

F.A.B. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

F.A.U. 3578 (SOUTHWEST HIGHWAY)
OVER B&O RAILROAD & STONY CREEK & AT RIDGELAND AVENUE
BEAM FABRICATION
SECTION 15 VB-1-F
PROJECT NO. BRM-3578(009)
COOK COUNTY
C-91-747-09

FOR INDEX OF SHEETS, SEE SHEET NO. 2
HIGHWAY CLASSIFICATION

MINOR ARTERIAL ROADWAY

DESIGN DESIGNATION

3440 (26) ARTERIAL 6.03 (PCC-20)

TRAFFIC DATA

SOUTHWEST HIGHWAY

103 ST. TO RIDGELAND AVE.

2020 ADT=34,000

POSTED SPEED LIMIT=65 km/H (40 MPH)

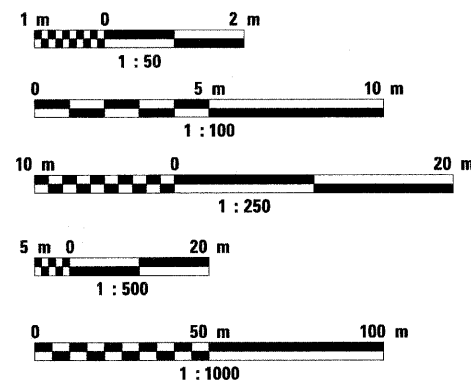
DESIGN SPEED LIMIT=70 km/H (45 MPH)

PROJECT DESCRIPTION

BEAM FABRICATION

**PROJECT LOCATED IN THE
VILLAGE OF CHICAGO RIDGE**

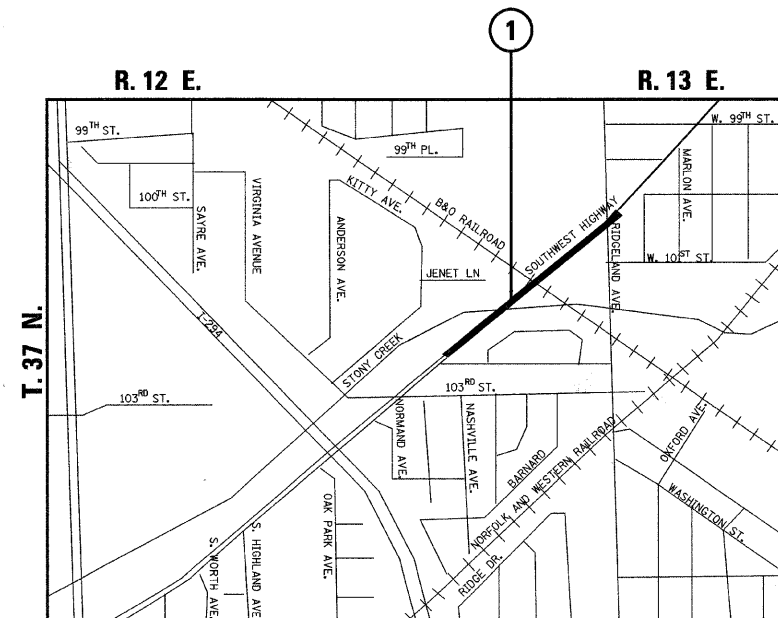
METRIC RATIOS



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811

CONTRACT NO. 60H54

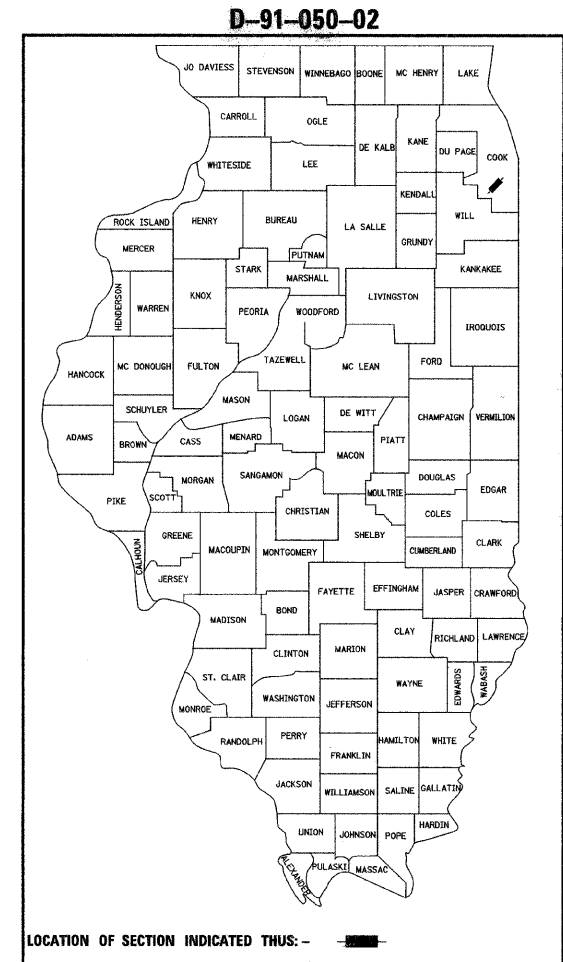


WORTH TOWNSHIP

LOCATION MAP

SCALE 1:15,000

GROSS LENGTH OF SN 016-2771 = 398 m = 0.398 km



**PROPOSED
BEAM FABRICATION**

**1 SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY
CREEK STRUCTURE REPLACEMENT
SN 016-2771 (EXISTING SN 016-0463)
STA. 4+524.129 TO STA. 4+923.711**



Paul M Lopez, EXP. 11-30-10
PAUL M. LOPEZ, P.E., S.E.
 NO. 081-005231
 DATE: 5/22/2009

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

SUBMITTED MAY 22 20 09

June Okin
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 26, 20 09
Charles A. Ingersoll
 ENGINEER OF DESIGN AND ENVIRONMENT

June 26, 20 09
Christine M. Reed
 DIRECTOR, HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

DISTRICT 1 - DESIGN / CONSULTANT SERVICES / RAJENDRA SHAH (847) 705-4555

PATRICK
ENGINEERING INC.
 LISLE, ILLINOIS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54				

INDEX OF SHEETS

SHEET NO.	
1	COVER SHEET
2	INDEX OF SHEETS AND SUMMARY OF QUANTITIES
3- 62	BRIDGE PLANS SN 016-2771

SUMMARY OF QUANTITIES			<i>URBAN</i>
			80% FEDERAL 20% STATE
			X371-2A
CODE	ITEM DESCRIPTION	UNIT	TOTAL QTY.
50500205	FURNISHING STRUCTURAL STEEL	LSUM	1
50500455	STORAGE OF STRUCTURAL STEEL	CAL DA	60

tkoepfenrfdwy_L(isie) 5/22/2009 11:04:47 AM PDF(Grey_Large).plt 0:\DOT\9556_A0\Drawings\STRUCT\Fabrication_plans\00b_FAB_Index_&_S00.dgn



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAU 3578 (SOUTHWEST HIGHWAY) OVER B&O RAILROAD AND STONY CREEK INDEX OF SHEETS & SUMMARY OF QUANTITIES
NAME	DATE	
		NONE NONE DATE: MAY 22, 2009
		DRAWN BY: JTV CHECKED BY: RLD

Bench Mark:

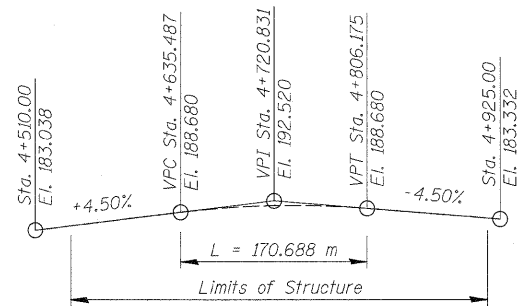
E. Flange Bolt of F.H. at S.W. corner Ridgeland & SW Highway - El. 181.825

Existing Structure:

S.N. 016-0463 was originally constructed in 1934. The overall length of the existing bridge is 386.75 m. The superstructure was reconstructed in 1959 and the bridge was partially reconstructed in 1999. The portion of the existing bridge remaining from the 1959 reconstruction consists of 18 simple spans comprised of pretensioned concrete deck beams, with an out-to-out width of 15.7 m. The portion of the existing bridge reconstructed in 1999 consists of five new rolled continuous wide flange beam spans to form a unit of 96.971 m. The out-to-out width of the concrete deck is 18.50 m. Two 7.70 m reinforced concrete slab spans were also constructed in 1999 to transition the new structure to the original.

Notes:

- All dimensions are in millimeters (mm), except as noted.
- Offsets are measured from ϕ SW Highway to edge of deck.



WATERWAY INFORMATION (STONY CREEK)

Max Recorded H.W.E. = 180.90 m (7/ 18- 20 /96)

Drainage Area = 47.37 sq.km Low Grade Elev. 183.6 @ Sta. 4+525

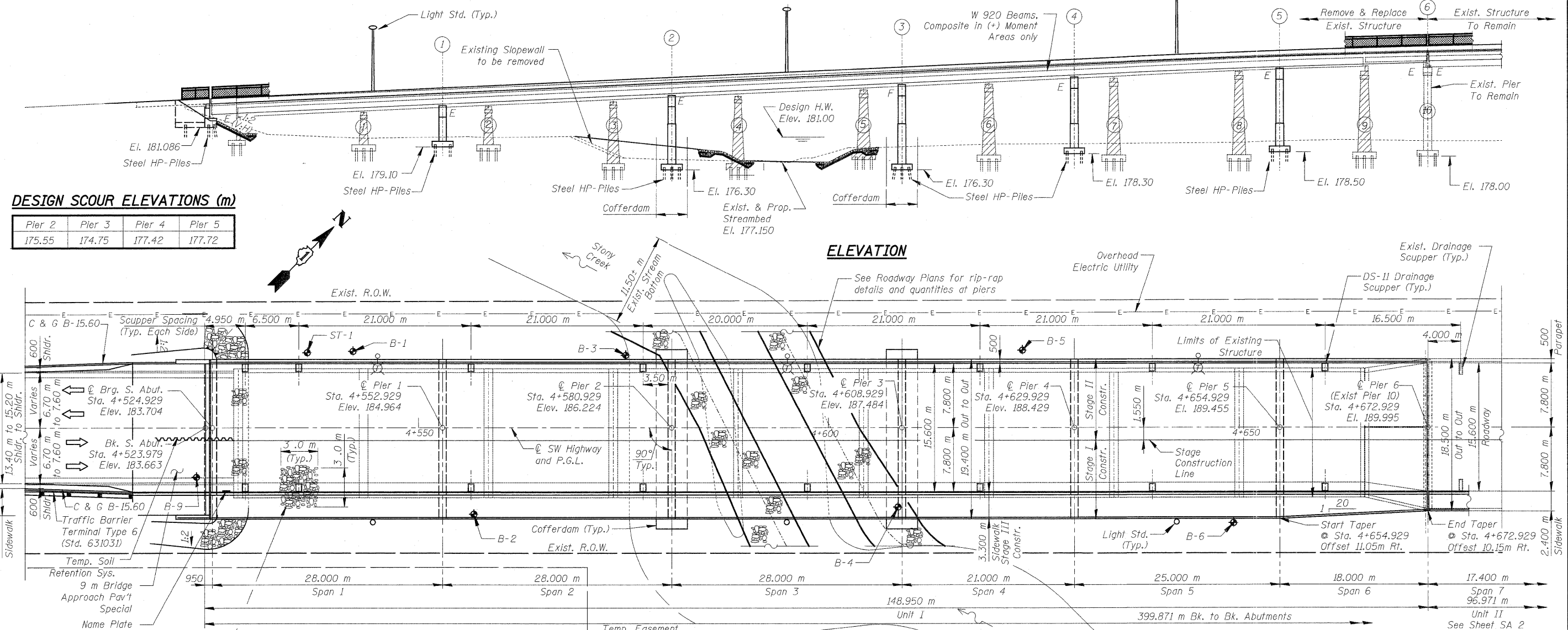
Flood	Freq. (Yr.)	Q (cms)	Opening (Sq. m)		Natural H.W.E. (m)	Head (m)		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	35.25	147.3	154.3	180.61	0.00	0.00	180.61	180.61
Base	50	47.57	208.0	217.2	181.00	0.00	0.00	181.00	181.00
Overtopping	100	53.24	234.2	244.4	181.16	0.00	0.00	181.16	181.16
Max. Calc.	500	58.33	277.3	289.2	181.42	0.00	0.00	181.42	181.42

All elevations are in Highway Datum
IDOT Datum = FIS Datum + 0.789 m

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60H54				

DESIGN SCOUR ELEVATIONS (m)

Pier 2	Pier 3	Pier 4	Pier 5
175.55	174.75	177.42	177.72



DESIGN STRESSES

EXISTING CONSTRUCTION
 $f'_c = 24$ MPa
 $f_y = 400$ MPa (Reinf.)
 $f_y = 345$ MPa (M270M Grade 345)

NEW CONSTRUCTION
 $f'_c = 24$ MPa
 $f_y = 400$ MPa (Reinf.)
 $f_y = 345$ MPa (M270M Grade 345)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.038g
 Site Coefficient (S) = 1.0

APPROVED FOR STRUCTURAL ADEQUACY ONLY

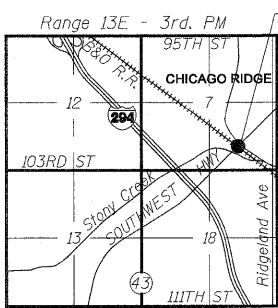
Paul M. Lopez, P.E., S.E.
 ENGINEER OF BRIDGES AND STRUCTURES



PATRICK ENGINEERING INC.
 PAUL M. LOPEZ, P.E., S.E.
 IL. REG. NO. 081-005231

EXP DATE: 11-30-2010
 DATE: 5-22-2009

PLAN



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges
 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges
LOADING MS18
 Allowance for Future Wearing Surface = 2.4 kN/m²



ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
UNIT I
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497

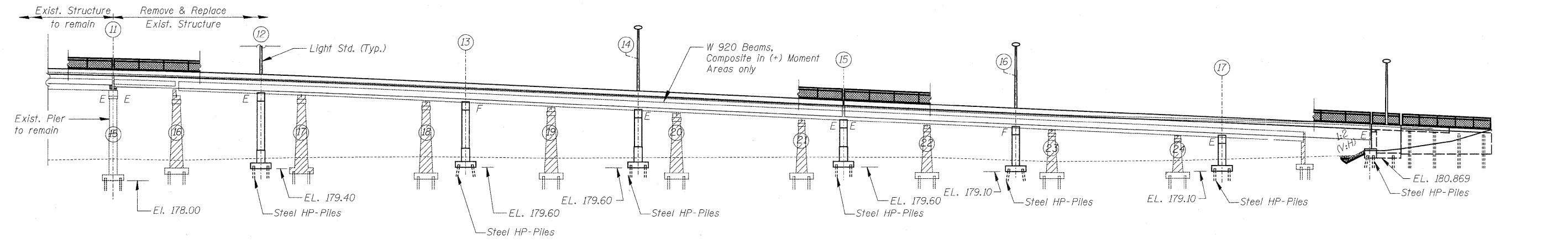
SCALE: NONE
 DATE: MAY 22, 2009

DRAWN BY: E. Mroozek
 CHECKED BY: G. Hatlestad

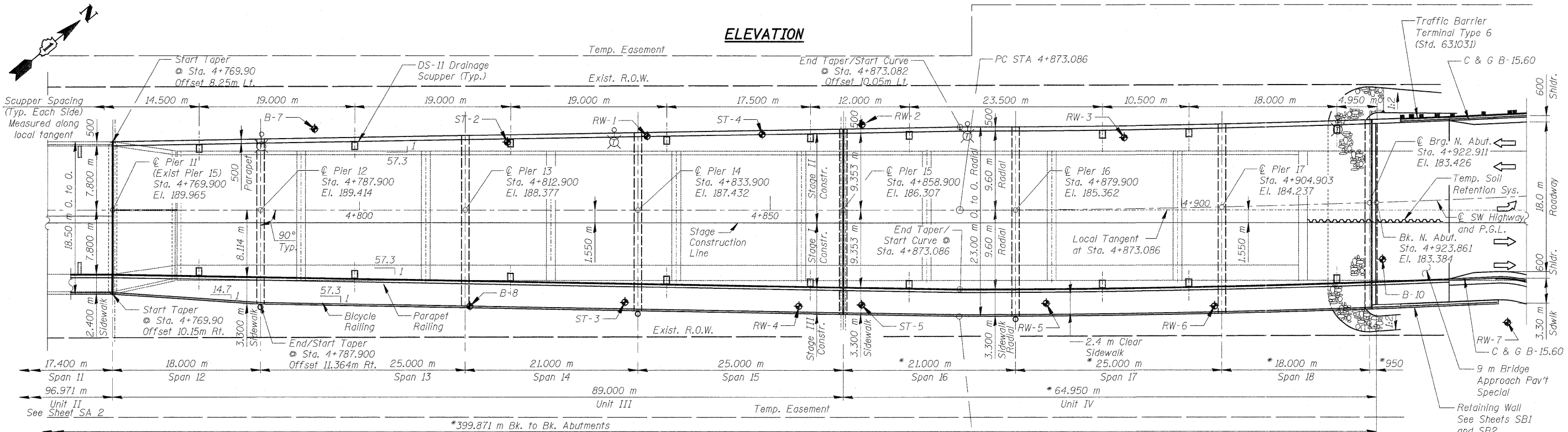
REVISIONS	
NAME	DATE

k:\open\Draw_L15e\5/22/2009 4:25:42 PM
 q:\idof\9556_a0\drawings\struct\Fabrication\plans\01\FAB_0gel.dgn

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



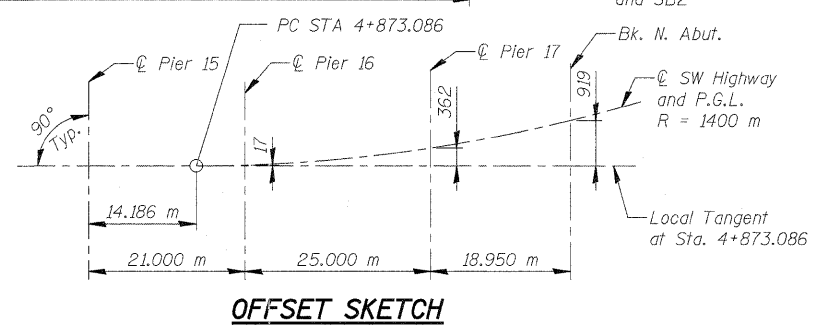
ELEVATION



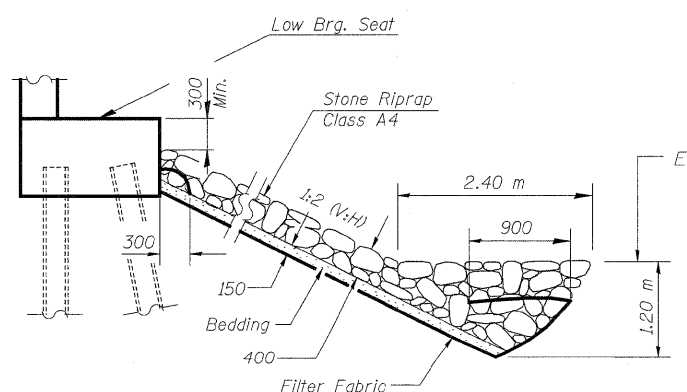
PLAN

PROP. CURVE P-SW

PI STA = 4+981.784
 $\Delta = 8^\circ 52' 45''$ (LT)
 R = 1,400.000 m
 T = 108.697 m
 L = 216.960 m
 E = 4.213 m
 e = Normal Crown
 P.C. STA = 4+873.086
 P.T. STA = 5+090.046



OFFSET SKETCH



STONE RIPRAP ANCHOR DETAIL AT ABUTMENT

STATION 4+716.497
 BUILT 200_ BY
 STATE OF ILLINOIS
 FAU 3578 SECTION 15V B-1-R-1
 F.A. PROJ.
 LOADING MS18
 STR. NO. 016-2771

NAME PLATE
See Std. 515001

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
UNIT III & UNIT IV
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatlestad

k:\pepper\rdwy_l\isle\5/22/2009 4:25:41 PM q:\1dot\9556_a0\drawings\struct\Fabrication-plans\03_FAB.pge3.dgn



GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts M22, open holes 24mm Φ , unless otherwise noted.
2. Calculated mass of structural steel: M270M Grade 345 = 745,430 kg
M270M Grade 250 = 67,390 kg
3. No field welding is permitted except as specified in the contract documents.
- * 4. Anchor bolts shall be set before bolting diaphragms over supports.
- * 5. The structural steel bearing plates of the Elastomeric Bearing Assembly & the plates of the Steel Extensions shall conform to the requirements of AASHTO M270M Grade 345.
6. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
- * 7. Reinforcement bars shall conform to the requirements of ASTM A706M grade 420. See Special Provisions.
- * 8. Reinforcement bars designated (E) shall be epoxy coated.
- * 9. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
10. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- * 11. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 3 mm adjusting shims shall be provided for each bearing and placed as detailed.
- * 12. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- * 13. Concrete Sealer shall be applied to the seat area of the abutments and Piers 6, 11 and 15.
- * 14. When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:
a. At least 72 hours shall have elapsed from the end of the previous pour.
b. The concrete strength shall have attained a minimum flexural strength of 4.5 MPA or a minimum compressive strength of 24 MPA.
- * 15. All construction joints shall be bonded.
16. All dimensions are in millimeters (mm) except as noted.
17. The Inorganic zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No 5B 7/L. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be reddish brown Munsell No. 2.5YR 3/4. See special provision for "Cleaning and Painting New Metal Structures".
- * 18. Prior to beginning any work within or above the railroad right-of-way, the Contractor shall comply with the requirements set forth by Articles 107.11 and 107.12 of the Standard Specifications.
- * 19. The Contractor is solely responsible for arranging access to the site with the necessary property owners. In addition, the contractor is advised of overhead utility lines that may potentially interfere with certain construction equipment. The Contractor shall use appropriate equipment that provides adequate clearance to the utility lines or make arrangements with the respective utility companies to accommodate his specific equipment. No additional compensation will be considered for gaining access to the site, or addressing utility accommodations or any associated delays.
- * 20. See the General Notes on Sheet 2 for notes regarding access to the railroad right-of-way.
- * 21. See Sheet SA 8 for salvaging of existing structural supports.
- * 22. Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.
- * 23. Protective coat shall be applied to the entire surface of the sidewalk barrier.
- * 24. If the Contractor's procedures for existing beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Structures.
- * 25. The Contractor is advised that the existing PPC Deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal of the superstructure.
- * 26. Slipforming of the concrete parapets is not allowed.

INDEX OF SHEETS

- SA1 General Plan and Elevation - Unit I
- SA2 General Plan and Elevation - Unit II
- SA3 General Plan and Elevation - Unit III & Unit IV
- SA4 General Notes, Total Bill of Mat'l & Index of Sheets
- ** SA5 Construction Staging & Removal Details - Unit I
- ** SA6 Construction Staging & Removal Details - Unit II
- ** SA7 Construction Staging & Removal Details - Unit III & IV
- ** SA8 Temporary Superstructure Support Removal I
- ** SA8A Temporary Superstructure Support Removal II
- SA9 Top of Slab Elevations - Unit I - A
- SA10 Top of Slab Elevations - Unit I - B
- SA11 Top of Slab Elevations - Unit I - C
- SA12 Top of Slab Elevations - Unit I - D
- SA13 Top of Slab Elevations - Unit III - A
- SA14 Top of Slab Elevations - Unit III - B
- SA15 Top of Slab Elevations - Unit III - C
- SA16 Top of Slab Elevations - Unit IV - A
- SA17 Top of Slab Elevations - Unit IV - B
- SA18 Top of Slab Elevations - Unit IV - C
- ** SA18A Top of Slab Elevations - APPR. PAV'T
- SA19 Superstructure - Unit I
- SA20 Superstructure Details - Unit I - A
- SA21 Superstructure Details - Unit I - B
- SA22 Superstructure - Unit II
- SA23 Superstructure Details - Unit II
- SA23A Superstructure Details - Unit II - A
- SA24 Superstructure - Unit III
- SA25 Superstructure Details - Unit III - A
- SA26 Superstructure Details - Unit III - B
- SA27 Superstructure - Unit IV
- SA28 Superstructure Details - Unit IV - A
- SA29 Superstructure Details - Unit IV - B
- SA30 Modular Expansion Joint
- SA30A Modular Expansion Joint
- SA30B Modular Expansion Joint
- ** SA30C Expansion Joint Details
- ** SA31 Drainage Scupper Details
- ** SA32 Bicycle Railing Details I
- ** SA32A Bicycle Railing Details II
- SA33 Framing Plan - Unit I
- SA34 Framing Plan - Unit III
- SA35 Framing Plan - Unit IV
- SA35A End Diaphragms at Modular Jnts.
- SA36 Beam Details - Unit I
- SA37 Beam Details - Unit III
- SA38 Beam Details - Unit IV
- SA39 Lighting Support Bracket Details
- SA40 Bearing Details - Unit I South Abutment & Pier 3
- SA41 Bearing Details - Unit I Piers 1, 2, 4, & 5
- SA42 Bearing Details - Piers 6 & 11
- SA43 Steel Extension Details - Unit II
- SA44 Bearing Details - Unit III Piers 12, 13, 14 & 15
- SA45 Bearing Details - Unit IV Piers 15, 16, 17 and N. Abut
- ** SA46 Anchor Bolt Details
- SA47 South Abutment
- SA48 South Abutment Details
- SA49 North Abutment
- SA50 North Abutment Details
- SA51 Pier 1
- SA52 Pier 2
- SA53 Pier 3
- SA54 Pier 4
- SA55 Pier 5
- SA56 Piers 6 & 11 - Removal
- SA57 Pier 6
- SA58 Pier 12
- SA59 Pier 13
- SA60 Pier 14
- SA61 Pier 15
- SA62 Pier 16
- SA63 Pier 17
- ** SA64 Temporary Concrete Barrier
- ** SA65 Bar Splicer Assembly Details
- ** SA65A Pile Detail
- ** SA66 to SA78 - Soil Boring Logs
- ** SA79 to SA110 - Interim Bridge Plans (For Information only)

SHEET SA4 of SA110

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 60H54

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing Structural Steel	L. Sum	1
Storage of Structural Steel	Cal Day	60

* - This work is not included in this fabrication contract and is provided for information only

** - This work is not included in this fabrication contract and sheet is not included in these plans

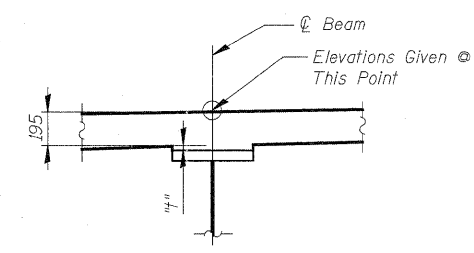
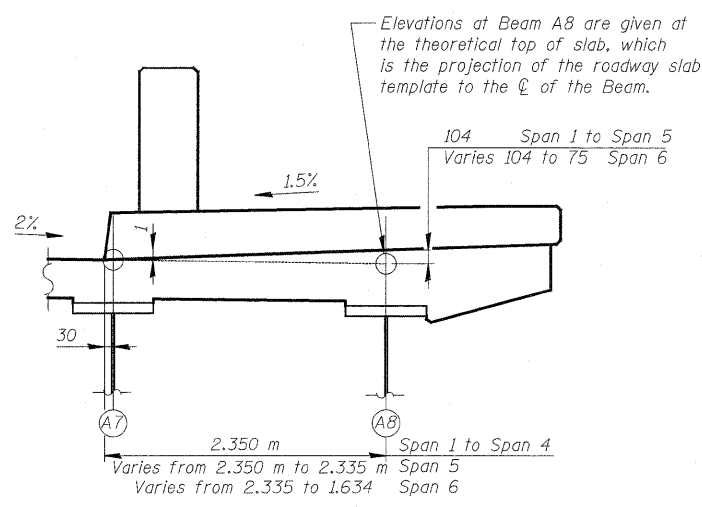
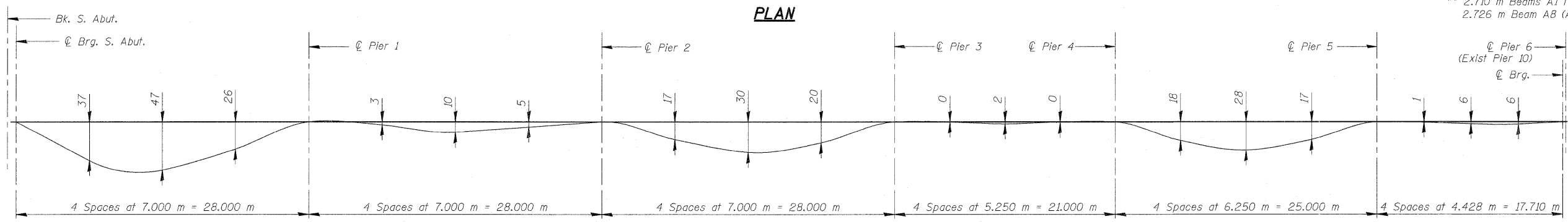
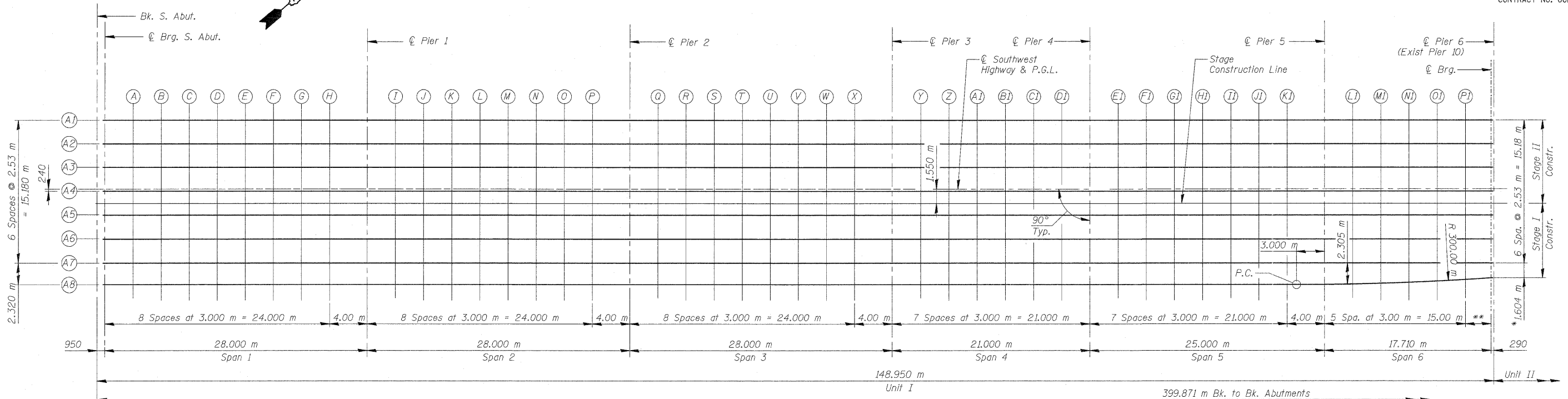
These plans are for the fabrication of the structural steel. All work shown that is not related to the fabrication is for information only. It is not included in this contract, and is identified as "Not included in this contract" or "For information only"

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION GENERAL NOTES, TOTAL BILL OF MAT'L & INDEX OF SHEETS SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: JTV DATE: MAY 22, 2009 CHECKED BY: RLD
NAME	DATE	

jvermillion(rdwj_llise) 5/29/2009 10:52:25 PM
 qt:\idot\9556_a0\drawings\struc\fabr\cortfor_plans\04_FAB_gen_notes.dgn



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TOP OF SLAB ELEVATIONS - UNIT I - A
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatstead

+koeppen(fdw)_Lisle) 5/22/2009 4:26:15 PM qt:\dot\9556_a0\drawings\structure\fabrification-plans\09_FAB_Top slab Elev UNIT I.dgn

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				

BEAM A1

BEAM A2

BEAM A3

CENTERLINE ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	-7.350	183.551	183.551
⊕ Brg. S. Abut.	4+524.929	-7.350	183.593	183.593
A	4+527.929	-7.350	183.728	183.746
B	4+530.929	-7.350	183.863	183.896
C	4+533.929	-7.350	183.998	184.041
D	4+536.929	-7.350	184.133	184.180
E	4+539.929	-7.350	184.268	184.313
F	4+542.929	-7.350	184.403	184.440
G	4+545.929	-7.350	184.538	184.564
H	4+548.929	-7.350	184.673	184.686
⊕ Brg. Pier 1	4+552.929	-7.350	184.853	184.853
I	4+555.929	-7.350	184.988	184.986
J	4+558.929	-7.350	185.123	185.124
K	4+561.929	-7.350	185.258	185.264
L	4+564.929	-7.350	185.393	185.402
M	4+567.929	-7.350	185.528	185.538
N	4+570.929	-7.350	185.663	185.671
O	4+573.929	-7.350	185.798	185.803
P	4+576.929	-7.350	185.933	185.934
⊕ Brg. Pier 2	4+580.929	-7.350	186.113	186.113
Q	4+583.929	-7.350	186.248	186.254
R	4+586.929	-7.350	186.383	186.397
S	4+589.929	-7.350	186.518	186.541
T	4+592.929	-7.350	186.653	186.681
U	4+595.929	-7.350	186.788	186.818
V	4+598.929	-7.350	186.923	186.950
W	4+601.929	-7.350	187.058	187.078
X	4+604.929	-7.350	187.193	187.204
⊕ Brg. Pier 3	4+608.929	-7.350	187.373	187.373
Y	4+611.929	-7.350	187.508	187.506
Z	4+614.929	-7.350	187.643	187.643
A1	4+617.929	-7.350	187.778	187.780
B1	4+620.929	-7.350	187.913	187.915
C1	4+623.929	-7.350	188.048	188.048
D1	4+626.929	-7.350	188.183	188.182
⊕ Brg. Pier 4	4+629.929	-7.350	188.318	188.318
E1	4+632.929	-7.350	188.453	188.460
F1	4+635.929	-7.350	188.588	188.605
G1	4+638.929	-7.350	188.723	188.745
H1	4+641.929	-7.350	188.858	188.875
I1	4+644.929	-7.350	188.993	188.996
J1	4+647.929	-7.350	189.128	189.107
K1	4+650.929	-7.350	189.263	189.211
⊕ Brg. Pier 5	4+654.929	-7.350	189.398	189.344
L1	4+657.929	-7.350	189.533	189.446
M1	4+660.929	-7.350	189.668	189.546
N1	4+663.929	-7.350	189.803	189.641
O1	4+666.929	-7.350	189.938	189.730
P1	4+669.929	-7.350	190.073	189.810
⊕ Brg. Pier 6	4+672.639	-7.350	189.876	189.876
⊕ Pier 6	4+672.929	-7.350	189.884	189.884

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	-4.820	183.590	183.590
⊕ Brg. S. Abut.	4+524.929	-4.820	183.632	183.632
A	4+527.929	-4.820	183.767	183.785
B	4+530.929	-4.820	183.902	183.935
C	4+533.929	-4.820	184.037	184.080
D	4+536.929	-4.820	184.172	184.219
E	4+539.929	-4.820	184.307	184.352
F	4+542.929	-4.820	184.442	184.479
G	4+545.929	-4.820	184.577	184.603
H	4+548.929	-4.820	184.712	184.725
⊕ Brg. Pier 1	4+552.929	-4.820	184.892	184.892
I	4+555.929	-4.820	185.027	185.025
J	4+558.929	-4.820	185.162	185.163
K	4+561.929	-4.820	185.297	185.303
L	4+564.929	-4.820	185.432	185.441
M	4+567.929	-4.820	185.567	185.577
N	4+570.929	-4.820	185.702	185.710
O	4+573.929	-4.820	185.837	185.842
P	4+576.929	-4.820	185.972	185.973
⊕ Brg. Pier 2	4+580.929	-4.820	186.152	186.152
Q	4+583.929	-4.820	186.287	186.293
R	4+586.929	-4.820	186.422	186.436
S	4+589.929	-4.820	186.557	186.580
T	4+592.929	-4.820	186.692	186.720
U	4+595.929	-4.820	186.827	186.857
V	4+598.929	-4.820	186.962	186.989
W	4+601.929	-4.820	187.097	187.117
X	4+604.929	-4.820	187.232	187.243
⊕ Brg. Pier 3	4+608.929	-4.820	187.412	187.412
Y	4+611.929	-4.820	187.547	187.545
Z	4+614.929	-4.820	187.682	187.682
A1	4+617.929	-4.820	187.817	187.819
B1	4+620.929	-4.820	187.952	187.954
C1	4+623.929	-4.820	188.087	188.087
D1	4+626.929	-4.820	188.222	188.221
⊕ Brg. Pier 4	4+629.929	-4.820	188.357	188.357
E1	4+632.929	-4.820	188.492	188.499
F1	4+635.929	-4.820	188.627	188.644
G1	4+638.929	-4.820	188.762	188.784
H1	4+641.929	-4.820	188.897	188.914
I1	4+644.929	-4.820	189.032	189.035
J1	4+647.929	-4.820	189.167	189.145
K1	4+650.929	-4.820	189.302	189.249
⊕ Brg. Pier 5	4+654.929	-4.820	189.382	189.382
L1	4+657.929	-4.820	189.484	189.484
M1	4+660.929	-4.820	189.586	189.584
N1	4+663.929	-4.820	189.688	189.680
O1	4+666.929	-4.820	189.790	189.768
P1	4+669.929	-4.820	189.892	189.848
⊕ Brg. Pier 6	4+672.639	-4.820	189.915	189.915
⊕ Pier 6	4+672.929	-4.820	189.923	189.923

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	-2.290	183.628	183.628
⊕ Brg. S. Abut.	4+524.929	-2.290	183.670	183.670
A	4+527.929	-2.290	183.805	183.823
B	4+530.929	-2.290	183.940	183.973
C	4+533.929	-2.290	184.075	184.118
D	4+536.929	-2.290	184.210	184.257
E	4+539.929	-2.290	184.345	184.390
F	4+542.929	-2.290	184.480	184.517
G	4+545.929	-2.290	184.615	184.641
H	4+548.929	-2.290	184.750	184.763
⊕ Brg. Pier 1	4+552.929	-2.290	184.930	184.930
I	4+555.929	-2.290	185.065	185.063
J	4+558.929	-2.290	185.200	185.201
K	4+561.929	-2.290	185.335	185.341
L	4+564.929	-2.290	185.470	185.479
M	4+567.929	-2.290	185.605	185.615
N	4+570.929	-2.290	185.740	185.748
O	4+573.929	-2.290	185.875	185.880
P	4+576.929	-2.290	186.010	186.011
⊕ Brg. Pier 2	4+580.929	-2.290	186.190	186.190
Q	4+583.929	-2.290	186.325	186.331
R	4+586.929	-2.290	186.460	186.474
S	4+589.929	-2.290	186.595	186.618
T	4+592.929	-2.290	186.730	186.758
U	4+595.929	-2.290	186.865	186.895
V	4+598.929	-2.290	187.000	187.027
W	4+601.929	-2.290	187.135	187.155
X	4+604.929	-2.290	187.270	187.281
⊕ Brg. Pier 3	4+608.929	-2.290	187.450	187.450
Y	4+611.929	-2.290	187.585	187.583
Z	4+614.929	-2.290	187.720	187.720
A1	4+617.929	-2.290	187.855	187.857
B1	4+620.929	-2.290	187.990	187.992
C1	4+623.929	-2.290	188.125	188.125
D1	4+626.929	-2.290	188.260	188.259
⊕ Brg. Pier 4	4+629.929	-2.290	188.395	188.395
E1	4+632.929	-2.290	188.530	188.537
F1	4+635.929	-2.290	188.665	188.682
G1	4+638.929	-2.290	188.797	188.822
H1	4+641.929	-2.290	188.924	188.952
I1	4+644.929	-2.290	189.047	189.073
J1	4+647.929	-2.290	189.164	189.183
K1	4+650.929	-2.290	189.277	189.287
⊕ Brg. Pier 5	4+654.929	-2.290	189.420	189.420
L1	4+657.929	-2.290	189.522	189.522
M1	4+660.929	-2.290	189.619	189.622
N1	4+663.929	-2.290	189.712	189.718
O1	4+666.929	-2.290	189.799	189.806
P1	4+669.929	-2.290	189.882	189.886
⊕ Brg. Pier 6	4+672.639	-2.290	189.953	189.953
⊕ Pier 6	4+672.929	-2.290	189.960	189.960

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	0.00	183.662	183.662
⊕ Brg. S. Abut.	4+524.929	0.00	183.704	183.704
A	4+527.929	0.00	183.839	183.857
B	4+530.929	0.00	183.974	184.007
C	4+533.929	0.00	184.109	184.152
D	4+536.929	0.00	184.244	184.291
E	4+539.929	0.00	184.379	184.424
F	4+542.929	0.00	184.514	184.551
G	4+545.929	0.00	184.649	184.675
H	4+548.929	0.00	184.784	184.797
⊕ Brg. Pier 1	4+552.929	0.00	184.964	184.964
I	4+555.929	0.00	185.099	185.097
J	4+558.929	0.00	185.234	185.235
K	4+561.929	0.00	185.369	185.375
L	4+564.929	0.00	185.504	185.513
M	4+567.929	0.00	185.639	185.649
N	4+570.929	0.00	185.774	185.782
O	4+573.929	0.00	185.909	185.914
P	4+576.929	0.00	186.044	186.045
⊕ Brg. Pier 2	4+580.929	0.00	186.224	186.224
Q	4+583.929	0.00	186.359	186.365
R	4+586.929	0.00	186.494	186.508
S	4+589.929	0.00	186.629	186.652
T	4+592.929	0.00	186.764	186.792
U	4+595.929	0.00	186.899	186.929
V	4+598.929	0.00	187.034	187.061
W	4+601.929	0.00	187.169	187.189
X	4+604.929	0.00	187.304	187.315
⊕ Brg. Pier 3	4+608.929	0.00	187.484	187.484
Y	4+611.929	0.00	187.619	187.617
Z	4+614.929	0.00	187.754	187.754
A1	4+617.929	0.00	187.889	187.891
B1	4+620.929	0.00	188.024	188.026
C1	4+623.929	0.00	188.159	188.159
D1	4+626.929	0.00	188.294	188.293
⊕ Brg. Pier 4	4+629.929	0.00	188.429	188.429
E1	4+632.929	0.00	188.564	188.571
F1	4+635.929	0.00	188.699	188.716
G1	4+638.929	0.00	188.831	188.856
H1	4+641.929			

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				

BEAM A4

STAGE CONSTRUCTION LINE

BEAM A5

BEAM A6

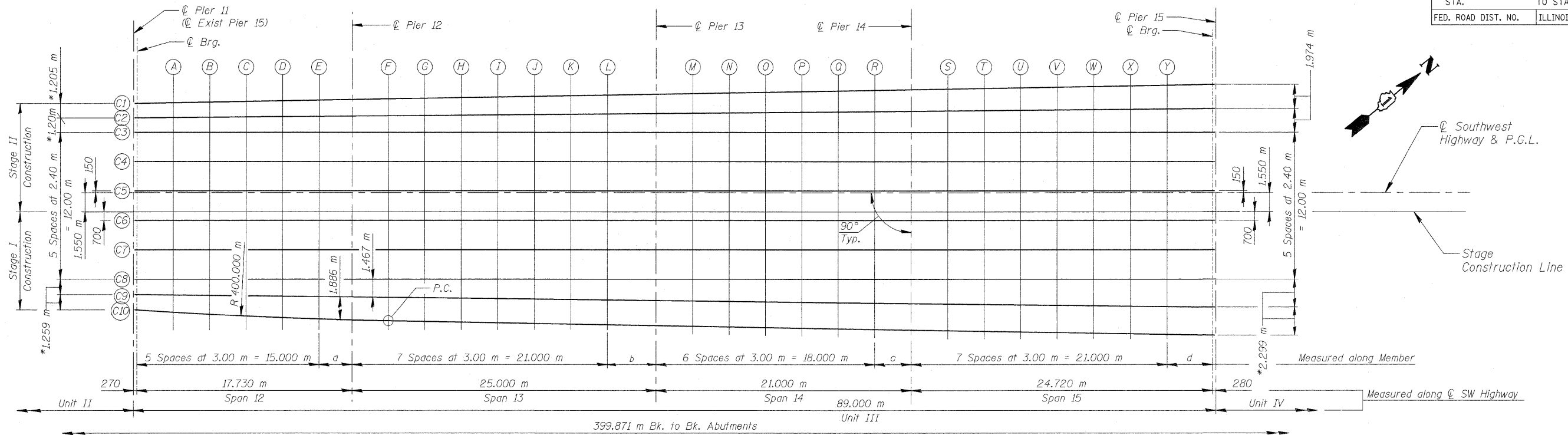
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	0.240	183.658	183.658
⊕ Brg. S. Abut.	4+524.929	0.240	183.700	183.700
A	4+527.929	0.240	183.835	183.853
B	4+530.929	0.240	183.970	184.003
C	4+533.929	0.240	184.105	184.148
D	4+536.929	0.240	184.240	184.287
E	4+539.929	0.240	184.375	184.420
F	4+542.929	0.240	184.510	184.547
G	4+545.929	0.240	184.645	184.671
H	4+548.929	0.240	184.780	184.793
⊕ Brg. Pier 1	4+552.929	0.240	184.960	184.960
I	4+555.929	0.240	185.095	185.093
J	4+558.929	0.240	185.230	185.231
K	4+561.929	0.240	185.365	185.371
L	4+564.929	0.240	185.500	185.509
M	4+567.929	0.240	185.635	185.645
N	4+570.929	0.240	185.770	185.778
O	4+573.929	0.240	185.905	185.910
P	4+576.929	0.240	186.040	186.041
⊕ Brg. Pier 2	4+580.929	0.240	186.220	186.220
Q	4+583.929	0.240	186.355	186.361
R	4+586.929	0.240	186.490	186.504
S	4+589.929	0.240	186.625	186.648
T	4+592.929	0.240	186.760	186.788
U	4+595.929	0.240	186.895	186.925
V	4+598.929	0.240	187.030	187.057
W	4+601.929	0.240	187.165	187.185
X	4+604.929	0.240	187.300	187.311
⊕ Brg. Pier 3	4+608.929	0.240	187.480	187.480
Y	4+611.929	0.240	187.615	187.613
Z	4+614.929	0.240	187.750	187.750
A1	4+617.929	0.240	187.885	187.887
B1	4+620.929	0.240	188.020	188.022
C1	4+623.929	0.240	188.155	188.155
D1	4+626.929	0.240	188.290	188.289
⊕ Brg. Pier 4	4+629.929	0.240	188.425	188.425
E1	4+632.929	0.240	188.560	188.567
F1	4+635.929	0.240	188.695	188.713
G1	4+638.929	0.240	188.830	188.853
H1	4+641.929	0.240	188.965	188.983
I1	4+644.929	0.240	189.100	189.103
J1	4+647.929	0.240	189.195	189.214
K1	4+650.929	0.240	189.308	189.318
⊕ Brg. Pier 5	4+654.929	0.240	189.451	189.451
L1	4+657.929	0.240	189.553	189.553
M1	4+660.929	0.240	189.650	189.653
N1	4+663.929	0.240	189.743	189.749
O1	4+666.929	0.240	189.830	189.837
P1	4+669.929	0.240	189.913	189.917
⊕ Brg. Pier 6	4+672.639	0.240	189.984	189.984
⊕ Pier 6	4+672.929	0.240	189.991	189.991

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	1.550	183.639	183.639
⊕ Brg. S. Abut.	4+524.929	1.550	183.681	183.681
A	4+527.929	1.550	183.816	183.834
B	4+530.929	1.550	183.951	183.984
C	4+533.929	1.550	184.086	184.129
D	4+536.929	1.550	184.221	184.268
E	4+539.929	1.550	184.356	184.401
F	4+542.929	1.550	184.491	184.528
G	4+545.929	1.550	184.626	184.652
H	4+548.929	1.550	184.761	184.774
⊕ Brg. Pier 1	4+552.929	1.550	184.941	184.941
I	4+555.929	1.550	185.076	185.074
J	4+558.929	1.550	185.211	185.212
K	4+561.929	1.550	185.346	185.352
L	4+564.929	1.550	185.481	185.490
M	4+567.929	1.550	185.616	185.626
N	4+570.929	1.550	185.751	185.759
O	4+573.929	1.550	185.886	185.891
P	4+576.929	1.550	186.021	186.022
⊕ Brg. Pier 2	4+580.929	1.550	186.201	186.201
Q	4+583.929	1.550	186.336	186.342
R	4+586.929	1.550	186.471	186.485
S	4+589.929	1.550	186.606	186.629
T	4+592.929	1.550	186.741	186.769
U	4+595.929	1.550	186.876	186.906
V	4+598.929	1.550	187.011	187.038
W	4+601.929	1.550	187.146	187.166
X	4+604.929	1.550	187.281	187.292
⊕ Brg. Pier 3	4+608.929	1.550	187.461	187.461
Y	4+611.929	1.550	187.596	187.594
Z	4+614.929	1.550	187.731	187.731
A1	4+617.929	1.550	187.866	187.868
B1	4+620.929	1.550	188.001	188.003
C1	4+623.929	1.550	188.136	188.136
D1	4+626.929	1.550	188.271	188.270
⊕ Brg. Pier 4	4+629.929	1.550	188.406	188.406
E1	4+632.929	1.550	188.541	188.548
F1	4+635.929	1.550	188.676	188.693
G1	4+638.929	1.550	188.808	188.833
H1	4+641.929	1.550	188.935	188.963
I1	4+644.929	1.550	189.058	189.084
J1	4+647.929	1.550	189.175	189.194
K1	4+650.929	1.550	189.288	189.298
⊕ Brg. Pier 5	4+654.929	1.550	189.432	189.432
L1	4+657.929	1.550	189.533	189.533
M1	4+660.929	1.550	189.631	189.634
N1	4+663.929	1.550	189.723	189.729
O1	4+666.929	1.550	189.811	189.818
P1	4+669.929	1.550	189.893	189.897
⊕ Brg. Pier 6	4+672.639	1.550	189.964	189.964
⊕ Pier 6	4+672.929	1.550	189.972	189.972

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	2.770	183.620	183.620
⊕ Brg. S. Abut.	4+524.929	2.770	183.662	183.662
A	4+527.929	2.770	183.797	183.815
B	4+530.929	2.770	183.932	183.965
C	4+533.929	2.770	184.067	184.110
D	4+536.929	2.770	184.202	184.249
E	4+539.929	2.770	184.337	184.382
F	4+542.929	2.770	184.472	184.509
G	4+545.929	2.770	184.607	184.633
H	4+548.929	2.770	184.742	184.755
⊕ Brg. Pier 1	4+552.929	2.770	184.922	184.922
I	4+555.929	2.770	185.057	185.055
J	4+558.929	2.770	185.192	185.193
K	4+561.929	2.770	185.327	185.333
L	4+564.929	2.770	185.462	185.471
M	4+567.929	2.770	185.597	185.607
N	4+570.929	2.770	185.732	185.740
O	4+573.929	2.770	185.867	185.872
P	4+576.929	2.770	186.002	186.003
⊕ Brg. Pier 2	4+580.929	2.770	186.182	186.182
Q	4+583.929	2.770	186.317	186.323
R	4+586.929	2.770	186.452	186.466
S	4+589.929	2.770	186.587	186.610
T	4+592.929	2.770	186.722	186.750
U	4+595.929	2.770	186.857	186.887
V	4+598.929	2.770	186.992	187.019
W	4+601.929	2.770	187.127	187.147
X	4+604.929	2.770	187.262	187.273
⊕ Brg. Pier 3	4+608.929	2.770	187.442	187.442
Y	4+611.929	2.770	187.577	187.575
Z	4+614.929	2.770	187.712	187.712
A1	4+617.929	2.770	187.847	187.849
B1	4+620.929	2.770	187.982	187.984
C1	4+623.929	2.770	188.117	188.117
D1	4+626.929	2.770	188.252	188.251
⊕ Brg. Pier 4	4+629.929	2.770	188.387	188.387
E1	4+632.929	2.770	188.522	188.529
F1	4+635.929	2.770	188.658	188.675
G1	4+638.929	2.770	188.790	188.815
H1	4+641.929	2.770	188.917	188.945
I1	4+644.929	2.770	189.039	189.065
J1	4+647.929	2.770	189.157	189.176
K1	4+650.929	2.770	189.270	189.280
⊕ Brg. Pier 5	4+654.929	2.770	189.413	189.413
L1	4+657.929	2.770	189.515	189.515
M1	4+660.929	2.770	189.612	189.615
N1	4+663.929	2.770	189.705	189.711
O1	4+666.929	2.770	189.792	189.799
P1	4+669.929	2.770	189.875	189.879
⊕ Brg. Pier 6	4+672.639	2.770	189.946	189.946
⊕ Pier 6	4+672.929	2.770	189.953	189.953

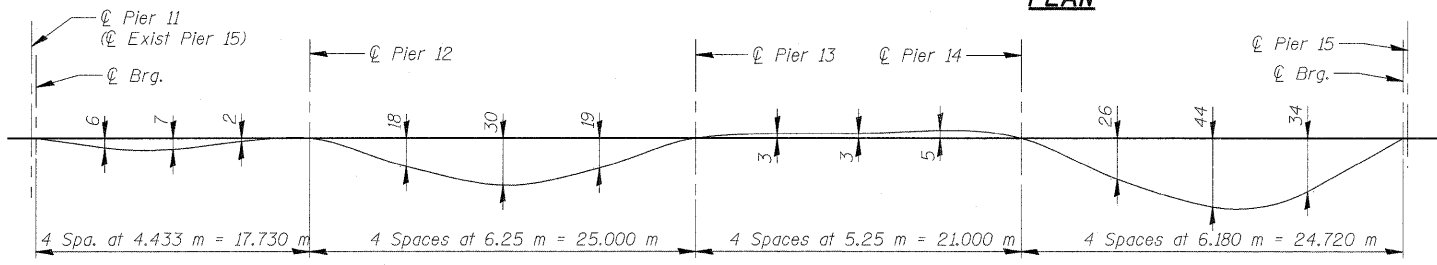
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	4+523.979	5.300	183.583	183.583
⊕ Brg. S. Abut.	4+524.929	5.300	183.625	183.625
A	4+527.929	5.300	183.760	183.778
B	4+530.929	5.300	183.895	183.928
C	4+533.929	5.300	184.030	184.073
D	4+536.929	5.300	184.165	184.212
E	4+539.929	5.300	184.300	184.345
F	4+542.929	5.300	184.435	184.472
G	4+545.929	5.300	184.570	184.596
H	4+548.929	5.300	184.705	184.718
⊕ Brg. Pier 1	4+552.929	5.300	184.885	184.885
I	4+555.929	5.300	185.020	185.018
J	4+558.929	5.300	185.155	185.156
K	4+561.929	5.300	185.290	185.296
L	4+564.929	5.300	185.425	185.434
M	4+567.929	5.300	185.560	185.570
N	4+570.929	5.300	185.695	185.703
O	4+573.929	5.300	185.830	185.835
P	4+576.929	5.300	185.965	185.966
⊕ Brg. Pier 2	4+580.929	5.300	186.145	186.145
Q	4+583.929	5.300	186.280	186.286
R	4+586.929	5.300	186.415	186.429
S	4+589.929	5.300	186.550	186.573
T	4+592.929	5.300	186.685	186.713
U	4+595.929	5.300	186.820	186.850
V	4+598.929	5.300	186.955	186.982
W	4+601.929	5.300	187.090	187.110
X	4+604.929	5.300	187.225	187.236
⊕ Brg. Pier 3	4+608.929	5.300	187.405	187.405
Y	4+611.929	5.300	187.540	187.538
Z	4+614.929	5.300	187.675	187.675
A1	4+617.929	5.300	187.810	187.812
B1	4+620.929	5.300	187.945	187.947
C1	4+623.929	5.300	188.080	188.080
D1	4+626.929	5.300	188.215	188.214
⊕ Brg. Pier 4	4+629.929	5.300	188.350	188.350
E1	4+632.929	5.300	188.485	188.492
F1	4+635.929	5.300	188.620	188.637
G1	4+638.929	5.300	188.752	188

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
		CONTRACT NO. 60H54		

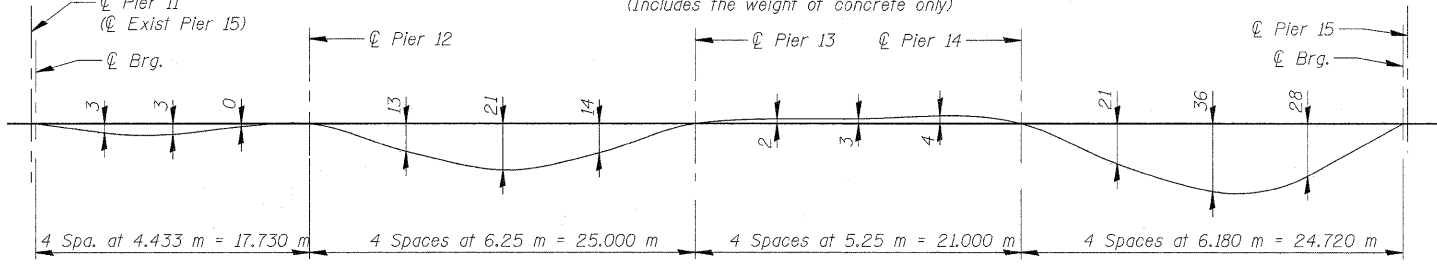


PLAN

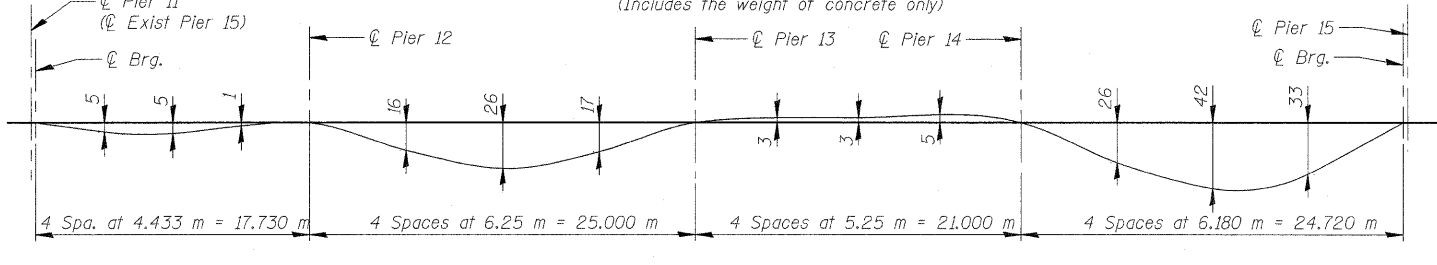
Line	a (m)	b (m)	c (m)	d (m)
C1	2.733	4.004	3.003	3.724
C2	2.731	4.001	3.001	3.721
C3 TO C8	2.730	4.000	3.000	3.720
PGL	2.730	4.000	3.000	3.720
Stage Constr. Line	2.730	4.000	3.000	3.720
C9	2.731	4.002	3.001	3.722
C10	2.752	4.004	3.003	3.724



DEAD LOAD DEFLECTION DIAGRAM - BEAMS C4 to C7
(Includes the weight of concrete only)

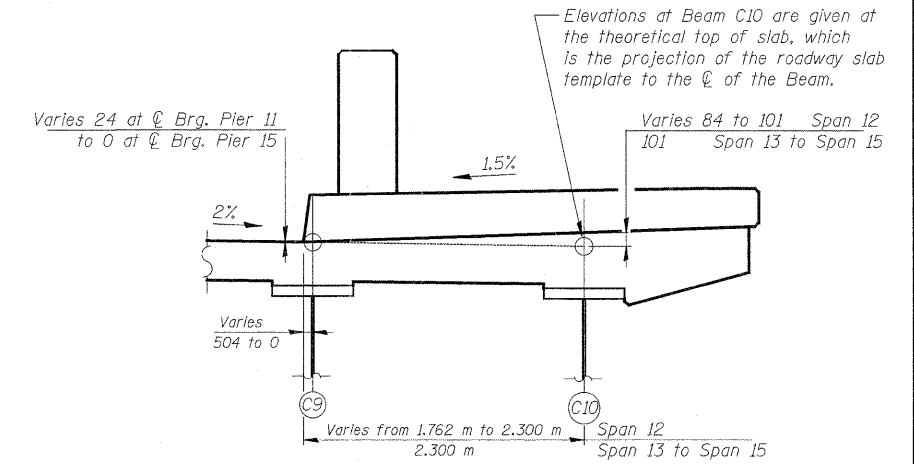


DEAD LOAD DEFLECTION DIAGRAM - BEAMS C1, C2 & C10
(Includes the weight of concrete only)



DEAD LOAD DEFLECTION DIAGRAM - BEAMS C3, C8 & C9
(Includes the weight of concrete only)

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on sheets SA14 thru SA15.



LOCATION OF ELEVATIONS AT FASCIA BEAM

NOTES

- See Sheet SA9 for fillet height detail
- All dimensions are in millimeters (mm) except as noted.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TOP OF SLAB ELEVATIONS - UNIT III-A
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatlestad

FOR INFORMATION ONLY

+koeppen(fdw)_L(isie) 5/22/2009 4:27:19 PM c:\dot\9556_a0\drawings\struct\fabr\fabr\plans\15\FAB_Top_slab_ElevUnit_III.A.dgn



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	12
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				

BEAM C1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier 11	4+769.900	-7.350	189.854	189.854
⊕ Brg. Pier 11	4+770.170	-7.355	189.847	189.847
A	4+773.170	-7.407	189.766	189.769
B	4+776.169	-7.460	189.680	189.684
C	4+779.169	-7.512	189.589	189.592
D	4+782.168	-7.564	189.494	189.495
E	4+785.168	-7.617	189.393	189.392
⊕ Brg. Pier 12	4+787.900	-7.664	189.298	189.298
F	4+790.900	-7.717	189.189	189.194
G	4+793.899	-7.769	189.075	189.088
H	4+796.899	-7.821	188.956	188.974
I	4+799.898	-7.874	188.833	188.854
J	4+802.898	-7.926	188.704	188.724
K	4+805.897	-7.978	188.571	188.586
L	4+808.897	-8.031	188.436	188.444
⊕ Brg. Pier 13	4+812.900	-8.100	188.255	188.255
M	4+815.900	-8.153	188.119	188.117
N	4+818.899	-8.205	187.983	187.981
O	4+821.899	-8.257	187.847	187.845
P	4+824.898	-8.310	187.712	187.709
Q	4+827.898	-8.362	187.576	187.572
R	4+830.897	-8.414	187.440	187.436
⊕ Brg. Pier 14	4+833.900	-8.467	187.304	187.304
S	4+836.900	-8.519	187.168	187.177
T	4+839.899	-8.571	187.033	187.054
U	4+842.899	-8.624	186.897	186.927
V	4+845.898	-8.676	186.761	186.797
W	4+848.898	-8.728	186.625	186.661
X	4+851.897	-8.781	186.490	186.520
Y	4+854.897	-8.833	186.354	186.373
⊕ Brg. Pier 15	4+858.620	-8.898	186.185	186.185
⊕ Pier 15	4+858.900	-8.903	186.173	186.173

BEAM C2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier 11	4+769.900	-6.148	189.873	189.873
⊕ Brg. Pier 11	4+770.170	-6.150	189.866	189.866
A	4+773.170	-6.176	189.785	189.788
B	4+776.170	-6.203	189.699	189.703
C	4+779.170	-6.229	189.609	189.612
D	4+782.170	-6.255	189.514	189.515
E	4+785.169	-6.281	189.414	189.413
⊕ Brg. Pier 12	4+787.900	-6.305	189.319	189.319
F	4+790.900	-6.331	189.210	189.215
G	4+793.900	-6.358	189.097	189.110
H	4+796.900	-6.384	188.978	188.996
I	4+799.900	-6.410	188.855	188.876
J	4+802.899	-6.436	188.728	188.748
K	4+805.899	-6.463	188.595	188.610
L	4+808.899	-6.489	188.460	188.468
⊕ Brg. Pier 13	4+812.900	-6.524	188.279	188.279
M	4+815.900	-6.550	188.144	188.142
N	4+818.900	-6.577	188.008	188.006
O	4+821.900	-6.603	187.873	187.871
P	4+824.900	-6.629	187.738	187.735
Q	4+827.899	-6.655	187.602	187.598
R	4+830.899	-6.682	187.467	187.463
⊕ Brg. Pier 14	4+833.900	-6.708	187.331	187.331
S	4+836.900	-6.734	187.196	187.205
T	4+839.900	-6.760	187.061	187.082
U	4+842.900	-6.787	186.925	186.955
V	4+845.900	-6.813	186.790	186.826
W	4+848.899	-6.839	186.654	186.690
X	4+851.899	-6.865	186.519	186.549
Y	4+854.899	-6.892	186.384	186.403
⊕ Brg. Pier 15	4+858.620	-6.924	186.215	186.215
⊕ Pier 15	4+858.900	-6.927	186.203	186.203

BEAM C3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier 11	4+769.900	-4.950	189.891	189.891
⊕ Brg. Pier 11	4+770.170	-4.950	189.884	189.884
A	4+773.170	-4.950	189.803	189.807
B	4+776.170	-4.950	189.718	189.724
C	4+779.170	-4.950	189.628	189.633
D	4+782.170	-4.950	189.534	189.536
E	4+785.170	-4.950	189.434	189.433
⊕ Brg. Pier 12	4+787.900	-4.950	189.340	189.340
F	4+790.900	-4.950	189.231	189.238
G	4+793.900	-4.950	189.118	189.133
H	4+796.900	-4.950	189.000	189.023
I	4+799.900	-4.950	188.877	188.903
J	4+802.900	-4.950	188.750	188.775
K	4+805.900	-4.950	188.618	188.637
L	4+808.900	-4.950	188.483	188.493
⊕ Brg. Pier 13	4+812.900	-4.950	188.303	188.303
M	4+815.900	-4.950	188.168	188.165
N	4+818.900	-4.950	188.033	188.030
O	4+821.900	-4.950	187.898	187.895
P	4+824.900	-4.950	187.763	187.759
Q	4+827.900	-4.950	187.628	187.623
R	4+830.900	-4.950	187.493	187.489
⊕ Brg. Pier 14	4+833.900	-4.950	187.358	187.358
S	4+836.900	-4.950	187.223	187.234
T	4+839.900	-4.950	187.088	187.112
U	4+842.900	-4.950	186.953	186.988
V	4+845.900	-4.950	186.818	186.860
W	4+848.900	-4.950	186.683	186.725
X	4+851.900	-4.950	186.548	186.583
Y	4+854.900	-4.950	186.413	186.435
⊕ Brg. Pier 15	4+858.620	-4.950	186.245	186.245
⊕ Pier 15	4+858.900	-4.950	186.233	186.233

BEAM C4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier 11	4+769.900	-2.550	189.927	189.927
⊕ Brg. Pier 11	4+770.170	-2.550	189.920	189.920
A	4+773.170	-2.550	189.839	189.844
B	4+776.170	-2.550	189.754	189.761
C	4+779.170	-2.550	189.664	189.670
D	4+782.170	-2.550	189.570	189.573
E	4+785.170	-2.550	189.470	189.470
⊕ Brg. Pier 12	4+787.900	-2.550	189.376	189.376
F	4+790.900	-2.550	189.267	189.274
G	4+793.900	-2.550	189.154	189.171
H	4+796.900	-2.550	189.036	189.062
I	4+799.900	-2.550	188.913	188.943
J	4+802.900	-2.550	188.786	188.814
K	4+805.900	-2.550	188.654	188.675
L	4+808.900	-2.550	188.519	188.531
⊕ Brg. Pier 13	4+812.900	-2.550	188.339	188.339
M	4+815.900	-2.550	188.204	188.201
N	4+818.900	-2.550	188.069	188.066
O	4+821.900	-2.550	187.934	187.931
P	4+824.900	-2.550	187.799	187.795
Q	4+827.900	-2.550	187.664	187.659
R	4+830.900	-2.550	187.529	187.525
⊕ Brg. Pier 14	4+833.900	-2.550	187.394	187.394
S	4+836.900	-2.550	187.259	187.270
T	4+839.900	-2.550	187.124	187.149
U	4+842.900	-2.550	186.989	187.026
V	4+845.900	-2.550	186.854	186.897
W	4+848.900	-2.550	186.719	186.762
X	4+851.900	-2.550	186.584	186.620
Y	4+854.900	-2.550	186.449	186.472
⊕ Brg. Pier 15	4+858.620	-2.550	186.281	186.281
⊕ Pier 15	4+858.900	-2.550	186.269	186.269

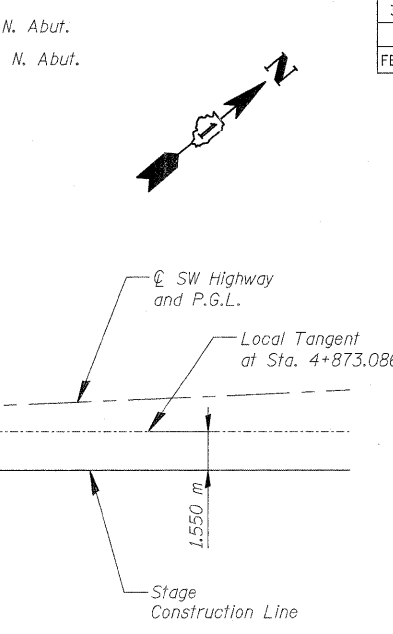
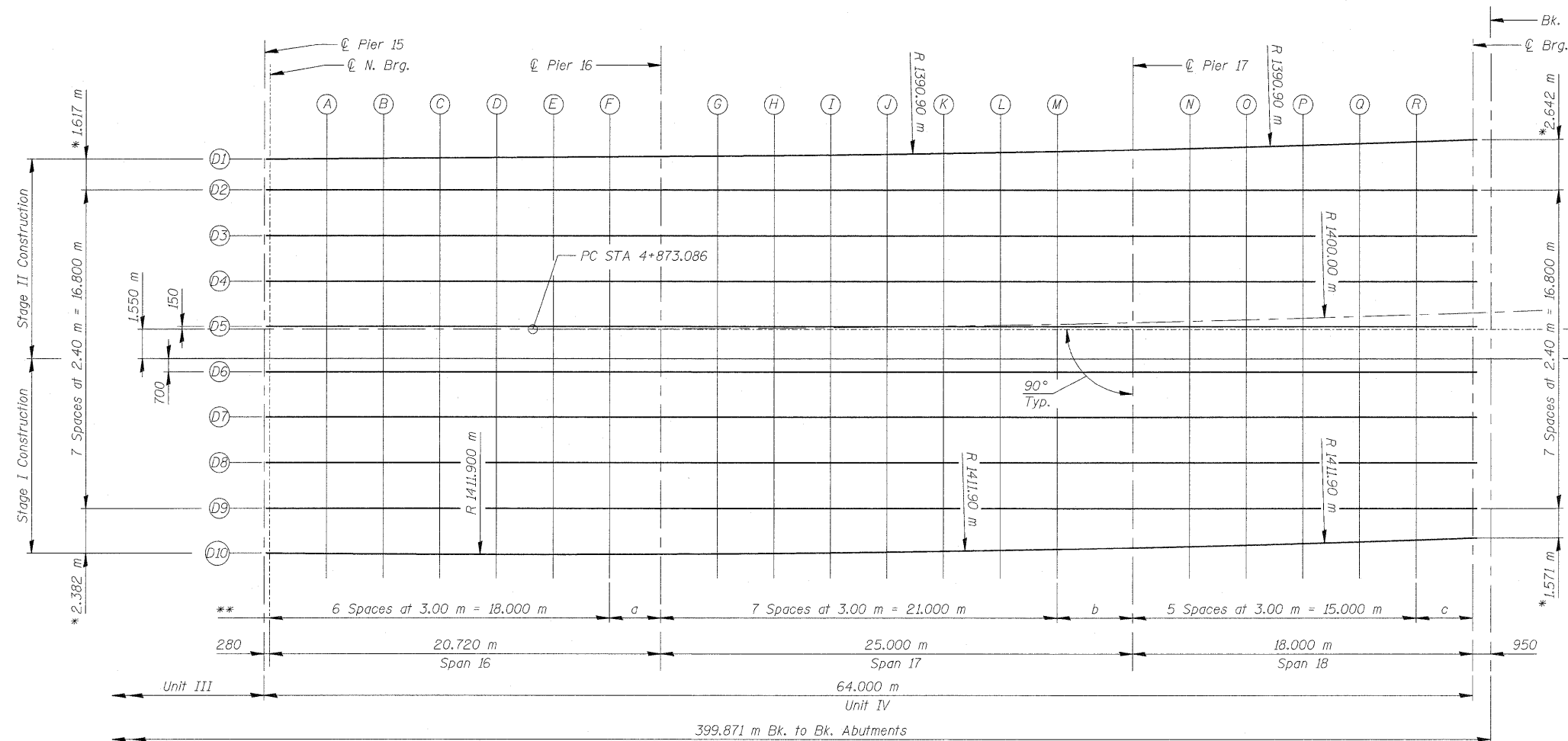
BEAM C5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier 11	4+769.900	-0.150	189.963	189.963
⊕ Brg. Pier 11	4+770.170	-0.150	189.956	189.956
A	4+773.170	-0.150	189.875	189.880
B	4+776.170	-0.150	189.790	189.797
C	4+779.170	-0.150	189.700	189.706
D	4+782.170	-0.150	189.606	189.609
E	4+785.170	-0.150	189.506	189.506
⊕ Brg. Pier 12	4+787.900	-0.150	189.412	189.412
F	4+790.900	-0.150	189.303	189.310
G	4+793.900	-0.150	189.190	189.207
H	4+796.900	-0.150	189.072	189.098
I	4+799.900	-0.150	188.949	188.979
J	4+802.900	-0.150	188.822	188.850
K	4+805.900	-0.150	188.690	188.711
L	4+808.900	-0.150	188.555	188.567
⊕ Brg. Pier 13	4+812.900	-0.150	188.375	188.375
M	4+815.900	-0.150	188.240	188.237
N	4+818.900	-0.150	188.105	188.102
O	4+821.900	-0.150	187.970	187.967
P	4+824.900	-0.150	187.835	187.831
Q	4+827.900	-0.150	187.700	187.695
R	4+830.900	-0.150	187.565	187.561
⊕ Brg. Pier 14	4+833.900	-0.150	187.430	187.430
S	4+836.900	-0.150	187.295	187.306
T	4+839.900	-0.150	187.160	187.185
U	4+842.900	-0.150	187.025	187.062
V	4+845.900	-0.150	186.890	186.933
W	4+848.900	-0.150	186.755	186.798
X	4+851.900	-0.150	186.620	186.656
Y	4+854.900	-0.150	186.485	186.508
⊕ Brg. Pier 15	4+858.620	-0.150	186.317	186.317
⊕ Pier 15	4+858.900	-0.150	186.305	186.305

CENTERLINE ROADWAY & P.G.L.

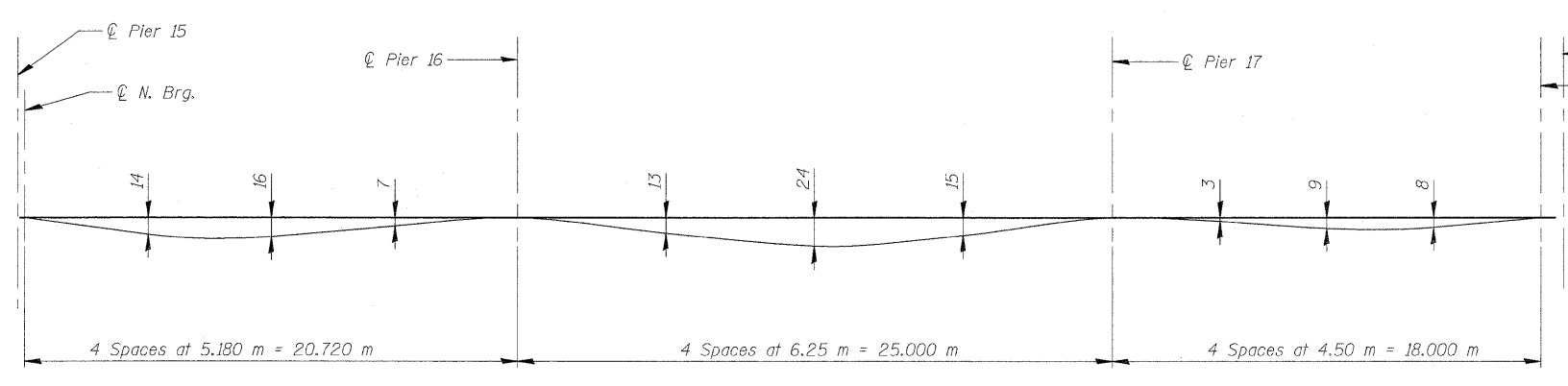
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Pier 11	4+769.900	0.00	189.965	189.965
⊕ Brg. Pier 11	4+770.170	0.00	189.958	189.958
A	4+773.170	0.00	189.878	189.882
B	4+776.170	0.00	189.792	189.800
C	4+779.170	0.00	189.702	189.709
D	4+782.170	0.00	189.608	189.611
E	4+785.170	0.00	189.508	189.508
⊕ Brg. Pier 12	4+787.900	0.00	189.414	189.414
F	4+790.900	0.00	189.305	189.313
G	4+793.900	0.00	189.192	189.209
H	4+796.900	0.00	189.074	189.100
I	4+799.900	0.00	188.952	188.981
J	4+802.900	0.00	188.824	188.852
K	4+805.900	0.00	188.692	188.713
L	4+808.900	0.00	188.557	188.569
⊕ Brg. Pier 13	4+812.900	0.00	188.377	188.377
M	4+815.900	0.00	188.242	188.239
N	4+818.900	0.00	188.107	188.104
O	4+821.900	0.00	187.972	187.969
P	4+824.900	0.00	187.837	187.833
Q	4+827.900	0.00	187.702	187.697
R	4+830.900	0.00	187.567	187.563
⊕ Brg. Pier 14	4+833.900	0.00	187.432	187.432
S	4+836.900	0.00	187.297	187.308
T	4+839.900	0.00	187.162	187.187
U	4+842.900	0.00	187.027	187.064
V	4+845.90			

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	14
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54				



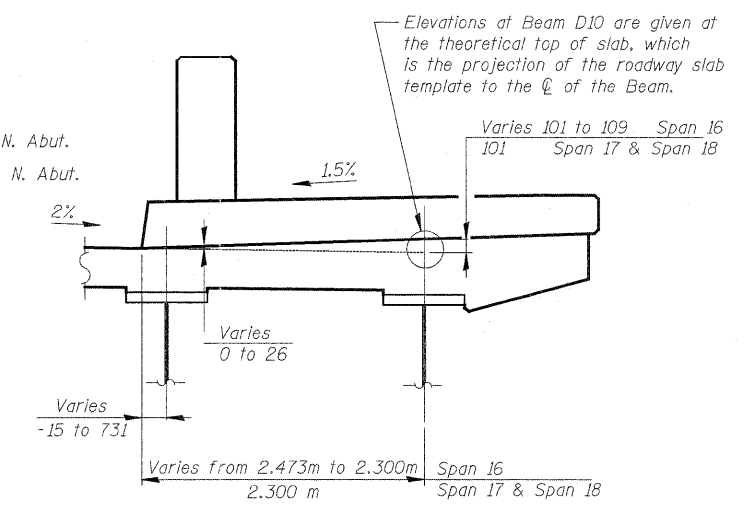
PLAN

* Measured along ϕ Brg.
 ** Measured along ϕ Beam



DEAD LOAD DEFLECTION DIAGRAM
 (Includes the weight of concrete only)

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted For Dead Load Deflections as shown on sheets SA17 thru SA18.



LOCATION OF ELEVATIONS AT FASCIA BEAM

NOTES

- See Sheet SA9 for fillet height detail.
- All dimensions are in millimeters (mm) except as noted.

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TOP OF SLAB ELEVATIONS - UNIT IV-A
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497

SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: A. Yarglooglu

FOR INFORMATION ONLY

q:\idot\9556-a0\drawings\struct\fabrication\plans\16_FAB_Top_slab Elev UnitIV A.dgn
 5/22/2009 4:28:12 PM
 +koeppen\rdwy_lislie



BEAM D1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	-8.965	186.172	186.172
Ⓞ Brg.Pr.15	4+859.180	-8.967	186.159	186.159
A	4+862.180	-8.988	186.024	186.033
B	4+865.180	-9.010	185.888	185.904
C	4+868.180	-9.031	185.753	185.770
D	4+871.180	-9.052	185.618	185.632
E	4+874.187	-9.073	185.482	185.490
F	4+877.206	-9.088	185.346	185.348
Ⓞ Pier 16	4+879.945	-9.097	185.223	185.223
G	4+882.964	-9.100	185.087	185.091
H	4+885.984	-9.100	184.951	184.963
I	4+889.003	-9.100	184.815	184.835
J	4+892.023	-9.100	184.679	184.703
K	4+895.043	-9.100	184.543	184.566
L	4+898.062	-9.100	184.408	184.425
M	4+901.082	-9.100	184.272	184.280
Ⓞ Pier 17	4+905.111	-9.100	184.090	184.090
N	4+908.131	-9.100	183.955	183.955
O	4+911.150	-9.100	183.819	183.824
P	4+914.170	-9.100	183.683	183.692
Q	4+917.189	-9.100	183.547	183.556
R	4+920.209	-9.100	183.411	183.417
Ⓞ Brg. N.A.	4+923.237	-9.100	183.275	183.275
Bk. N. Abut.	4+924.193	-9.100	183.232	183.232

BEAM D2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	-7.350	186.197	186.197
Ⓞ Brg.Pr.15	4+859.180	-7.350	186.184	186.184
A	4+862.180	-7.350	186.049	186.058
B	4+865.180	-7.350	185.914	185.929
C	4+868.180	-7.350	185.779	185.796
D	4+871.180	-7.350	185.644	185.658
E	4+874.186	-7.350	185.509	185.517
F	4+877.202	-7.344	185.373	185.375
Ⓞ Pier 16	4+879.936	-7.333	185.250	185.250
G	4+882.952	-7.315	185.115	185.119
H	4+885.967	-7.291	184.980	184.992
I	4+888.983	-7.260	184.844	184.864
J	4+891.998	-7.223	184.709	184.733
K	4+895.013	-7.179	184.574	184.597
L	4+898.028	-7.129	184.439	184.456
M	4+901.043	-7.072	184.304	184.313
Ⓞ Pier 17	4+905.062	-6.987	184.125	184.125
N	4+908.076	-6.915	183.990	183.991
O	4+911.090	-6.837	183.856	183.861
P	4+914.104	-6.752	183.721	183.730
Q	4+917.117	-6.661	183.587	183.597
R	4+920.129	-6.563	183.453	183.459
Ⓞ Brg. N.A.	4+923.142	-6.459	183.319	183.319
Bk. N. Abut.	4+924.095	-6.425	183.277	183.277

BEAM D3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	-4.950	186.233	186.233
Ⓞ Brg.Pr.15	4+859.180	-4.950	186.220	186.220
A	4+862.180	-4.950	186.085	186.094
B	4+865.180	-4.950	185.950	185.965
C	4+868.180	-4.950	185.815	185.832
D	4+871.180	-4.950	185.680	185.694
E	4+874.184	-4.950	185.545	185.553
F	4+877.195	-4.944	185.410	185.412
Ⓞ Pier 16	4+879.924	-4.933	185.287	185.287
G	4+882.935	-4.915	185.152	185.156
H	4+885.945	-4.891	185.016	185.029
I	4+888.955	-4.860	184.881	184.901
J	4+891.966	-4.823	184.747	184.770
K	4+894.976	-4.779	184.612	184.635
L	4+897.985	-4.729	184.477	184.494
M	4+900.995	-4.673	184.343	184.351
Ⓞ Pier 17	4+905.007	-4.587	184.163	184.163
N	4+908.016	-4.516	184.029	184.030
O	4+911.025	-4.438	183.895	183.900
P	4+914.033	-4.353	183.761	183.770
Q	4+917.041	-4.262	183.627	183.636
R	4+920.048	-4.165	183.493	183.499
Ⓞ Brg. N.A.	4+923.056	-4.061	183.359	183.359
Bk. N. Abut.	4+924.008	-4.027	183.317	183.317

BEAM D4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	-2.550	186.269	186.269
Ⓞ Brg.Pr.15	4+859.180	-2.550	186.256	186.256
A	4+862.180	-2.550	186.121	186.130
B	4+865.180	-2.550	185.986	186.001
C	4+868.180	-2.550	185.851	185.868
D	4+871.180	-2.550	185.716	185.730
E	4+874.182	-2.550	185.581	185.589
F	4+877.187	-2.544	185.446	185.448
Ⓞ Pier 16	4+879.912	-2.533	185.323	185.323
G	4+882.918	-2.516	185.188	185.192
H	4+885.923	-2.491	185.053	185.066
I	4+888.928	-2.461	184.919	184.939
J	4+891.933	-2.423	184.784	184.808
K	4+894.938	-2.380	184.649	184.672
L	4+897.943	-2.330	184.515	184.532
M	4+900.947	-2.273	184.381	184.389
Ⓞ Pier 17	4+904.953	-2.188	184.202	184.202
N	4+907.956	-2.116	184.068	184.068
O	4+910.960	-2.038	183.934	183.939
P	4+913.963	-1.954	183.800	183.809
Q	4+916.966	-1.863	183.666	183.675
R	4+919.968	-1.766	183.532	183.538
Ⓞ Brg. N.A.	4+922.970	-1.662	183.399	183.399
Bk. N. Abut.	4+923.920	-1.628	183.357	183.357

BEAM D5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	-.150	186.305	186.305
Ⓞ Brg.Pr.15	4+859.180	-.150	186.292	186.292
A	4+862.180	-.150	186.157	186.166
B	4+865.180	-.150	186.022	186.037
C	4+868.180	-.150	185.887	185.904
D	4+871.180	-.150	185.752	185.766
E	4+874.180	-.150	185.617	185.625
F	4+877.180	-.144	185.482	185.484
Ⓞ Pier 16	4+879.901	-.133	185.360	185.360
G	4+882.901	-.116	185.225	185.229
H	4+885.901	-.091	185.090	185.103
I	4+888.901	-.061	184.956	184.976
J	4+891.901	-.024	184.822	184.845
K	4+894.901	.020	184.687	184.709
L	4+897.900	.070	184.551	184.568
M	4+900.899	.126	184.415	184.424
Ⓞ Pier 17	4+904.898	.211	184.234	184.234
N	4+907.897	.283	184.098	184.099
O	4+910.895	.361	183.962	183.967
P	4+913.893	.445	183.826	183.835
Q	4+916.890	.536	183.689	183.699
R	4+919.888	.633	183.553	183.559
Ⓞ Brg. N.A.	4+922.884	.736	183.417	183.417
Bk. N. Abut.	4+923.833	.770	183.373	183.373

CENTERLINE ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	.000	186.307	186.307
Ⓞ Brg.Pr.15	4+859.180	.000	186.294	186.294
A	4+862.180	.000	186.159	186.169
B	4+865.180	.000	186.024	186.040
C	4+868.180	.000	185.889	185.906
D	4+871.180	.000	185.754	185.768
E	4+874.180	.000	185.619	185.627
F	4+877.180	.000	185.484	185.486
Ⓞ Pier 16	4+879.900	.000	185.362	185.362
G	4+882.900	.000	185.227	185.231
H	4+885.900	.000	185.092	185.104
I	4+888.900	.000	184.957	184.977
J	4+891.900	.000	184.822	184.846
K	4+894.900	.000	184.687	184.710
L	4+897.900	.000	184.552	184.569
M	4+900.900	.000	184.417	184.425
Ⓞ Pier 17	4+904.903	.000	184.237	184.237
N	4+907.903	.000	184.102	184.103
O	4+910.903	.000	183.967	183.972
P	4+913.903	.000	183.832	183.841
Q	4+916.903	.000	183.697	183.706
R	4+919.903	.000	183.562	183.568
Ⓞ Brg. N.A.	4+922.911	.000	183.426	183.426
Bk. N. Abut.	4+923.861	.000	183.384	183.384

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Ⓞ Pier 15	4+858.900	1.550	186.284	186.284
Ⓞ Brg.Pr.15	4+859.180	1.550	186.271	186.271
A	4+862.180	1.550	186.136	186.145
B	4+865.180	1.550	186.001	186.016
C	4+868.180	1.550	185.866	185.883
D	4+871.180	1.550	185.731	185.745
E	4+874.179	1.550	185.596	185.604
F	4+877.175	1.556	185.461	185.463
Ⓞ Pier 16	4+879.892	1.567	185.339	185.339
G	4+882.889	1.584	185.204	185.208
H	4+885.885	1.609	185.068	185.081
I	4+888.882	1.639	184.933	184.953
J	4+891.878	1.676	184.798	184.822
K	4+894.874	1.720	184.662	184.685
L	4+897.870	1.770	184.527	184.544
M	4+900.866	1.826	184.391	184.400
Ⓞ Pier 17	4+904.859	1.911	184.210	184.210
N	4+907.854	1.982	184.074	184.075
O	4+910.849	2.060	183.938	183.944
P	4+913.843	2.144	183.802	183.811
Q	4+916.837	2.235	183.666	183.676
R	4+919.831	2.332	183.530	183.536
Ⓞ Brg. N.A.	4+922.824	2.435	183.394	183.394
Bk. N. Abut.	4+923.772	2.469	183.351	183.351

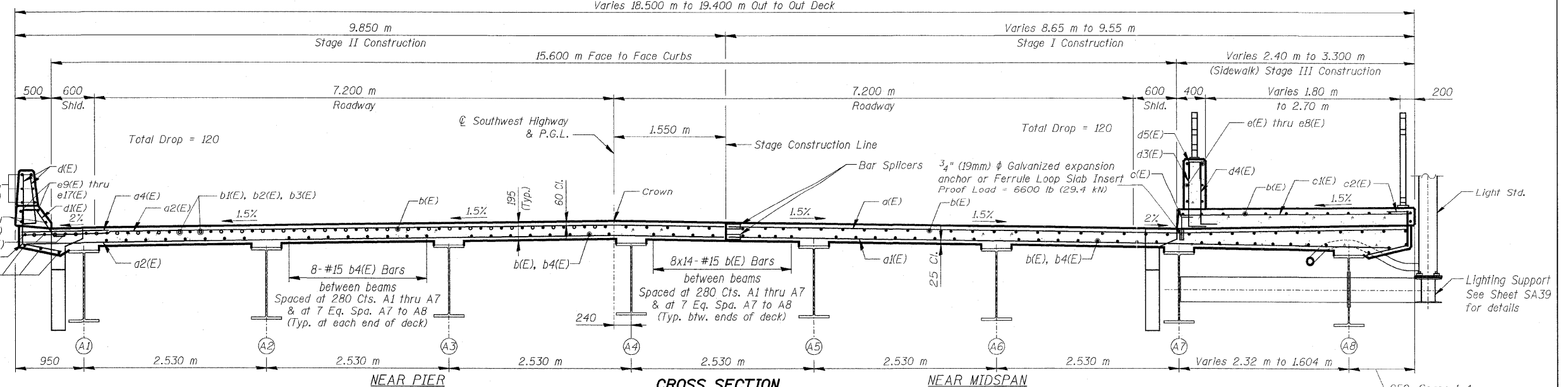
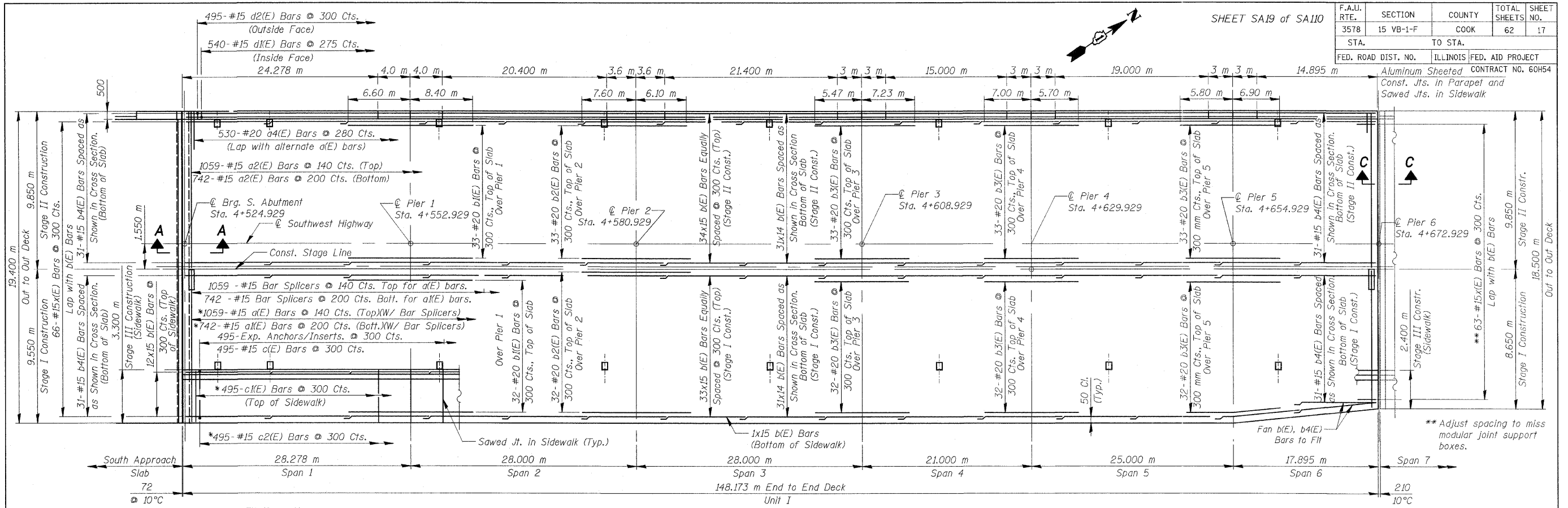
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TOP OF SLAB ELEVATIONS - UNIT IV - B SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: E. Mroozek DATE: MAY 22, 2009 CHECKED BY: A. Yargloogu
NAME	DATE	

k:\projects\9556_a0\drawings\structure\fab\top slab elev unit iv B.dgn
 5/22/2009 4:28:19 PM



FOR INFORMATION ONLY

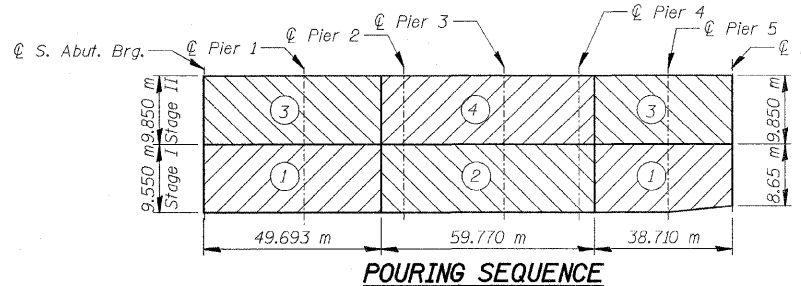
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	17
STA.	TO STA.		FED. AID PROJECT	
	ILLINOIS		CONTRACT NO. 60H54	



TYP. LAP SPLICE

BAR SIZE	MIN. LAP
#15	510
#25	1.06 m

- NOTES**
1. Reinforcement Bars designated (E) shall be Epoxy Coated.
 2. Bars indicated 20 x 3 - #15 etc. indicates 20 Lines of Bars with 3 lengths per line.
 3. All edges shall have standard 19 mm chamfer except as noted.
 4. Work this Sheet with Sheet Nos. SA20 and SA21. See Sheets SA20 & SA21 for Parapet and Bicycle Railing Details.
 5. All Dimensions are in millimeters (mm) except as noted.
 6. Place bars d1(E) and d2(E) to miss the aluminum sheeted joint locations in parapets
 7. The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.



REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE - UNIT I

SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK

FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497

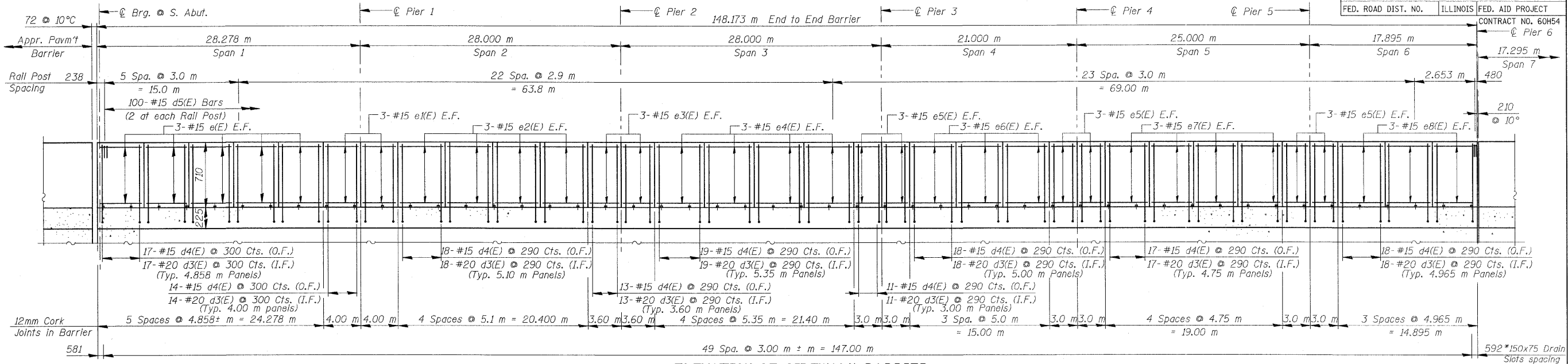
SCALE: NONE DATE: MAY 22, 2009
DRAWN BY: M. Tryon
CHECKED BY: A. Yargloogu

FOR INFORMATION ONLY

jvermillion(Rdwy_L1sle) 5/29/2009 1:06:46 PM q:\1dot\9556_a0\drawings\structure\Fabrication\plans\19_FAB_Deck_Plan.dgn



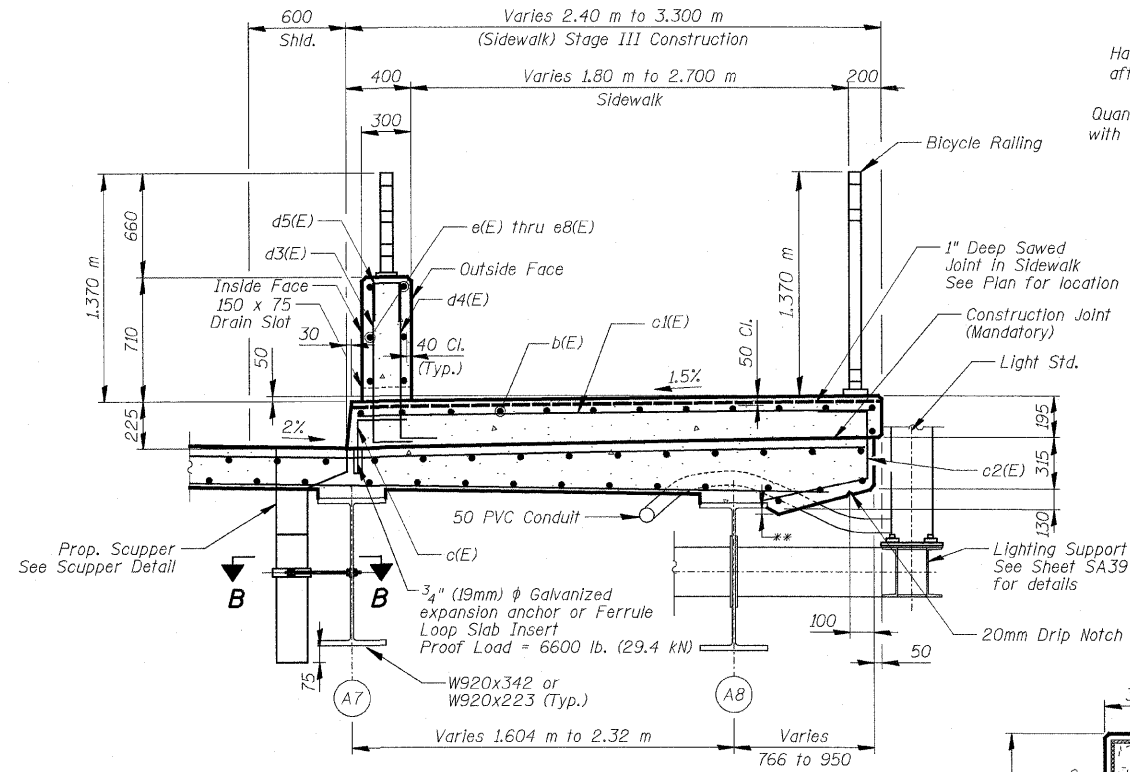
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



ELEVATION OF SIDEWALK BARRIER

Looking North-West

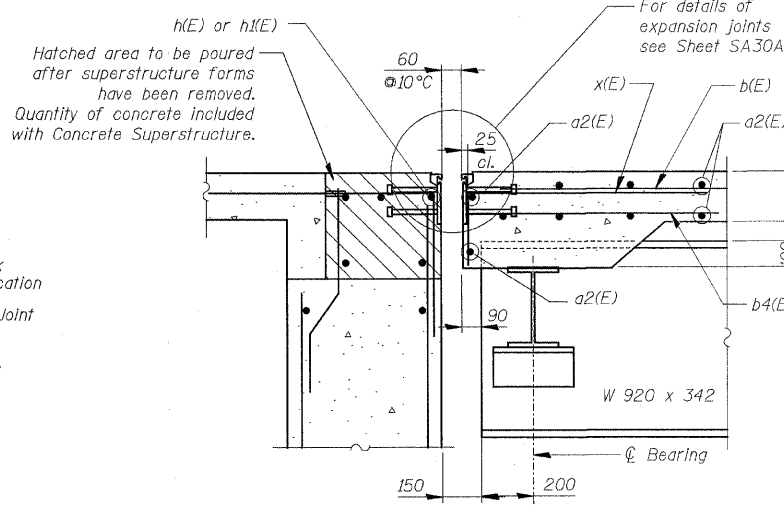
* Drain Slots shall omit the vertical reinforcement and shall be 50mm min. from the edges of joints.



SECTION THRU SIDEWALK

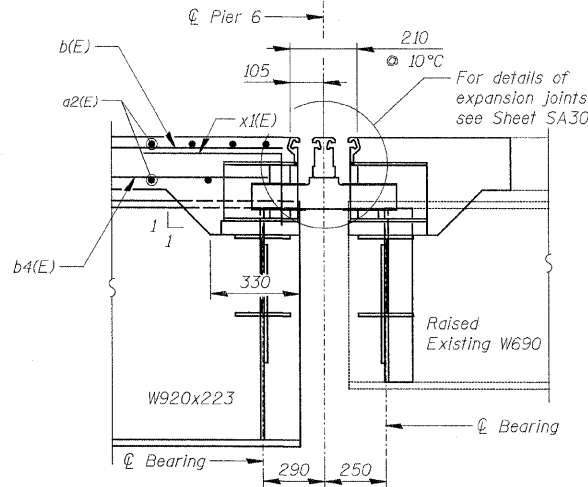
See Sheet SA21 for Section B-B and Scupper Drainage Details

**Varies 10 to 110

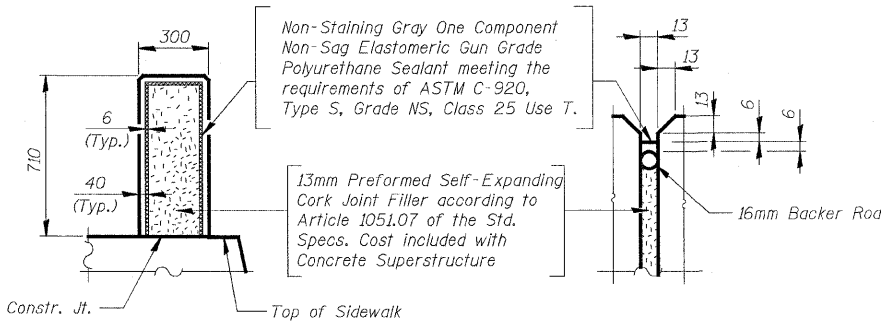


SECTION A-A

See Sheet SA19 for Section location



SECTION C-C



BARRIER JOINT DETAILS

NOTES

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.
4. The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.
5. In lieu of providing the d3(E) & d4(E) dowels bars as shown, the contractor, at his option and expense, can submit to the engineer for his review and approval an alternate detail to drill and grout the bars. No additional compensation will be allowed if the contractor elects to use the alternate detail.

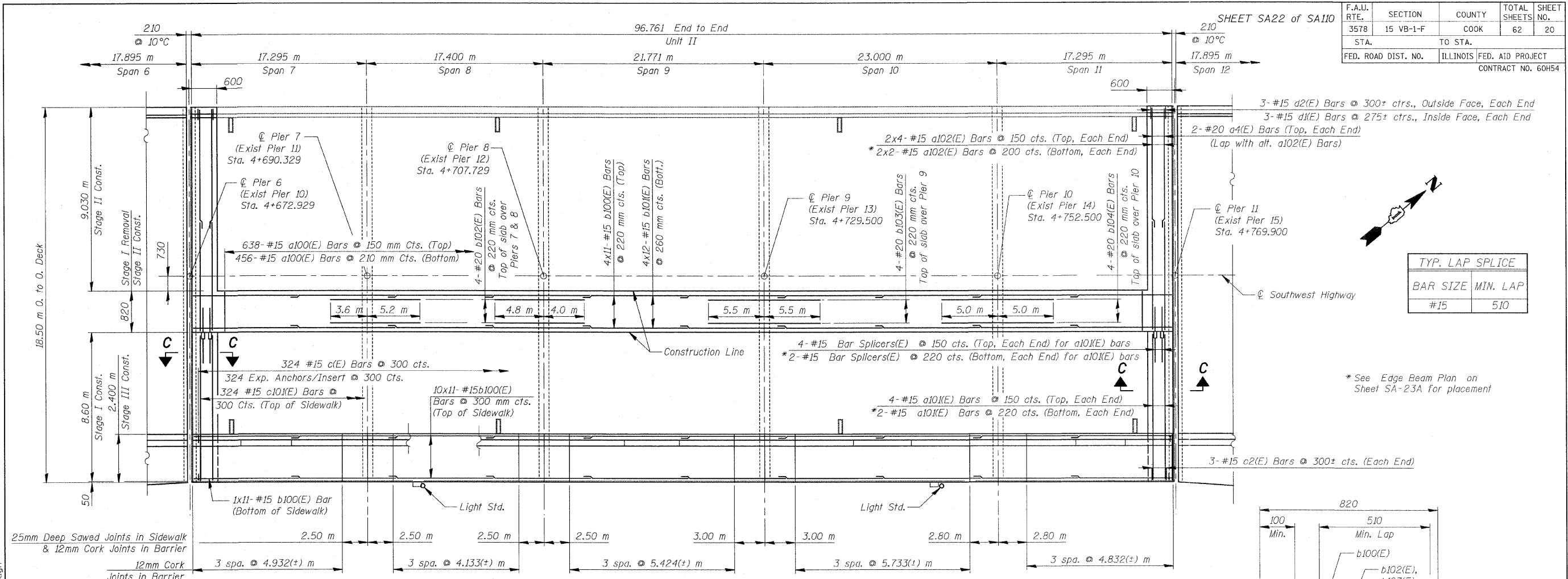
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	SUPERSTRUCTURE DETAILS - UNIT I - A	
		SOUTHWEST HIGHWAY OVER	
		B&O RAILROAD AND STONY CREEK	
		FAU 3578	SECTION 15 VB-1-F
		STRUCTURE NUMBER	016-2771
		COOK COUNTY	STATION 4+716.497
		SCALE: NONE	DRAWN BY: M. Tryon
		DATE: MAY 22, 2009	CHECKED BY: A. Yargiooglu

FOR INFORMATION ONLY

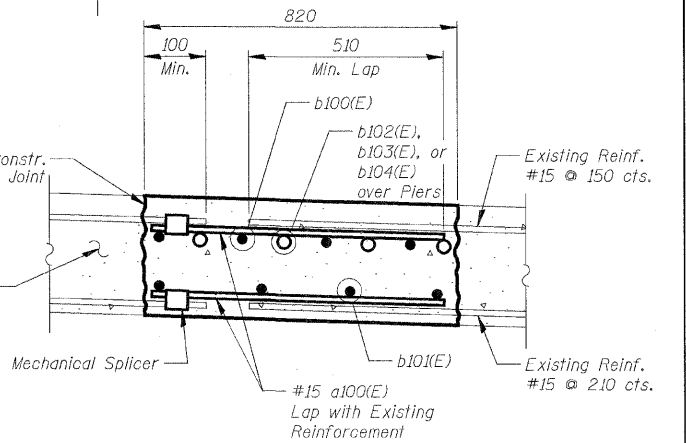
jvermillion(rdwj-l)ise) 10:56:53 PM
 5/29/2009
 at:\cort\9556.ad\drawings\struc\fabr\cort\plans\20_fab_deck_details UNIT 1A.dgn



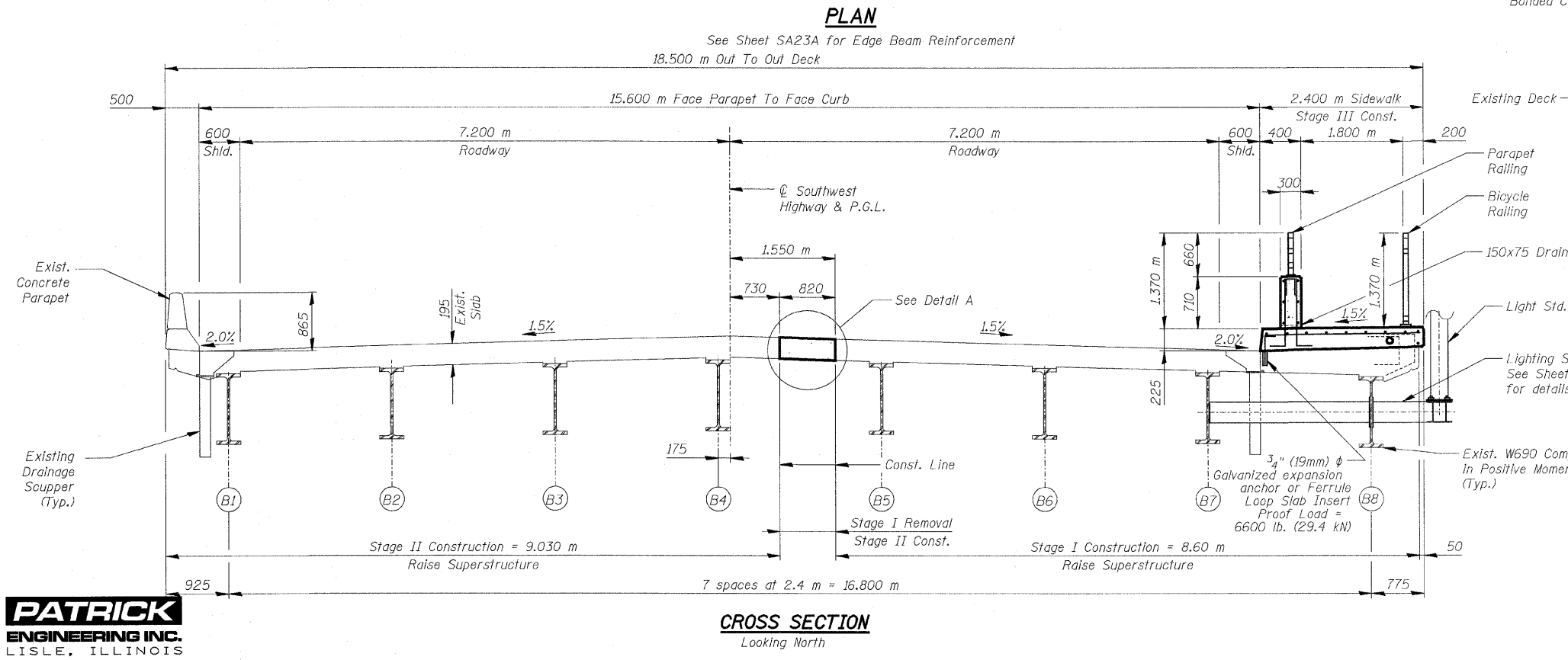
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	20
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	510



- NOTES**
1. Reinforcement bars designated (E) shall be Epoxy Coated.
 2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
 3. All dimensions are in millimeters (mm) except as noted.
 4. Dowel holes shall be drilled 5mm larger than the diameter of the dowels, depth of the embedment shall be 100mm minimum.
 5. Work this Sheet with Sheet SA23 and SA23A
 6. For Section C-C see Sheet SA20, for Section D-D see Sheet SA25.



REVISIONS	
NAME	DATE

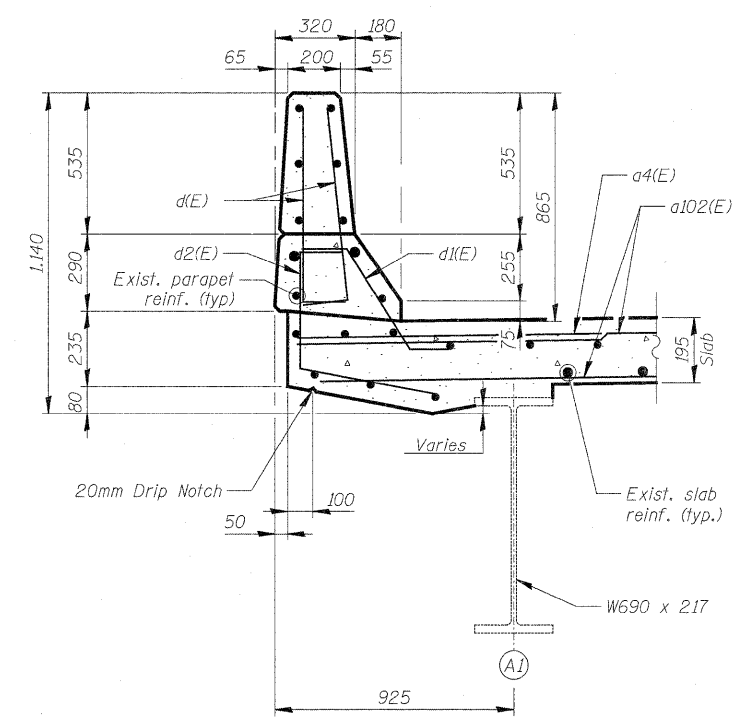
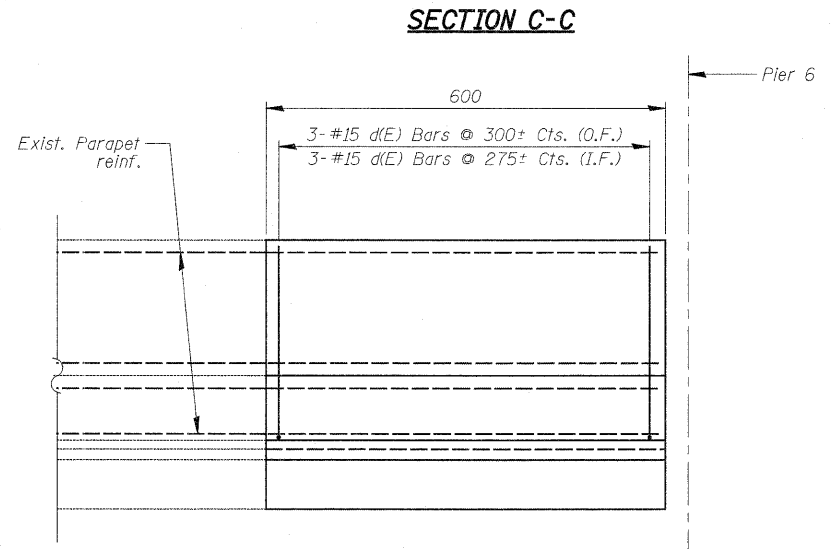
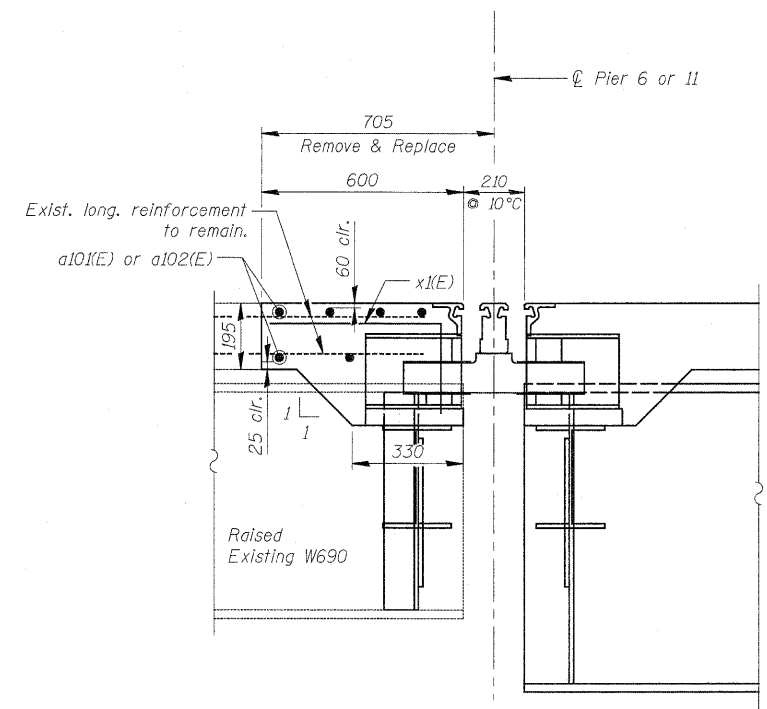
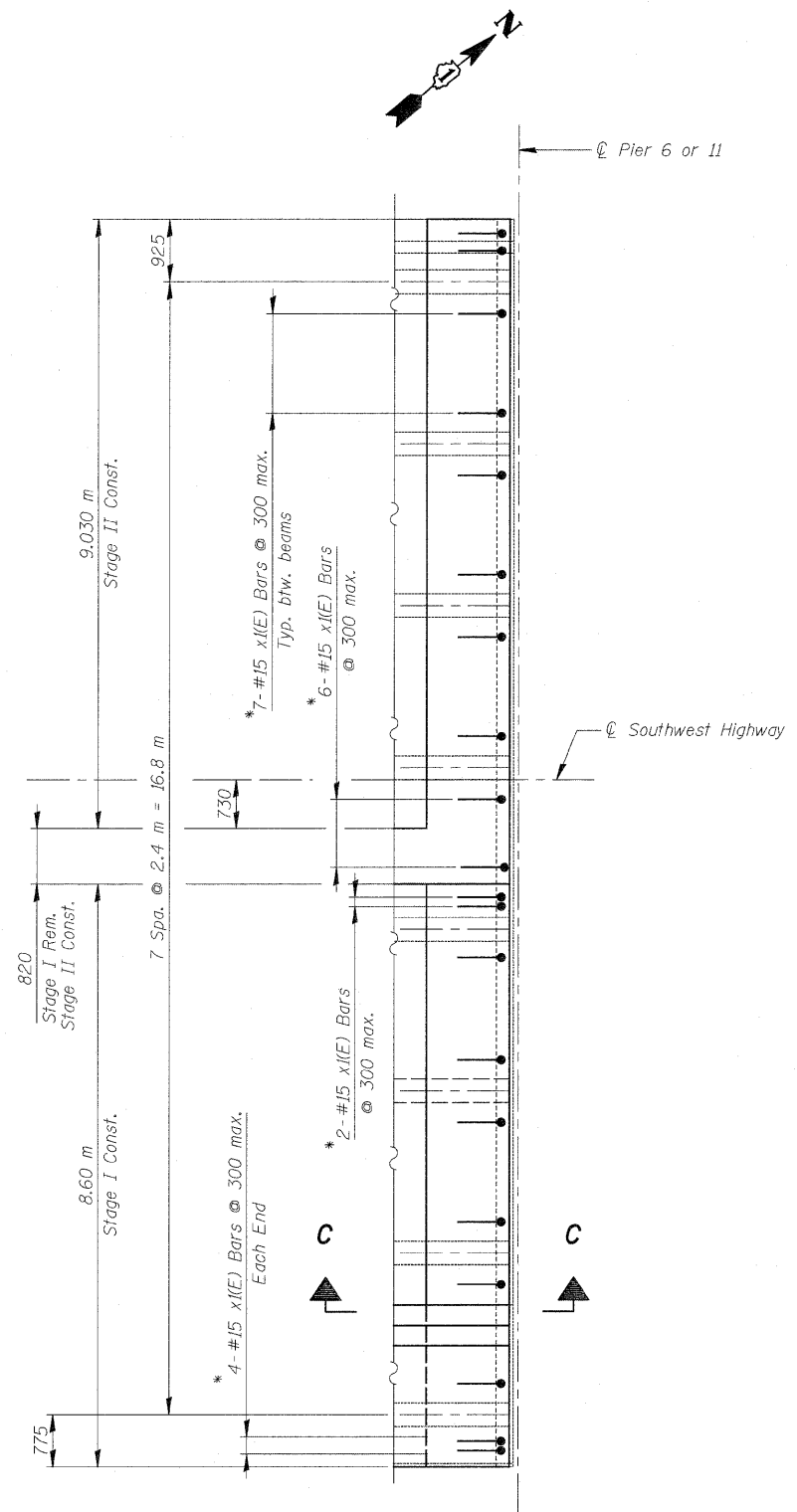
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE - UNIT II
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: A. Yargoolouj

J:\vermillion\rdwy_lisle\5/29/2009 10:07:07 PM
 q:\icot\9556_a0\drawings\struct\fabr\locatn\plans\22.FAB.Deck_Plan1.dwg



FOR INFORMATION ONLY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	22
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



END DIAPHRAGM

NOTES

1. All dimensions are in millimeters (mm) except as noted.

REVISIONS	
NAME	DATE

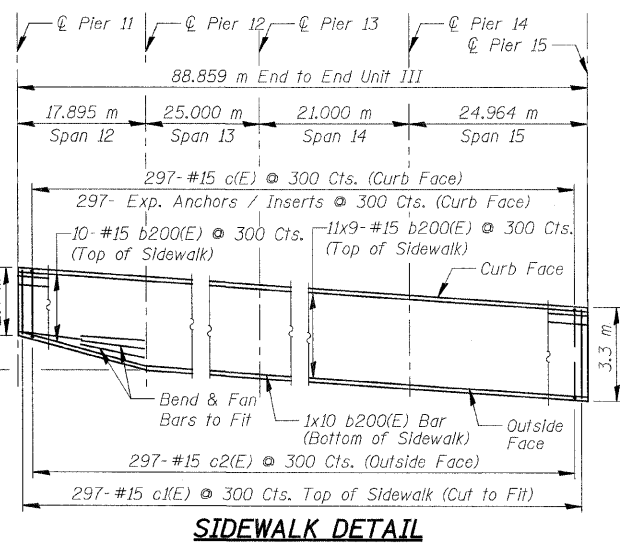
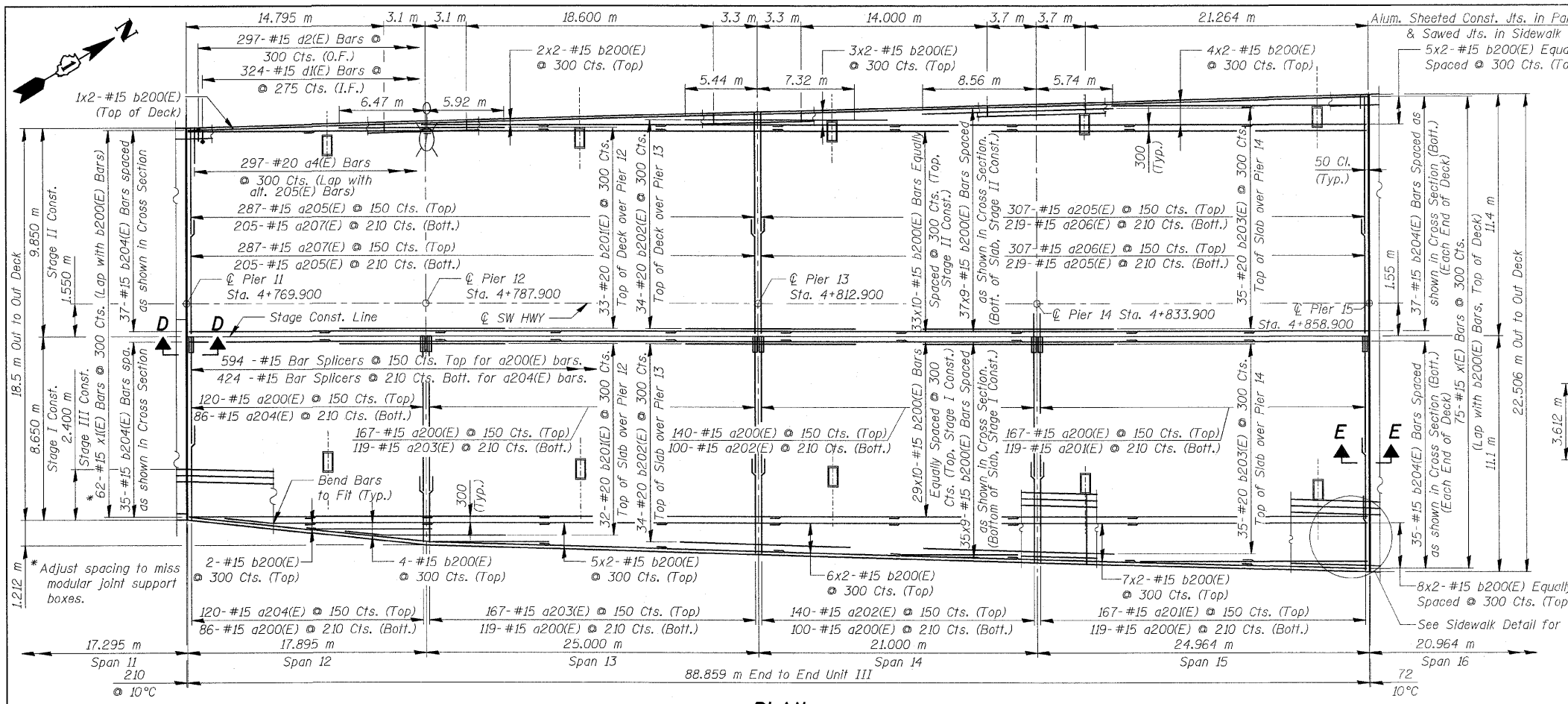
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS - UNIT II-A
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: A. Durbak
 DATE: MAY 22, 2009 CHECKED BY: A. Yarglooglu

FOR INFORMATION ONLY

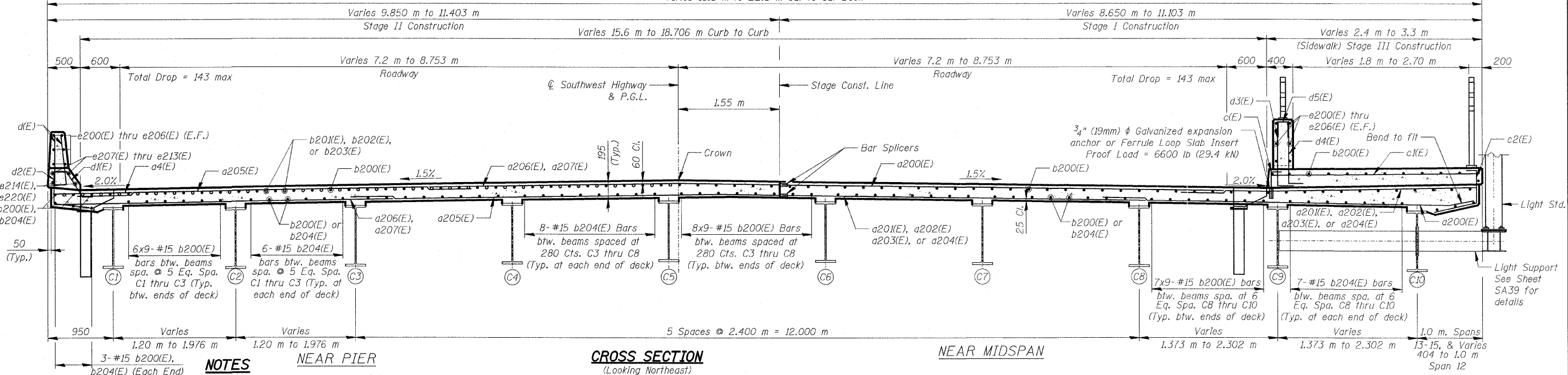
q:\dot\9556_a0\drawings\struct\Fabrication\plans\23A-FAB-Deck-Details UNIT II A.dgn
 koeppen(Rdwy_Lisle) 5/22/2009 4:30:01 PM



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	23
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 60H54	



PLAN Varies 18.5 m to 22.5 m Out to Out Deck



CROSS SECTION (Looking Northeast)

- NOTES**
1. Reinforcement Bars designated (E) shall be epoxy coated.
 2. Bars indicated 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
 3. All edges shall have standard 19 mm chamfer except as noted.
 4. Work this Sheet with Sheet SA25 and SA26. See Sheet SA25 for Bicycle Railing Details and SA26 for Parapet Details.
 5. All Dimensions are in millimeters (mm) except as noted.
 6. Place bars d1(E) and d2(E) to miss the aluminum sheeted joint locations in parapets

TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	510
#25	1,06 m

REVISIONS	
NAME	DATE

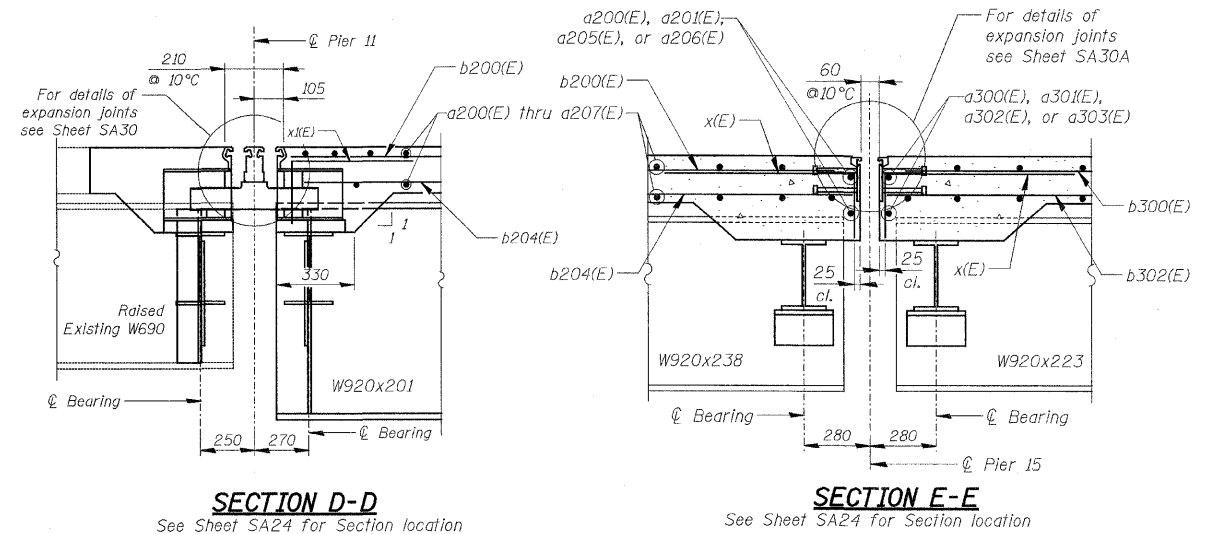
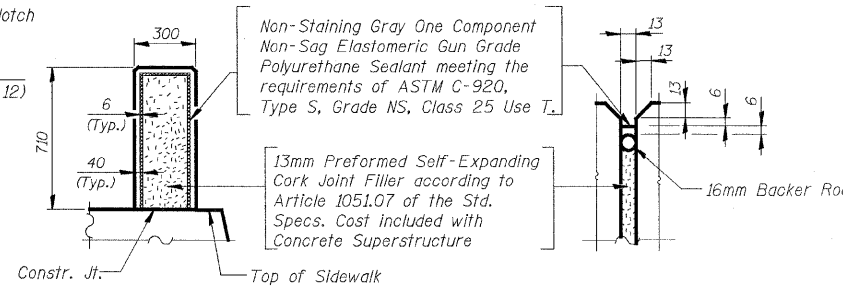
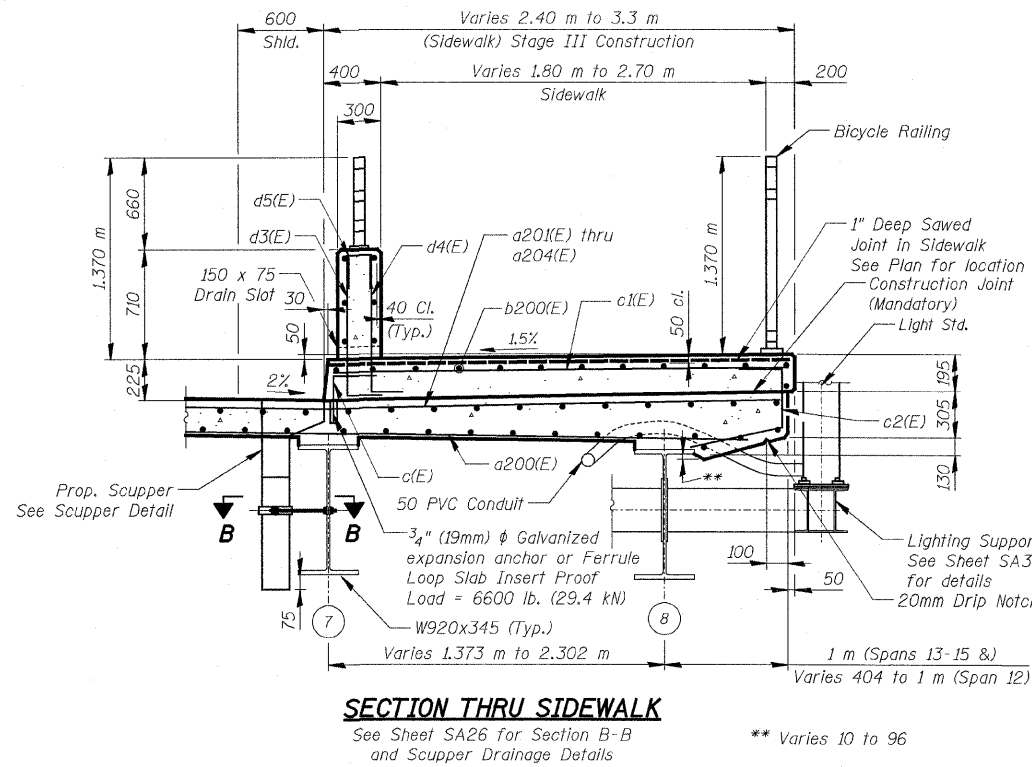
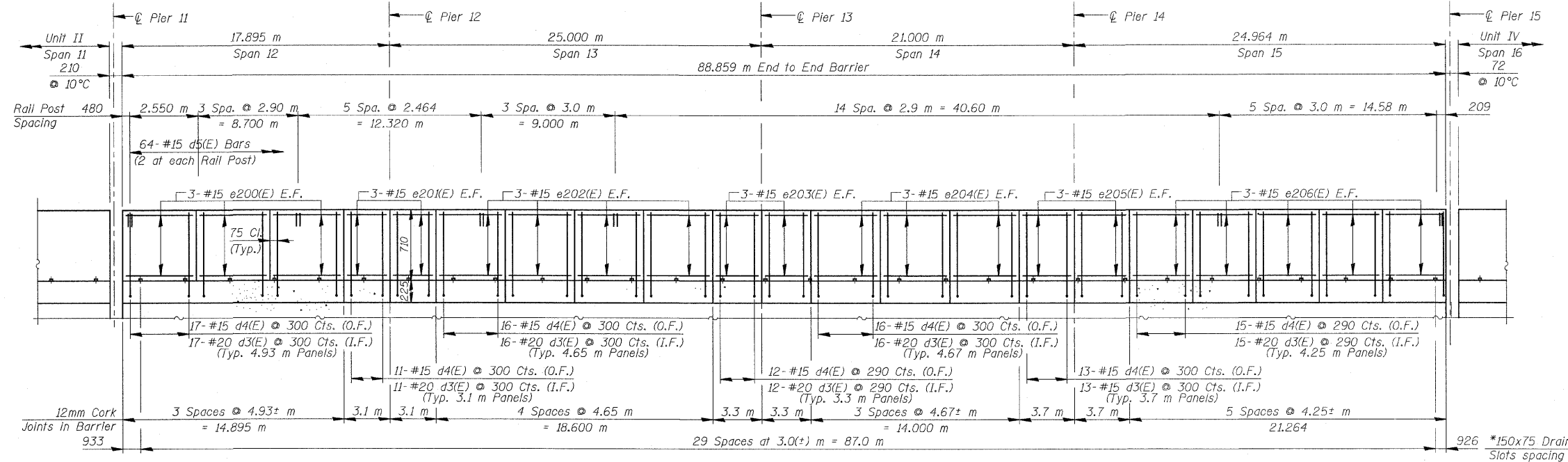
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE - UNIT III
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: M. Tryon
 DATE: MAY 22, 2009 CHECKED BY: A. Yargolouglu

FOR INFORMATION ONLY

a:\idof\9556_a0\drawings\struc\1\Fabrication\plans\24_FAB_Deck_Plan1.dgn
 5/29/2009 10:17:22 PM
 jvermillion(rdwj.Lisie)



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	24
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



NOTES

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.
4. Work this Sheet with SA24 & SA26.
5. In lieu of providing the d3(E) & d4(E) dowels bars as shown, the contractor, at his option and expense, can submit to the engineer for his review and approval an alternate detail to drill and grout the bars. No additional compensation will be allowed if the contractor elects to use the alternate detail.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SUPERSTRUCTURE DETAILS - UNIT III-A
NAME	DATE	
		SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: M. Tryon DATE: 08/09/2009 CHECKED BY: A. Yargloogu

FOR INFORMATION ONLY

J:\vermillion\rdwy_1\isle\5/29/2009 2:39:39 PM q:\tdor\9556_a0\drawings\struct\Fabrication\plans\25_FAB_Deck_Details\Unit III.dgn

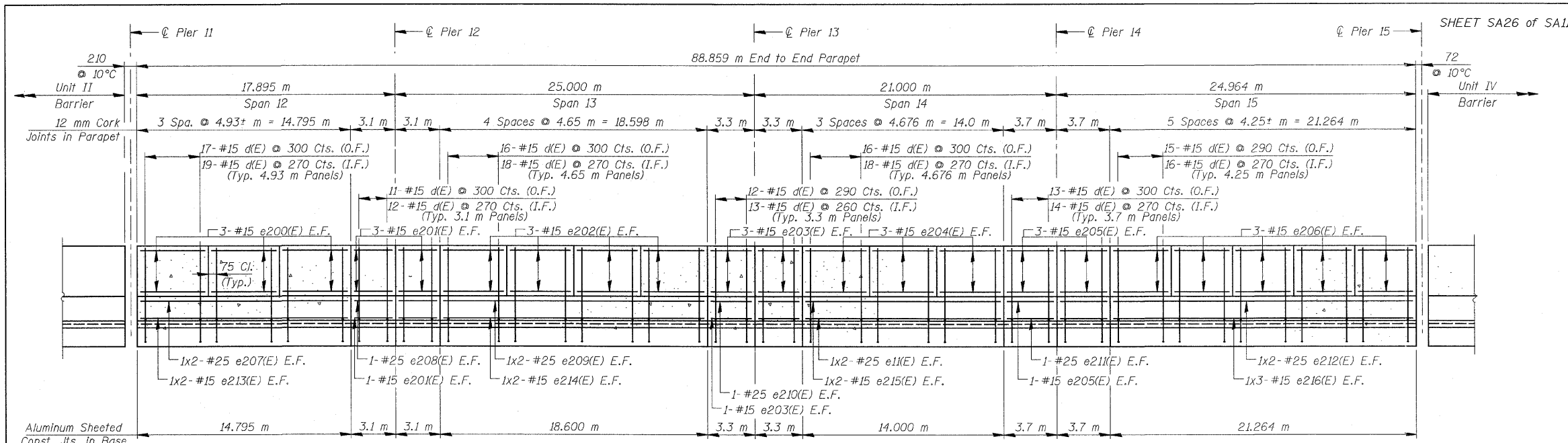


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
	CONTRACT NO. 60H54			

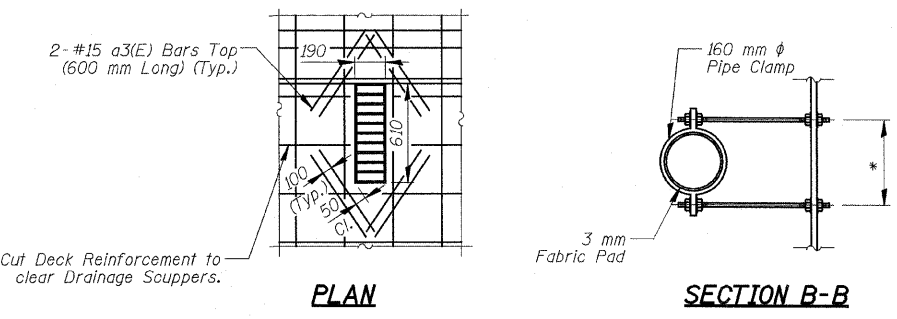
SUPERSTRUCTURE - UNIT III
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH (m)	SHAPE
a3(E)	80	#15	0.60	—
a4(E)	297	#20	1.2	—
a200(E)	1,022	#15	6.36	—
a201(E)	288	#15	5.16	—
a202(E)	240	#15	4.72	—
a203(E)	286	#15	4.36	—
a204(E)	208	#15	3.92	—
a205(E)	1,020	#15	6.51	—
a206(E)	528	#15	5.31	—
a207(E)	494	#15	4.50	—
b200(E)	1,475	#15	9.34	—
b201(E)	65	#20	12.39	—
b202(E)	68	#20	12.76	—
b203(E)	70	#20	14.30	—
b204(E)	144	#15	4.93	—
c(E)	297	#15	0.50	—
c1(E)	297	#15	3.20	—
c2(E)	297	#15	1.17	—
d(E)	651	#15	0.91	—
d1(E)	324	#15	0.80	—
d2(E)	297	#15	1.14	—
d3(E)	310	#20	1.08	—
d4(E)	310	#15	1.08	—
d5(E)	64	#15	0.61	—
e11(E)	4	#25	7.46	—
e200(E)	36	#15	4.80	—
e201(E)	28	#15	2.95	—
e202(E)	48	#15	4.50	—
e203(E)	28	#15	3.15	—
e204(E)	36	#15	4.52	—
e205(E)	28	#15	3.55	—
e206(E)	60	#15	4.10	—
e207(E)	4	#25	7.88	—
e208(E)	4	#25	2.95	—
e209(E)	4	#25	9.76	—
e210(E)	4	#25	3.15	—
e211(E)	4	#25	3.55	—
e212(E)	4	#25	11.09	—
e213(E)	4	#15	7.61	—
e214(E)	4	#15	9.48	—
e215(E)	4	#15	7.18	—
e216(E)	6	#15	7.38	—
x(E)	75	#15	1.28	—
x1(E)	62	#15	0.77	—
Concrete Superstructure	m ²		503.8	
Bridge Deck Grooving	m ²		1,471	
Protective Coat	m ²		2,065	
Reinforcement Bars, Epoxy Coated	kg		74,170	
Bar Splitters	Each		1,018	

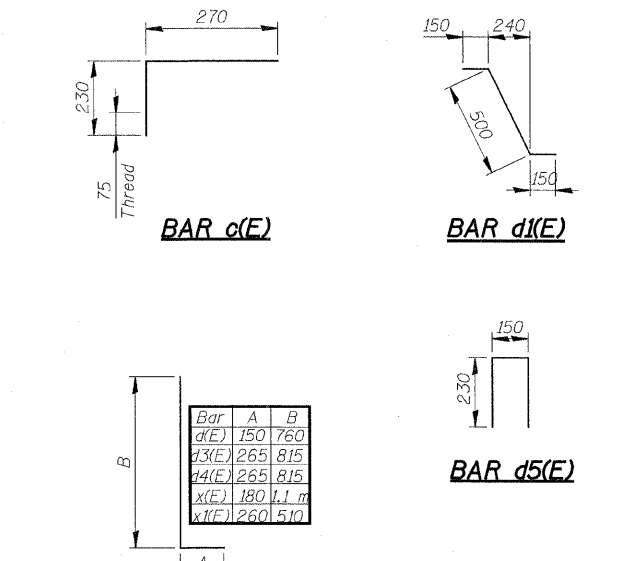
- NOTES**
- Reinforcement bars designated (E) shall be Epoxy Coated.
 - Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
 - All dimensions are in millimeters (mm) except as noted.
 - The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.



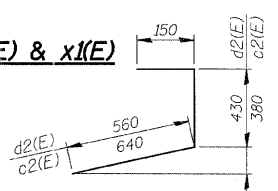
INSIDE ELEVATION OF PARAPET
(Looking Northwest)



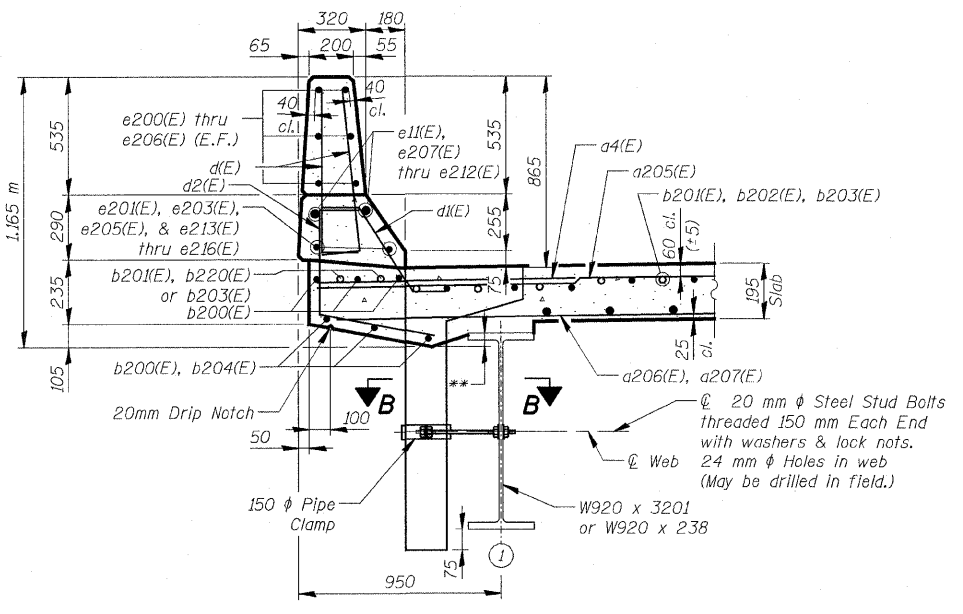
DRAINAGE SCUPPER DETAILS
* Dimension as required by Pipe Clamp



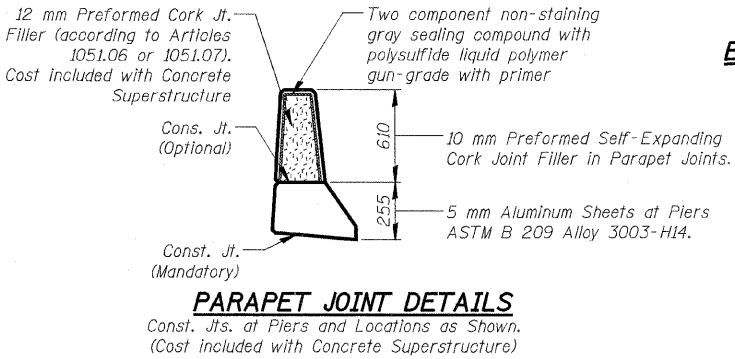
BARS d(E), d3(E), d4(E), x(E) & x1(E)



BAR c2(E) & d2(E)



SECTION THRU PARAPET
** Varies 8 to 75



PARAPET JOINT DETAILS
Const. Jts. at Piers and Locations as Shown.
(Cost included with Concrete Superstructure)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS - UNIT III-B

SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497

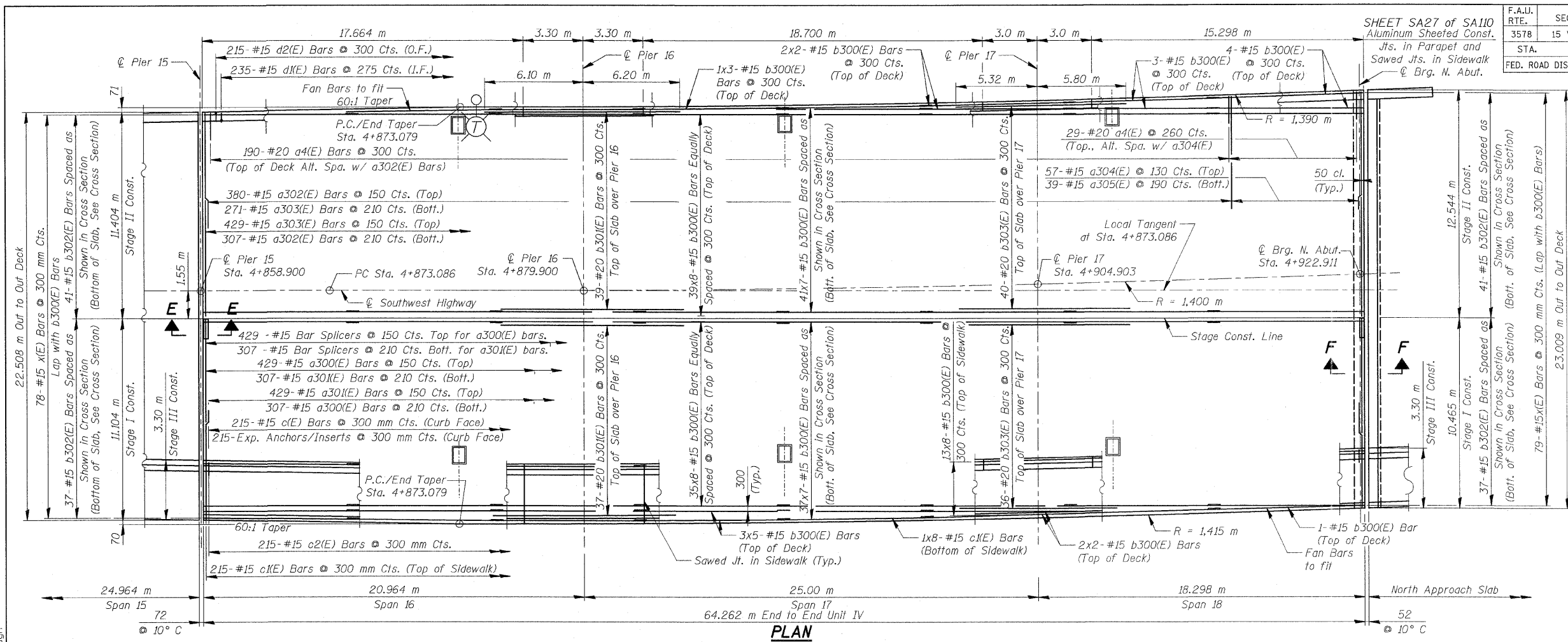
SCALE: NONE DRAWN BY: M. Tryon
DATE: MAY 22, 2009 CHECKED BY: A. Yargloogu

FOR INFORMATION ONLY

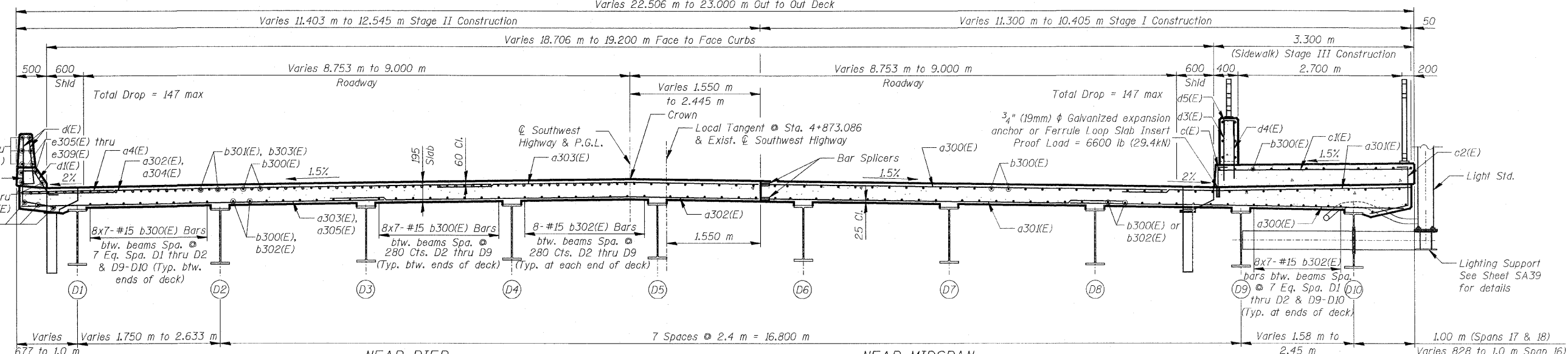
jvermillion(rl)dwg... 5/29/2009 10:07:36 PM
 q:\ido\9556-a0\drawings\struct\fabrication\plans\26_FAB_Deck_Details_UNIT III.dgn



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	26
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 60H54	



PLAN
(See Sheet SA25 For Section E-E)
64.262 m End to End Unit IV



CROSS SECTION
(Looking Northeast)
All cross section dimensions are radial to @ Southwest Highway

- NOTES**
1. Reinforcement Bars designated (E) shall be Epoxy Coated.
 2. Bars indicated 20 x 3 - #15 etc. indicates 20 Lines of Bars with 3 lengths per line.
 3. All edges shall have standard 3/4" (19 mm) chamfer except as noted.
 4. Work this Sheet with Sheet Nos. SA28 and SA29. See Sheets SA28 & SA29 for Parapet and Bicycle Railing Details.
 5. All Dimensions are in millimeters (mm) except as noted.
 6. Place bars d1(E) and d2(E) to miss the aluminum sheeted joint locations in parapets.

TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	5.10
#25	1.06 m

NOTE: Use a min. lap splice of 640 for a304(E) bars

REVISIONS	
NAME	DATE

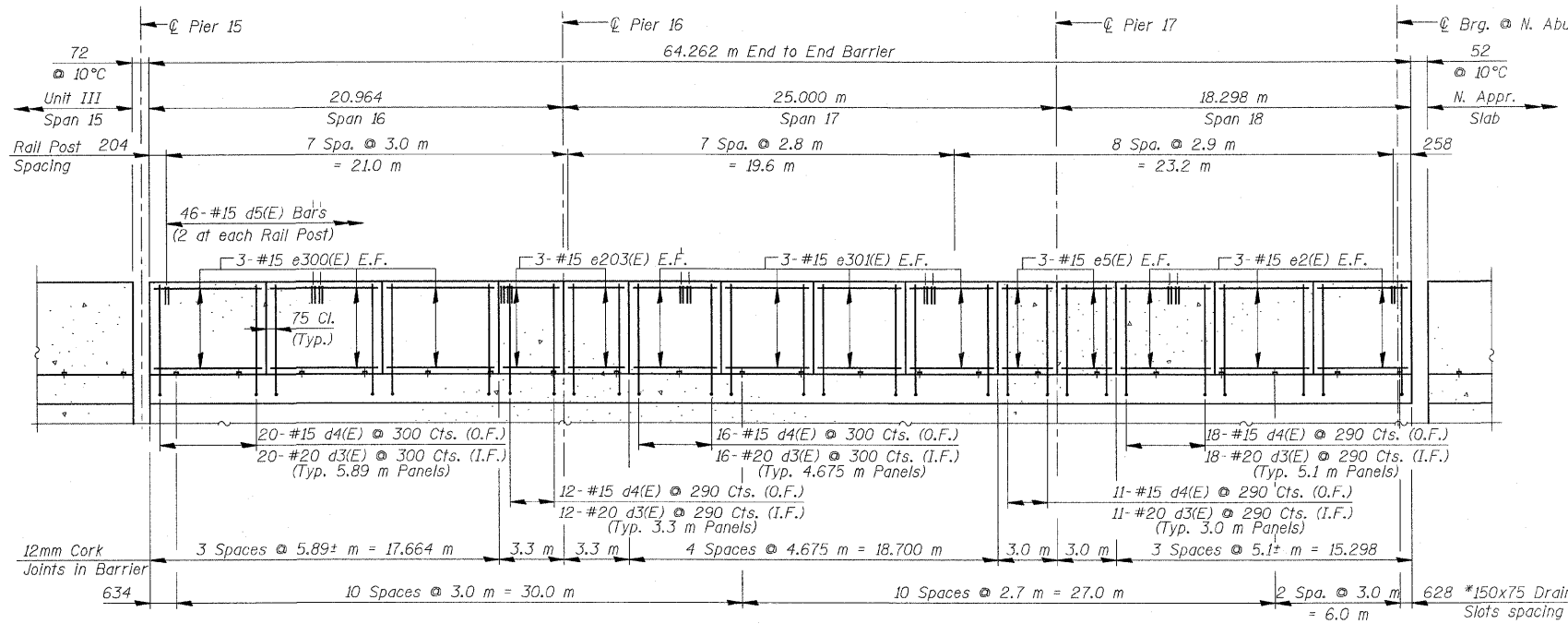
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE - UNIT IV
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: M. Tryon
DATE: MAY 22, 2009 CHECKED BY: A. Yarglooglu

FOR INFORMATION ONLY

q:\tdot\9556_a0\drawings\struct\Fabrication\plans\27_FAB_Deck_PlanV.dgn
 jvermillion(rdwy_lisle) 10/17/03 PM 5/29/2009

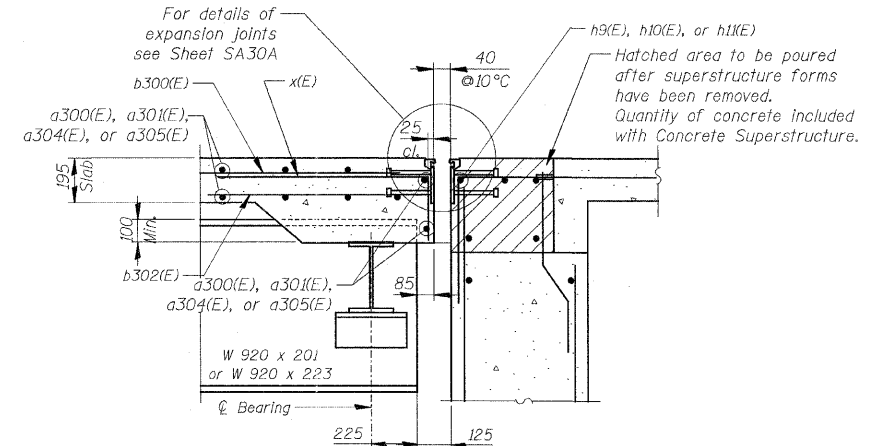


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
3578	15 VB-1-F	COOK	62	27
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



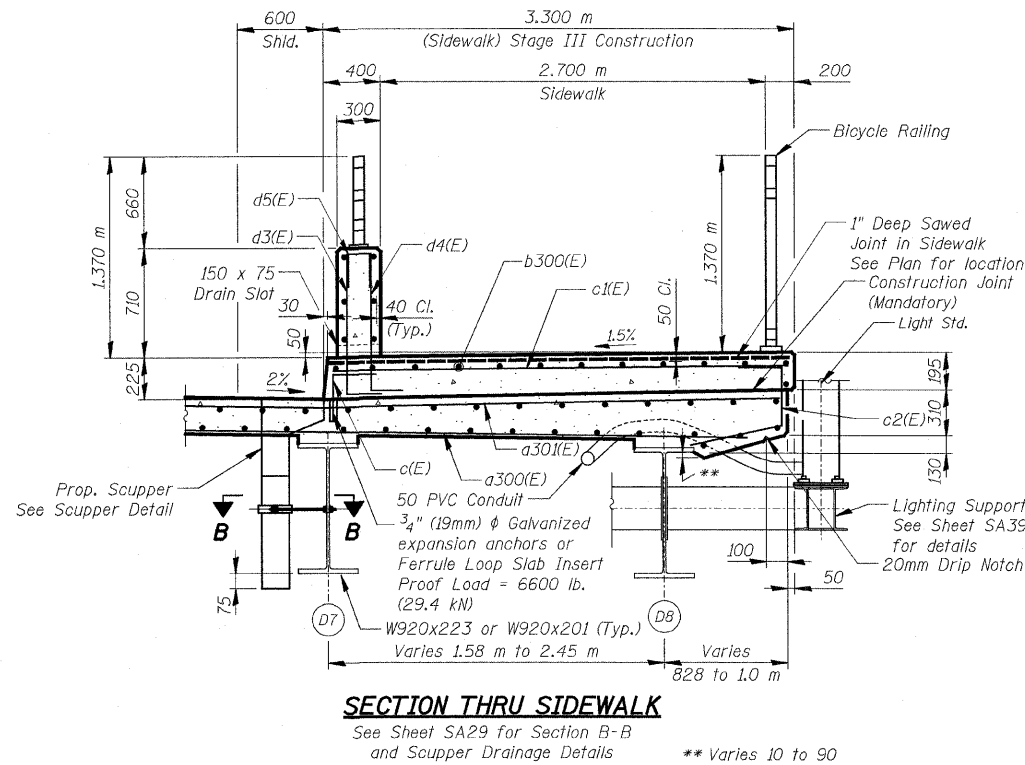
ELEVATION OF SIDEWALK BARRIER

Looking North-West
 * Drain Slots shall omit the vertical reinforcement and shall be 50mm min. from the edges of joints.



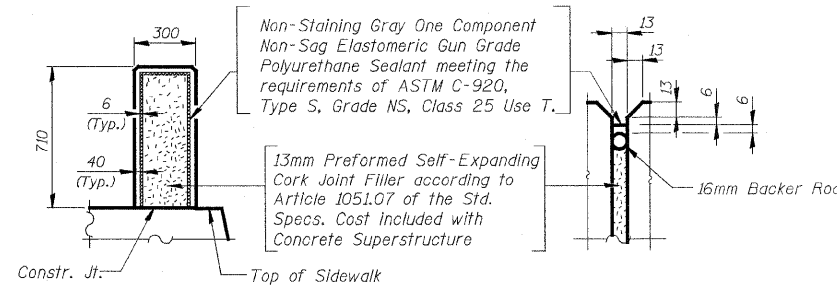
SECTION F-F

See Sheet SA27 for Section location



SECTION THRU SIDEWALK

See Sheet SA29 for Section B-B and Scupper Drainage Details



BARRIER JOINT DETAILS

NOTES

- Reinforcement bars designated (E) shall be Epoxy Coated.
- Bars indicated thus 20 x 3 -#15 etc. indicates 20 lines of bars with 3 lengths per line.
- All dimensions are in millimeters (mm) except as noted.
- See Sheet SA24 for Section E-E.
- In lieu of providing the d3(E) & d4(E) dowels bars as shown, the contractor, at his option and expense, can submit to the engineer for his review and approval an alternate detail to drill and grout the bars. No additional compensation will be allowed if the contractor elects to use the alternate detail.

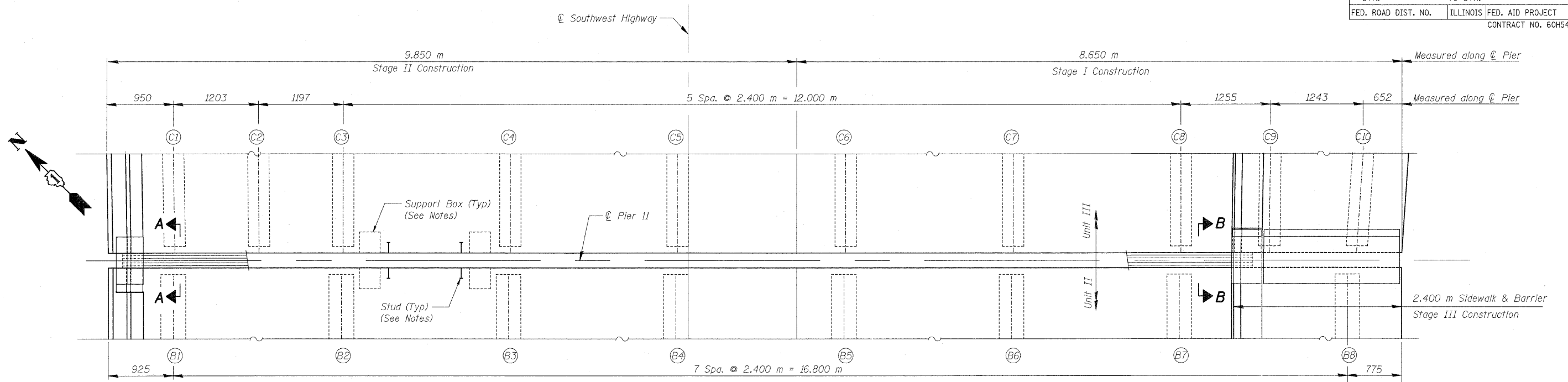
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SUPERSTRUCTURE DETAILS - UNIT IV-A
NAME	DATE	
		SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: M. Tryon DATE: MAY 22, 2009 CHECKED BY: A. Yarglooglu

FOR INFORMATION ONLY

at:\icof\9556_a0\drawings\struc\fabr\con\plan\28_FAB_Deck_Details_UNIT IV_A.dgn
 5/29/2009 10:50 PM
 jvermillion(frdwy_Lisle)



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	29
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				

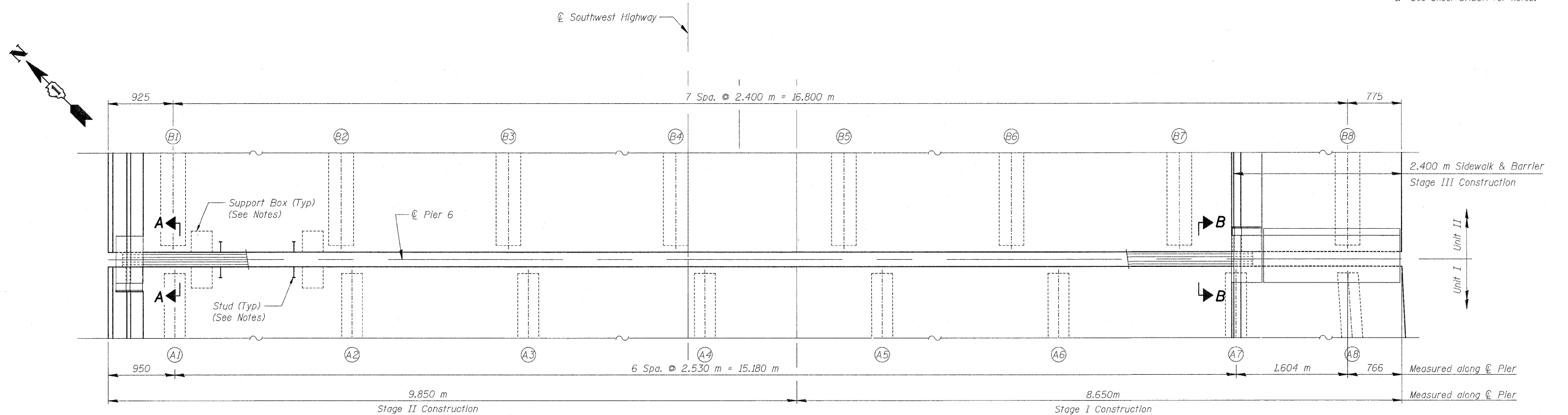


PLAN

(Pier 11 Expansion Joint)
(For Sections A-A and B-B see Sheet SA30A of SA110)

Notes:

1. See Sheet SA30A For Notes.



PLAN

(Pier 6 Expansion Joint)
(For Sections A-A and B-B see Sheet SA30A of SA110)

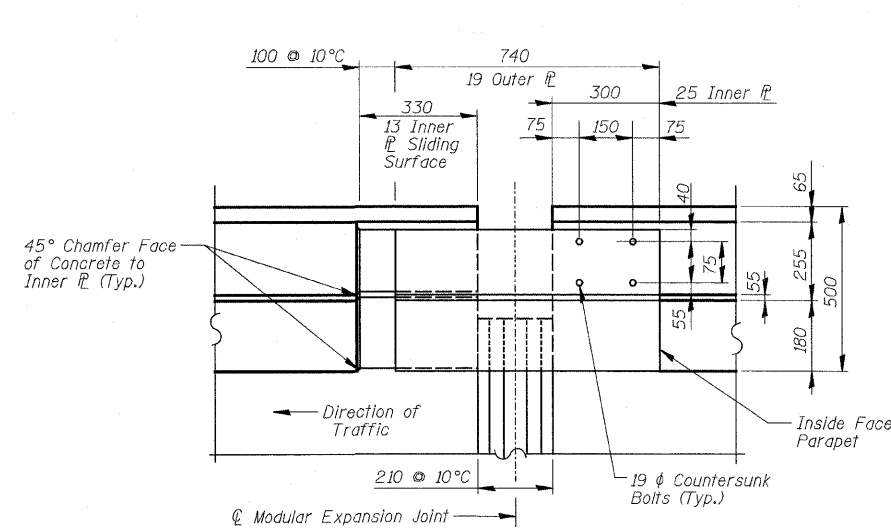
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
MODULAR EXPANSION JOINT I
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: R. DiGiulio
 DATE: MAY 22, 2009 CHECKED BY: A. Durbak

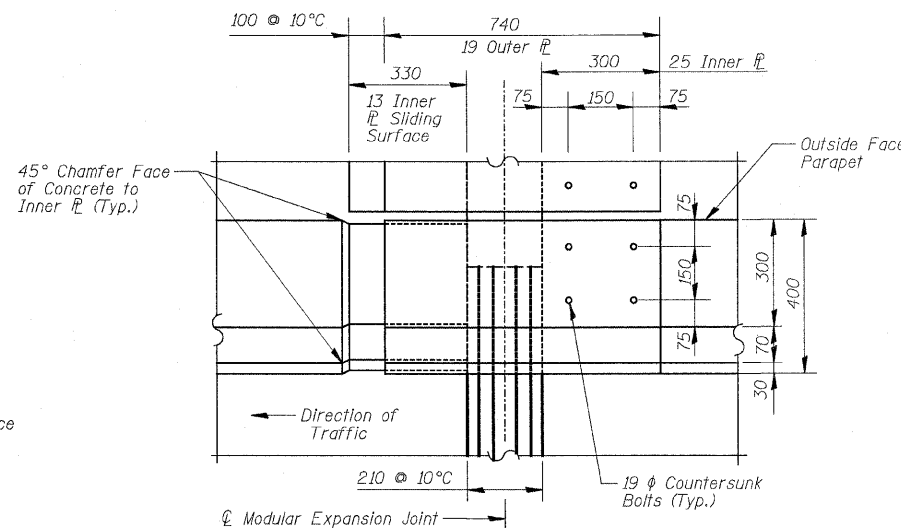
q:\dot\9556.d0\drawings\struct\fabr\location_plans\30_FAB_exp_joint.dgn
 5/22/2009 4:31:32 PM
 T:\koepfert\raw\lisle



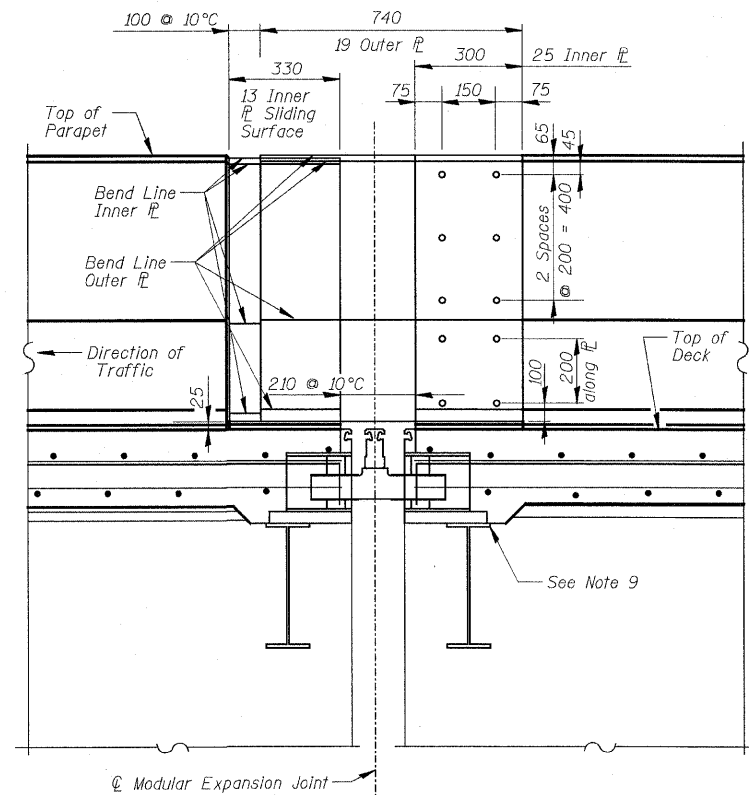
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	30
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54				



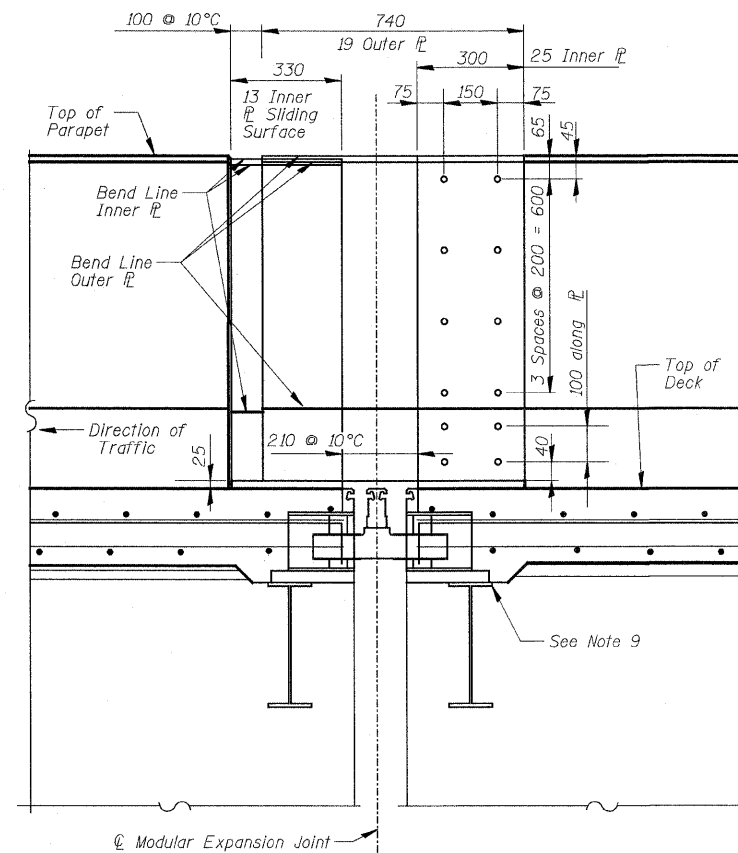
PARAPET SLIDING P ASSEMBLY
(Top View)



PARAPET SLIDING P ASSEMBLY AT SIDEWALK
(Top View)



SECTION A-A
(Parapet Sliding P Assembly)



SECTION B-B
(Parapet Sliding P Assembly at Sidewalk)

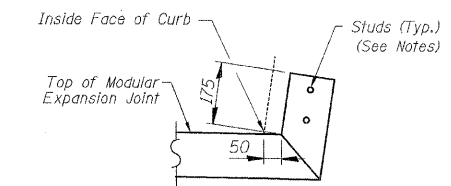
Notes:

1. New Modular Expansion Joints shall be installed to replace the expansion joints at Piers 6 and 11
2. See Special Provisions for a list of Approved Modular Expansion Joints Systems.
3. Joints shall provide a minimum total movement of 150 mm.
4. The Sliding Plate Assemblies shall be Hot-Dip Galvanized in accordance with ASTM A-123.
5. Sliding Plate Assemblies shall be provided for the sidewalk & barrier and the parapet at each Modular Joint location. Cost of furnishing and installing Sliding Plate Assemblies shall be included with Modular Expansion Joint 160 mm. Contractor shall submit shop drawings showing the plate dimensions based on the actual joint system selected.
6. The Contractor shall verify ALL dimensions in the field before fabrication of Modular Joints and Sliding Plate Assemblies.
7. Box Spacing and Stud Spacing shall be per Modular Joint Manufacturer.
8. Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
9. Support box should be rigidly attached to diaphragm by adjustable bracket, stools or shims. Cost is included in the Modular Expansion Joint 160 mm.

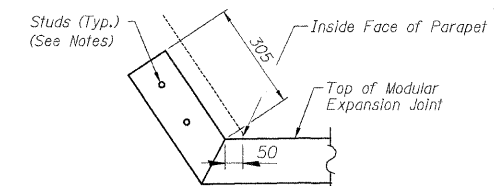
BILL OF MATERIAL

ITEM	UNIT	QTY.
* Modular Expansion Joint 160mm	m	31.2

* See Special Provision in Contract



MODULAR EXPANSION JOINT UPRTURN DETAIL AT CURB



MODULAR EXPANSION JOINT UPRTURN DETAIL AT PARAPET

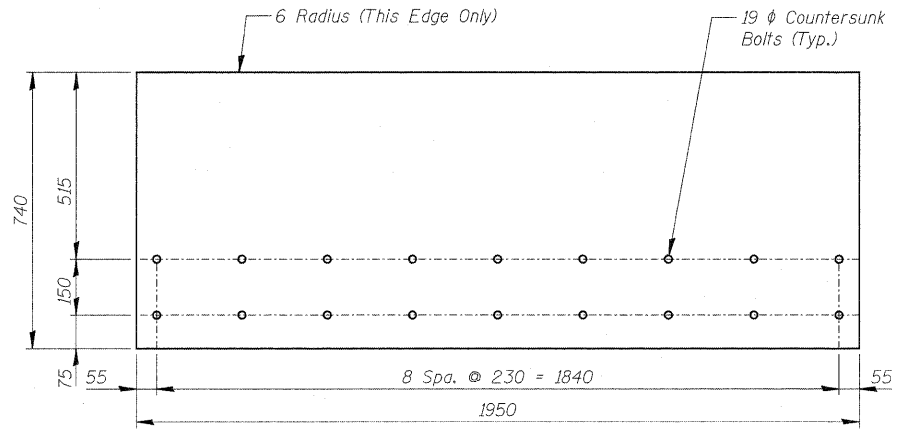
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		MODULAR EXPANSION JOINT II SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: R. DiGiulio DATE: MAY 22, 2009 CHECKED BY: A. Durbak

FOR INFORMATION ONLY

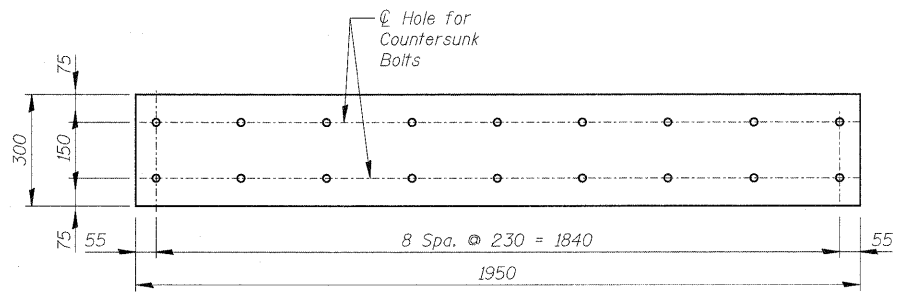
q:\1dot\9556_a0\dr\awings\struc\fabrication_plans\30A_FAB_exp_joint.dgn
 5/29/2009 10:04 PM
 jvermillion(Rdwy_Lisle)



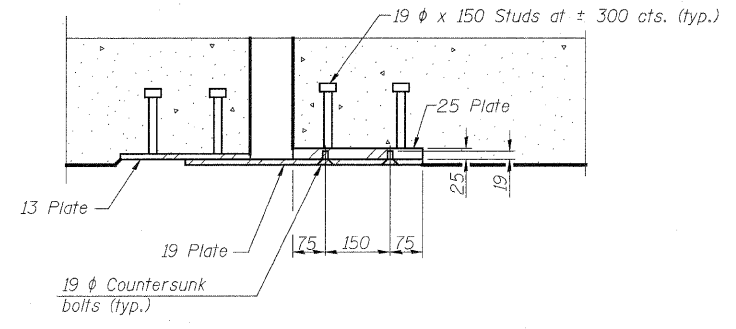
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	31
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60H54				



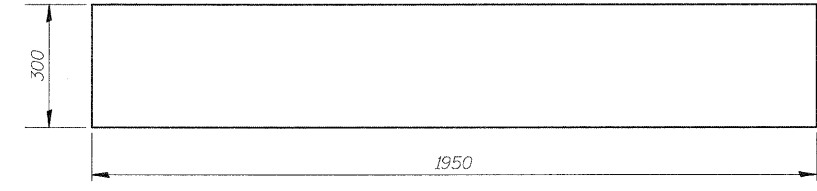
19 mm OUTER SIDEWALK SLIDING PL



25 mm INNER SIDEWALK SLIDING PL

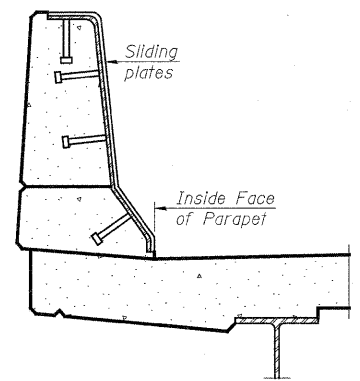


SECTION THRU SLIDING PLATES

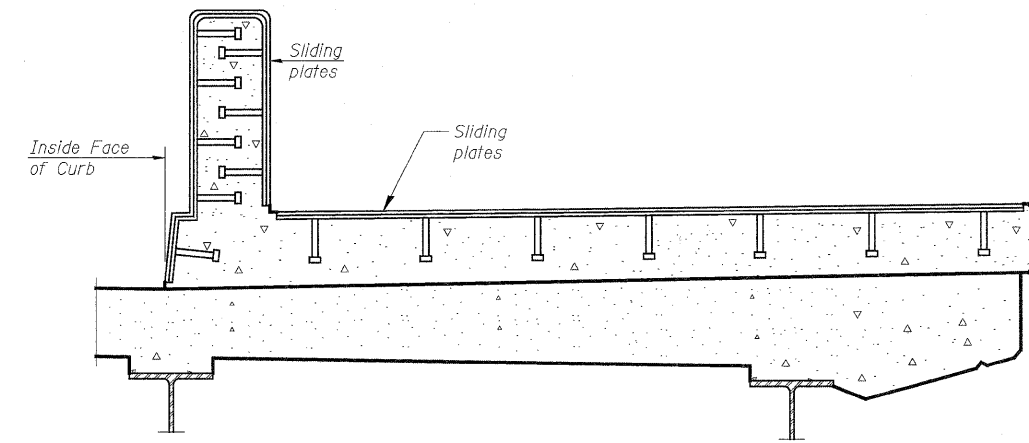


13 mm INNER SIDEWALK SLIDING PL

(Studs not shown)



SECTION THRU BARRIER



SECTION THRU SIDEWALK

REVISIONS	
NAME	DATE

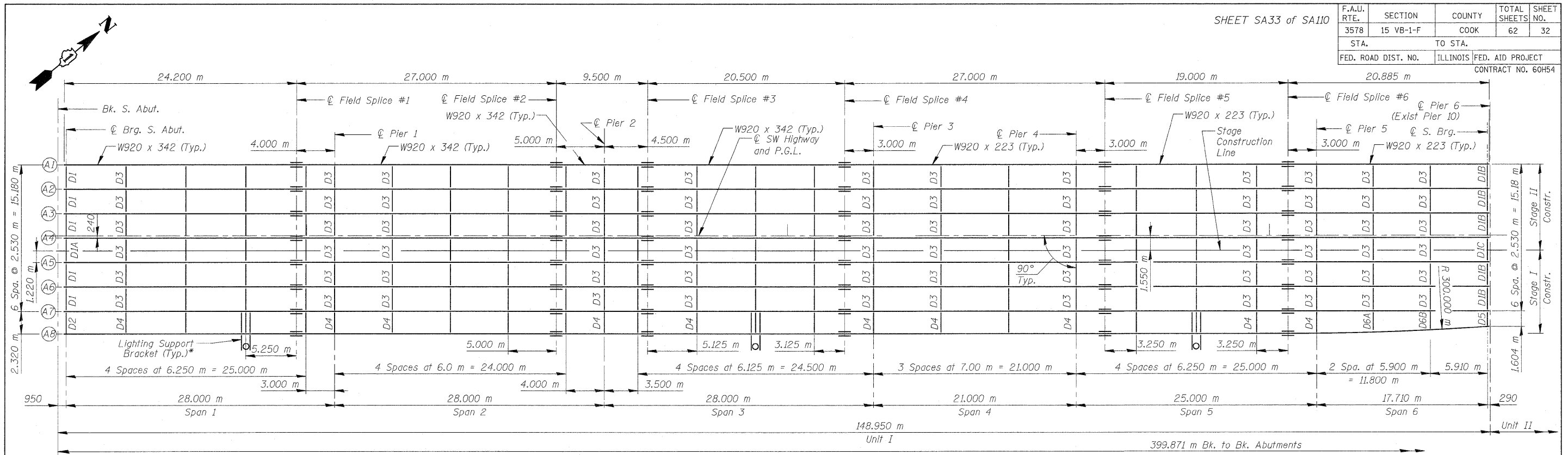
ILLINOIS DEPARTMENT OF TRANSPORTATION
 MODULAR EXPANSION JOINT III
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: R. DiGiulio
 DATE: MAY 22, 2009 CHECKED BY: A. Durbak

c:\dot\9556...a0\drawings\struct\fabrication_plans\30B_FAB_exp_joint.dgn
 5/22/2009 4:34:46 PM
 hkoepfen@rdwy.lisle



FOR INFORMATION ONLY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	32
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



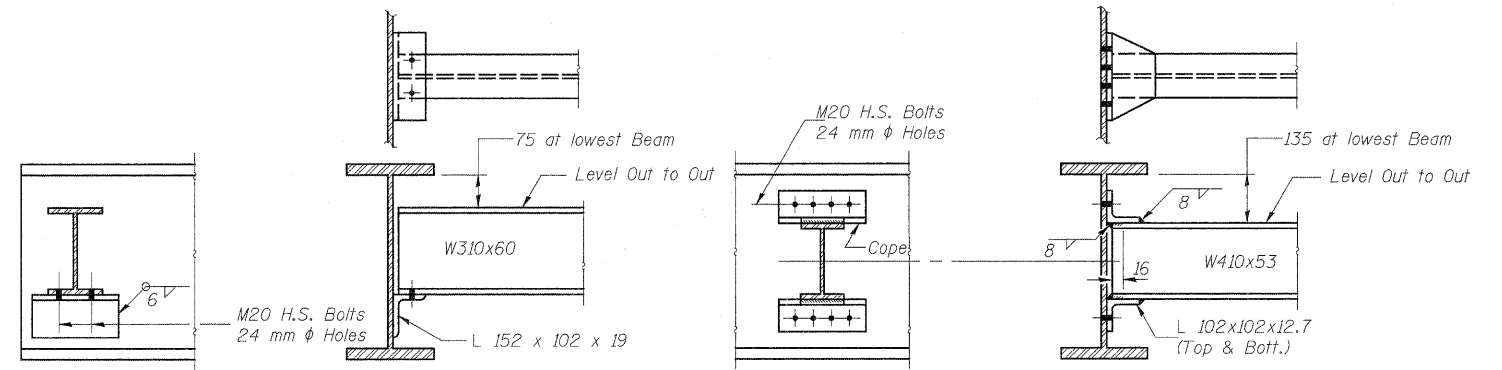
* For Lighting Support Bracket details, see Sheet SA39.

PLAN

	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6
R _l	269.5	751.2	678.1	557.3	516.1	549.5	142.0
R _r	234.0	316.6	309.8	280.6	268.5	262.5	218.2
Imp.	53.2	71.9	70.4	67.3	66.0	66.4	58.8
R (Total)	556.7	1,139.7	1,058.3	905.3	850.6	878.4	419.0

	Brig. S. Abut.	Field Splice #1	Brig. Pier 1	Field Splice #2	Brig. Pier 2	Field Splice #3	Field Splice #4	Brig. Pier 3	Brig. Pier 4	Field Splice #5	Field Splice #6	Brig. Pier 5	Brig. Pier 6
Beam A1	183.379	184.456	184.634	185.658	185.888	186.095	187.010	187.145	188.090	188.225	189.008	189.103	189.663
Beam A2	183.419	184.495	184.673	185.697	185.927	186.134	187.049	187.184	188.129	188.264	189.047	189.142	189.703
Beam A3	183.457	184.533	184.711	185.735	185.965	186.172	187.087	187.222	188.167	188.302	189.085	189.180	189.741
Beam A4	183.487	184.563	184.741	185.765	185.995	186.202	187.117	187.252	188.197	188.332	189.116	189.211	189.772
Beam A5	183.449	184.525	184.703	185.727	185.957	186.164	187.079	187.214	188.159	188.294	189.078	189.173	189.734
Beam A6	183.412	184.488	184.666	185.690	185.920	186.127	187.042	187.177	188.122	188.257	189.040	189.135	189.696
Beam A7	183.369	184.445	184.623	185.646	185.877	186.084	186.999	187.134	188.079	188.214	188.998	189.093	189.654
Beam A8	183.323	184.399	184.577	185.600	185.831	186.038	186.953	187.088	188.033	188.168	188.951	189.048	189.622

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.6 Sp. 6
I _s	6,250	6,250	6,250	6,250	6,250	3,770	3,770	3,770	3,770	3,770	3,770
I _c (n)	13,540	13,540	13,540	13,540	13,540	9,652	9,652	9,652	9,652	9,652	9,652
I _c (3n)	10,010	10,010	10,010	10,010	10,010	7,156	7,156	7,156	7,156	7,156	7,156
S _s	13,710	13,710	13,710	13,710	13,710	8,277	8,277	8,277	8,277	8,277	8,277
S _c (n)	17,990	17,990	17,990	17,990	17,990	11,860	11,860	11,860	11,860	11,860	11,860
S _c (3n)	16,400	16,400	16,400	16,400	16,400	10,770	10,770	10,770	10,770	10,770	10,770
Z											
ψ	15.64	24.03	15.64	24.03	15.64	23.39	14.35	22.75	14.35	22.75	14.35
M _l	962	1,872	378	1,545	663	1,013	141	949	456	1,053	258
s _l	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40
M _s l	549	268	399	132	320	177					
M _t	1,203	754	1,005	719	1,058	521	690	496	891	470	677
M (Imp)	273	171	229	163	241	125	175	122	212	119	182
M ₃ [M _l + M (Imp)]	2,461	1,542	2,057	1,471	2,165	1,076	1,443	1,029	1,840	981	1,431
M _a	5,164	4,439	3,513	3,921	4,194	2,715	2,231	2,572	3,400	2,644	2,426
M _u	7,012	7,012	7,012	7,012	7,012	4,375	4,375	4,375	4,375	4,375	4,943
f _s l (non-comp) (MPa)	70.16	136.55	27.54	112.71	48.34	122.35	17.08	114.69	55.11	127.27	31.13
f _s l (comp) (MPa)	33.49	16.35	24.34	12.24	29.71	16.46					
f _s 3 (L+Imp) (MPa)	136.79	112.50	114.32	107.27	120.32	129.97	121.66	124.34	155.10	118.47	120.68
f _s (Overload) (MPa)	240.44	249.05	158.20	219.97	193.00	252.32	150.98	239.03	239.93	245.73	168.27
f _s (Total) (MPa)	323.8	286.0	328.0	310.7	319.5						
VR	306	243	251	240	302						



END DIAPHRAGMS D1 & D2

D1 - 5 Required
D2 - 1 Required

DIAPHRAGMS D3, D4, D6A & D6B

D3 - 144 Required
D4 - 22 Required
D6A - 1 Required
D6B - 1 Required

NOTES

- Two hardened washers shall be required over all oversize holes for diaphragms.
- All dimensions are in millimeters (mm) except as noted.
- See Sheet SA35 for Diaphragm D1A details. See Sheet SA35A for Diaphragm D1B, D1C and D2 details.

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FRAMING PLAN - UNIT I

SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK

FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2711
COOK COUNTY STATION 4+716.497

SCALE: NONE DRAWN BY: E. Mroozek
DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).

I_{c(n)} and S_{c(n)} are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

I_{c(3n)} and S_{c(3n)} are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

M_a (Applied Moment) = 1.3[M_l + M_sl + M_t + M (Imp)].

The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.

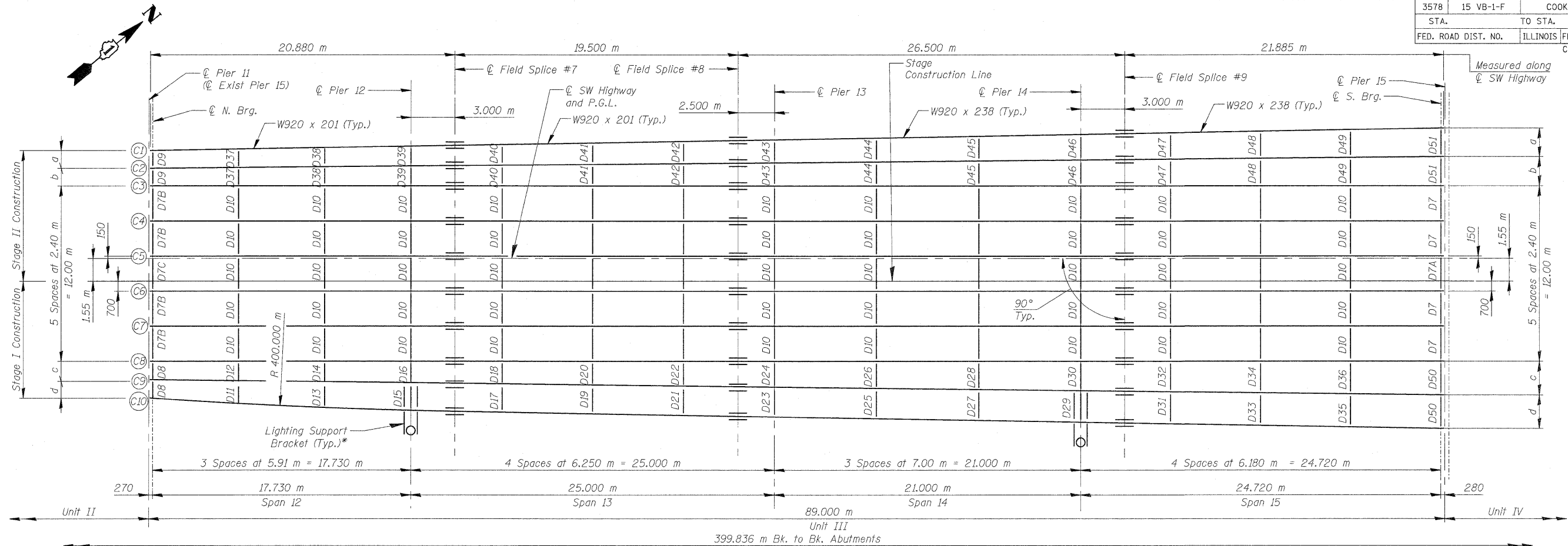
f_s (Overload) is the sum of the stresses due to M_l + M_sl + M_t + M (Imp).

f_s (Total) (Non-compact section) is the sum of the stresses due to 1.3[M_l + M_sl + M_t + M (Imp)].

g:\1dot\9556-c0\drawings\struct\framing\plans\33_FAB_framing_1m1.dgn 5/22/2009 4:34:53 PM



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	33
STA.	TO STA.		FED. AID PROJECT	
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60H54		

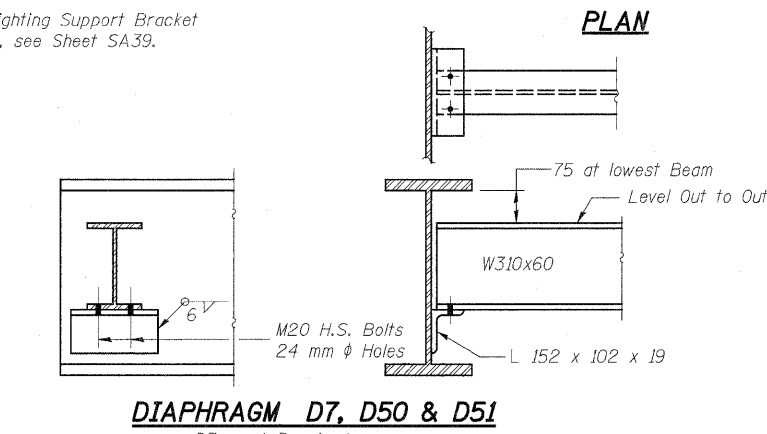


	Pier 11	Pier 12	Pier 13	Pier 14	Pier 15
R _P (kN)	126.9	493.5	463.4	543.4	217.4
R _L (kN)	209.1	248.1	254.2	262.2	220.5
Imp. (kN)	56.3	62.7	62.5	64.6	52.7
R (Total) (kN)	392.3	804.3	780.1	870.1	490.6

* For Lighting Support Bracket details, see Sheet SA39.

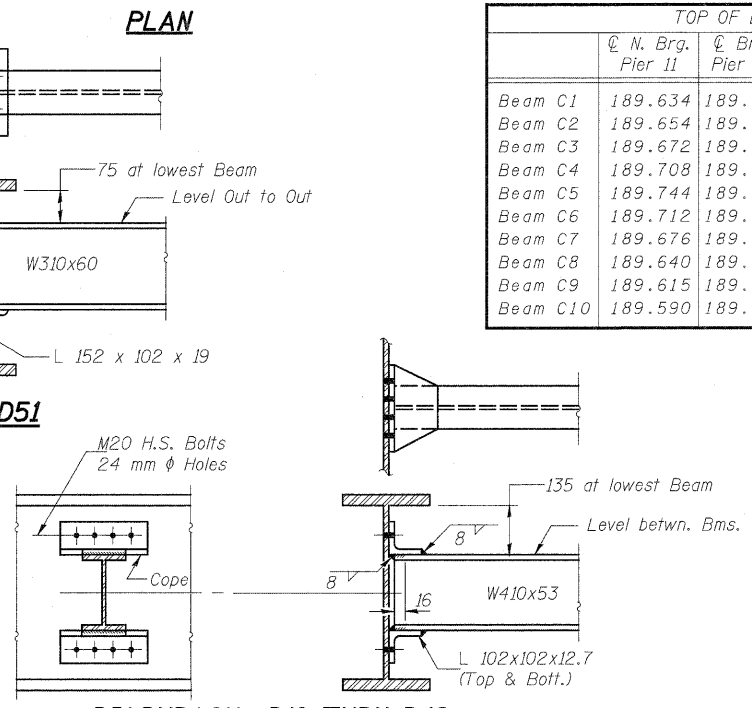
	0.4 Sp. 12	Pier 12	0.5 Sp. 13	Pier 13	0.5 Sp. 14	Pier 14	0.6 Sp. 15
I _s (10 ⁶ mm ⁴)	3,250	3,250	3,250	4,060	4,060	4,060	4,060
I _c (n) (10 ⁶ mm ⁴)	8,727		8,727		10,160		10,160
I _c (3n) (10 ⁶ mm ⁴)	6,490		6,490		7,512		7,512
S _s (10 ³ mm ³)	7,198	7,198	7,198	8,874	8,874	8,874	8,874
S _c (n) (10 ³ mm ³)	10,600		10,600		12,590		12,590
S _c (3n) (10 ³ mm ³)	9,623		9,623		11,420		11,420
Z (10 ³ mm ³)							
M (kN·m)	13.56	20.44	13.56	20.82	13.96	21.21	13.96
M _ℓ (kN·m)	244	947	429	875	74	1136	707
s _ℓ (kN·m)	6.79		6.97		7.16		7.35
M _s ℓ (kN·m)	144		267		85		401
M _ℓ (kN·m)	644	436	836	492	650	516	987
M (Imp) (kN·m)	173	110	199	121	165	127	236
f _s ℓ (non-comp) (MPa)	33.93	131.51	59.54	98.59	8.30	127.96	79.64
f _s ℓ (comp) (MPa)	14.99		27.72		7.45		35.13
f _s ℓ ₃ (4+Imp) (MPa)	128.42	126.42	162.81	115.01	107.88	120.77	161.92
f _s (Overload) (MPa)	177.34	257.93	250.07	213.60	123.63	248.73	276.70
f _s (Total) (MPa)							
VR (kN)	288		228		212		288

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 I_c(n) and S_c(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 I_c(3n) and S_c(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
 VR is the maximum Live Load + Impact shear range in span.



DIAPHRAGM D7, D50 & D51
 D7 - 4 Required
 D50 - 2 Required
 D51 - 2 Required

- NOTES:**
- Two hardened washers shall be required over all oversize holes for diaphragms.
 - All dimensions are in millimeters (mm) except as noted.
 - See Sheet SA35 for Diaphragm D7A details. See Sheet SA35A for Diaphragm D7B, D7C, D8 and D9 details.



DIAPHRAGM D10 THRU D49
 D10 - 65 Required
 D11 thru D36 - 1 Required (26 total)
 D37 thru D49 - 2 Required (26 total)

	℄ N. Brg. Pier 11	℄ Brg. Pier 12	℄ Field Splice #7	℄ Field Splice #8	℄ Brg. Pier 13	℄ Brg. Pier 14	℄ Field Splice #9	℄ S. Brg. Pier 15
Beam C1	189.634	189.056	188.958	188.135	188.022	187.073	186.937	185.972
Beam C2	189.654	189.078	188.981	188.161	188.049	187.102	186.967	186.003
Beam C3	189.672	189.098	189.001	188.185	188.072	187.129	186.994	186.033
Beam C4	189.708	189.135	189.038	188.221	188.109	187.165	187.030	186.069
Beam C5	189.744	189.171	189.074	188.257	188.145	187.201	187.066	186.105
Beam C6	189.712	189.140	189.043	188.225	188.113	187.169	187.034	186.073
Beam C7	189.676	189.104	189.007	188.189	188.077	187.133	186.998	186.037
Beam C8	189.640	189.067	188.970	188.153	188.040	187.097	186.962	186.001
Beam C9	189.615	189.040	188.942	188.123	188.010	187.063	186.927	185.963
Beam C10	189.590	189.002	188.902	188.080	187.967	187.017	186.881	185.917

	℄ N. Brg. Pier 11	℄ Brg. Pier 12	℄ Brg. Pier 13	℄ Brg. Pier 14	℄ S. Brg. Pier 15
a	1.205	1.359	1.576	1.759	1.974
b	1.200	1.355	1.574	1.758	1.974
c	1.259	1.467	1.761	2.008	2.298
d	1.259	1.886	2.040	2.159	2.300

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FRAMING PLAN - UNIT III

SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK

FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497

SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatfield

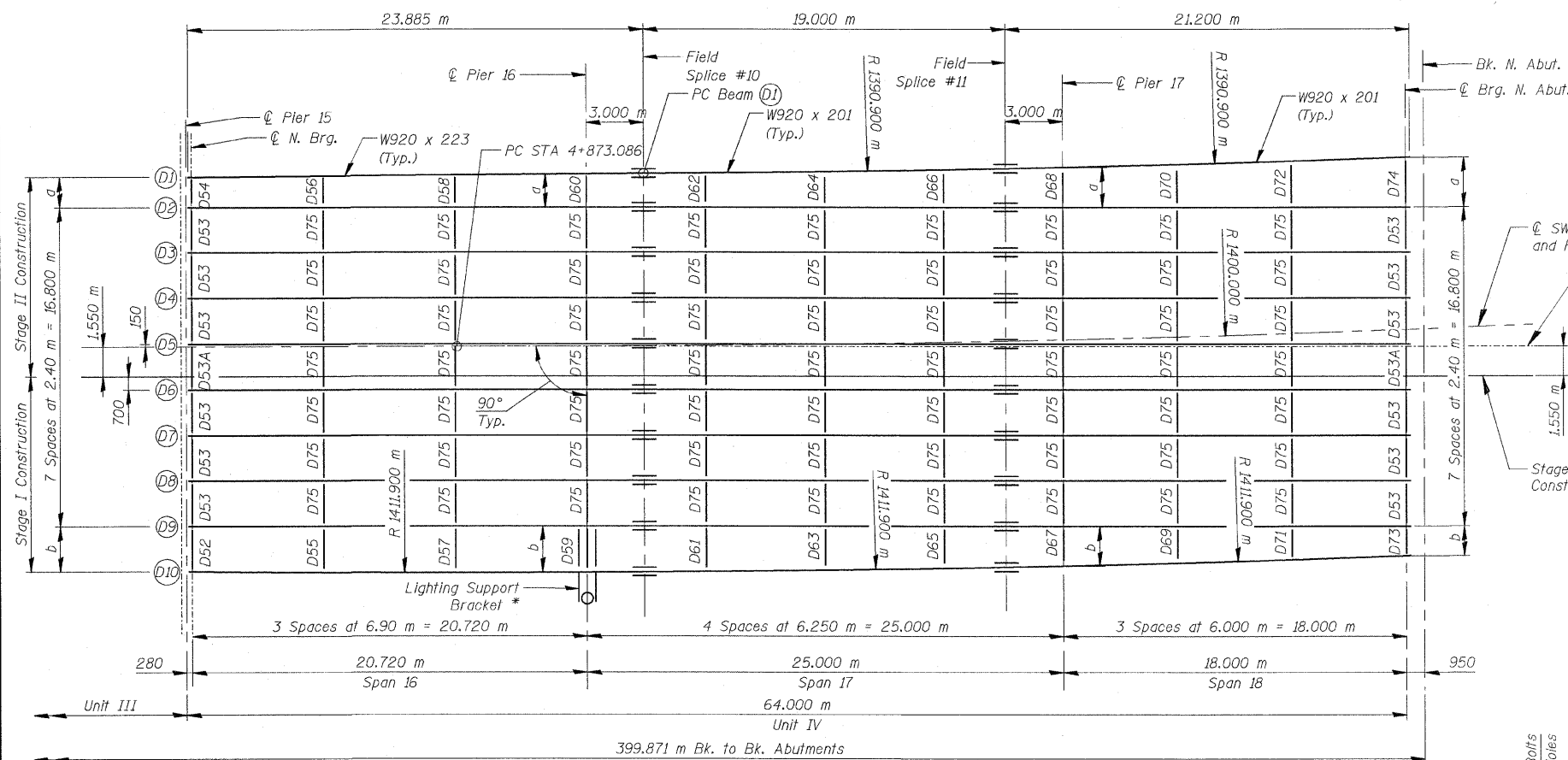
hkoepf(Row_V_Lisle) 4/3/2010 PM 5:22/2009 g:\dot\9556_a0\drawings\struct\Fabrication\plans\34_FAB_framing_UnitIII.dgn



F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	34
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60H54				

LAYOUT DIMENSIONS (in meters)

	¢ N. Brg. Pier 15	¢ Brg. Pier 16	¢ Brg. Pier 17	¢ Brg. N. Abut.
a	1.617	1.764	2.114	2.642
b	2.382	2.434	2.092	1.571



INTERIOR GIRDER REACTION TABLE

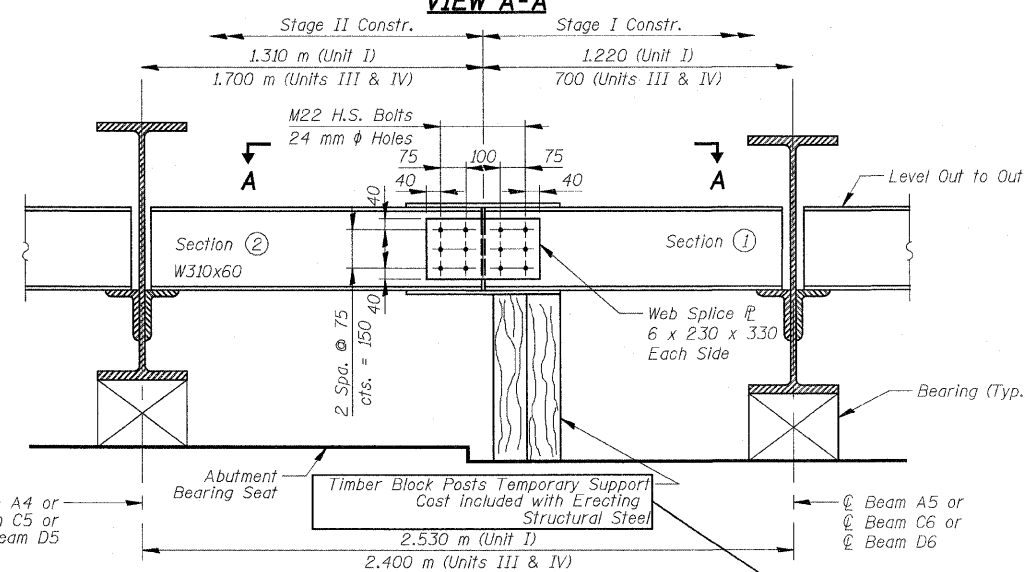
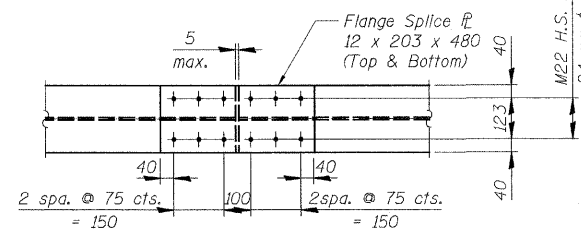
	Pier 15	Pier 16	Pier 17	N. Abut.
R _P (kN)	168.3	549.8	500.6	139.4
R _L (kN)	215.3	262.8	251.2	209.8
Imp. (kN)	55.0	64.7	63.3	56.2
R (Total) (kN)	438.6	877.3	815.1	405.4

INTERIOR GIRDER MOMENT TABLE

	0.4 Sp. 16	Pier 16	0.5 Sp. 17	Pier 17	0.6 Sp. 18
I _s (10 ⁶ mm ⁴)	3,770	3,770	3,250	3,250	3,250
I _c (n) (10 ⁶ mm ⁴)	9,649		8,727		8,727
I _c (sn) (10 ⁶ mm ⁴)	7,149		6,490		6,490
S _s (10 ³ mm ³)	8,280		7,200		7,200
S _c (n) (10 ³ mm ³)	11,860		10,600		10,600
S _c (sn) (10 ³ mm ³)	10,770		9,623		9,623
Z (10 ³ mm ³)					
Q (kN/m)	13.79	21.25	13.55	21.13	13.55
M _P (kN·m)	4.10	1,119	371	928	278
s _P (kN/m)	7.58		7.58		7.58
M _{sP} (kN·m)	247		266		176
M _L (kN·m)	812	498	850	439	673
M (Imp) (kN·m)	207	123	202	111	180
S ₃ [M _L +M(Imp)] (kN·m)	1,699	1,034	1,754	916	1,421
M _a (kN·m)	3,063	2,799	3,108	2,397	2,438
M _u (kN·m)	4,126		3,739		3,700
f _{sP} (non-comp) (MPa)	49.52	135.14	51.54	128.90	38.63
f _{sP} (comp) (MPa)	22.97		27.63		18.26
f _{s3} (4+Imp) (MPa)	143.22	124.85	165.46	127.23	134.07
f _s (Overload) (MPa)	215.69	259.99	244.63	256.13	190.96
f _s (Total) (MPa)		338.0		333.0	
VR (kN)	292		232		289

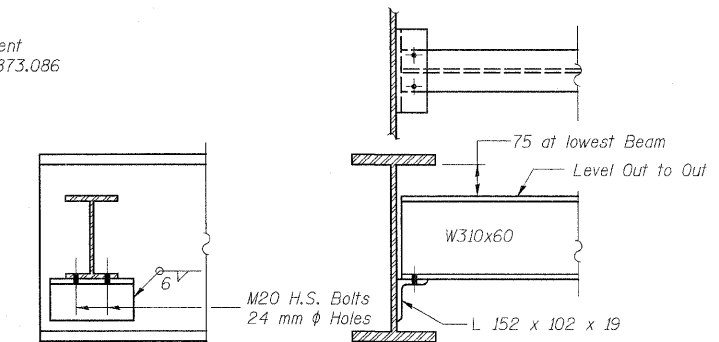
I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 I_c(n) and S_c(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 I_c(sn) and S_c(sn) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See AASHTO 10.38)
 VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

* See sheet SA39 for Lighting Support Bracket details.

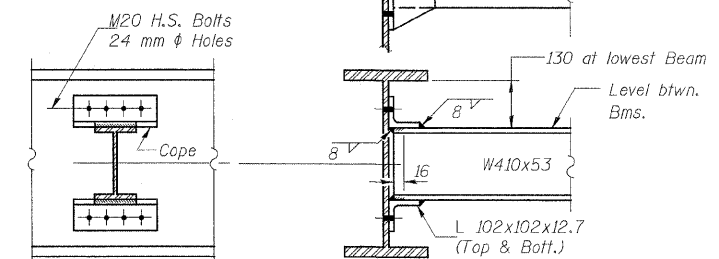


M_a (Applied Moment) = 1.3[M_P + M_{sP} + S₃(M_L + M(Imp))].
 The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 f_s (Overload) is the sum of the stresses due to M_P + M_{sP} + S₃(M_L + M(Imp)).
 f_s (Total) (Non-compact section) is the sum of the stresses due to 1.3[M_P + M_{sP} + S₃(M_L + M(Imp))].

For details of connections to beams see Diaphragms D1, D7 & D53



D52 - 1 Required
 D53 - 12 Required
 D54 - 1 Required
 D73 - 1 Required
 D74 - 1 Required



D75 - 63 Required
 D55 thru D72 - 1 Required (18 total)

TOP OF BEAM ELEVATIONS (FOR FABRICATION ONLY)

	¢ N. Brg. Pier 15*	¢ Brg. Pier 16	¢ Field Splice #10	¢ Field Splice #11	¢ Brg. Pier 17	¢ Brg. N. Abut.
Beam D1	185.945	184.993	184.855	183.995	183.862	183.062
Beam D2	185.972	185.021	184.883	184.028	183.897	183.107
Beam D3	186.008	185.057	184.919	184.066	183.935	183.147
Beam D4	186.044	185.093	184.956	184.105	183.974	183.187
Beam D5	186.080	185.130	184.993	184.139	184.006	183.205
Beam D6	186.048	185.099	184.962	184.105	183.972	183.172
Beam D7	186.012	185.063	184.926	184.071	183.938	183.140
Beam D8	185.976	185.028	184.891	184.038	183.905	183.108
Beam D9	185.937	184.989	184.852	183.999	183.866	183.068
Beam D10	185.888	184.941	184.805	183.958	183.827	183.039

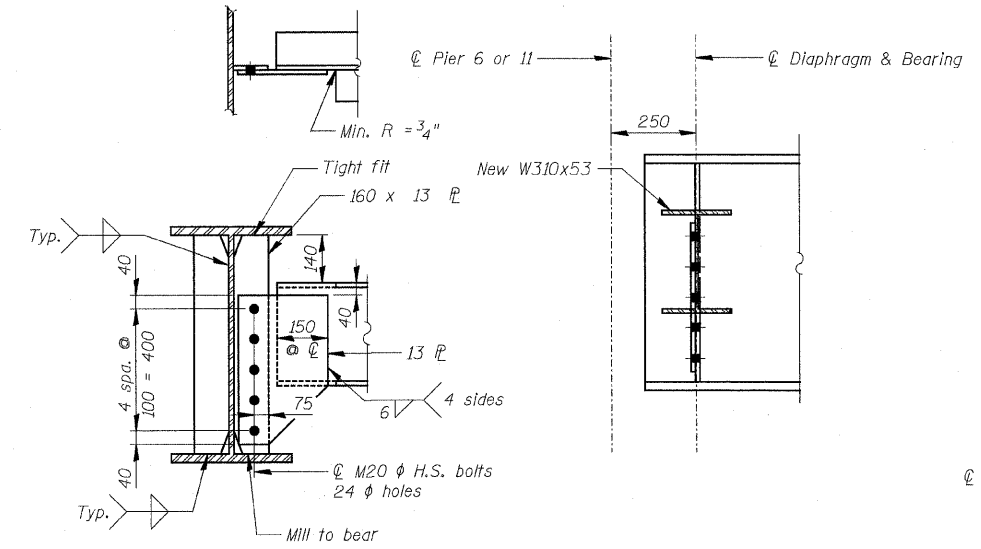
NOTES:
 1. Two hardened washers shall be required over all oversized holes for diaphragms.
 2. All dimensions are in millimeters (mm) except as noted.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FRAMING PLAN - UNIT IV SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497
NAME	DATE	
SCALE: NONE	DATE: MAY 22, 2009	DRAWN BY: E. Mroozek CHECKED BY: A. Yarglooglu

5/29/2009 10:08:27 PM
 jvermillion(Rev. L. Lise)
 5/29/2009
 q:\cort\9556-a0\dr\awings\struc\Framing\plans\35-FAB-Framing Unit IV.dgn

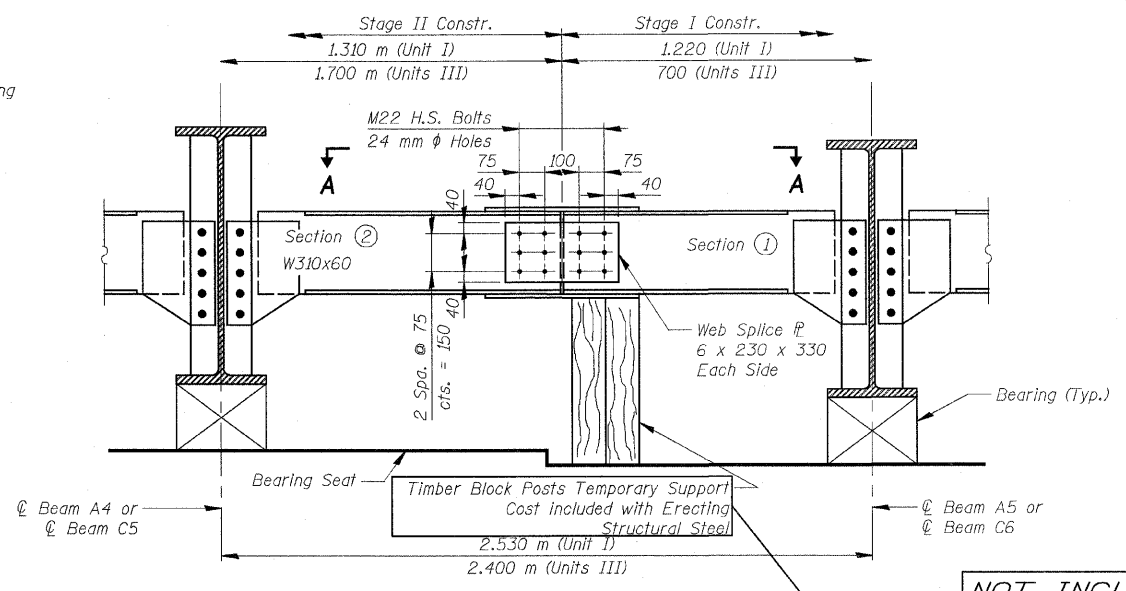


F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	35
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



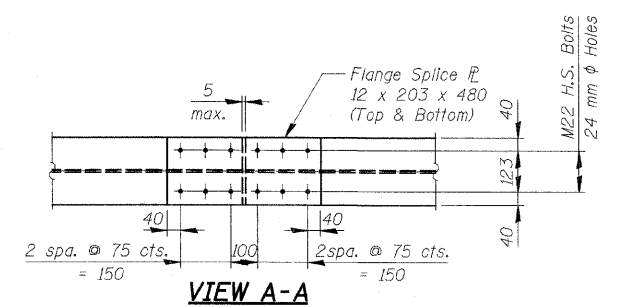
END DIAPHRAGMS D1B, D5, D7B, D8 & D9

- D1A - 5 Required
- D5 - 1 Required
- D7B - 4 Required
- D8 - 2 Required
- D9 - 2 Required

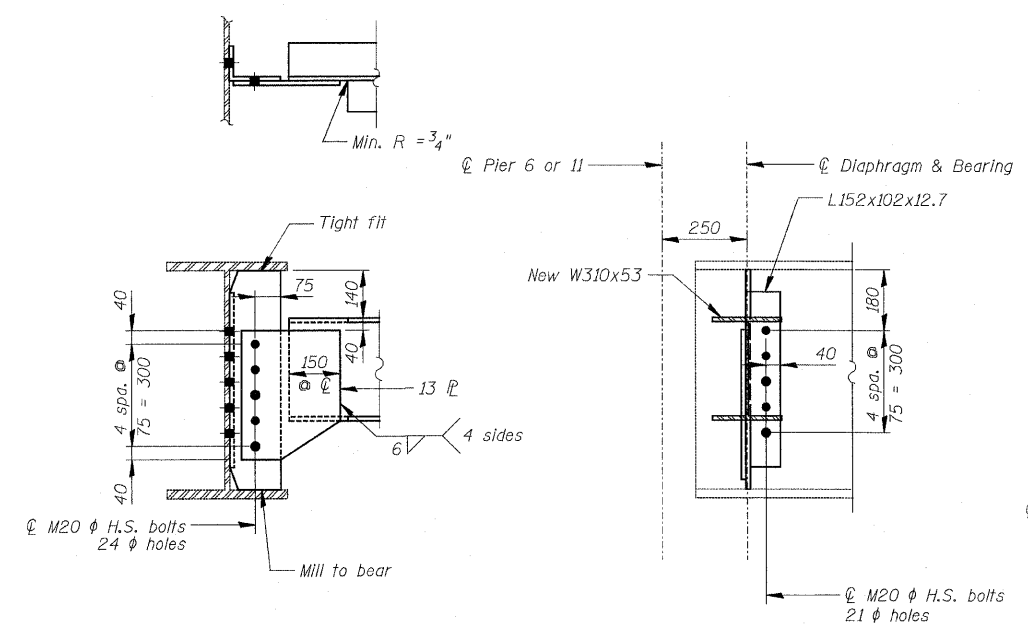


DIAPHRAGMS DIC & D7C

- 1 Required (Looking East)
- For details of connections to beams see Diaphragms D1B & D7B

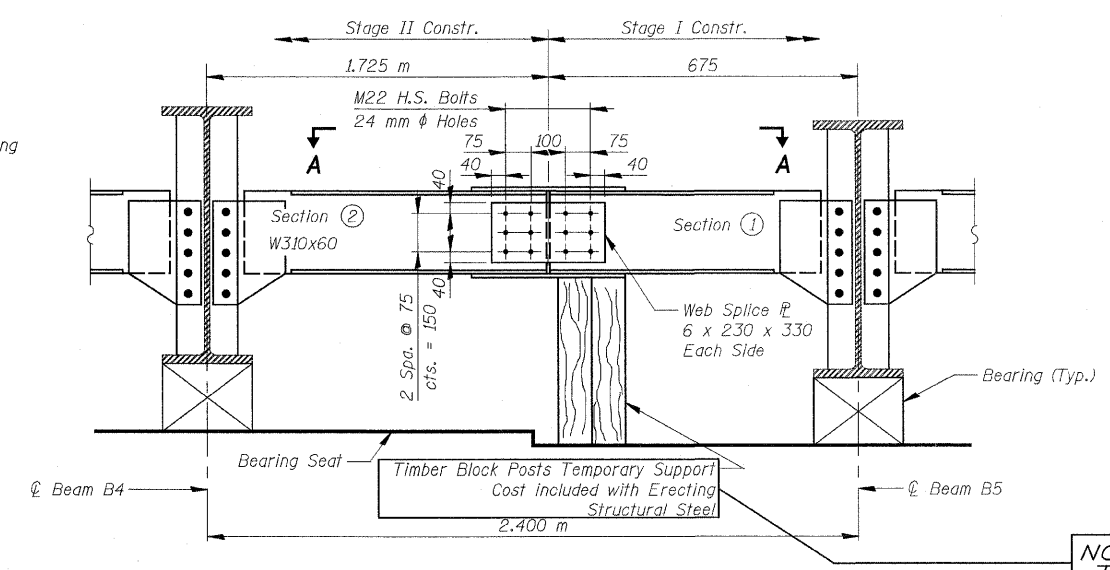


VIEW A-A



END DIAPHRAGMS - UNIT II

- 12 Required



DIAPHRAGMS - UNIT II BTW. GIRDERS B4 & B5

- 2 Required (Looking East)

NOTES:

1. All dimensions are in millimeters (mm) except as noted.
2. For mounting new end diaphragms to existing structure, burrs, shavings, loose paint and scale and other non-adherent material in the contract areas shall be removed before field bolting.
3. Two hardened washers required over all oversized holes for diaphragms.

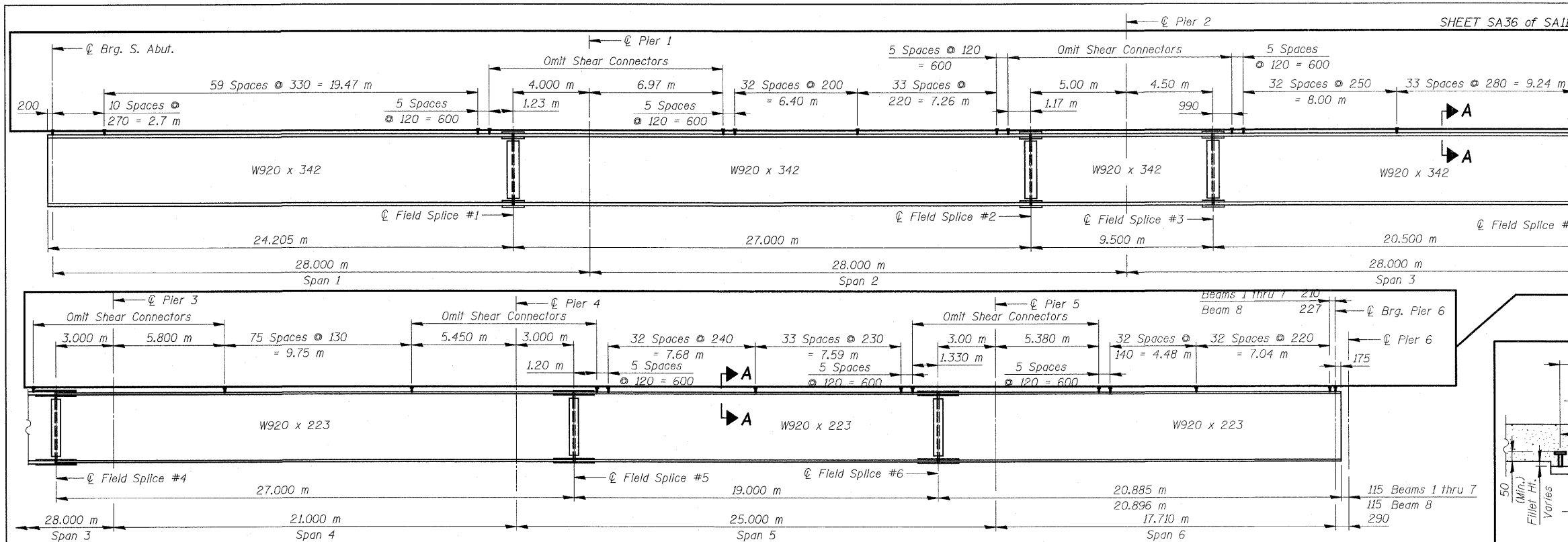
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
END DIAPHRAGMS AT MODULAR JNTS.
 SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

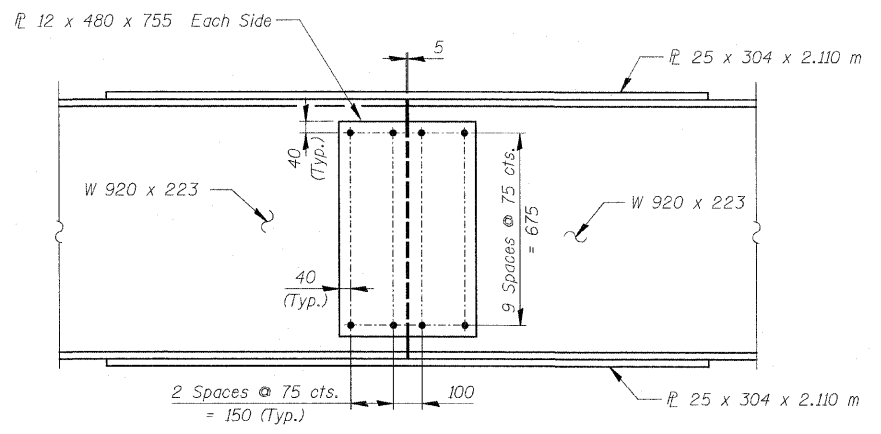
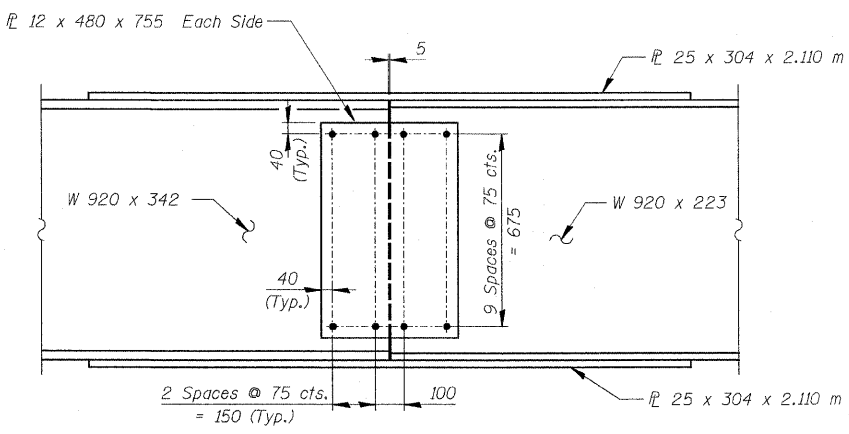
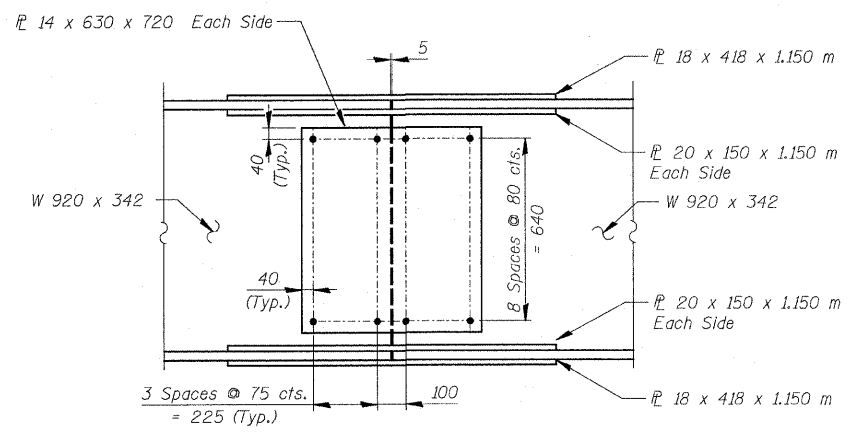
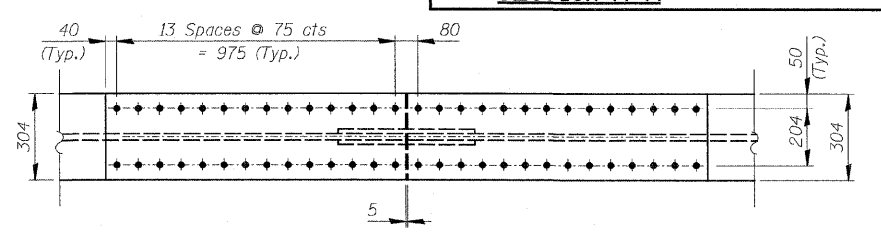
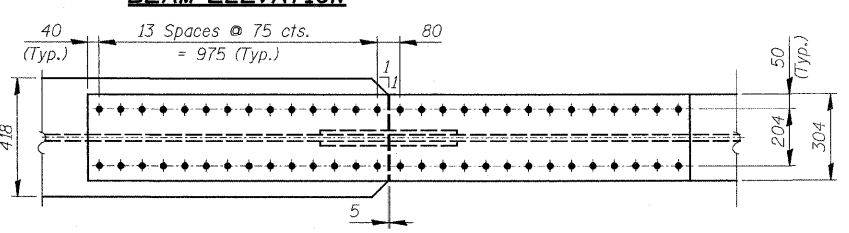
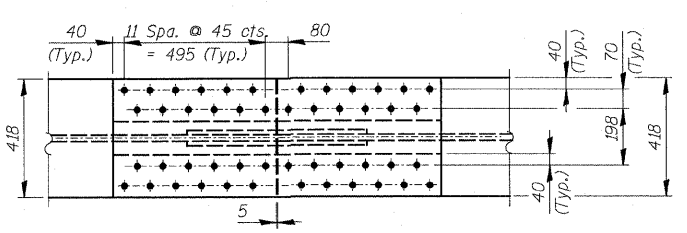
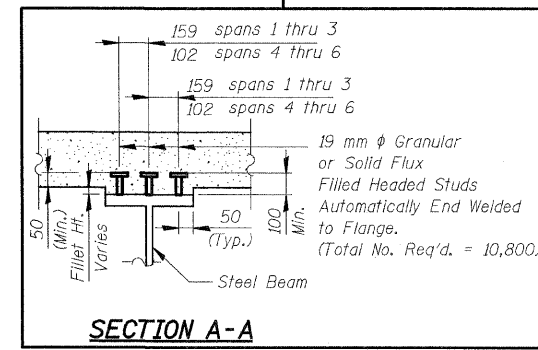
q:\1dot\9556_a0\drawings\structure\fabrication\plans\35A_FAB_fr-aming_end-diaphragms.dgn
 jvermillion(rdw-Lisie) 5/29/2009 11:25 PM



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
3578	15 VB-1-F	COOK	62	36
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 60H54	



FOR INFORMATION ONLY



BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing Structural Steel	L Sum	1

NOTES

- For Top of Beam Elevations, Table of Moments and Reactions see Sheet SA33.
- All Wide Flange Beams and Splice Plate Material, except Fill Plates, shall be AASHTO M270 M Grade 345 and shall meet Notch Toughness Requirements.
- All dimensions are in millimeters (mm) except as noted.

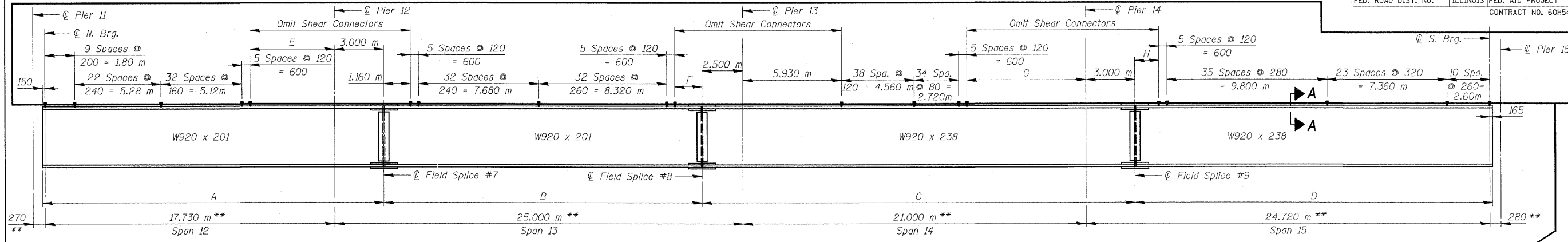
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BEAM DETAILS - UNIT I
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DATE: MAY 22, 2009
 DRAWN BY: M. Tryon
 CHECKED BY: G. Hottelstad

J:\vermillion\rdwy_l\lisle\1008135.PM
 q:\yidof\9556.ad\drawings\struc\fabr\location-plans\36_FAB_beam_Unit1.dgn



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
3578	15 VB-1-F	COOK	62	37
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



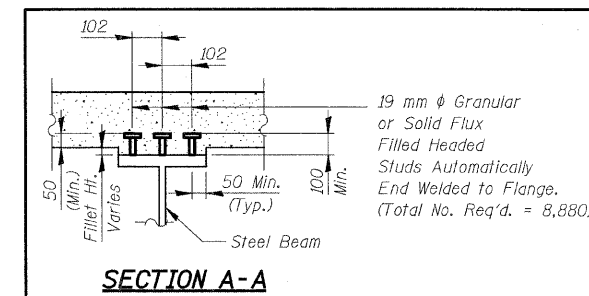
BEAM DIMENSIONS (In meters)

BEAM	A*	B*	C*	D*	E*	F*	G*	H*
C1	20.883	19.503	26.503	21.888	4.933	1.143	7.193	1.363
C2	20.881	19.501	26.501	21.886	4.931	1.141	7.191	1.361
C3 thru C8	20.880	19.500	26.500	21.885	4.930	1.140	7.190	1.360
C9	20.881	19.501	26.501	21.886	4.931	1.141	7.191	1.361
C10	20.902	19.503	26.503	21.888	4.952	1.143	7.193	1.363

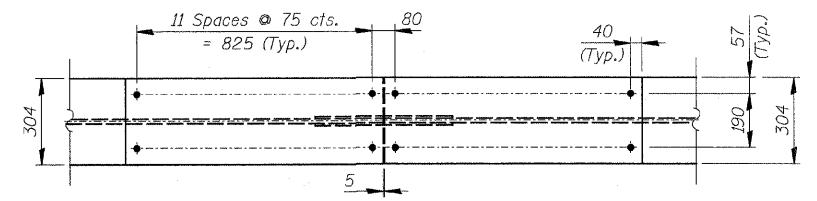
* Measured along ϕ Beam

** Measured along ϕ SW Highway

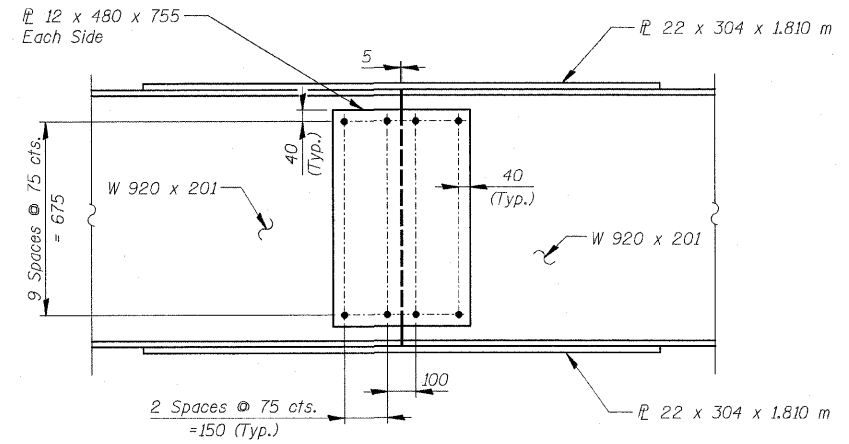
BEAM ELEVATION



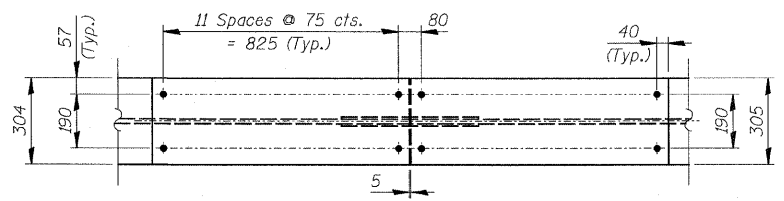
FOR INFORMATION ONLY



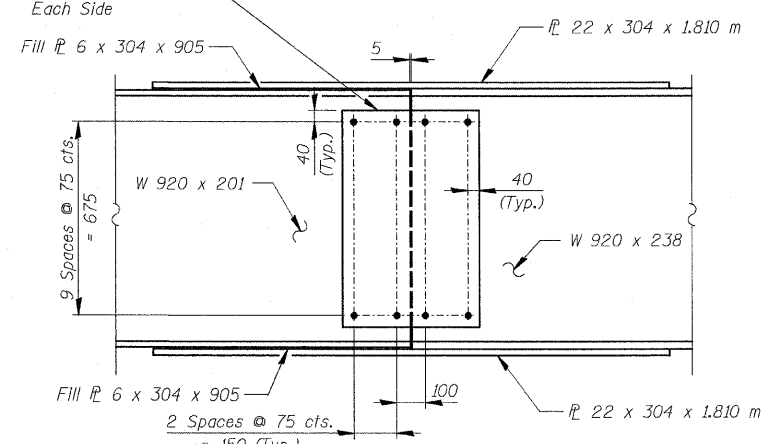
TOP PLAN (Bottom Splice is Identical)



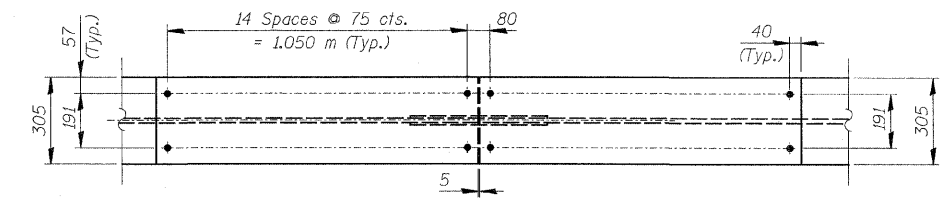
ELEVATION FIELD SPLICE #7



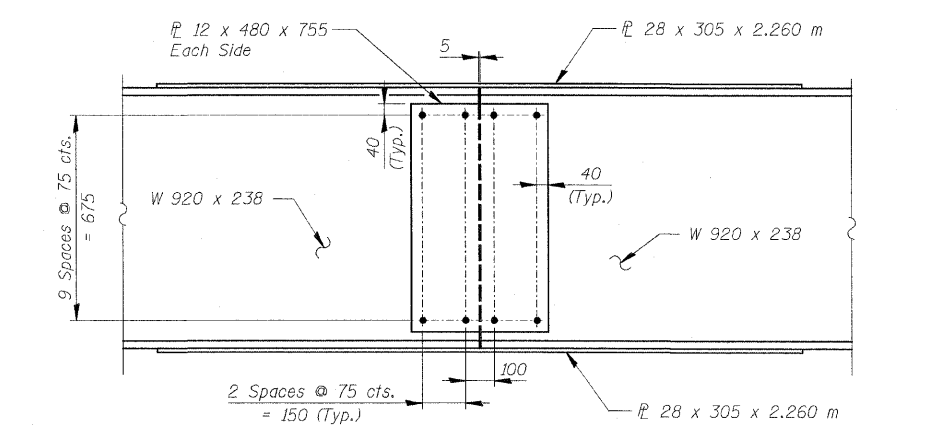
TOP PLAN (Bottom Splice is Identical)



ELEVATION FIELD SPLICE #8



TOP PLAN (Bottom Splice is Identical)



ELEVATION FIELD SPLICE #9

NOTES:

- For Top of Beam Elevations, Table of Moments and Reactions see Sheet SA34.
- All Wide Flange Beams and Splice Plate Material, except Fill Plates, shall be AASHTO M270 M Grade 345 and shall meet Notch Toughness Requirements.
- All dimensions are in millimeters (mm) except as noted.

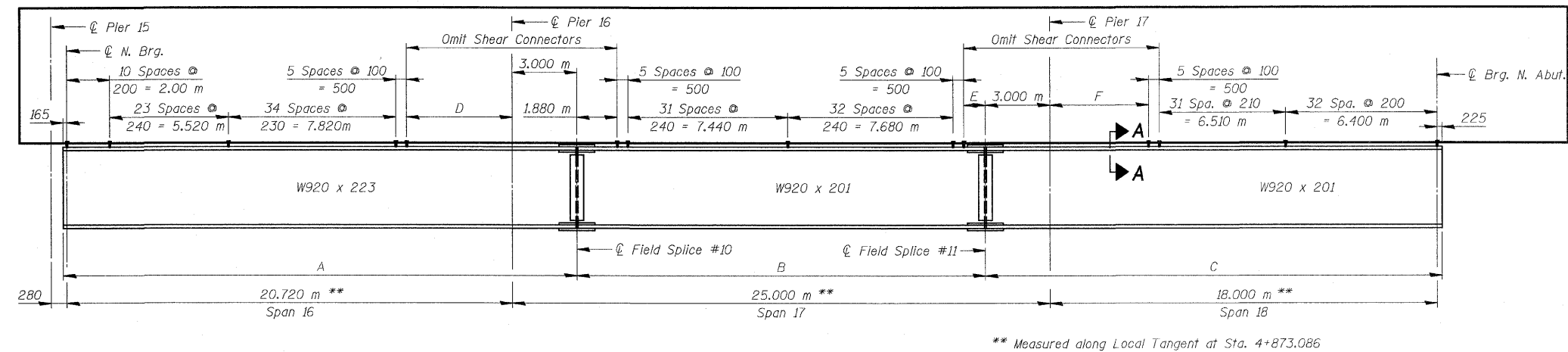
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 BEAM DETAILS - UNIT III
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: M. Tryon
 DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

c:\p101\9556_a0\dr\awings\struc\fabr\info\plan\37_FAB_beam_UnitIII.dgn
 jvermillion(rdwy-lisle) 5/29/2009 10:08:41 PM



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	38
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54				



FOR INFORMATION ONLY

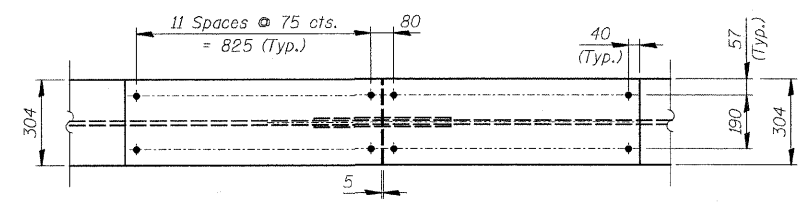
BEAM ELEVATION

BEAM DIMENSIONS (In meters)

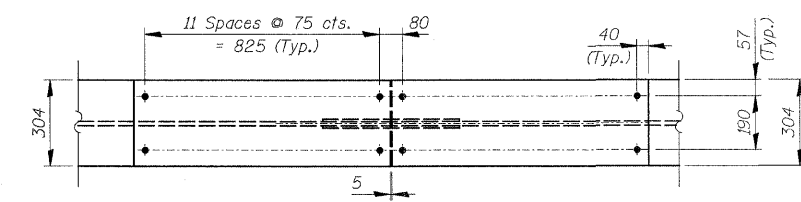
BEAM	A*	B*	C*	D*	E*	F*
D1	23.886	19.003	21.233	4.881	1.003	4.598
D2 thru D9	23.885	19.000	21.225	4.880	1.000	4.590
D10	23.885	19.003	21.233	4.880	1.003	4.598

* Measured along \bar{C} Beam

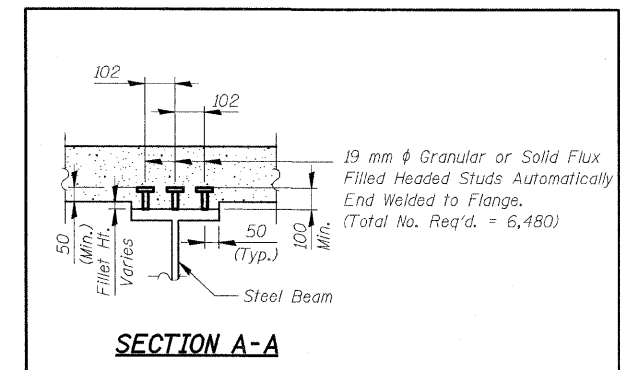
** Measured along Local Tangent at Sta. 4+873.086



TOP PLAN
(Bottom Splice is Identical)

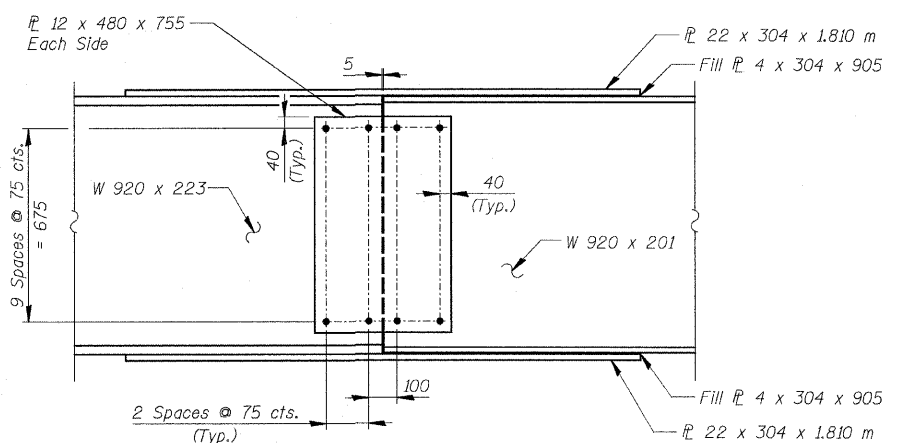


TOP PLAN
(Bottom Splice is Identical)

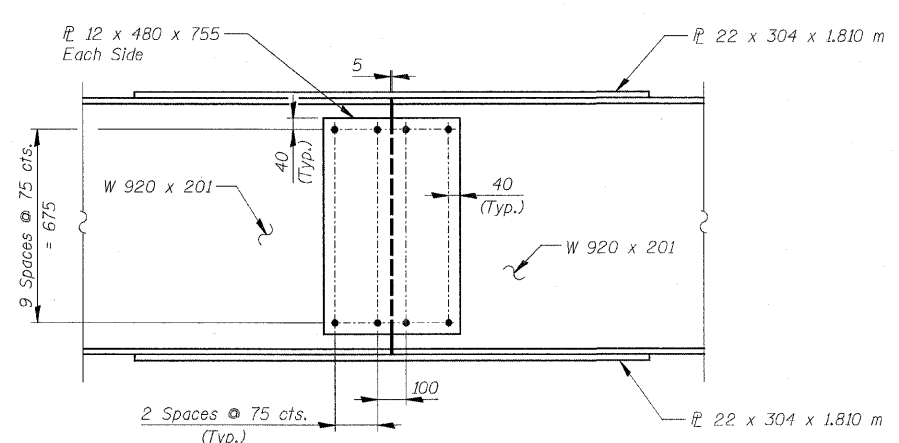


SECTION A-A

FOR INFORMATION ONLY



ELEVATION
FIELD SPLICE #10



ELEVATION
FIELD SPLICE #11

NOTES:

- For Top of Beam Elevations, Table of Moments and Reactions see Sheet SA35.
- All Wide Flange Beams and Splice Plate Material, except Fill Plates, shall be AASHTO M270 M Grade 345 and shall meet Notch Toughness Requirements.
- All dimensions are in millimeters (mm) except as noted.

REVISIONS	
NAME	DATE

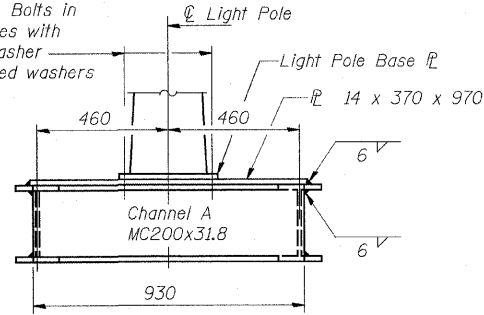
ILLINOIS DEPARTMENT OF TRANSPORTATION
BEAM DETAILS - UNIT IV
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: A. Yargoolgi

g:\nd07\9556_A0_Drawings\STRUCT\Fabrication_plans\38_FAB_beam_UnitIV.dgn
 J:\vermillion(Rowy-Lisle)\5/29/2009 3:09:32 PM

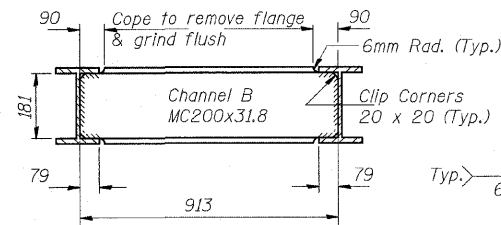


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.
3578	15 VB-1-F	COOK	62
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54			

** M24 H.S. Bolts in 30mm ϕ Holes with 1 beveled washer & 2 hardened washers per bolt.



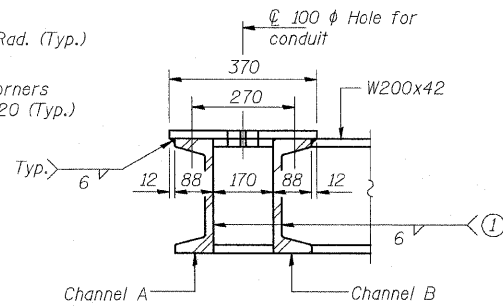
VIEW A-A



VIEW B-B

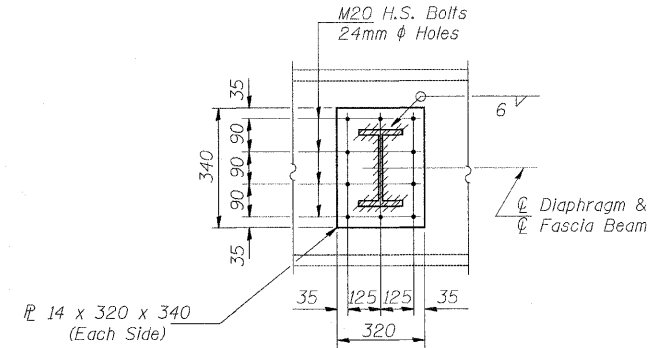
** If pole base has larger holes, provide bushings and plate washers to cover.

① Weld Channels A & B to web and inside faces of flange of diaphragms one side only.

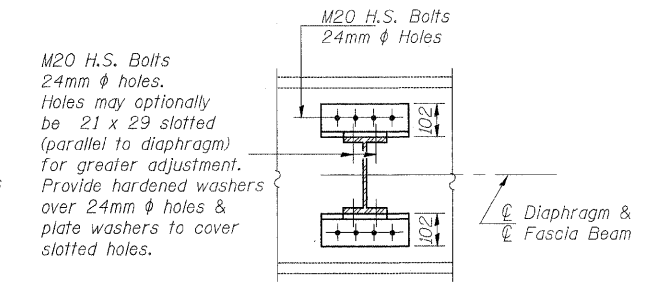


SECTION D-D

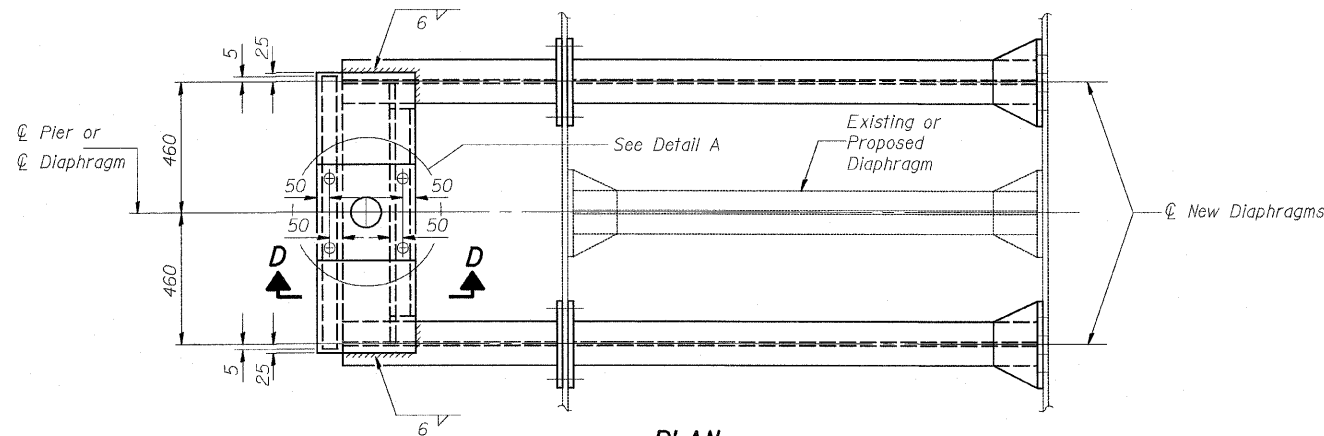
(Light Pole Base \bar{r} Omitted)



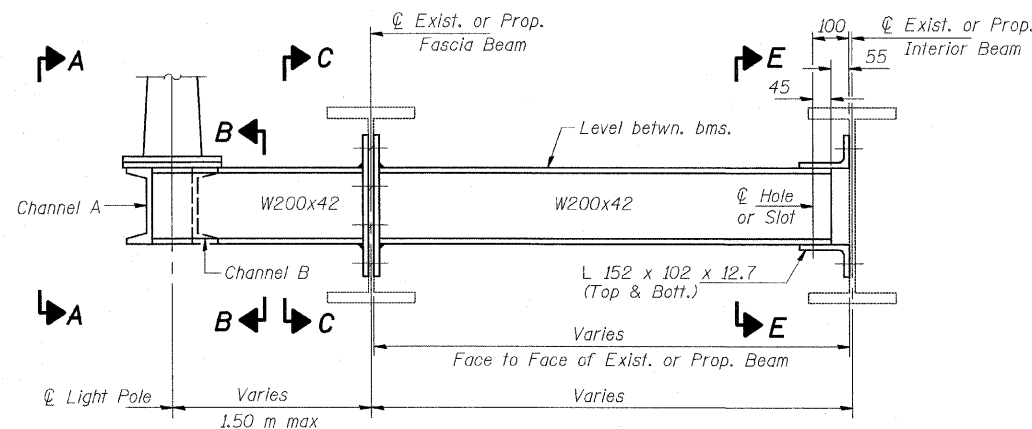
VIEW C-C



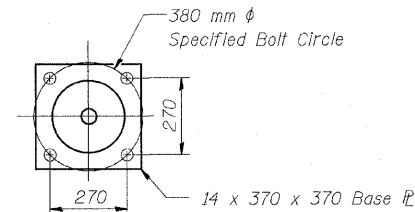
VIEW E-E



PLAN



ELEVATION



DETAIL A

NOTES

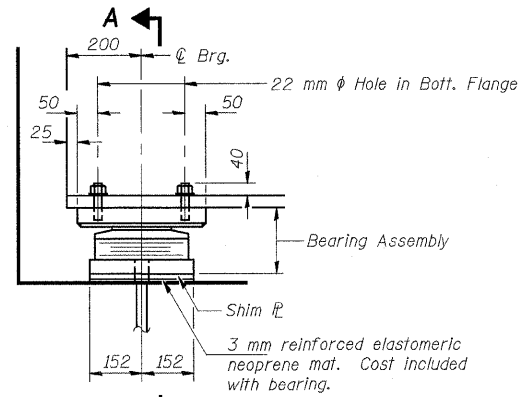
- All dimensions are in millimeters (mm) except as noted.
- For mounting to existing structures, burrs, shavings, loose paint and scale and other non adherent material in the contract areas shall be removed before field bolting.
- All new structural steel shall be hot dip galvanized per AASHTO M111 after fabrication. Bolts shall be hot dip galvanized per AASHTO M232.
- Cost of erecting lighting support is included with Erecting Structural Steel.
- Cost of furnishing lighting support is included with Furnishing Structural Steel.

NOT INCLUDED IN THIS CONTRACT

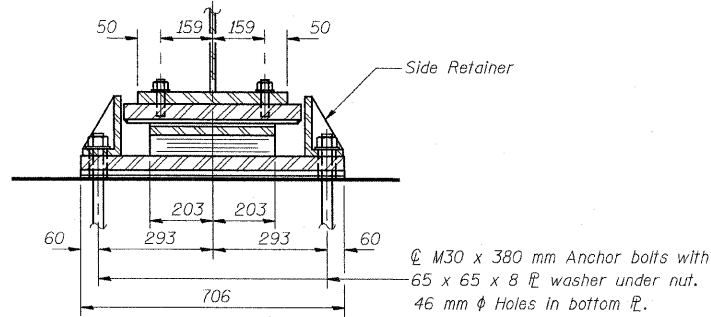
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION LIGHTING SUPPORT BRACKET DETAILS SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: E. Mroozek DATE: MAY 22, 2009 CHECKED BY: A. Yargiooglu
NAME	DATE	

q:\1dot\9556_a0\drawings\struct\fabrication\plans\39_FAB_Lighting_Support.dgn
 5/29/2009 10:05:50 PM
 jvermillion(rdwj_lisle)
 PATRICK ENGINEERING INC. Lisle, Illinois

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
3578	15 VB-1-F	COOK	62 40
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54			

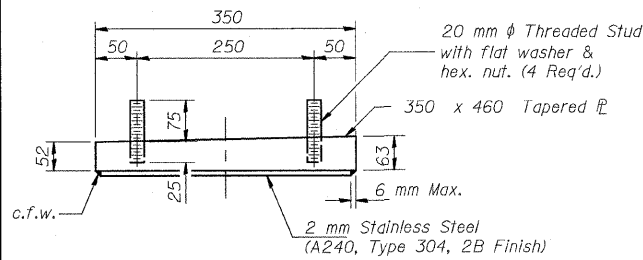


ELEVATION AT SOUTH ABUT.

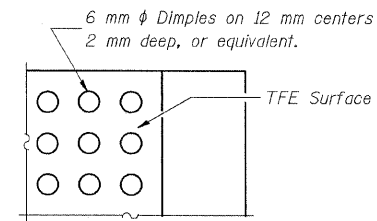


SECTION A-A

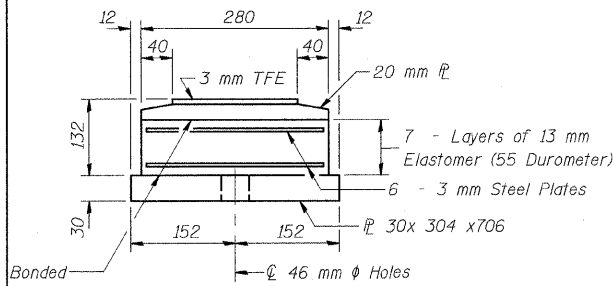
TYPE II ELASTOMERIC EXP. BRG.



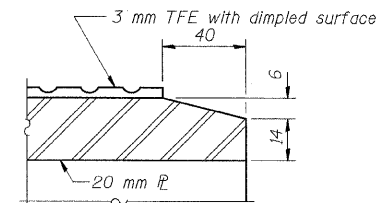
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



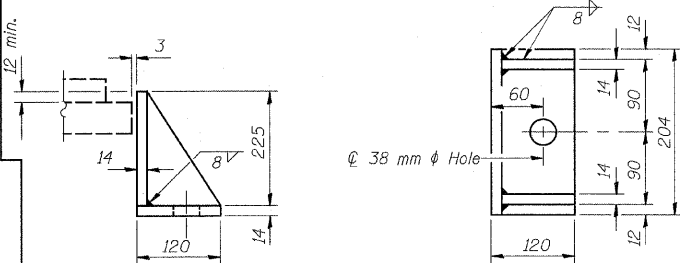
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

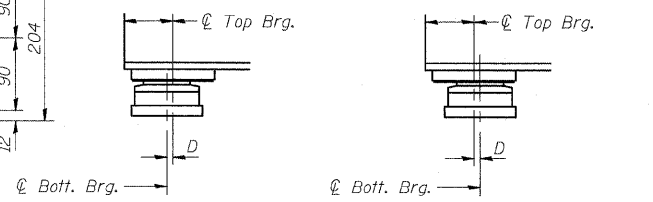
Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



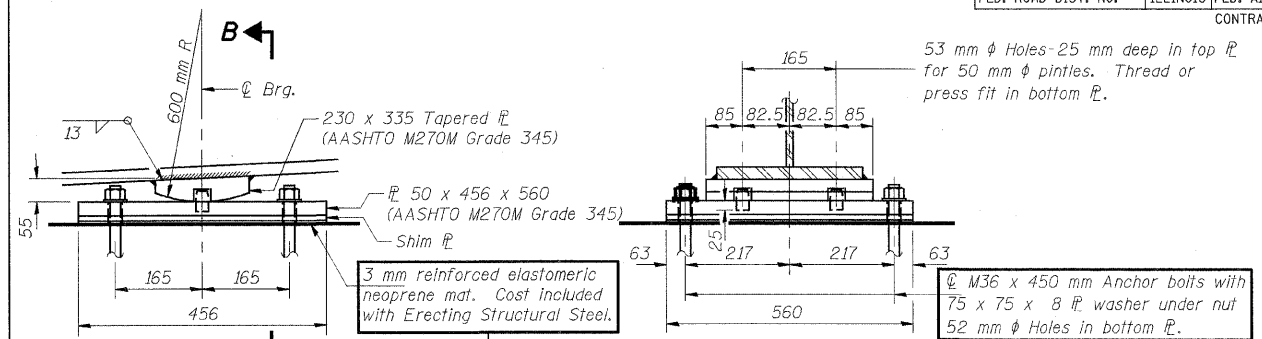
SIDE RETAINER

For S. Abutment
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

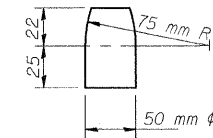


ELEVATION AT PIER 3

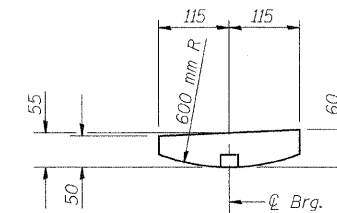
FIXED BEARING

SECTION B-B

NOT INCLUDED IN THIS CONTRACT



PINTLE
AASHTO M270M Grade 345



TOP PLATE DETAIL

FOR INFORMATION ONLY

NOTES

- Anchor bolts at fixed bearings may be built into the masonry.
- See sheets #SA46 & #SA53 for Anchor Bolt installation.
- All dimensions are in millimeters (mm) except as noted.
- Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

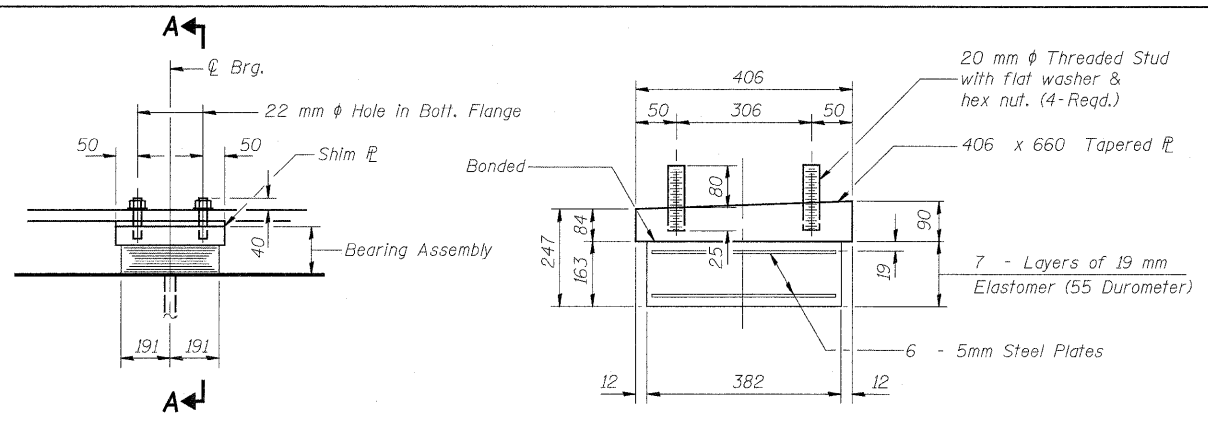
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	8
Anchor Bolts, M30	Each	16
Anchor Bolts, M36	Each	32

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BEARING DETAILS - UNIT I
SOUTH ABUTMENT & PIER 3
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: E. Mroozek
DATE: MAY 22, 2009 CHECKED BY: G. Hatlestad

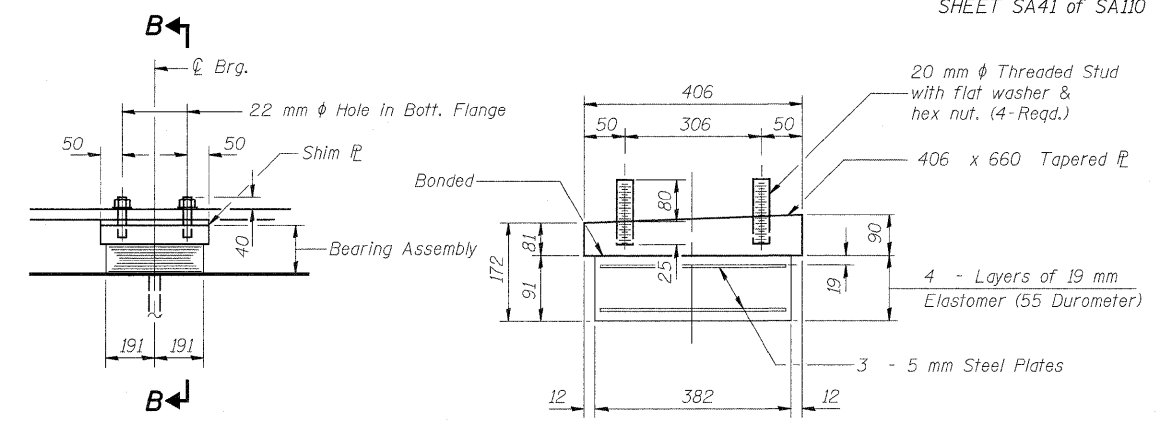
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	41
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



ELEVATION AT PIER 1

PIER 1 BEARING ASSEMBLY

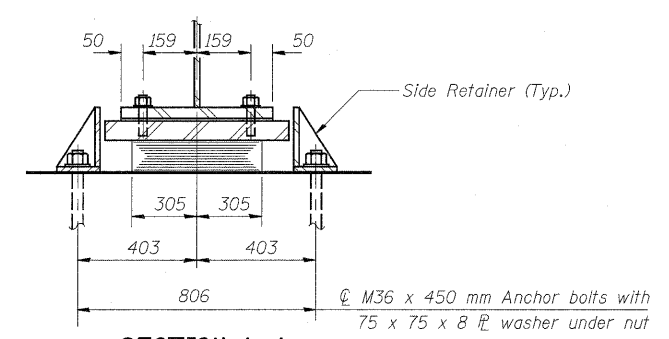
PIER 1 TYPE I ELASTOMERIC EXP. BRG.



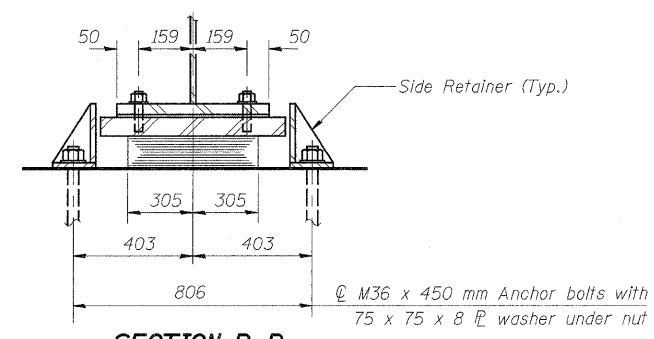
ELEVATION AT PIER 2

PIER 2 BEARING ASSEMBLY

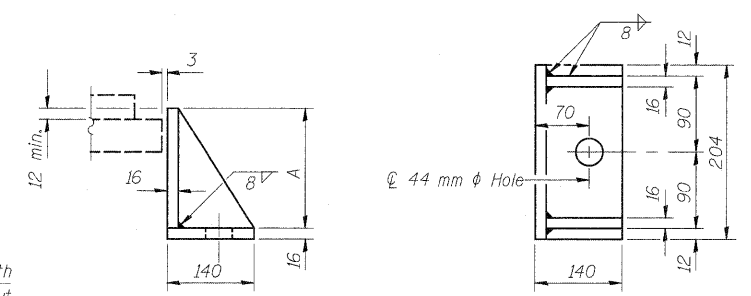
PIER 2 TYPE I ELASTOMERIC EXP. BRG.



SECTION A-A



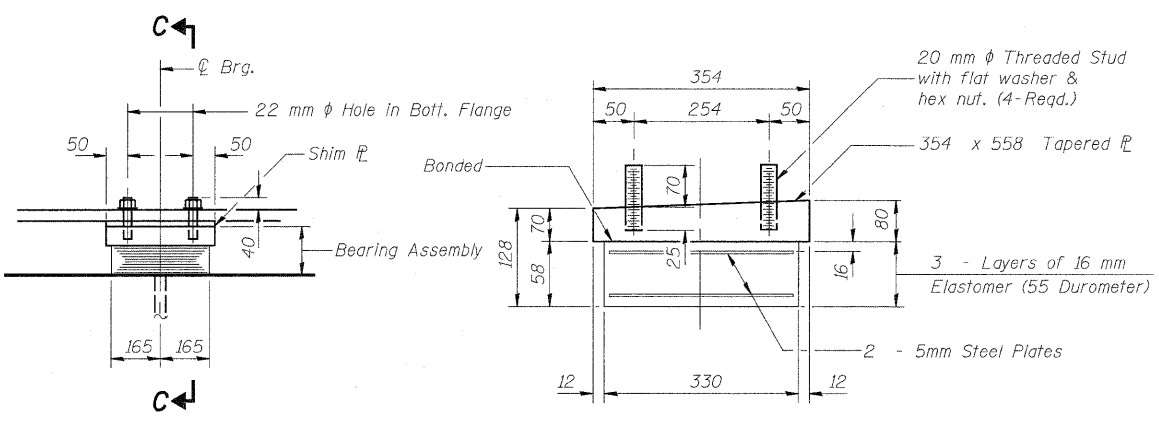
SECTION B-B



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

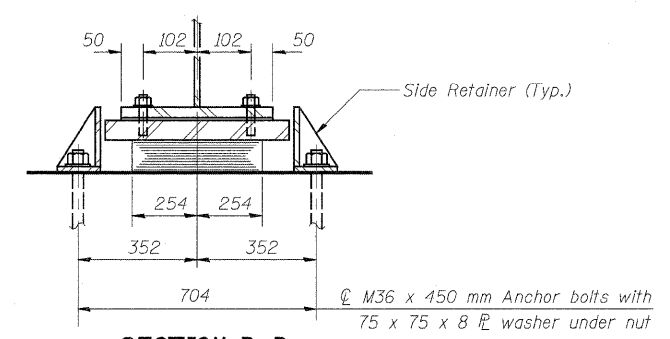
	PIER 1	PIER 2	PIER 4	PIER 5
A	249	177	134	208



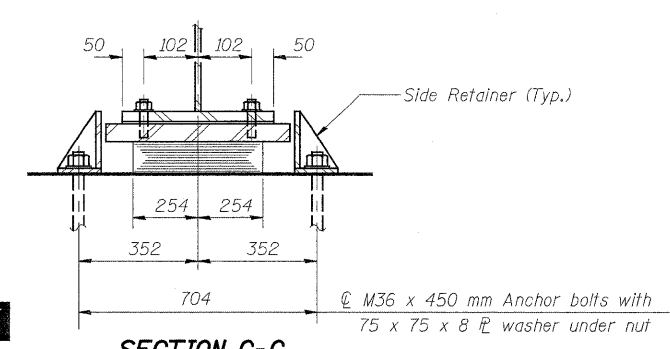
ELEVATION AT PIER 4

PIER 4 BEARING ASSEMBLY

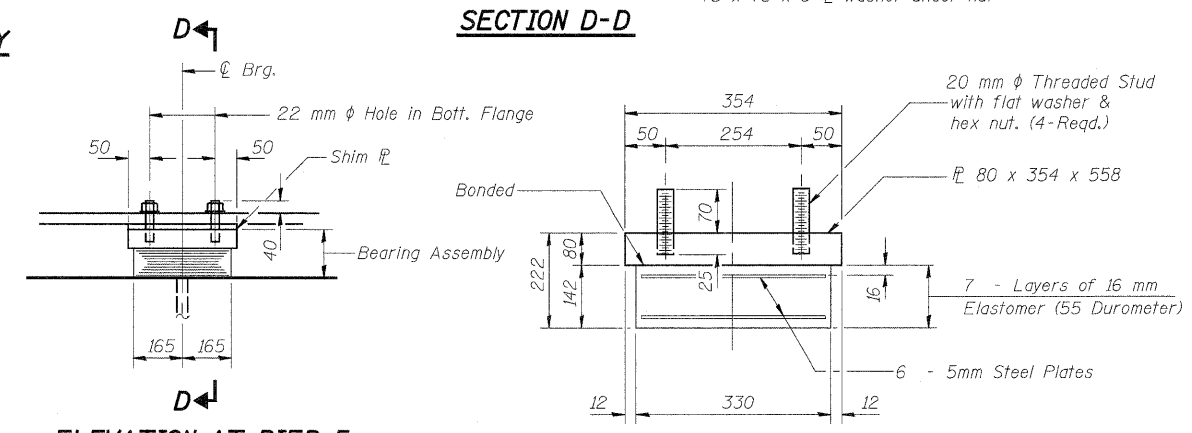
PIER 4 TYPE I ELASTOMERIC EXP. BRG.



SECTION D-D



SECTION C-C



ELEVATION AT PIER 5

PIER 5 BEARING ASSEMBLY

PIER 5 TYPE I ELASTOMERIC EXP. BRG.

NOTES

- See sheet #SA46 for Anchor Bolt installation.
- All dimensions are in millimeters (mm) except as noted
- Shim plates shall not be placed under bearing assembly
- Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

REVISIONS	
NAME	DATE

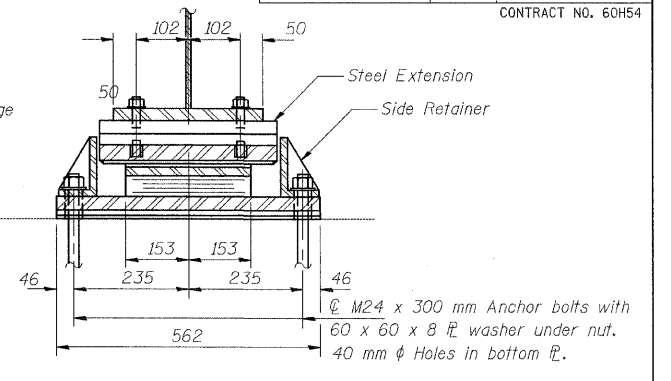
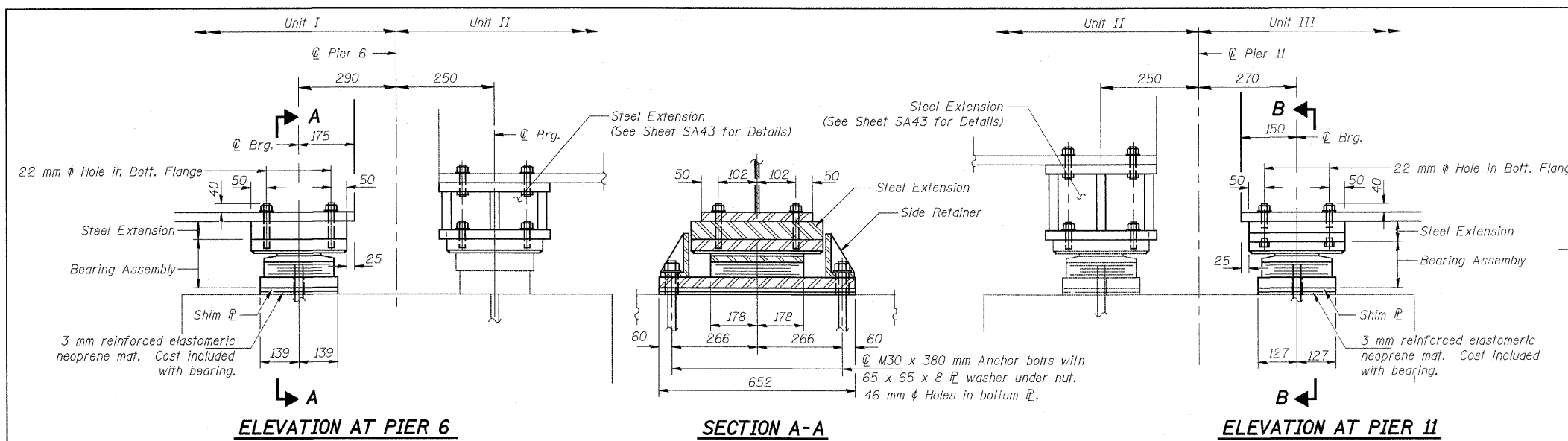
ILLINOIS DEPARTMENT OF TRANSPORTATION
 BEARING DETAILS - UNIT I
 PIERS 1, 2, 4 & 5
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hoffstad

t:\koeppen\rdwy_l\isile\5/22/2009 4:33:41 PM
 g:\idot\9556_c0\drawings\struct\fabr\location_plans\41\FAB_brgs_Pier_L2_4_5.dgn



FOR INFORMATION ONLY

F.A.L. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	42
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



ELEVATION AT PIER 6

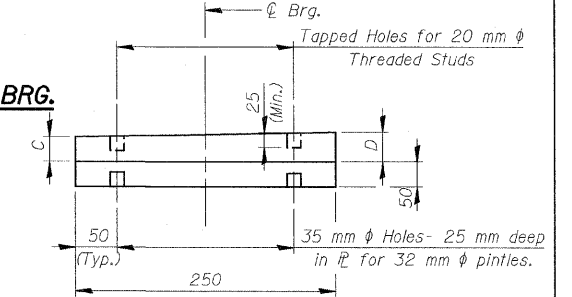
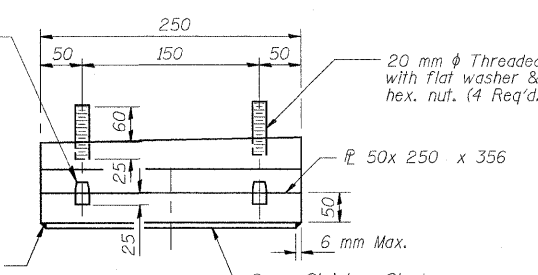
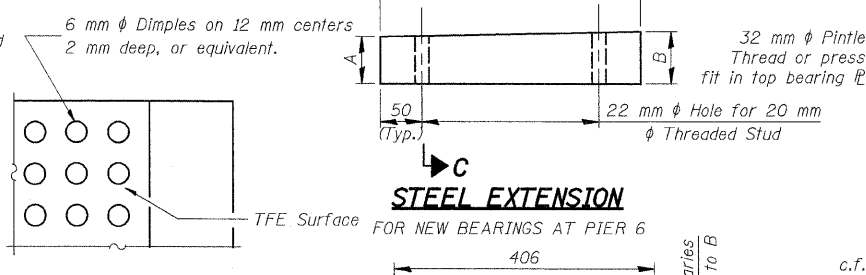
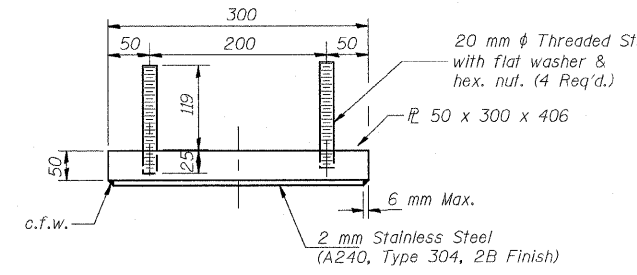
SECTION A-A

ELEVATION AT PIER 11

SECTION B-B

TYPE II ELASTOMERIC EXP. BRG.

TYPE II ELASTOMERIC EXP. BRG.



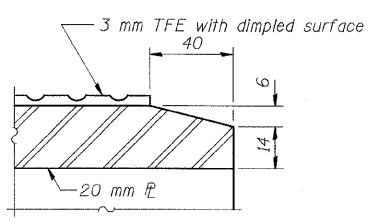
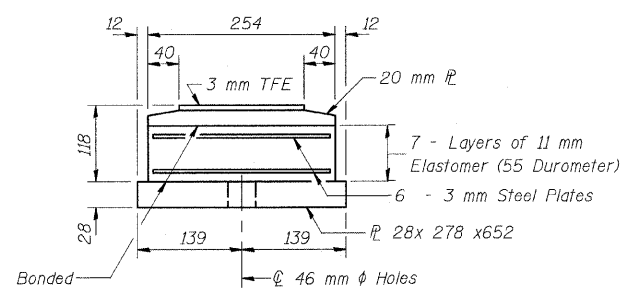
TOP BEARING ASSEMBLY

PLAN-TFE SURFACE

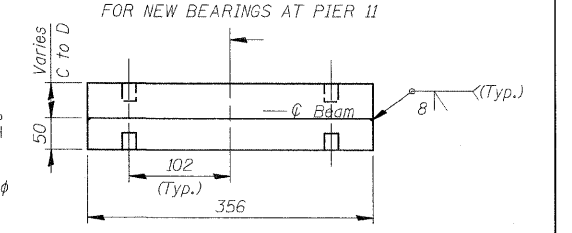
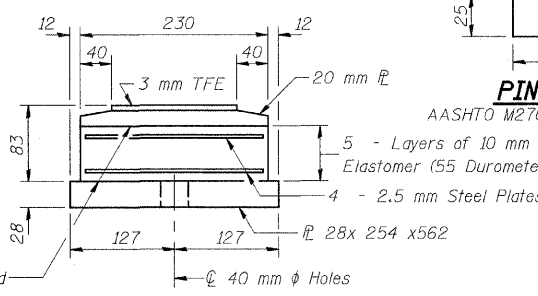
STEEL EXTENSION

TOP BEARING ASSEMBLY

ELEVATION STEEL EXTENSION



SECTION C-C
STEEL EXTENSION DIMENSIONS



BOTTOM BEARING ASSEMBLY

SECTION THRU TFE

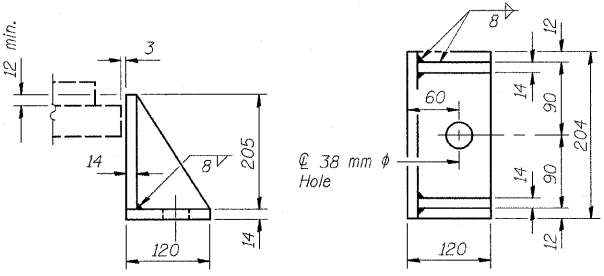
Bearing Location	Pier 6		Pier 11	
	A	B	C	D
Beam 1	39	49	33	43
Beam 2	43	53	53	63
Beam 3	45	55	34	44
Beam 4	40	50	34	44
Beam 5	32	42	34	44
Beam 6	30	40	33	43
Beam 7	24	34	33	43
Beam 8	39	49	33	43
Beam 9	-	-	55	65
Beam 10	-	-	30	40

PINTLE
AASHTO M270M Grade 345

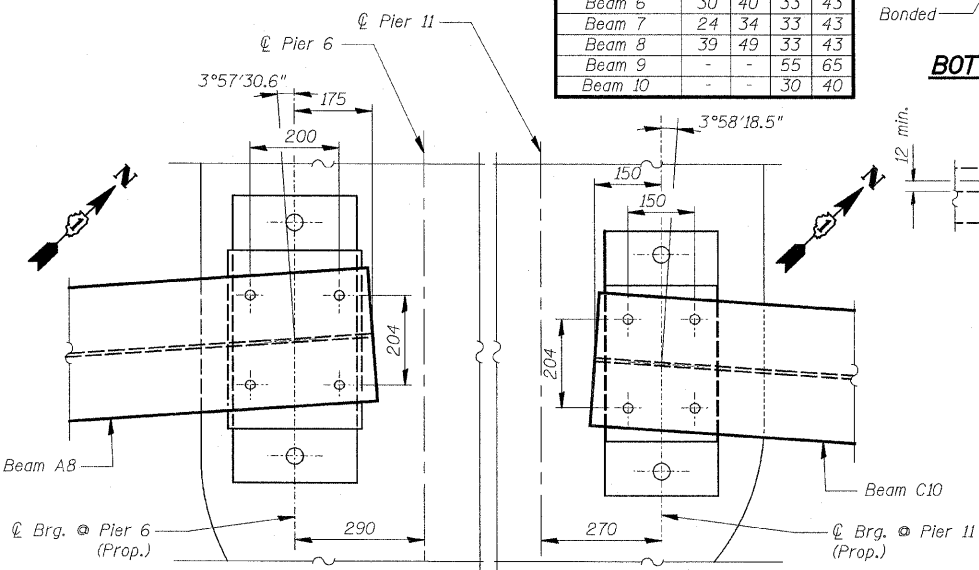
BOTTOM BEARING ASSEMBLY

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	18
Anchor Bolts, M24	Each	20
Anchor Bolts, M30	Each	16

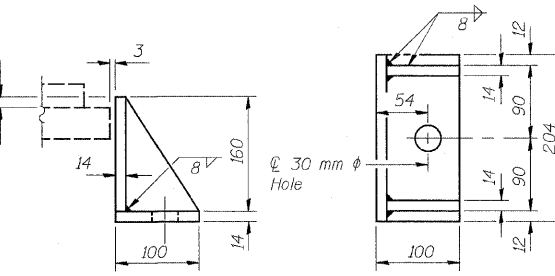


SIDE RETAINER
FOR NEW BEARINGS AT PIER 6
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BEAM AB AT PIER 6

BEAM C10 AT PIER 11



SIDE RETAINER
FOR NEW BEARINGS AT PIER 11
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

NOTES

- Prior to ordering any material, the Contractor shall verify existing bridge seat elevations, all bearing height, and proposed bottom of beam elevations prior to fabrication of Steel Extensions.
- Cost of steel extensions is included with Furnishing Structural Steel.
- See Sheet SA40 for Setting Anchor Bolts at Expansion Bearing.
- See Sheet SA46 for Anchor Bolt Installation.

REVISIONS	
NAME	DATE

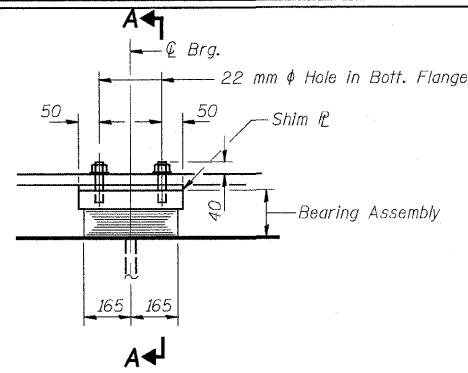
ILLINOIS DEPARTMENT OF TRANSPORTATION
BEARING DETAILS
PIERS 6 & 11
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: M. Tryon
DATE: MAY 22, 2009 CHECKED BY: G. Haffstedt

FOR INFORMATION ONLY

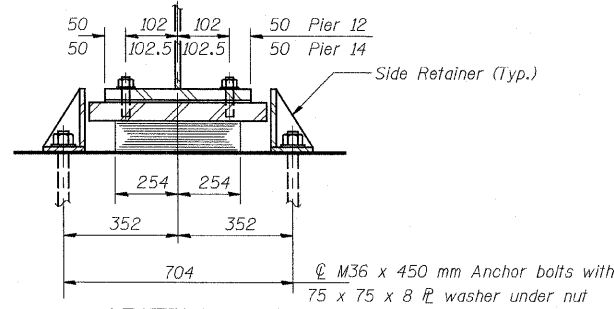
5/29/2009 10:02:02 AM J:\vermillion\rdwy\Lislie\103902.PM
 q:\icot\9556_a0\drawings\struc\fabr\location\plans\42_fab_brgs_pier_6_ii.dgn



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	44
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				

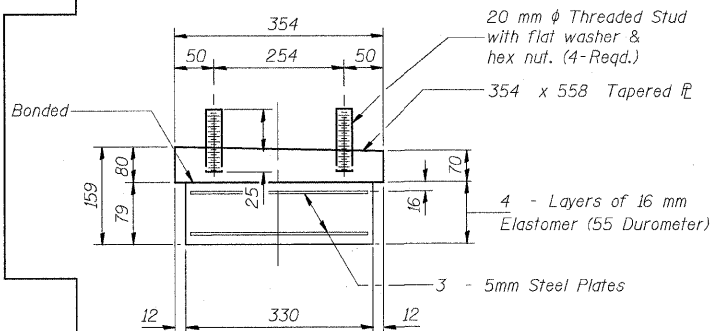


ELEVATION AT PIERS 12 & 14



SECTION A-A

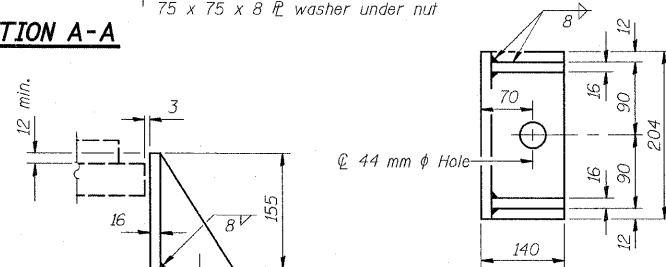
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

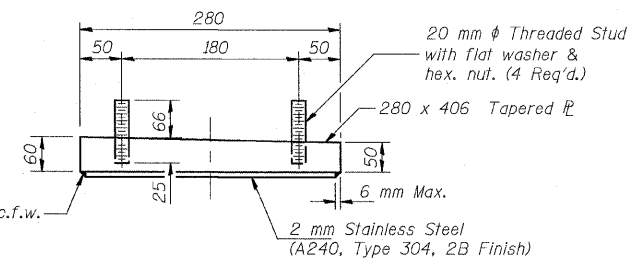
FOR PIERS 12 & 14

Note: Shim plates shall not be placed under Bearing Assembly.



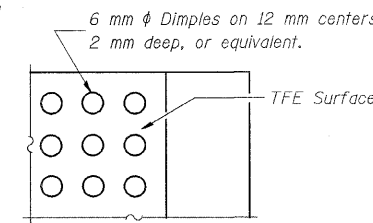
SIDE RETAINER

FOR PIERS 12 & 14
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

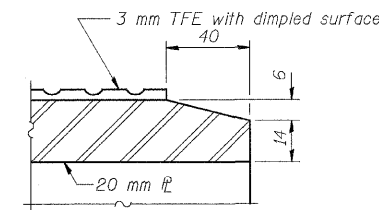


TOP BEARING ASSEMBLY

FOR PIER 15 (UNIT III)

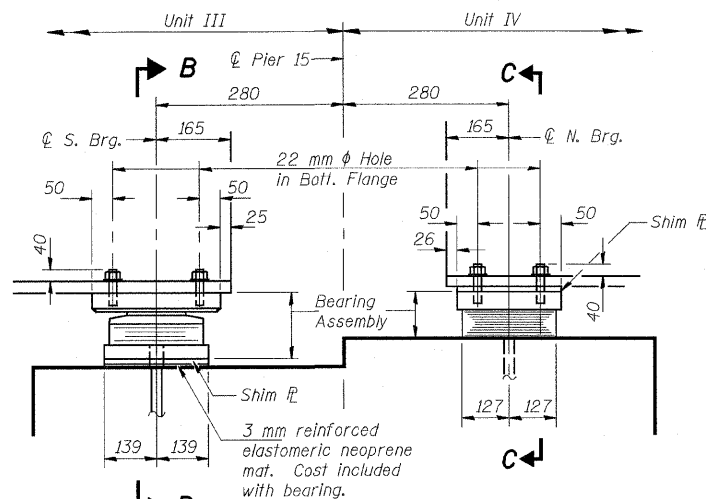


PLAN-TFE SURFACE

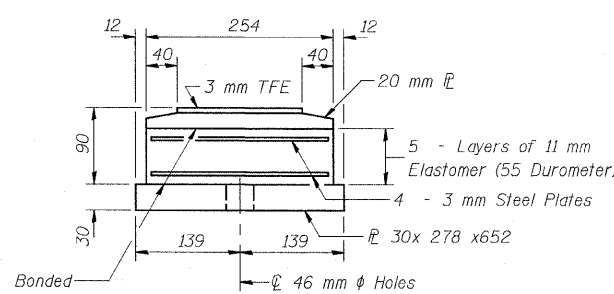


SECTION THRU TFE

FOR PIER 15 (UNIT III)

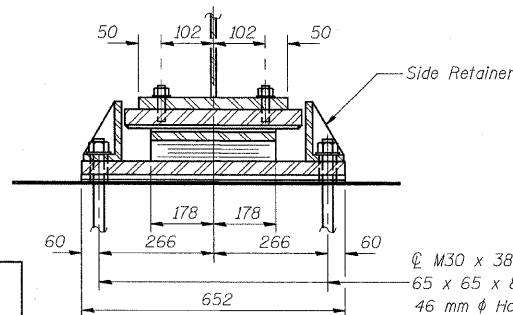


ELEVATION AT PIER 15
TYPE II ELASTOMERIC EXP. BRG.

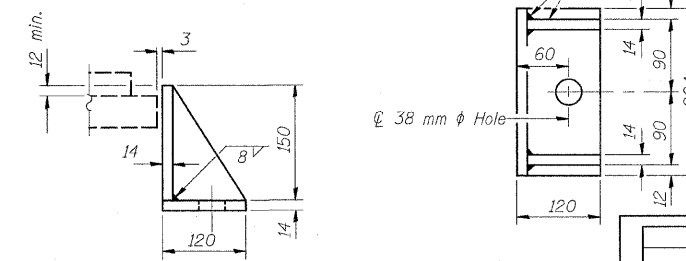


BOTTOM BEARING ASSEMBLY

FOR PIER 15 (UNIT III)

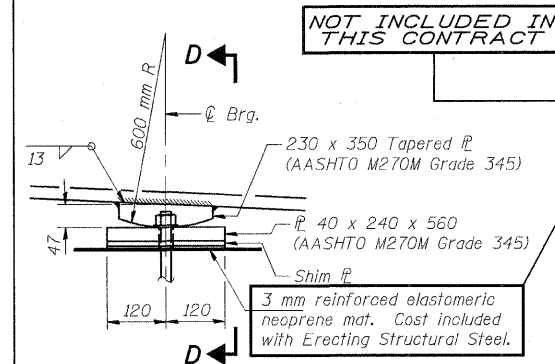


SECTION B-B



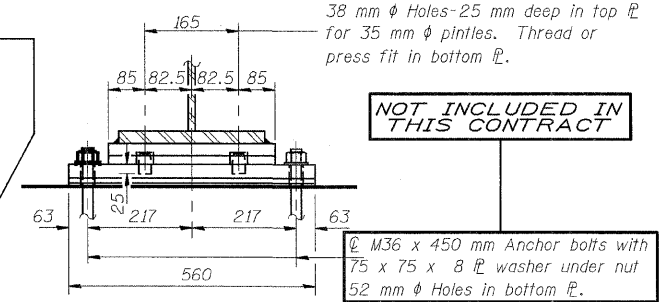
SIDE RETAINER

FOR PIER 15 (UNIT III)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION AT PIER 13

FIXED BEARING



SECTION D-D

PINTLE
AASHTO M270M Grade 345

TOP PLATE DETAIL

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	20
Elastomeric Bearing Assembly Type II	Each	10
Anchor Bolts, M30	Each	20
Anchor Bolts, M36	Each	60

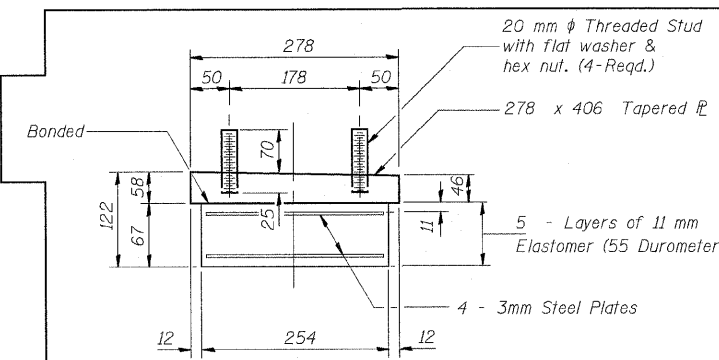
NOTES

- Anchor bolts at fixed bearings may be built into the masonry.
- See sheet SA46 for Anchor Bolt installation.
- See sheet SA40 for Setting Anchor Bolts at Expansion Bearing.
- See Sheet SA45 for Section C-C and details of North Bearing (Type I) at Pier 15
- See Sheet SA42 for Pier 11 bearing details.
- All dimensions are in millimeters (mm) except as noted.
- Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I or II.

REVISIONS	
NAME	DATE

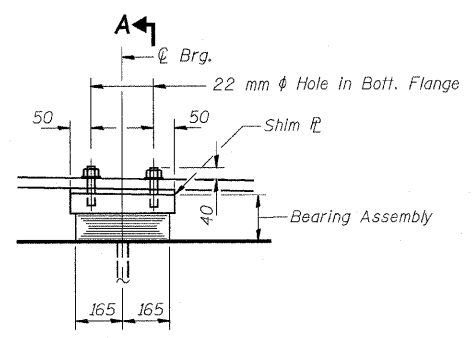
ILLINOIS DEPARTMENT OF TRANSPORTATION
BEARING DETAILS - UNIT III
PIERS 12, 13, 14 & 15
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: E. Mroozek
DATE: MAY 22, 2009 CHECKED BY: G. Hottelstad

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	45
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT NO. 60H54		

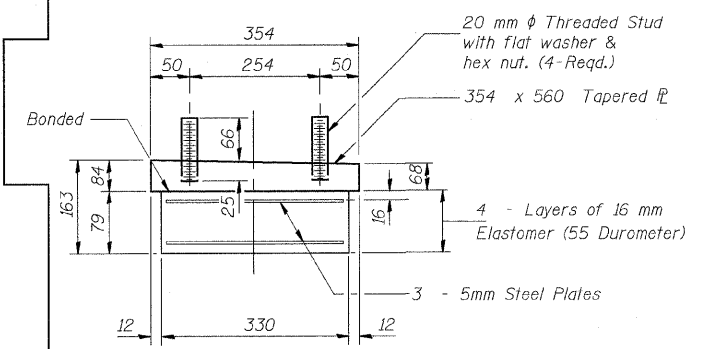


BEARING ASSEMBLY AT PIER 15
(UNIT IV)

Notes: Shim plates shall not be placed under Bearing Assembly.
See Sheet SA44 for Elevation at Pier 15.



ELEVATION AT PIER 17
TYPE I ELASTOMERIC EXP. BRG.

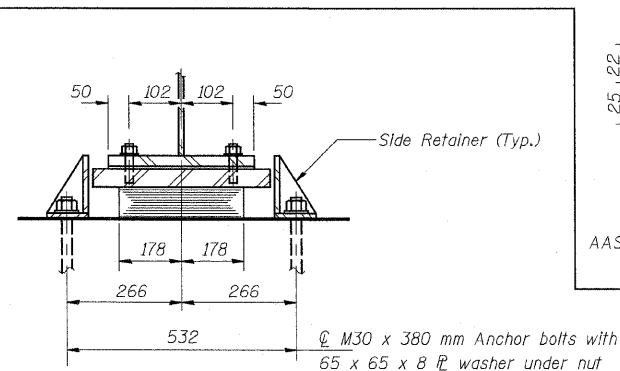


BEARING ASSEMBLY

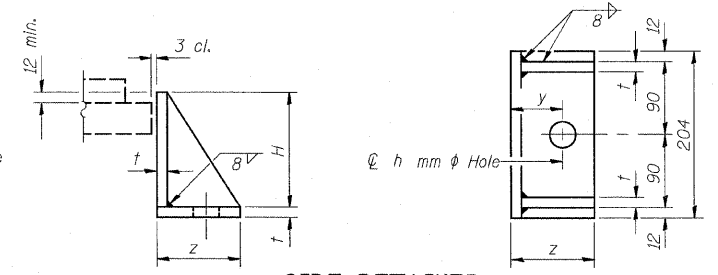
Note: Shim plates shall not be placed under Bearing Assembly.

Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



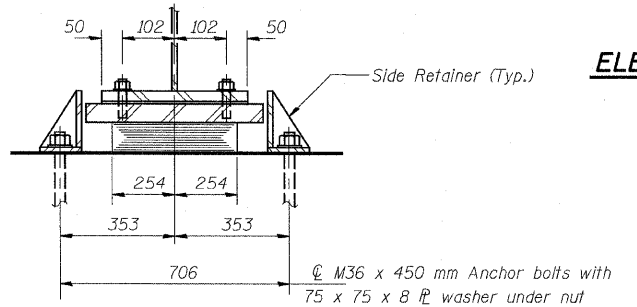
SECTION C-C
PIER 15 (UNIT IV)



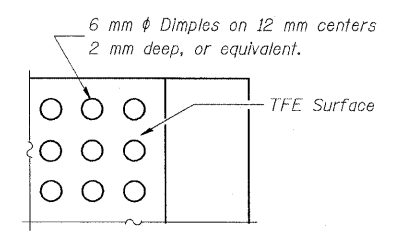
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

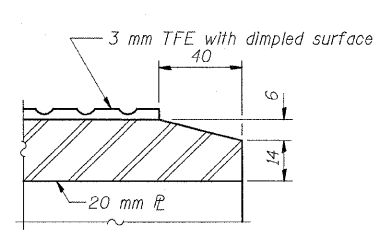
	PIER 15	PIER 17	N.ABUT.
y	60	70	54
z	120	140	100
t	14	16	14
h	38	44	30
H	125	155	140



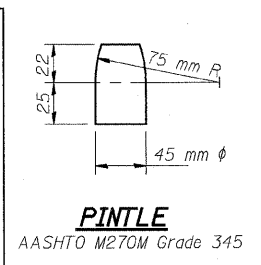
SECTION A-A



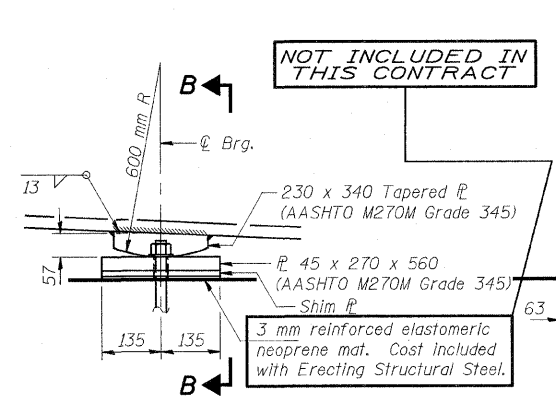
PLAN-TFE SURFACE



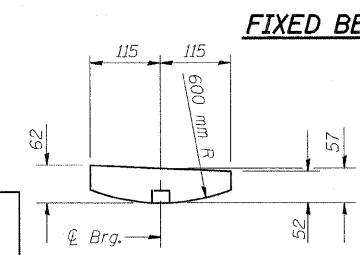
SECTION THRU TFE



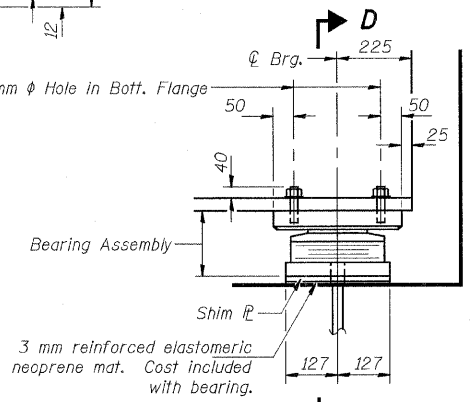
PINTLE
AASHTO M270M Grade 345



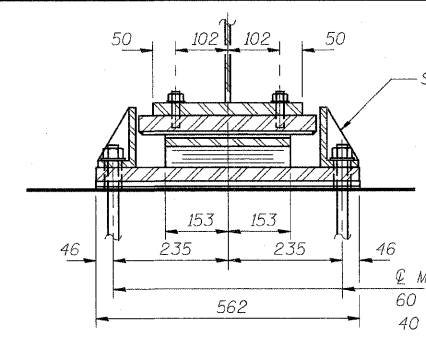
ELEVATION AT PIER 16
FIXED BEARING



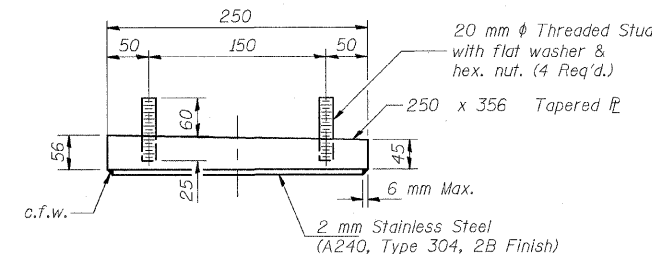
TOP PLATE DETAIL



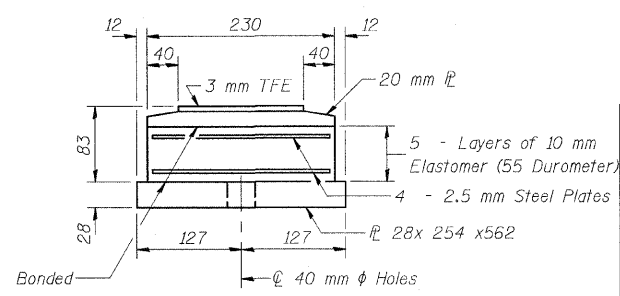
ELEVATION AT NORTH ABUT.
TYPE II ELASTOMERIC EXP. BRG.



SECTION D-D



TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY

BILL OF MATERIAL		
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	20
Elastomeric Bearing Assembly Type II	Each	10
Anchor Bolts, M24	Each	20
Anchor Bolts, M30	Each	20
Anchor Bolts, M36	Each	40

FOR INFORMATION ONLY

NOTES

- Anchor bolts at fixed bearings may be built into the masonry.
- See sheet SA46 for Anchor Bolt installation.
- See sheet SA40 for Setting Anchor Bolts at Expansion Bearing.
- All dimensions are in millimeters (mm) except as noted.
- Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I or II.

REVISIONS	
NAME	DATE

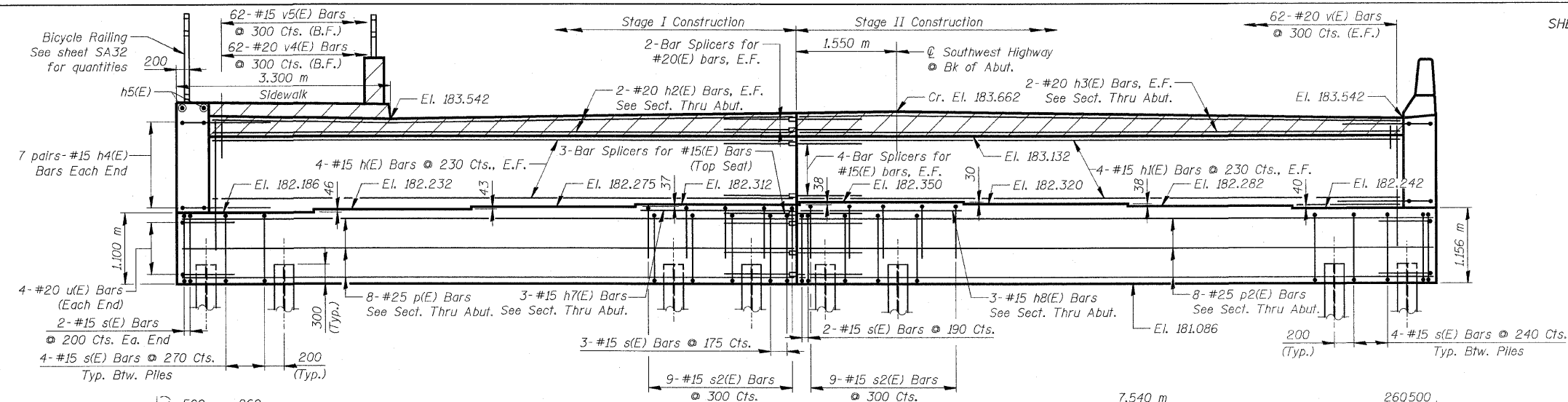
ILLINOIS DEPARTMENT OF TRANSPORTATION
BEARING DETAILS - UNIT IV
PIERS 15, 16, 17 AND NORTH ABUTMENT
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: E. Mroozek
DATE: MAY 22, 2009 CHECKED BY: A. Yargloogu

j:\vermillion(Rdwy_Ltise)_id9818 PM 5/22/2009
 c:\idot\9556_ad\drawings\struct\Fabrication\plans\45_FAB_brgs Unit IV.dgn

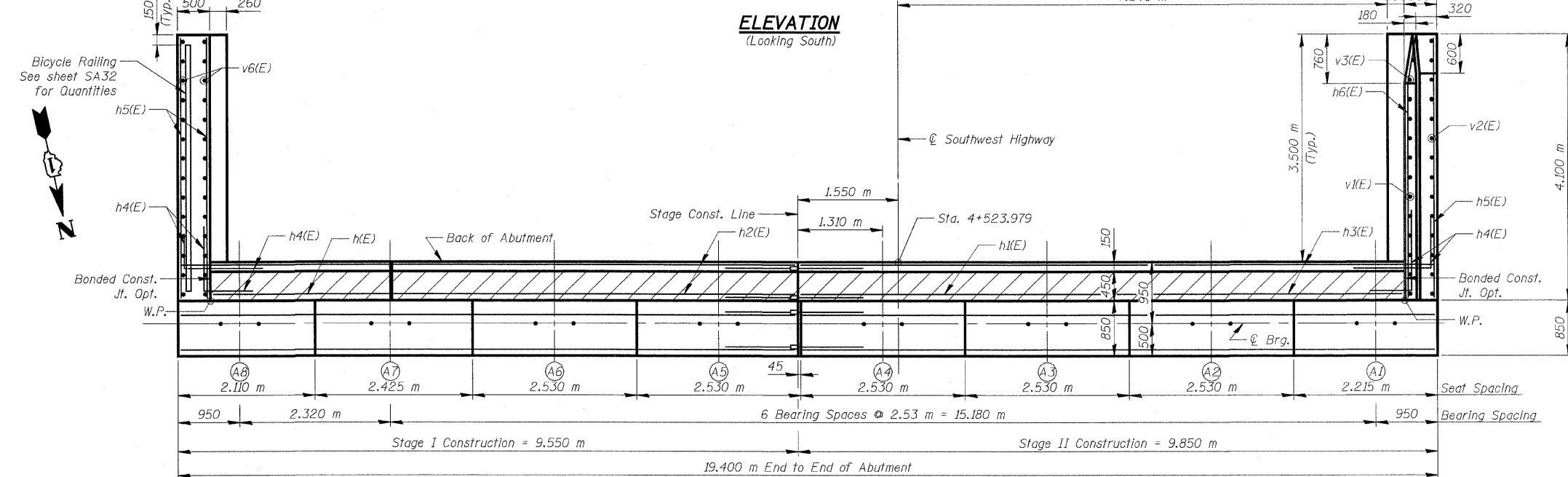
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	46
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 60H54

NOTES

- Reinforcement bars designated (E) shall be Epoxy Coated.
 - Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
 - All dimensions are in millimeters (mm) except as noted.
- ☐ - Indicates concrete placed after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



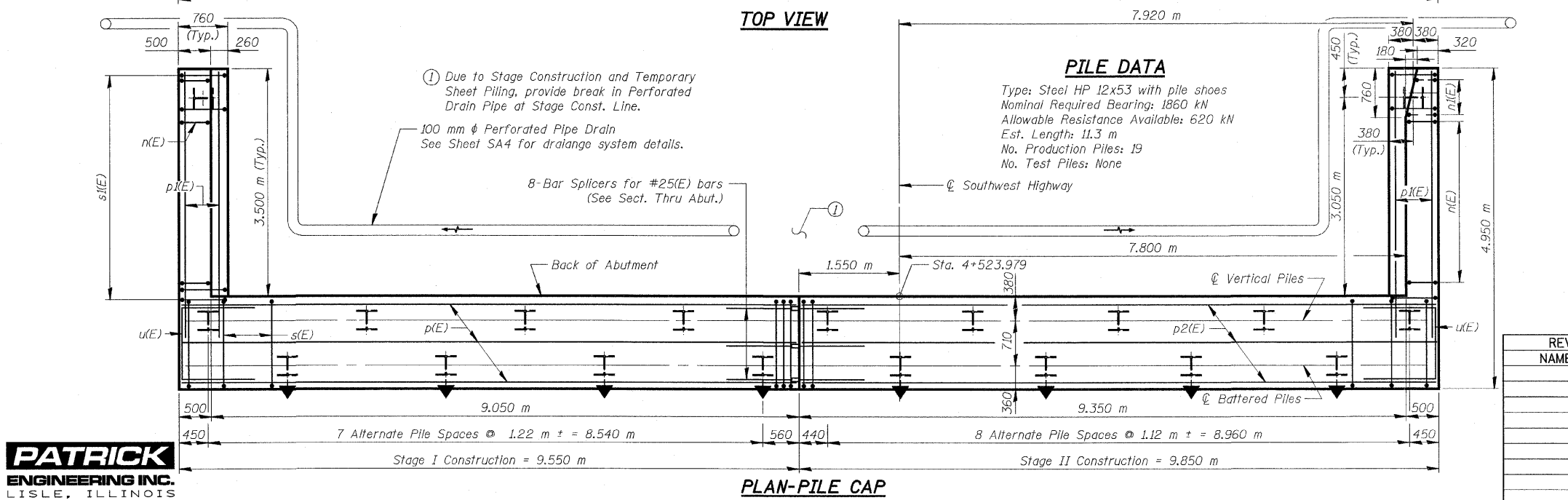
ELEVATION
(Looking South)



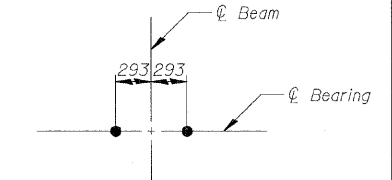
TOP VIEW

PILE DATA

Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 11.3 m
 No. Production Piles: 19
 No. Test Piles: None



PLAN-PILE CAP



ANCHOR BOLT DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h(E)	8	#15	8.95	—
h1(E)	8	#15	9.25	—
h2(E)	4	#20	8.95	—
h3(E)	4	#20	9.25	—
h4(E)	28	#15	1.50	—
h5(E)	28	#15	4.00	—
h6(E)	8	#15	4.03	—
h7(E)	3	#15	2.39	—
h8(E)	3	#15	2.48	—
n(E)	27	#20	3.20	—
n1(E)	6	#20	1.60	—
p(E)	8	#25	9.45	—
p1(E)	12	#25	4.00	—
p2(E)	8	#25	9.75	—
s(E)	69	#15	4.98	□
s1(E)	30	#15	2.92	□
s2(E)	18	#15	2.71	□
u(E)	8	#20	2.88	—
v(E)	124	#20	1.70	—
v1(E)	12	#20	1.98	—
v2(E)	15	#20	1.91	—
v3(E)	3	#20	1.67	—
v4(E)	62	#20	0.99	—
v5(E)	62	#15	0.81	—
v6(E)	30	#20	1.37	—

ITEM	UNIT	TOTAL
Porous Granular Embankment (Special)	m ³	81
Structure Excavation	m ³	200
Concrete Structures	m ³	55.5
Concrete Superstructure	m ³	5.4
Protective Coat	m ²	8
Reinforcement Bars, Epoxy Coated	kg	3,490
Concrete Sealer	m ²	17
Furnishing Steel Piles HP310x79	m	214.7
Driving Piles	m	214.7
Bar Splicers	Each	85
Pile Shoes	Each	19

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT

SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK

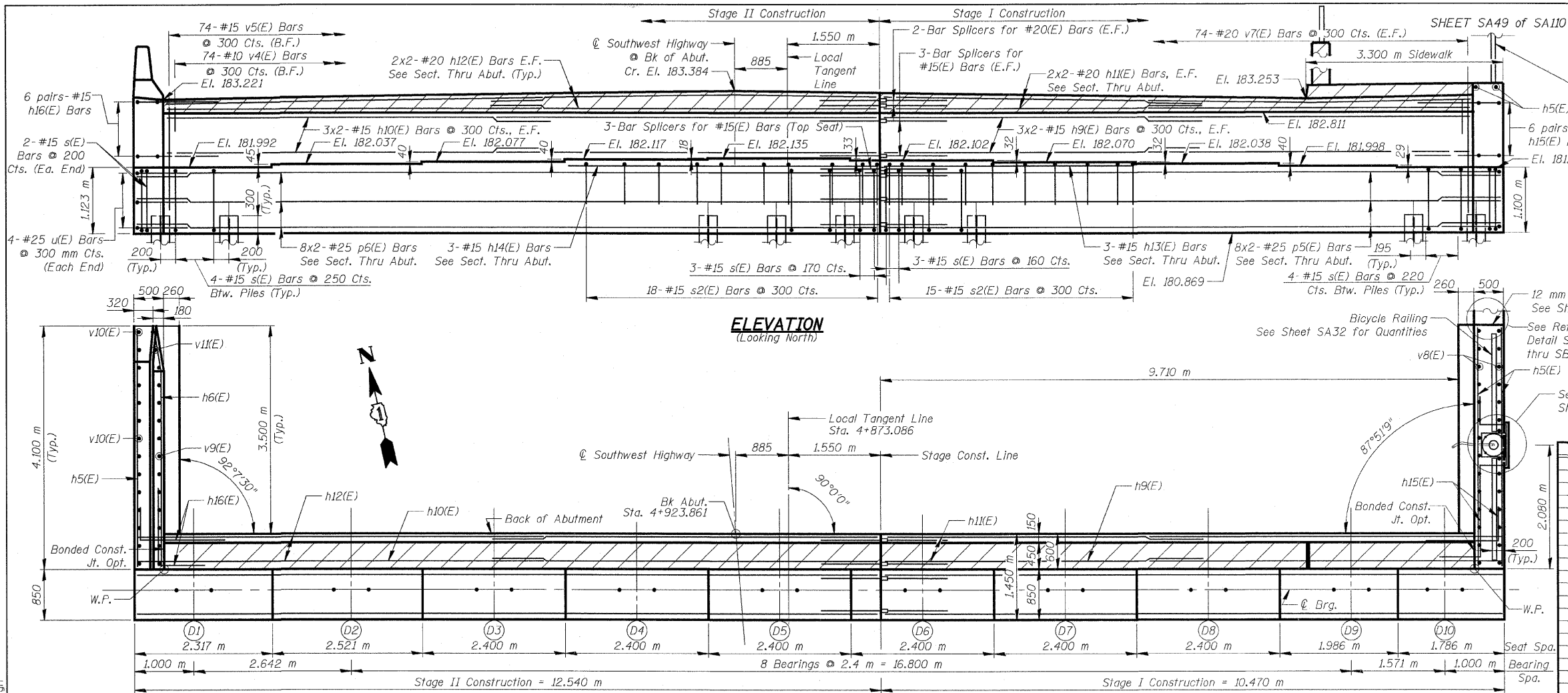
FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2171
 COOK COUNTY STATION 4+716.497

SCALE: NONE DRAWN BY: M. Tryon
 DATE: MAY 22, 2009 CHECKED BY: A. Yargioğlu

FOR INFORMATION ONLY

I:\vermillion\rdwy_lisle\10523 PM\qa\ldot\9556_a0\drawings\struc\fabr\location-plans\47_FAB_S_Abut.dgn
 5/29/2009
PATRICK ENGINEERING INC.
 LISLE, ILLINOIS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	48
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 60H54		



Bicycle Railing See sheet SA32 for Quantities

6 pairs-#15 h15(E) bars El. 181.969

h5(E)

12 mm Exp. Jt. See Sheet SB2

See Retaining Wall Detail Sheets SB1 thru SB2

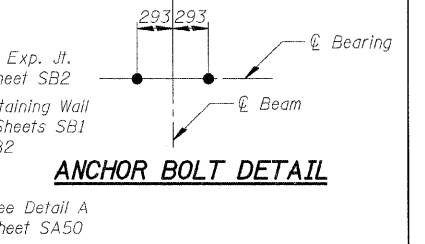
h5(E)

See Detail A Sheet SA50

293 293

⊕ Bearing

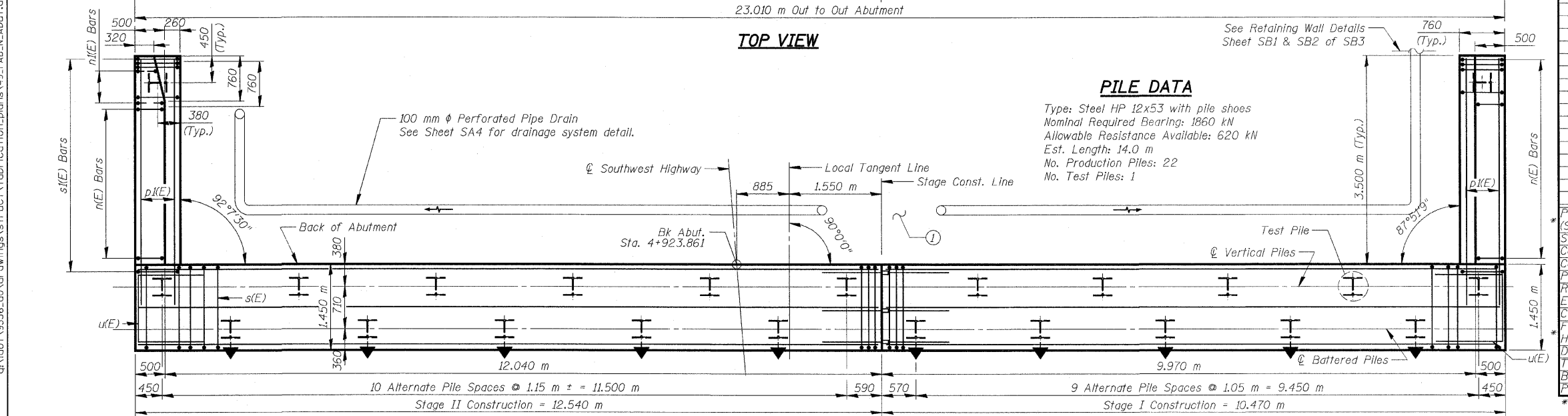
⊕ Beam



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
d10(E)	3	#20	1.22	
d11(E)	5	#20	2.68	
h5(E)	25	#15	4.00	
h6(E)	7	#15	4.03	
h9(E)	12	#15	5.29	
h10(E)	12	#15	6.33	
h11(E)	8	#20	5.38	
h12(E)	8	#20	6.42	
h13(E)	3	#15	4.20	
h14(E)	3	#15	5.20	
h15(E)	12	#15	1.50	
h16(E)	12	#15	1.50	
n(E)	27	#20	3.20	
n1(E)	6	#20	1.60	
p1(E)	12	#25	4.00	
p5(E)	8	#25	10.37	
p6(E)	8	#25	12.44	
s(E)	86	#15	4.98	
s1(E)	30	#15	2.92	
s2(E)	33	#15	2.71	
u(E)	8	#20	2.88	
v4(E)	74	#10	0.99	
v5(E)	74	#15	0.81	
v7(E)	148	#20	1.59	
v8(E)	30	#20	1.30	
v9(E)	15	#20	1.91	
v10(E)	12	#20	1.84	
v11(E)	3	#20	1.6	
ITEM	UNIT	TOTAL		
Porous Granular Embankment (Special)	m ³	90		
Structure Excavation	m ³	232		
Concrete Structures	m ³	61.5		
Concrete Superstructure	m ³	6.4		
Protective Coat	m ²	8		
Reinforcement Bars, Epoxy Coated	kg	4,000		
Concrete Sealer	m ²	20		
Furnishing Steel Piles HP310x79	m	308		
Driving Piles	m	308		
Test Pile Steel HP310x79	Each	1		
Bar Splacers	Each	95		
Pile Shoes	Each	23		

* See Special Provisions



PILE DATA

Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 14.0 m
 No. Production Piles: 22
 No. Test Piles: 1



- NOTES**
1. Reinforcement bars designated (E) shall be Epoxy Coated.
 2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
 3. All dimensions are in millimeters (mm) except as noted.

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT

SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK

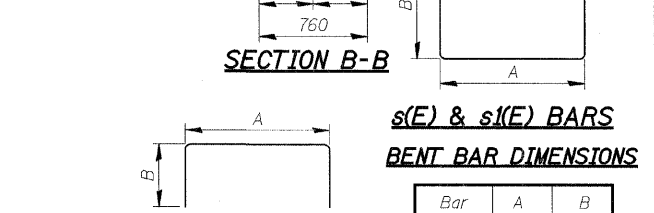
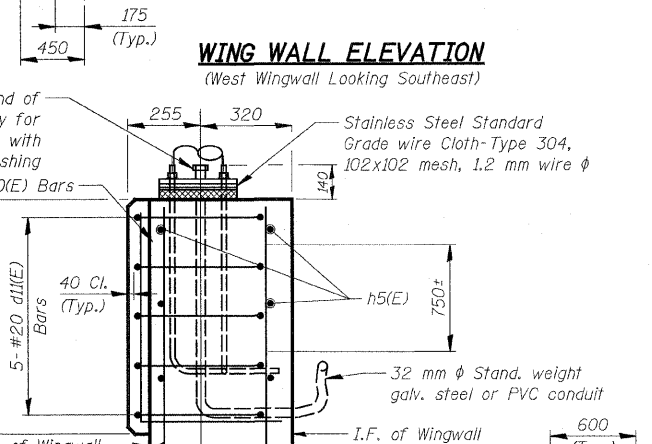
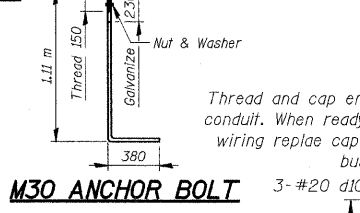
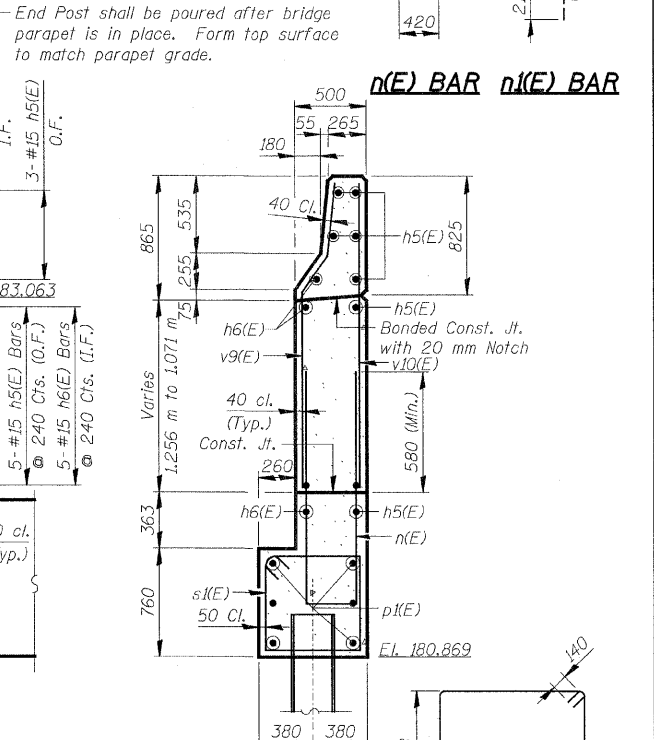
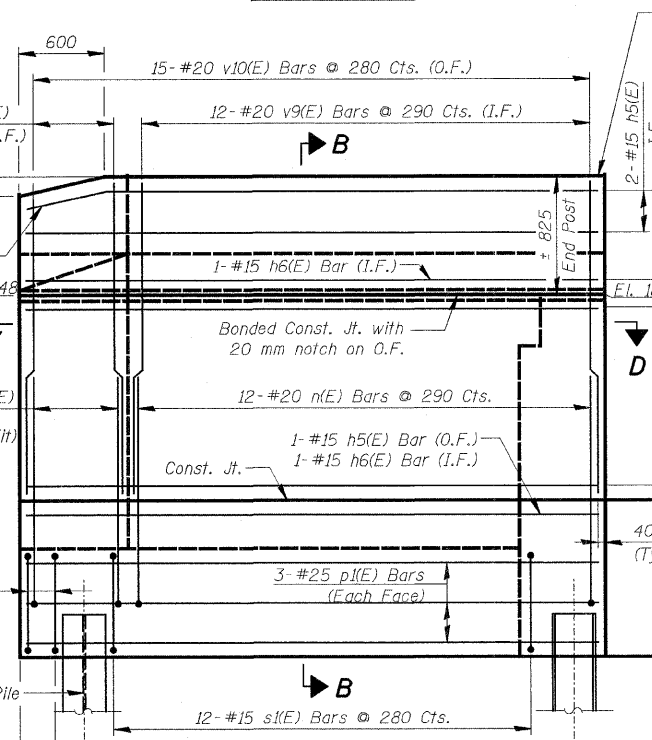
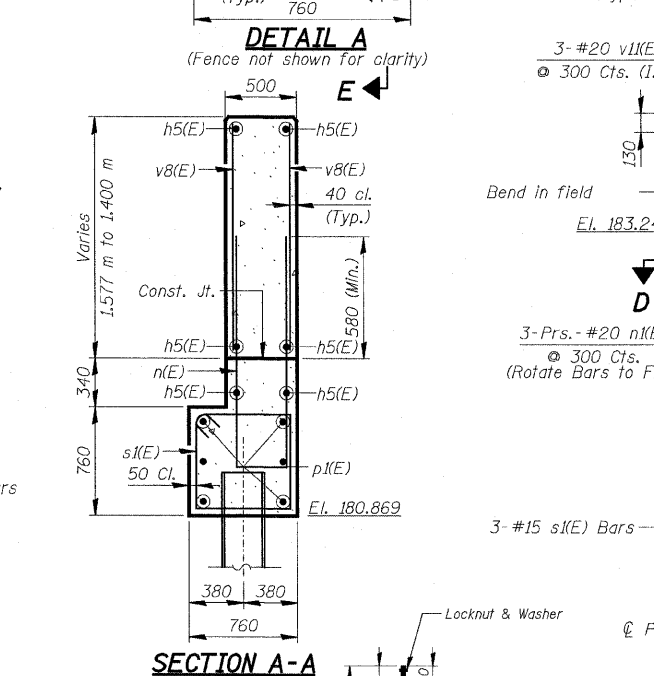
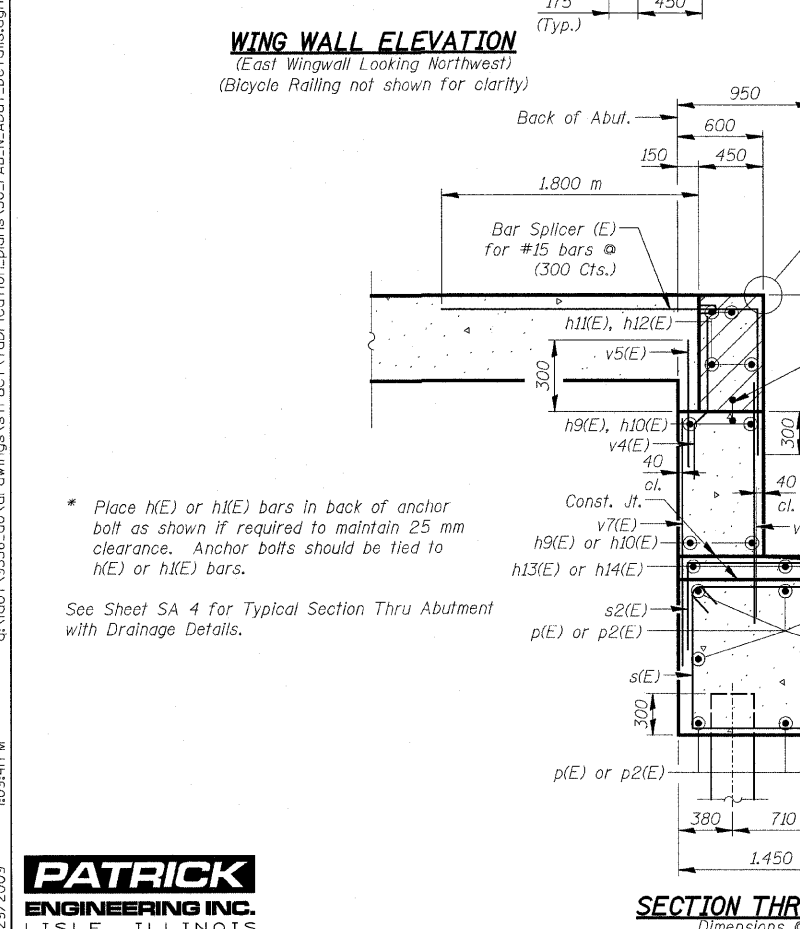
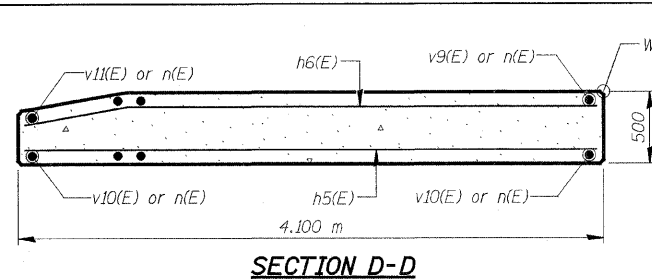
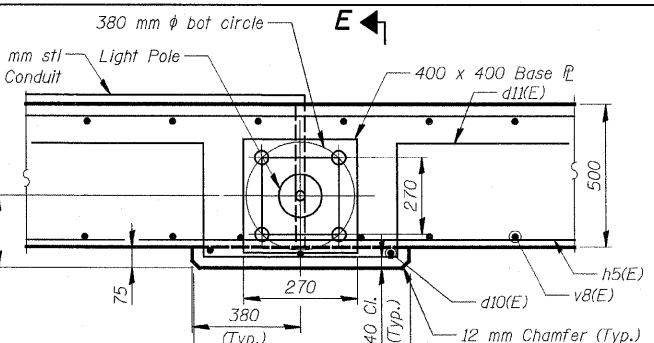
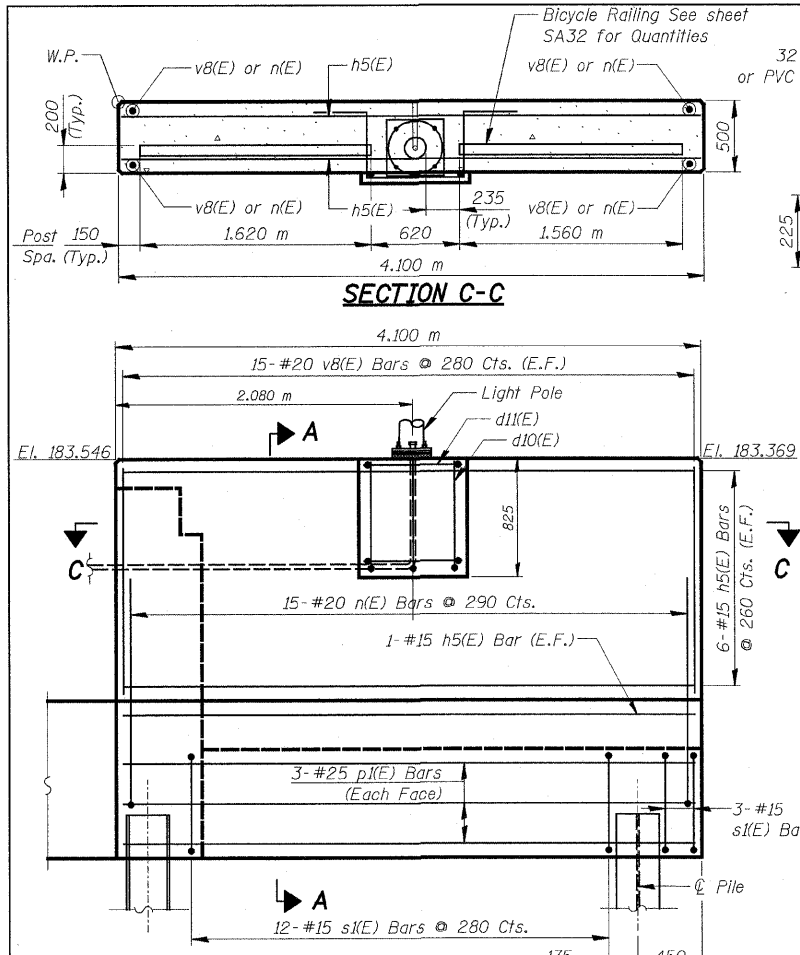
FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2171
 COOK COUNTY STATION 4+716.497

SCALE: NONE DATE: MAY 22, 2009
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yarglooglu



FOR INFORMATION ONLY

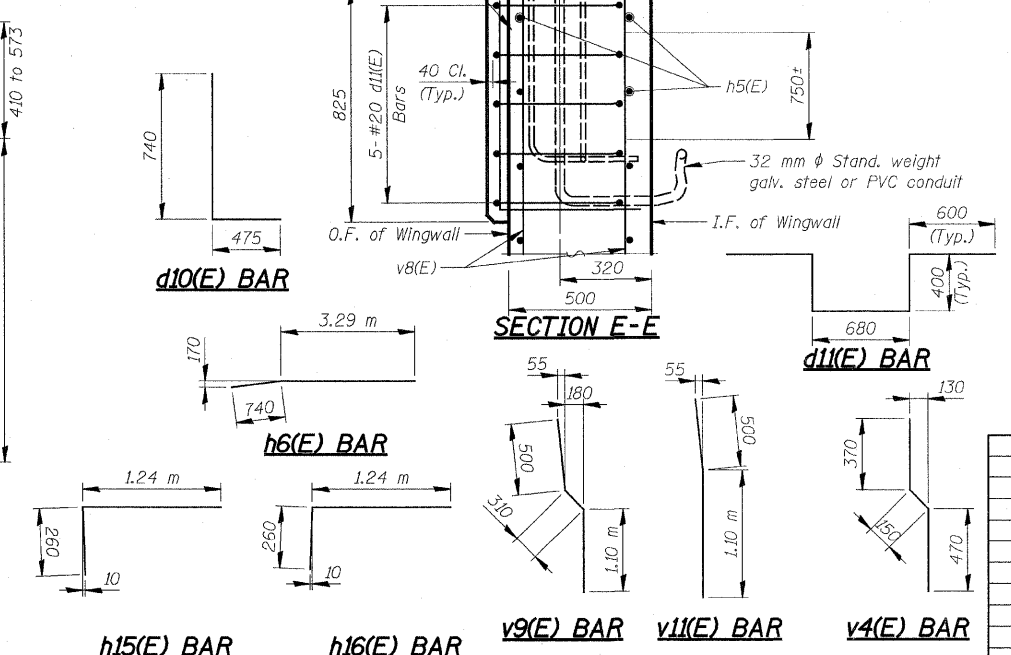
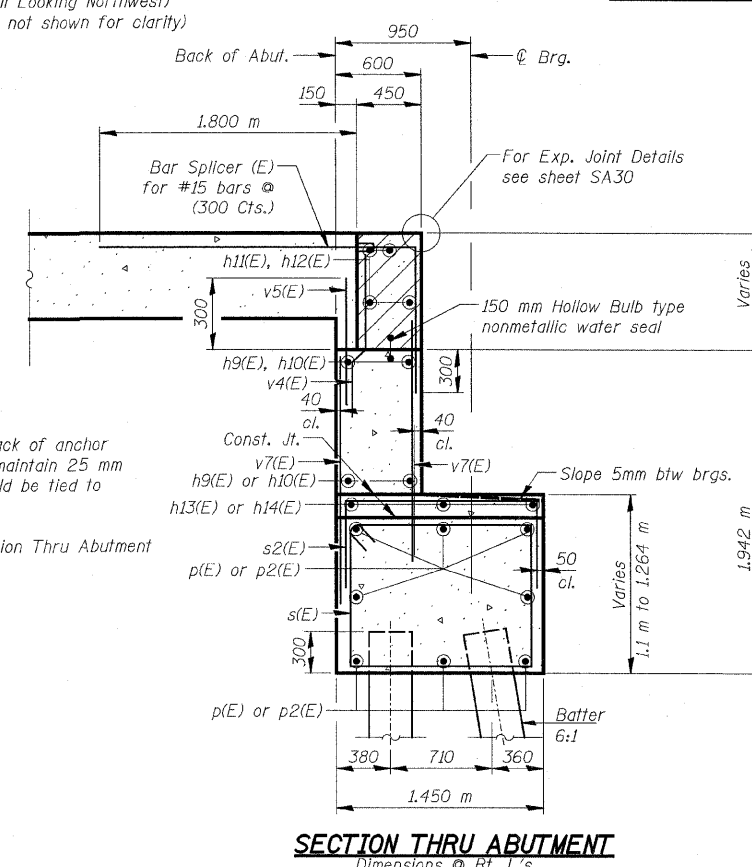
F.A.J. R.T.E.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
3578	15 VB-1-F	COOK	62	49
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT	
CONTRACT NO. 60H54				



BENT BAR DIMENSIONS

Bar	A	B
s(E)	1.35 m	1.0 m
s1(E)	660	660
s2(E)	1.35 m	680
u(E)	1.3 m	790

- NOTES**
- Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
 - Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - Reinforcement bars designated (E) shall be epoxy coated.
 - Quantity of concrete in end post included with Concrete Superstructure on sheet SA21.
 - All dimensions are in millimeters (mm) except as noted.
 - E.F. = Each Face, I.F. = Inside Face, O.F. = Outside Face
 - Cost of Anchor Bolts & Conduit included with Concrete Structures.



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION NORTH ABUTMENT DETAILS SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497
NAME	DATE	
		SCALE: NONE DATE: MAY 22, 2009 DRAWN BY: M. Tryon CHECKED BY: A. Yarglooglu

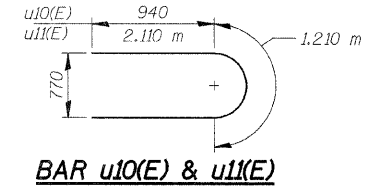
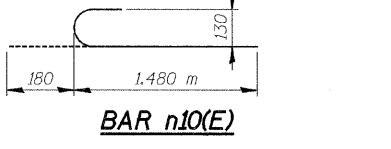
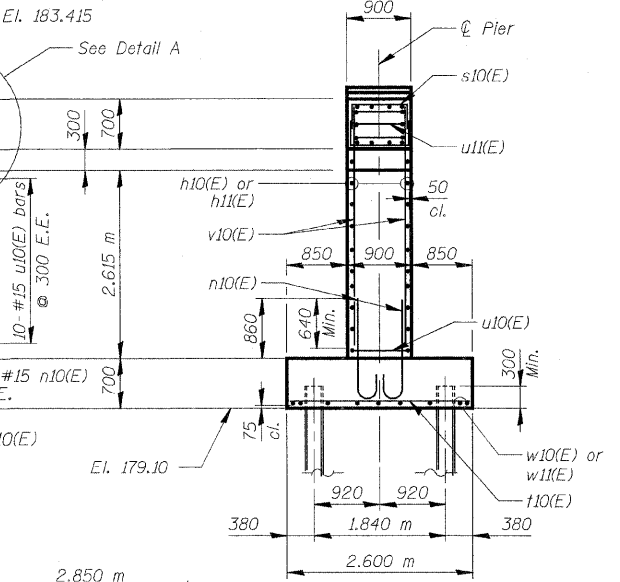
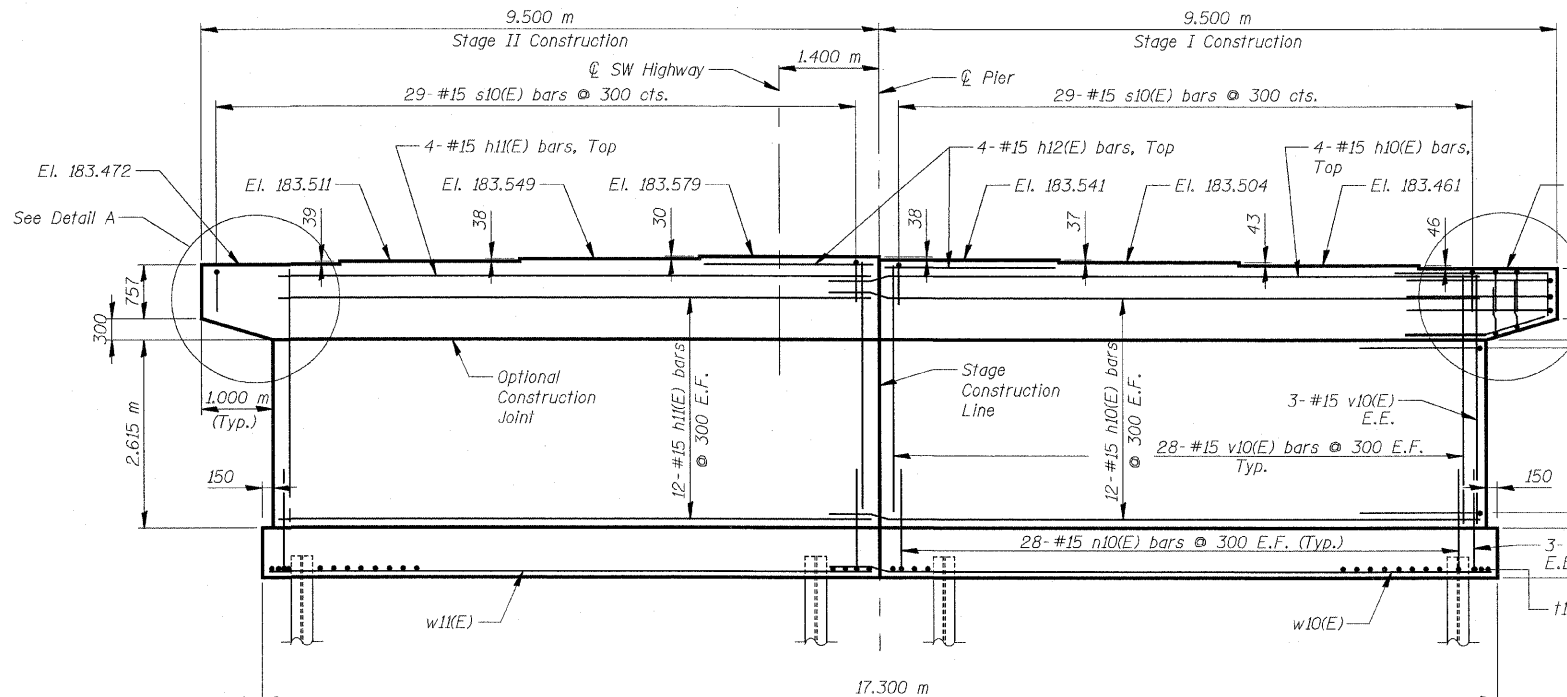
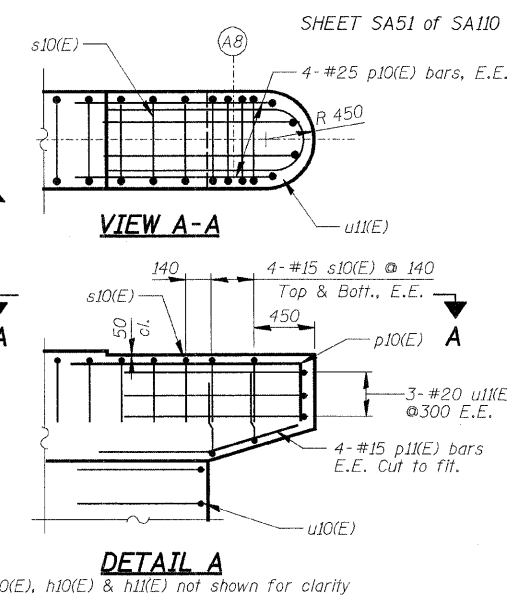
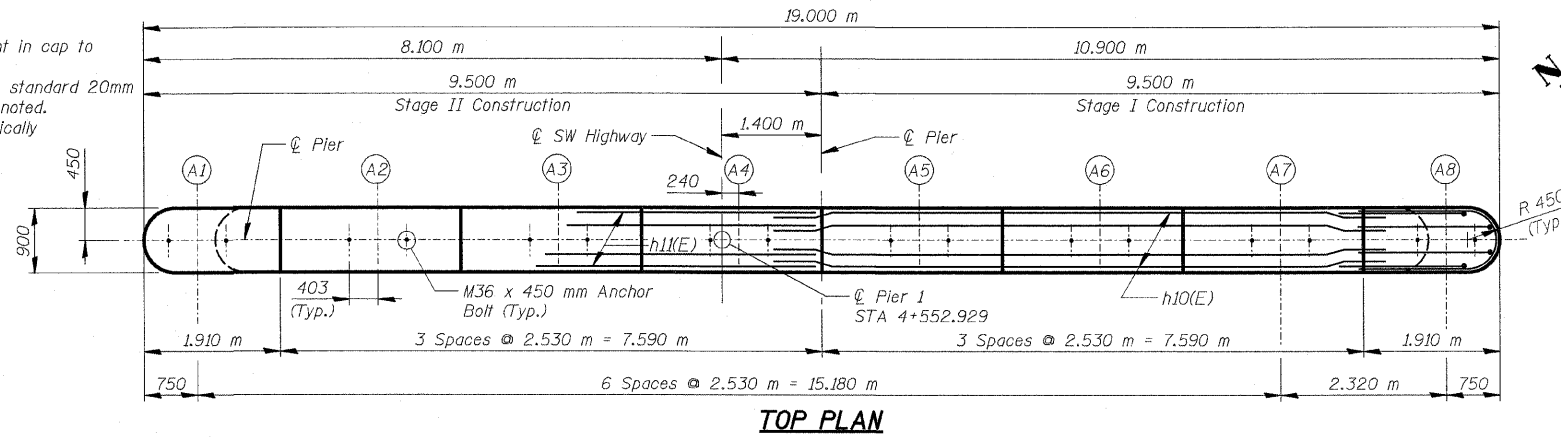
5/29/2009 10:09:41 PM
 jvermillion(rdwyl, Lisle)
 01-dot-9556-a0-dr-awings-a-uct-fabr-locatn-plans-50-FAB-N-Abut-Detail.dgn



FOR INFORMATION ONLY

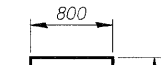
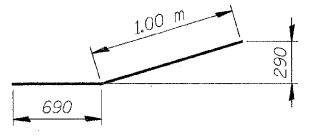
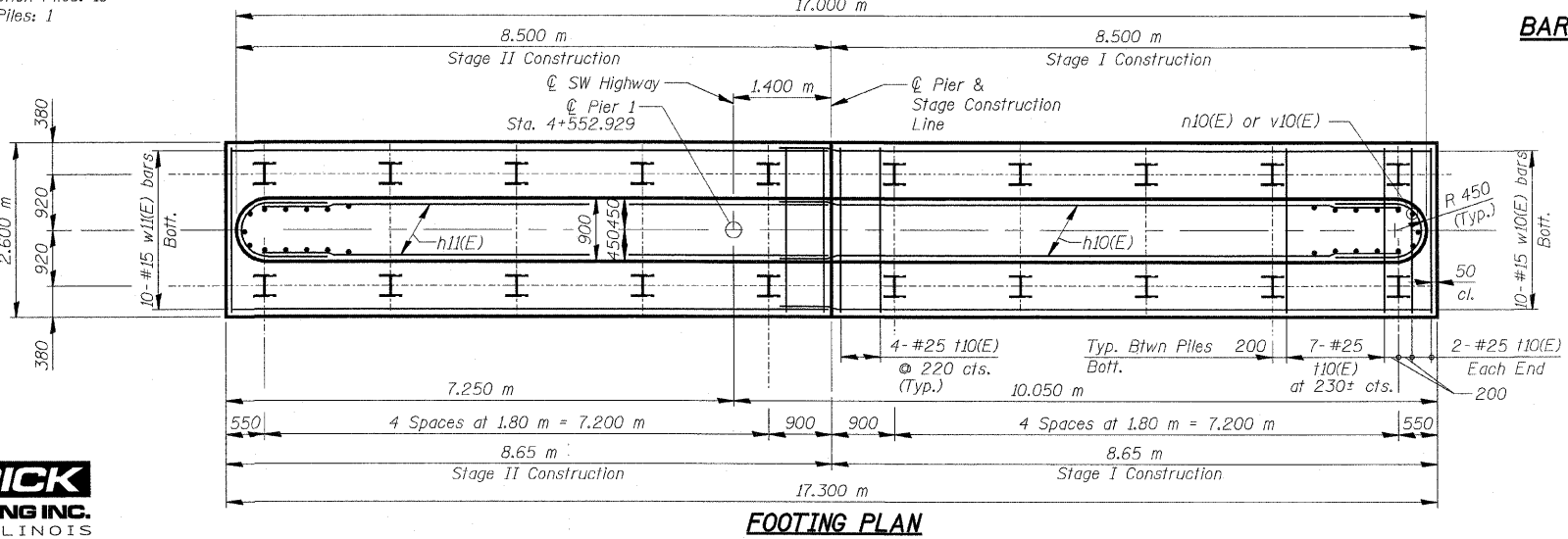
NOTES:

Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20mm chamfer except as noted.
 Pour steps monolithically with cap.



PILE DATA

Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 20.2 m
 No. Production Piles: 19
 No. Test Piles: 1



F.A.U. RIE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	50
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h10(E)	28	# 15	8,940	—
h11(E)	28	# 15	8,000	—
h12(E)	8	# 15	2,430	—
n10(E)	118	# 15	1,660	—
p10(E)	8	# 25	3,460	—
p11(E)	8	# 15	1,690	—
s10(E)	74	# 15	2,080	—
u10(E)	68	# 25	2,500	—
u11(E)	20	# 15	3,090	—
u12(E)	6	# 20	5,430	—
v10(E)	118	# 15	3,520	—
w10(E)	10	# 15	9,290	—
w11(E)	10	# 15	8,550	—
Structure Excavation			m ²	92
Concrete Structures			m ²	89.8
Reinforcement Bars, Epoxy Coated			kg	3,230
Furnishing Steel Piles HP310x79			m	383.8
Driving Piles			m	383.8
Test Pile Steel HP310x79			Each	1
Pile Shoes			Each	20

TYP. LAP SPLICE

BAR SIZE	MIN. LAP
#15	890 mm
#20	1,110 m
#25	1,850 m

NOTE: Use a min. lap splice of 640 for w10(E) & w11(E) bars

LEGEND:

E.E. Each End
 E.F. Each Face

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		PIER 1 SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: E. Mroozek DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

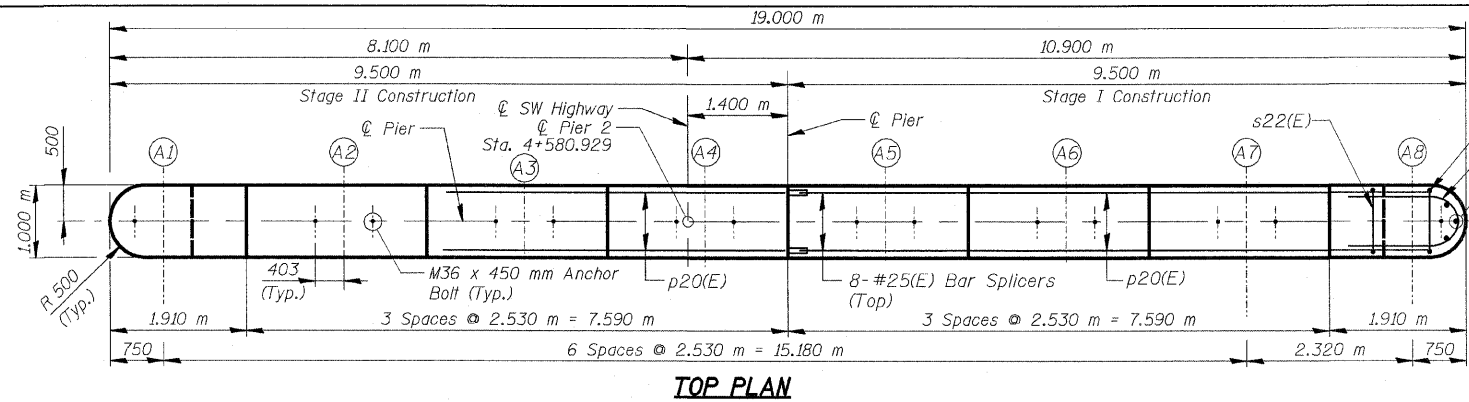
FOR INFORMATION ONLY

J:\vermillion(Rdwy_Lisle)\5/29/2009 10:09:47 PM q:\vdor\9556.ad\drawings\structure\Fabrication-plans\51\FAB_Pier_1.dgn

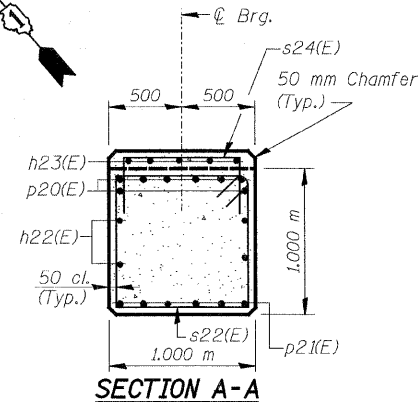


NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20 mm chamfer except as noted.
 Four steps monolithically with cap.

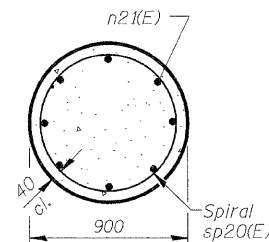
TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1,110 m
#25	1,850 m



TOP PLAN

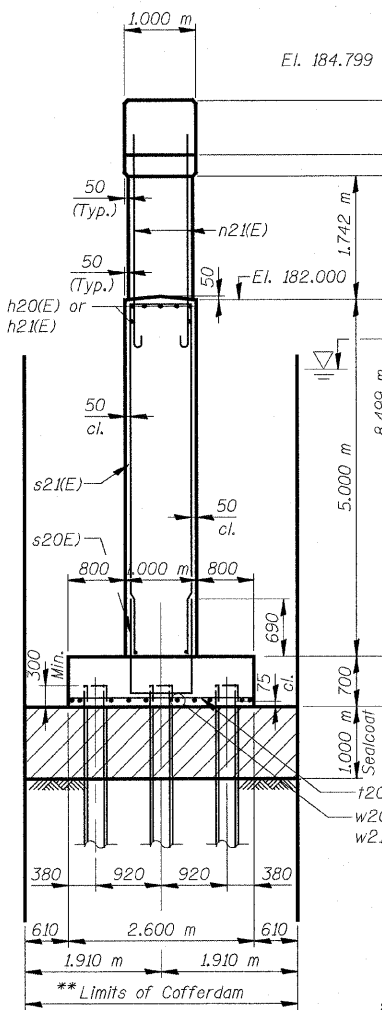


SECTION A-A

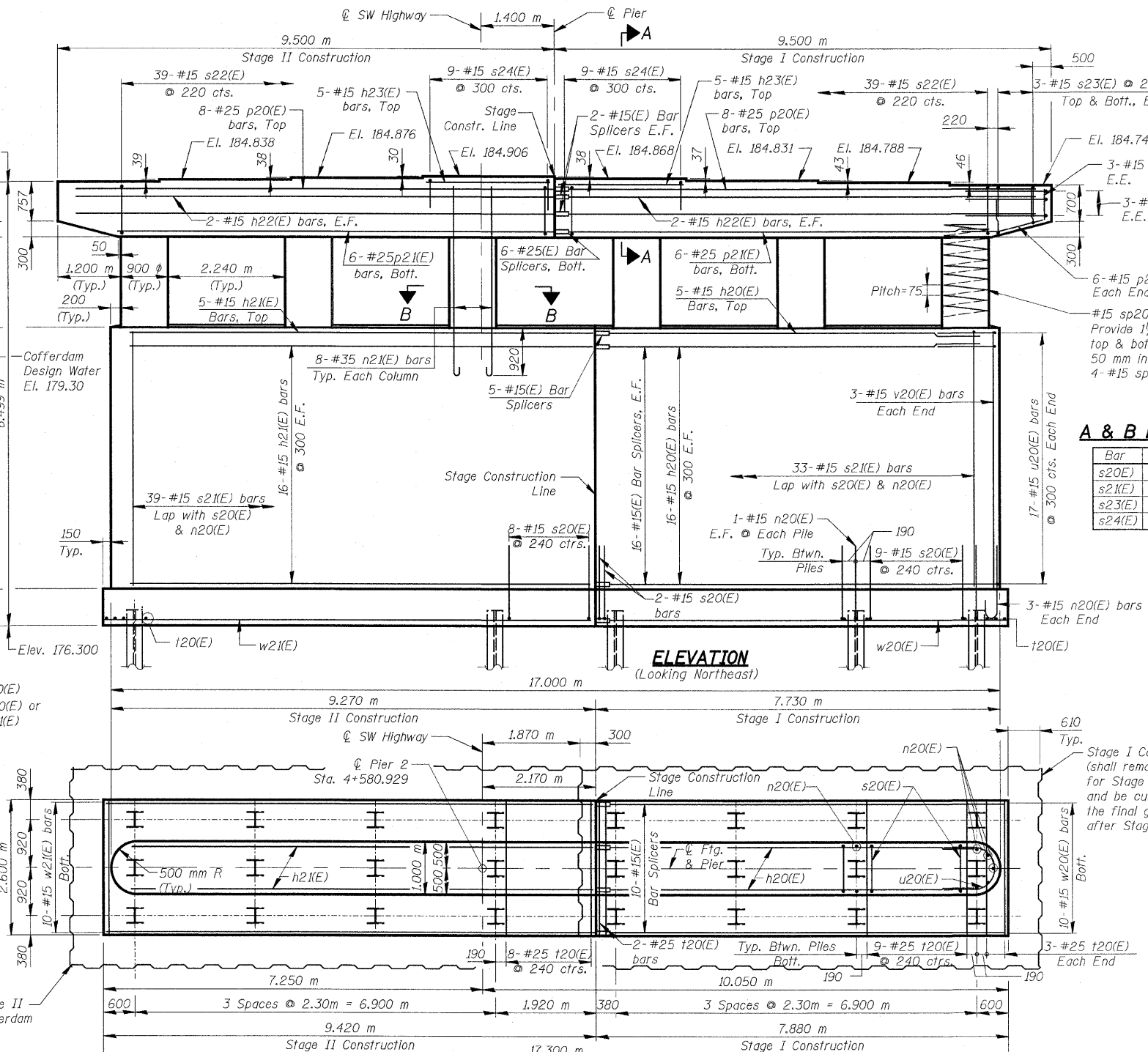


SECTION B-B

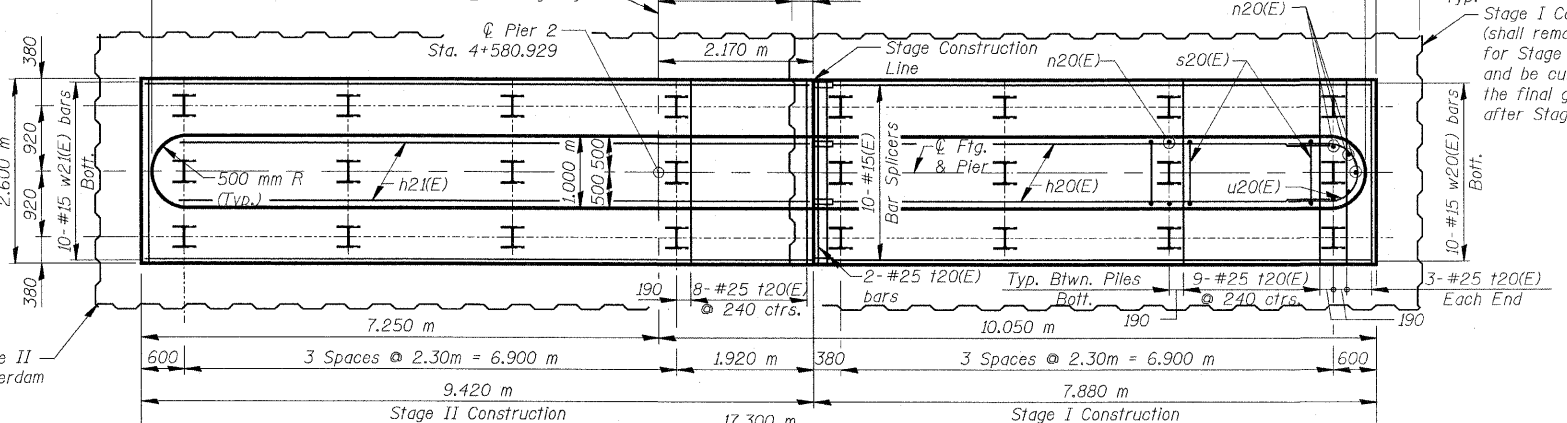
** The bottom of the cofferdam shall be at EL. 172.19 or lower. The cofferdam shall have a minimum section modulus of 492,000 mm³/m.



END VIEW



ELEVATION (Looking Northeast)



FOOTING PLAN

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	51
STA. TO STA.		FED. AID PROJECT		
FED. ROAD DIST. NO.		ILLINOIS		
CONTRACT NO. 60H54				

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h20(E)	37	# 15	7.180	—
h21(E)	37	# 15	8.720	—
h22(E)	8	# 15	8.950	—
h23(E)	10	# 15	2.430	—
n20(E)	22	# 15	1.480	—
n21(E)	48	# 35	3.920	—
p20(E)	16	# 25	8.950	—
p21(E)	12	# 25	8.300	—
p22(E)	12	# 15	1.830	—
s20(E)	64	# 15	3.500	—
s21(E)	72	# 15	10.800	—
s22(E)	78	# 15	3.880	—
s23(E)	12	# 15	2.400	—
s24(E)	18	# 15	1.800	—
sp20(E)	6	# 15	*1.790	—
t20(E)	70	# 25	2.500	—
u20(E)	34	# 15	3.150	—
u21(E)	6	# 20	3.590	—
v20(E)	6	# 15	4.950	—
v21(E)	6	# 15	0.600	—
w20(E)	10	# 15	7.780	—
w21(E)	10	# 15	9.320	—
Cofferdam Excavation		m ³	204	
Cofferdam (Location-1)	Each		1	
Concrete Structures		m ³	143.4	
Seal Coat Concrete		m ³	70.7	
Reinforcement Bars, Epoxy Coated		kg	7,680	
Bar Splicers	Each		65	
Furnishing Steel Piles		m	228.0	
HP310x79		m	228.0	
Driving Piles		m	228.0	
Pile Shoes	Each		24	

* Height of spiral

A & B DIMENSIONS

Bar	A	B
s20(E)	900	1.30 m
s21(E)	900	4.950 m
s23(E)	900	750
s24(E)	900	450

BARS n20(E) & n21(E)

BAR p22(E)

BARS s20(E), s21(E), s23(E) & s24(E)

BAR s22(E)

BARS u20(E) & u21(E)

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.
4. Minimum lap for spirals 770 mm.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 2
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2171
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

FOR INFORMATION ONLY

J:\vermillion\rdwy_lisle\109553 PM 5/29/2009 q:\109553\ad\drawings\struct\fabr\location-plans\52-FAB-Pier-2.dwg

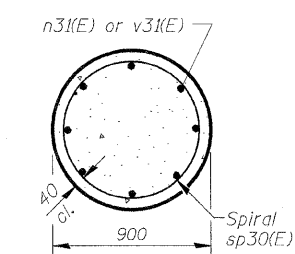
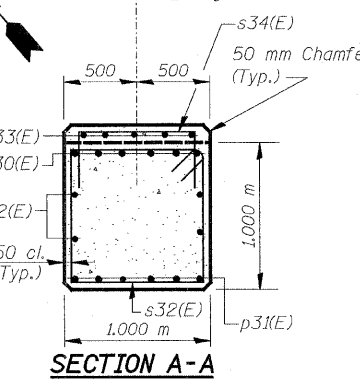
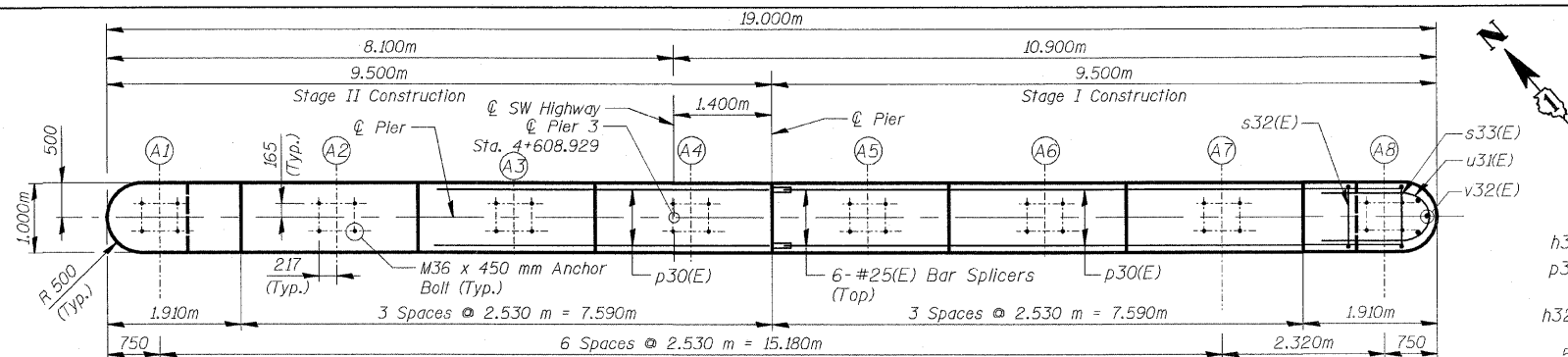


NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20 mm chamfer except as noted.
 Four steps monolithically with cap.

** The bottom of the cofferdam shall be at EL 172.19 or lower. The cofferdam shall have a minimum section modulus of 268,000 mm⁴/m.

TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1.110 m
#25	1.850 m

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	52
STA. TO STA.		FED. AID PROJECT		
FED. ROAD DIST. NO.		ILLINOIS		
CONTRACT NO. 60H54				



SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h30(E)	37	#15	7.180	—
h31(E)	37	#15	8.720	—
h32(E)	8	#15	8.950	—
h33(E)	10	#15	2.430	—
n30(E)	26	#25	2.410	—
n31(E)	48	#35	3.050	—
p30(E)	12	#25	8.950	—
p31(E)	12	#25	8.300	—
p32(E)	12	#15	1.830	—
s30(E)	65	#25	5.160	—
s31(E)	75	#25	10.500	—
s32(E)	68	#15	3.880	—
s33(E)	12	#15	2.400	—
s34(E)	18	#15	1.800	—
sp30(E)	6	#15	* 3.120	—
t30(E)	128	#25	3.260	—
u30(E)	34	#15	3.150	—
u31(E)	6	#20	3.590	—
v30(E)	6	#25	4.800	—
v31(E)	48	#35	3.870	—
v32(E)	6	#15	0.600	—
w30(E)	24	#15	7.780	—
w31(E)	24	#15	9.320	—
Cofferdam Excavation	m ³		356	
Cofferdam (Location-2)	Each		1	
Concrete Structures	m ³		163.8	
Seal Coat Concrete	m ³		84.8	
Reinforcement Bars, Epoxy Coated	kg		13,500	
Bar Splicers	Each		77	
Furnishing Steel Piles HP310x79	m		553.9	
Driving Piles	m		553.9	
Test Pile Steel HP310x79	Each		1	
Pile Shoes	Each		30	

BARS n30(E) & n31(E)

BAR p32(E)

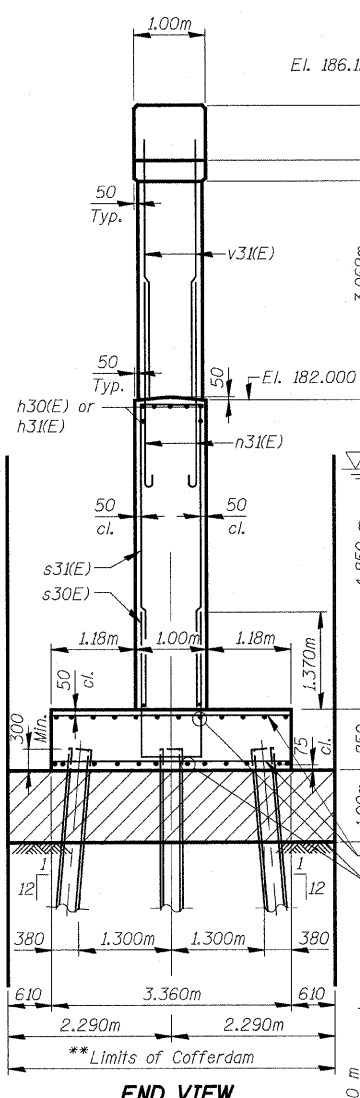
BARS s30(E), s31(E), s33(E) & s34(E)

BAR s32(E)

BARS u30(E) & u31(E)

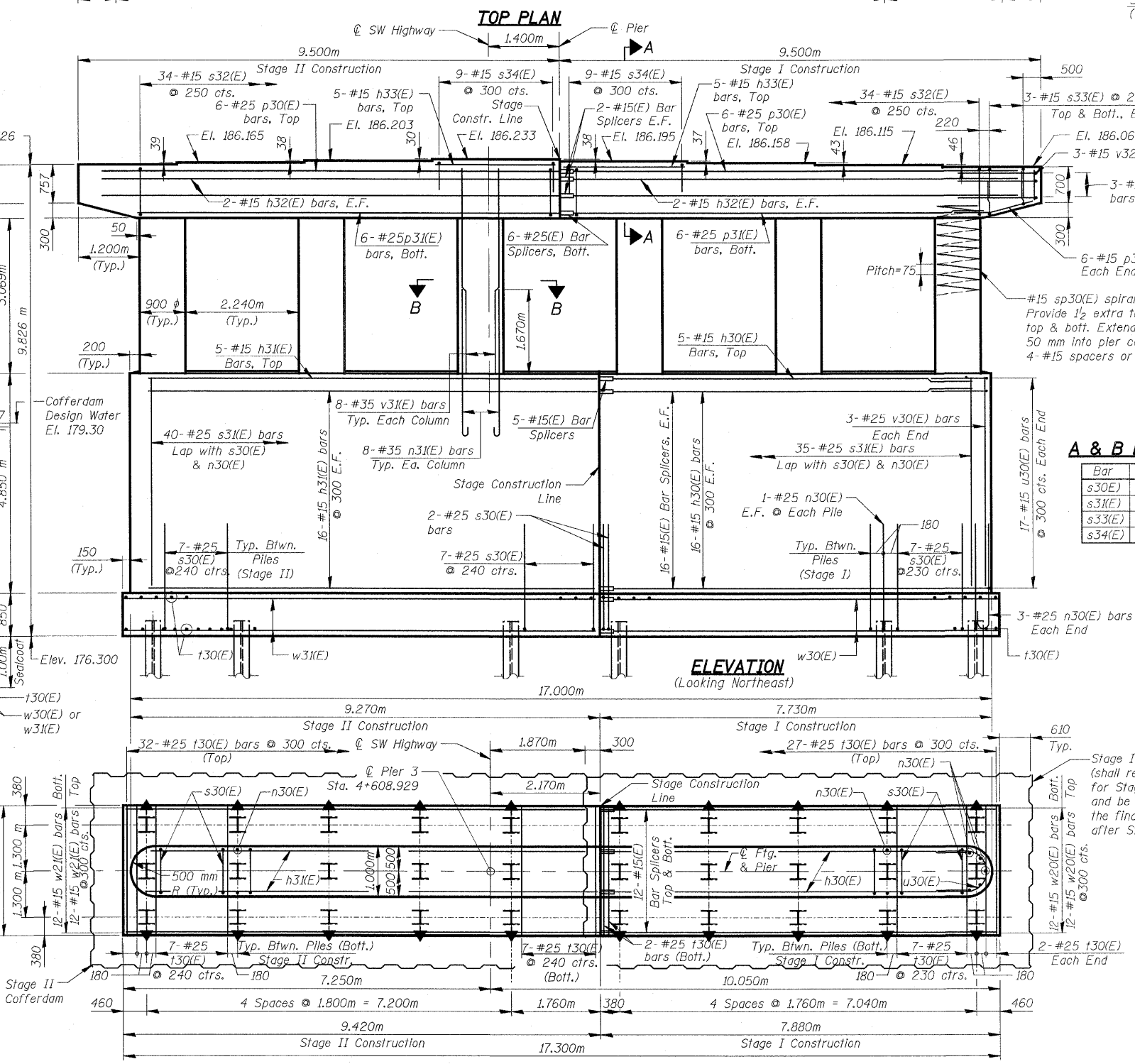
A & B DIMENSIONS

Bar	A	B
s30(E)	900	2.130 m
s31(E)	900	4.800 m
s33(E)	900	750
s34(E)	900	450



END VIEW

PILE DATA
 Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 562 kN
 Est. Length: 19.1 m
 No. Production Piles: 29
 No. Test Piles: 1



FOOTING PLAN

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.
4. Minimum lap for spirals 770 mm.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 3
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2171
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

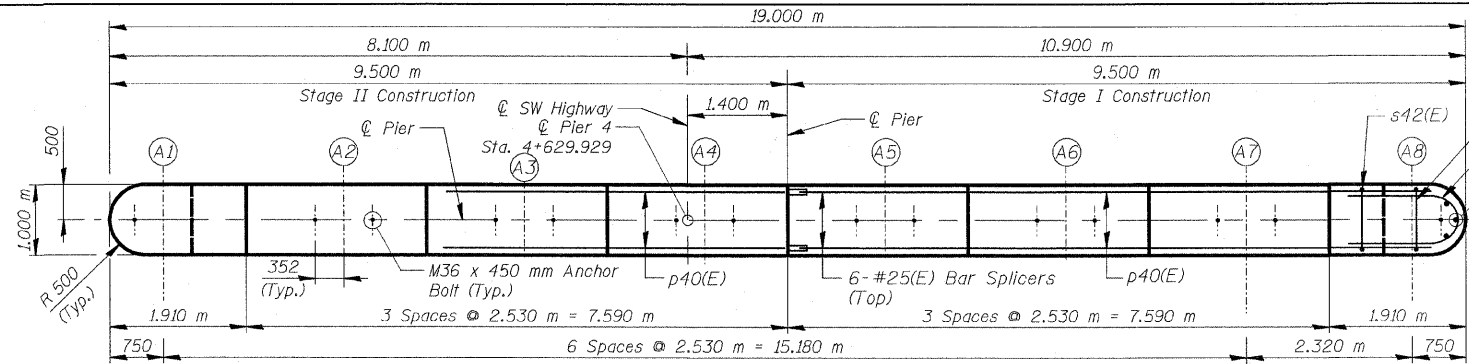
FOR INFORMATION ONLY

NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20 mm chamfer except as noted.
 Four steps monolithically with cap.

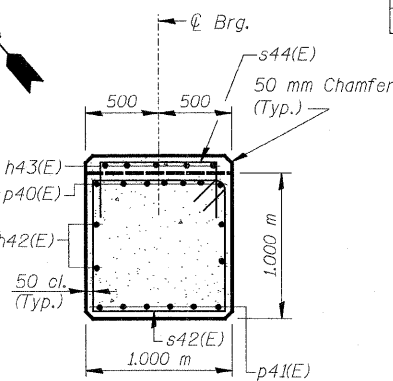
TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1,110 m
#25	1,850 m

NOTE: Use a min. lap splice of 640 for w40(E) & w41(E) bars

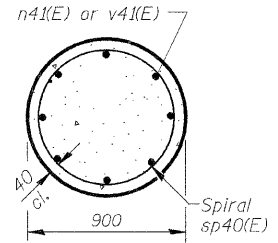
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
3578	15 VB-1-F	COOK	62	53
STA. TO STA.		FED. AID PROJECT		
FED. ROAD DIST. NO.		ILLINOIS		
CONTRACT NO. 60H54				



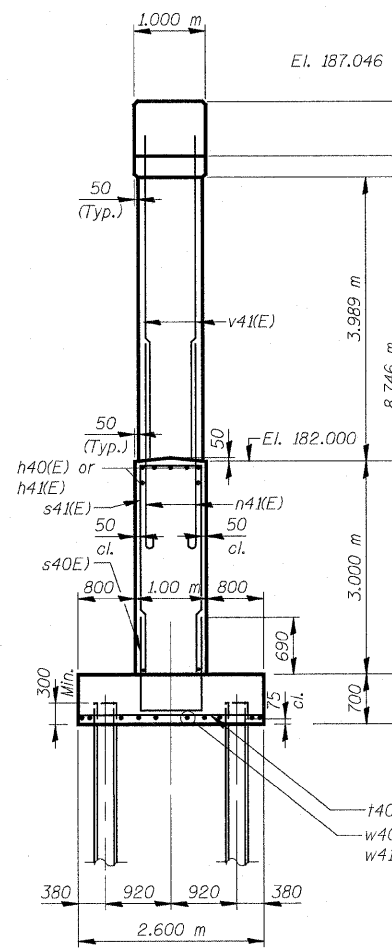
TOP PLAN



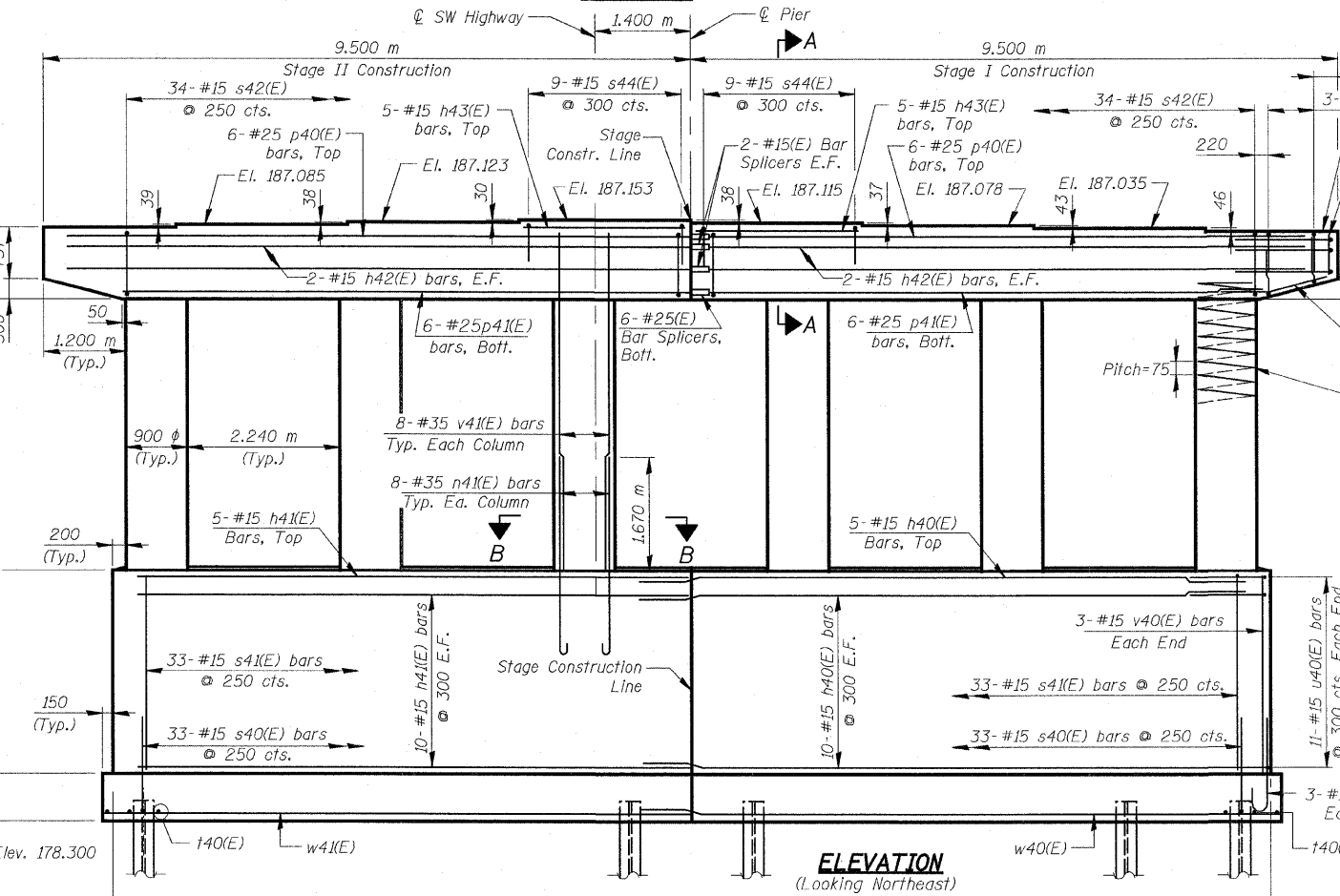
SECTION A-A



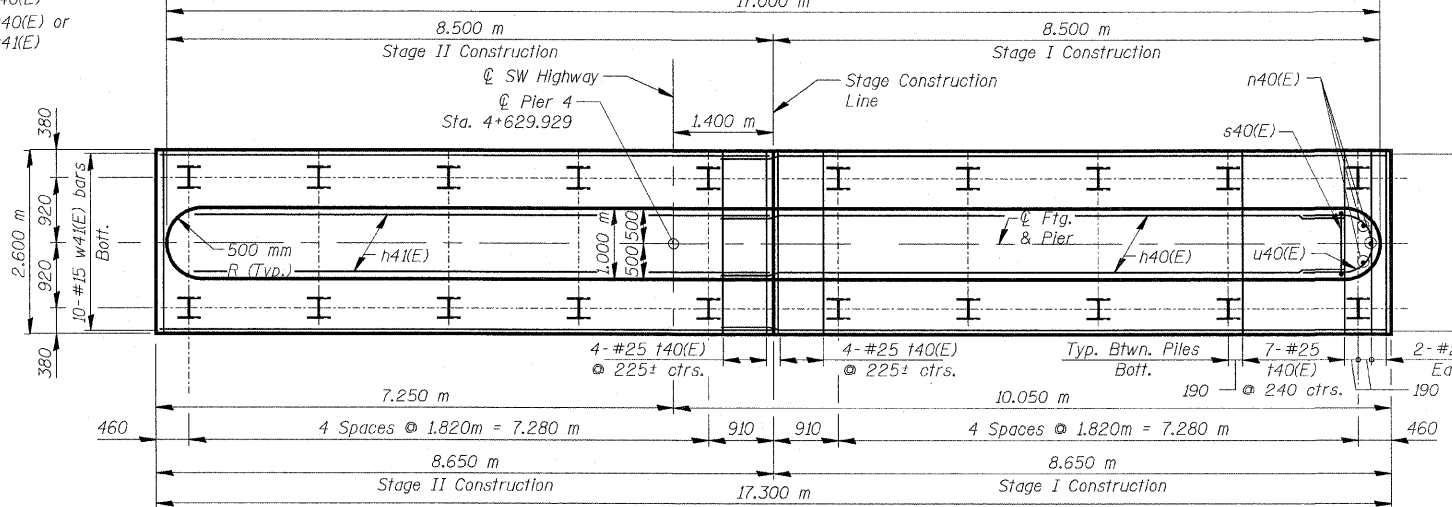
SECTION B-B



END VIEW



ELEVATION
(Looking Northeast)



FOOTING PLAN

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h40(E)	25	#15	8,940	—
h41(E)	25	#15	7,950	—
h42(E)	8	#15	8,950	—
h43(E)	10	#15	2,430	—
n40(E)	6	#15	1,480	—
n41(E)	48	#35	3,050	—
p40(E)	12	#25	8,950	—
p41(E)	12	#25	8,300	—
p42(E)	12	#15	1,830	—
s40(E)	66	#15	3,500	—
s41(E)	66	#15	6,800	—
s42(E)	68	#15	3,880	—
s43(E)	12	#15	2,400	—
s44(E)	18	#15	1,800	—
sp40(E)	6	#15	*4,040	—
t40(E)	68	#25	2,500	—
u40(E)	22	#15	3,150	—
u41(E)	6	#20	3,590	—
v40(E)	6	#15	2,950	—
v41(E)	48	#35	4,790	—
v42(E)	6	#15	0,600	—
w40(E)	10	#15	9,290	—
w41(E)	10	#15	8,550	—
Structure Excavation			m ³	98
Concrete Structures			m ³	116.0
Reinforcement Bars, Epoxy Coated			kg	8,850
Bar Splicers			Each	16
Furnishing Steel Piles HP310x79			m	292.0
Driving Piles			m	292.0
Pile Shoes			Each	20

* Height of spiral

A & B DIMENSIONS

Bar	A	B
s40(E)	900	1,300 m
s41(E)	900	2,950 m
s43(E)	900	750
s44(E)	900	450

BARS n40(E) & n41(E)

BAR p42(E)

BARS s40(E), s41(E), s43(E) & s44(E)

BAR s42(E)

BARS u40(E) & u41(E)

NOTES:

- Reinforcement bars designated (E) shall be Epoxy Coated.
- Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
- All dimensions are in millimeters (mm) except as noted.
- Minimum lap for spirals 770 mm.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 4
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hattestad

FOR INFORMATION ONLY

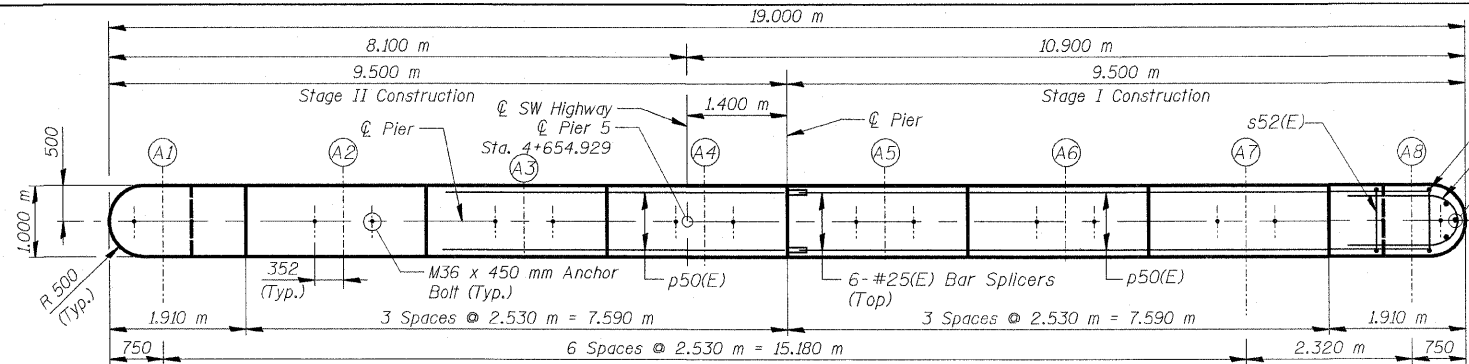
5/29/2009 PM 10:09 PATRICK ENGINEERING INC. LISLE, ILLINOIS
 c:\pilot\9556_c0_drawing\structure\fabrication_plans\54_FAB_Pier_4.dgn

NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20 mm chamfer except as noted.
 Four steps monolithically with cap.

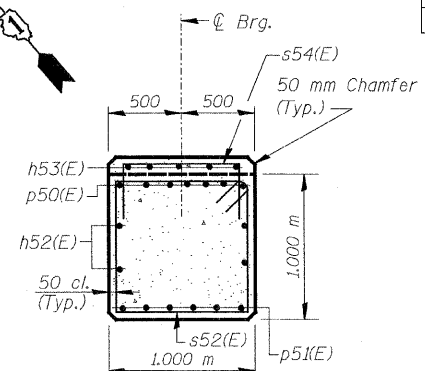
TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1.110 m
#25	1.850 m

NOTE: Use a min. lap splice of 640 for w50(E) & w51(E) bars

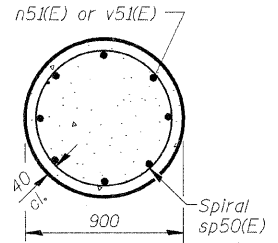
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	54
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60H54				



TOP PLAN



SECTION A-A

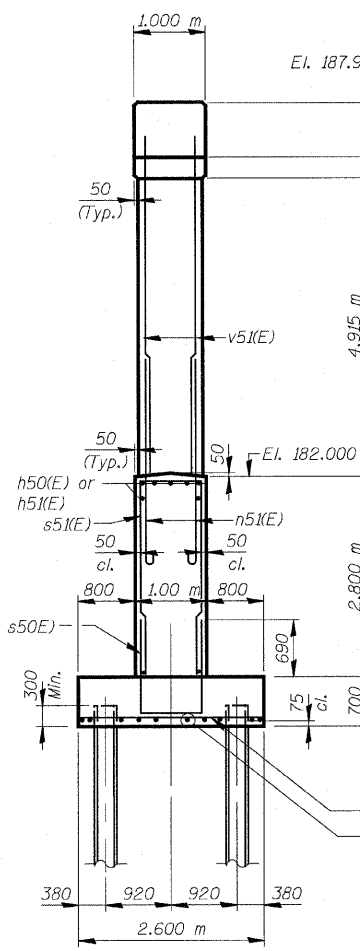


SECTION B-B

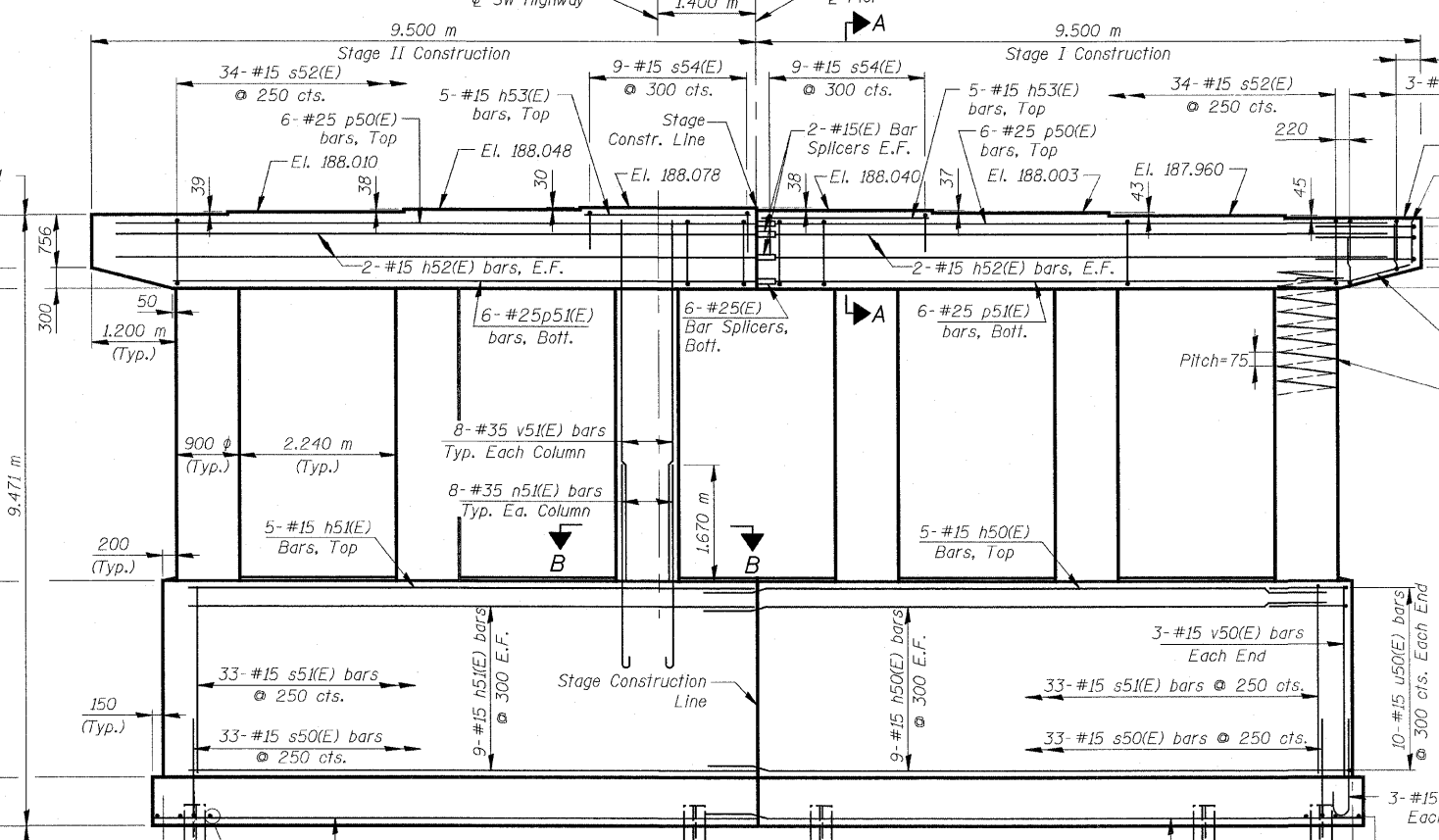
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h50(E)	23	#15	8,940	—
h51(E)	23	#15	7,950	—
h52(E)	8	#15	8,950	—
h53(E)	10	#15	2,430	—
n50(E)	6	#15	1,480	—
n51(E)	48	#35	3,050	—
p50(E)	12	#25	8,950	—
p51(E)	12	#25	8,300	—
p52(E)	12	#15	1,830	—
s50(E)	66	#15	3,500	—
s51(E)	66	#15	6,400	—
s52(E)	68	#15	3,880	—
s53(E)	12	#15	2,400	—
s54(E)	18	#15	1,800	—
sp50(E)	6	#15	* 4,970	—
150(E)	68	#25	2,500	—
u50(E)	20	#15	3,150	—
u51(E)	6	#20	3,590	—
v50(E)	6	#15	2,750	—
v51(E)	48	#35	5,720	—
v52(E)	6	#15	0,600	—
w50(E)	10	#15	9,290	—
w51(E)	10	#15	8,550	—
Structure Excavation			m ³	95
Concrete Structures			m ³	118.1
Reinforcement Bars, Epoxy Coated			kg	9,420
Bar Splicers			Each	16
Furnishing Steel Piles HP310x79			m	209.0
Driving Piles			m	209.0
Test Pile Steel HP310x79			Each	1
Pile Shoes			Each	20

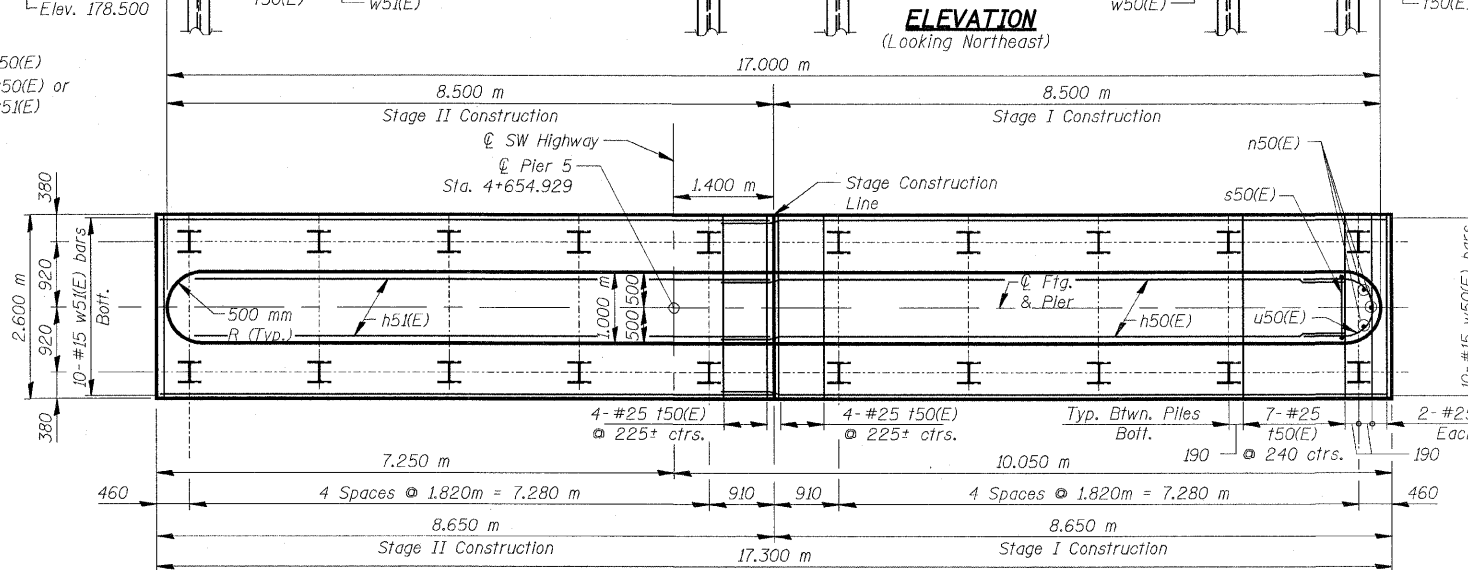
* Height of spiral



END VIEW



ELEVATION (Looking Northeast)



FOOTING PLAN

A & B DIMENSIONS

Bar	A	B
s50(E)	900	1,300 m
s51(E)	900	2,750 m
s53(E)	900	750
s54(E)	900	450

BARS n50(E) & n51(E)

BAR p52(E)

BARS s50(E), s51(E), s53(E) & s54(E)

BAR s52(E)

BARS u50(E) & u51(E)

PILE DATA
 Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 11.0 m
 No. Production Piles: 19
 No. Test Piles: 1

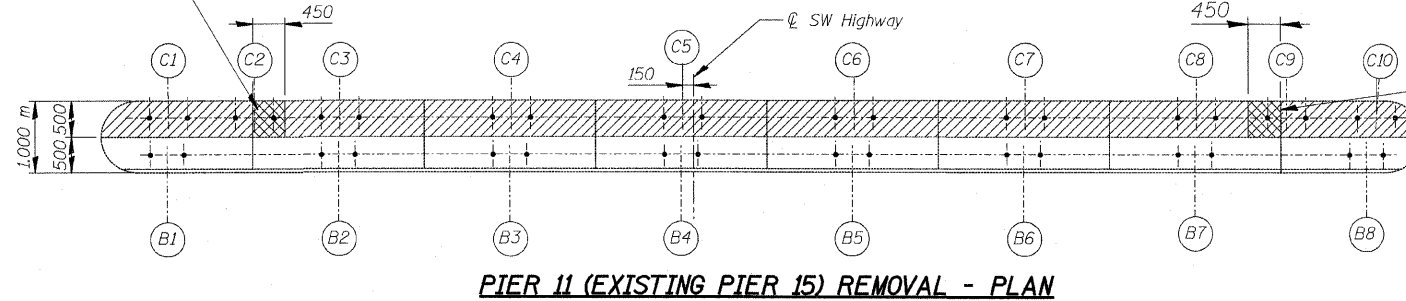
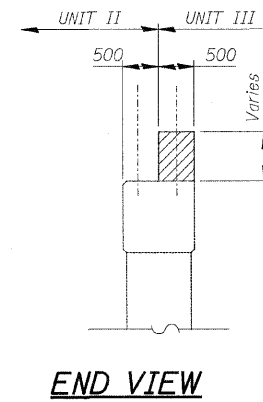
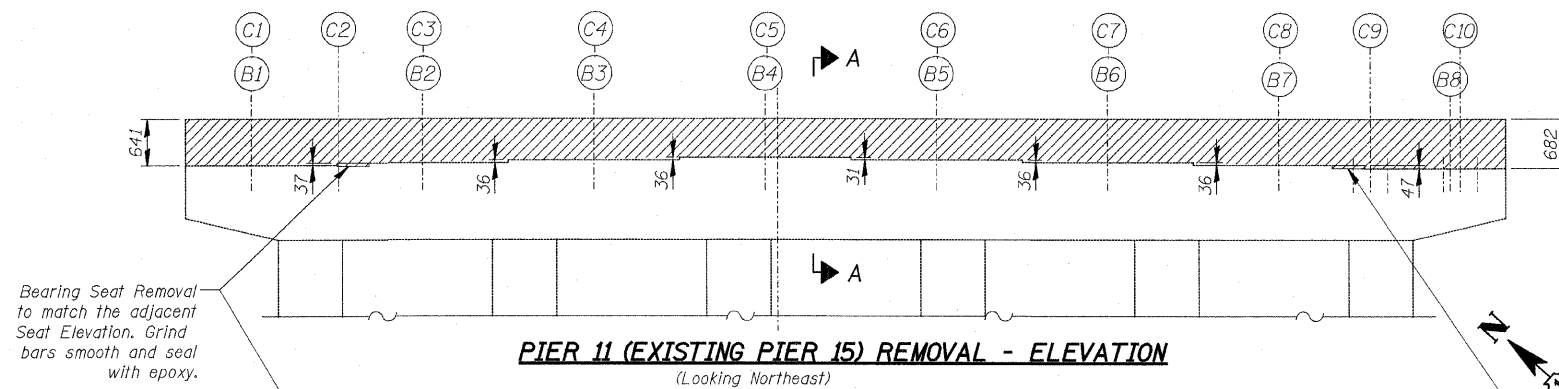
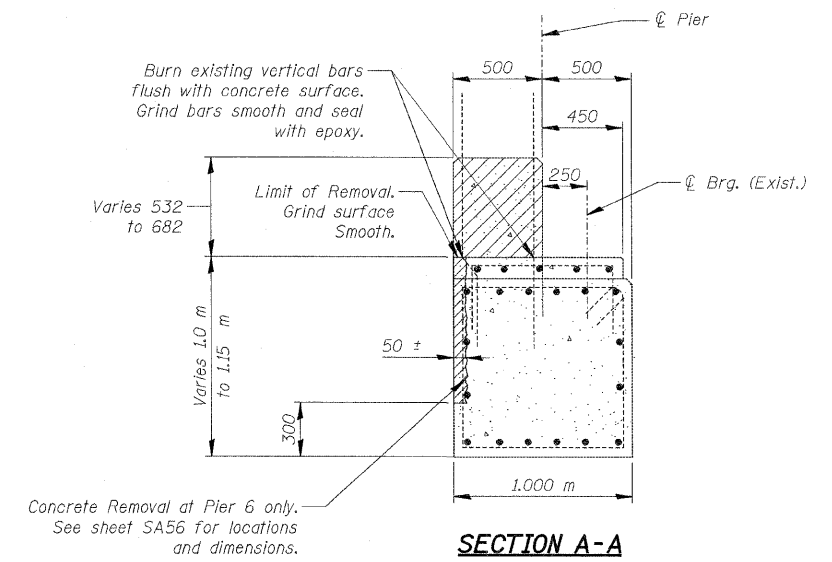
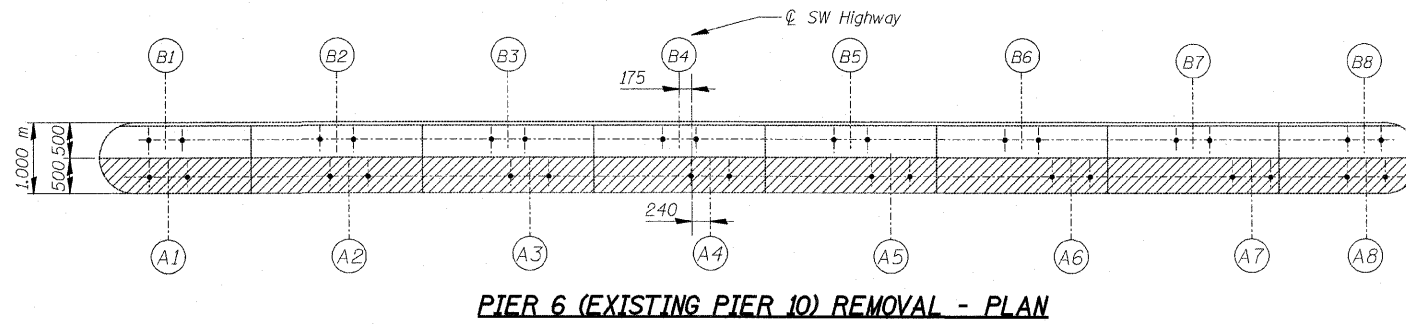
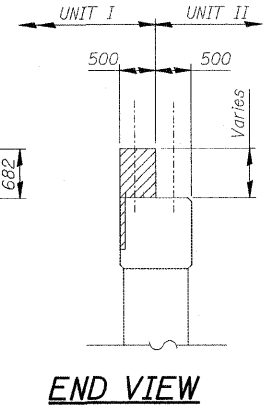
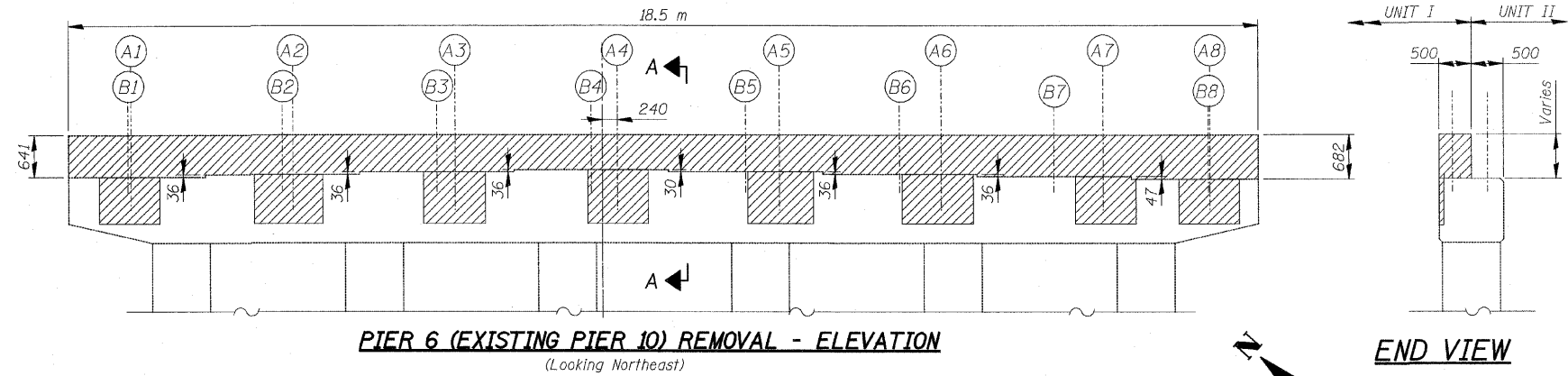


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 5
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatstead

FOR INFORMATION ONLY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	55
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



Bearing Seat Removal to match the adjacent Seat Elevation. Grind bars smooth and seal with epoxy.

Bearing Seat Removal to match the adjacent Seat Elevation. Grind bars smooth and seal with epoxy.

NOTES:

- All dimensions are in millimeters (mm) except as noted.
- All Pedestrian Traffic shall be prohibited during all stages of construction.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. m	12.5

LEGEND:

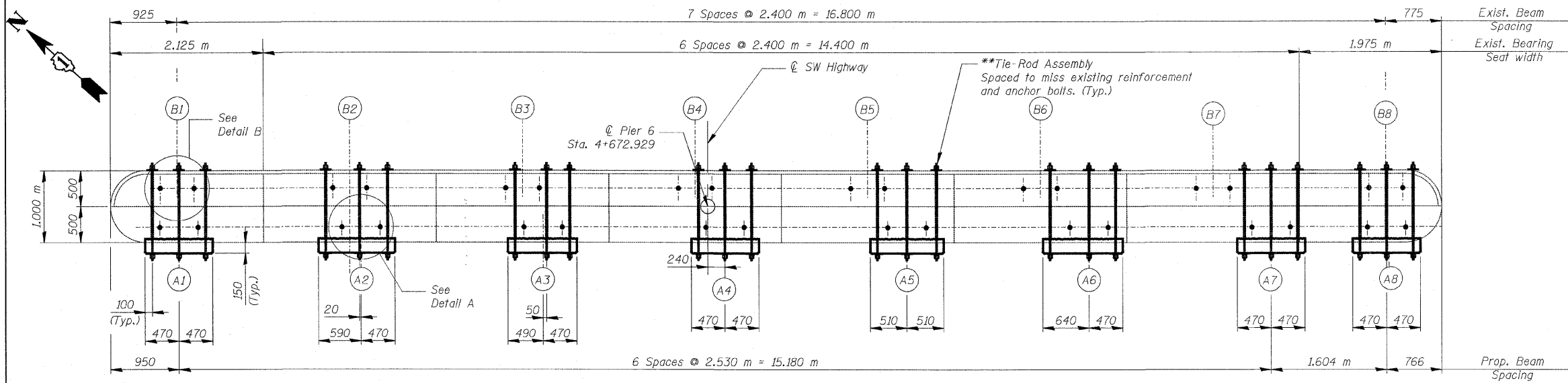
- Concrete Removal
- Existing Structure
- Proposed Structure

REVISIONS	
NAME	DATE

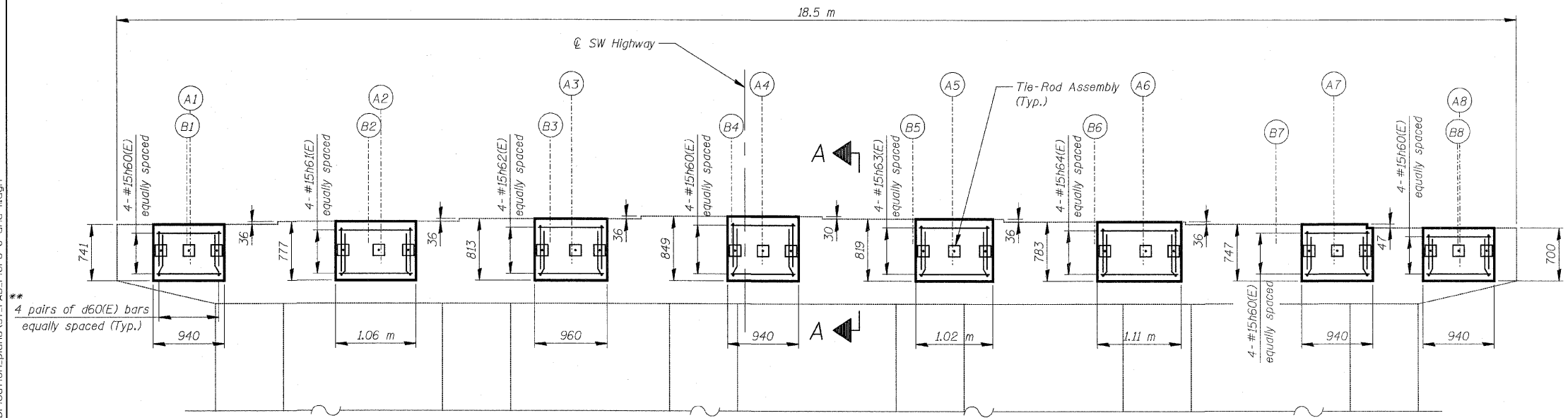
ILLINOIS DEPARTMENT OF TRANSPORTATION
PIERS 6 & 11 - REMOVAL
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15V B-1-R-1
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatfield

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	56
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60H54				

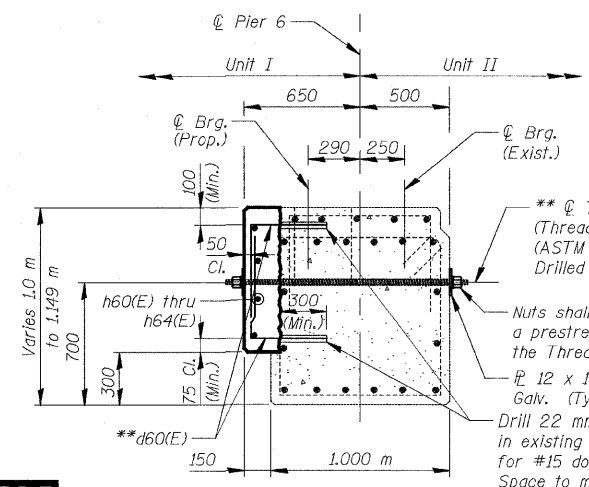


TOP PLAN



PIER 6 (EXISTING PIER 10) REMOVAL

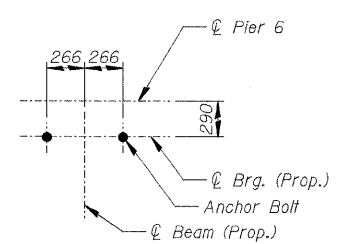
(Looking Northeast)



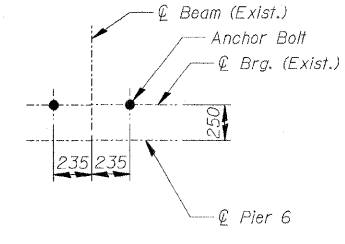
SECTION A-A

** Drill and Grout d60(E) bars and Tie-Rod Assemblies in accordance with Section 584 of the Standard Specifications.

BAR d60(E)



DETAIL A



DETAIL B

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
d60(E)	64	#15	0.97	—
h60(E)	16	#15	0.84	—
h61(E)	4	#15	0.96	—
h62(E)	4	#15	0.86	—
h63(E)	4	#15	0.92	—
h64(E)	4	#15	1.01	—
Concrete Structures			m ³	1.2
Reinforcement Bars, Epoxy Coated			kg	140
Concrete Sealer			m ²	39
Tie-Rod Assemblies			Each	24

* See Special Provisions
 *** Quantity includes quantity required for Pier 6 & Pier 11.

NOTES

- All dimensions are in millimeters (mm) except as noted.
- For details of existing reinforcement in Pier Cap of Pier 6 see Sheet SA98.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 6
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hatlestad

FOR INFORMATION ONLY

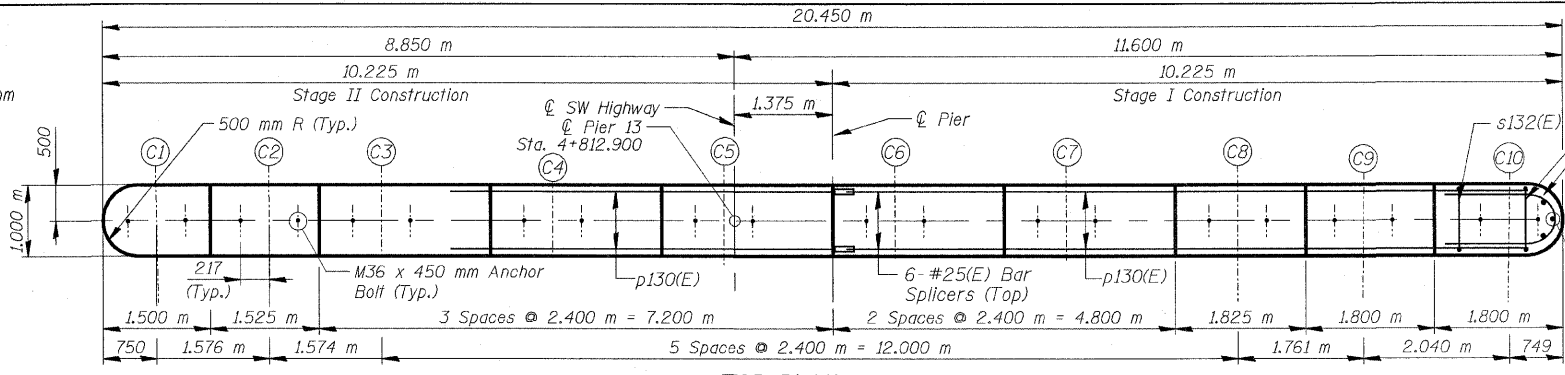
I:\er\millions\rdwy_lisle\529\2009 3:21:0 PM
 G:\DOT\9856_A0\Drawings\STRUCT\Fabrication\plans\ST_FAB_Piers 6 and 10.dgn



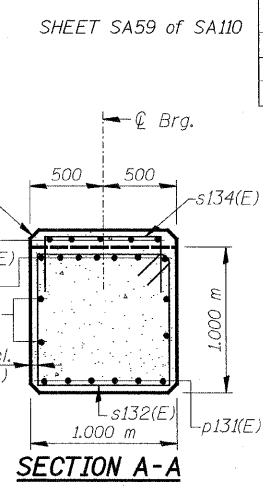
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET
3578	15 VB-1-F	COOK	62	58
STA.	TO STA.		FED. AID PROJECT	
			CONTRACT NO. 60H54	

NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20 mm chamfer except as noted.
 Four steps monolithically with cap.

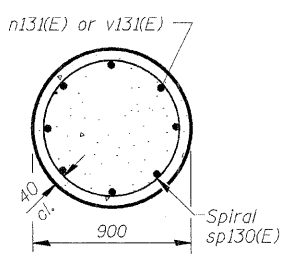
BAR SIZE	MIN. LAP
#15	890 mm
#20	1.110 m
#25	1.850 m



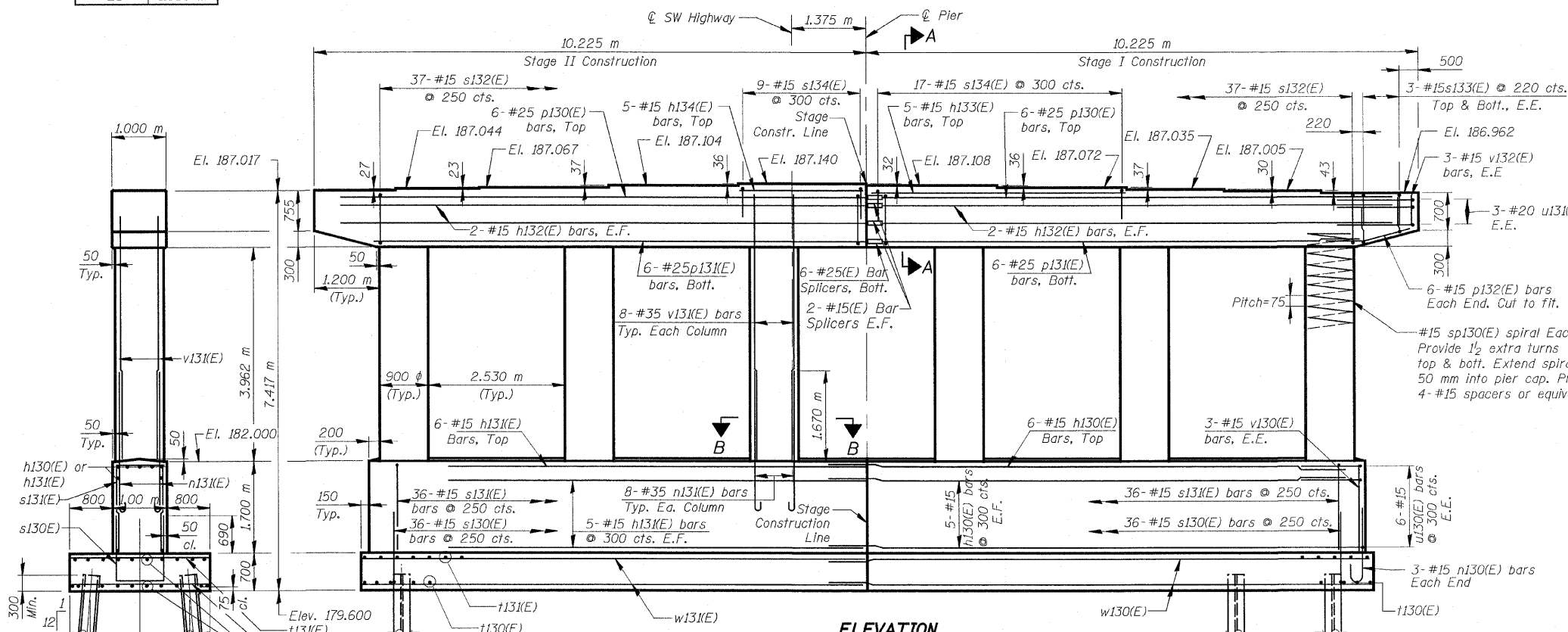
TOP PLAN



SECTION A-A



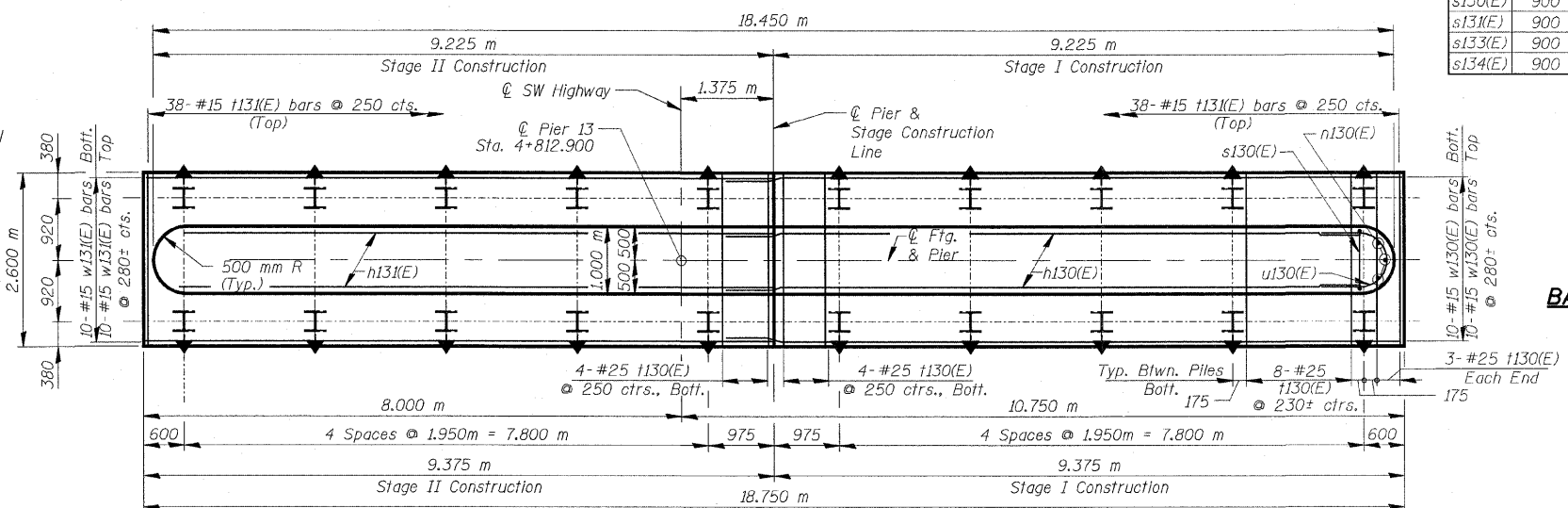
SECTION B-B



ELEVATION
(Looking Northeast)

END VIEW

PILE DATA
 Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 13.0 m
 No. Production Piles: 19
 No. Test Piles: 1



FOOTING PLAN

BAR n130(E) or n131(E)

BAR p132(E)

BARS s130(E), s131(E), s133(E) & s134(E)

A & B DIMENSIONS

Bar	A	B
s130(E)	900	1,300 m
s131(E)	900	1,650 m
s133(E)	900	750
s134(E)	900	450

BAR s132(E)

BAR u130(E) & u131(E)

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
n130(E)	16	# 15	9,670	—
n131(E)	16	# 15	8,680	—
h132(E)	8	# 15	9,680	—
h133(E)	5	# 15	4,700	—
h134(E)	5	# 15	2,300	—
n130(E)	6	# 15	1,480	—
n131(E)	48	# 35	3,050	—
p130(E)	12	# 25	9,680	—
p131(E)	12	# 25	9,030	—
p132(E)	12	# 15	1,830	—
s130(E)	72	# 15	3,500	—
s131(E)	72	# 15	4,200	—
s132(E)	74	# 15	3,880	—
s133(E)	12	# 15	2,400	—
s134(E)	26	# 15	1,800	—
sp130(E)	6	# 15	* 4,010	—
h130(E)	78	# 25	2,500	—
h131(E)	76	# 15	2,500	—
u130(E)	12	# 15	3,150	—
u131(E)	6	# 20	3,590	—
v130(E)	6	# 15	1,650	—
v131(E)	48	# 35	4,760	—
v132(E)	6	# 15	0,600	—
w130(E)	20	# 15	10,270	—
w131(E)	20	# 15	9,280	—
Structure Excavation			m ³	118
Concrete Structures			m ³	102.6
Reinforcement Bars, Epoxy Coated			kg	8,950
Bar Splicers			Each	16
Furnishing Steel Piles HP310x79			m	247.0
Driving Piles			m	247.0
Pile Shoes			Each	20
Test Pile Steel HP310x79			Each	1

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.
4. Minimum lap for spirals 770 mm.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 13
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Hotteled

FOR INFORMATION ONLY

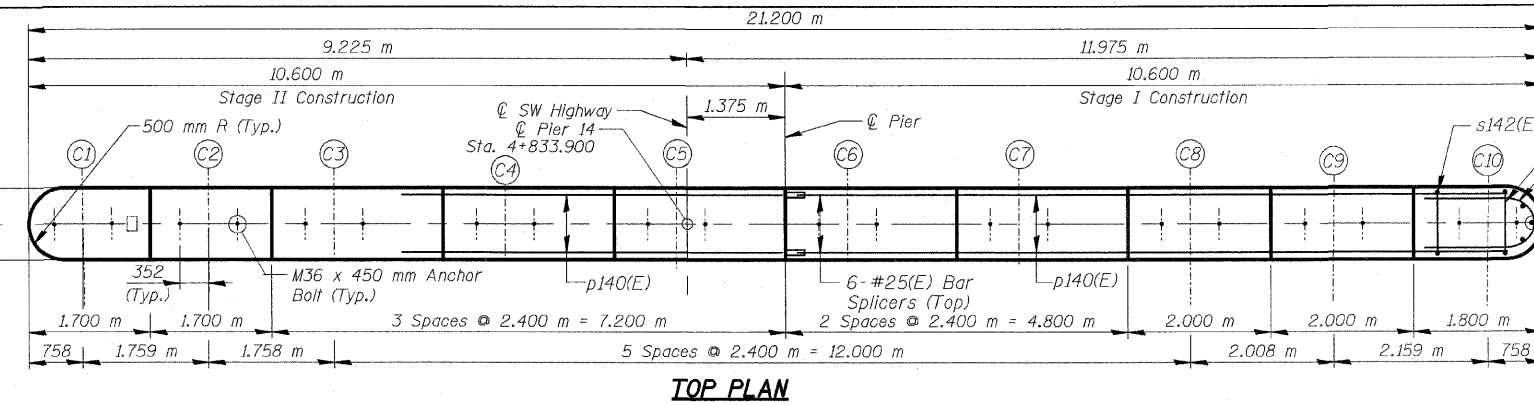
Ver:millions(Rawy_Lisle) 5/29/2009
 q:\1dof\9556-ad\drawings\struct\fabr\constr\p13\p13.dgn
 PATRICK ENGINEERING INC. LISLE, ILLINOIS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	59
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60H54				

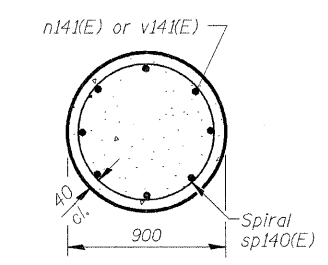
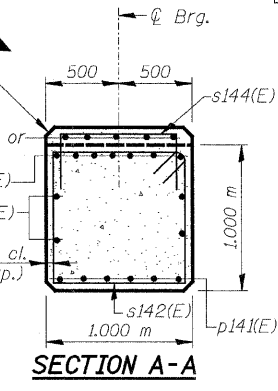
NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20 mm chamfer except as noted.
 Four steps monolithically with cap.

TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1.110 m
#25	1.850 m

NOTE: Use a min. lap splice of 640 for w140(E) & w141(E) bars



SHEET SA60 of SA110



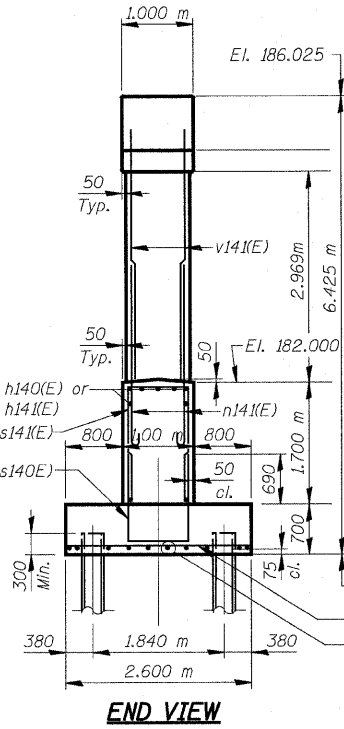
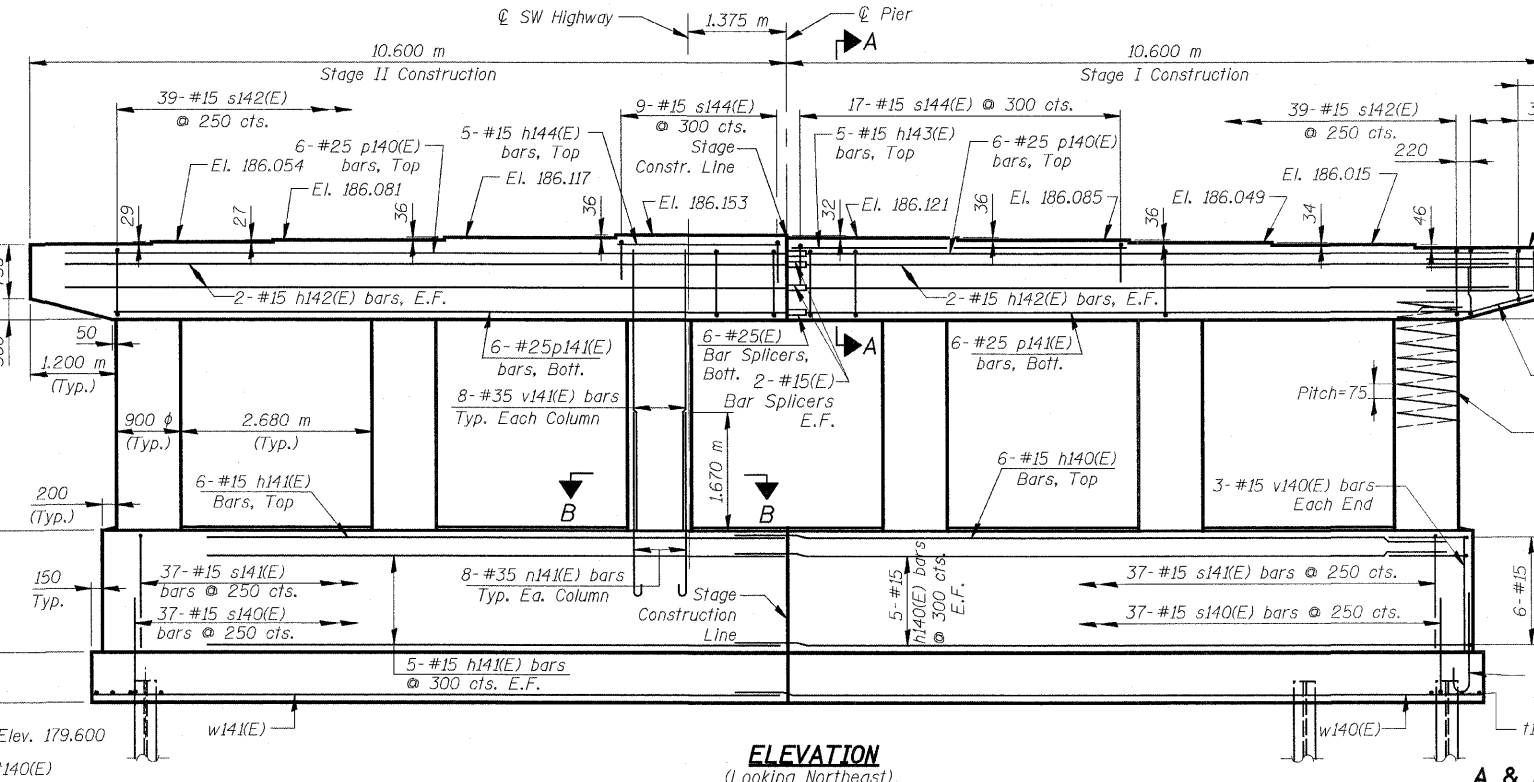
SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h140(E)	16	#15	10.040	—
h141(E)	16	#15	9.050	—
h142(E)	8	#15	10.050	—
h143(E)	5	#15	4.700	—
h144(E)	5	#15	2.300	—
n140(E)	6	#15	1.480	U
n141(E)	48	#35	3.050	U
p140(E)	12	#25	10.050	—
p141(E)	12	#25	9.400	—
p142(E)	12	#15	1.830	—
s140(E)	74	#15	3.500	□
s141(E)	74	#15	4.200	□
s142(E)	78	#15	3.880	□
s143(E)	12	#15	2.400	□
s144(E)	26	#15	1.800	□
sp140(E)	6	#15	*3.020	~
t140(E)	76	#25	2.500	—
u140(E)	12	#15	3.150	U
u141(E)	6	#20	3.590	U
v140(E)	6	#15	1.650	—
v141(E)	48	#35	3.770	—
v142(E)	6	#15	0.600	—
w140(E)	10	#15	10.390	—
w141(E)	10	#15	9.650	—
Structure Excavation		m ³	120	
Concrete Structures		m ³	102.3	
Reinforcement Bars, Epoxy Coated		kg	8,020	
Bar Splicers		Each	16	
Furnishing Steel Piles HP310x79		m	280.0	
Driving Piles		m	280.0	
Pile Shoes		Each	20	

* Height of spiral

PILE DATA
 Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 14.0 m
 No. Production Piles: 20
 No. Test Piles: None



A & B DIMENSIONS

Bar	A	B
s140(E)	900	1,300 m
s141(E)	900	1,650 m
s143(E)	900	750
s144(E)	900	450

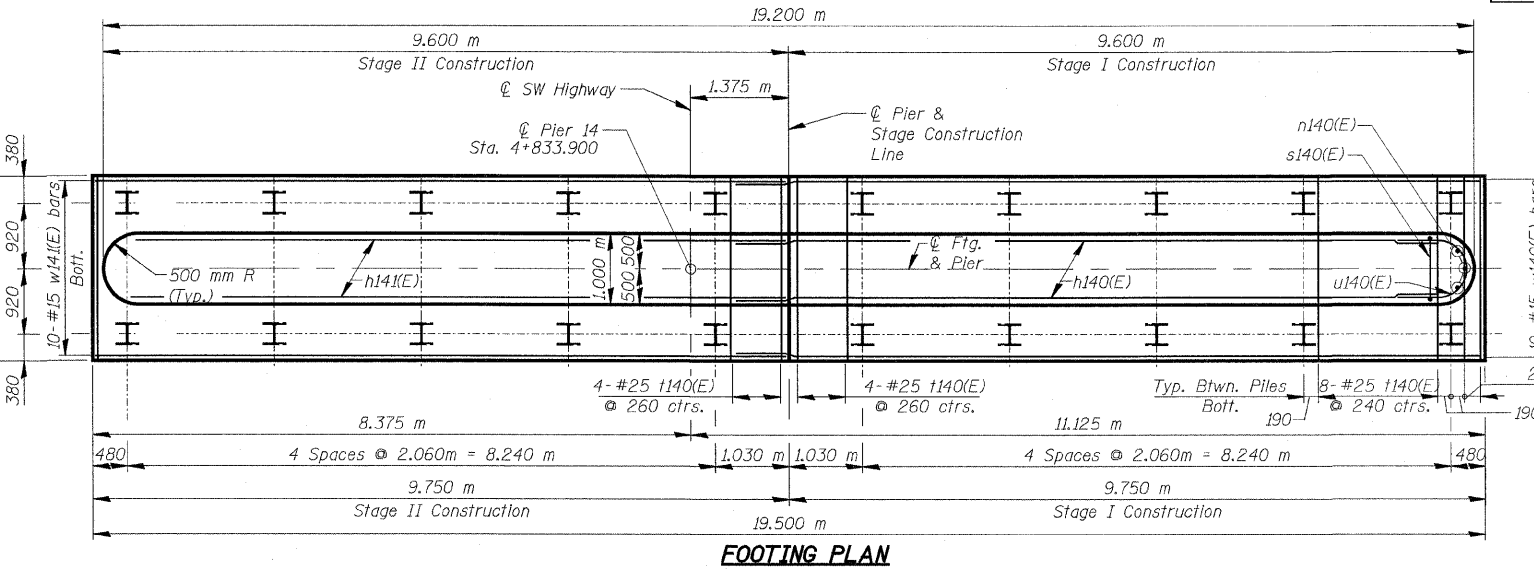
BAR n140(E) or n141(E)

BAR p142(E)

BAR s140(E), s141(E), s143(E) & s144(E)

BAR s142(E)

BAR u140(E) & u141(E)



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 14
 SOUTHWEST HIGHWAY OVER
 B&O RAILROAD AND STONY CREEK
 FAU 3578 SECTION 15 VB-1-F
 STRUCTURE NUMBER 016-2771
 COOK COUNTY STATION 4+716.497
 SCALE: NONE DRAWN BY: E. Mroozek
 DATE: MAY 22, 2009 CHECKED BY: G. Holsted

FOR INFORMATION ONLY

J:\vermillion(Rdwy_Lise)\5/29/2009\10:54 PM\qa\1dort\9556.ad\drawings\struct\Yfabr\action-plans\60_FAB_Pier_14.dwg
 PATRICK ENGINEERING INC. LISLE, ILLINOIS

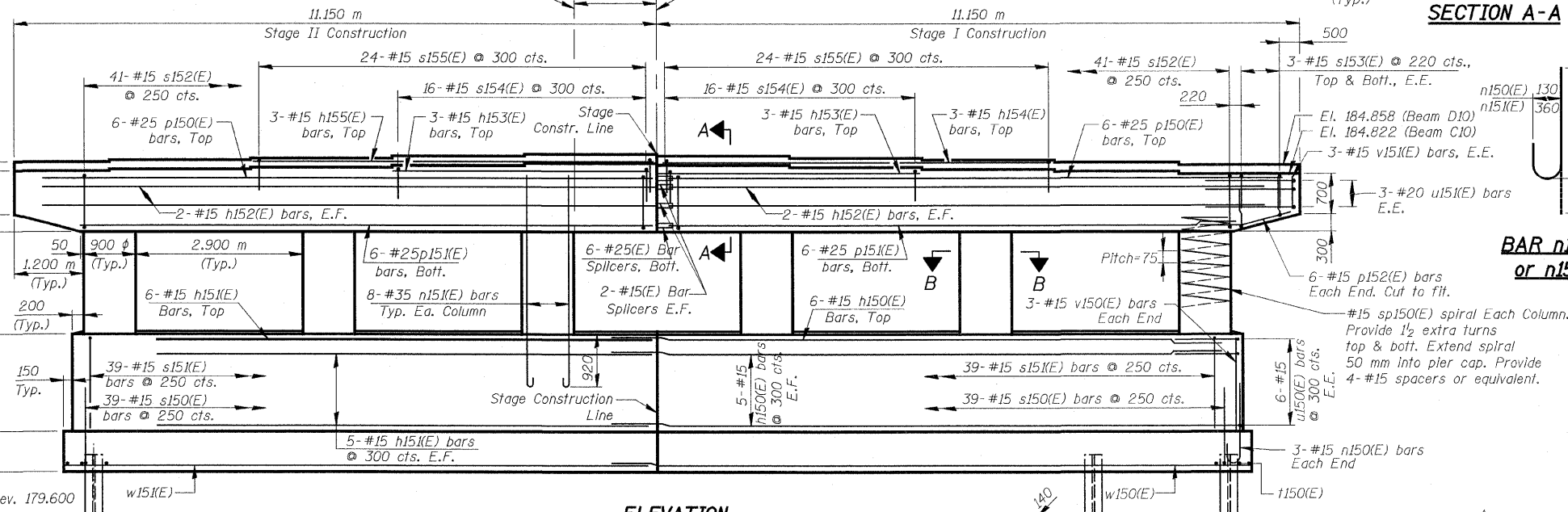
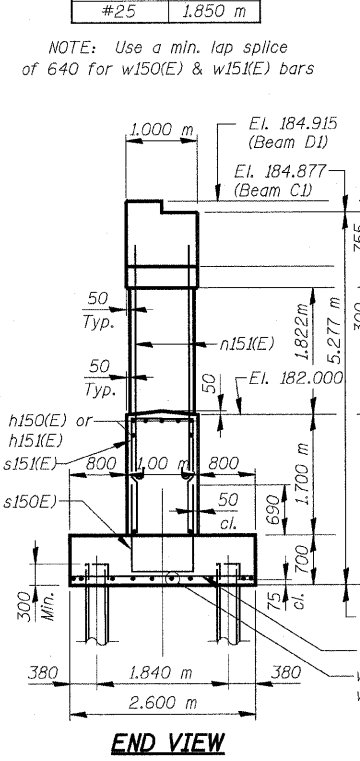
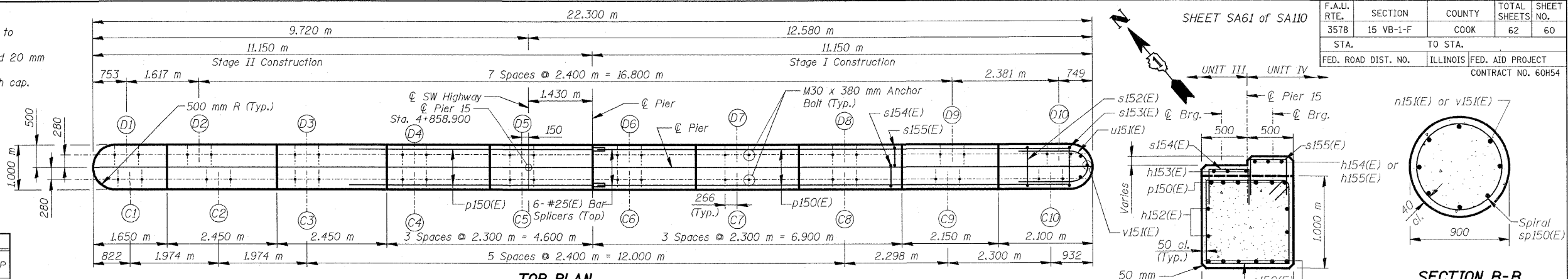
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	60
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 60H54	

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard 20 mm chamfer except as noted.
Four steps monolithically with cap.

TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1.110 m
#25	1.850 m

NOTE: Use a min. lap splice of 640 for w150(E) & w151(E) bars



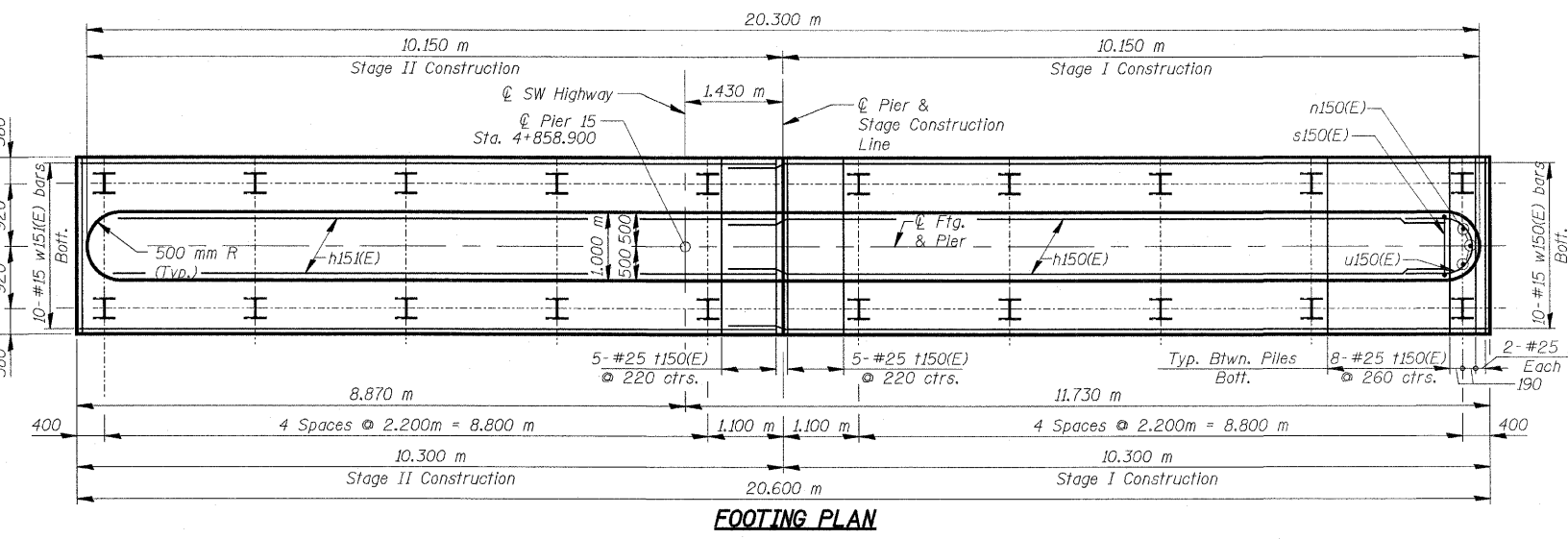
PIER CAP STEPS & ELEVATIONS (Looking Northeast)

Beam	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
Elevation	184.877	184.908	184.938	184.974	185.010	184.978	184.942	184.906	184.868	184.822
Step	0.031	0.030	0.036	0.036	-0.032	-0.036	-0.036	-0.038	-0.046	
Beam	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
Elevation	184.915	184.942	184.978	185.014	185.050	185.018	184.982	184.946	184.907	184.858
Step	0.027	0.036	0.036	0.036	-0.032	-0.036	-0.036	-0.039	-0.049	

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h150(E)	16	# 15	10.590	—
h151(E)	16	# 15	9.600	—
h152(E)	8	# 15	10.600	—
h153(E)	6	# 15	4.500	—
h154(E)	3	# 15	6.800	—
h155(E)	3	# 15	6.950	—
n150(E)	6	# 15	1.480	U
n151(E)	48	# 35	4.000	U
p150(E)	12	# 25	10.600	—
p151(E)	12	# 25	9.950	—
p152(E)	12	# 15	1.830	—
s150(E)	78	# 15	3.500	□
s151(E)	78	# 15	4.200	□
s152(E)	82	# 15	3.880	□
s153(E)	12	# 15	2.400	□
s154(E)	32	# 15	1.400	□
s155(E)	48	# 15	1.300	□
sp150(E)	6	# 15	1.870	W
t150(E)	78	# 25	2.500	—
u150(E)	12	# 15	3.150	U
u151(E)	6	# 20	3.590	U
v150(E)	6	# 15	1.650	—
v151(E)	6	# 15	0.600	—
w150(E)	10	# 15	10.940	—
w151(E)	10	# 15	10.200	—
Structure Excavation		m ³	127	
Concrete Structures		m ³	103.4	
Reinforcement Bars, Epoxy Coated		kg	6,900	
Bar Splacers		Each	16	
Furnishing Steel Piles HP310x79		m	200.0	
Driving Piles		m	200.0	
Pile Shoes		Each	20	
Concrete Sealer		m ²	23	

PILE DATA
Type: Steel HP 12x53 with pile shoes
Nominal Required Bearing: 1860 kN
Allowable Resistance Available: 620 kN
Est. Length: 10.0 m
No. Production Piles: 20
No. Test Piles: None



A & B DIMENSIONS

Bar	A	B
s150(E)	900	1.300 m
s151(E)	900	1.650 m
s153(E)	900	750
s154(E)	500	450
s155(E)	400	450

- NOTES:**
- Reinforcement bars designated (E) shall be Epoxy Coated.
 - Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
 - All dimensions are in millimeters (mm) except as noted.
 - Minimum lap for spirals 770 mm.

REVISIONS

NAME	DATE

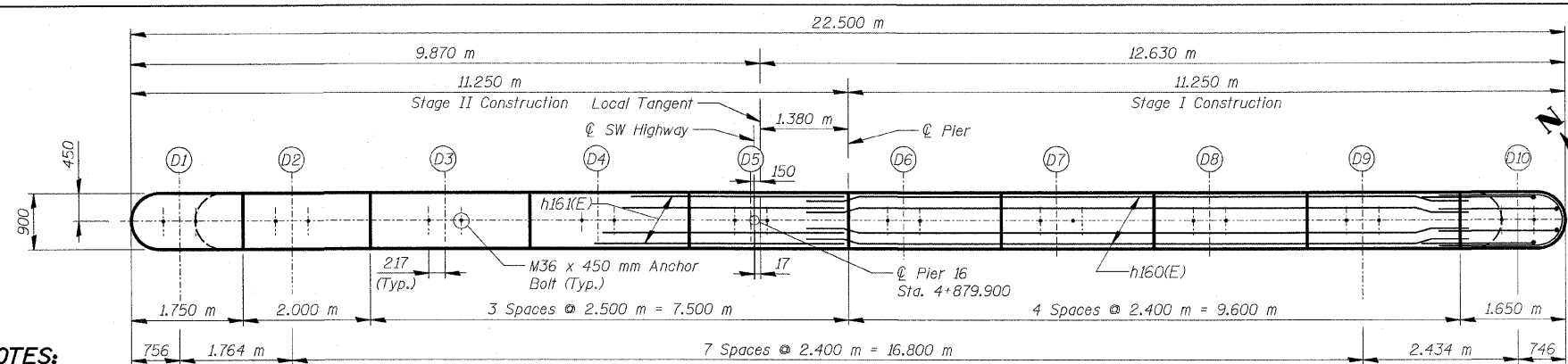
ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 15
SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2171
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: E. Mroozek
DATE: MAY 22, 2009 CHECKED BY:

5/29/2009 11:01 PM
 J:\vermillion\rdwy_1\isle\529\2009\drawings\struct\Fabrication\plans\61_FAB_Pier_15.dwg
 a:\dof\9556_a0\drawings\struct\Fabrication\plans\61_FAB_Pier_15.dwg



FOR INFORMATION ONLY

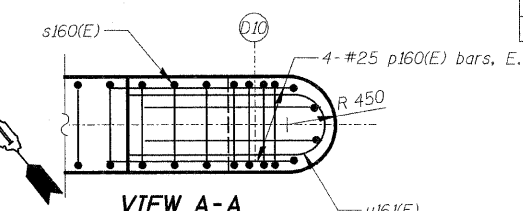
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	61
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 68888		



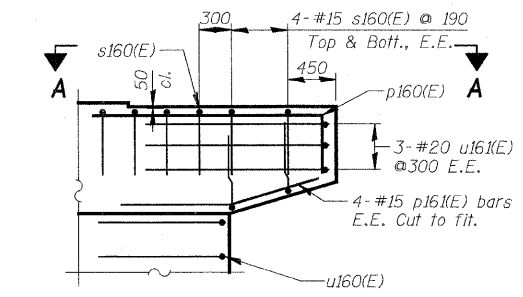
NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard 20mm chamfer except as noted.
Pour steps monolithically with cap.

TOP PLAN



VIEW A-A

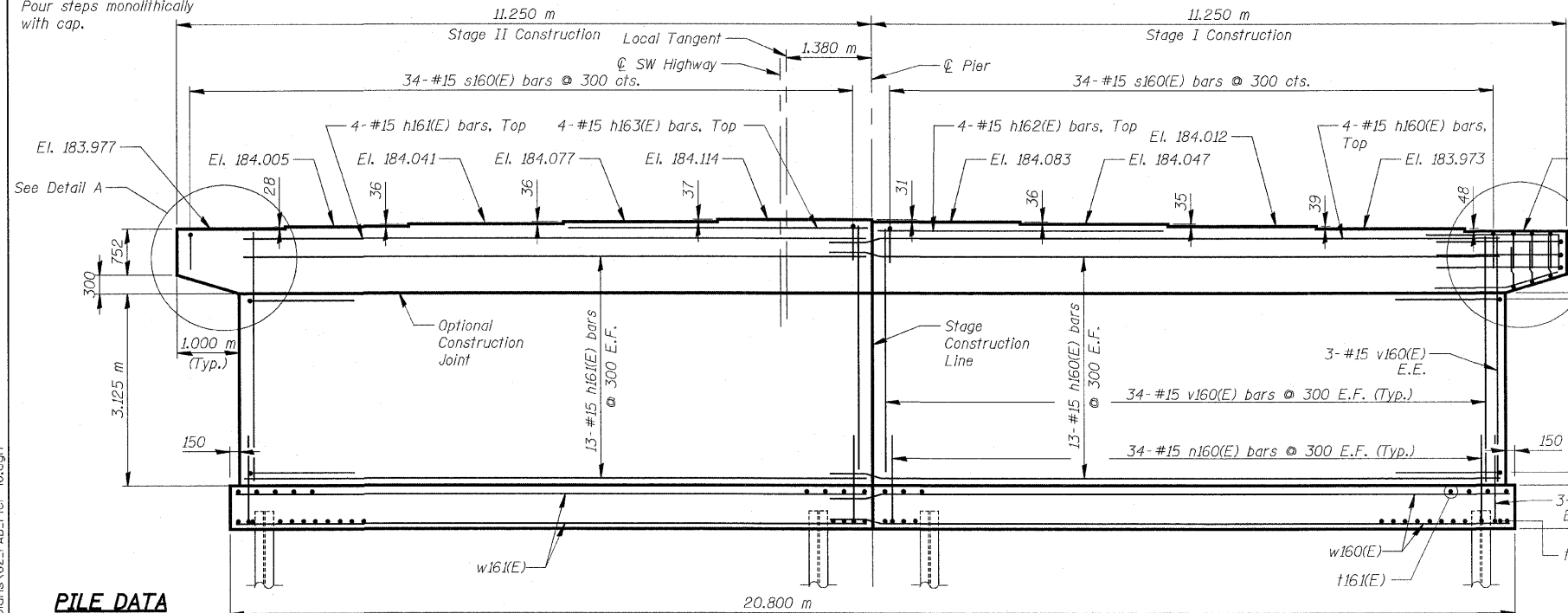


DETAIL A

v160(E), h160(E) & h161(E) not shown for clarity

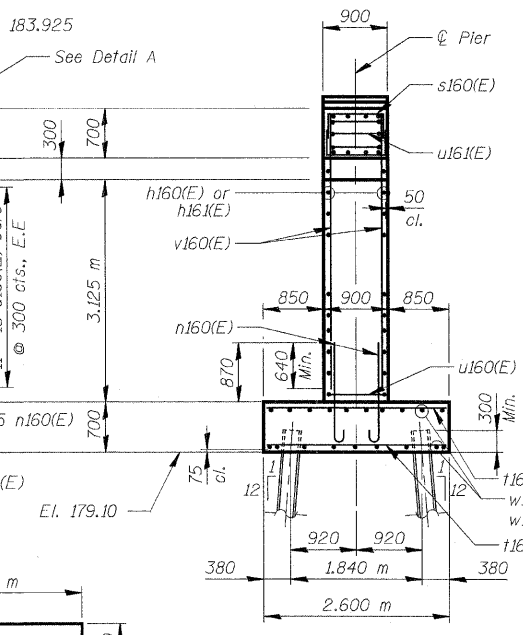
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h160(E)	30	# 15	10.740	—
h161(E)	30	# 15	9.750	—
h162(E)	4	# 15	4.700	—
h163(E)	4	# 15	4.900	—
n160(E)	142	# 15	1.670	—
p160(E)	8	# 25	3.460	—
p161(E)	8	# 15	1.690	—
s160(E)	84	# 15	2.080	—
t160(E)	78	# 25	2.500	—
t161(E)	70	# 15	2.500	—
u160(E)	22	# 15	3.090	—
u161(E)	6	# 20	5.430	—
v160(E)	142	# 15	4.030	—
w160(E)	20	# 15	11.290	—
w161(E)	20	# 15	10.300	—
Structure Excavation				m ³ 150
Concrete Structures				m ³ 117.5
Reinforcement Bars, Epoxy Coated				kg 4,600
Furnishing Steel Piles HP310x79				m 279.3
Driving Piles				m 279.3
Test Pile Steel HP310x79				Each 1
Pile Shoes				Each 20

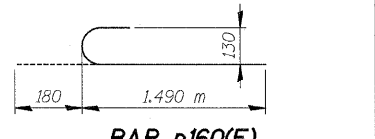


ELEVATION

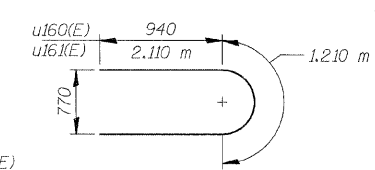
(Looking Northeast)



SIDE VIEW



BAR n160(E)

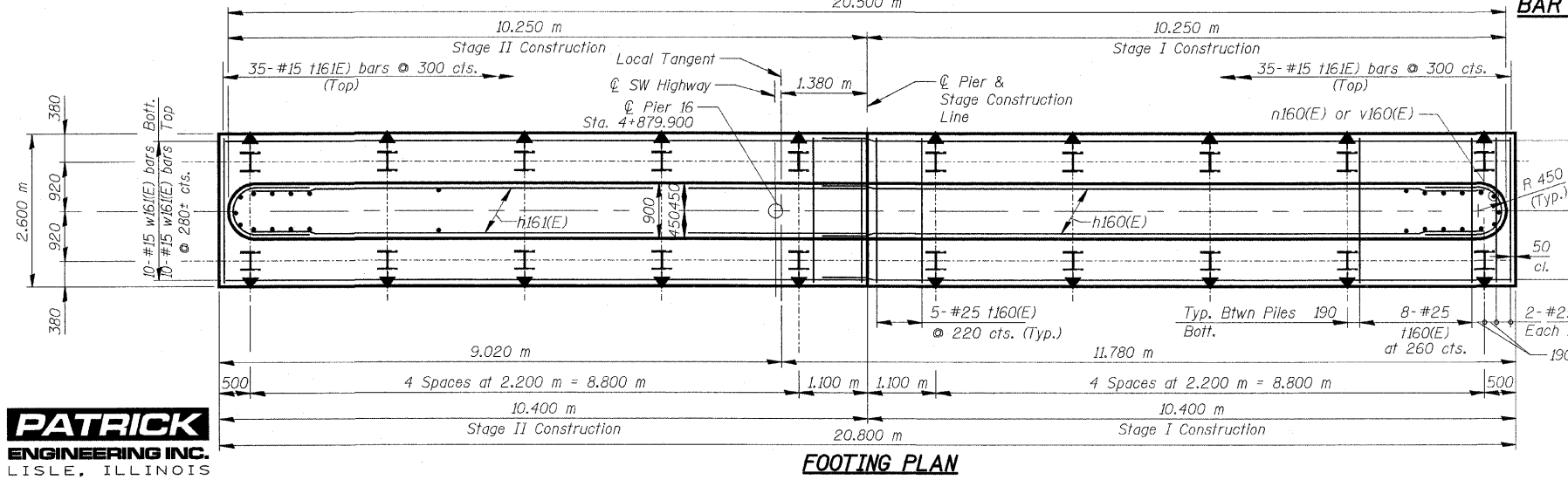


BAR u160(E) & u161(E)

TYP. LAP SPLICE	
BAR SIZE	MIN. LAP
#15	890 mm
#20	1,110 m
#25	1,850 m

PILE DATA

Type: Steel HP 12x53 with pile shoes
Nominal Required Bearing: 1860 kN
Allowable Resistance Available: 620 kN
Est. Length: 14.7 m
No. Production Piles: 19
No. Test Piles: 1



FOOTING PLAN

BAR p160(E)

BAR p161(E)

BAR s160(E)

LEGEND:

E.E. Each End
E.F. Each Face

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.

REVISIONS	
NAME	DATE

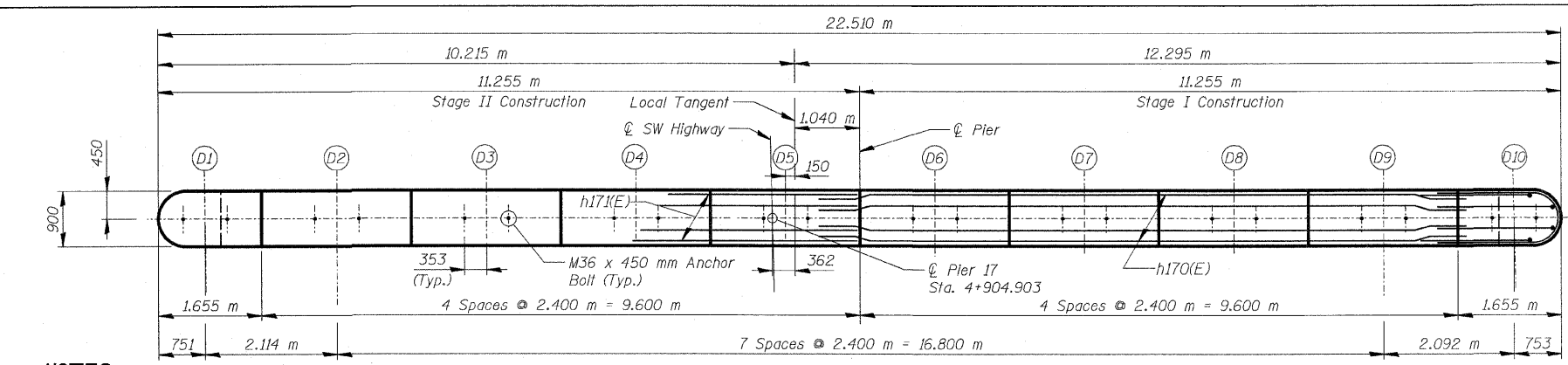
ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 16
SOUTHWEST HIGHWAY OVER
B&O RAILROAD AND STONY CREEK
FAU 3578 SECTION 15 VB-1-F
STRUCTURE NUMBER 016-2771
COOK COUNTY STATION 4+716.497
SCALE: NONE DRAWN BY: E. Mroozek
DATE: MAY 22, 2009 CHECKED BY: G. Hottelsted

FOR INFORMATION ONLY

J:\vermillion(Rdwy.L15e)\5/29/2009 11:10 PM
 c:\dot\9556_c0\drawings\structure\fabrication\plans\62.FAB.Pier_16.dgn

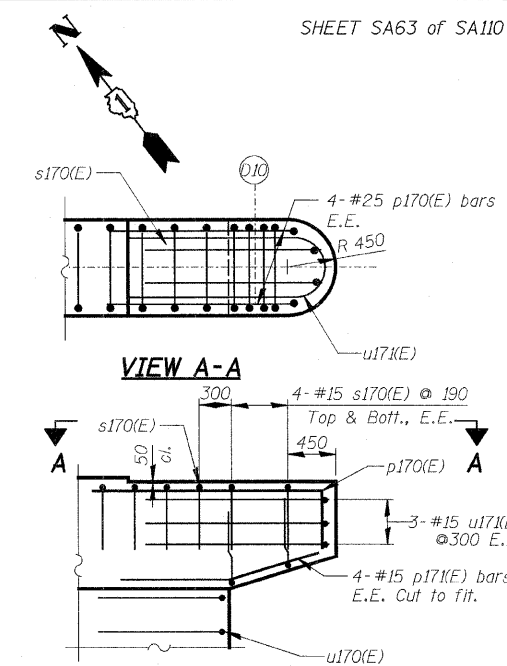


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15 VB-1-F	COOK	62	62
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60H54				



NOTES:
 Space Reinforcement in cap to miss anchor bolts.
 All edges shall have standard 20mm chamfer except as noted.
 Four steps monolithically with cap.

TOP PLAN

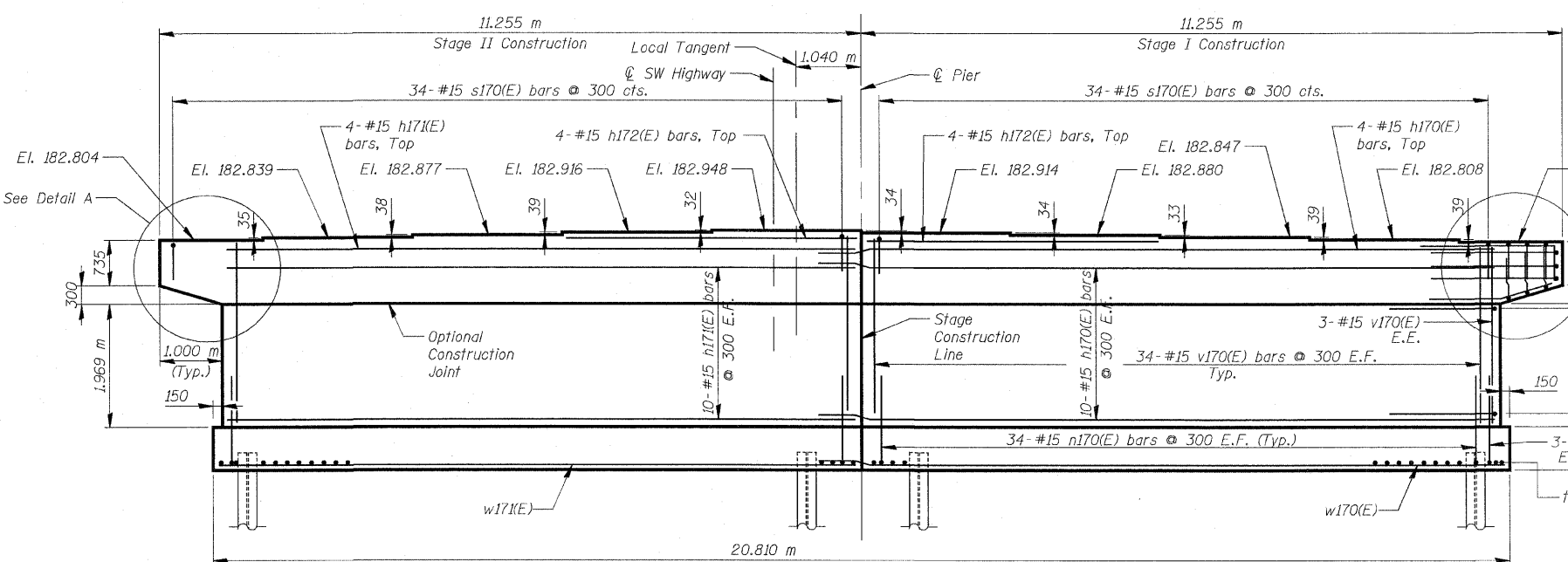


VIEW A-A

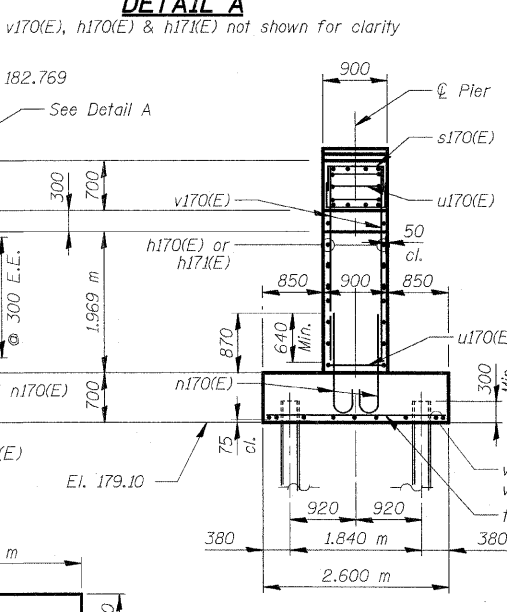
DETAIL A

BILL OF MATERIAL

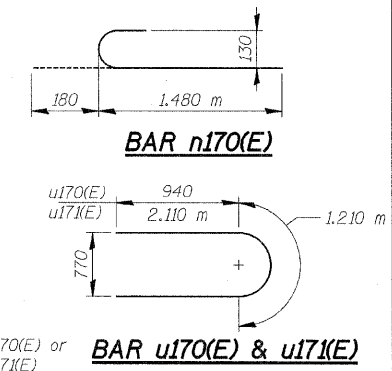
Bar	No.	Size	Length (m)	Shape
h170(E)	24	# 15	10.750	—
h17(K)E	24	# 15	9.760	—
h172(E)	8	# 15	4.700	—
n170(E)	142	# 15	1.660	—
p170(E)	8	# 25	3.460	—
p17(K)E	8	# 15	1.690	—
s170(E)	84	# 15	2.080	—
1170(E)	78	# 25	2.500	—
u170(E)	16	# 15	3.090	—
u17(K)E	6	# 20	5.430	—
v170(E)	142	# 15	2.870	—
w170(E)	10	# 15	11.050	—
w17(K)E	10	# 15	10.310	—
Structure Excavation		m ³	149	
Concrete Structures		m ³	96.1	
Reinforcement Bars, Epoxy Coated		kg	3,500	
Furnishing Steel Piles HP310x79		m	280.0	
Driving Piles		m	280.0	
Pile Shoes		Each	20	



ELEVATION
Looking Northeast



SIDE VIEW



BAR n170(E)

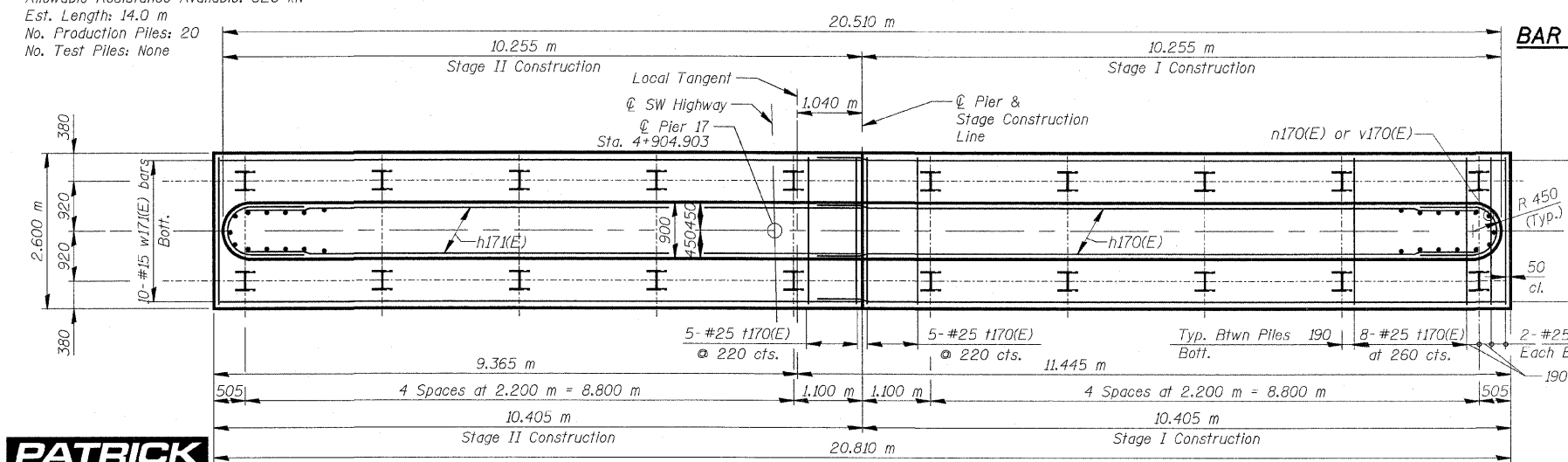
BAR u170(E) & u17(K)E

TYP. LAP SPLICE

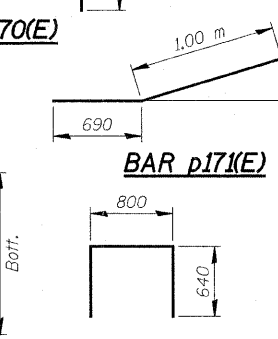
BAR SIZE	MIN. LAP
#15	890 mm
#20	1.110 m

NOTE: Use a min. lap splice of 640 for w170(E) & w17(K)E bars

PILE DATA
 Type: Steel HP 12x53 with pile shoes
 Nominal Required Bearing: 1860 kN
 Allowable Resistance Available: 620 kN
 Est. Length: 14.0 m
 No. Production Piles: 20
 No. Test Piles: None



FOOTING PLAN



BAR p170(E)

BAR p17(K)E

BAR s170(E)

LEGEND:

E.E. Each End
 E.F. Each Face

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Bars indicated thus 20 x 3 - #15 etc. indicates 20 lines of bars with 3 lengths per line.
3. All dimensions are in millimeters (mm) except as noted.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		PIER 17 SOUTHWEST HIGHWAY OVER B&O RAILROAD AND STONY CREEK FAU 3578 SECTION 15 VB-1-F STRUCTURE NUMBER 016-2771 COOK COUNTY STATION 4+716.497 SCALE: NONE DRAWN BY: E. Mroozek DATE: MAY 22, 2009 CHECKED BY: G. Hatlostad

FOR INFORMATION ONLY

J:\vermillion\rdwy_1\isle\5229\2009\5229\2009\ad\drawings\structure\fabrication\plans\63_FAB_Pier_17.dgn
 5/29/2009 11:16 PM
 PATRICK ENGINEERING INC. LISLE, ILLINOIS