TYPE 2.

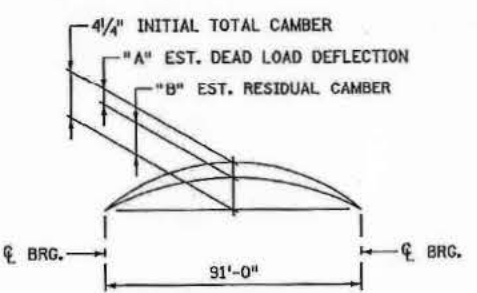
<p>17:10 08-APR-2014 08-62646.dwg</p>	<p>I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</p> <p>PRINT NAME: <u>GEORGE W. GORRILL</u></p> <p>DATE: <u>4/10/14</u> LICENSE # <u>46863</u></p>	<p>AND/OR ACCEPTANCE</p> <p>SIGNATURE: <u>[Signature]</u></p> <p>DATE: <u>4/11/14</u></p>	<p>DES: AMW DR: MMF APPROVED:</p> <p>CHK: GDF CHK: AMW</p>	<p>S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 29 OF 55</p> <p>FRAMING PLAN</p>
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Y DISTANCES (IN INCHES)			
	NO.	CL SPAN	END
STRAIGHT STRANDS	30	3.6	
DRAPED STRANDS	10	7	37 <sup>a</sup>
TOTAL STRANDS	40	4.45	

Y = DISTANCE TO CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM. ALL STRANDS SPACED 2" CENTER TO CENTER, HORIZONTALLY AND VERTICALLY, EXCEPT AS NOTED.

<sup>a</sup> A TOLERANCE OF ± 1" WILL BE PERMITTED IN THIS DIMENSION.



CALCULATED PRESTRESS LOSSES	
ELASTIC SHORTENING LOSS	24.09 KSI
LONG TERM LOSSES	25.12 KSI
TOTAL LOSSES	49.21 KSI

CAMBER TABLE		
BEAM	"A"	"B"
B1, B5	3 1/4"	1"
B2, B3, B6, B7	2 3/4"	1 1/2"
B4, B8	2 1/2"	1 3/4"

MINIMUM CONCRETE STRENGTH - K.S.I.	
① f'cl	② f'c
7 KSI	8.5 KSI

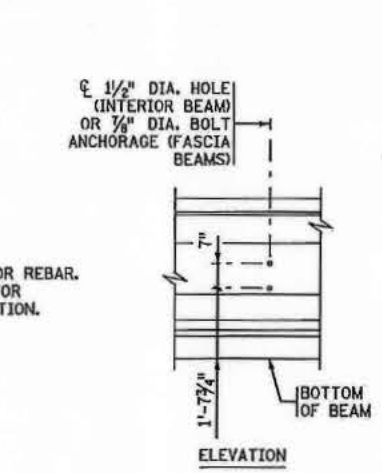
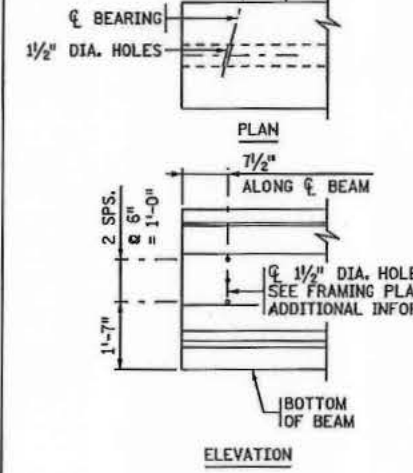
PRESTRESSING STRAND DIAMETER	
⑤	1/2" □
⑥	0.60" ☒

FORMED HOLE TABLE		
HOLE NUMBER	"Z"	"Y"
1	36'-3 3/8"	1'-11"
2	38'-7 3/8"	1'-11 1/16"
3	40'-11"	1'-11 1/16"
4	43'-2 5/8"	1'-11 7/8"
5	45'-6 1/4"	2'-0 1/8"
6	48'-9 3/4"	2'-0 7/16"
7	50'-1 3/4"	2'-0 1/16"
8	52'-5"	2'-1"
9	54'-8 5/8"	2'-1 1/4"
10	57'-0 1/4"	2'-1 3/8"
11	59'-3 3/4"	2'-1 3/4"

**GENERAL NOTES**

- TOPS OF BEAMS SHALL BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BOND.
- PROVIDE HANDLING HOOKS OR DEVICES AS REQUIRED BY CONTRACTOR.
- EACH BEAM SHALL BE MARKED, SHOWING BRIDGE NUMBER, CASTING DATE, AND INDIVIDUAL IDENTIFICATION LETTERS AND NUMBERS. MARKINGS SHALL BE MADE ON THE FACE OF THE BEAM, NEAR THE END, SO LOCATED THAT THEY WILL BE EXPOSED AFTER THE END DIAPHRAGMS HAVE BEEN CAST. FASCIA BEAMS SHALL BE MARKED ON THE INSIDE FACE. ALL MARKINGS SHALL BE STENCILED AND BE CLEARLY LEGIBLE. FOR LOCATION OF BEAMS, SEE FRAMING PLAN.
- ALL MATERIAL AND WORK SHOWN OR NOTED ON THIS SHEET SHALL BE INCLUDED IN UNIT PRICE BID FOR PRESTRESSED CONCRETE BEAMS. SEE Mn/DOT SPEC. 2405.
- SEE FRAMING PLAN FOR BEAM END MARKED "X" AND DIAPHRAGM SPACING.
- APPROXIMATE WEIGHT OF BEAM IS 34.3 TONS.
- AS AN ALTERNATE TO THE DIAPHRAGM ANCHORAGES SHOWN, THE CONTRACTOR MAY SUBMIT DETAILS OF A CAST-IN-PLACE ANCHORAGE TO THE ENGINEER FOR APPROVAL. ANCHORAGE MUST PROVIDE AN ULTIMATE PULL OUT STRENGTH OF 15 KIPS PER ANCHORAGE.
- ① MINIMUM CONCRETE STRENGTH AT TIME OF PRESTRESS TRANSFER.
- ② MINIMUM CONCRETE STRENGTH WHEN BEAM CAN BE TRANSPORTED AND INSTALLED.
- ③ DRAPED STRANDS.
- ④ STRAIGHT STRANDS.
- ⑤ PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION STRAND, CONFORMING TO ASTM A416, GRADE 270.
- ⑥ FOR INTEGRAL ABUTMENT, SOLE PLATE CAN BE ELIMINATED OR REPLACED WITH AN APPROVED PROTECTION PLATE.
- ⑦ CENTER OF GRAVITY OF HOLD DOWNS WHEN MULTIPLE HOLD DOWNS ARE USED.

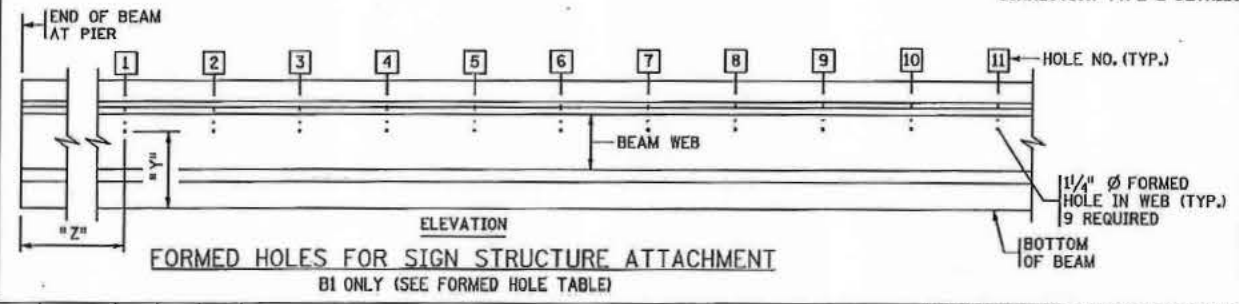
MODIFICATIONS: ADDED "FORMED HOLES FOR SIGN STRUCTURE ATTACHMENTS" DETAIL, AND "FORMED HOLE TABLE", ADDED "SPECIAL STEEL INTERMEDIATE DIAPHRAGM" DETAIL.



SEE SUPERSTRUCTURE DETAILS AND REINFORCEMENT FOR DIAPHRAGM DETAILS.

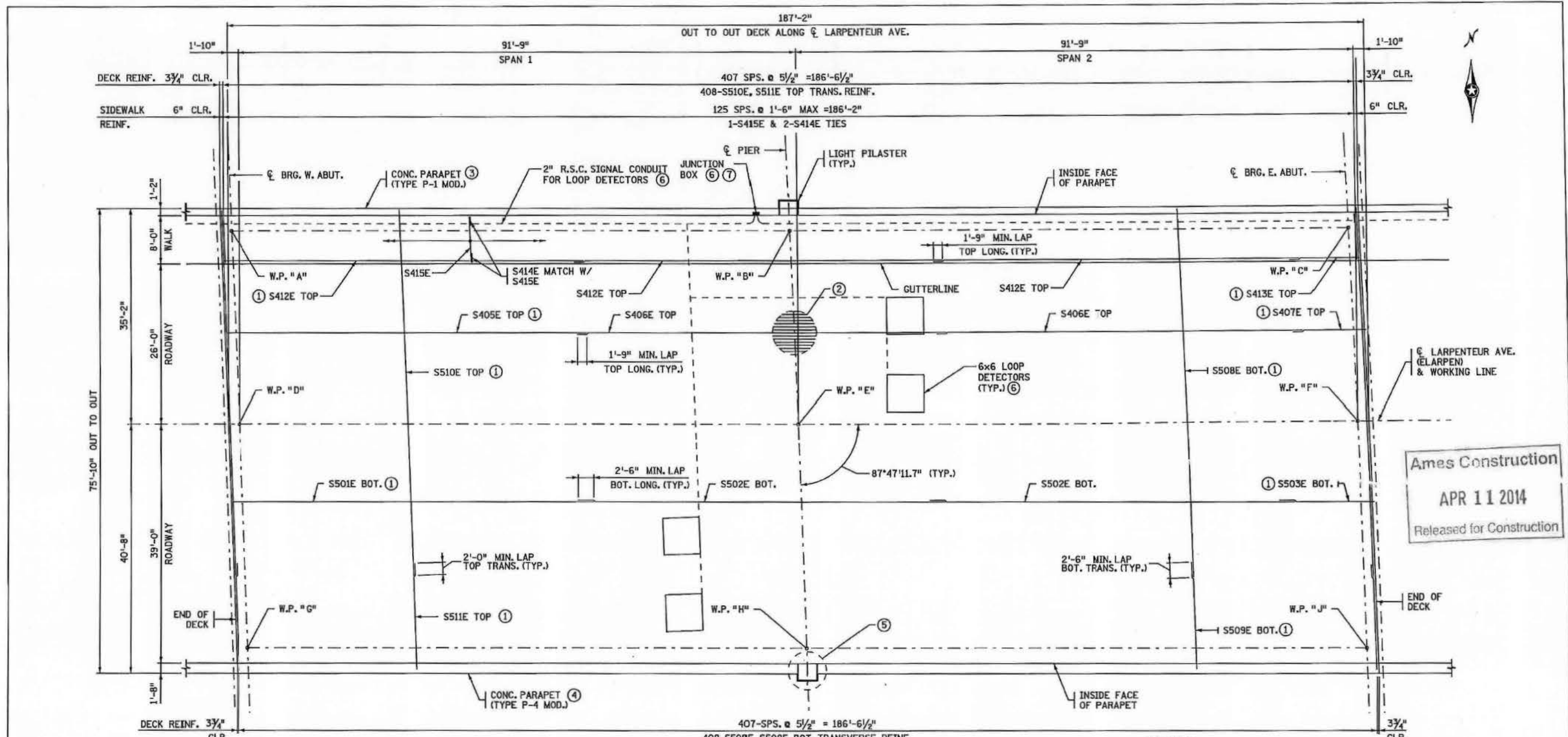
(SEE DETAIL B403 FOR DIAPHRAGM CONNECTION TYPE 1 DETAILS)

FOR DIAPHRAGMS LOCATED 15'-2" FROM PIER BEARINGS (SEE DETAIL B403 FOR DIAPHRAGM CONNECTION TYPE 2 DETAILS)

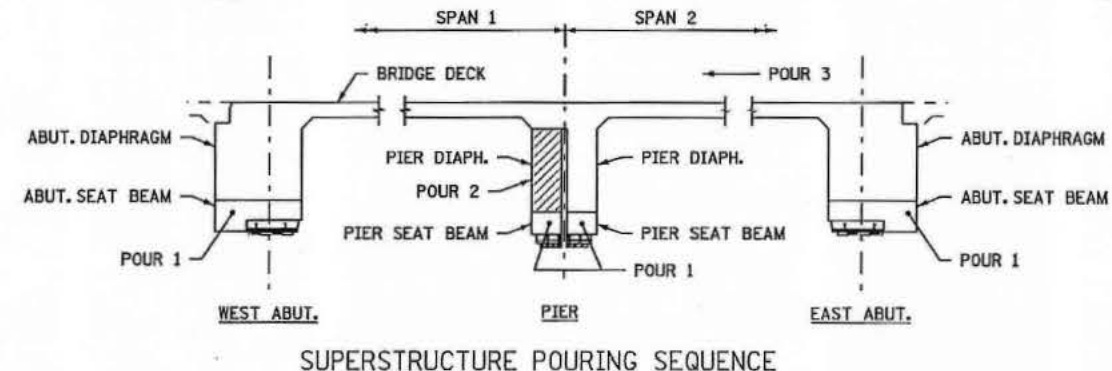


ARTES CONSTRUCTION  
MAR 06 2014  
Released under function

DRAWING NO. 1		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 MISSISSIPPI.		PRINT NAME: <u>George W. Gorman</u>		DATE: <u>3/5/14</u> LICENSE: <u>46863</u>		S.P. NO. 6280-62646		BRIDGE NO. 62646		SHEET 30 OF 55	
AMNES TEAM												MN45 PRESTRESSED CONCRETE BEAM (PRETENSIONED) MN45-93		FIG. 5-397.505 MOD.			

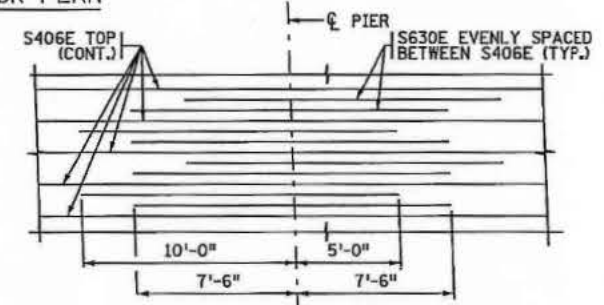


Ames Construction  
 APR 11 2014  
 Released for Construction



SUPERSTRUCTURE POURING SEQUENCE

DECK PLAN



STAGGER DIAGRAM

NOTES:

- TRANSVERSE REINFORCEMENT TO BE PLACED PARALLEL TO SKEW.
- ① ALTERNATE PLACEMENT OF S501E & S503E, S405E & S407E, S508E & S509E, & S510E & S511E, S412E & S413E TO STAGGER LAPS.
- ② SEE STAGGER DIAGRAM FOR ADDITIONAL TOP REINFORCEMENT OVER PIER.
- ③ SEE SHEET 41 FOR CONCRETE PARAPET TYPE P-1 MOD.
- ④ SEE SHEET 42 FOR CONCRETE PARAPET TYPE P-4 MOD. DETAILS.
- ⑤ SEE SHEET 43 FOR PILASTER.
- ⑥ SEE SIGNAL PLANS FOR DETAILS.
- ⑦ SEE SHEET 41 FOR JUNCTION BOX IN PARAPET DETAILS.

NO	DATE	BY	CHKD	APPR	REVISION

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PRINT NAME: GEORGE W. GORRILL

DATE: 4/11/14 LICENSE # 46863

MINIOT ACCEPTANCE

SIGNATURE: D.J. Horn

DATE: 4/11/14

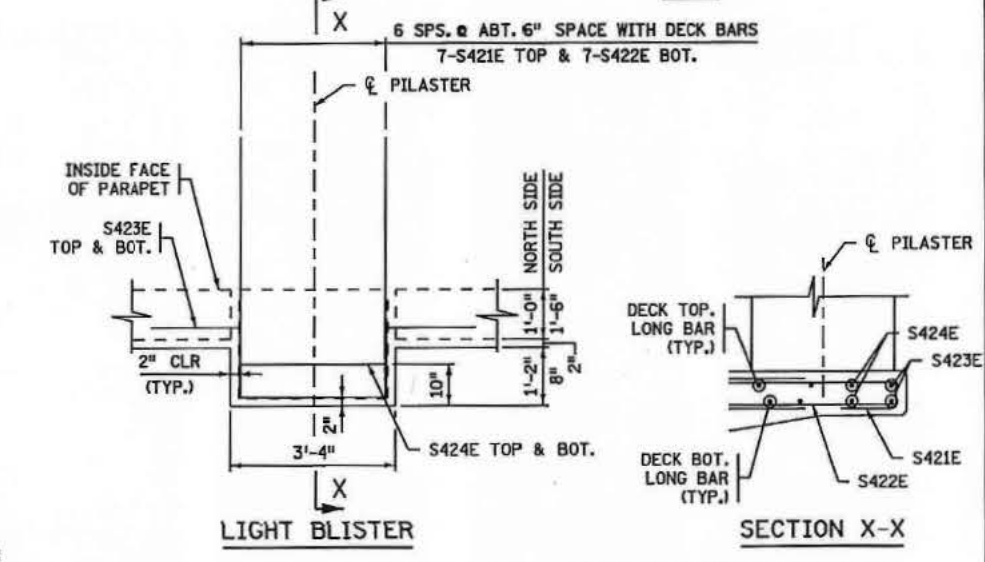
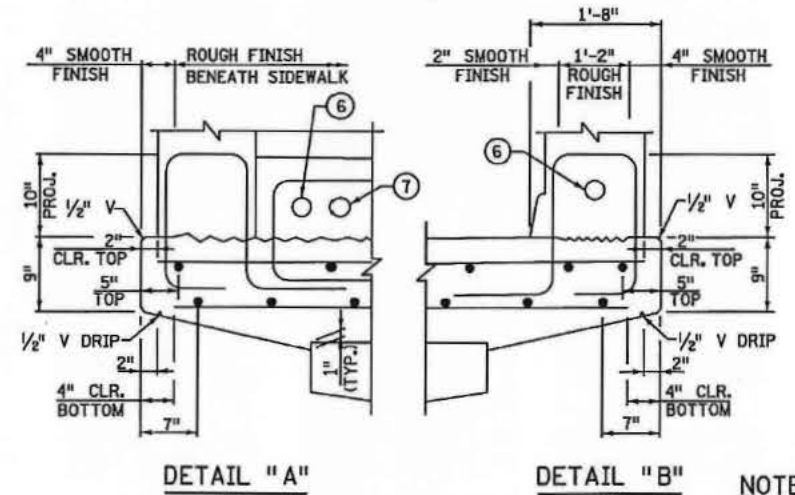
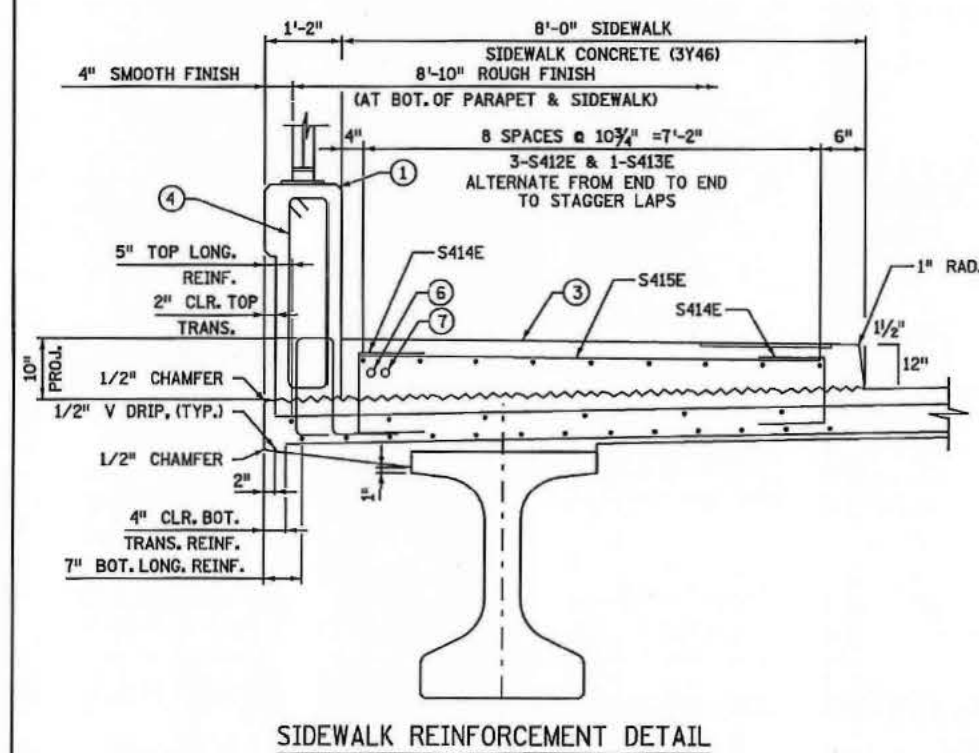
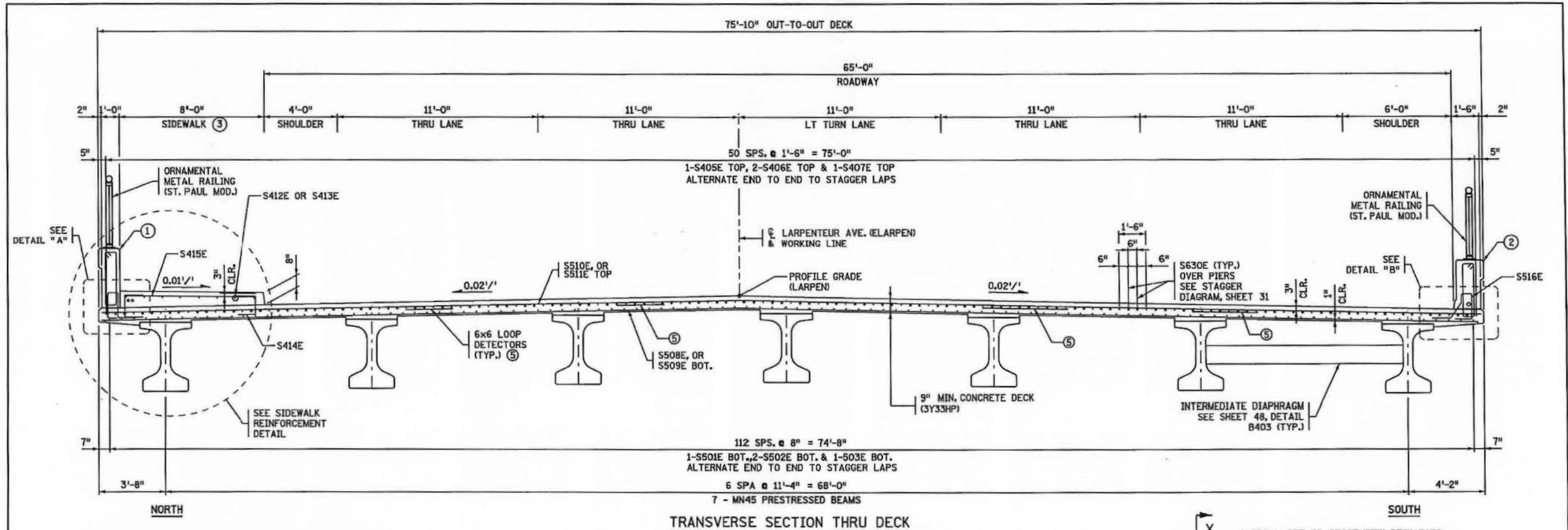
DES: AMW DR: MMF APPROVED:

CHK: ZAT CHK: ZAT

**AMES TEAM**

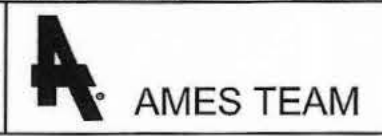
S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 31 OF 55

SUPERSTRUCTURE DETAILS & REINFORCEMENT



- NOTES:
- SEE SHEET 44 FOR ORNAMENTAL RAILING (ST. PAUL MOD.) DETAILS.
  - SEE SHEET 35 AND 37 FOR CONCRETE DIAPHRAGM DETAILS.
  - CONCRETE PARAPET (TYPE P-1 MOD.) W/ORNAMENTAL METAL RAILING.
  - CONCRETE PARAPET (TYPE P-4 MOD.) W/ORNAMENTAL METAL RAILING.
  - INSTALL SIDEWALK AFTER DECK IS POURED.
  - SEE SHEET 41 AND 42 FOR BARRIER REINFORCING.
  - TIE LOOP DETECTORS TO BOTTOM OF TOP MAT OF STEEL. SEE SIGNAL PLANS FOR LOOP DETECTOR DETAILS.
  - 1/2" R.S.C. LIGHTING CONDUIT SEE LIGHTING PLAN FOR DETAILS.
  - 2" R.S.C. SIGNAL CONDUIT SEE SIGNAL PLANS FOR DETAILS.
- |          |          |           |
|----------|----------|-----------|
| DES: AW  | DR: MMF  | APPROVED: |
| CHK: ZAT | CHK: ZAT |           |

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S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 32 OF 55  
SUPERSTRUCTURE DETAILS & REINFORCEMENT

NO	DATE	BY	CHKD	APPR	REVISION

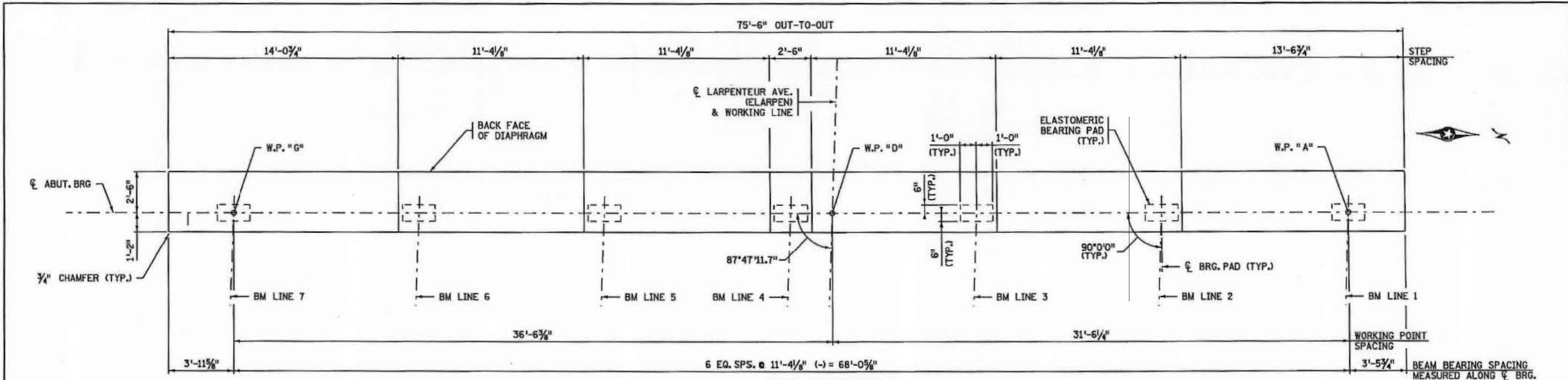
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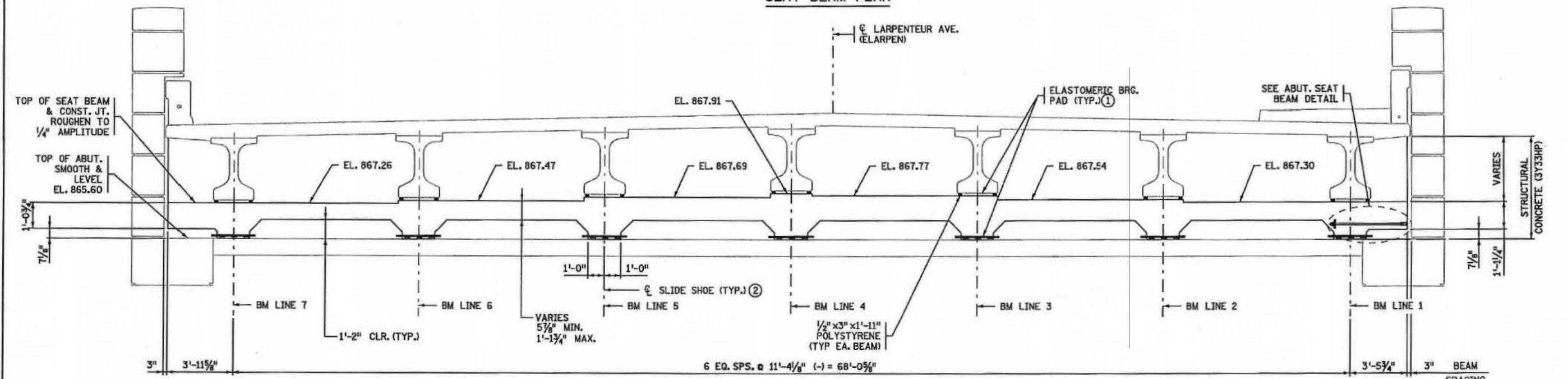
PRINT NAME: GEORGE W. GORRILL  
DATE: 4/10/14 LICENSE # 46863

INDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 4/11/14

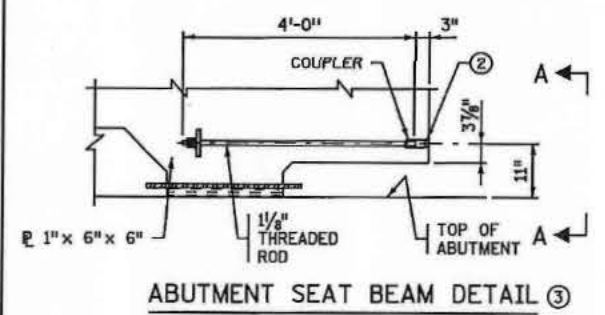




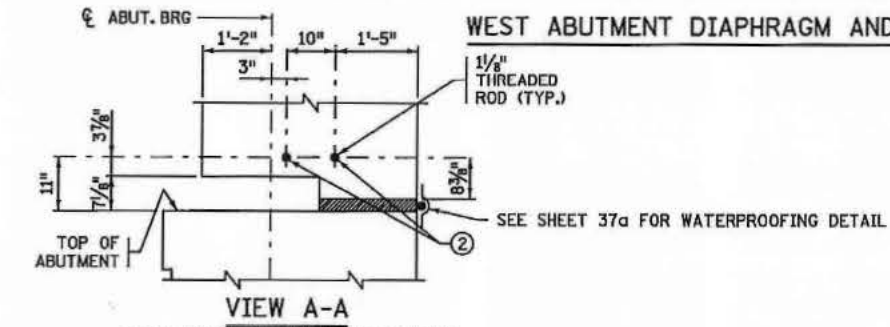
SEAT BEAM PLAN



WEST ABUTMENT DIAPHRAGM AND SEAT BEAM ELEVATION



ABUTMENT SEAT BEAM DETAIL



VIEW A-A

SLIDE SHOE NOT SHOWN FOR CLARITY

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MAY 21 2014  
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- NOTES:
- ① SEE SHEET 46 FOR ELASTOMERIC BEARING PAD DETAILS.
  - ② 1/2" INNER DIA. GALVANIZED SLEEVE. FILL SLEEVES FLUSH WITH MORTAR PER MnDOT SPEC 2401.3F2a WHEN BRIDGE IS IN FINAL LOCATION.
  - ③ ALL THREADED RODS, COUPLERS, SLEEVES AND PLATES SHALL BE EPOXY COATED.

NO	DATE	BY	CHK	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	GALVANIZED SLEEVE ADDITION/REVISION (NDCC08)

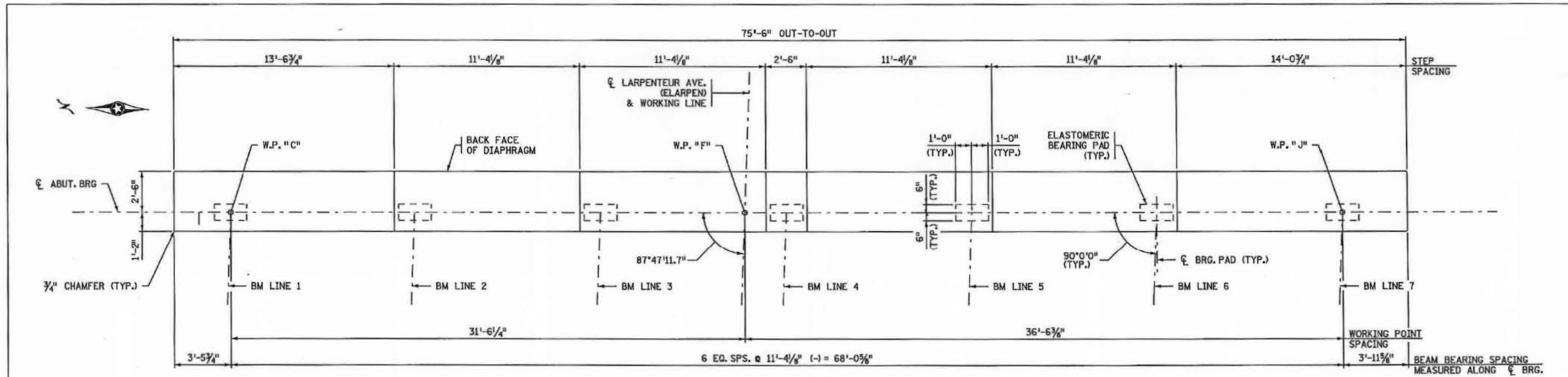
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE W. CORRILL  
DATE: 5/20/14 LICENSE: 46863

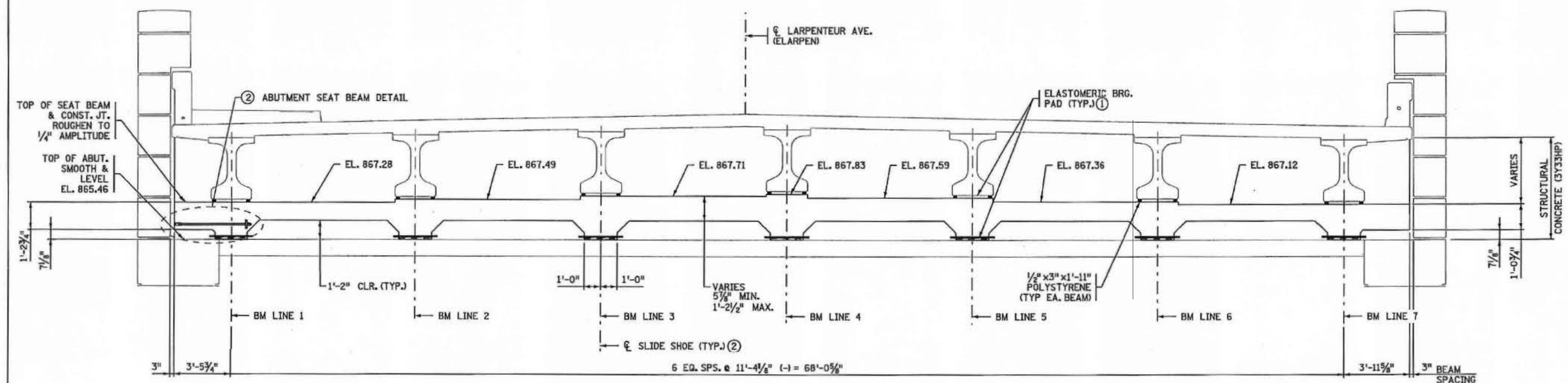
MNDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 5/21/14



DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	
S.P. NO. 6280-62646		BRIDGE NO. 62646
SUPERSTRUCTURE DETAILS & REINFORCEMENT		SHEET 33 OF 55



SEAT BEAM PLAN



EAST ABUTMENT DIAPHRAGM AND SEAT BEAM ELEVATION

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 APR 11 2014  
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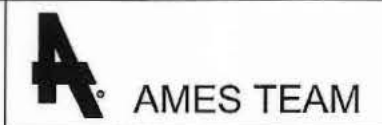
- NOTES:  
 (1) SEE SHEET 46 FOR ELASTOMERIC BEARING PAD DETAILS.  
 (2) SEE SHEET 33 FOR ABUTMENT SEAT BEAM DETAILS.

NO	DATE	BY	CKD	APPR	REVISION

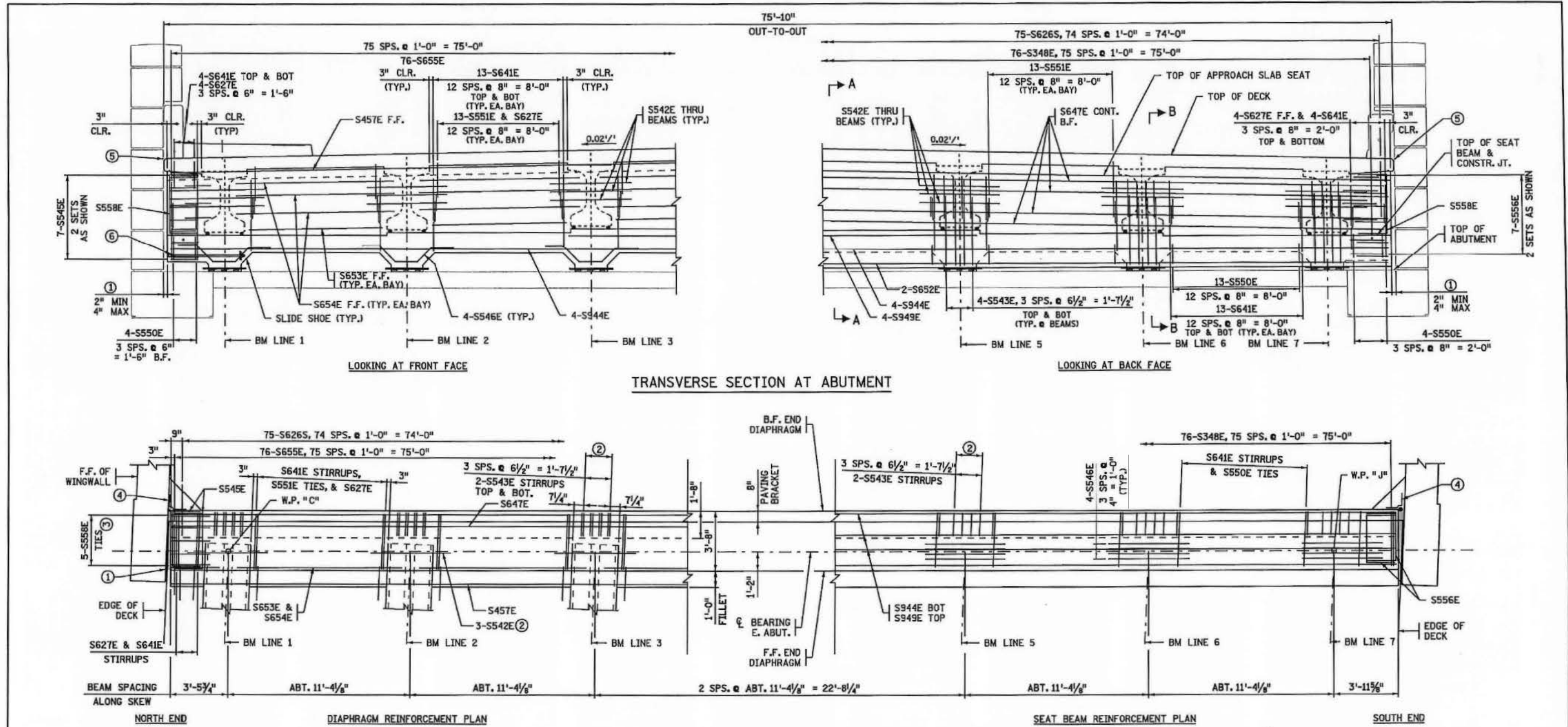
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 PRINT NAME: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE # 46863

INDOT ACCEPTANCE  
 SIGNATURE: [Signature]  
 DATE: 4/11/14



DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	
S.P. NO. 6280-62646		BRIDGE NO. 62646
SUPERSTRUCTURE DETAILS & REINFORCEMENT		SHEET 3.4 OF 5.5



TRANSVERSE SECTION AT ABUTMENT

EAST END DIAPHRAGM PLAN VIEW

NOTES:

- SEE SHEET 37a FOR SECTIONS A-A AND B-B.
- PROVIDE A 2'-6" MIN. LAP SPLICE FOR S457E BARS.
- PROVIDE A 3'-6" MIN. LAP SPLICE FOR S647E AND S652E BARS.
- PROVIDE A 6'-6" MIN. LAP SPLICE FOR S944E BARS.
- ① FIELD VERIFY DIMENSIONS AFTER SLIDE. FILL WITH POLYSTYRENE TYPE B.
- ② TYPICAL AT BEAMS UNLESS NOTED OTHERWISE.
- ③ TYPICAL AT ENDS UNLESS NOTED OTHERWISE.
- ④ SEE SHEET 38 FOR GEOTEXTILE FILTER DETAIL.
- ⑤ SEAL WITH SELF-LEVELING SILICON PER MNDOT 3722.

⑥ 1/2" INNER DIA. GALVANIZED SLEEVE. FILL SLEEVES FLUSH WITH MORTAR PER MNDOT SPEC. 240L3F2a WHEN BRIDGE IS IN FINAL LOCATION.

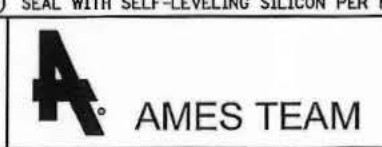
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MAY 21 2014  
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NO	DATE	BY	CHKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	GALVANIZED SLEEVE ADDITION/REVISION (NDC008)

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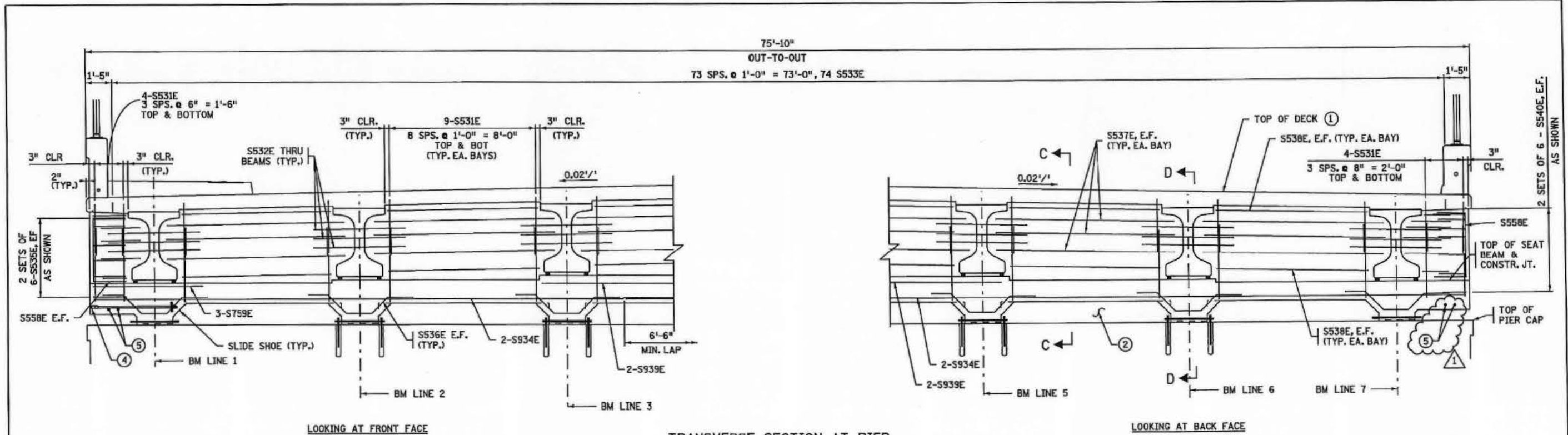
PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE: 45863

MNDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 5/21/14

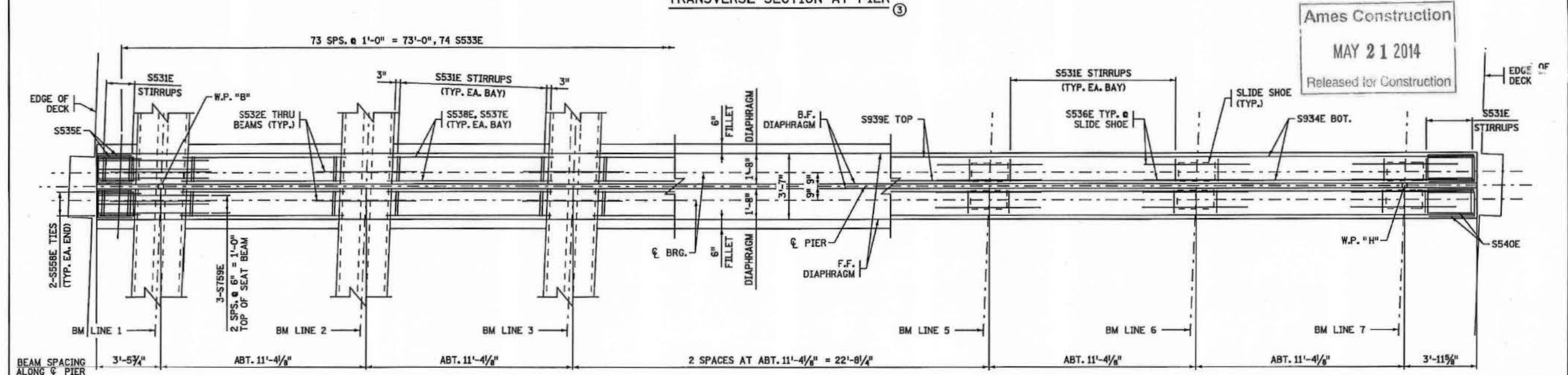


DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	
S.P. NO. 6280-62646		BRIDGE NO. 62646
SUPERSTRUCTURE DETAILS & REINFORCEMENT		SHEET 35 OF 55





TRANSVERSE SECTION AT PIER ③



PLAN VIEW AT PIER ③

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NOTES:

- SEE SHEET 37a FOR SECTIONS C-C AND D-D.
- ① DECK REINFORCEMENT NOT SHOWN FOR CLARITY.
- ② SEAT BEAM FORMS TO REMAIN IN PLACE DURING DECK AND DIAPHRAGM PLACEMENT.
- ③ REINFORCEMENT TYPICAL FOR EACH DIAPHRAGM UNLESS NOTED OTHERWISE.

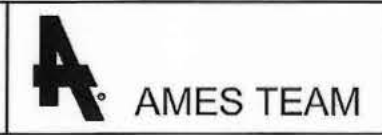
- ④ 1/2" INNER DIA. GALVANIZED SLEEVE. FILL SLEEVES FLUSH WITH MORTAR PER MNDOT SPEC. 2401.3F2a WHEN BRIDGE IS IN FINAL LOCATION.
- ⑤ 1/2" INNER DIA. GALVANIZED SLEEVE. FILL SLEEVES FLUSH WITH MORTAR PER MNDOT SPEC. 2401.3F2a WHEN BRIDGE IS IN FINAL LOCATION.

NO.	DATE	BY	CKD	APPR	REVISION
1	5/5/14	JLJ	ZAT	JWD	GALVANIZED SLEEVE ADDITION/REVISION (NDC008)

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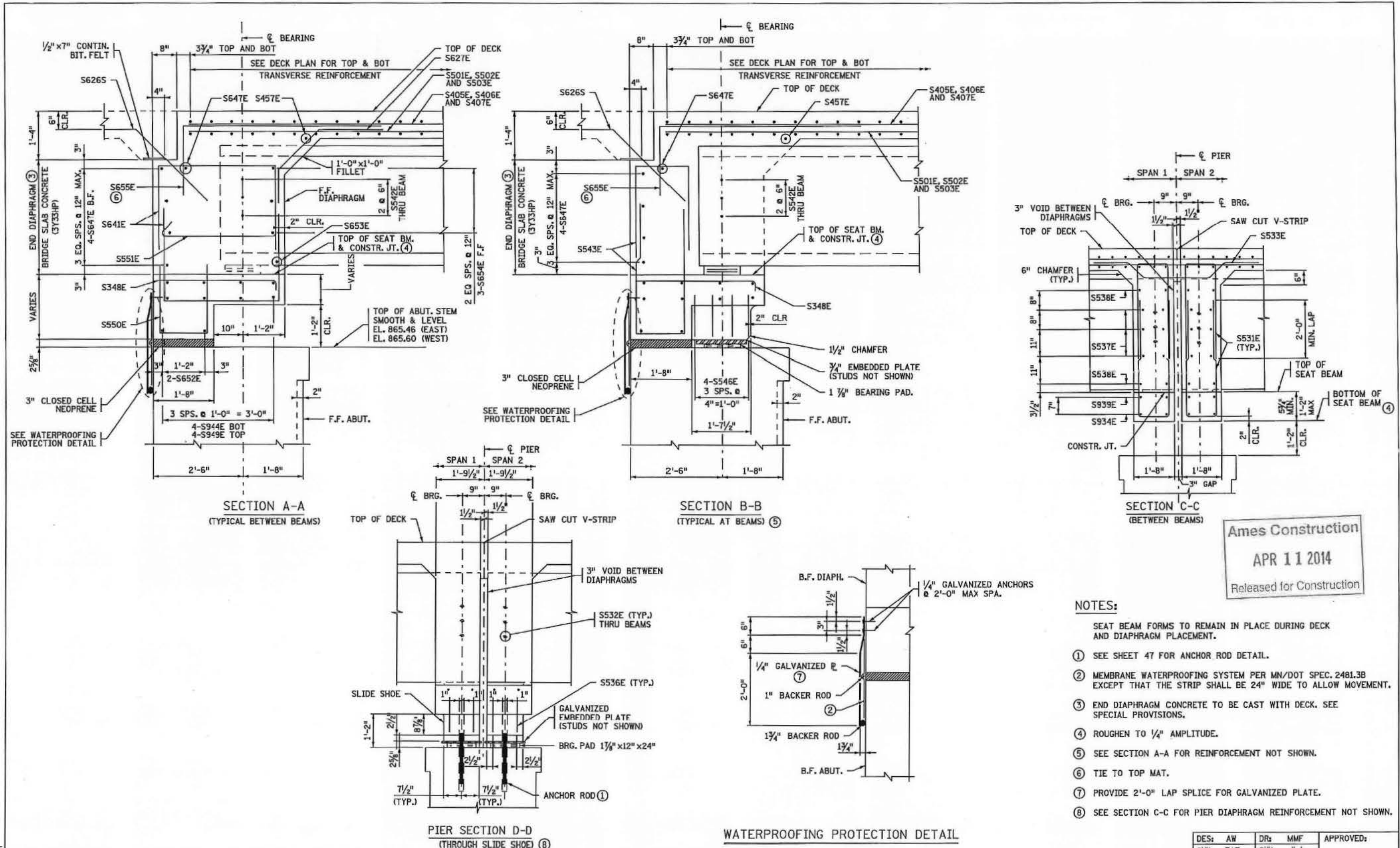
PRINT NAME: GEORGE W. GORRILL  
DATE: 5/20/14 LICENSE: 45863

MNDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 5/21/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 37 OF 55
SUPERSTRUCTURE DETAILS & REINFORCEMENT		

DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	



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- NOTES:**
- SEAT BEAM FORMS TO REMAIN IN PLACE DURING DECK AND DIAPHRAGM PLACEMENT.
  - ① SEE SHEET 47 FOR ANCHOR ROD DETAIL.
  - ② MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.3B EXCEPT THAT THE STRIP SHALL BE 24" WIDE TO ALLOW MOVEMENT.
  - ③ END DIAPHRAGM CONCRETE TO BE CAST WITH DECK. SEE SPECIAL PROVISIONS.
  - ④ ROUGHEN TO 1/4" AMPLITUDE.
  - ⑤ SEE SECTION A-A FOR REINFORCEMENT NOT SHOWN.
  - ⑥ TIE TO TOP MAT.
  - ⑦ PROVIDE 2'-0" LAP SPLICE FOR GALVANIZED PLATE.
  - ⑧ SEE SECTION C-C FOR PIER DIAPHRAGM REINFORCEMENT NOT SHOWN.

DES: AW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 37a OF 55
SUPERSTRUCTURE DETAILS & REINFORCEMENT		

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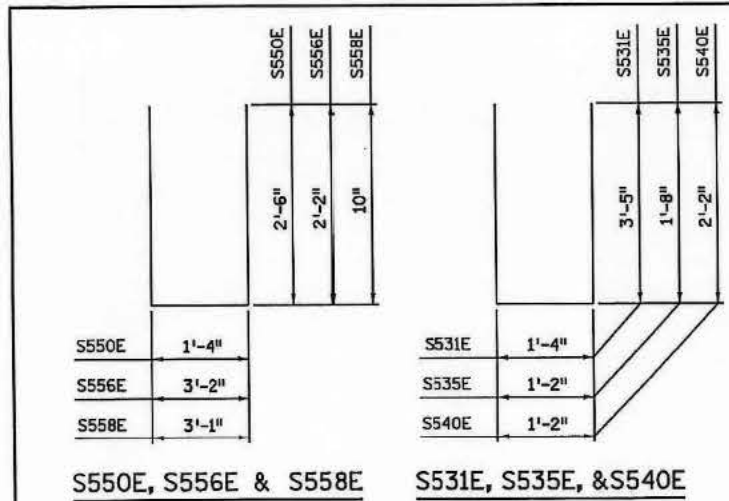
PRINT NAME: GEORGE W. GORRILL  
 SIGNATURE: [Signature]  
 DATE: 4/11/14 LICENSE # 46863

MINOT ACCEPTANCE  
 SIGNATURE: [Signature]  
 DATE: 4/11/14



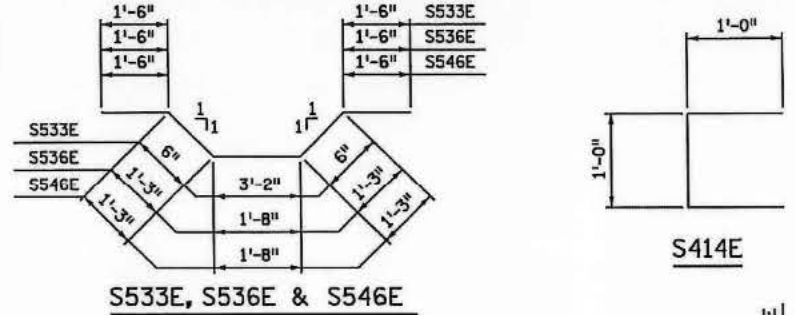
NO	DATE	BY	CKD	APPR	REVISION

DRAWING NO. 11128 08-APR-2014 CDR-62646.dwg

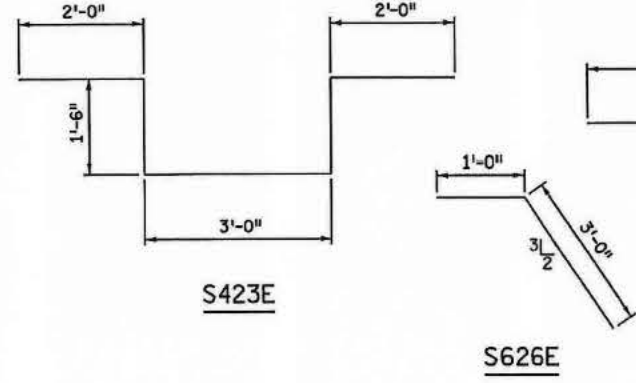


S550E, S556E & S558E S531E, S535E, & S540E

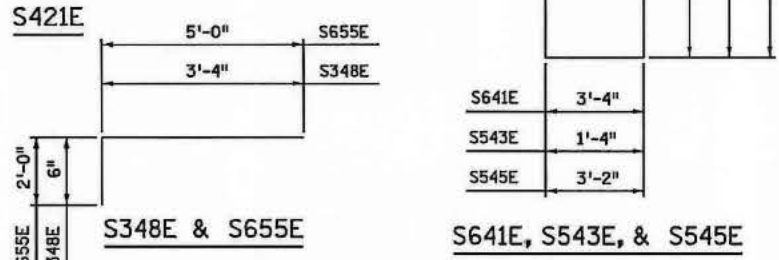
SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE			
ITEM NO.	ITEM	QUANTITY	UNIT
①	2401.512 BRIDGE SLAB CONCRETE (3Y33HP)	14,200	SQ. FT.
②	2401.513 TYPE P-1 MOD. RAILING CONCRETE (3Y46)	240	LIN. FT.
③	2401.513 TYPE P-4 MOD. RAILING CONCRETE (3Y46)	240	LIN. FT.
④	2401.515 SIDEWALK CONCRETE (3Y46)	1,924	SQ. FT.
⑤	2401.541 REINFORCEMENT BARS (EPOXY COATED)	134,707	POUND
⑨	2401.541 REINFORCEMENT BARS (STAINLESS STEEL)	901	POUND



S533E, S536E & S546E S414E

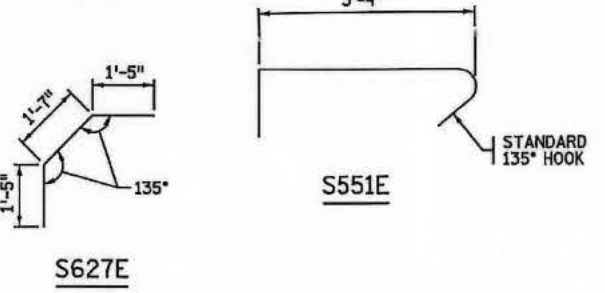


S423E S626E



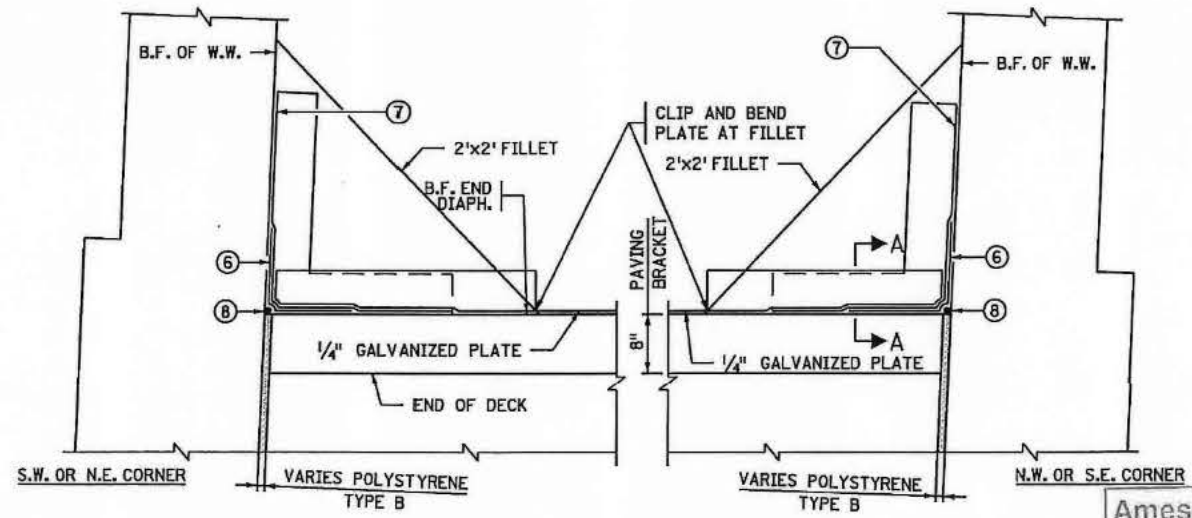
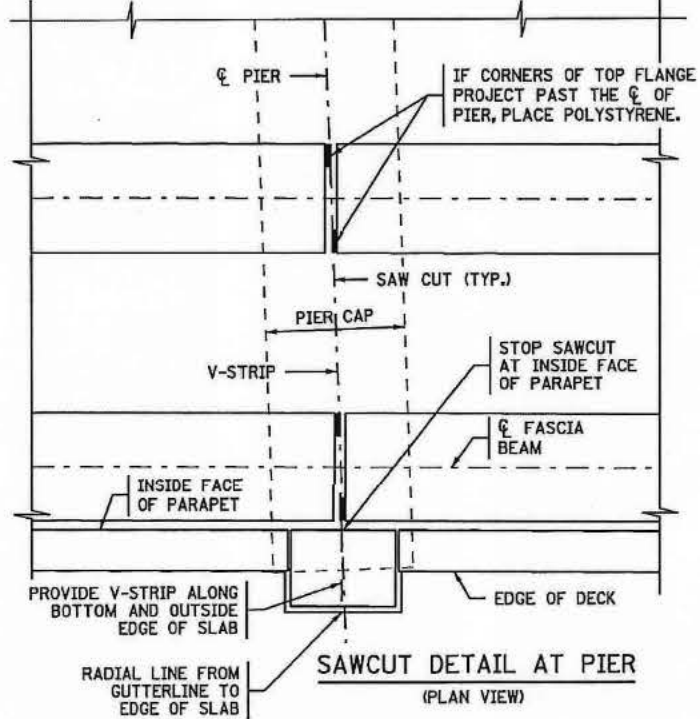
S421E S641E, S543E, & S545E

- NOTES:**
- SEE SHEET 35 AND 37 FOR CONCRETE DIAPHRAGM DETAILS.
  - SEE SHEETS 41 & 42 FOR CONCRETE PARAPET TYPE P-1 MOD. AND TYPE P-4 MOD. DETAILS RESPECTIVELY.
  - SEE SHEET 44 FOR ORNAMENTAL METAL RAILING (ST. PAUL MOD.) DETAILS.
  - SEE SHEET 32 FOR SIDEWALK REINFORCEMENT DETAIL.
  - ① "BRIDGE SLAB CONCRETE (3Y33HP)" VOLUME WAS COMPUTED USING AN AVERAGE STOOL HEIGHT OF 3" INCHES. ITEM INCLUDES APPROXIMATELY 429 CU. YDS. FOR SLAB, APPROXIMATELY 51 CU. YDS. FOR EACH END DIAPHRAGM, AND APPROXIMATELY 23 CU. YDS. FOR EACH PIER DIAPHRAGM.
  - ② "TYPE P-1 MOD. RAILING CONCRETE (3Y46)" VOLUME IS APPROXIMATELY 31 CU. YDS.
  - ③ "TYPE P-4 MOD. RAILING CONCRETE (3Y46)" VOLUME IS APPROXIMATELY 34 CU. YDS.
  - ④ "SIDEWALK CONCRETE (3Y46)" VOLUME IS APPROXIMATELY 56 CU. YDS.
  - ⑤ INCLUDES SLAB, PIER DIAPHRAGMS, SEAT BEAM, END DIAPHRAGMS, SIDEWALK, AND PARAPET REINFORCEMENT.
  - ⑥ MEMBRANE WATERPROOFING SYSTEM PER MN/DOT SPEC. 2481.38 EXCEPT THAT THE STRIP SHALL BE 24" WIDE TO ALLOW MOVEMENT.
  - ⑦ GEOTEXTILE FILTER TYPE II ATTACHED TO WINGWALL. DO NOT ATTACH TO DIAPHRAGM OR OTHER LAYER. LAP 2'-0" MIN.
  - ⑧ 1" BACKER ROD.
  - ⑨ S626S TO BE STAINLESS STEEL PER SPEC. 3312.

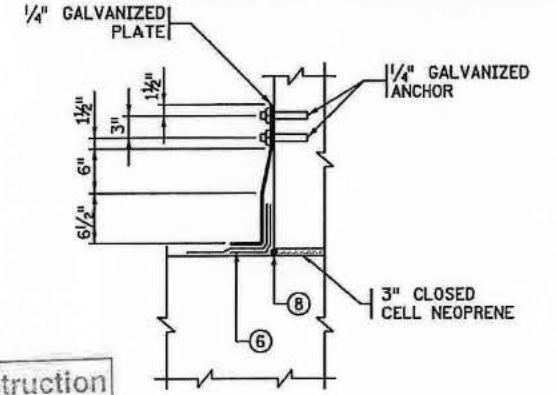


S551E S627E

BILL OF REINFORCEMENT FOR SUPERSTRUCTURE				
BAR	NO.	LENGTH	SHAPE	LOCATION
S501E	113	60'-0"		SLAB LONG. BOT.
S502E	226	60'-0"		SLAB LONG. BOT.
S503E	113	15'-2"		SLAB LONG. BOT.
S405E	51	60'-0"		SLAB LONG. TOP
S406E	102	60'-0"		SLAB LONG. TOP
S407E	51	12'-2"		SLAB LONG. TOP
S508E	408	60'-0"		SLAB TRANS. BOT.
S509E	408	17'-8"		SLAB TRANS. BOT.
S510E	408	60'-0"		SLAB TRANS. TOP
S511E	408	17'-6"		SLAB TRANS. TOP
S412E	27	60'-0"		SIDEWALK LONG.
S413E	9	12'-0"		SIDEWALK LONG.
S414E	252	3'-0"		SIDEWALK VERT.
S415E	126	7'-6"		SIDEWALK TRANS.
S421E	12	8'-5"		SLAB TRANS. TOP @ PILASTER
S422E	12	7'-0"		SLAB TRANS. BOT @ PILASTER
S423E	4	10'-0"		SLAB REINF. @ PILASTER
S424E	4	3'-0"		SLAB REINF. @ PILASTER
S626S	150	4'-0"		ABUT. TO APPROACH TIES
S627E	172	4'-5"		ABUT. DECK TIES
S630E	100	15'-0"		SLAB ADD'L LONG. TOP
S531E	248	8'-2"		PIER DIAPHRAGM STIRRUPS
S532E	42	5'-0"		PIER THROUGH BEAMS
S533E	74	7'-2"		PIER DIAPHRAGM DECK TIE
S934E	8	40'-10"		PIER SEAT BEAM BOTTOM
S535E	24	4'-8"		PIER DIAPHRAGM END TIES
S536E	28	7'-2"		PIER SLIDE SHOE BOT.
S537E	72	10'-3"		PIER DIAPHRAGM HORIZ.
S538E	48	8'-2"		PIER DIAPHRAGM HORIZ.
S939E	4	25'-4"		PIER SEAT BEAM TOP
S540E	24	5'-8"		PIER DIAPHRAGM END TIES
S641E	344	9'-8"		ABUT. DIAPHRAGM STIRRUPS
S542E	42	5'-0"		ABUT. THROUGH BEAMS
S543E	112	8'-8"		ABUT. DIAPHRAGM STIRRUPS B.F.
S944E	16	40'-10"		ABUT. SEAT BEAM BOTTOM
S545E	28	6'-6"		ABUT. DIAPHRAGM ENDS
S546E	56	7'-2"		ABUT. SLIDE SHOE BOTTOM
S647E	20	39'-6"		ABUT. DIAPHRAGM HORIZONTAL
S348E	152	3'-10"		ABUT. SEAT BEAM TIES
S949E	8	25'-4"		ABUT. SEAT BEAM TOP
S550E	172	6'-4"		ABUT. DIAPHRAGM STIRRUPS B.F.
S551E	156	4'-7"		ABUTMENT TIES
S652E	8	39'-6"		ABUT. SEAT BEAM HORIZONTAL
S653E	12	8'-2"		ABUT. DIAPHRAGM HORIZ.
S654E	36	10'-3"		ABUT. DIAPHRAGM HORIZ.
S655E	152	7'-0"		ABUT. DIAPHRAGM DECK TIES
S556E	28	7'-6"		ABUT. DIAPHRAGM END TIES
S457E	4	39'-0"		ABUT. DIAPHRAGM HORIZ.
S558E	28	4'-9"		ABUT. /PIER DIAPH. END TIES
S759E	6	6'-0"		ABUT. SEAT BEAM HORIZONTAL



GEOTEXTILE FILTER DETAIL



SECTION A-A

Ames Construction  
APR 11 2014  
Released for Construction

DES: AMW	DR: MMF	APPROVED:
CHK: ZAT	CHK: JLJ	

S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 38 OF 55
SUPERSTRUCTURE DETAILS & REINFORCEMENT		

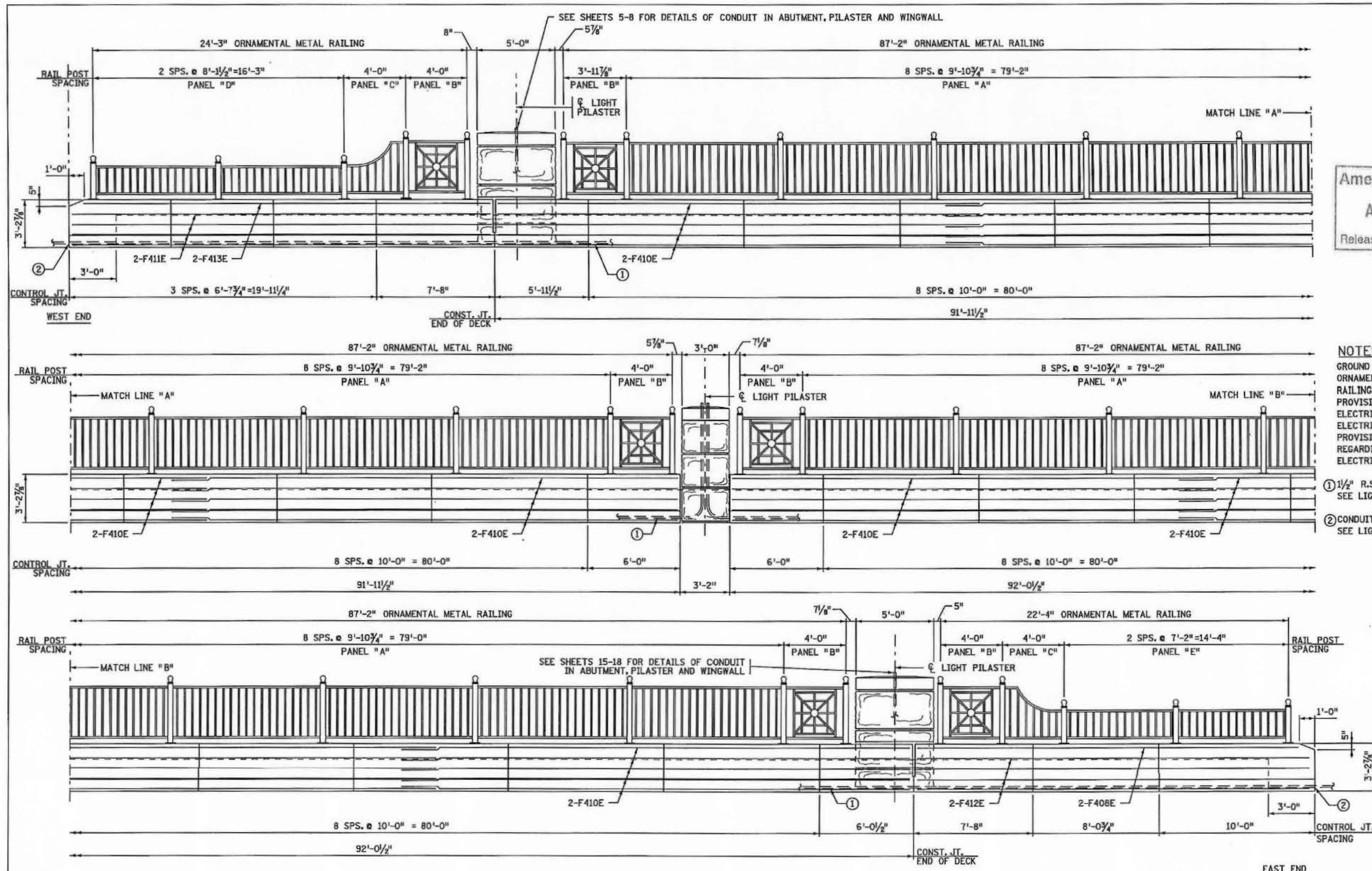
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: GEORGE W. GORRILL  
DATE: 4/10/14 LICENSE # 46863

INDOT ACCEPTANCE  
SIGNATURE: [Signature]  
DATE: 4/11/14



10-10-2014 08:52:46 AM r1738.dgn

NO	DATE	BY	CKD	APPR	REVISION



Ames Construction  
 APR 11 2014  
 Released for Construction

- NOTES:**
- GROUND ALL SECTIONS OF ORNAMENTAL METAL RAILINGS; SEE THE SPECIAL PROVISIONS. REFER TO THE ELECTRICAL PLANS AND ELECTRICAL SPECIAL PROVISIONS FOR DETAILS REGARDING BONDING MULTIPLE ELECTRICAL GROUNDING SYSTEMS.
  - ① 1/2" R.S.C. LIGHTING CONDUIT, SEE LIGHTING PLAN FOR DETAILS.
  - ② CONDUIT EXPANSION FITTING, SEE LIGHTING PLAN FOR DETAILS.

INSIDE ELEVATION - NORTH CONCRETE PARAPET (TYPE P-1 MOD.) & ORNAMENTAL METAL RAILING (ST. PAUL MOD.)

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: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE # 46863

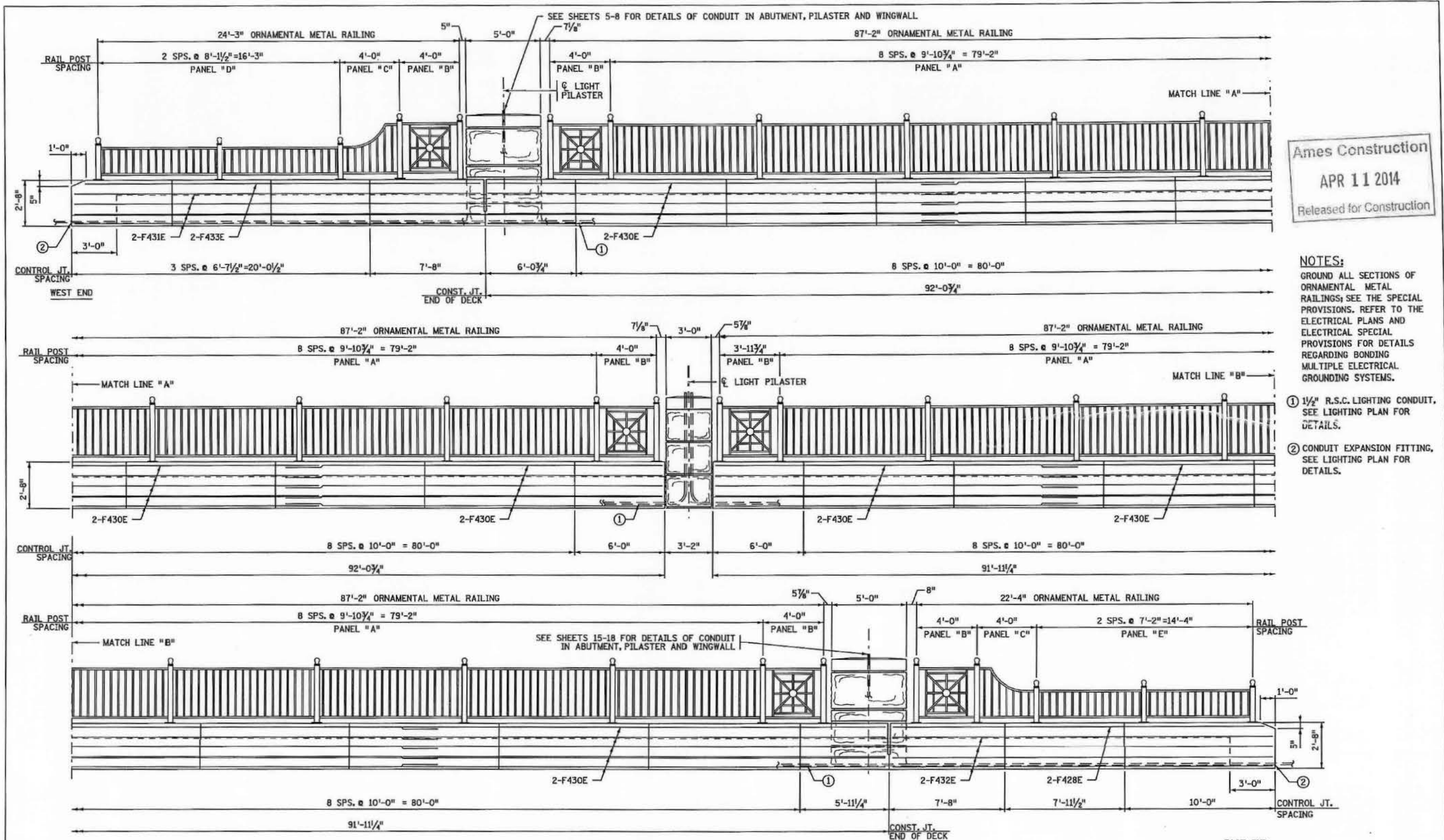
MMDOT ACCEPTANCE

SIGNATURE: *David J. Henn*  
 DATE: 4/11/14



DES: JLJ	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	
S.P. NO. 6280-62646		BRIDGE NO. 62646
ORNAMENTAL METAL RAILING (ST. PAUL MOD.) AND CONCRETE PARAPET (TYPE P-1 MOD.)		SHEET 39 OF 55





Ames Construction  
 APR 11 2014  
 Released for Construction

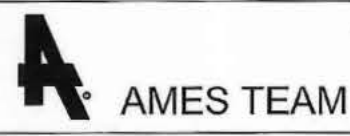
**NOTES:**  
 GROUND ALL SECTIONS OF ORNAMENTAL METAL RAILINGS; SEE THE SPECIAL PROVISIONS. REFER TO THE ELECTRICAL PLANS AND ELECTRICAL SPECIAL PROVISIONS FOR DETAILS REGARDING BONDING MULTIPLE ELECTRICAL GROUNDING SYSTEMS.

- ① 1/2" R.S.C. LIGHTING CONDUIT, SEE LIGHTING PLAN FOR DETAILS.
- ② CONDUIT EXPANSION FITTING, SEE LIGHTING PLAN FOR DETAILS.

INSIDE ELEVATION - SOUTH CONCRETE PARAPET (TYPE P-4 MOD.) & ORNAMENTAL METAL RAILING (ST. PAUL MOD.)

DES: JLEJ	DR: MMF	APPROVED:
CHK: ZAT	CHK: ZAT	

S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 40 OF 55  
 ORNAMENTAL METAL RAILING (ST. PAUL MOD.) AND CONCRETE PARAPET (TYPE P-4 MOD.)

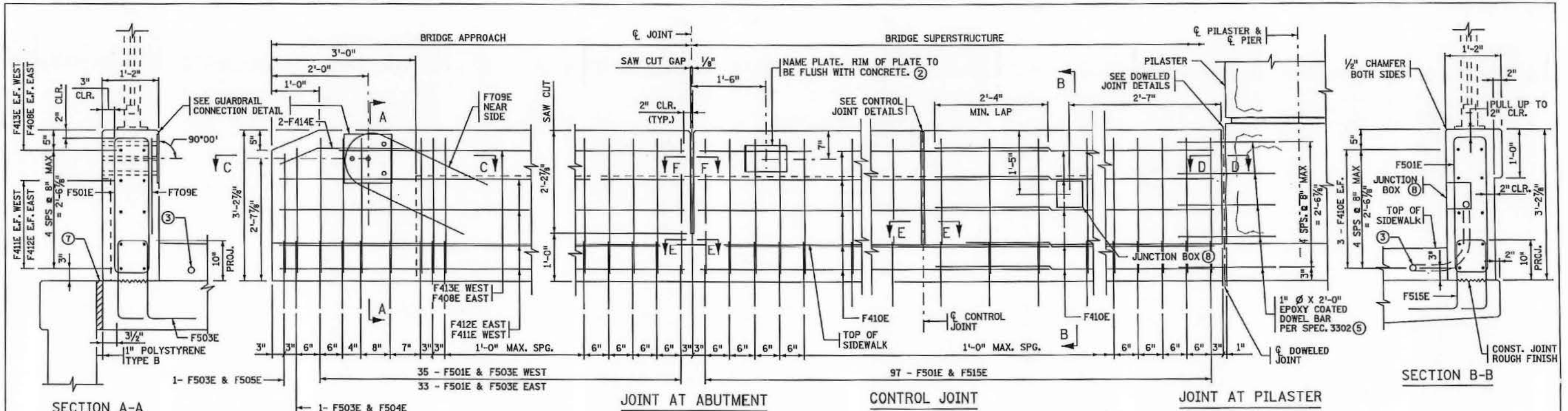


AMDOT ACCEPTANCE  
 SIGNATURE: *D.J. Herzog*  
 DATE: 4/11/14

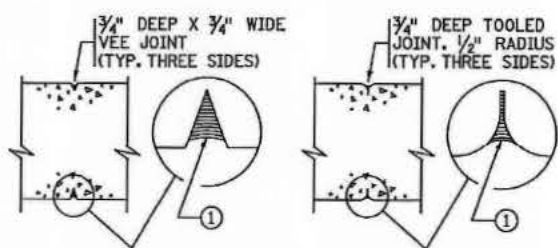
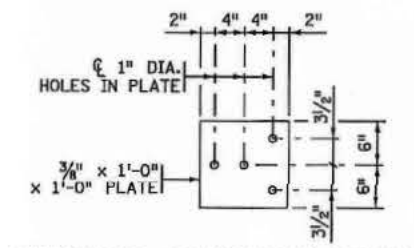
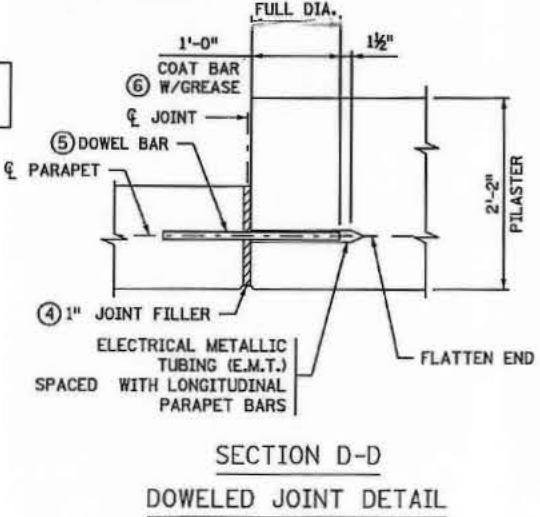
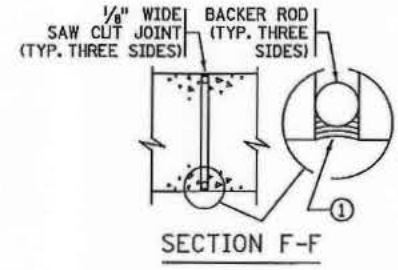
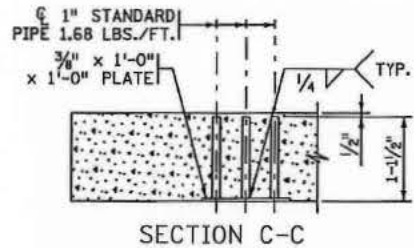
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: GEORGE W. GORRILL  
 DATE: 4/10/14 LICENSE # 46863

NO	DATE	BY	CHKD	APPR	REVISION

DRAWING NO. 1



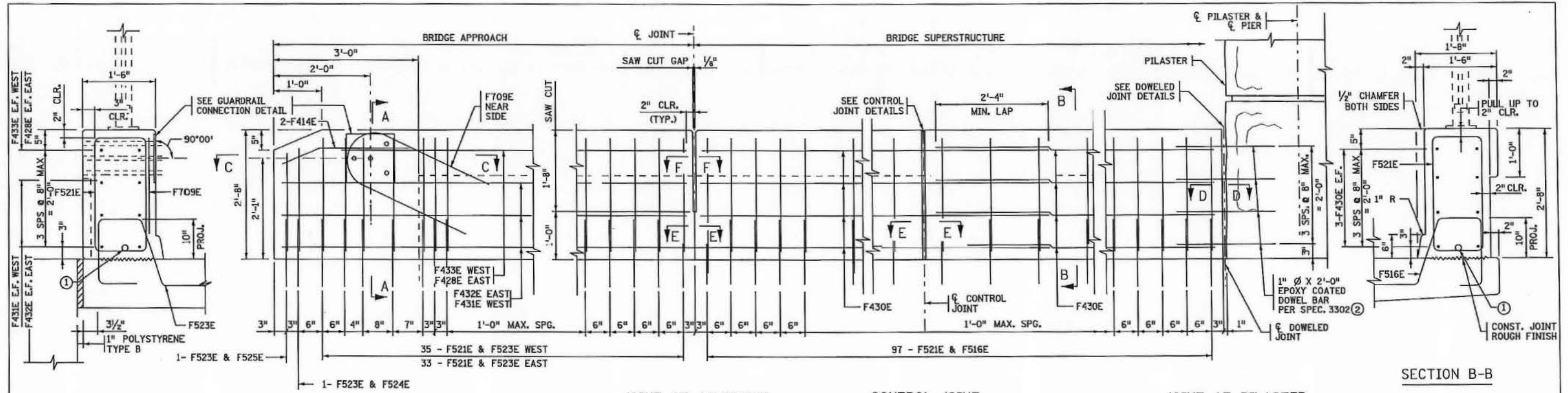
INSIDE ELEVATION OF PARAPET  
 PARAPET MEETS TEST LEVEL 2  
 REQUIREMENTS OF NCHRP REPORT 350



- NOTES:**
- GROUND ALL SECTIONS OF ORNAMENTAL METAL RAILINGS; SEE THE SPECIAL PROVISIONS. REFER TO THE ELECTRICAL PLANS AND ELECTRICAL SPECIAL PROVISIONS FOR DETAILS REGARDING BONDING MULTIPLE ELECTRICAL GROUNDING SYSTEMS.
  - NORTH SIDE CONCRETE PARAPET = 516 LBS./FT. (0.127 CU. YDS./FT.)
  - FINISH ALL EDGES OF PARAPET WITH 1/2" CHAMFER, EXCEPT WHERE OTHERWISE NOTED.
  - MAXIMUM SPACING OF CONTROL JOINTS ON SUPERSTRUCTURE, APPROACH AND WINGWALL SHALL BE 10 FT. SEE SHEET 39 FOR JOINT SPACING.
  - GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL, SPEC. 3306.
  - SEE SHEET 43 FOR PILASTER DETAILS.
  - PARAPET QUANTITIES ARE LISTED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.
  - SEE SHEET 42 FOR BILL OF REINFORCEMENT.
  - ① JOINT SEALANT PER MNDOT APPROVED/QUALIFIED PRODUCTS LIST - CRACK AND JOINT MATERIALS - SILICONE JOINT SEALERS.
  - ② SEE SHEET 1 FOR LOCATION OF NAME PLATE.
  - ③ 1/2" R.S.C. LIGHTING CONDUIT. SEE LIGHTING PLAN FOR DETAIL.
  - ④ JOINT FILLER SHALL BE CORK (SPEC. 2401.3E3).
  - ⑤ DOWEL BAR ASSEMBLY MUST BE INSTALLED PERPENDICULAR TO JOINT AND PARALLEL TO THE PARAPET FACE AND TO EACH OTHER.
  - ⑥ GREASE SHALL BE AN APPROVED HIGH PRESSURE TYPE THAT IS EFFECTIVE OVER THE RANGE OF EXPECTED TEMPERATURES AND RESISTANT TO CHEMICAL ACTION.
  - ⑦ SEAL WITH SELF-LEVELING SILICONE PER MNDOT 3722.
  - ⑧ ADJUST F410E BARS TO AVOID JUNCTION BOX.

Ames Construction  
 APR 11 2014  
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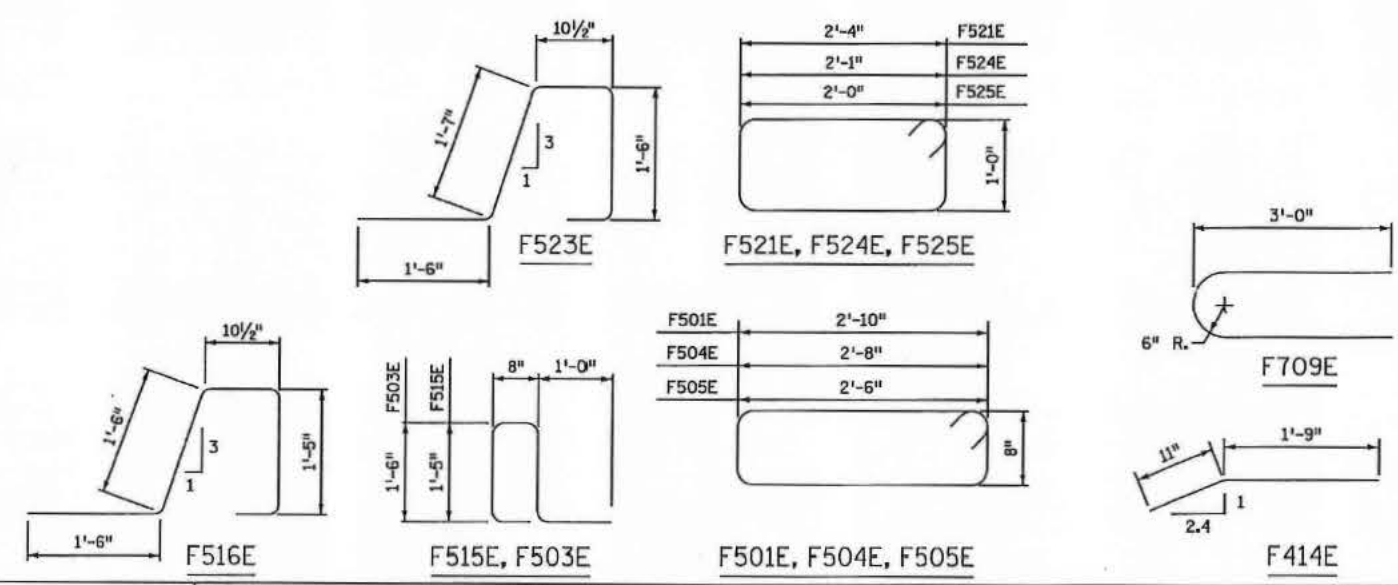
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: <u>GEORGE W. GORRILL</u> DATE: <u>4/10/14</u> LICENSE # <u>45863</u>					MNDOT ACCEPTANCE SIGNATURE: <u>D. J. Hermy</u> DATE: <u>4/11/14</u>		DES: <u>AW</u> DR: <u>MMF</u> APPROVED: CHK: <u>ZAT</u> CHK: <u>Jt.J</u>		S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET CONCRETE PARAPET (TYPE MOD. P1, TL-2) 41 OF 55	
NO. DATE BY CKD APPR REVISION					AMES TEAM					



JOINT AT ABUTMENT  
(SEMI-INTEGRAL ABUTMENT)  
INSIDE ELEVATION OF PARAPET  
PARAPET MEETS TEST LEVEL 4  
REQUIREMENTS OF NCHRP REPORT 350

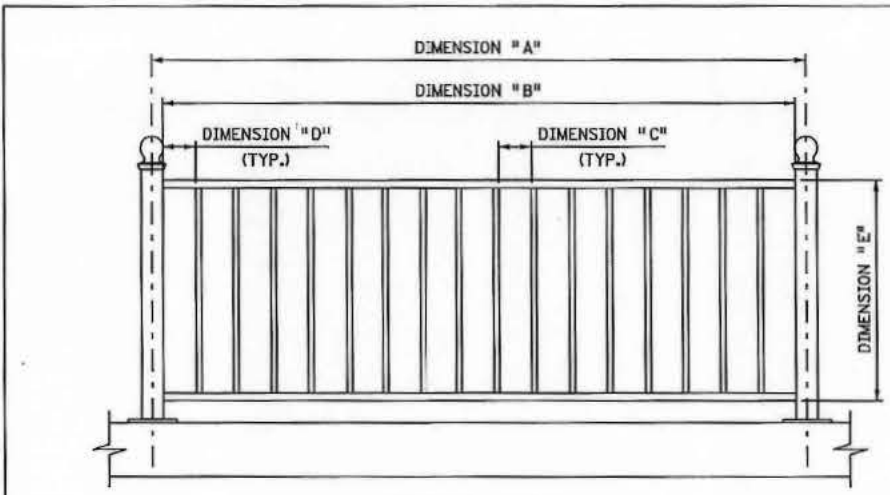
Ames Construction  
APR 11 2014  
Released for Construction

BILL OF REINFORCEMENT FOR PARAPET				
BAR	NO.	LENGTH	SHAPE	LOCATION
F501E	262	7'-11"	[Symbol]	PARAPET VERTICAL
F503E	72	5'-3"	[Symbol]	PARAPET VERTICAL
F504E	2	7'-7"	[Symbol]	PARAPET VERTICAL
F505E	2	7'-3"	[Symbol]	PARAPET VERTICAL
F408E	2	24'-4"	[Symbol]	PARAPET LONGIT.
F709E	4	6'-7"	[Symbol]	PARAPET VERTICAL
F410E	60	32'-3"	[Symbol]	PARAPET LONGIT.
F411E	8	27'-6"	[Symbol]	PARAPET LONGIT.
F412E	8	25'-6"	[Symbol]	PARAPET LONGIT.
F413E	2	26'-2"	[Symbol]	PARAPET LONGIT.
F414E	8	2'-8"	[Symbol]	PARAPET END
F515E	194	5'-1"	[Symbol]	PARAPET VERTICAL
F516E	194	5'-9"	[Symbol]	PARAPET VERTICAL
F521E	262	7'-7"	[Symbol]	PARAPET VERTICAL
F523E	72	5'-11"	[Symbol]	PARAPET VERTICAL
F524E	2	7'-1"	[Symbol]	PARAPET VERTICAL
F525E	2	6'-11"	[Symbol]	PARAPET VERTICAL
F428E	2	24'-0"	[Symbol]	PARAPET LONGIT.
F430E	48	32'-3"	[Symbol]	PARAPET LONGIT.
F431E	6	27'-6"	[Symbol]	PARAPET LONGIT.
F432E	6	25'-6"	[Symbol]	PARAPET LONGIT.
F433E	2	26'-4"	[Symbol]	PARAPET LONGIT.

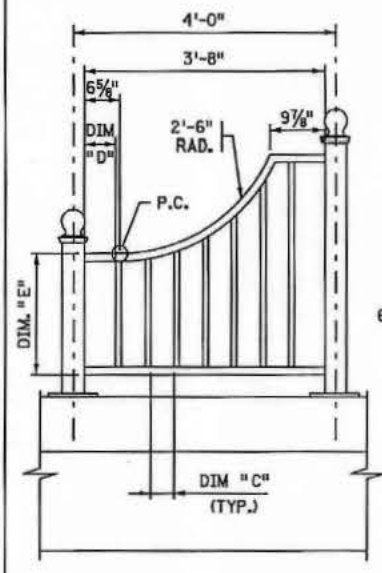


- NOTES:
- GROUND ALL SECTIONS OF ORNAMENTAL METAL RAILINGS; SEE THE SPECIAL PROVISIONS. REFER TO THE ELECTRICAL PLANS AND ELECTRICAL SPECIAL PROVISIONS FOR DETAILS REGARDING BONDING MULTIPLE ELECTRICAL GROUNDING SYSTEMS.
  - SOUTH SIDE CONCRETE PARAPET = 574 LBS/FT. (0.142 CU. YDS/FT.)
  - FINISH ALL EDGES OF PARAPET WITH 1/2" CHAMFER, EXCEPT WHERE OTHERWISE NOTED.
  - MAXIMUM SPACING OF CONTROL JOINTS ON SUPERSTRUCTURE, APPROACH AND WINGWALL SHALL BE 10 FT. SEE SHEET 40 FOR JOINT SPACING.
  - GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL, SPEC. 3306.
  - SEE SHEET 43 FOR PILASTER DETAILS.
  - PARAPET QUANTITIES ARE LISTED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.
  - SEE SHEET 41 FOR SECTIONS C-C, D-D, E-E, F-F, GUARDRAIL CONNECTION DETAIL AND DOWLED JOINT DETAIL.
  - ① 1/2" R.S.C. LIGHTING CONDUIT. SEE LIGHTING PLAN FOR DETAIL.
  - ② DOWEL BAR ASSEMBLY MUST BE INSTALLED PERPENDICULAR TO JOINT AND PARALLEL TO THE PARAPET FACE AND TO EACH OTHER.

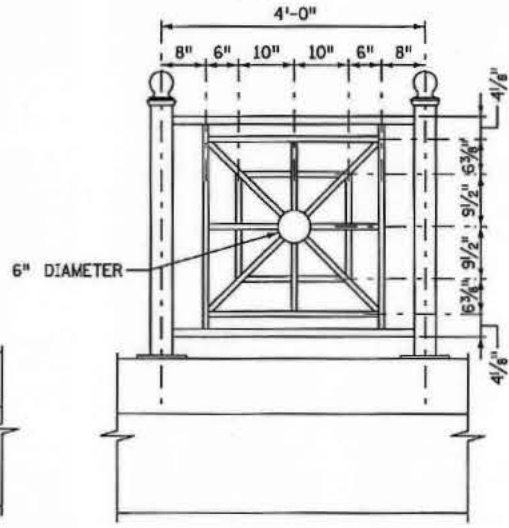
17114 18-APR-2014 CB-62646-43-REV.001	NO	DATE	BY	CKD	APPR	REVISION	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: <u>GEORGE W. GORRILL</u> DATE: <u>4/10/14</u> LICENSE # <u>46863</u>	MNDOT ACCEPTANCE SIGNATURE: <u>Dw J Heron</u> DATE: <u>4/11/14</u>	<b>AMES TEAM</b>	DES: AW CHK: ZAT	DR: MMF CHK: JLJ	APPROVED:	S.P. NO. 6280-62646 BRIDGE NO. 62646 CONCRETE PARAPET (TYPE MOD. P4, TL-4)	SHEET 42 OF 55
	DRAWING NO. 1													



TYPICAL PANEL  
PANEL TYPES "A", "D", OR "E"

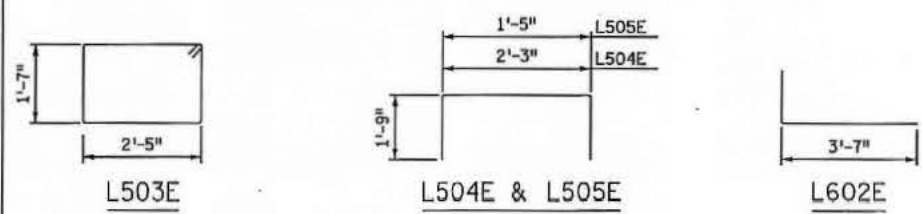


TRANSITION PANEL  
PANEL TYPE "C"

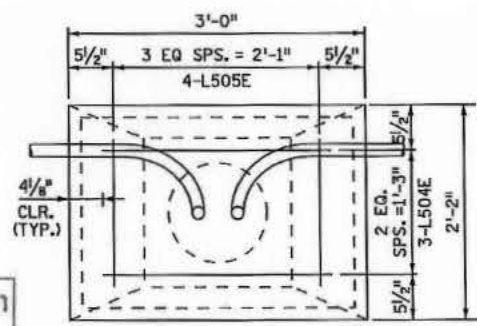


END PANEL  
PANEL TYPE "B"

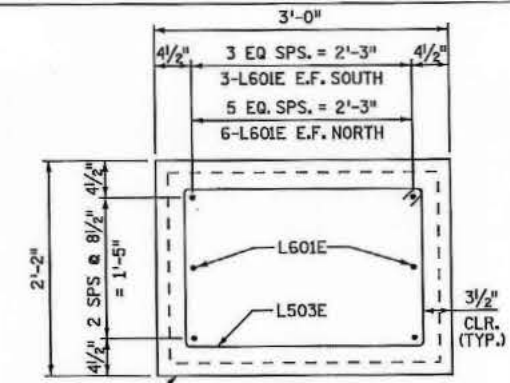
TYPICAL PANEL DIMENSION TABLE						
PANEL TYPE	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	QUANTITY
PANEL TYPE "A"	9'-10 3/4"	9'-6 3/4"	5"	5 7/8"	3'-4"	32
PANEL TYPE "B"	SEE DETAIL					12
PANEL TYPE "C"	SEE DETAIL					4
PANEL TYPE "D"	8'-1 1/2"	7'-9 1/2"	5"	4 1/2"	1'-10"	4
PANEL TYPE "E"	7'-2"	6'-10"	5"	4 1/2"	1'-10"	4



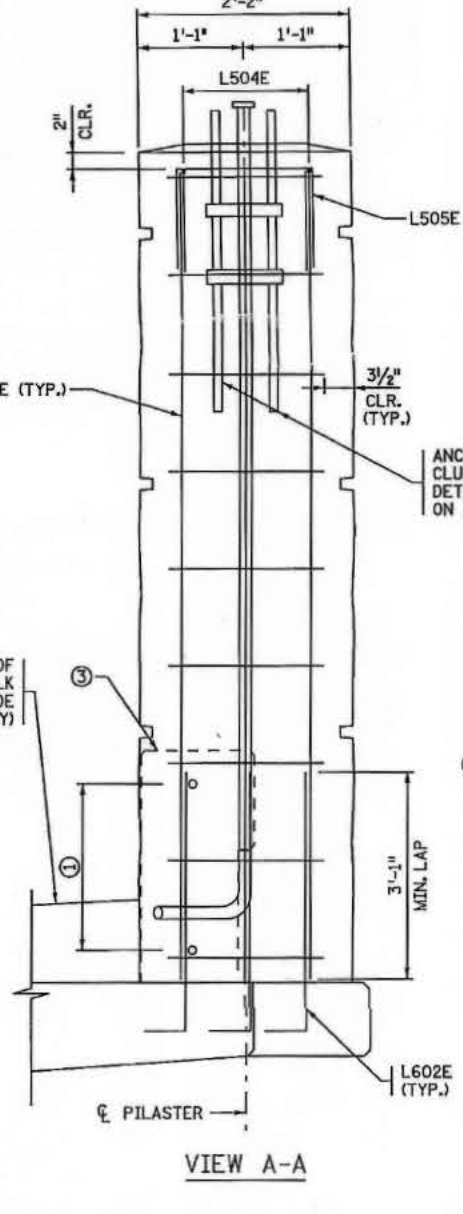
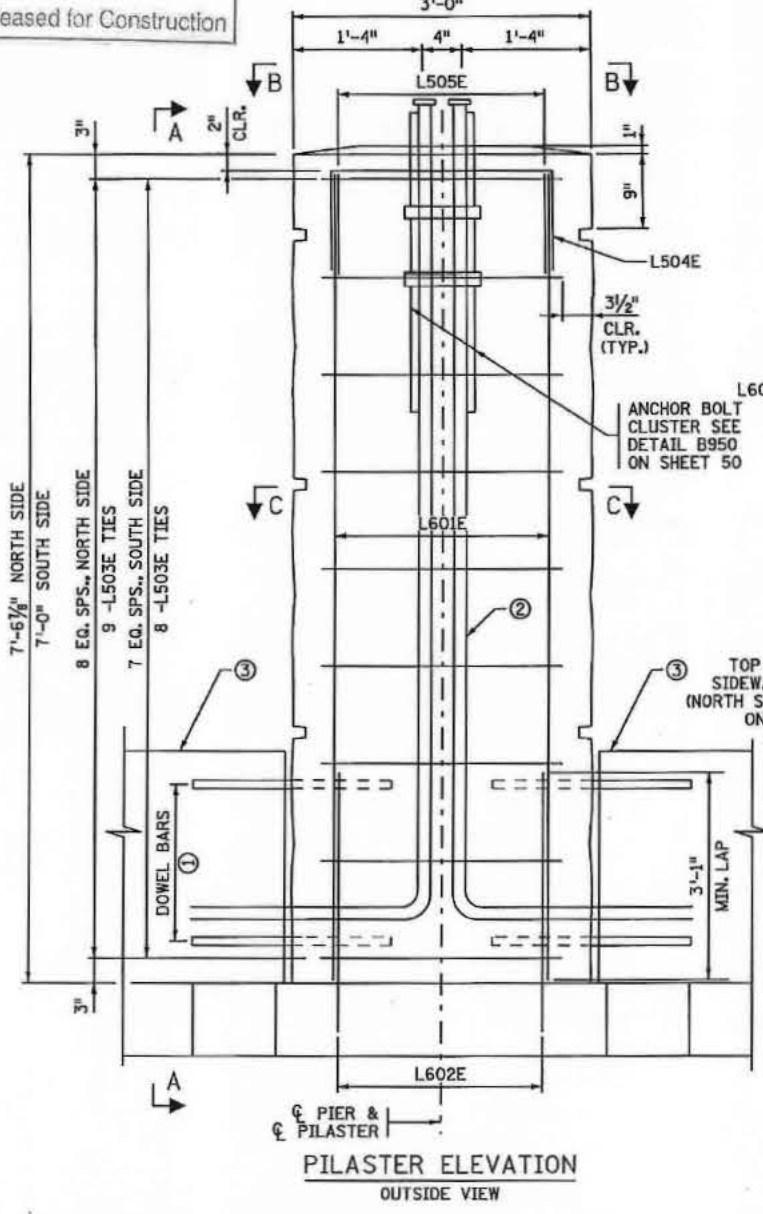
Ames Construction  
APR 11 2014  
Released for Construction



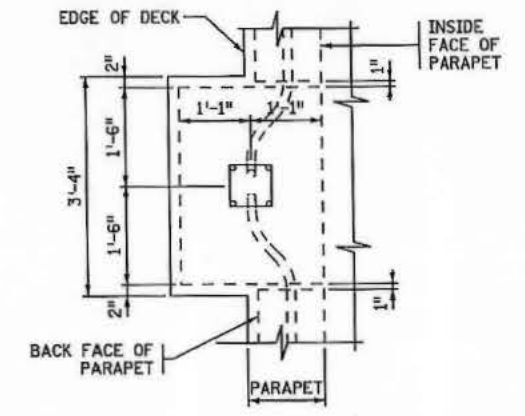
VIEW B-B



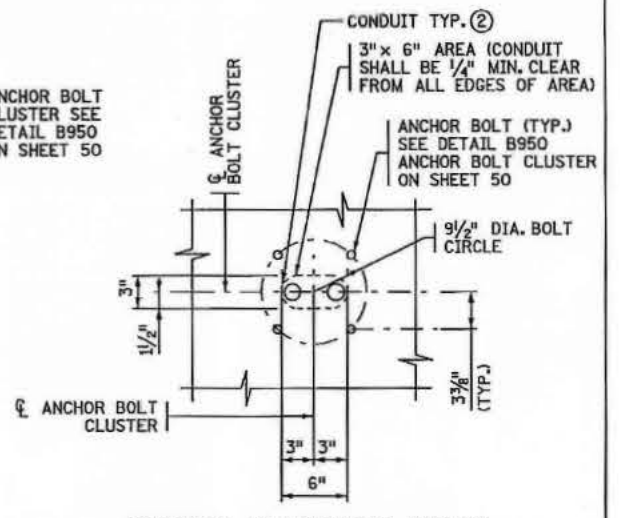
SECTION C-C



BILL OF REINFORCEMENT FOR LIGHT PILASTERS				
BAR	NO.	LENGTH	SHAPE	LOCATION
L601E	22	6'-8"	—	PILASTER VERTICAL
L602E	22	4'-7"	—	PILASTER VERTICAL
L503E	17	8'-11"	□	LONGIT. TIE
L504E	6	5'-9"	┌	VERTICAL TIE
L505E	8	4'-11"	└	VERTICAL TIE



LIGHT POLE ANCHORAGE AT PIER PILASTER



CONDUIT PLACEMENT DETAIL

NOTES:  
ALL DIMENSIONS GIVEN ALONG C/L OF RAILING.  
BOND AND GROUND THE CONDUIT SYSTEM (LIGHTING) IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF Mn/DOT SPEC 2545.3R.

① DOWELS FOR DOWEL JOINT, SEE SHEET 41.  
② THE 1/2" DIA. CONDUIT SHALL EXTEND 3" MIN. ABOVE THE PILASTER AND BE CAPPED.  
③ SEE CONCRETE PARAPET SHEETS FOR TYPICAL PARAPET REINFORCEMENT.

NO.	DATE	BY	CKD	APPR	REVISION

DRAWING NO. 17115  
08-APR-2014  
2545.3R-62646-417-43.dgn

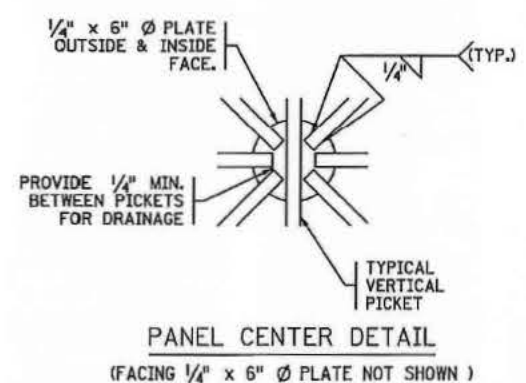
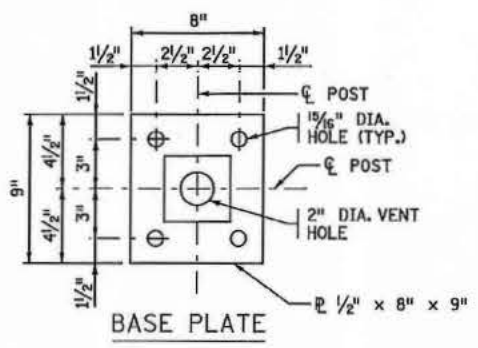
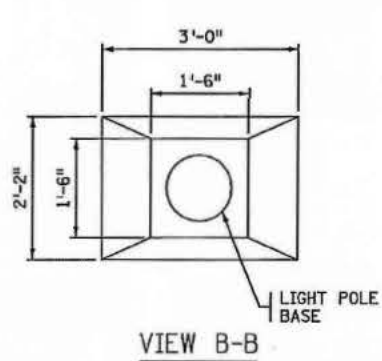
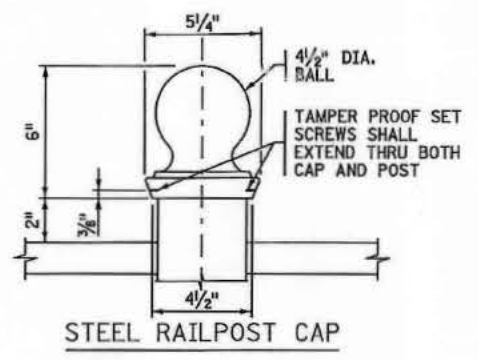
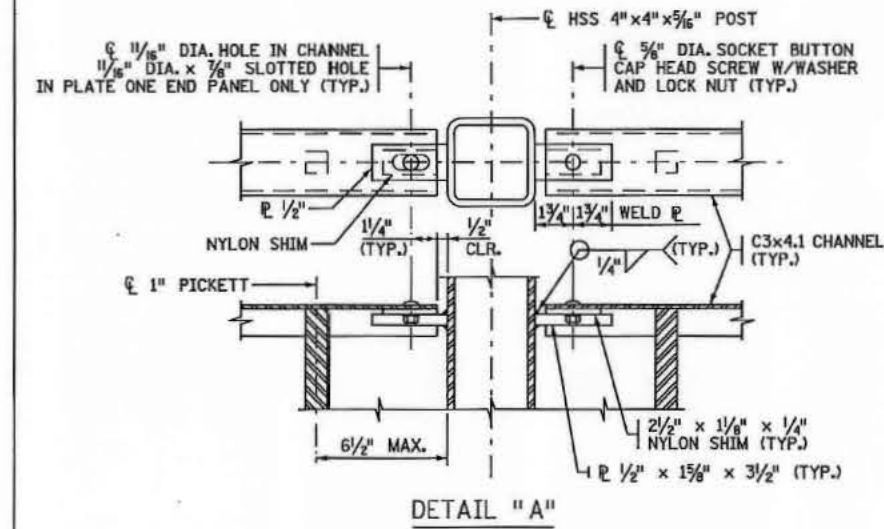
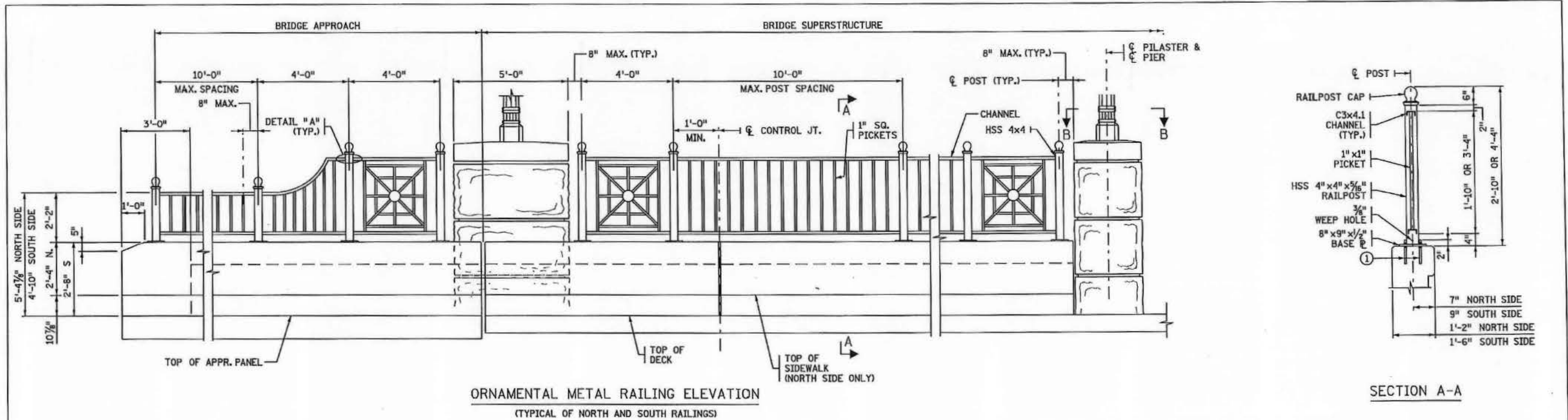
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GEORGE W. GORRILL  
DATE: 4/10/14 LICENSE: 45863

MNDOT ACCEPTANCE  
SIGNATURE: *Dw J Horn*  
DATE: 4/11/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 43 OF 55
PILASTER DETAILS		



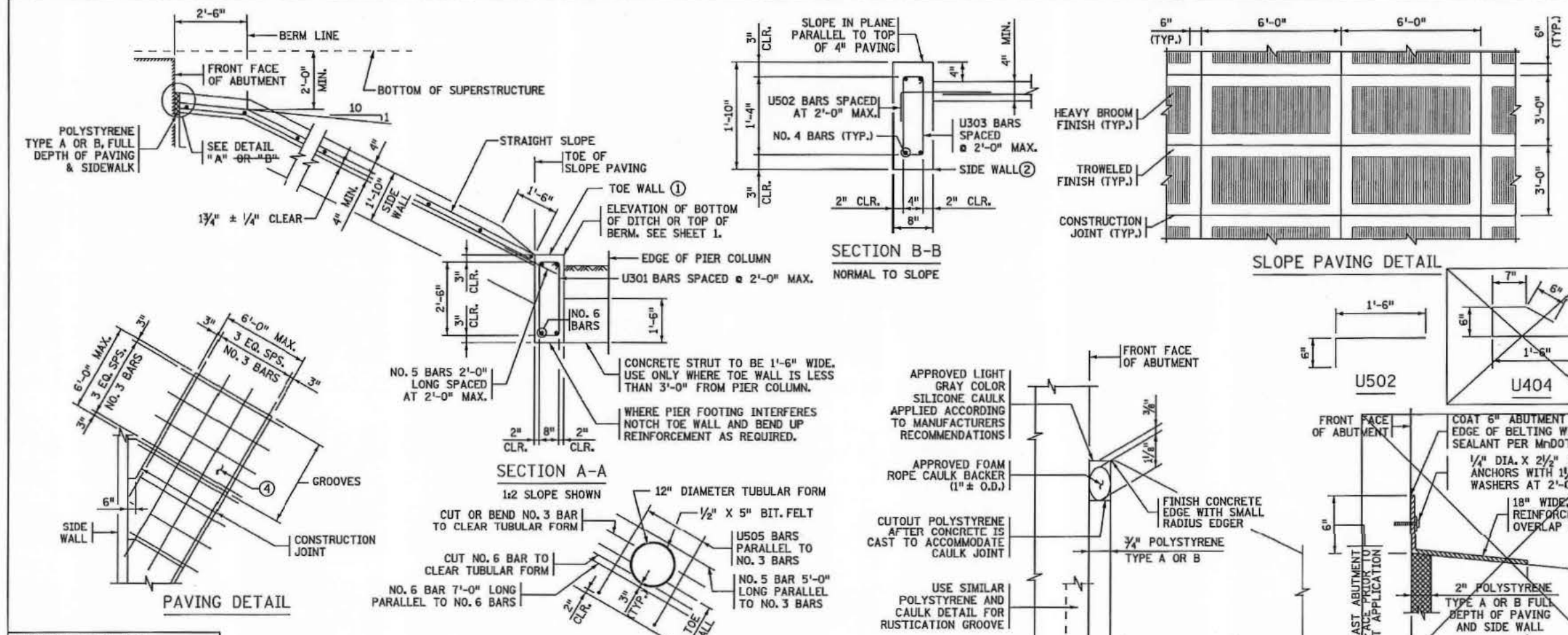
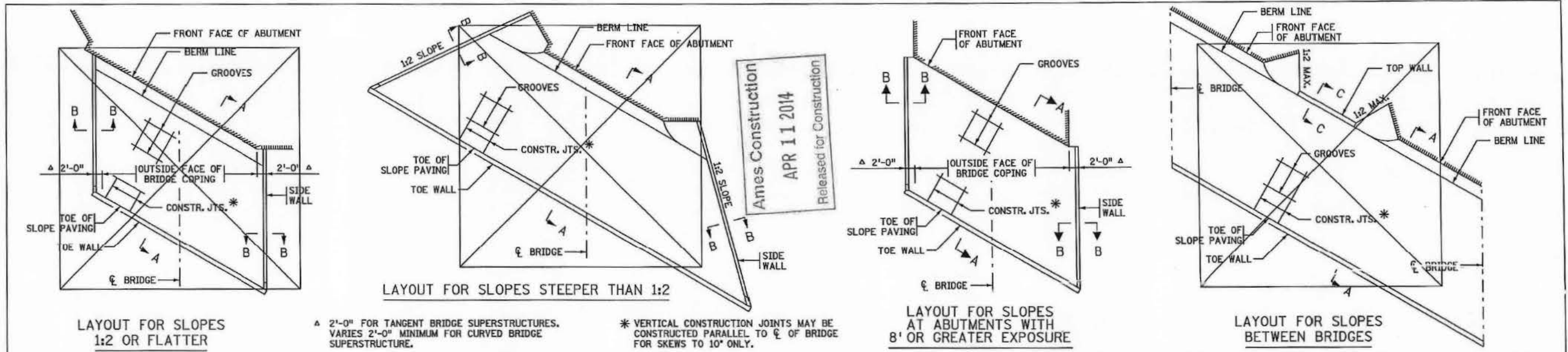
- NOTES:**
- HORIZONTAL RAILS SHALL BE CAMBERED/CURVED WHERE APPLICABLE AND PARALLEL TO THE EDGE OF DECK PROFILE.
  - DRILLED IN ANCHORAGES WILL BE PERMITTED IN LIEU OF ANCHORAGE SHOWN, SEE NOTE 1. SPACE RAILPOST ANCHORAGE TO CLEAR REINFORCEMENT IN CONCRETE PARAPET.
  - ALL STRUCTURAL STEEL MATERIAL (EXCEPT POSTS) SHALL COMPLY WITH MnDOT SPEC.3306, UNLESS OTHERWISE NOTED.
  - RAILING POSTS SHALL CONFORM TO MnDOT SPEC. 3361, TYPE A.
  - GALVANIZE BOLTS, NUTS AND WASHERS PER MnDOT SPEC. 3394. AFTER FABRICATION.
  - ALL RAILING MEMBERS SHALL BE FLAT AFTER FABRICATION AND GALVANIZING TO WITHIN 1/8" IN 10 FT. VERTICALLY AND HORIZONTALLY BY MECHANICAL MEANS WITHOUT DAMAGE TO THE ZINC COATING.
  - VENT HOLES SHALL BE DRILLED IN THE RAILING POST BASE AS NECESSARY TO FACILITATE GALVANIZING. SEE SPECIAL PROVISIONS FOR PAINT TO BE APPLIED TO METAL RAILING.
  - MAX. CONTROL JOINT SPACING SHALL BE 10'-0". SEE SHEET 40 FOR JOINT SPACING AND PANEL LAYOUT.
  - METAL RAILING SHALL BE CONTINUOUSLY GROUNDED, SEE SPECIAL PROVISIONS. METAL RAILING SHALL BE CONTINUOUSLY GROUNDED WITH 5/8" DIA. COPPER ROD PER MnDOT SPEC. 2557.
  - RAILPOSTS AND PICKETS SHALL BE VERTICAL.
  - ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF METAL RAILING. SET VERTICAL.
  - ① 5/8" DIA. GALVANIZED CHEMICAL ANCHOR RODS, MnDOT SPEC. 3385, TYPE A, WITH HEX NUTS AND WASHERS. MINIMUM ULTIMATE BOND STRENGTH SHALL BE 20,000 LBS. WITH A MINIMUM 6" EMBEDMENT LENGTH.

Ames Construction  
APR 11 2014  
Released for Construction

DES: AW CHK: ZAT	DR: MMF CHK: JLJ	APPROVED:	
		S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 44	
ORNAMENTAL METAL RAILING (ST. PAUL MOD.)		OF 55	

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: GEORGE W. CORRILL DATE: 4/10/14 LICENSE # 46863	MnDOT ACCEPTANCE Signature: <i>David J. Heron</i> DATE: 4/11/14	AMES TEAM
---	---	-----------



- CONCRETE & REINFORCEMENT UNIT QUANTITIES**
- ① 0.111 CU. YD. OF CONCRETE/LIN. FT.  
8.37 LBS. OF REINFORCEMENT/LIN. FT.
  - ② 0.046 CU. YD. OF CONCRETE/LIN. FT.  
4.46 LBS. OF REINFORCEMENT/LIN. FT.
  - ③ 0.058 CU. YD. OF CONCRETE/LIN. FT.  
3.70 LBS. OF REINFORCEMENT/LIN. FT.  
-BASED ON A SLOPE OF 1:2-
  - ④ 0.111 CU. YD. OF CONCRETE/SQ. YD.  
4.50 LBS. OF REINFORCEMENT/SQ. YD.

**GENERAL NOTE**  
SLOPES ARE EXPRESSED AS A RATIO OF VERTICAL DISTANCE: HORIZONTAL DISTANCE.  
SLOPE PAVING PER SPEC. 2514.

REVISION: 04-17-2013

APPROVED: SEPTEMBER 26, 2003

DES:	AW	DR:	GJS	APPROVED:
CHK:	JLJ	CHK:	JLJ	

STATE BRIDGE ENGINEER

NO	DATE	BY	CKD	APPR	REVISION

DETAIL WHERE GUARDRAIL POST EXTENDS THROUGH SLOPE PAVING

SPACE U301 BARS TO MISS TUBULAR FORM

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: GEORGE W. GORRILL  
DATE: 4/11/14  
LICENSE: 48863

APPROVED LIGHT GRAY COLOR SILICONE CAULK APPLIED ACCORDING TO MANUFACTURERS RECOMMENDATIONS

APPROVED FOAM ROPE CAULK BACKER (1" ± O.D.)

CUTOUT POLYSTYRENE AFTER CONCRETE IS CAST TO ACCOMMODATE CAULK JOINT

USE SIMILAR POLYSTYRENE AND CAULK DETAIL FOR RUSTICATION GROOVE

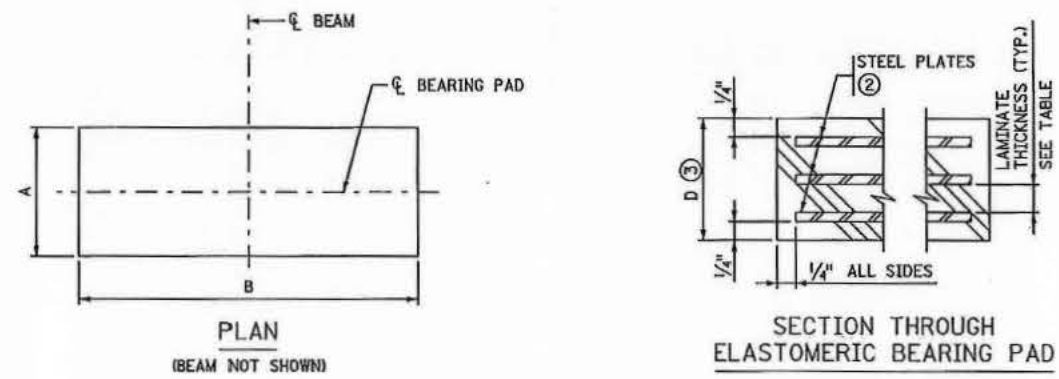
MDOT ACCEPTANCE  
D.W.J. Heron  
SIGNATURE  
DATE: 4/11/14

AMES TEAM

S.P. NO. 6280-62646  
BRIDGE NO. 62646  
SHEET 45 OF 55

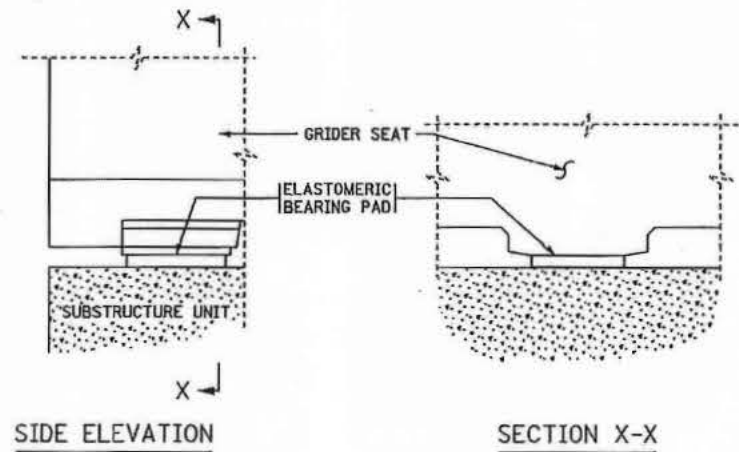
CONCRETE SLOPE PAVING UNDER BRIDGES

FIG. 5-397.301



PLAN  
(BEAM NOT SHOWN)

SECTION THROUGH  
ELASTOMERIC BEARING PAD



SIDE ELEVATION

SECTION X-X

PAD TYPE	LOCATION	BEAM SIZE	BEARING PAD SIZE			STEEL PLATES	LAMINATES		SHAPE FACTOR
			A	B	D		NO.	THICK.	
E1	ABUT	MN	12	24	1 1/8	3	2	1/2	8.0
F1	PIER	MN	12	24	1 1/8	3	2	1/2	8.0

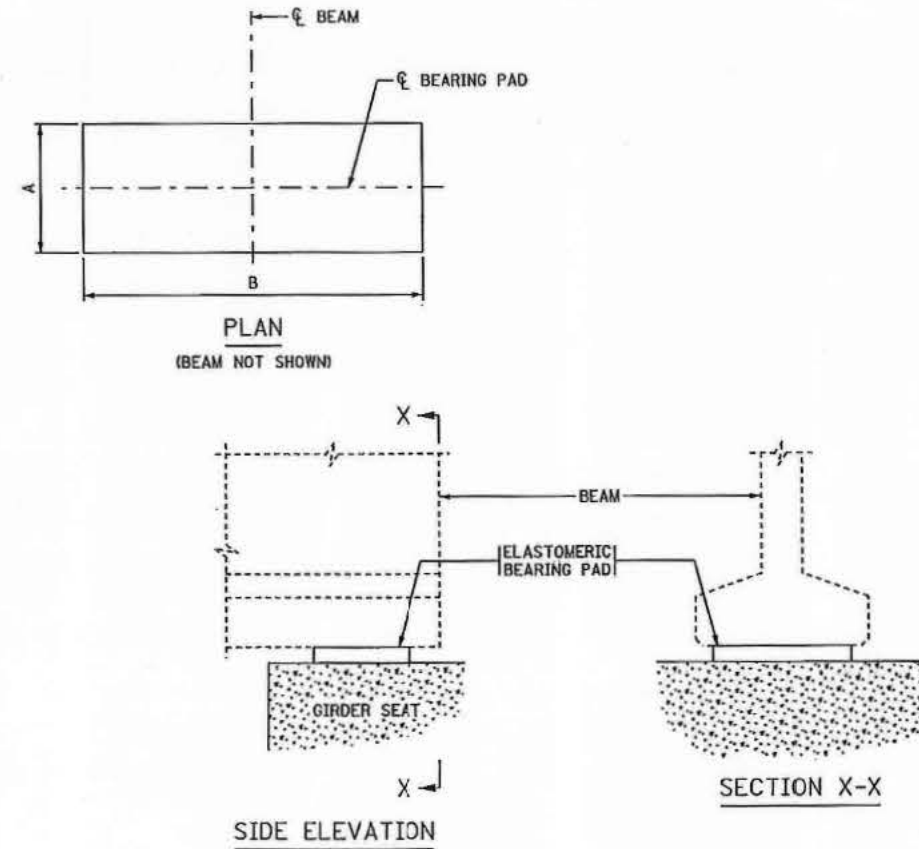
QUANTITIES	
PAD TYPE	COUNT
E1	14
F1	14

**NOTES:**

ELASTOMERIC MATERIALS AND PAD CONSTRUCTION SHALL COMPLY WITH SPEC. 3741.

ALL STEEL PLATES SHALL COMPLY WITH MnDOT SPEC 3306.

MODIFICATIONS: CHANGED THE BEAM TO SHOW SLIDE SHOE. INCLUDED REINFORCED BEARING PAD DETAILS. ADDED QUANTITIES



PLAN  
(BEAM NOT SHOWN)

SIDE ELEVATION

SECTION X-X

PAD TYPE	LOCATION	BEAM SIZE	BEARING PAD SIZE			SHAPE FACTOR
			A	B	D	
1	GIRDER	MN	12	24	1/2	8.0

QUANTITIES	
PAD TYPE	COUNT
1	28

**NOTES:**

ELASTOMERIC MATERIALS AND PAD CONSTRUCTION SHALL COMPLY WITH SPEC. 3741.

① "D" INDICATES THE THICKNESS OF THE BEARING PAD.

MODIFICATIONS: ADDED QUANTITIES

Ames Construction  
MAR 06 2014  
Released for Construction

DES: ZAT  
CHK: GDF  
DR: MMF  
CHK: GDF  
APPROVED:

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION  
ELASTOMERIC BEARING PAD  
(SEAT BEAM)

REVISION  
12-17-2008  
05-24-2012

DETAIL NO.  
B305  
(MOD.)

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION  
ELASTOMERIC BEARING PAD  
(PRESTRESSED CONCRETE BEAMS)

REVISION  
12-17-2008  
05-24-2012

DETAIL NO.  
B305  
(MOD.)

NO.	DATE	BY	CHKD	APPR	REVISION

DRAWING NO. 1

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: George W. Lorenz

DATE: 2/27/14 LICENSE: 46863

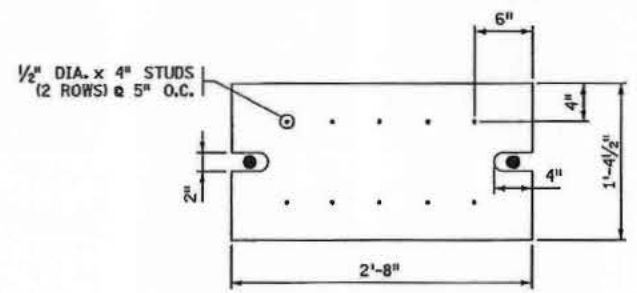
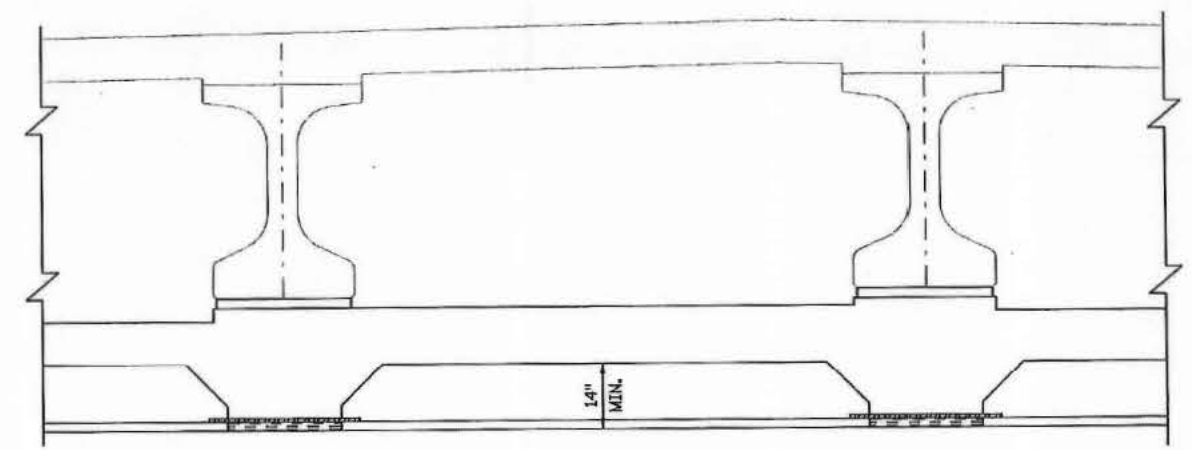
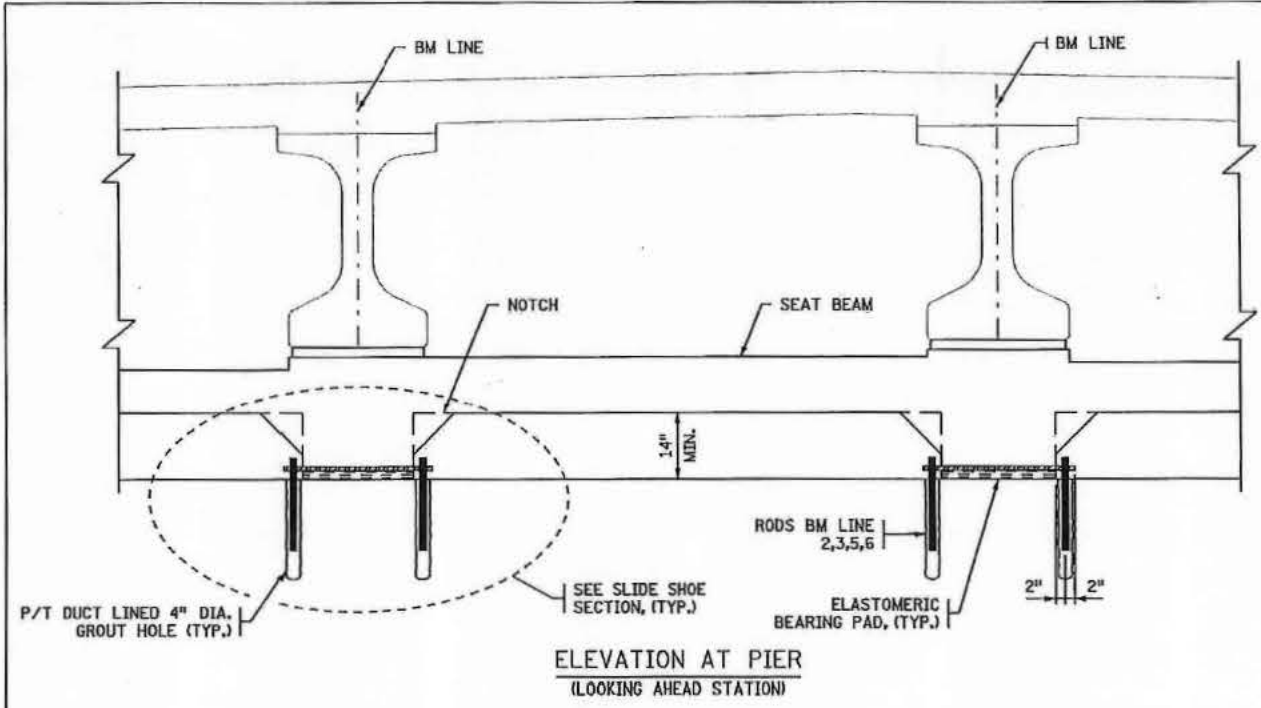
MNDOT ACCEPTANCE

SIGNATURE: DWJ Heron

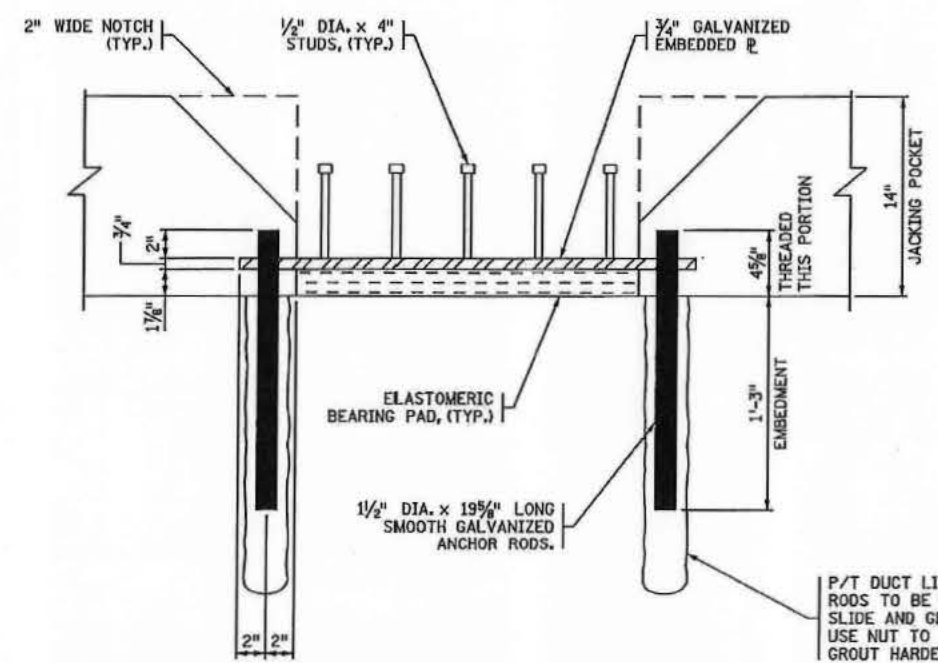
DATE: 3/3/14

**AMES TEAM**

S.P. NO. 6280-62646  
BRIDGE NO. 62646  
SHEET 46 OF 55  
BEARING DETAILS

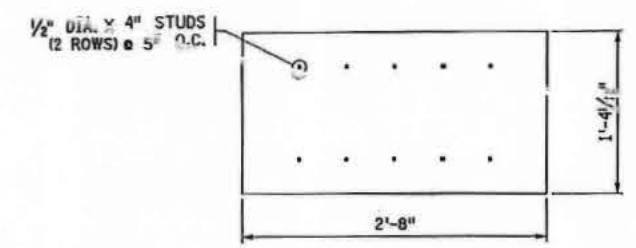


3/4" GALVANIZED EMBEDDED PLATE (AT PIER)  
TYP. ANCHOR ROD LOCATIONS



SLIDE SHOE SECTION

ELEVATION AT ABUTMENT



3/4" GALVANIZED EMBEDDED PLATE (AT ABUTMENT)

QUANTITIES	
1/2" DIA. x 19 5/8" GALV. RODS.	16
SLOTTED PL'S	14
UNSLOTTED PL'S	14

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MAR 06 2014  
Released for Construction

NOTES:  
STEEL PLATES SHALL COMPLY WITH SPEC 3306. GALVANIZE PER SPEC 3392.  
ANCHOR RODS SHALL COMPLY WITH SPEC 3306. GALVANIZE PER SPEC 3392.

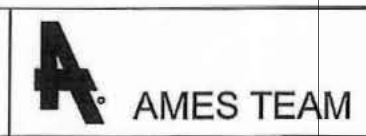
P/T DUCT LINED HOLE TO BE 21" DEEP. RODS TO BE PICKED UP AFTER BRIDGE SLIDE AND GROUTED IN PLACE AS SHOWN. USE NUT TO HOLD ROD IN PLACE UNTIL GROUT HARDENS, THEN REMOVE NUT.

NO.	DATE	BY	CHKD	APPR	REVISION

DRAWING NO. 1

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: GEORGE W. GORRUM  
DATE: 2/27/14 LICENSE # 46863

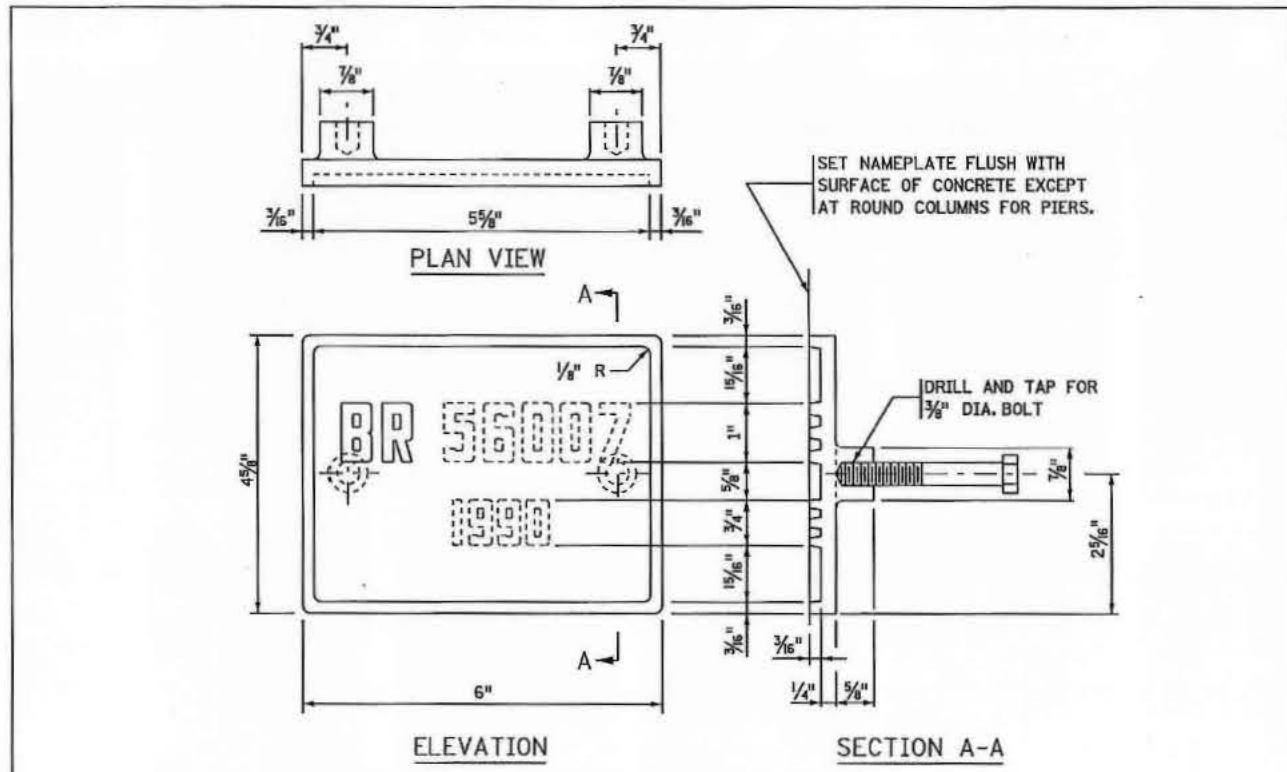
AWDOT ACCEPTANCE  
SIGNATURE: D. J. Herman  
DATE: 3/3/14



S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET 47 OF 55
BEARING DETAILS		

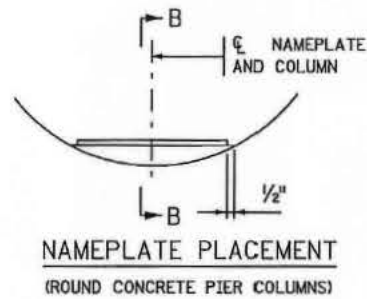






THE DASHED NUMBERS SHOWN ABOVE ARE FOR ILLUSTRATION. DATA TO BE SHOWN ON NAMEPLATE IS AS FOLLOWS:

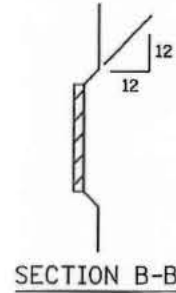
BRIDGE 62646  
YEAR 2014



NAMEPLATE PLACEMENT  
(ROUND CONCRETE PIER COLUMNS)

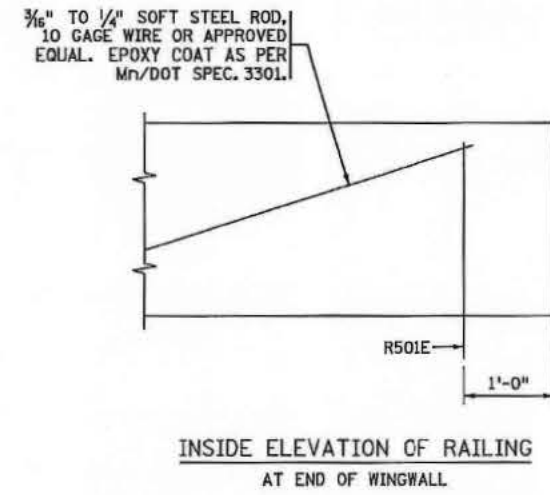
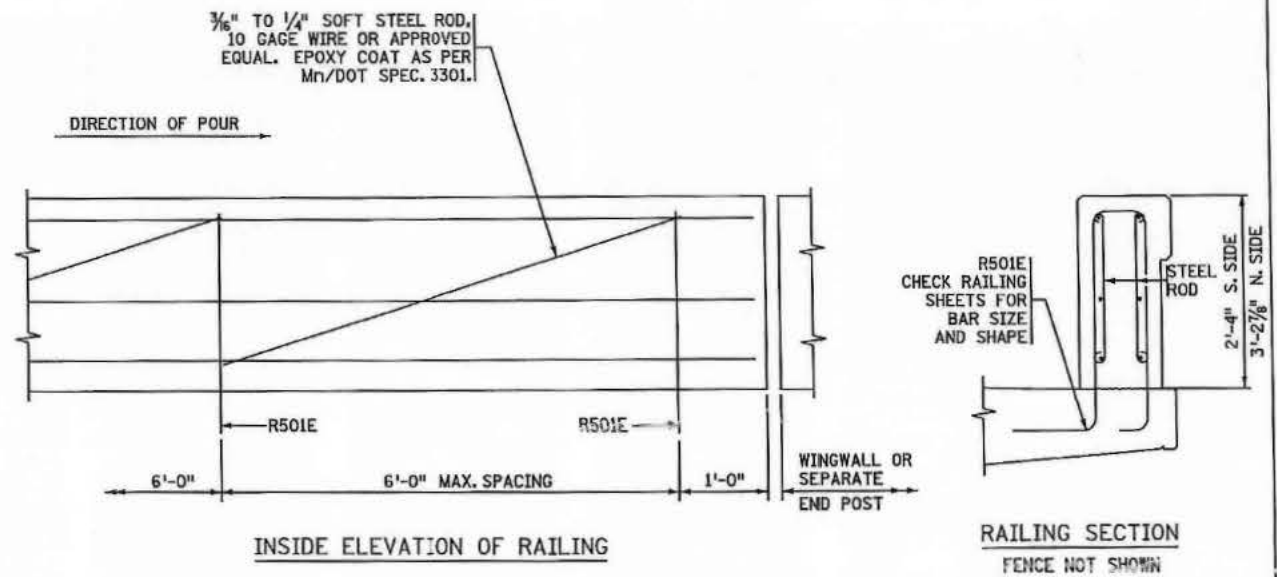
1234567890

NUMBERS FOR NAMEPLATE



SECTION B-B

**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.



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APR 11 2014  
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**NOTES:**  
CONTRACTOR WILL TOOL V-GROOVE AT DEFLECTION JOINTS AT TIME RAIL IS CAST AND SHALL EXTEND V-GROOVE AROUND ENTIRE PERIMETER OF RAIL.  
FOR ADDITIONAL DIMENSIONS, DETAILS, REINFORCEMENT AND NOTES SEE RAILING SHEET.  
FORM RAIL FOR A MINIMUM OF 2' ON EACH SIDE OF EXPANSION DEVICES, LIGHT STANDARDS AND DECK DRAIN BOX OUTS.  
~~PAY QUANTITIES WILL NOT BE ADJUSTED AS A RESULT OF SELECTING THIS ALTERNATE.~~  
USE A SIMILAR METHOD FOR TALLER RAILINGS OR MODIFIED VERSIONS OF THIS RAILING.

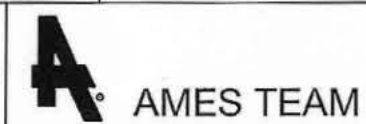
APPROVED: NOVEMBER 22, 2002	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
<i>Daniel W. Morgan</i> STATE BRIDGE ENGINEER	BRIDGE NAMEPLATE (FOR NEW BRIDGES)		B101

APPROVED: NOVEMBER 22, 2002	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION 4-17-2013	DETAIL NO.
<i>Daniel W. Morgan</i> STATE BRIDGE ENGINEER	CONCRETE PARAPET RAILING (SLIPFORM ALTERNATE)		B831

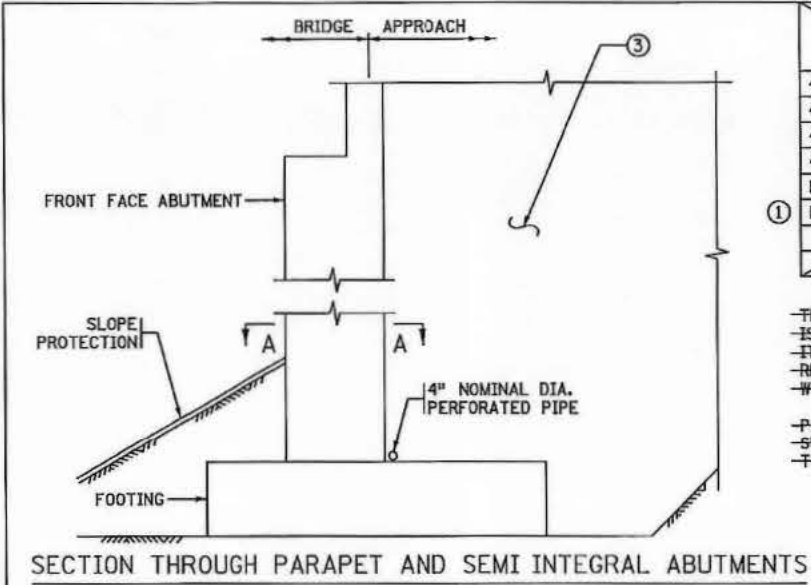
NO	DATE	BY	CHKD	APPR	REVISION

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: GEORGE W. GORRILL  
DATE: 4/11/14 LICENSE # 46863

MNDOT ACCEPTANCE  
SIGNATURE: *D. J. Heron*  
DATE: 4/11/14



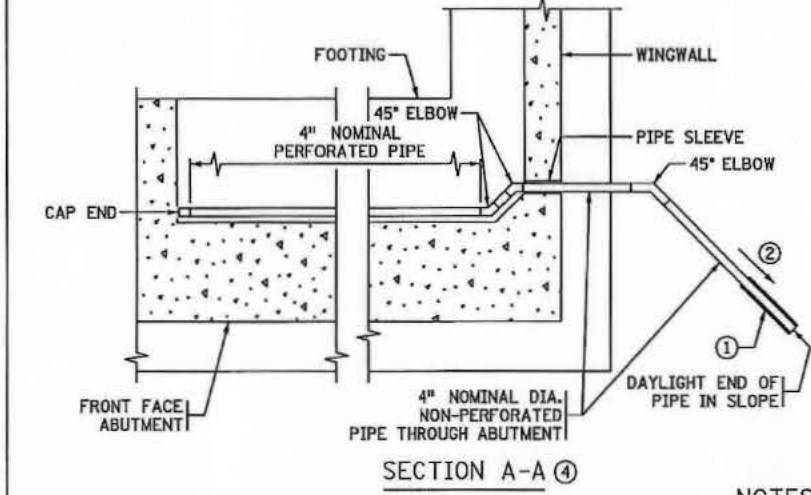
S.P. NO. 6280-62646	BRIDGE NO. 62646	SHEET
		49
	DETAILS	OF
		55



SUMMARY OF QUANTITIES FOR DRAINAGE SYSTEM	
4" DIA. PERFORATED PIPE	- LIN. FT.
4" DIA. NON-PERFORATED PIPE	- LIN. FT.
45° ELBOW	- EACH
4" DIA. END CAP	- EACH
PIPE SLEEVE	- EACH
PRECAST CONCRETE HEADWALL	- EACH
(FOR INFORMATION ONLY)	

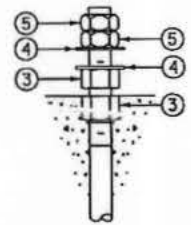
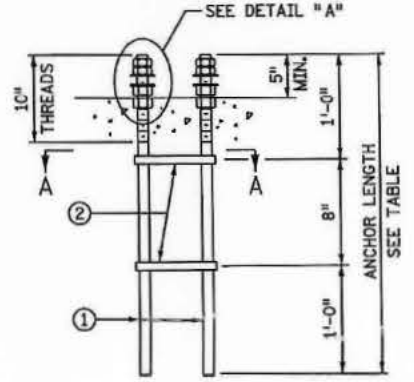
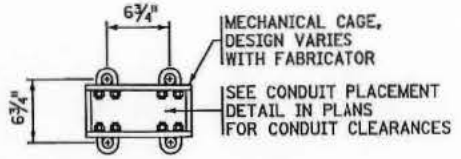
THE SUMMARY OF QUANTITIES FOR DRAINAGE SYSTEM IS AS SHOWN ABOVE. ANY ADDITIONAL MINOR ITEMS OR SLIGHT CHANGES OF QUANTITIES REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION.

PAYMENT WILL BE INCLUDED IN THE SINGLE LUMP-SUM PRICE FOR ITEM 2502.502 "DRAINAGE SYSTEM TYPE (B910)".



- NOTES:**
- ALL PIPE SHALL COMPLY WITH Mn/DOT SPEC. 3245.
  - WRAP PERFORATED PIPE WITH GEOTEXTILE AS PER Mn/DOT SPEC. 3733, TYPE 1. ATTACH TO PIPE AS PER Mn/DOT SPEC. 2502.
  - ① PRECAST CONCRETE HEADWALL WITH RODENT SCREEN. SEE STANDARD PLATE 3131 FOR DETAILS.
  - ② 1/8" PER FT. MINIMUM SLOPE.
  - ③ MATERIAL SHALL COMPLY WITH Mn/DOT SPEC. 3149.2B SELECT GRANULAR BORROW, MODIFIED SO THAT NO MORE THAN 10% PASSES A NO. 200 SIEVE. (UNDER GRADING PORTION OF CONTRACT)
  - ④ SEE SHEET 5 AND 15 FOR EXACT LOCATION OF DRAINAGE SYSTEM AT EACH ABUTMENT.

MODIFICATIONS:  
ADDED TWO 45° BENDS AT ABUTMENT CORNER FILLETS.



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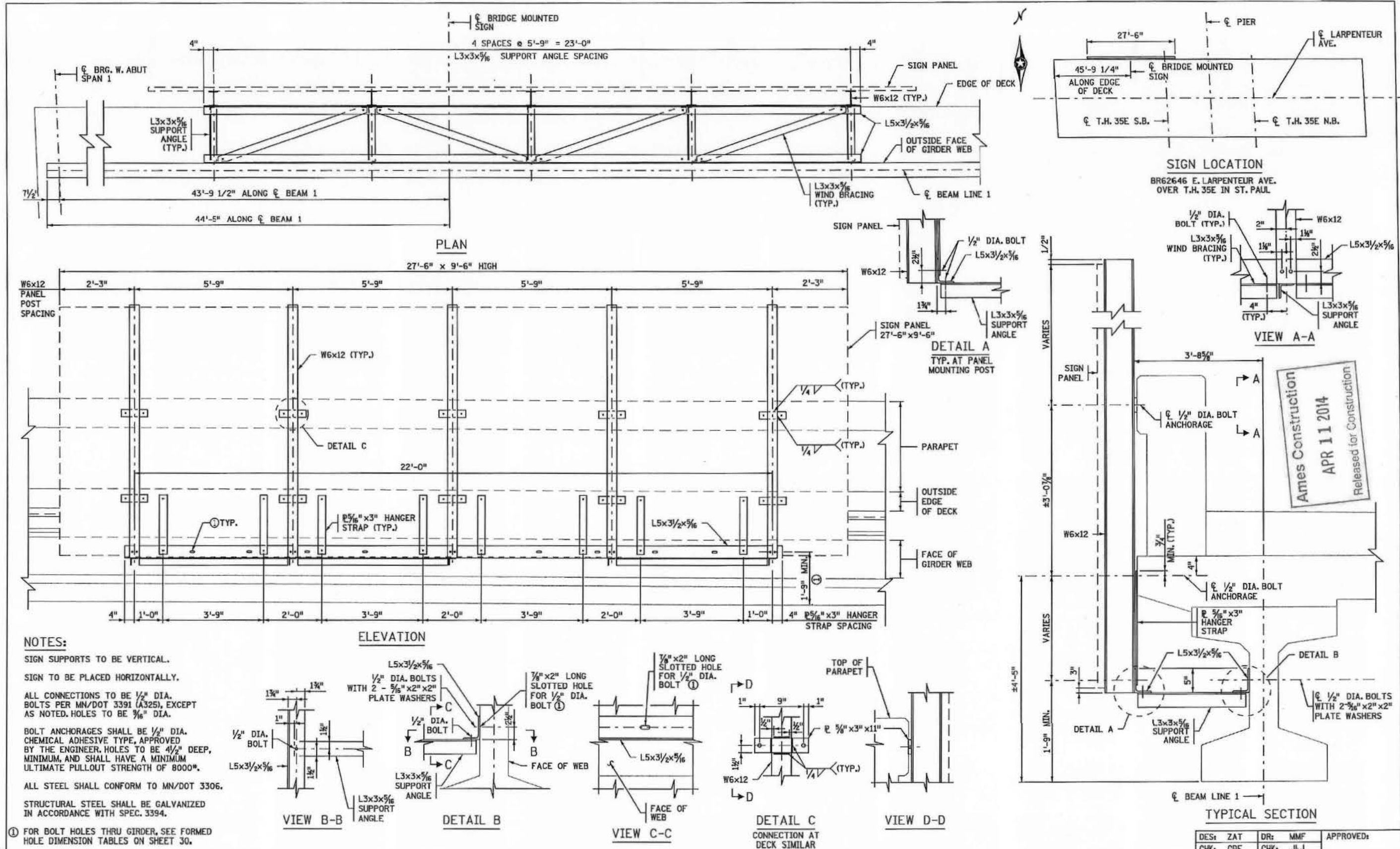
STANDARD RAIL TYPES (SEE PLANS FOR TYPE)	ANCHOR LENGTH
CONCRETE PARAPET TYPE P-1 MOD	2'-8"
CONCRETE PARAPET TYPE P-4 MOD	2'-8"

MODIFICATIONS:  
REMOVED TWO ANCHOR RODS AND ADJUSTED ELEVATION, MECHANICAL DETAILS ACCORDINGLY. REMOVED WELDED CAGE ALTERNATIVE. MODIFIED ANCHOR ROD DIA. TO 3/4".

- NOTES:**
- ALL RODS ARE TO BE 3/4" NOMINAL DIA. WITH 1 - 8UNC - 2A THREADS. HEAVY HEX NUTS, JAM NUTS, AND FLAT WASHERS PER Mn/DOT SPEC. 3391.2A FOR 3/4" DIA. THREADED RODS. NUTS TO BE TAPPED 1/64" OVERSIZED PRIOR TO GALVANIZING, AND RETAPPED TO STANDARD SIZE AFTER GALVANIZING.
  - GALVANIZE THREADED RODS, CAGES, AND NUTS AFTER FABRICATION AS PER Mn/DOT SPEC. 3392.
  - TOP OF THE LOWER NUTS SHALL BE FLUSH WITH TOP OF CONCRETE RAILING.
  - SUBSTITUTE MATERIALS PER Mn/DOT SPEC. 1605.
  - ① THREADED RODS, STEEL AS PER Mn/DOT SPEC. 3309, 3310, OR 3385 TYPE B (4 REQUIRED).
  - ② PROVIDE A MECHANICAL CAGE FOR ROD ALIGNMENT. STEEL AS PER Mn/DOT SPEC. 3306 (2 REQUIRED).
  - ③ HEAVY HEX NUTS FOR 3/4" DIA. RODS (8 REQUIRED).
  - ④ FLAT WASHERS FOR 3/4" DIA. RODS (8 REQUIRED).
  - ⑤ JAM NUTS FOR 3/4" DIA. RODS (8 REQUIRED).

APPROVED: MARCH 26, 2009	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISED 10-22-2009	DETAIL NO.  B910 MODIFIED	APPROVED: NOVEMBER 22, 2002	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISED 10-26-2004 03-02-2005	DETAIL NO.  B950 MODIFIED
<i>Daniel J. Morgan</i> STATE BRIDGE ENGINEER	DRAINAGE SYSTEM			<i>Daniel J. Morgan</i> STATE BRIDGE ENGINEER	ANCHOR BOLT CLUSTER FOR LIGHT POLES		
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: GEORGE W. GORRILL DATE: 4/11/14 LICENSE # 46863				MDT ACCEPTANCE <i>Daniel J. Morgan</i> SIGNATURE DATE: 4/11/14		S.P. NO. 6280-62646 BRIDGE NO. 62646 SHEET 50 OF 55 DETAILS	





**NOTES:**  
 SIGN SUPPORTS TO BE VERTICAL.  
 SIGN TO BE PLACED HORIZONTALLY.  
 ALL CONNECTIONS TO BE 1/2" DIA. BOLTS PER MN/DOT 3391 (A325), EXCEPT AS NOTED. HOLES TO BE 3/16" DIA.  
 BOLT ANCHORAGES SHALL BE 1/2" DIA. CHEMICAL ADHESIVE TYPE, APPROVED BY THE ENGINEER. HOLES TO BE 4 1/2" DEEP, MINIMUM, AND SHALL HAVE A MINIMUM ULTIMATE PULLOUT STRENGTH OF 8000#. ALL STEEL SHALL CONFORM TO MN/DOT 3306.  
 STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH SPEC. 3394.  
 ① FOR BOLT HOLES THRU GIRDER, SEE FORMED HOLE DIMENSION TABLES ON SHEET 30.

DES: ZAT CHK: GDF				DR: MMF CHK: JLJ		APPROVED:	
S.P. NO. 6280-62646				BRIDGE NO. 62646		SHEET	
BRIDGE MOUNTED SIGN				51 OF 55		AMES TEAM	

NO	DATE	BY	CHKD	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.

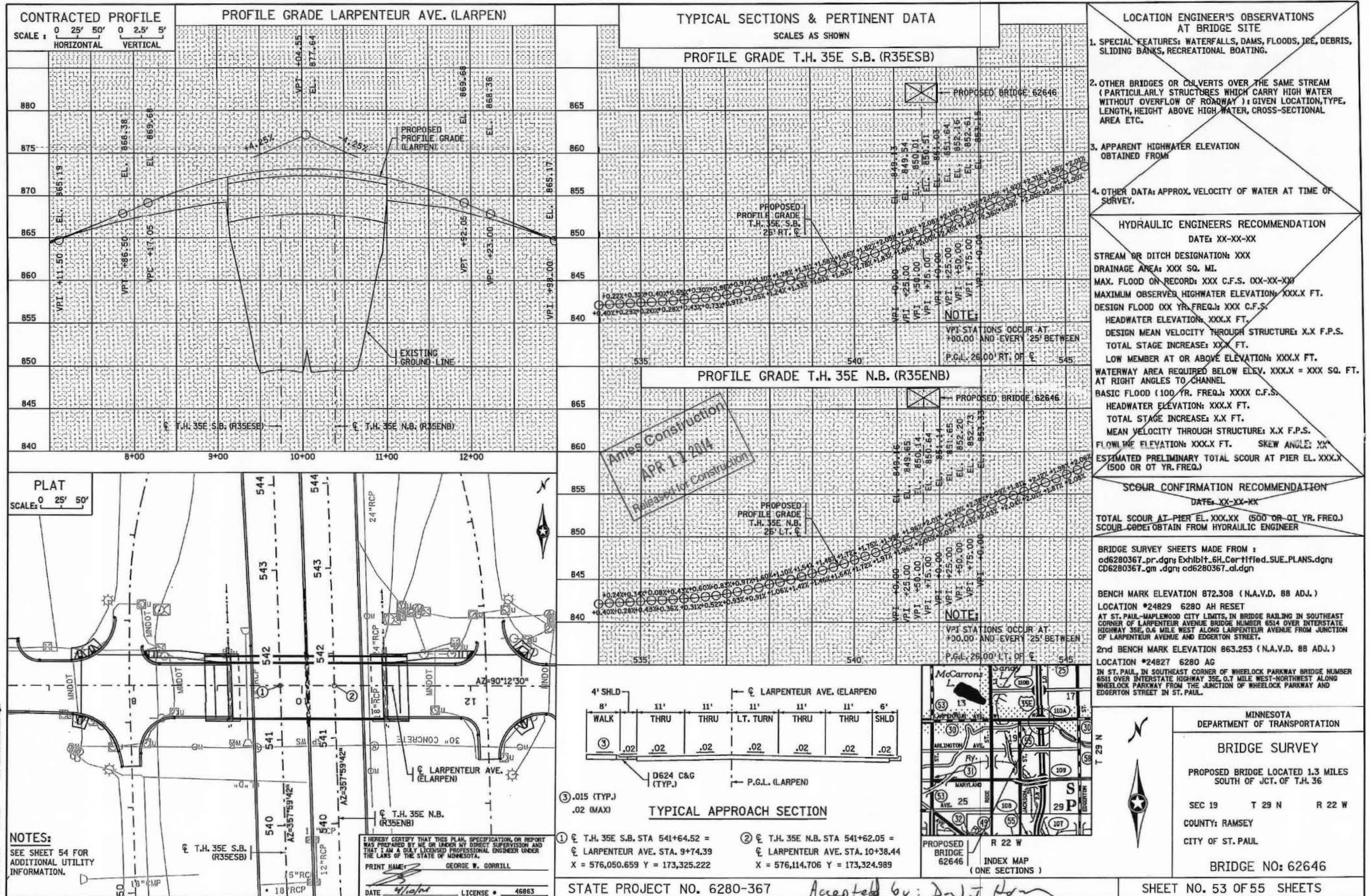
PRINT NAME: GEORGE W. GORRILL  
 DATE: 4/11/14  
 LICENSE: 46883

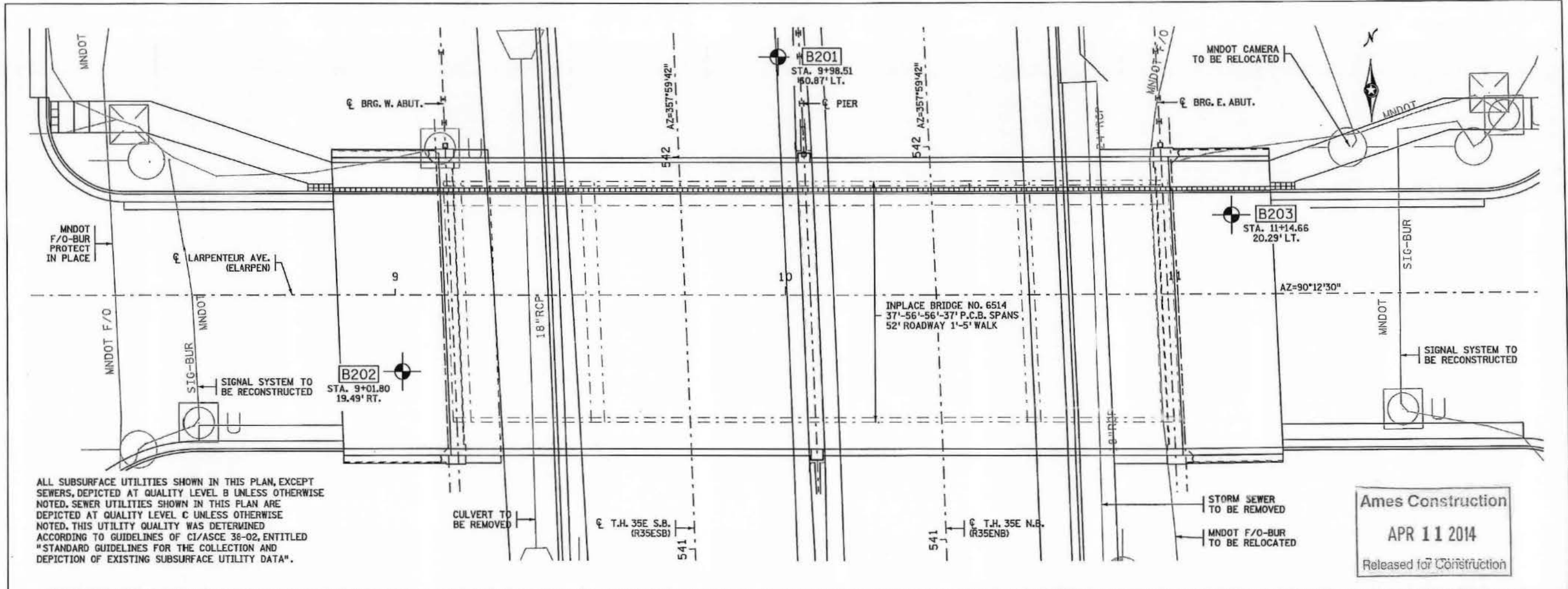
ANDOT ACCEPTANCE  
 SIGNATURE: [Signature]  
 DATE: 4/11/14

AMES TEAM

Ames Construction  
 APR 11 2014  
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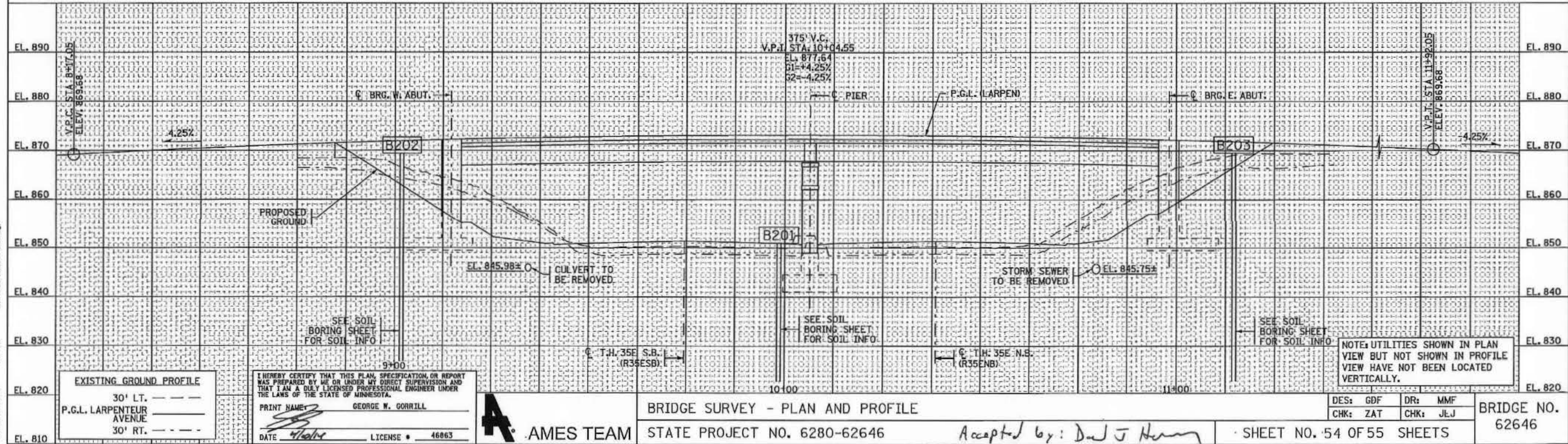






Ames Construction  
 APR 11 2014  
 Released for Construction

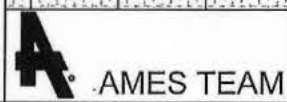
ALL SUBSURFACE UTILITIES SHOWN IN THIS PLAN, EXCEPT SEWERS, DEPICTED AT QUALITY LEVEL B UNLESS OTHERWISE NOTED. SEWER UTILITIES SHOWN IN THIS PLAN ARE DEPICTED AT QUALITY LEVEL C UNLESS OTHERWISE NOTED. THIS UTILITY QUALITY WAS DETERMINED ACCORDING TO GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".



NOTE: UTILITIES SHOWN IN PLAN VIEW BUT NOT SHOWN IN PROFILE VIEW HAVE NOT BEEN LOCATED VERTICALLY.

EXISTING GROUND PROFILE  
 30' LT. ---  
 P.C.L. LARPEUR AVENUE  
 30' RT. ---

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: GEORGE W. GORRILL  
 DATE: 4/11/14 LICENSE: 46863



BRIDGE SURVEY - PLAN AND PROFILE  
 STATE PROJECT NO. 6280-62646

Accepted by: *Dan J. Henry*  
 Date: 4/11/14

DES: GDF DR: MMF  
 CHK: ZAT CHK: JEL

BRIDGE NO. 62646

SHEET NO. 54 OF 55 SHEETS

08-APR-2014 17:19 C:\p2646.stn\54.dgn

