

GENERAL NOTES

1.0 GENERAL

- 1.1 THE CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO FABRICATION TO ENSURE ACCURACY OF THE EXPANSION JOINT.
 - 1.2 ALL WORK SHALL COMPLY WITH THE STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (ADOPTED 1-1-07) AND REVISED BY SUPPLEMENT SPECIFICATIONS DATED 1-1-10.
 - 1.3 THE EXPANSION JOINTS SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 520 "BRIDGE EXPANSION JOINTS" OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS "MODULAR EXPANSION JOINT".
 - 1.4 IN CASE OF DISCREPANCY, THE FOLLOWING HIERARCHY OF CONTRACT DOCUMENTS SHALL BE FOLLOWED PER SECTION 105.05 "COORDINATION OF THE CONTRACT DOCUMENTS" OF THE STANDARD SPECIFICATIONS:
 - SPECIAL PROVISIONS
 - PLANS
 - RECURRING SPECIAL PROVISIONS
 - SUPPLEMENTAL SPECIFICATIONS
 - AND STANDARD SPECIFICATIONS
- DETAIL PLANS HOLD OVER HIGHWAY STANDARDS
- CALCULATED DIMENSIONS HOLD OVER SCALED DIMENSIONS
- THE HIGHWAY STANDARD INDICATED BY THE REVISION NUMBER LISTED IN THE INDEX OF HIGHWAY STANDARDS ON THE PLANS SHALL HOLD OVER HIGHWAY STANDARDS LISTED ANYWHERE ELSE.

2.0 STANDARD SPECIFICATION CRITERIA

3.0 SPECIAL PROVISION CRITERIA

- 3.1 WATSON BOWMAN ACME IS AISC CERTIFIED ACCORDING TO CATEGORY SBr (SIMPLE STEEL BRIDGES).
- 3.2 A QUALIFIED TECHNICAL SERVICE REPRESENTATIVE SHALL BE PRESENT TO SUPERVISE INSTALLATION.
 - 3.2.1 CONTACT JOHN MANNING AT (716) 817-5453 FOR FIELD SERVICE PRICING AND SCHEDULING.
 - 3.2.2 TWO (2) WEEKS PRIOR NOTICE OF REQUIREMENTS FOR FIELD SERVICE PERSONNEL IS RECOMMENDED.

4.0 MATERIALS

- 4.1 ALL STRUCTURAL AND PERMANENT MATERIALS SHALL BE OF DOMESTIC ORIGIN, AND MATERIAL CERTIFICATION STATING ALL SUCH MATERIALS ARE "MELTED AND MANUFACTURED" IN THE UNITED STATES OF AMERICA SHALL BE SUBMITTED.
- 4.2 ALL STEEL EXTRUSIONS AND PLATES USED FOR THE EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH ASTM A 36 (AASHTO M270, GRADE 36) OR ASTM A 588 (AASHTO M270, GRADE 50W). ALL STEEL PLATES USED FOR THE BARRIER PLATE ASSEMBLIES WILL BE IN ACCORDANCE WITH ASTM A 588 (AASHTO M270, GRADE 50W).

- 4.3 THE STRIP SEAL GLAND SHALL BE POLYCHLOROPRENE (NEOPRENE) SHALL BE AS NOTED BELOW:

REQUIRED PHYSICAL PROPERTIES	ASTM PROCEDURE	PHYSICAL REQUIREMENTS
TENSILE STRENGTH, MIN. psi (kPa)	D-412	1500 (10,300)
ULTIMATE ELONGATION, MIN.	D-412	200 %
DUROMETER - SHORE A	D-2240	50 MIN.
OVEN AGING 70 hrs. @ 212°F TENSILE STRENGTH, LOSS, MAX. ELONGATION, LOSS, MAX.	D-573	20% 20%
HARDNESS, TYPE A DURO (POINTS CHANGE)		0 TO 10
OIL SWELL, ASTM #3 OIL, 70 hrs. @ 212°F WEIGHT CHANGE, MAX.	D-471	45%
OZONE RESISTANCE, 20% STRAIN 300 pphm IN AIR 70 hrs. @ 100°F (WIPE WITH TOLUENE TO REMOVE SURFACE CONTAMINANTS)	D-1149	NO CRACKS
LOW TEMPERATURE STIFFENING 7 DAYS @ 14°F HARDNESS TYPE A DURO, POINTS CHANGE	D-2240	0 TO +15
COMPRESSION SET, 70 h AT 212°F (100°C), max. % (TEST EXCEEDS THE PROJECT REQUIREMENTS OF A 22 HOUR TEST AT 212°F UNDER ASTM D 395 METHOD B)	D 395 METHOD B	35

- 4.4 BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-325, A-563 AND F-436 RESPECTIVELY. ALL HARDWARE SHALL BE GALVANIZED UNLESS NOTED OTHERWISE. COUNTERSUNK BOLTS FOR BARRIER PLATE ASSEMBLIES SHALL BE IN ACCORDANCE WITH ASTM A 307, GRADE A AND SHALL BE GALVANIZED.

- 4.5 THE STRIP SEAL GLAND SHALL BE ADHERED IN PLACE USING PRIMA-LUB ADHESIVE AND LUBRICANT. PRIMA-LUB IS A ONE-COMPONENT BLEND OF URETHANE AND AROMATIC SOLVENTS FOR USE IN LUBRICATING PREFORMED BRIDGE SEALS FOR INSERTION AND ADHESION TO METAL AND CONCRETE SURFACES. PRIMA-LUB SHALL BE IN ACCORDANCE ASTM D-4070 AND WITH THE FOLLOWING REQUIREMENTS:

REQUIRED PHYSICAL PROPERTIES

RESIN TYPE:	MOISTURE CURE URETHANE
SOLVENT:	AROMATIC NAPHTHA
WEIGHT SOLIDS:	72 - 73%
VOLUME SOLIDS:	66 - 68%
WEIGHT/GALLON:	8.4 - 8.6 lbs/gal
PRACTICAL COVERAGE:	400 - 500 ft./GALLON - SMALL SEALS (STRIP SEALS) 100 - 200 ft./GALLON - LARGE SEALS (COMPRESSION SEALS)
FLASHPOINT:	106°F (40.5°C)
SHELF LIFE:	ONE YEAR FROM DATE OF MANUFACTURE
MEETS OR EXCEEDS ASTM D-4070	
FILM STRENGTH ASTM D-412	2000 psi (MIN.)
% ELONGATION (BEFORE BREAK)	350 (MIN.)
WORKABLE TEMPERATURE RANGE	5 - 120°F (-15 - 49°C)

- 4.6 ALL STUDS SHALL CONFORM TO ASTM A 108 (AASHTO M169) GRADES 1015, 1018 OR 1020.

- 4.7 THE STAINLESS STEEL IS USED ON THE SLIDING SURFACES OF THE SUPPORT BAR THAT CONTACT THE TEFLON SURFACE OF THE BEARING AND COMPRESSION SPRING. THE STAINLESS STEEL SHALL BE ASTM A 240, TYPE 304, NO. 4 FINISH OR NO. 8 FINISH AS NOTED HERE IN.

- 4.8 THE UPPER AND LOWER YOKE BEARINGS ARE COMPOSED OF URETHANE, EPOXY AND 3/64" THICK TEFLON SHEET ON WHICH THE SUPPORT BAR SLIDES THE PHYSICAL PROPERTIES OF THE URETHANE ARE:

REQUIRED PHYSICAL PROPERTIES	ASTM PROCEDURE	PHYSICAL REQUIREMENTS
SHORE DUROMETER	D-2240	90A
ELONGATION AT BREAK (%)	D-412	425
TENSILE STRENGTH (psi)	D-412	6500
199% MODULES (psi)	D-412	1200
300% MODULES (psi)	D-412	2400
TEAR STRENGTH (pli)	D-470	110
REBOUND RESILIENCE (%)	D-2632	40

- 4.9 BEARING IS COMPOSED OF URETHANE, AASHTO 62D.

- 4.10 DU BEARINGS AND WASHERS ARE CONTAINED WITHIN THE EQUIDISTANCE MECHANISM. THE DU BEARINGS SHALL HAVE THE FOLLOWING PHYSICAL PROPERTIES:

CONSTRUCTION	STEEL
BACKING	POROUS COPPER-TIN BRONZE
INNERSTRUCTURE	PTFE / LEAD
BEARING SURFACE	
LUBRICATION	NOT REQUIRED
LOAD CAPACITY	
COMPRESSIVE STRENGTH	44,000 psi
STATIC LOAD CAPACITY	36,000 psi
DYNAMIC LOAD CAPACITY	20,000 psi
SPEED	1,000 fpm. DRY
PV LIMIT	
CONTINUOUS	50,000 psi-fpm
INTERMITTENT	100,000 psi-fpm
TEMPERATURE RANGE	-328 TO +563°F
COEFFICIENT OF FRICTION	
STATIC (FIRST MOVEMENT MAY BE GREATER FOR A LONG DWELL PERIOD UNDER LOAD)	0.02 - 0.20
DYNAMIC	0.02 - 0.20

5.0 INSPECTION REQUIREMENTS

- 5.1 IN HOUSE INSPECTION BY AN INDEPENDENT (THIRD PARTY) IS REQUIRED. WELDING SHALL BE OBSERVED BY A CERTIFIED WELDING INSPECTOR (CWI) IN ADDITION TO WATSON BOWMAN ACME'S OWN WELDING INSPECTION. THIRD PARTY NON DESTRUCTIVE EXAMINATION (NDE) SHALL BE PERFORMED BY INSPECTOR(S) CERTIFIED AS LEVEL II IN APPLICABLE METHODS, AND ALL COMPLETE PENETRATION BEAM-TO-BAR WELDS AND BUTT JOINTS IN BEAMS SHALL BE UT INSPECTED AND 10% OF FILLETS AND PARTIAL PENETRATION WELDS SHALL BE MT INSPECTED PER SPECIAL PROVISIONS "MODULAR EXPANSION JOINT".

5.2 QUALITY CONTROL INSPECTION

- 5.2.1 DURING FABRICATION OF THE EXPANSION JOINT, WATSON BOWMAN ACME SHALL PROVIDE FULL TIME QUALITY CONTROL INSPECTION TO INSURE THAT THE MATERIALS AND WORKMANSHIP MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE CONTRACT.
- 5.2.2 QUALITY CONTROL INSPECTION SHALL BE THE RESPONSIBILITY OF A QUALITY CONTROL GROUP, WHICH SHALL BE INDEPENDENT OF THE FABRICATION GROUP.

6.0 FABRICATION

- 6.1 FABRICATION SHALL BE IN ACCORDANCE WITH WATSON BOWMAN ACME'S QUALITY CONTROL MANUAL AND MANUFACTURING TOLERANCES.
- 6.2 THE EXPANSION JOINT OPENING SHALL BE PRESET BY WATSON BOWMAN ACME TO THE JOINT OPENING OF DIM "A" = 9 1/2". FINAL ADJUSTMENTS SHALL BE MADE IN THE FIELD BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER IN CHARGE, PRIOR TO FINAL CONCRETE PLACEMENT.
- 6.3 THE NEOPRENE SEALS SHALL BE SHOP INSTALLED BY WATSON BOWMAN ACME USING INSTALLATION TOOLS AND BONDED IN PLACE WITH PRIMA-LUB ADHESIVE. THE ADHESIVE SHALL BE APPLIED TO ALL NEOPRENE/STEEL CONTACT SURFACES. THE NEOPRENE SEAL SHALL BE SUPPLIED IN ONE CONTINUOUS PIECE.
- 6.4 EXPANSION JOINT ASSEMBLIES SHALL BE WELDED IN ACCORDANCE WITH ANSI/AWS/AASHTO BRIDGE WELDING CODE D1.5.
- 6.5 WATSON BOWMAN ACME SHALL PREPARE THE ENDS OF THE STEEL SHAPES FOR FIELD WELDING.
- 6.6 STUDS MAY BE BENT TO AN ANGLE OF 30° TO AVOID INTERFERENCE WITH DECK REINFORCEMENT, OR TO PROVIDE PROPER CONCRETE COVER.
- 6.7 DISTORTED MEMBERS SHALL BE STRAIGHTENED BY MECHANICAL MEANS OR, IF APPROVED BY THE ENGINEER, BY CAREFULLY PLANNED PROCEDURE AND SUPERVISED APPLICATION OF A LIMITED AMOUNT OF LOCALIZED HEAT.
- 6.8 ALL BOLTS FOR EQUIDISTANCE SYSTEM SHALL BE SNUG TIGHT UNLESS OTHERWISE NOTED HEREIN.
- 6.9 ALL WELDING OF THE EXPANSION JOINT ASSEMBLIES SHALL BE EXECUTED USING THE GMAW OR FCAW PROCESSES. ALL WELDING OF THE COVER PLATE ASSEMBLIES SHALL BE EXECUTED USING THE FCAW PROCESS.

7.0 COATINGS

- 7.1 THE EXPANSION JOINT ASSEMBLY SHALL BE PAINTED IN ACCORDANCE WITH SECTION 506 "CLEANING AND PAINTING METAL STRUCTURES" AND SECTION 1008 "STRUCTURAL STEEL COATINGS" OF THE STANDARD SPECIFICATIONS.
- 7.2 AREAS TO BE PAINTED SHALL BE BLAST CLEANED ACCORDING TO THE REQUIREMENTS OF SSPC SURFACE PREPARATION SPECIFICATION SP 10 FOR NEAR WHITE CLEANING.
 - 7.2.1 SURFACES SHALL HAVE AN ANCHOR PROFILE OF 1 TO 2.5 MILS (25 TO 65 UM).
 - 7.2.2 THE BLAST CLEANED SURFACES TO BE PAINTED SHALL BE PRIME COAT WITHIN 24 HOURS AFTER CLEANING.
- 7.3.1 ALL SURFACES OF THE EXPANSION JOINT ASSEMBLY SHALL BE SHOP PAINTED WITH ONE SHOP COAT OF INORGANIC ZINC RICH PRIMER, EXCEPT AREAS IN DIRECT CONTACT WITH THE SEALS AND STAINLESS STEEL SURFACES.
- 7.3.1 THE INORGANIC ZINC-RICH PRIMER SHALL BE A SOLVENT-BASED, MULTIPLE COMPONENT, SELF CURING ALKYL SILICATE ZINC-RICH PAINT WHICH CURES WITHOUT USE OF A SEPARATE CURING SOLUTION AND IS FOR USE ONLY ON BLAST-CLEANED STEEL. THE PRIMER SHALL BE APPLIED BY SPRAY WITH ONLY LIMITED APPLICATION BY BRUSH.
- THE INORGANIC ZINC-RICH PRIMER SHALL BE ACCORDING TO AASHTO M300 TYPE I. THE VOLATILE ORGANIC COMPOUNDS (VOC) SHALL NOT EXCEED 2.8 lb/gal (340 g/L) FOR SHOP PAINTING AS APPLIED WHEN TESTING ACCORDING TO ASTM D 3960.

- 7.4 PARAPET COVER PLATE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123 (AASHTO M111)

STATE:	ILLINOIS
COUNTY:	ST. CLAIR
CONTRACT NO.:	76C44
SECTION:	82-2-1HVB
PROJECT:	PNRS-0998(001)
STRUCTURE NO.:	SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.:	SE1134532AA & AB
JOINT TYPE:	SEISMIC MODULAR

APPROVED

For Main Dimensions and Materials Only

082-0318

Stan IL Appr.

082-0318 #0319

E. Abue-Johe

76C44

SHEET NUMBER	2 of 1
ITEM DESIGNATION	
ITEM NUMBER	

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DRAWING ACTION:

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12/17/10

REVISIONS			
NO.	DATE	DESCRIPTION	BY
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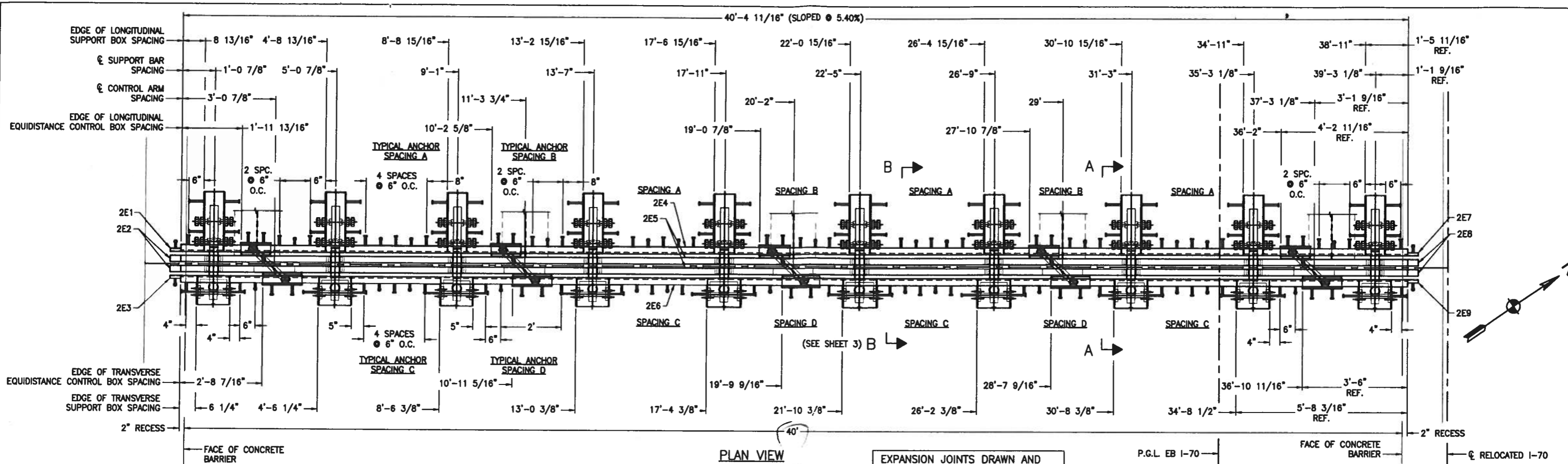


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DESIGNED BY:	SRN	DATE:	10/20/11
CHECKED BY:	JFW	DATE:	11/11/11
SCALE:	NTS	WBA JOB NO.:	134532
SHEET NO.:	1 of 20	DRAWING NO.:	R-2R24R

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT
& INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

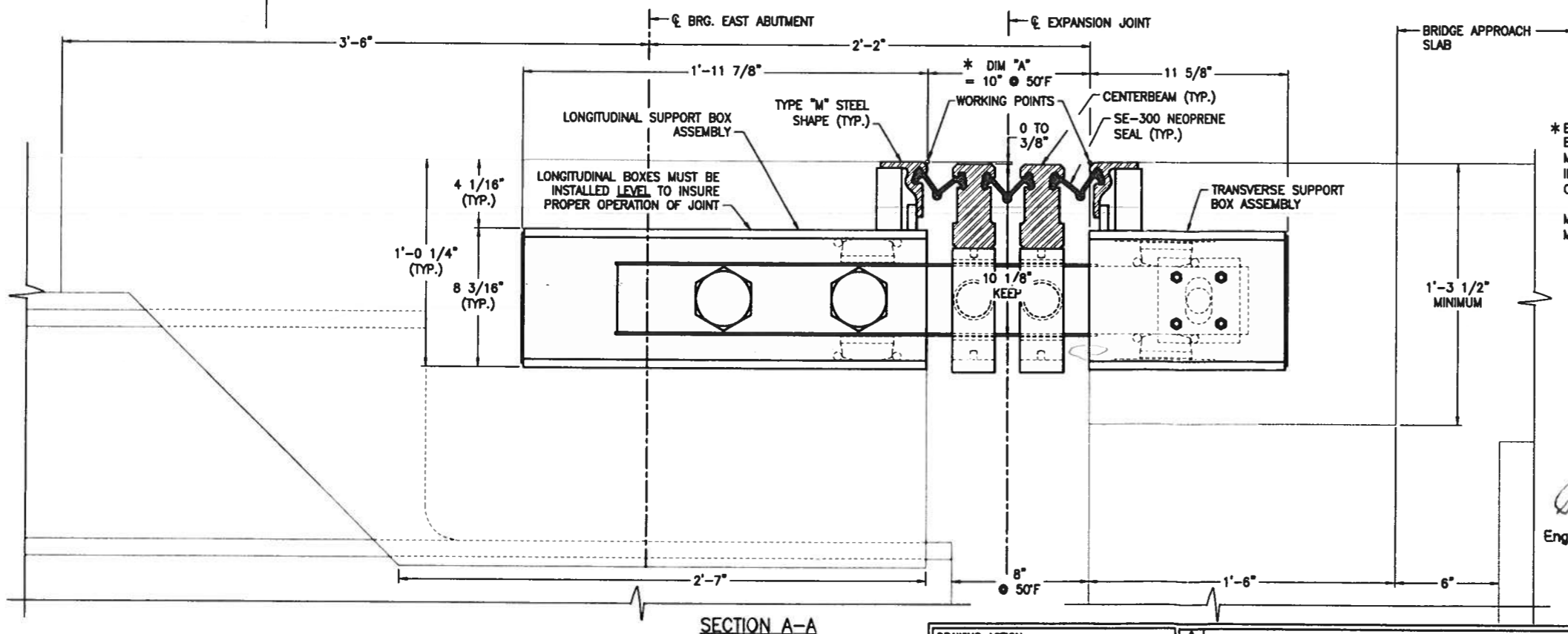


PLAN VIEW
SE134532AA - (1) REQUIRED
EAST ABUTMENT EB

EXPANSION JOINTS DRAWN AND
FABRICATED AT DIM "A" = 9 1/2"

P.G.L. EB I-70

FACE OF CONCRETE BARRIER
2" RECESS
RELOCATED I-70



SECTION A-A

* EXACT WIDTH TO BE DETERMINED BY ENGINEER AT TIME OF SETTING. MIN. WIDTH "A" TO INSTALL SEAL IN THE FIELD IS 8" (9 1/2" OR GREATER IS RECOMMENDED)
MINIMUM OPENING (DIM "A") = 5"
MAXIMUM OPENING (DIM "A") = 14"

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Ralph C. ...
Engineer of Bridges and Traffic Structures

"A" DIMENSIONS	
TEMPERATURE AT TIME OF SETTING EXP. JOINT	EAST ABUTMENT
-10°F	13 3/16"
5°F	12 7/16"
20°F	11 5/8"
35°F	10 13/16"
50°F	10"
65°F	9 3/16"
80°F	8 3/8"
95°F	7 9/16"
110°F	6 13/16"

THE CHANGE PER 15°F IS MEASURED PERPENDICULAR TO THE JOINT FOR BOTH NORMAL AND SKEWED JOINTS.

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 78C44
SECTION: 82-2-1HVB
PROJECT: PNRS-0998(001)
STRUCTURE NO.: SN 082-031B (EB) & 0319 (WB)
WBA PRODUCT NO.: SE134532AA & AB
JOINT TYPE: SEISMIC MODULAR

NOTE:
REINFORCEMENT: AT THE TIME OF REINFORCEMENT PLACEMENT, THE EXPANSION JOINT BLOCKOUT AREA SHALL BE LAID OUT, INCLUDING MODULAR EXPANSION JOINT SUPPORT BOX LOCATIONS. ANY MINOR RELOCATION OF REINFORCEMENT SHALL BE MADE AT THIS TIME TO AVOID INTERFERENCE WITH THE MODULAR EXPANSION JOINT SUPPORT BOXES AND/OR ANCHORAGES. WATSON BOWMAN ACME DOES NOT REQUIRE ANY ADDITIONAL REBAR BE PLACED FOR THE PROPER FUNCTIONING OF THE MODULAR EXPANSION JOINT.

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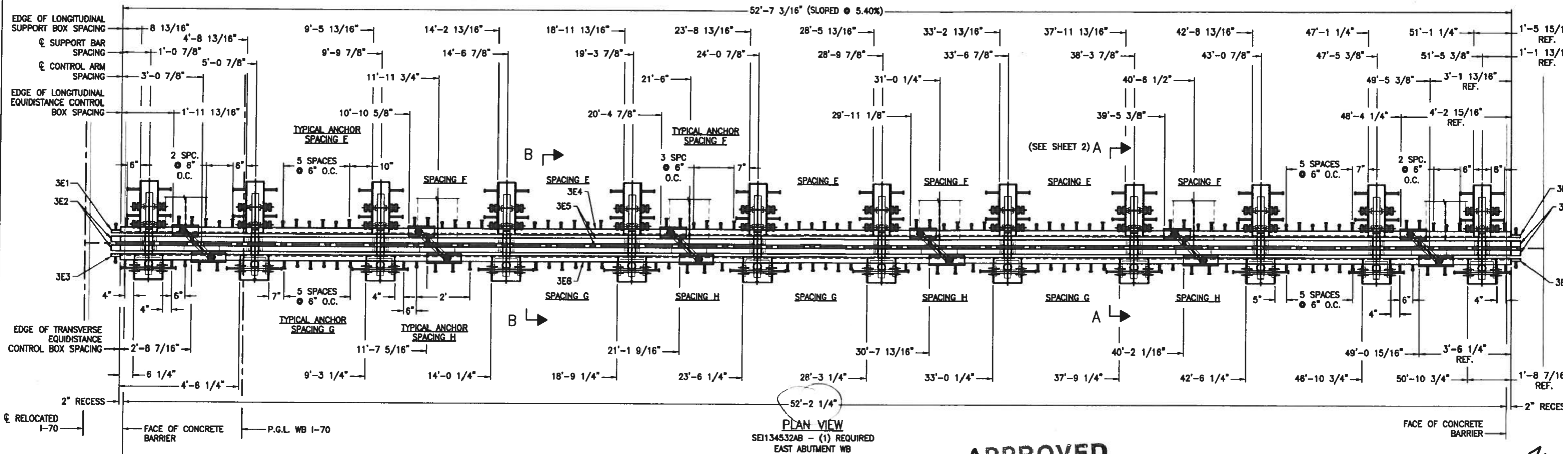
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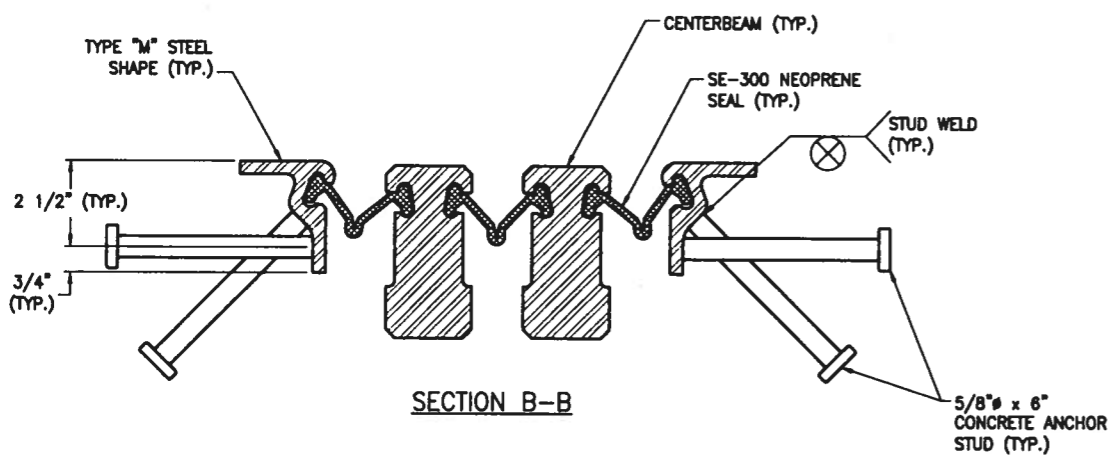
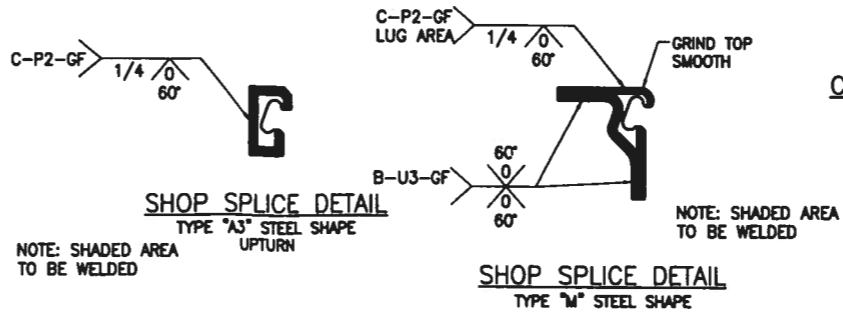
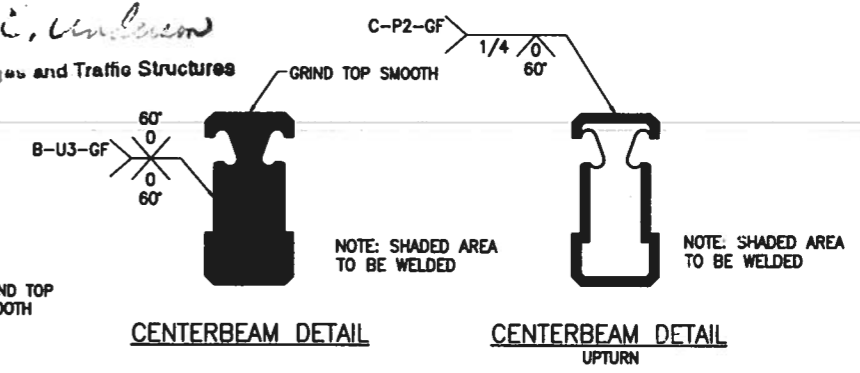
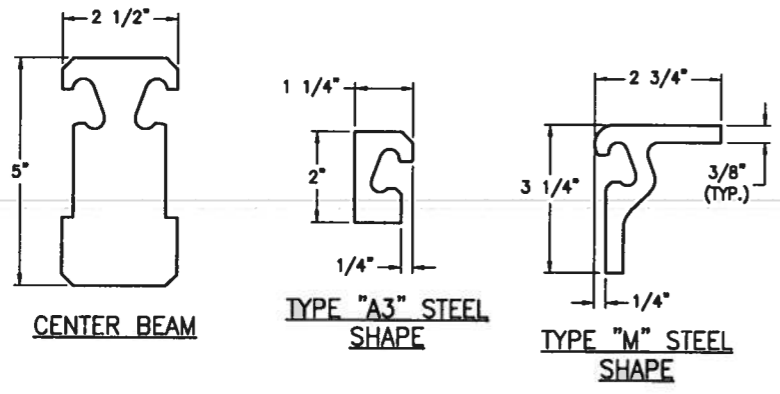
DATE: 10/20/11
DATE: 11/11/11
DATE: 134532
DATE: 8-2824

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
& INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS



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For Main Dimensions and Materials Only

Walter C. Anderson
Engineer of Bridges and Traffic Structures



STATE: ILLINOIS

COUNTY: ST. CLAIR

CONTRACT NO.: 78C44

SECTION: 82-2-1HVB

PROJECT: PNR8-0998(001)

STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)

WBA PRODUCT NO.: SEI134532AA & AB

JOINT TYPE: SEISMIC MODULAR

DRAWING ACTION:

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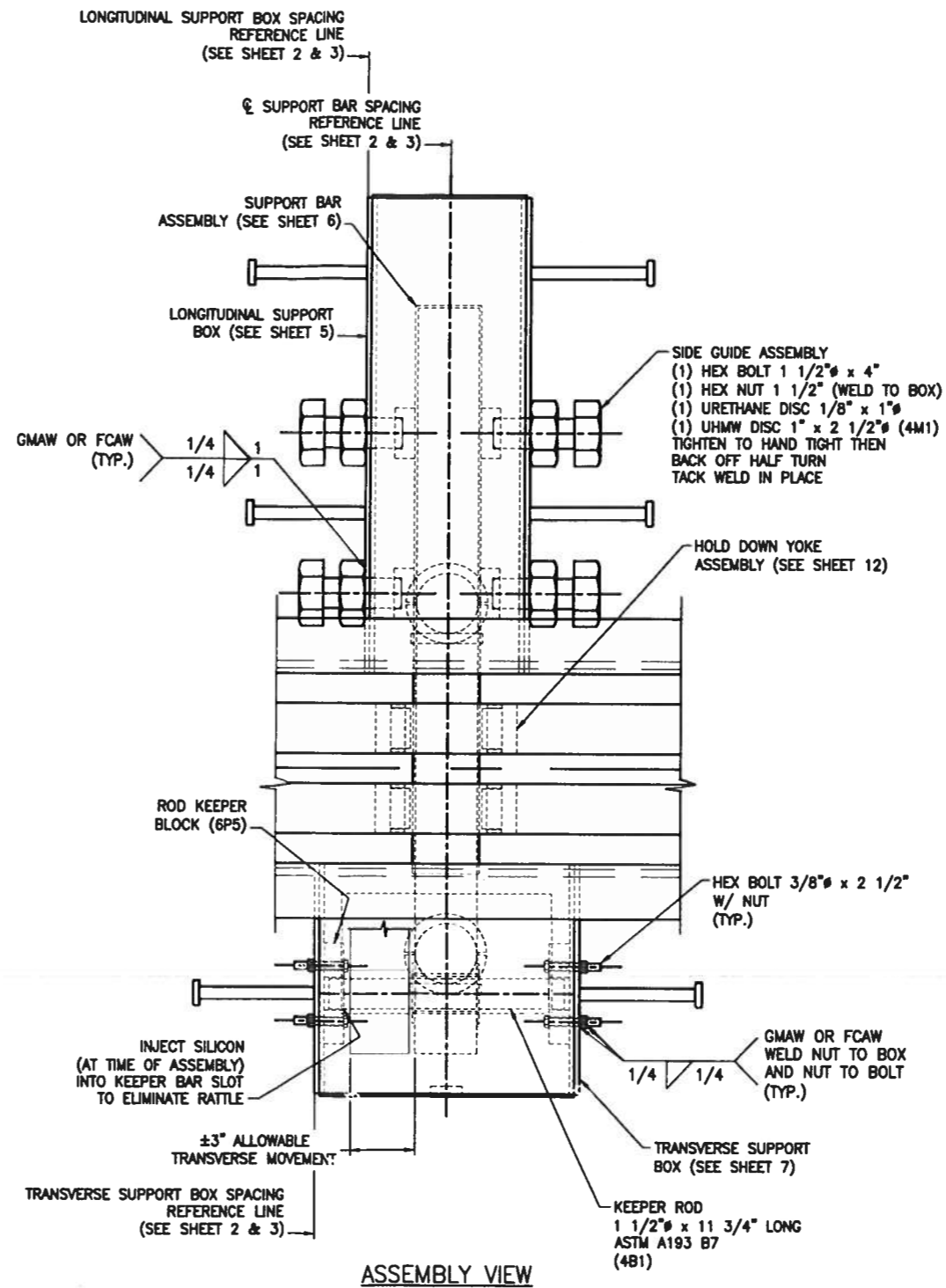
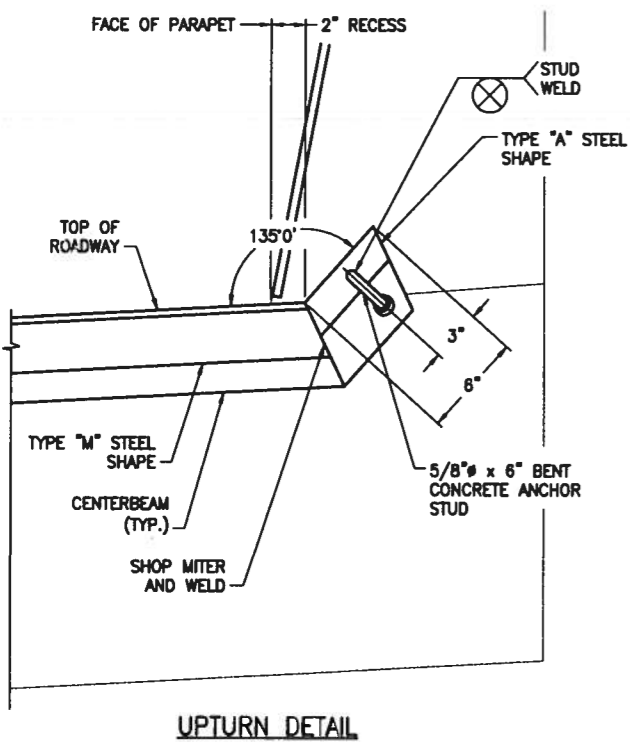
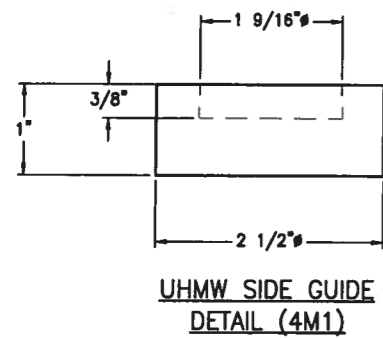
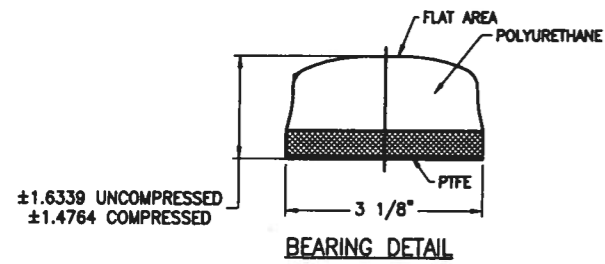
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PROJECT: FAP ROUTE 998 (RELOCATED I-70) PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

DESIGNED BY: SRN	DATE: 10/20/1
CHECKED BY: JFW	DATE: 11/11/1
SCALE: NTS	WBA JOB NO.: 134532
SHEET NO.: 3 of 20	DRAWING NO.: B-2824



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For Major Construction and
Maintenance

ROBERT C. COLLETT
Engineer of Bridges and Traffic Structures

SHEET NUMBER
ITEM DESIGNATION
ITEM NUMBER
2e1

MARK SYSTEM

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 78C44
SECTION: 82-2-1HVB
PROJECT: PNRJ-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SEI134532AA & AB
JOINT TYPE: SEISMIC MODULAR

DRAWING ACTION:

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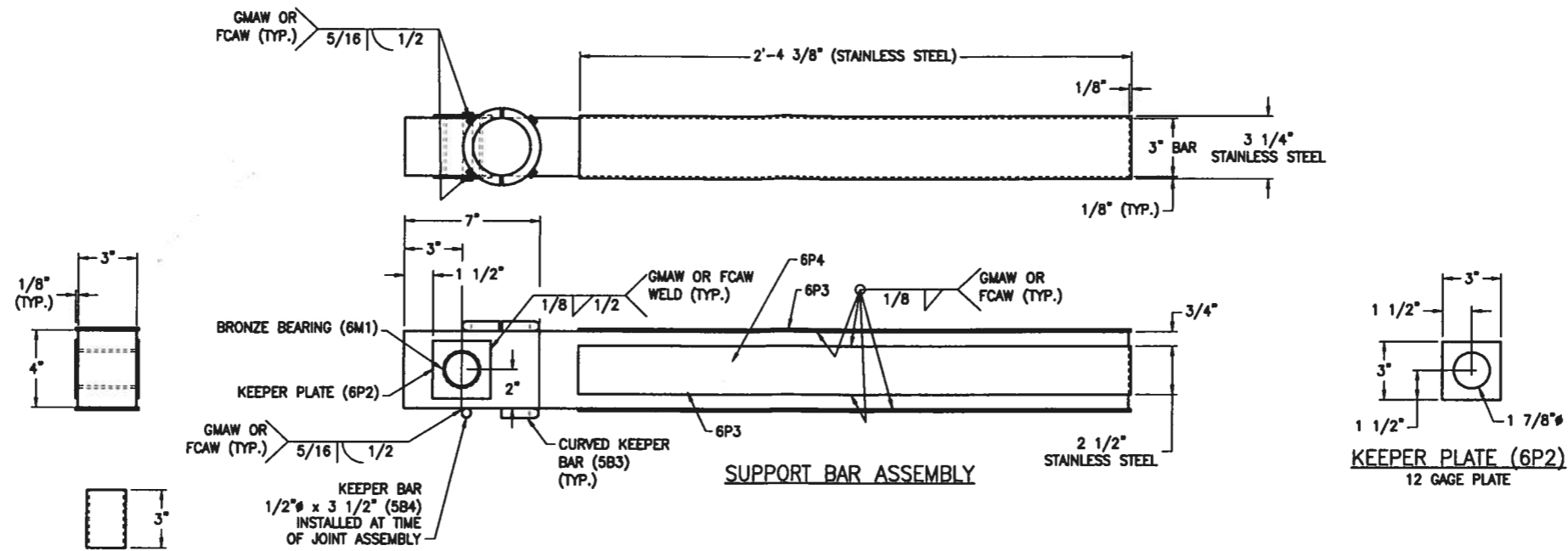
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DETAILED BY: SRN	DATE: 10/20/1
CHECKED BY: JFW	DATE: 11/11/1
SCALE: NTS	WBA JOB NO.: 134532
SHEET NO.: 4 of 20	DRAWING NO.: B-2824

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT
& INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 800 EXPANSION JOINT DETAILS

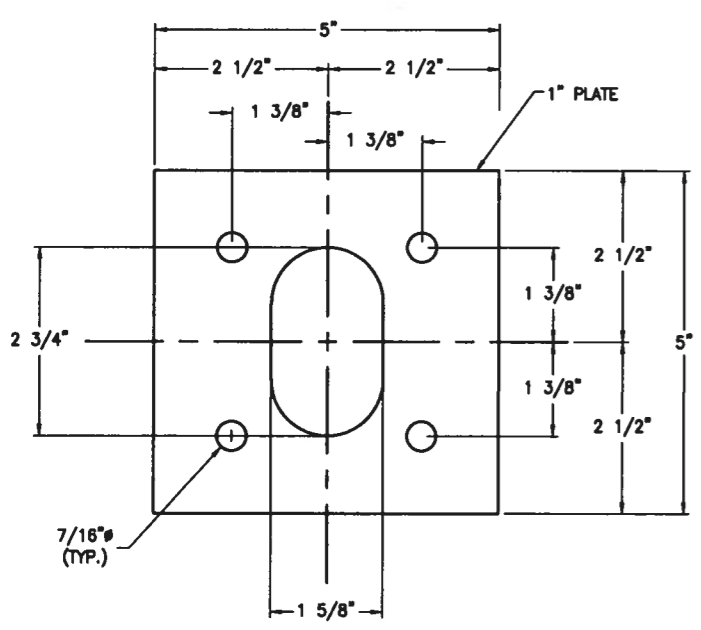
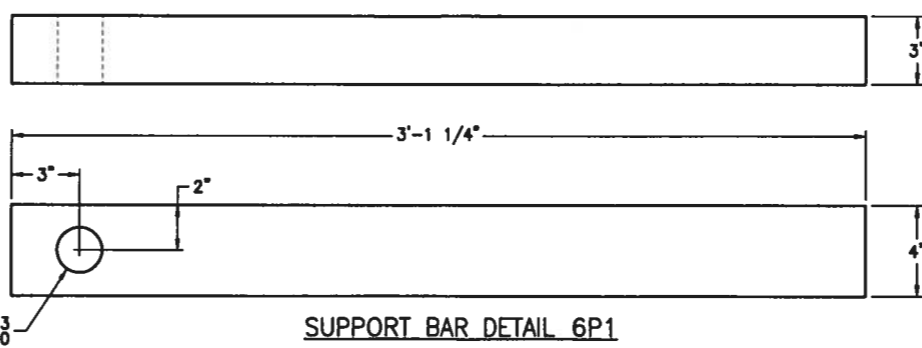


BRONZE BEARING (6M1)
 GENERAL PURPOSE
 GRADE BRONZE (ALLOY 932)
 ASTM B505
 McMASTER 6381K331

2.0000^{+0.0000}_{-0.0150}

1 3/4"

2.0313^{+0.0313}_{-0.0000}



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 For Main Dimensions and Materials Only

Ralph E. Anderson
 Engineer of Bridges and Traffic Structures

STRUCTURED BILL OF MATERIALS							DWGN B-28248
LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION	
0	SEI134532AA05	1	EA	SUPPORT BAR ASSEMBLY X-CEL 900 (W)	PAINTED		
					APPROX FINISHED WEIGHT = 145		
1	3734	127	LB	PLATE 3"A36	ASTM A 36		
1	4289	3	EA	CURVED KEEPER BAR A36 A28044 W (5B3)	ASTM A 36		
1	SEI134532AA05A	2	EA	STAINLESS STEEL SHEETS 12 GAGE (X) (6P3)			
2	8569	3.50	LB	STNLS STL 11GATYP304 #4FIN(A)	ASTM A 240, TYPE 304 NO. 4 FINISH		
1	SEI134532AA05B	2	EA	STAINLESS STEEL SHEETS 12 GAGE (X) (6P4)			
2	8569	2.75	LB	STNLS STL 11GATYP304 #4FIN(A)	ASTM A 240, TYPE 304 NO. 4 FINISH		

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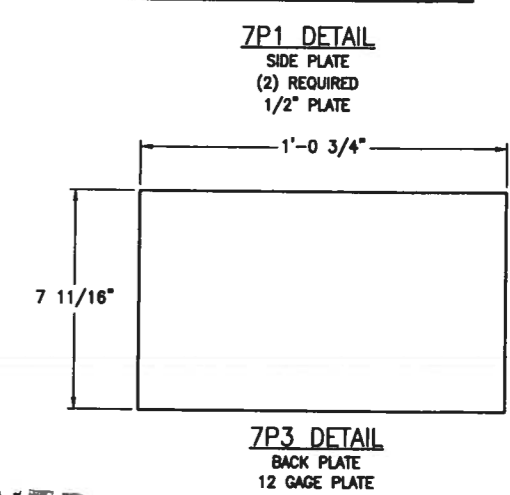
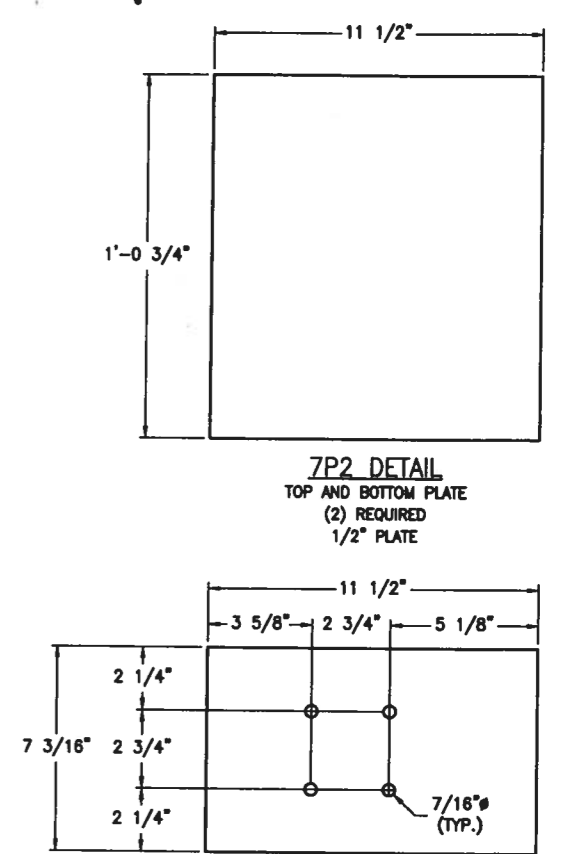
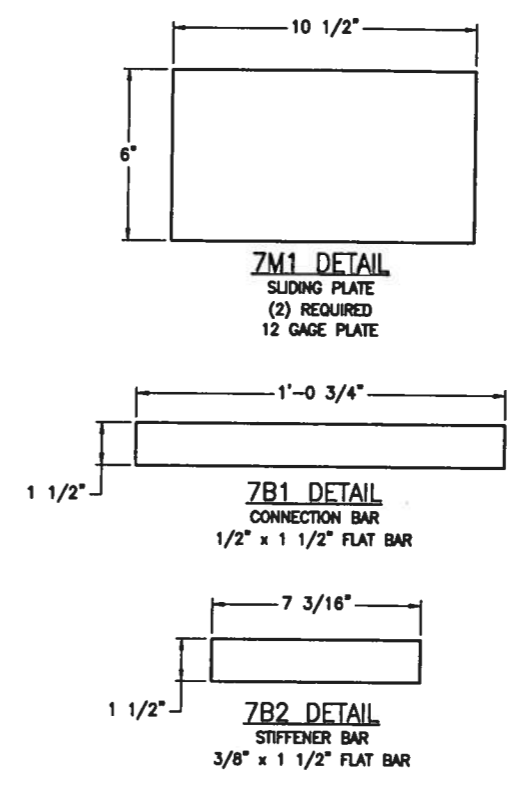
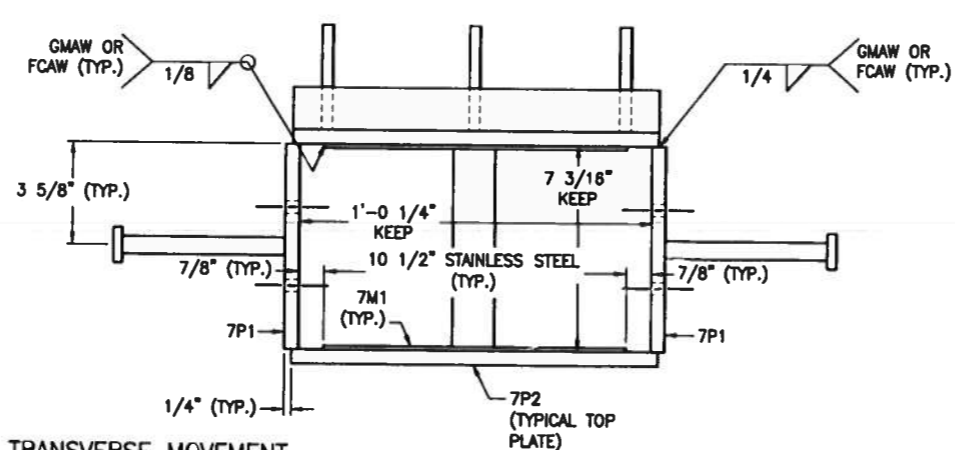
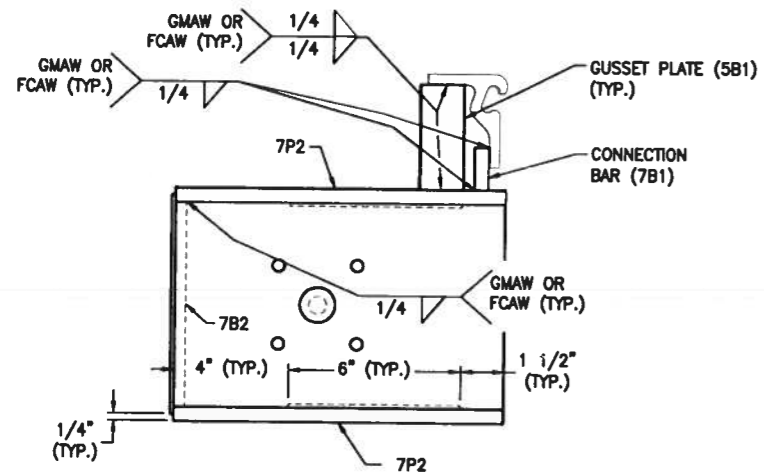
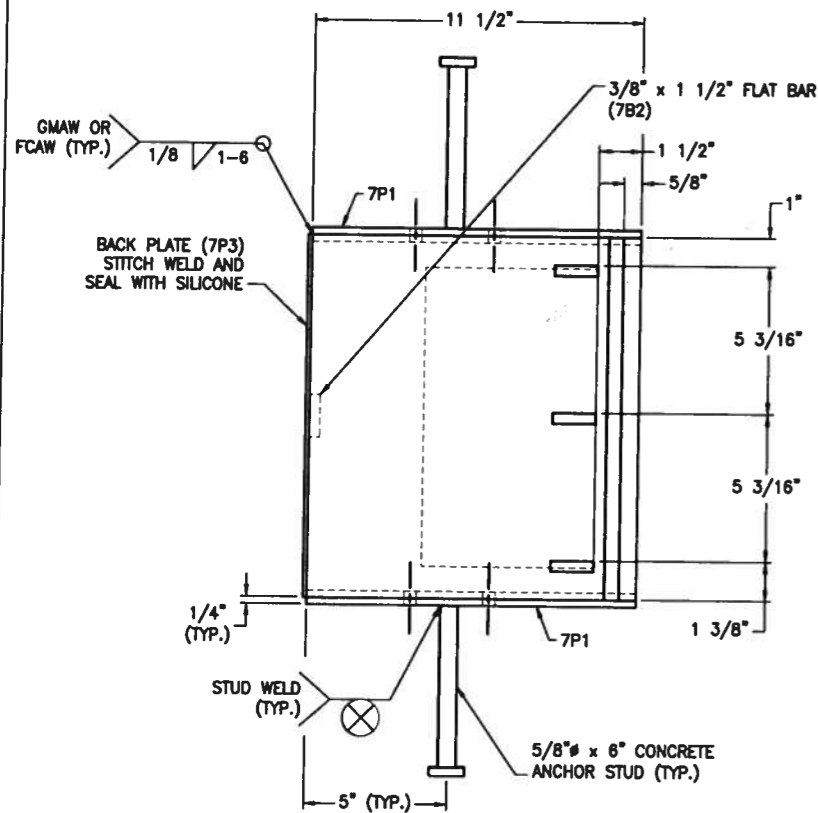
BASF
 The Chemical Company

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
 PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
 WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

DATE:	10/20/1
DATE:	11/11/1
DATE:	11/11/1
DATE:	11/11/1
DATE:	11/11/1

6 of 20

B-2824



TRANSVERSE MOVEMENT SUPPORT BOX ASSEMBLY

APPROVED
For Main L, S, and Materials Only

Ralph J. ...
Engineer of Bridges and Traffic Structures

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 78C44
SECTION: 82-2-1HVB
PROJECT: PNR8-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SE1134532AA & AB
JOINT TYPE: SEISMIC MODULAR

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SE1134532AA06	1	EA	TRANSVERSE BOX ASSEMBLY X-CEL 900 (W)	PAINTED	
					APPROX. FINISHED WEIGHT = 85 lb	
1	3560	65.25	LB	PLATE 1/2 A36	ASTM A 36	
1	SE1134532AA04A	3	EA	GUSSET PLATE (W)	(5B1)	
2	5901	0.35	FT	FLAT BAR 3/8 x 1-1/2 A36	ASTM A 36	
1	5970	1.1	FT	FLAT BAR 1/2 x 1-1/2 A36	(7B1) ASTM A 36	
1	5901	0.6	FT	FLAT BAR 3/8 x 1-1/2 A36	(7B2) ASTM A 36	
1	SE1134532AA06A	2	EA	SLIDING PLATE (X)	(7M1)	
2	8576	2.25	LB	STNLS STL 12GA TYP304 #8FIN(A)	ASTM A 240; TYPE 304 NO. 8 FINISH	
1	4620	2	EA	CON ANC ST 5/8 x 6 AW 108-*		

WING ACTION:

APPROVED

12/17/10

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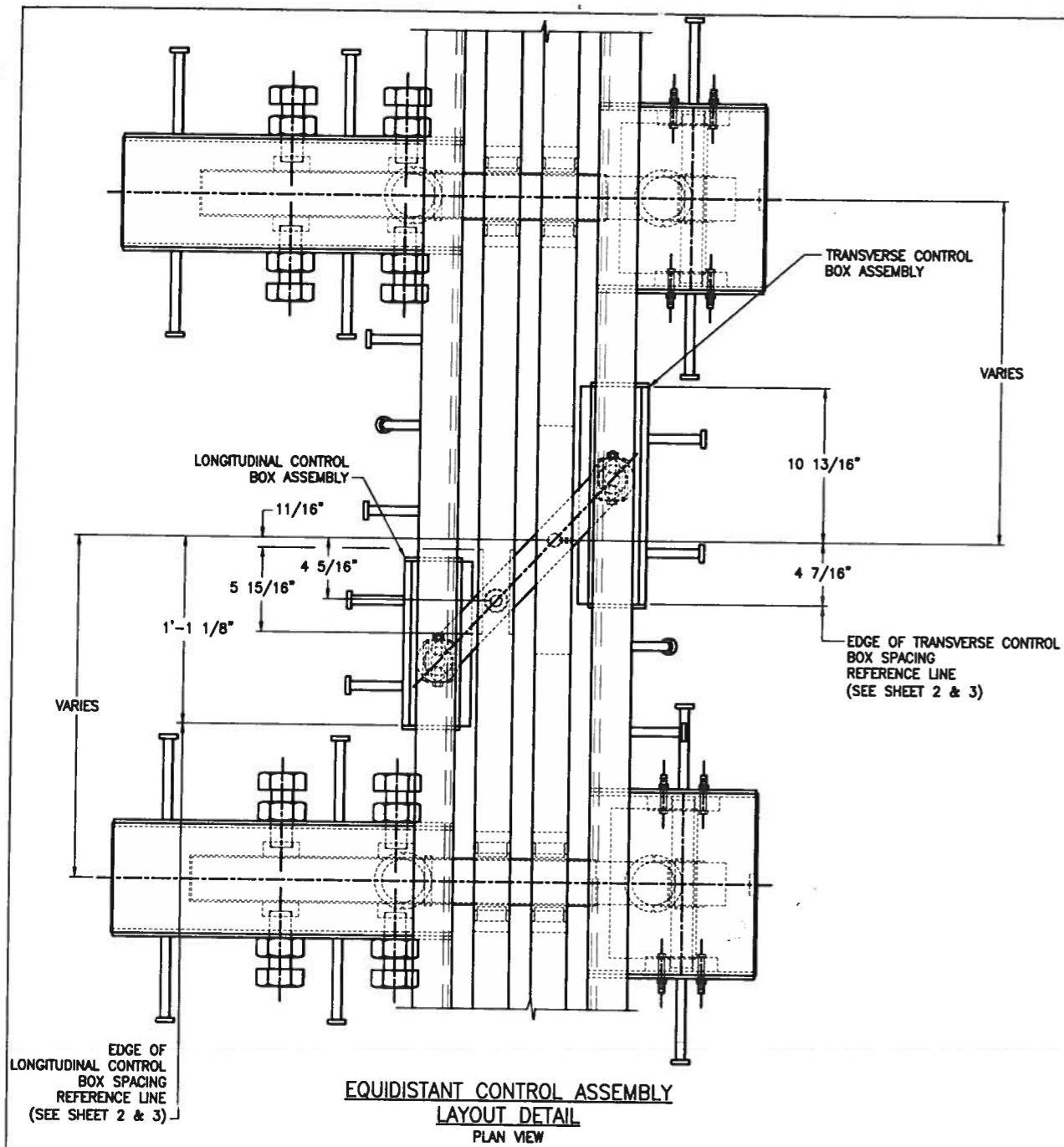
Watson Bowman Acme

Watson Bowman Acme Corp.
68 Pleasant Dale
Aurora, WI 54003
Phone: (715) 891-7888
Fax: (715) 891-8238
www.watsoncorp.com

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The Chemical Company

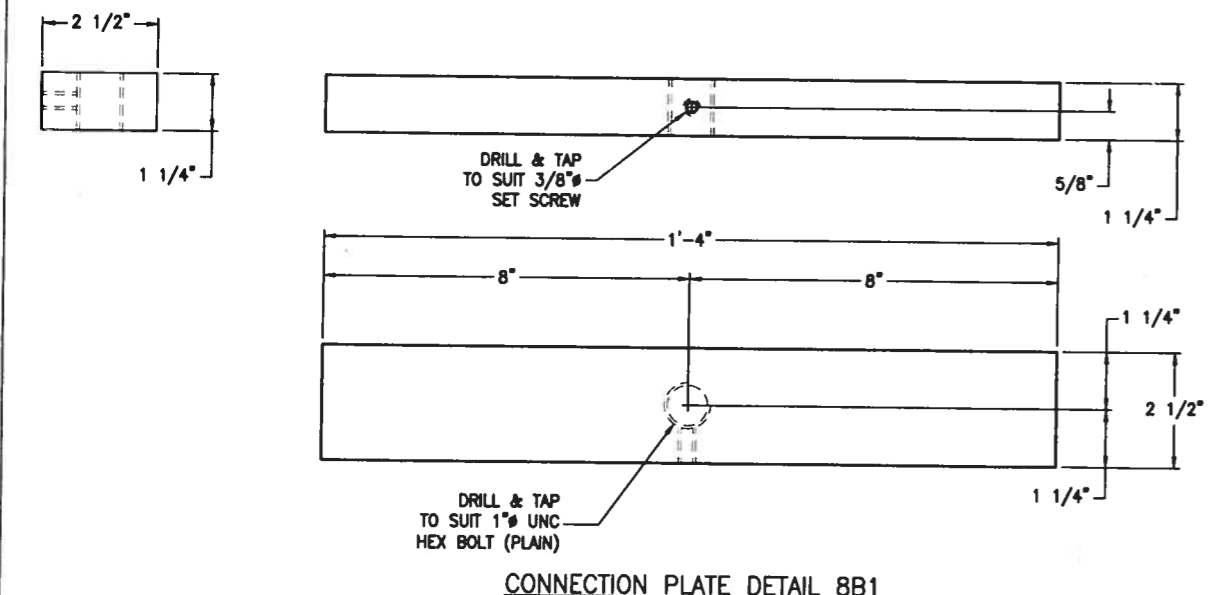
DATE:	10/20/10
CHECKED BY:	JFW
DATE:	11/11/10
SCALE:	NTS
WBA JOB NO.:	134532
DRAWING NO.:	

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS



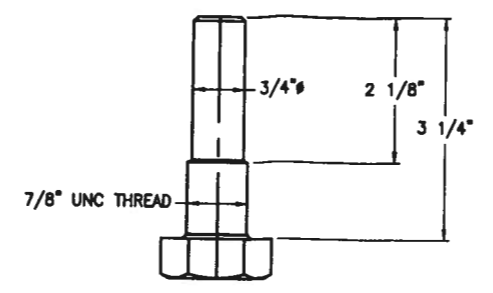
EDGE OF LONGITUDINAL CONTROL BOX SPACING REFERENCE LINE (SEE SHEET 2 & 3)

EQUIDISTANT CONTROL ASSEMBLY LAYOUT DETAIL
PLAN VIEW

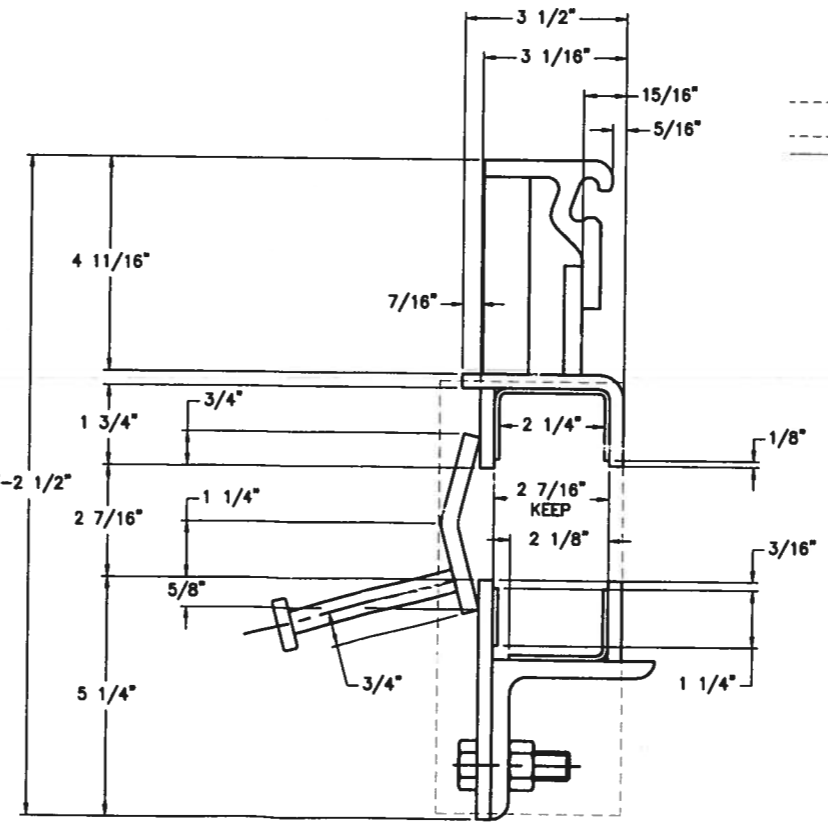


DRILL & TAP TO SUIT 1" UNC HEX BOLT (PLAIN)

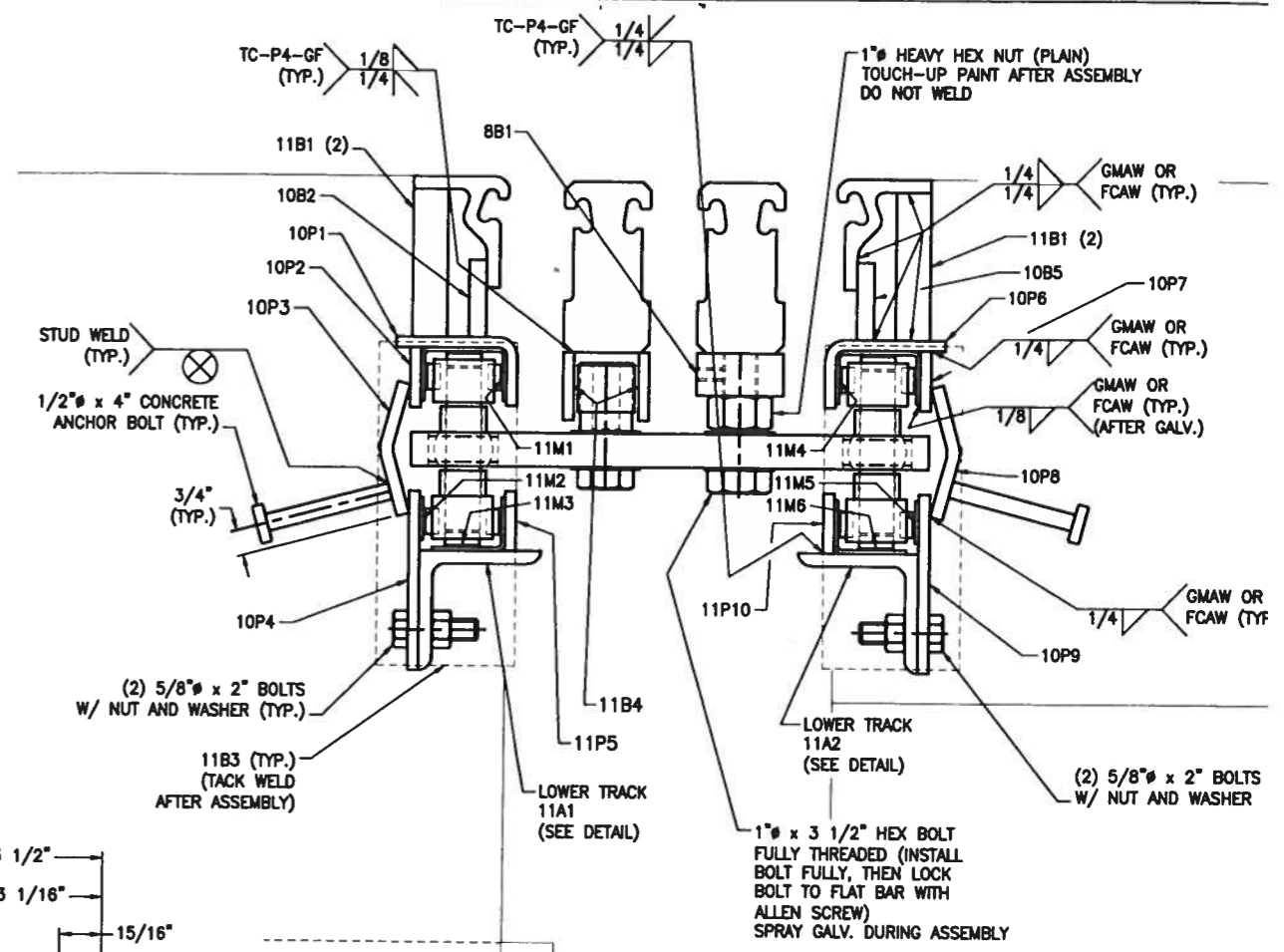
CONNECTION PLATE DETAIL 8B1



ROLLER BOLT DETAIL (8M1)
MACHINED FROM A
7/8" x 3 1/4" LONG HEX BOLT
ASTM A490
FULLY THREADED

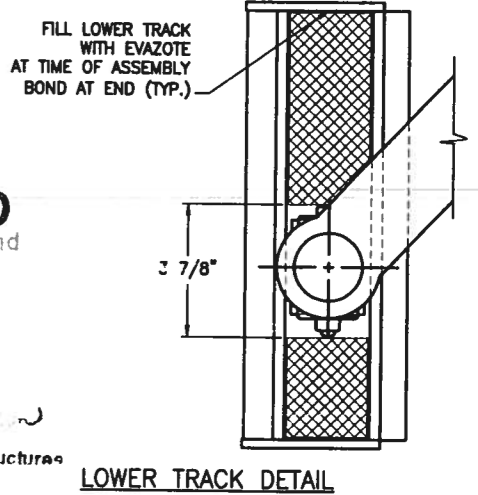


TYPICAL EQUIDISTANCE CONTROL BOX DETAIL



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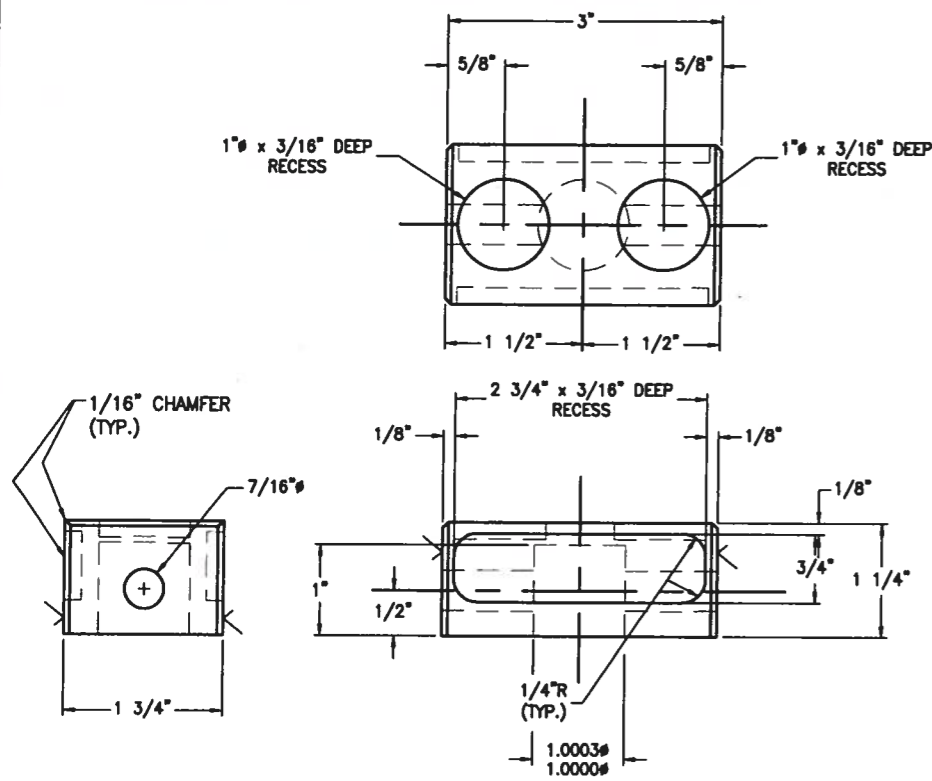
Ralph J. ...
Engineer of Bridges and Traffic Structures



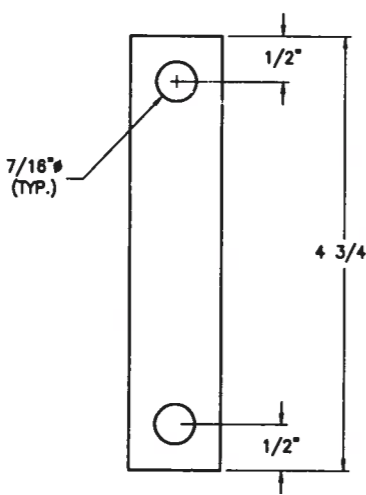
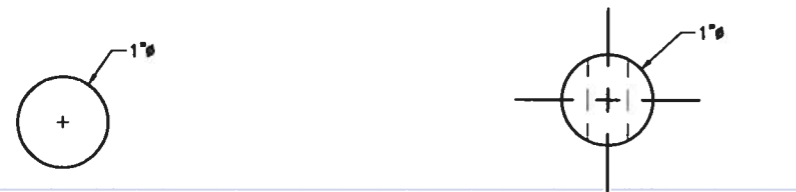
STATE:	ILLINOIS
COUNTY:	ST. CLAIR
CONTRACT NO.:	76C44
SECTION:	82-2-1HVB
PROJECT:	PNRS-0998(001)
STRUCTURE NO.:	SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.:	SE1134532AA & AB
JOINT TYPE:	SEISMIC MODULAR

MARK SYSTEM
2e1

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			<p>DATE: 11/11/10</p>
12/17/10	<p>12/17/10</p>	<p>12/17/10</p>	<p>12/17/10</p>

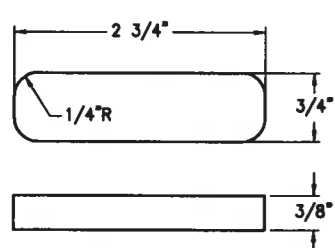


GUIDE BLOCK 10B1 DETAILS
 CUT FROM 1 1/4" A 588 PLATE
 BURN 1/8" OVERSIZE ALL AROUND
 MACHINE SIDES

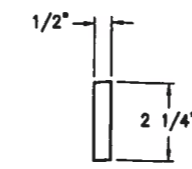


END ROD DETAILS - 10R1
 CUT FROM HARDENED PRECISION
 SHAFTS BY McMASTER-CARR
 ITEM 8061K218
 AISI 1566 STEEL

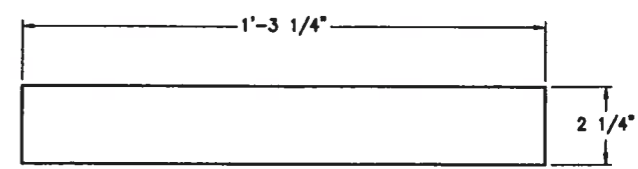
PTFE TOP GUIDE - 10M1
 15% GLASS FILLED BY MASS
 ETCHED ONE SIDE



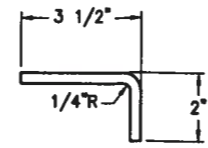
PTFE TOP GUIDE - 10M2
 15% GLASS FILLED BY MASS
 ETCHED ONE SIDE



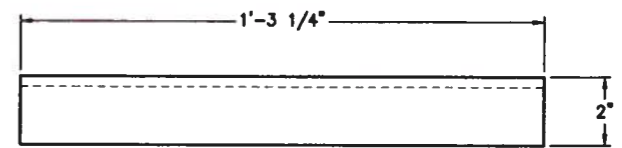
10B2 DETAIL
 1/2" x 2 1/4" FLAT BAR



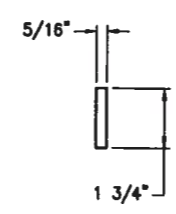
10B5 DETAIL
 1/2" x 2 1/4" FLAT BAR



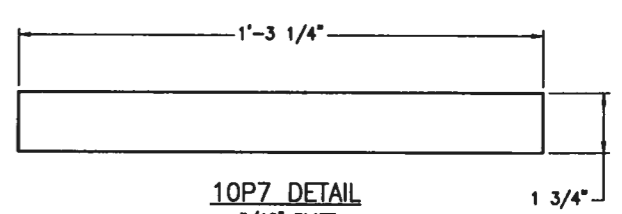
10P1 DETAIL
 5/16" PLATE, 5" DEVELOPED LENGTH



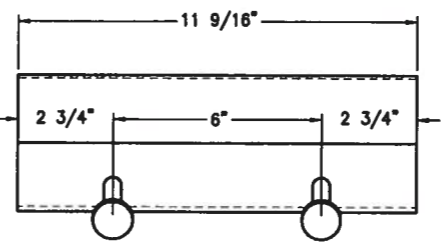
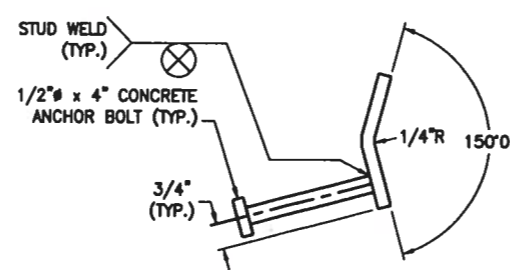
10P6 DETAIL
 5/16" PLATE, 5" DEVELOPED LENGTH



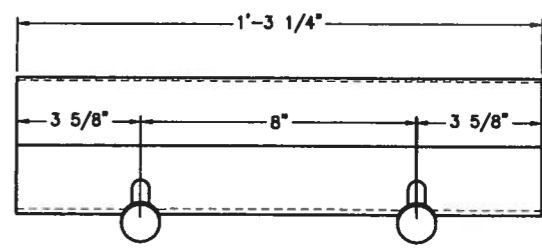
10P2 DETAIL
 5/16" PLATE



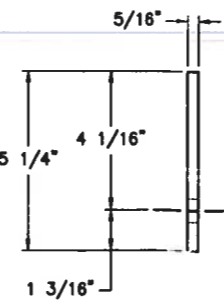
10P7 DETAIL
 5/16" PLATE



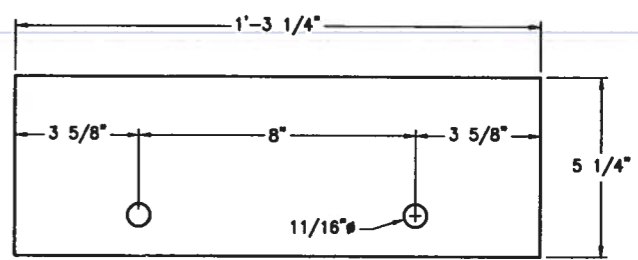
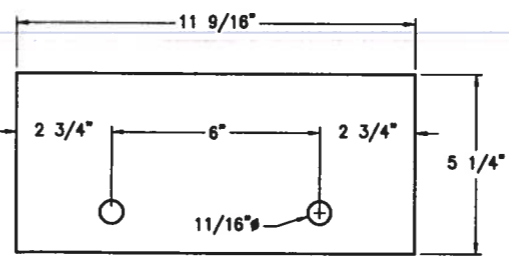
10P3 DETAIL
 3/8" PLATE, 4" DEVELOPED LENGTH



10P8 DETAIL
 3/8" PLATE, 4" DEVELOPED LENGTH



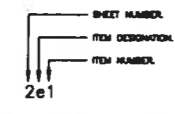
10P4 DETAIL
 5/16" PLATE



10P9 DETAIL
 5/16" PLATE

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 For Main Dimensions and
 Materials Only

George E. Anderson
 Engineer of Bridges and Traffic Structures



STATE:	ILLINOIS
COUNTY:	ST. CLAIR
CONTRACT NO.:	78C44
SECTION:	82-2-1HVB
PROJECT:	PNRS-0998(001)
STRUCTURE NO.:	SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.:	SEI134532AA & AB
JOINT TYPE:	SEISMIC MODULAR

DRAWING ACTION:

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12/17/10

NO.	DESCRIPTION	DATE

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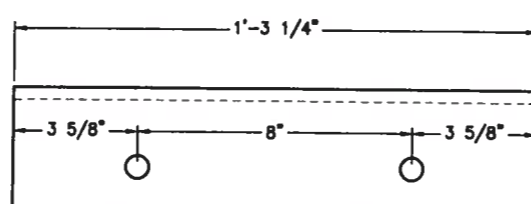
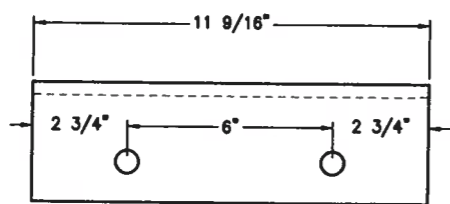
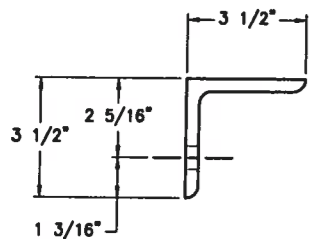


Watson Bowman Acme Corp.
 88 Phoenix Drive
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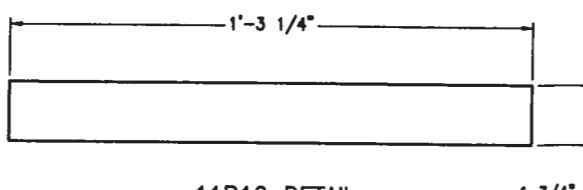
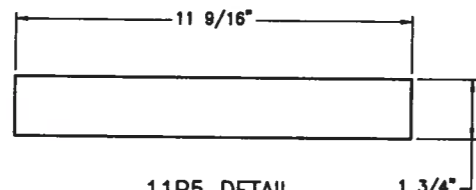
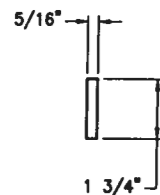
DETAILED BY:	SRN	DATE:	10/20/1
CHECKED BY:	JFW	DATE:	11/11/1
SCALE:	NTS	WBA JOB NO.:	134532
SHEET NO.:	10 of 20	DRAWING NO.:	B-2824

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
 PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT
 & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
 WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS



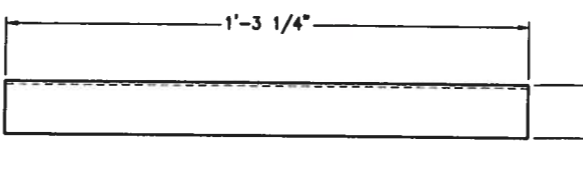
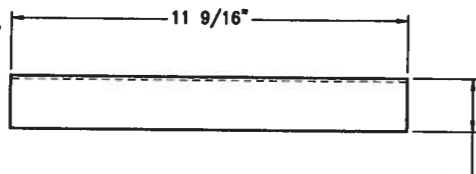
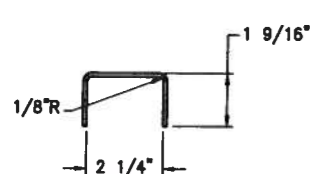
11A1 DETAIL
3 1/2" x 3 1/2" x 3/8" ANGLE

11A2 DETAIL
3 1/2" x 3 1/2" x 3/8" ANGLE



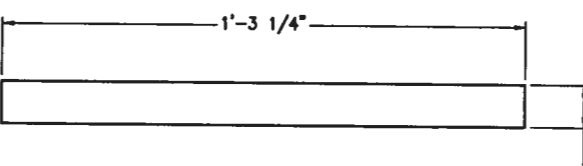
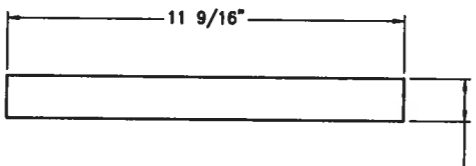
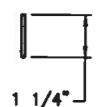
11P5 DETAIL
5/16" PLATE

11P10 DETAIL
5/16" PLATE



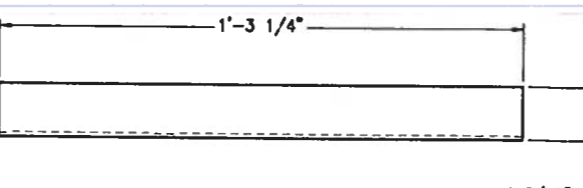
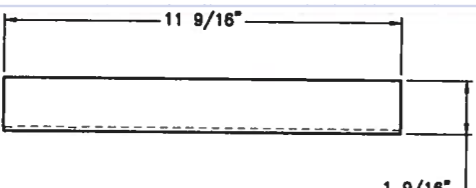
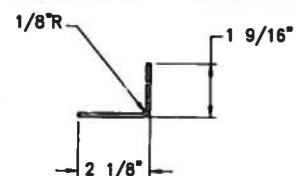
11M1 DETAIL
12 GAUGE STAINLESS STEEL # 8 FINISH
5 1/4" DEVELOPED LENGTH

11M4 DETAIL
12 GAUGE STAINLESS STEEL # 8 FINISH
5 1/4" DEVELOPED LENGTH



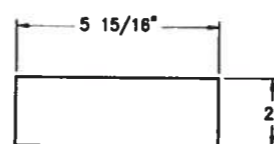
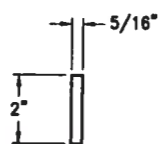
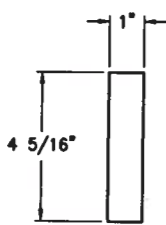
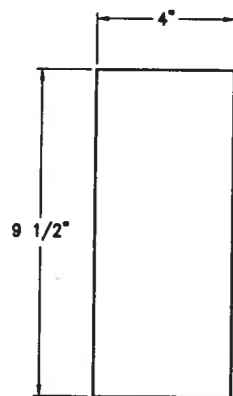
11M2 DETAIL
12 GAUGE STAINLESS STEEL # 8 FINISH

11M5 DETAIL
12 GAUGE STAINLESS STEEL # 8 FINISH



11M3 DETAIL
12 GAUGE STAINLESS STEEL # 8 FINISH
3 1/2" DEVELOPED LENGTH

11M6 DETAIL
12 GAUGE STAINLESS STEEL # 8 FINISH
3 1/2" DEVELOPED LENGTH



11B1 DETAIL
1/4" x 1" FLAT BAR

11B4 DETAIL
5/16" x 2" FLAT BAR

11B3 DETAIL
1/4" x 4" FLAT BAR

SEI134532AA08 QTY: 1 REQ'D. STRUCTURED BILL OF MATERIALS DWG# B-28

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SEI134532AA08	1	EA	TRANSVERSE CONTROL BOX ASSEMBLY X-CEL 900 (W)	PAINTED	
					APPROX FINISHED WEIGHT = 30 lb	
1	SEI134532AA08A	2	EA	STIFFENER PLATE (W)	(11B1) ASTMA 36	
2	5820	0.4	FT	FLAT BAR 1/4 x 1 A36		
1	SEI134532AA08B	1	EA	STIFFENER PLATE (W)	(10B5) ASTMA 36	
2	6004	1.3	FT	FLAT BAR 1/2 x 2-1/4 A36		
1	SEI134532AA08C	1	EA	TRACK ANGLE (X)	(10P6) ASTMA 36	
2	3516	7	LB	PLATE 5/16 A36 (6 FT WIDE)		
1	SEI134532AA08D	1	EA	TRACK SIDE BAR (X)	(10P7) ASTMA 36	
2	3516	2.5	LB	PLATE 5/16 A36 (6 FT WIDE)		
1	SEI133532AA08E	1	EA	TRACK CONNECTOR (U)	(10P8) ASTMA 36	
2	3540	6.5	LB	PLATE 3/8 A36 (6 FT WIDE)		
2	4500	2	EA	CON ANC ST 1/2 x 4 AW 108		
1	SEI133532AA08F	1	EA	LOWER TRACK SIDE BAR (X)	(10P9)	
2	3516	7.25	LB	PLATE 5/16 A36 (6 FT WIDE)		
1	SEI133532AA08G	1	EA	UPPER TRACK STAINLESS (X)	(11M4) ASTMA 240, TYPE 304, NO. 8 FINISH	
2	8576	3	LB	STNLS STL 12GA TYP304 #8FIN(A)		
1	SEI133532AA08H	1	EA	LOWER TRACK SIDE STAINLESS (X)	(11M5) ASTMA 240, TYPE 304, NO. 8 FINISH	
2	8576	0.75	LB	STNLS STL 12GA TYP304 #8FIN(A)		

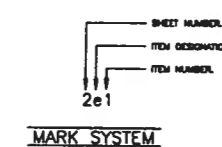
SEI134532AA09 QTY: 1 REQ'D. STRUCTURED BILL OF MATERIALS DWG# B-28

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SEI134532AA09	1	EA	LONGITUDINAL CONTROL BOX ASSEMBLY X-CEL 900 (W)	PAINTED	
					APPROX FINISHED WEIGHT = 25 lb	
1	SEI134532AA08A	2	EA	STIFFENER PLATE (W)	(11B1) ASTMA 36	
2	5820	0.4	FT	FLAT BAR 1/4 x 1 A36		
1	SEI134532AA09B	1	EA	STIFFENER PLATE (W)	(10B2) ASTMA 36	
2	6004	1	FT	FLAT BAR 1/2 x 2-1/4 A36		
1	SEI134532AA09C	1	EA	TRACK ANGLE (X)	(10P1) ASTMA 36	
2	3516	5.2	LB	PLATE 5/16 A36 (6 FT WIDE)		
1	SEI134532AA09D	1	EA	TRACK SIDE BAR (X)	(10P2) ASTMA 36	
2	3516	2	LB	PLATE 5/16 A36 (6 FT WIDE)		
1	SEI133532AA09E	1	EA	TRACK CONNECTOR (U)	(10P3) ASTMA 36	
2	3540	5	LB	PLATE 3/8 A36 (6 FT WIDE)		
2	4500	2	EA	CON ANC ST 1/2 x 4 AW 108		
1	SEI133532AA09F	1	EA	LOWER TRACK SIDE BAR (X)	(10P4)	
2	3516	5.5	LB	PLATE 5/16 A36 (6 FT WIDE)		
1	SEI133532AA09G	1	EA	UPPER TRACK STAINLESS (X)	(11M1) ASTMA 240, TYPE 304, NO. 8 FINISH	
2	8576	2.25	LB	STNLS STL 12GA TYP304 #8FIN(A)		
1	SEI133532AA09H	1	EA	LOWER TRACK SIDE STAINLESS (X)	(11M2) ASTMA 240, TYPE 304, NO. 8 FINISH	
2	8576	0.55	LB	STNLS STL 12GA TYP304 #8FIN(A)		

APPROVED
For Material Dimensions and Materials Only

Robert C. Anderson
Engineer of Bridges and Traffic Structures

STATE: ILLINOIS
 COUNTY: ST. CLAIR
 CONTRACT NO.: 76C44
 SECTION: 82-2-1HVB
 PROJECT: PNR5-0998(001)
 STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
 WBA PRODUCT NO.: SEI134532AA & AB
 JOINT TYPE: SEISMIC MODULAR



DRAWING ACTION:
APPROVED
 12/17/10

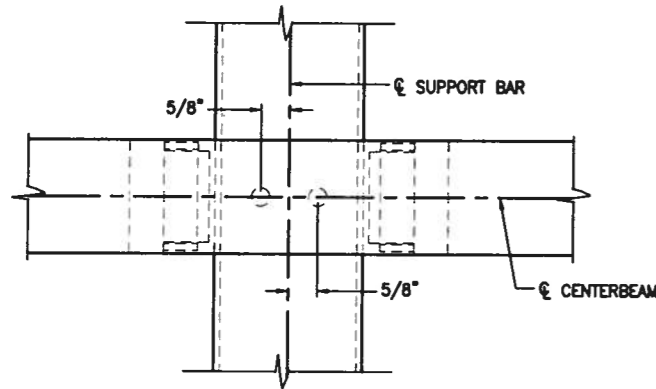
NO.	DESCRIPTION	DATE

Watson Bowman Acme Corp.
 88 Pioneer Drive
 Amherst, NY 14226
 Phone: (716) 891-7888
 Fax: (716) 891-8828
 www.watsonbowman.com

BASF
The Chemical Company

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
 PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT
 & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
 WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

DATE: 10/20/11	DATE: 11/11/11
DRAWN BY: SRN	CHECKED BY: JFW
SCALE: NTS	WBA JOB NO.: 134532
SHEET NO.: 11 of 20	DRAWING NO.: R-2R24P

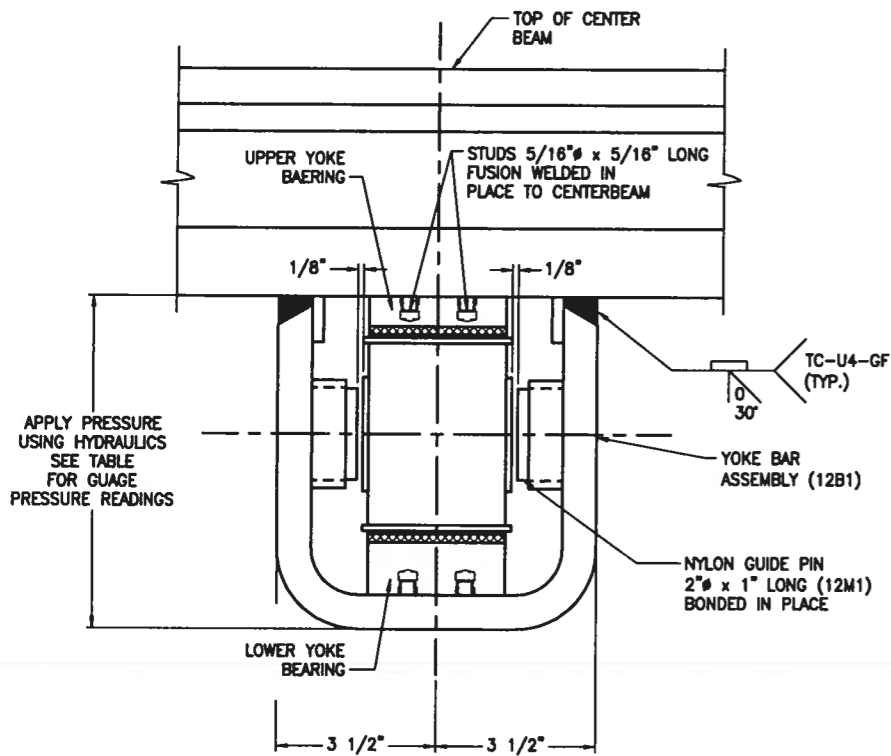
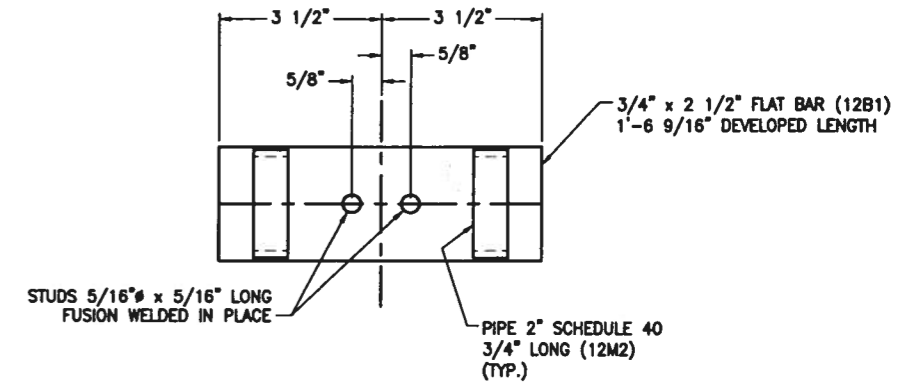


THE FOLLOWING ARE THE GAGE READINGS THAT MUST BE HELD BY FABRICATION STAFF WHEN ASSEMBLING THE YOKES

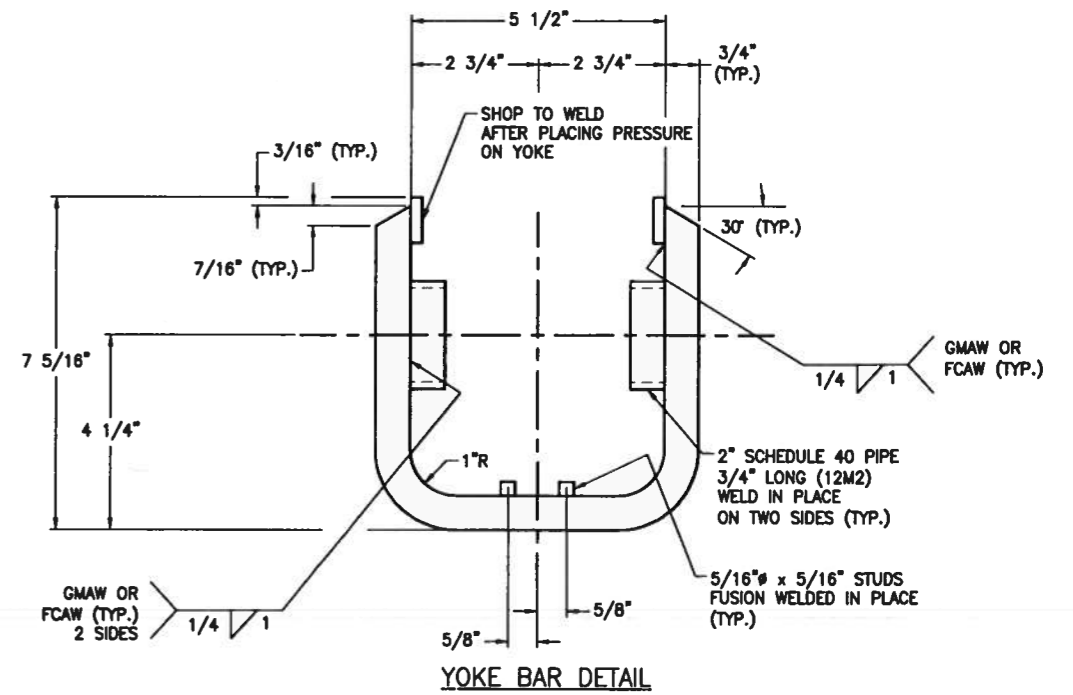
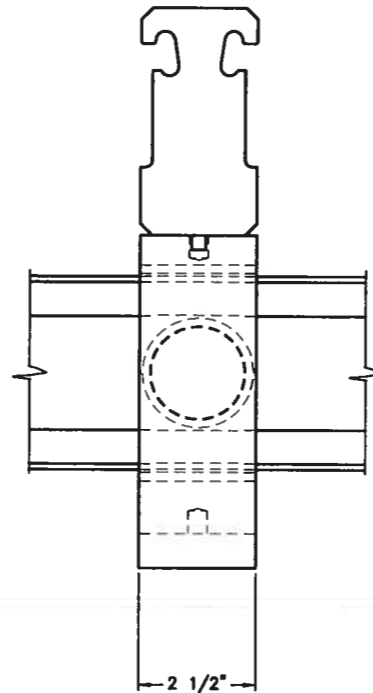
CYLINDER MODEL NUMBER	MINIMUM GAGE PRESSURE (psi)	DESIRED GAGE PRESSURE (psi)	MAXIMUM GAGE PRESSURE (psi)
RC106	650	1000	1330
RC256	300	450	580

IF OTHER CYLINDER MODEL NUMBERS ARE USED OTHER THAN THOSE ABOVE, PLEASE SEE THE WBA ENGINEERING DEPARTMENT TO OBTAIN THE CORRECT JACKING PRESSURE RANGE FOR THE SPECIFIC MODEL NUMBER

YOKE JACK GAGE TABLE

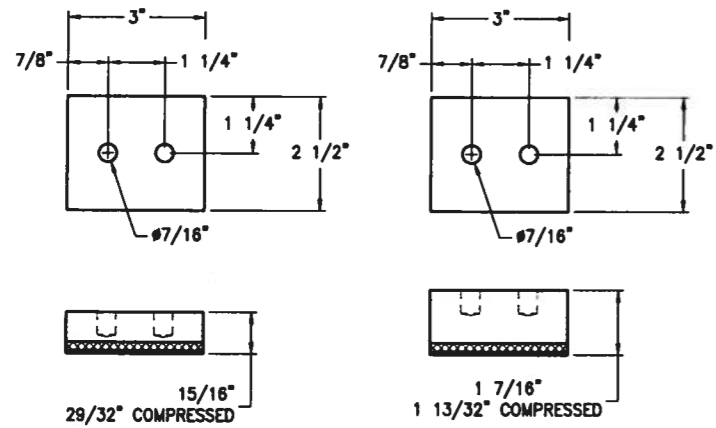


YOKE HOLD DOWN ASSEMBLY DETAILS



YOKE BAR DETAIL

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For Main Components and Materials Only



UPPER YOKE BEARING DETAIL

LOWER YOKE BEARING DETAIL

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SEI134532AA10	1	EA	HOLD DOWN YOKE ASSEMBLY (W)	PAINTED	
1	6078	1.6	FT	FLAT BAR 3/4 x 2-1/2 A36	(12B1)	APPROX FINISHED WEIGHT = 20 lb
1	7245	2	EA	YOKE ASSY PIPE GUIDE 2"A28060W	(12M2)	ASTM A 36
1	5584	2	EA	UHMW DISC 2" DIA X 1" LG		
1	6932	2	EA	NO THREAD STUD 5/16" DIA x 5/16" KO (A)		

DRAWING ACTION:
APPROVED
12/17/10

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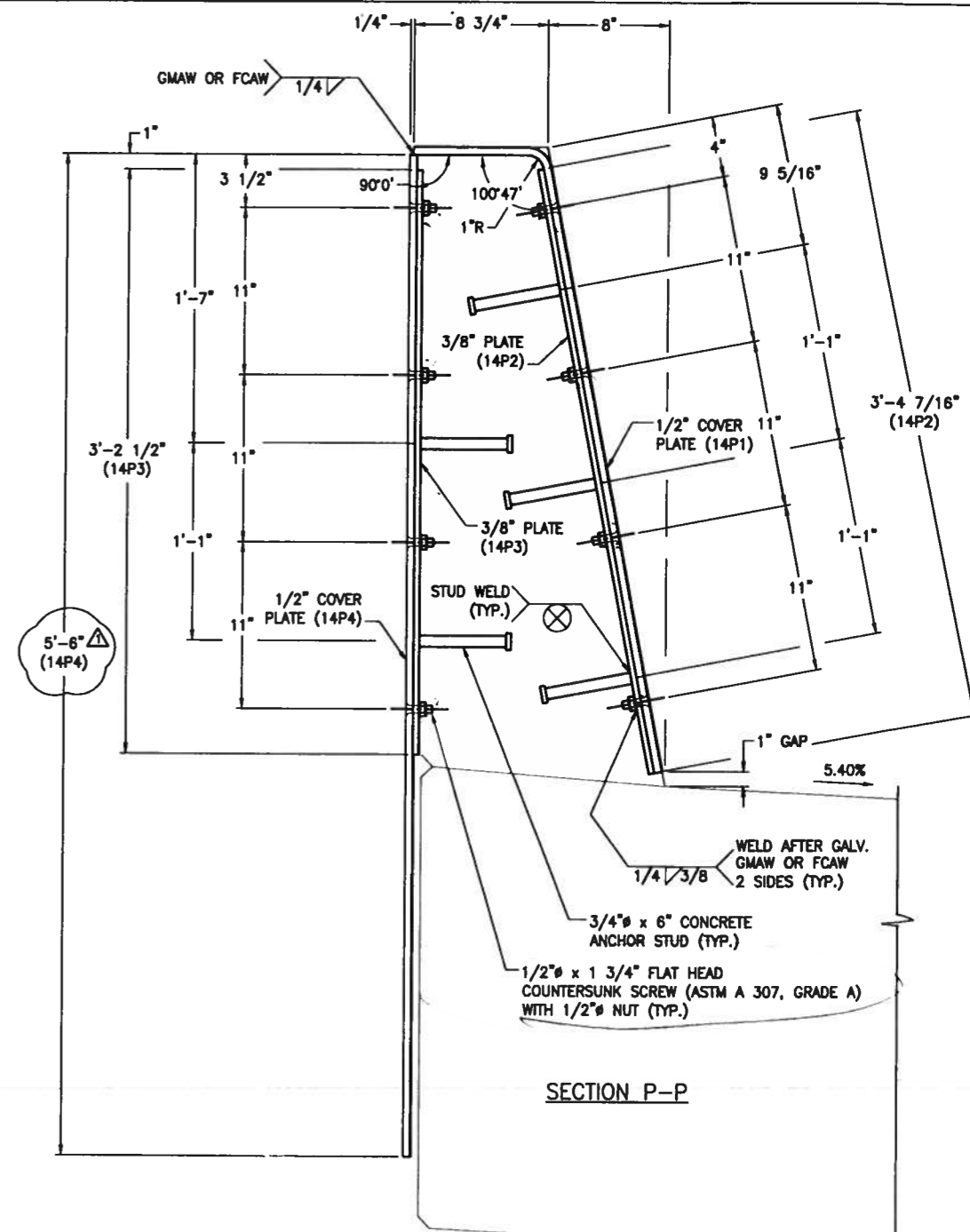
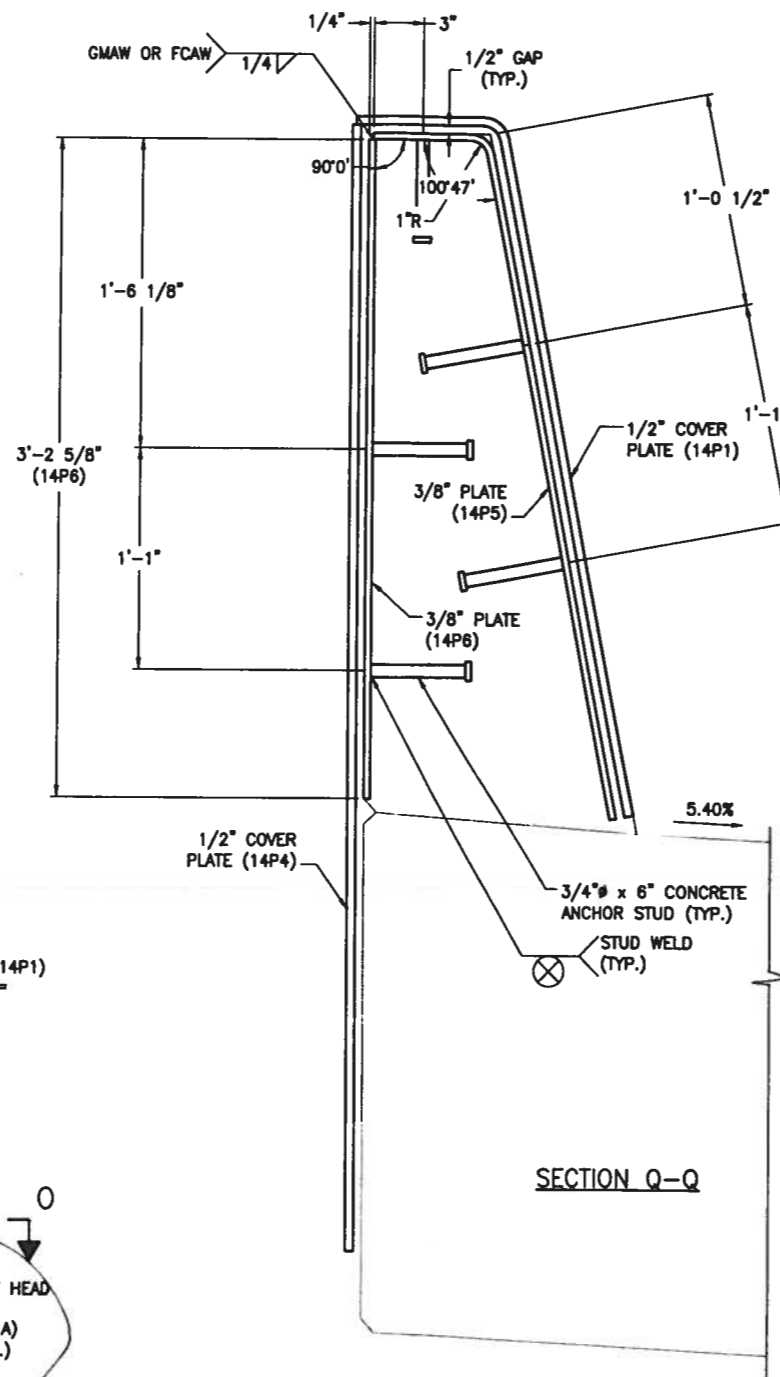
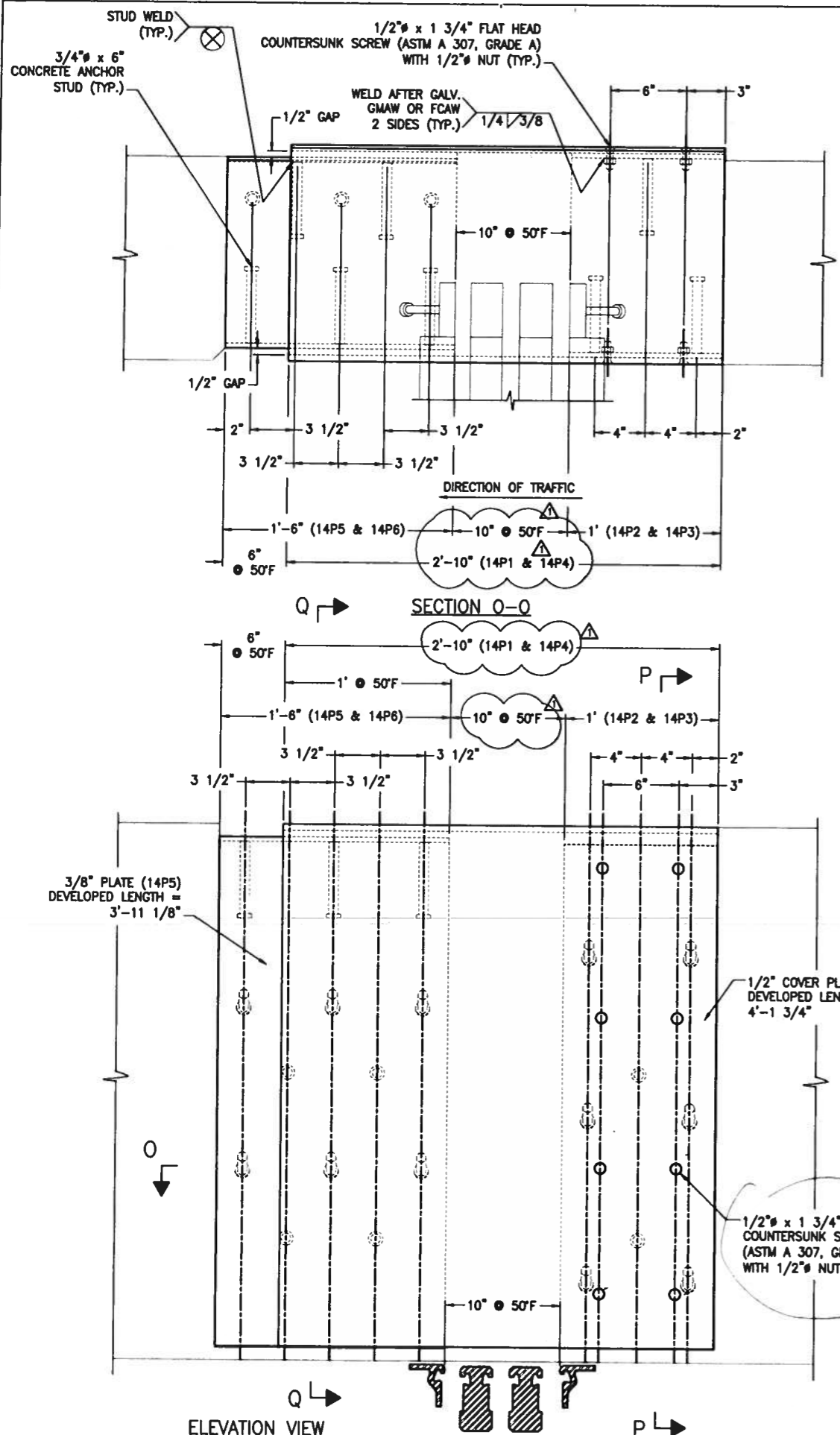
DETAILED BY: SRN DATE: 10/20/11
CHECKED BY: JFW DATE: 11/11/11
SCALE: NTS WBA JOB NO.: 134532
SHEET NO.: 12 of 20 DRAWING NO.: B-2824

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

MARK SYSTEM
SHEET NUMBER
ITEM DESIGNATE
ITEM NUMBER
2e1

MARK SYSTEM

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 78C44
SECTION: 82-2-1HVB
PROJECT: PNR8-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SEI134532AA & AB
JOINT TYPE: SEISMIC MODULAR



APPROVED
 For Main Contract Items and Materials Only

W. L. ...
 Engineer of Bridges and Traffic Structures

STATE: ILLINOIS
 COUNTY: ST. CLAIR
 CONTRACT NO.: 76C44
 SECTION: 82-2-1HVB
 PROJECT: PNR8-0998(001)
 STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
 WBA PRODUCT NO.: SE1134532AA & AB
 JOINT TYPE: SEISMIC MODULAR

DRAWING ACTION:
APPROVED
 12/17/10

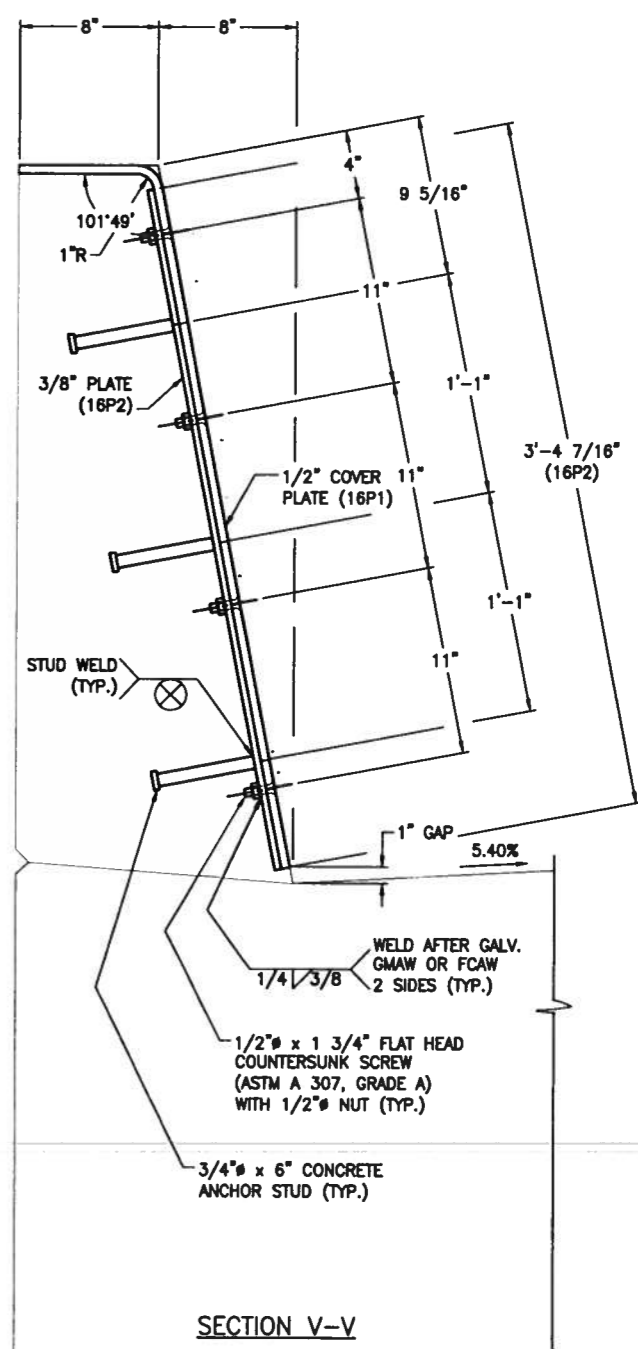
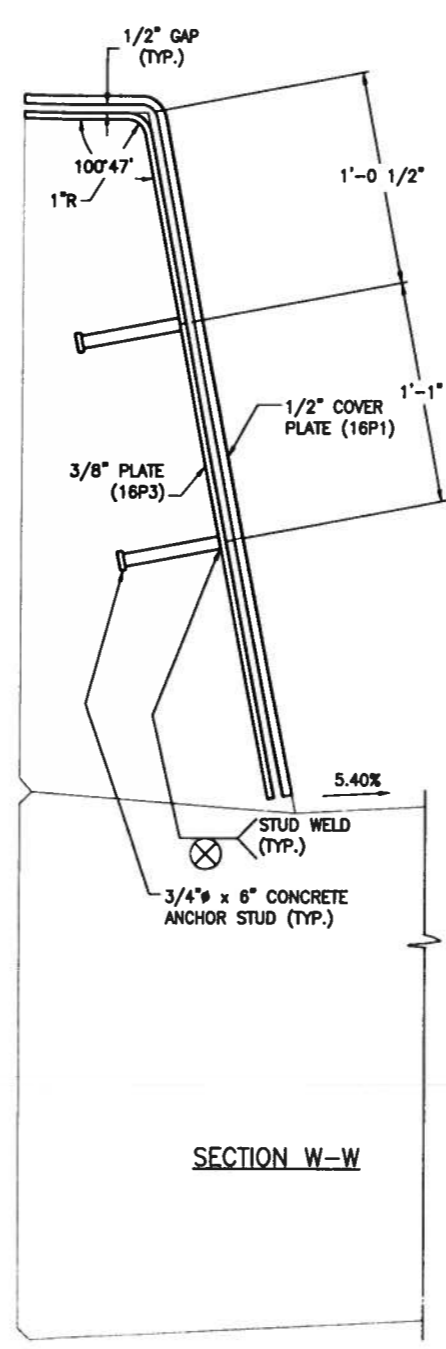
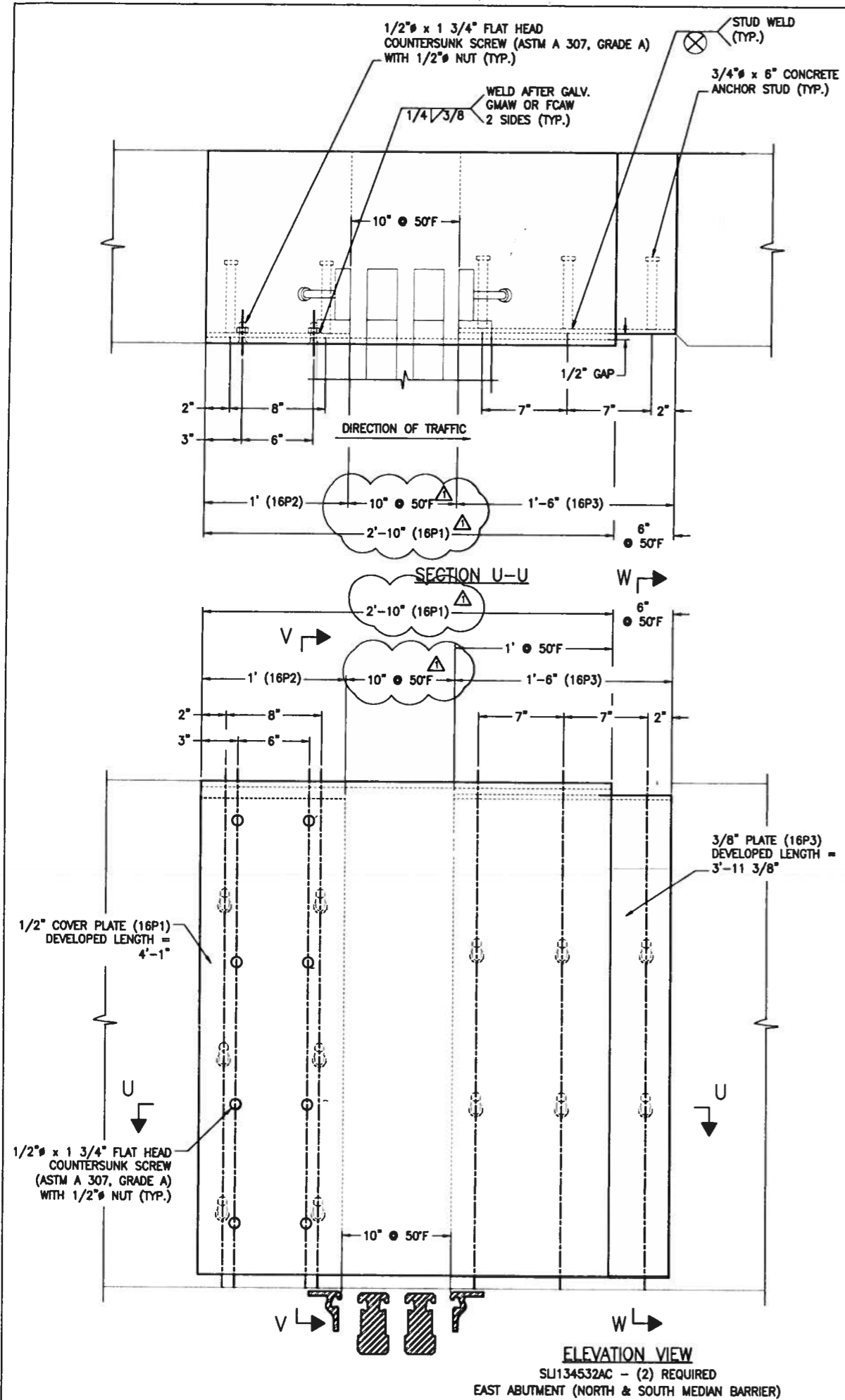
REVISIONS:
 1. REVISED PER REVIEW COMMENTS
 2. ...
 3. ...



PROJECT: I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
 WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

DESIGNED BY: SRN	DATE: 10/20/10
CHECKED BY: JFW	DATE: 11/11/10
SCALE: NTS	WBA JOB NO.: 134532
SHEET NO.: 2e1	DRAWING NO.: 14 of 20

MARK SYSTEM
 2e1



APPROVED
For Main Engineer's and
Millwrights Only

Ralph E. ...
Engineer of Bridges and Traffic Structures

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 76C44
SECTION: 82-2-1HVB
PROJECT: PNRS-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SEI134532AA & AB
JOINT TYPE: SEISMIC MODULAR

SHEET NUMBER
ITEM DESIGNATION
ITEM NUMBER
2e1
MARK SYSTEM

DRAWING ACTION:
APPROVED
12/17/10

REVISIONS	DATE	BY	DESCRIPTION
1			REVISED PER REVIEW COMMENTS
2			
3			
4			
5			

Watson Bowman Acme

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The Chemical Company

DETAILED BY: SRN
DATE: 10/20/10
CHECKED BY: JFW
DATE: 11/11/10

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

SCALE: NTS
SHEET NO.: 134532
DRAWING NO.: 16 of 20
WBA JOB NO.: B-2824

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SEI134532AA	1	EA	ITEM Z0034809; X-CEL 900, EAST ABUT., PAY LENGTH = 40.06'	PAINTED	
					SHIPPING LENGTH = ±45'	
					APPROX SHIPPING WEIGHT = 10,500 LB	
				BIN ITEMS		
1	7010	11	EA	THD STUD 5/8x1-1/2AWL NP108-*	ASTMA 108; SHIPPING CLAMP	
1	7549	11	EA	WASHER 5/8(A) B695C50T1 F436-*	ASTM F 436; SHIPPING CLAMP	
1	7960	11	EA	NUT 5/8 ZINCPLATED A307-*	ASTMA 563; SHIPPING CLAMP	
1	8084	12	EA	NUT 3/4 RICHMOND 2/45 LAG-*	LEVELING DEVICE	
1	SEI134532SA	3	EA	SEAL FOR SHOP INSTALLATION (U)		
2	90	43	FT	SE STRIP SEAL 300 IL C1735-2		
1	SEI134532EVA	1	EA	EVAZONTE FOR SHOP INSTALLATION (U)		
2	30621	8	FT	WABO EVAZOTE380 2.25" X 2"		
1	SEI134532AA01	1	EA	EXTRUSION ASSEMBLY (U)		
2	4620	72	EA	CON ANC ST 5/8 x 6 AW108-*	ASTMA 108	
2	4831	4	EA	CON ANC BNT 5/8 x 6 C10596-*(U)	ASTMA 108	
2	6932	40	EA	NO THD STUD 5/16 X 5/16 KO(A)	ASTMA 108	
2	18802	10	EA	BRONZE BEARING 3" LONG		
2	SEI134532AA03	20	EA	KEEPER PLATE (X)	(6P2)	
3	3545	0.35	LB	PLATE GAUGE 12 GALV (10'LONG)		
2	SEI134532AA02	1	EA	PROFILE (W)		
3	1918	3	FT	SS A3 FM 1.250x2 A36 C11810(W)	ASTMA 36	
3	1953	82	FT	SS MFM 2.75x3 2 A36 C11869(W)	ASTMA 36	
3	1890	84	FT	MOD CB FM SS 2.5x5 A36C13824(W)	ASTMA 36	
2	SEI134532AA04	10	EA	LONGITUDINAL BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA05	10	EA	SUPPORT BAR ASSEMBLY X-CEL 900 (W)	PAINTED	
2	SEI134532AA06	10	EA	TRANSVERSE BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA07	5	EA	CONTROL ARM ASSEMBLY (U)		
2	SEI134532AA08	5	EA	TRANSVERSE CONTROL BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA09	5	EA	LONGITUDINAL CONTROL BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA10	20	EA	HOLD DOWN YOKE ASSEMBLY (W)	PAINTED	
2	SEI134532AA11	10	EA	KEEPER ROD 1 1/2" DIA (U)	(4B1)	
3	9703	1	FT	ROUND BAR 1-1/2" DIA HR4140 QT	ASTMA 193 B7	
2	SEI134532AA12	5	EA	TRANSVERSE CONTROL BOX BOTTOM ASSEMBLY (W)	PAINTED	
3	3516	2.5	LB	PLATE 5/16 A36 (6 FT WIDE)	(11P10) ASTMA 36	
3	3912	1.3	FT	ANGLE 3-1/2x3-1/2x3/8 A36	(11A2) ASTMA 36	
3	8576	1.9	LB	STNLS STL 12GA TYP304 #8FIN(A)	(11M6) ASTMA 240, TYPE 304 NO. 8 FINISH	
2	SEI134532AA13	5	EA	LONGITUDINAL CONTROL BOX BOTTOM ASSEMBLY (W)	PAINTED	
3	3516	1.8	LB	PLATE 5/16 A36 (6 FT WIDE)	(11P5) ASTMA 36	
3	3912	1	FT	ANGLE 3-1/2x3-1/2x3/8 A36	(11A1) ASTMA 36	
3	8576	1.5	LB	STNLS STL 12GA TYP304 #8FIN(A)	(11M3) ASTMA 240, TYPE 304 NO. 8 FINISH	
2	SEI134532AA14	10	EA	ROLLER GUIDE RAIL (W)	(11B4) PAINTED	
3	NTS134532A	0.5	FT	FLAT BAR 5/16" x 2" ASTMA 36 (A)		
2	SEI134532AA15	2	EA	LIFTING DEVICE	(13A1) (TEMPORARY)	
3	4070	1.25	FT	ANGLE 6x4x1/2 A36	ASTMA 36	
2	SEI134532AA16	11	EA	SHIPPING CLAMP	(13A2) (TEMPORARY)	
3	3880	1.5	FT	ANGLE 3x3x3/8 A36	ASTMA 36	
2	SEI134532AA17	1	EA	PARTS FOR ASSEMBLY (U)		
3	4272	40	EA	MOD BEARING ROUND A23290X		
3	4288	20	EA	MOD YOKE BEARING UPPER		
3	4287	20	EA	MOD YOKE BEARING LOWER		
3	5189	5	EA	BOLT 1 x 3-1/2 A490 VL (A)	ASTMA 490; CONTROL ARM	
3	7967	5	EA	NUT 1" GALV A563 HVY HEX (A)	ASTMA 563; CONTROL ARM	
3	18804	10	EA	DU WASHER DU16 1-1/8ID X 2 OD	CONTROL ARM	
3	5838	5	EA	SCREW 3/8 x 1/2 KALLEN CUP PT	CONTROL ARM	
3	18806	40	EA	UHMV SIDE GUIDE A28050	(4M1) LONGITUDINAL SUPPORT BOX	
3	5188	40	EA	BOLT 1-1/2 x 4 A325 DL (A)	ASTMA 325; LONGITUDINAL SUPPORT BOX	
3	7966	40	EA	NUT 1-1/2 GALV A563 (A)	ASTMA 563; LONGITUDINAL SUPPORT BOX	
3	5187	80	EA	BOLT 3/8 x 2-1/2 GALV GR5 (A)	SAE GRADE 5; TRANSVERSE SUPPORT BOX	
3	7965	80	EA	NUT 3/8 GALV A563 (A)	ASTMA 563; TRANSVERSE SUPPORT BOX	
3	7567	80	EA	WASHER 3/8 (A) GALV GR 8	SAE GRADE 8; TRANSVERSE SUPPORT BOX	
3	5186	20	EA	BOLT 5/8 x 2 GALV A325	ASTMA 325; CONTROL BOX ASSEMBLIES	
3	7964	20	EA	NUT 5/8 GALV A563 (A)	ASTMA 563; CONTROL BOX ASSEMBLIES	
3	7565	20	EA	WASHER 5/8 (A) GALV F436	ASTM F 436; CONTROL BOX ASSEMBLIES	
3	5583	40	EA	URETHANE DISC 1" DIA X 1/8 THK 85A		
3	4298	5	EA	CONTROL ARM CONNEX PLT A28059X	(8B1) ASTMA 588	
3	4295	20	EA	KEEPER BAR (SEISMIC) A36 A28051U	(5B4) PAINTED	
3	4297	20	EA	ROD KEEPER BLOCK A36 A28052X	(6P5) PAINTED	

DRAWING ACTION:
APPROVED

12/17/10

SEI134532AA CONT STRUCTURED BILL OF MATERIALS DWG# B-28248

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
2	SEI134532AA18	10	EA	LONGITUDINAL SUPPORT BOX BACK PLATE (X (5P3)		
3	3545	2.05	LB	PLATE GAUGE 12 GALV (10'LONG)		
2	SEI134532AA19	10	EA	TRANSVERSE SUPPORT BOX BACK PLATE (X (7P3)		
3	3545	3.5	LB	PLATE GAUGE 12 GALV (10'LONG)		
2	SEI134532AA20	20	EA	CONTROL BOX ASSEMBLY END PLATE (X (11B3)		
3	5854	0.8	FT	FLAT BAR 1/4 x 4 A36		

SLI134532AA QTY: 1 REQ'D. STRUCTURED BILL OF MATERIALS DWG# B-28248

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SLI134532AA	1	EA	NORTH BARRIER COVER PLATE; EAST ABUTMENT (U)	GALVANIZED	
					APPROXIMATE FINISHED WIEGHT = 1,000 LB	
1	3570	558.25	LB	PLATE 1/2 A588 (14P1 & 14P4)	ASTMA 588	▲
1	3550	265	LB	PLATE 3/8 A588 (14P2, 14P3, 14P5 & 14P6)	ASTMA 588	
1	4720	21	EA	CON ANC ST3/4 x 6-1/16- AW108		
1	7903	16	EA	NUT 1/2 (A) GALVANIZED A325	ASTMA 563	

SLI134532AB QTY: 1 REQ'D. STRUCTURED BILL OF MATERIALS DWG# B-28248

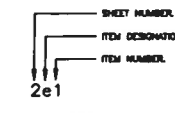
LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SLI134532AB	1	EA	SOUTH BARRIER COVER PLATE; EAST ABUTMENT (U)	GALVANIZED	
					APPROXIMATE FINISHED WIEGHT = 1,000 LB	
1	3570	558.25	LB	PLATE 1/2 A588 (15P1 & 15P4)	ASTMA 588	▲
1	3550	265	LB	PLATE 3/8 A588 (15P2, 15P3, 15P5 & 15P6)	ASTMA 588	
1	4720	21	EA	CON ANC ST3/4 x 6-1/16- AW108		
1	7903	16	EA	NUT 1/2 (A) GALVANIZED A325	ASTMA 563	

SLI134532AC QTY: 2 REQ'D. STRUCTURED BILL OF MATERIALS DWG# B-28248

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SLI134532AC	1	EA	NORTH & SOUTH MEDIAN BARRIER COVER PLATE; EAST ABUT. (U)	GALVANIZED	
					APPROXIMATE FINISHED WIEGHT = 450 LB	
1	3570	236.5	LB	PLATE 1/2 A588 (16P1)	ASTMA 588	▲
1	3550	142.5	LB	PLATE 3/8 A588 (15P2, 15P3, 15P5 & 15P6)	ASTMA 588	
1	4720	12	EA	CON ANC ST3/4 x 6-1/16- AW108		
1	7903	8	EA	NUT 1/2 (A) GALVANIZED A325	ASTMA 563	

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For Main Dimensions and Materials Only

DEC 22 2010
Ralph E. Anderson
Engineer of Bridges and Traffic Structures



MARK SYSTEM

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 76C44
SECTION: 82-2-1HVB
PROJECT: PNR8-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SEI134532AA & AB
JOINT TYPE: SEISMIC MODULAR



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Andover, NY 14228
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www.wbcorp.com



DESIGNED BY: SRN	DATE: 10/20/11
CHECKED BY: JFW	DATE: 11/11/11
SCALE: NTS	WBA JOB NO.: 134532
SHEET NO.: 17 of 20	DRAWING NO.: B-28248

REV. QTY. OF 1/2" PLATE PER REVIEW COMM. & REV. DISC. PER MATERIALS DEP.	SRN	DATE
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PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

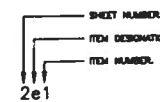
LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SEI134532AB	1	EA	ITEM Z0034809, X-CEL 900, EAST ABUT WB, PAY LENGTH = 52.27'	PAINTED	
				SHIPPING LENGTH = ±53'		
				APPROX SHIPPING WEIGHT = 12,500 LB		
				BIN ITEMS		
1	7010	13	EA	THD STUD 5/8x1-1/2AWL NP108-*	ASTMA 108, SHIPPING CLAMP	
1	7549	13	EA	WASHER 5/8(A) B695C50T1 F436-*	ASTM F 436, SHIPPING CLAMP	
1	7960	13	EA	NUT 5/8 ZINCPLATED A307-*	ASTMA 563, SHIPPING CLAMP	
1	8084	14	EA	NUT 3/4 RICHMOND 2/45 LAG-*	LEVELING DEVICE	
1	SEI134532SB	3	EA	SEAL FOR SHOP INSTALLATION (U)		
2	90	55	FT	SE STRIP SEAL 300 IL C1735-2		
1	SEI134532EV8	1	EA	EVAZONTE FOR SHOP INSTALLATION (U)		
2	30621	10	FT	WABO EVAZOTE380 2.25" X 2"		
1	SEI134532AB01	1	EA	EXTRUSION ASSEMBLY (U)		
2	4620	106	EA	CON ANC ST 5/8 x 6 AW108-*	ASTMA 108	
2	4831	4	EA	CON ANC BNT 5/8 x 6 C10598-*(U)	ASTMA 108	
2	6932	48	EA	NO THD STUD 5/16 X 5/16 KO(A)	ASTMA 108	
2	18802	12	EA	BRONZE BEARING 3" LONG		
2	SEI134532AA03	24	EA	KEEPER PLATE (X)	(6P2)	
3	3545	0.35	LB	PLATE GAUGE 12 GALV(10'LONG)		
2	SEI134532AB02	1	EA	PROFILE (W)		
3	1918	3	FT	SS A3 FM 1.250x2 A36 C11810(W)	ASTMA 36	
3	1953	107	FT	SS M FM 2.75x3.2 A36 C11869(W)	ASTMA 36	
3	1890	109	FT	MOD CB FM SS 2.5x5 A36C13824(W)	ASTMA 36	
2	SEI134532AA04	12	EA	LONGITUDINAL BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA05	12	EA	SUPPORT BAR ASSEMBLY X-CEL 900 (W)	PAINTED	
2	SEI134532AA06	12	EA	TRANSVERSE BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA07	6	EA	CONTROL ARM ASSEMBLY (U)		
2	SEI134532AA08	6	EA	TRANSVERSE CONTROL BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA09	6	EA	LONGITUDINAL CONTROL BOX ASSEMBLY X-CEL 900 (W)		
2	SEI134532AA10	24	EA	HOLD DOWN YOKE ASSEMBLY (W)	PAINTED	
2	SEI134532AA11	12	EA	KEEPER ROD 1 1/2" DIA (U)	(4B1)	
3	9703	1	FT	ROUND BAR 1-1/2"DIA HR4140 QT	ASTMA 193 B7	
2	SEI134532AA12	6	EA	TRANSVERSE CONTROL BOX BOTTOM ASSEMBLY (W)	PAINTED	
3	3516	2.5	LB	PLATE 5/16 A36 (6 FT WIDE)	(11P10) ASTMA 36	
3	3912	1.3	FT	ANGLE 3-1/2x3-1/2x3/8 A36	(11A2) ASTMA 36	
3	8576	1.9	LB	STNLS STL 12GA TYP304 #8FIN(A)	(11M6) ASTMA 240, TYPE 304 NO. 8 FINISH	
2	SEI134532AA13	6	EA	LONGITUDINAL CONTROL BOX BOTTOM ASSEMBLY (W)	PAINTED	
3	3516	1.8	LB	PLATE 5/16 A36 (6 FT WIDE)	(11P5) ASTMA 36	
3	3912	1	FT	ANGLE 3-1/2x3-1/2x3/8 A36	(11A1) ASTMA 36	
3	8576	1.5	LB	STNLS STL 12GA TYP304 #8FIN(A)	(11M3) ASTMA 240, TYPE 304 NO. 8 FINISH	
2	SEI134532AA14	12	EA	ROLLER GUIDE RAIL (W)	(11B4) PAINTED	
3	NTS134532A	0.5	FT	FLAT BAR 5/16" x 2" ASTMA 36 (A)		
2	SEI134532AA15	2	EA	LIFTING DEVICE	(13A1) (TEMPORARY)	
3	4070	1.25	FT	ANGLE 6x4x1/2 A36	ASTMA 36	
2	SEI134532AA16	13	EA	SHIPPING CLAMP	(13A2) (TEMPORARY)	
3	3880	1.5	FT	ANGLE 3x3x3/8 A36	ASTMA 36	
2	SEI134532AB17	1	EA	PARTS FOR ASSEMBLY (U)		
3	4272	48	EA	MOD BEARING ROUND A23290X		
3	4288	24	EA	MOD YOKE BEARING UPPER		
3	4287	24	EA	MOD YOKE BEARING LOWER		
3	5189	6	EA	BOLT 1 x 3-1/2 A490 VL (A)	ASTMA 490, CONTROL ARM	
3	7967	6	EA	NUT 1" GALV A563 HVY HEX (A)	ASTMA 563, CONTROL ARM	
3	18804	12	EA	DU WASHER DU18 1-1/8ID X2 OD	CONTROL ARM	
3	5838	6	EA	SCREW 3/8 x 1/2 K ALLEN CUP PT	CONTROL ARM	
3	18806	48	EA	UHMV SIDE GUIDE A28050	(4M1) LONGITUDINAL SUPPORT BOX	
3	5188	48	EA	BOLT 1-1/2 x 4 A325 DL (A)	ASTMA 325, LONGITUDINAL SUPPORT BOX	
3	7966	48	EA	NUT 1-1/2 GALV A563 (A)	ASTMA 563, LONGITUDINAL SUPPORT BOX	
3	5187	96	EA	BOLT 3/8 x 2-1/2 GALV GR5 (A)	SAE GRADE 5, TRANSVERSE SUPPORT BOX	
3	7965	96	EA	NUT 3/8 GALV A563 (A)	ASTMA 563, TRANSVERSE SUPPORT BOX	
3	7567	96	EA	WASHER 3/8 (A) GALV GR 8	SAE GRADE 8, TRANSVERSE SUPPORT BOX	
3	5186	24	EA	BOLT 5/8 x 2 GALV A325	ASTMA 325, CONTROL BOX ASSEMBLIES	
3	7964	24	EA	NUT 5/8 GALV A563 (A)	ASTMA 563, CONTROL BOX ASSEMBLIES	
3	7565	24	EA	WASHER 5/8 (A) GALV F436	ASTM F 436, CONTROL BOX ASSEMBLIES	
3	5583	48	EA	URETHANE DISC1" DIA X 1/8 THK 85A		
3	4298	6	EA	CONTROL ARM CONNEX PLT A28059X	(8B1) ASTMA 588	
3	4295	24	EA	KEEPER BAR (SEISMIC) A36 A28051U	(5B4) PAINTED	
3	4297	24	EA	ROD KEEPER BLOCK A36 A28052X	(6P5) PAINTED	

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
2	SEI134532AA18	12	EA	LONGITUDINAL SUPPORT BOX BACK PLATE (X)	(5P3)	
3	3545	2.05	LB	PLATE GAUGE 12 GALV(10'LONG)		
2	SEI134532AA19	12	EA	TRANSVERSE SUPPORT BOX BACK PLATE (X)	(7P3)	
3	3545	3.5	LB	PLATE GAUGE 12 GALV(10'LONG)		
2	SEI134532AA20	24	EA	CONTROL BOX ASSEMBLY END PLATE (X)	(11B3)	
3	5854	0.8	FT	FLAT BAR 1/4 x 4 A36		

LV	PART NO.	QTY	UM	DESCRIPTION	MATERIAL	REVISION
0	SEI134532PS	1	EA	PARTS FOR SHIPPING (for SEI134532AA - AC)		
1	NTS134532F	148	EA	SCREW 1/2" x 1 3/4" FLAT HEAD; ASTM A 307, GRADE A GALVANIZED (A)		
1	NTS134532G	25	EA	1" DIA LOCK NUT GALV. (A)		
1	NTS134532H	25	EA	WASHER 1" DIA (A) GALV. ASTM F 436	ASTM F 436	
1	4293	40	EA	MOD LEVELING ROD (12 INCHES) U	LEVELING DEVICE	
1	8084	40	EA	NUT 3/4 RICHMOND 2/45 LAG-*	LEVELING DEVICE	
2	7602	40	EA	WASHER 3/4(A) ZINCPLTED F436-*	LEVELING DEVICE	

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Materials Only

Ralph E. Anderson
Engineer of Bridges and Traffic Structures



MARK SYSTEM

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 76C44
SECTION: 82-2-1HVB
PROJECT: PNR8-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SEI134532AA & AB
JOINT TYPE: SEISMIC MODULAR

DRAWING ACTION:
APPROVED

12/17/10

REVISD DISCRPTION PER MATERIALS DEPARTMENT

NO.	DESCRIPTION	DATE

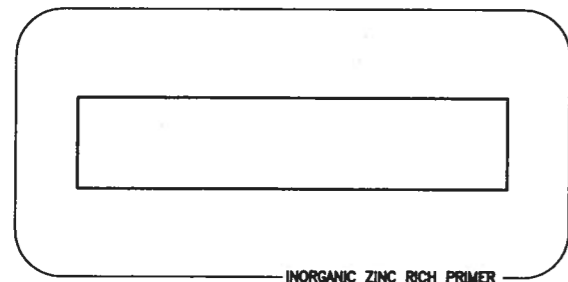
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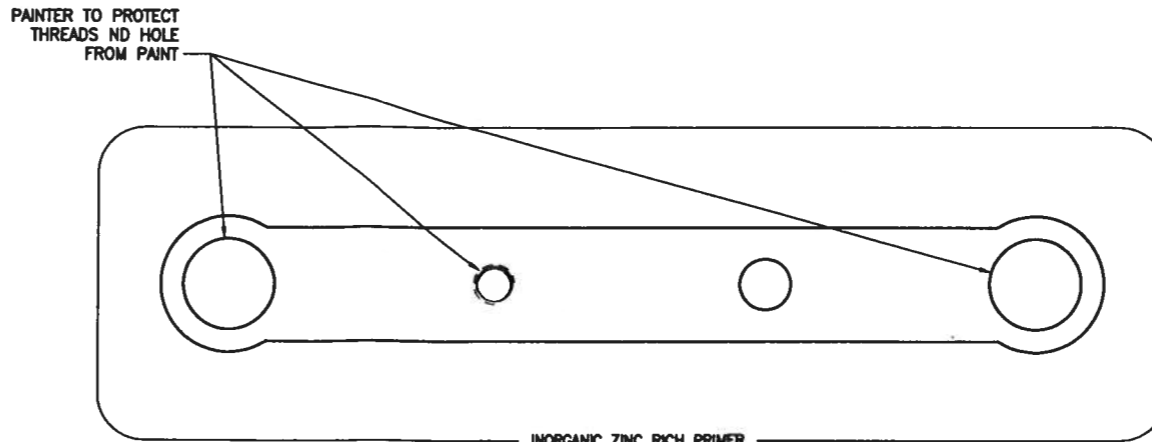
D-BASF
The Chemical Company

DETAILED BY: SRN	DATE: 10/20/1
CHECKED BY: JFW	DATE: 11/11/1
SCALE: NTS	WBA JOB NO.: 134532
SHEET NO.: 18 of 20	DRAWING NO.: B-2824

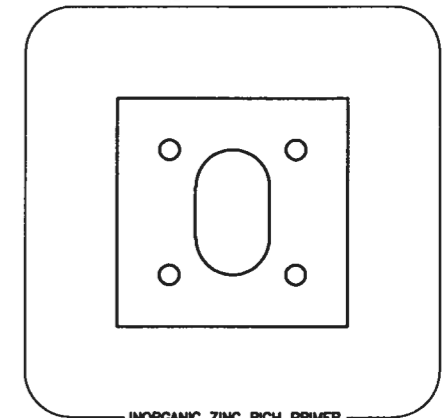
PROJECT:
FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT
& INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS



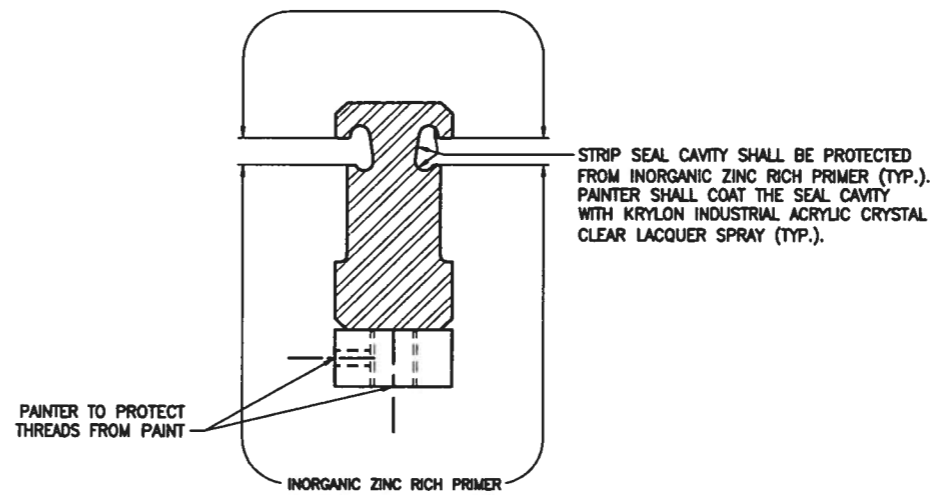
INORGANIC ZINC RICH PRIMER
ROLLER GUIDE RAIL PAINT DETAIL



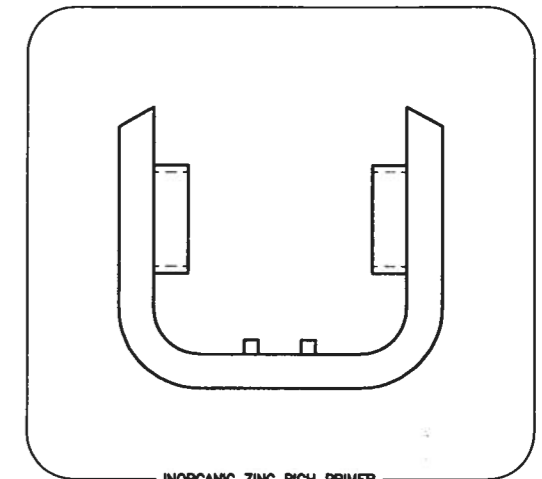
INORGANIC ZINC RICH PRIMER
CONTROL ARM PAINT DETAIL



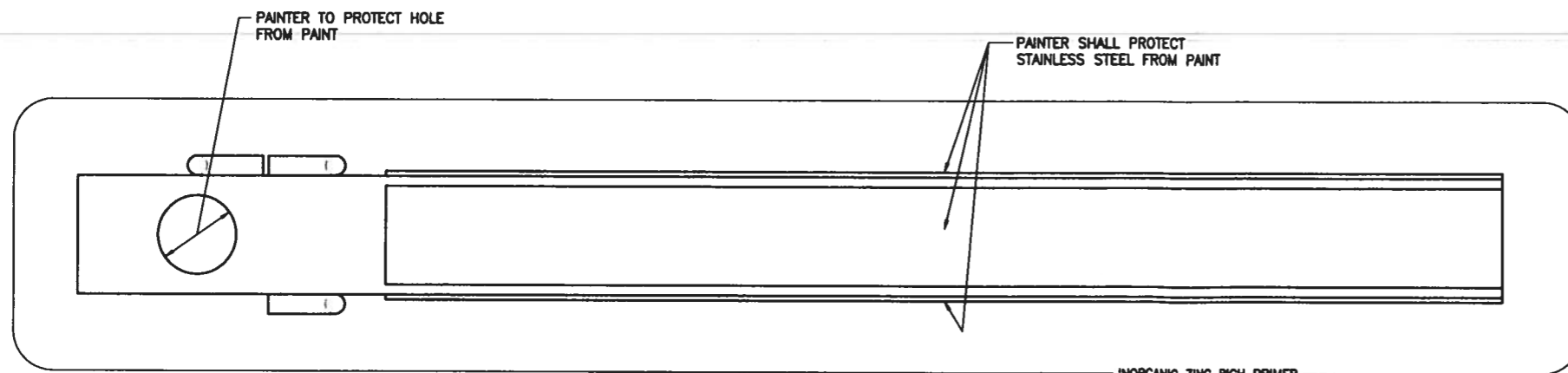
INORGANIC ZINC RICH PRIMER
ROD KEEPER BLOCK PAINT DETAIL



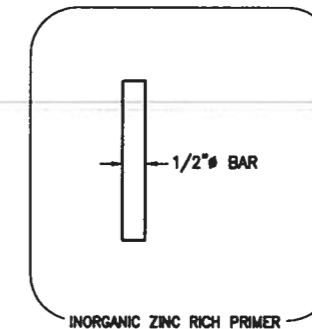
INORGANIC ZINC RICH PRIMER
CENTERBEAM AT CONNECTION PLATE PAINT DETAIL



INORGANIC ZINC RICH PRIMER
YOKE ASSEMBLY PAINT DETAIL



INORGANIC ZINC RICH PRIMER
SUPPORT BAR PAINT DETAIL



INORGANIC ZINC RICH PRIMER
KEEPER BAR PAINT DETAIL

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DEC 23 2010

Ralph E. Anderson
Engineer of Bridges and Traffic Structures

SHEET NUMBER
ITEM DESIGNATION
ITEM NUMBER
2e1

MARK SYSTEM

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 76C44
SECTION: 82-2-1HVB
PROJECT: PNRS-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SE1134532AA & AB
JOINT TYPE: SEISMIC MODULAR

DRAWING ACTION:

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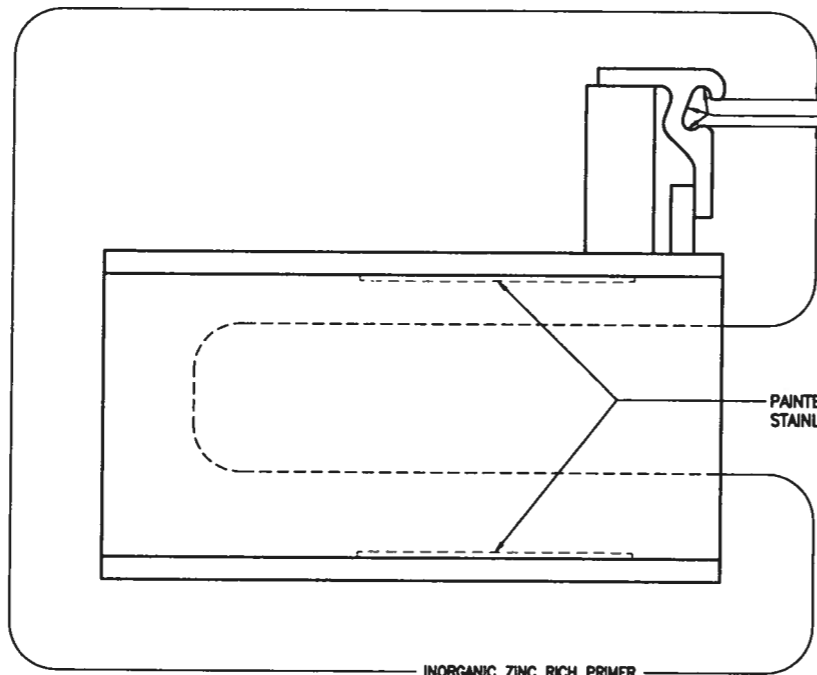
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Watson Bowman Acme Corp.
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Arundel, NY 14228
Phone: (716) 291-7100
Fax: (716) 291-4559
www.wbcorp.com

BASF
The Chemical Company

DETAILED BY	DATE
SRN	10/20/10
CHECKED BY	DATE
JFW	11/11/10
SCALE	WBA JOB NO.
NTS	134532
SHEET NO.	DRAWING NO.
19 of 20	B-28244

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT & INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS

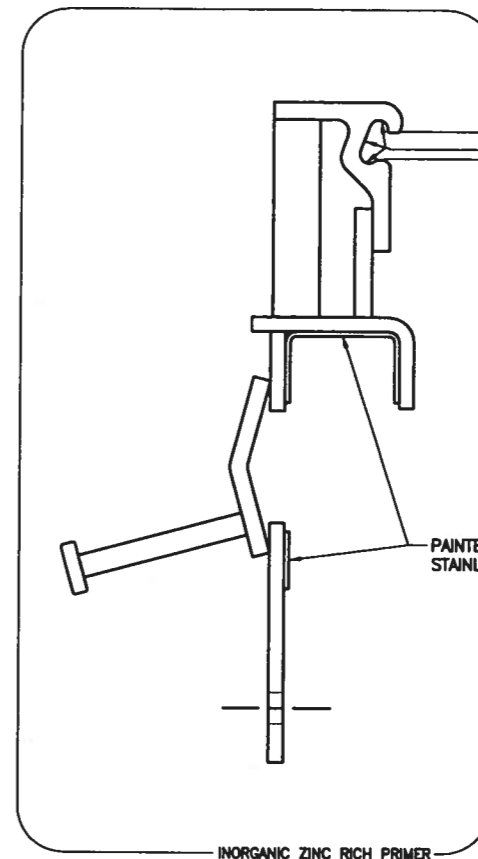


EDGE BEAM AT TRANSVERSE SUPPORT BOX
PAINT DETAIL

STRIP SEAL CAVITY SHALL BE PROTECTED FROM INORGANIC ZINC RICH PRIMER (TYP.). PAINTER SHALL COAT THE SEAL CAVITY WITH KRYLON INDUSTRIAL ACRYLIC CRYSTAL CLEAR LACQUER SPRAY.

PAINTER TO PROTECT STAINLESS STEEL FROM PAINT

INORGANIC ZINC RICH PRIMER



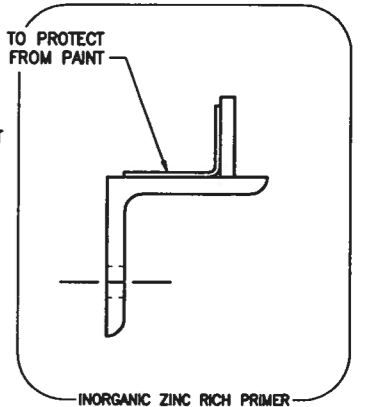
EDGE BEAM AT CONTROL BOX ASSEMBLY
PAINT DETAIL

STRIP SEAL CAVITY SHALL BE PROTECTED FROM INORGANIC ZINC RICH PRIMER (TYP.). PAINTER SHALL COAT THE SEAL CAVITY WITH KRYLON INDUSTRIAL ACRYLIC CRYSTAL CLEAR LACQUER SPRAY.

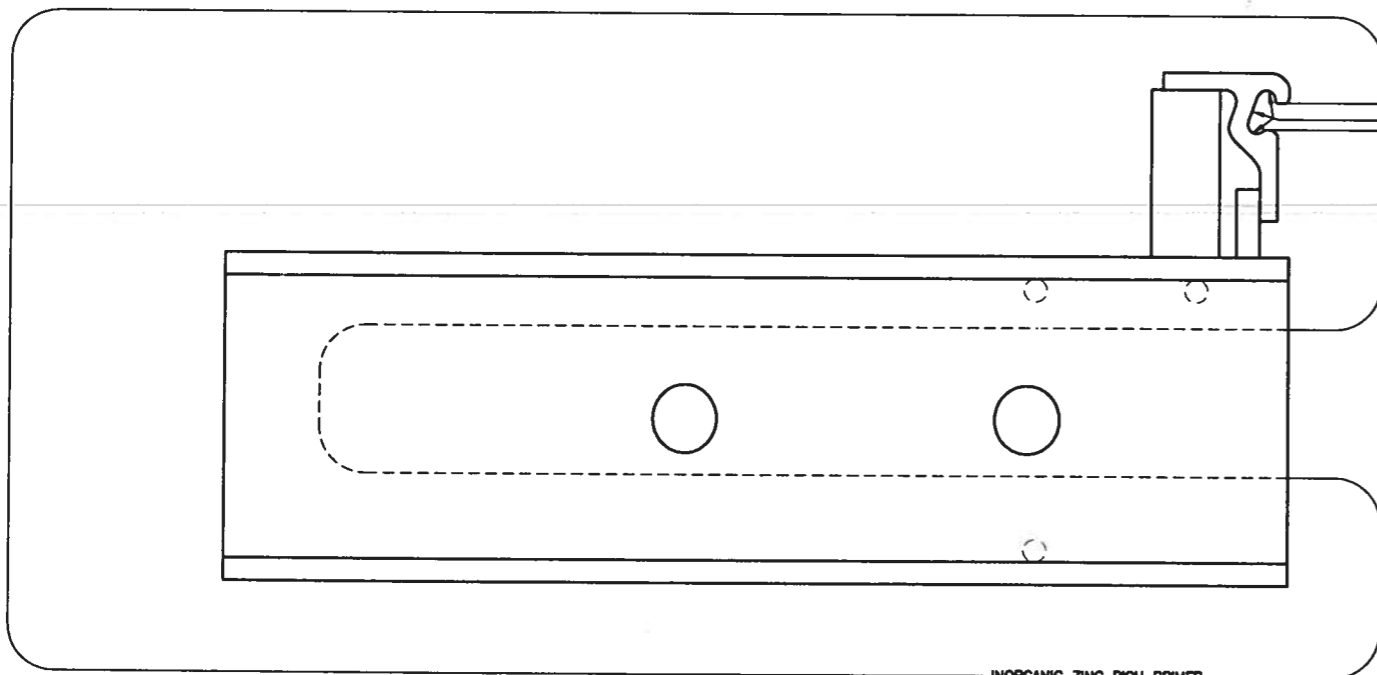
PAINTER TO PROTECT STAINLESS STEEL FROM PAINT

PAINTER TO PROTECT STAINLESS STEEL FROM PAINT

INORGANIC ZINC RICH PRIMER



CONTROL BOX ASSEMBLY BASE PLATE
PAINT DETAIL



EDGE BEAM AT LONGITUDINAL SUPPORT BOX
PAINT DETAIL

STRIP SEAL CAVITY SHALL BE PROTECTED FROM INORGANIC ZINC RICH PRIMER (TYP.). PAINTER SHALL COAT THE SEAL CAVITY WITH KRYLON INDUSTRIAL ACRYLIC CRYSTAL CLEAR LACQUER SPRAY.

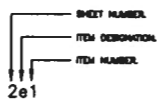
INORGANIC ZINC RICH PRIMER

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11/11/10

Ralph E. Anderson
Engineer of Bridges and Traffic Structures

STATE: ILLINOIS
COUNTY: ST. CLAIR
CONTRACT NO.: 76C44
SECTION: 82-2-1HVB
PROJECT: PNRS-0998(001)
STRUCTURE NO.: SN 082-0318 (EB) & 0319 (WB)
WBA PRODUCT NO.: SE1134532AA & AB
JOINT TYPE: SEISMIC MODULAR



MARK SYSTEM

DRAWING ACTION:

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12/17/10

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2		
3		

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DETAILED BY:	DATE:
SRN	10/20/10
CHECKED BY:	DATE:
JFW	11/11/10
SCALE:	WBA JOB NO.:
NTS	134532
SHEET NO.:	DRAWING NO.:
20 of 20	B-28248

PROJECT: FAP ROUTE 998 (RELOCATED I-70)
PROPOSED I-70 CURVED BRIDGE OVER NS, TRRA, MCT
& INDUSTRIAL DRIVE AND PROPOSED MSE RETAINING WALL
WBA SEISMIC MODULAR 900 EXPANSION JOINT DETAILS