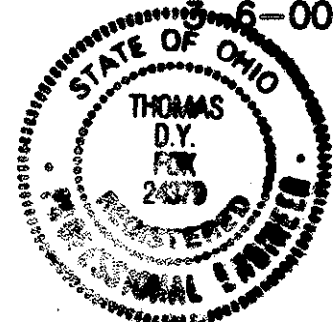


**UNDERGROUND UTILITIES**  
TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

**DESIGN DESIGNATION**  
SEE SCHEMATIC

DESIGN EXCEPTION:	DESIGN FEATURE	APPROVED DATES	SHEET NUMBERS
SR 181-HORIZONTAL CURVE RADIUS		3-6-00	352,384
SR 181-SUPERELEVATION RATE		3-6-00	352,384

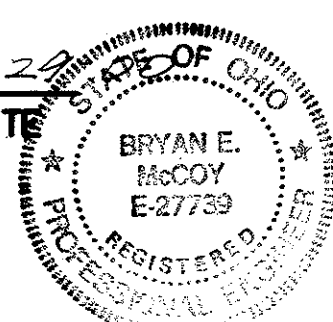


*Thomas D. Fok*  
THOMAS D.Y. FOK, P.E., P.S.  
CHAIRMAN

12-29-00  
DATE

*Bryan E. McCoy*  
BRYAN E. McCOY, P.E., P.S.  
VICE CHAIRMAN

12-29-00  
DATE



PLAN PREPARED BY:

**McCOY/FOK ASSOCIATES, INC.**  
367 Ghent Rd.  
Akron, Ohio 44333

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**CRA/RIC-30-33.500/0.000**

JACKSON TOWNSHIP  
SANDUSKY TOWNSHIP  
SPRINGFIELD TOWNSHIP

CRAWFORD AND RICHLAND COUNTIES

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NO. 132 OMITTED  
NO. 368 OMITTED  
NO. 381-383 OMITTED  
NO. 576-577 OMITTED  
NO. 711 OMITTED

**SPECIAL PROVISIONS**  
INDIVIDUAL PERMIT NO. (B)-96-493-001(3) DATED: 08-23-01

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS			
BP-3.1	07-28-00	F-3.1	07-28-00	TC-12.30	01-19-01	LA-1.1	07-28-00	MT-95.30M	04-25-94	806	09-09-97		
BP-4.1	07-28-00	F-3.3	07-28-00	TC-21.20	01-19-01	LA-1.2	07-28-00	MT-95.40M	04-25-94	814	06-02-98	905	04-01-98
BP-5.1	07-28-00	F-3.4	07-28-00	TC-22.10	01-19-01	HL-10.11M	05-01-95					906	05-05-98
BP-6.1	07-28-00			TC-41.10	01-19-01	HL-10.12	07-20-01	MT-99.50M	03-01-96	816	04-21-97	910	07-11-00
BP-9.1	07-28-00	GR-1.1M	10-21-97	TC-41.20	01-19-01	HL-10.13M	05-01-95	MT-99.51M	03-01-96	830	10-21-98	954	09-09-97
		GR-1.2M	01-03-96	TC-41.50	01-19-01	HL-20.11M	03-31-95	MT-101.60M	04-25-94	839	06-14-95		
CB-2.3	07-20-01	GR-1.3M	11-30-94	TC-42.10	01-19-01	HL-30.11	07-20-01	MT-105.10M	04-25-94	842	01-06-99	908	11-07-00
CB-3.1	07-20-01	GR-2.1M	04-14-98	TC-42.20	04-20-01	HL-30.21M	05-01-95	MT-105.11M	04-25-94	844	01-06-99		
CB-3.2	07-20-01	GR-3.1M	10-21-97	TC-52.10	04-20-01	HL-30.22	07-20-01			846	09-09-97		
CB-3.4	07-20-01	GR-4.1M	11-30-94	TC-52.20	04-20-01	HL-40.10	07-20-01	AS-1-81M	10-25-94	863	10-12-99		
		GR-4.2M	10-21-97	TC-61.10	01-19-01	HL-60.11	07-20-01			864	07-11-00		
DM-1.1	07-20-01	GR-4.3M	10-21-97	TC-65.10M	11-01-95	HL-60.31	07-20-01	ICD-1-82M	03-20-95	870	03-27-01		
DM-1.2	07-20-01	GR-4.4M	11-30-94	TC-65.11M	11-01-95			GSD-1-96M	11-21-97	877	04-13-99		
DM-4.2	07-20-01	GR-5.1M	04-21-95	TC-65.12M	11-01-95	MH-1.1	07-20-01			880	11-07-00		
DM-4.3	07-20-01	GR-5.2M	11-30-94	TC-71.10M	09-01-93			SICD-1-96M	02-12-97	887	03-28-00		
DM-4.4	07-20-01	GR-5.3M	11-30-94	TC-72.20	01-19-01	RM-1.1	04-29-99	SBR-1-99M	01-12-99	894	10-12-99		
		GR-6.1M	01-03-96	HW-2.1M	07-12-95	RM-4.2M	10-21-97			899	10-21-98		
F-2.1	07-28-00	GR-6.2M	01-03-96	HW-2.2M	07-12-95	RM-4.5M	10-21-97						



**PROJECT DESCRIPTION**

RELOCATION OF U.S. ROUTE 30 THROUGH PARTS OF CRAWFORD AND RICHLAND COUNTIES. BEGINNING APPROXIMATELY 0.75 KM WEST OF S.R. 61 AND ENDING AT THE WESTERN TERMINUS OF THE ONTARIO BYPASS. THE TOTAL LENGTH OF THIS PROJECT IS APPROXIMATELY 8.907 KM. THE PROJECT CONSISTS OF CONSTRUCTING A FOUR-LANE DIVIDED, LIMITED ACCESS HIGHWAY ON NEW ALIGNMENT, PARTIAL COMPLETION OF ONE INTERCHANGE, CONSTRUCTION OF ONE FULL DIAMOND INTERCHANGE, CROSSROAD AND RAILROAD GRADE SEPARATIONS AND RELOCATIONS, STRUCTURES OVER VARIOUS ROADS, TRAFFIC CONTROL AND LIGHTING.

**LIMITED ACCESS**

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO

**1997 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC EXCEPT AS NOTED ON SHEET 25-55e, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (1) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMITS OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

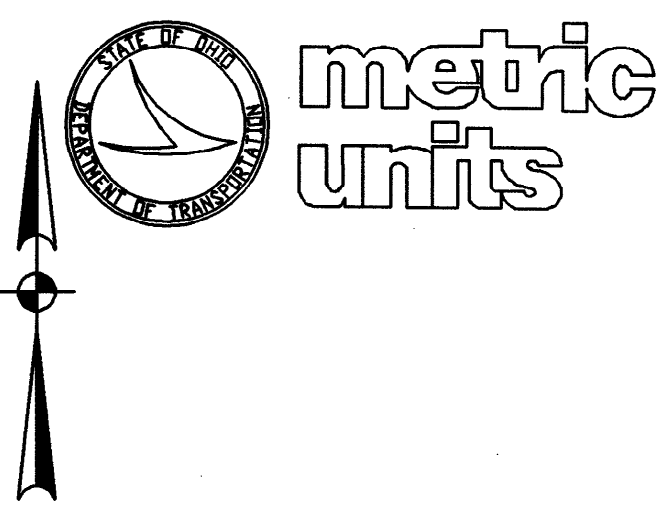
APPROVED *Thomas M. O'Leary*  
DATE 3-20-01 DISTRICT DEPUTY DIRECTOR

APPROVED *Jordan Proctor*  
DATE 10-25-01 DIRECTOR, DEPARTMENT OF TRANSPORTATION

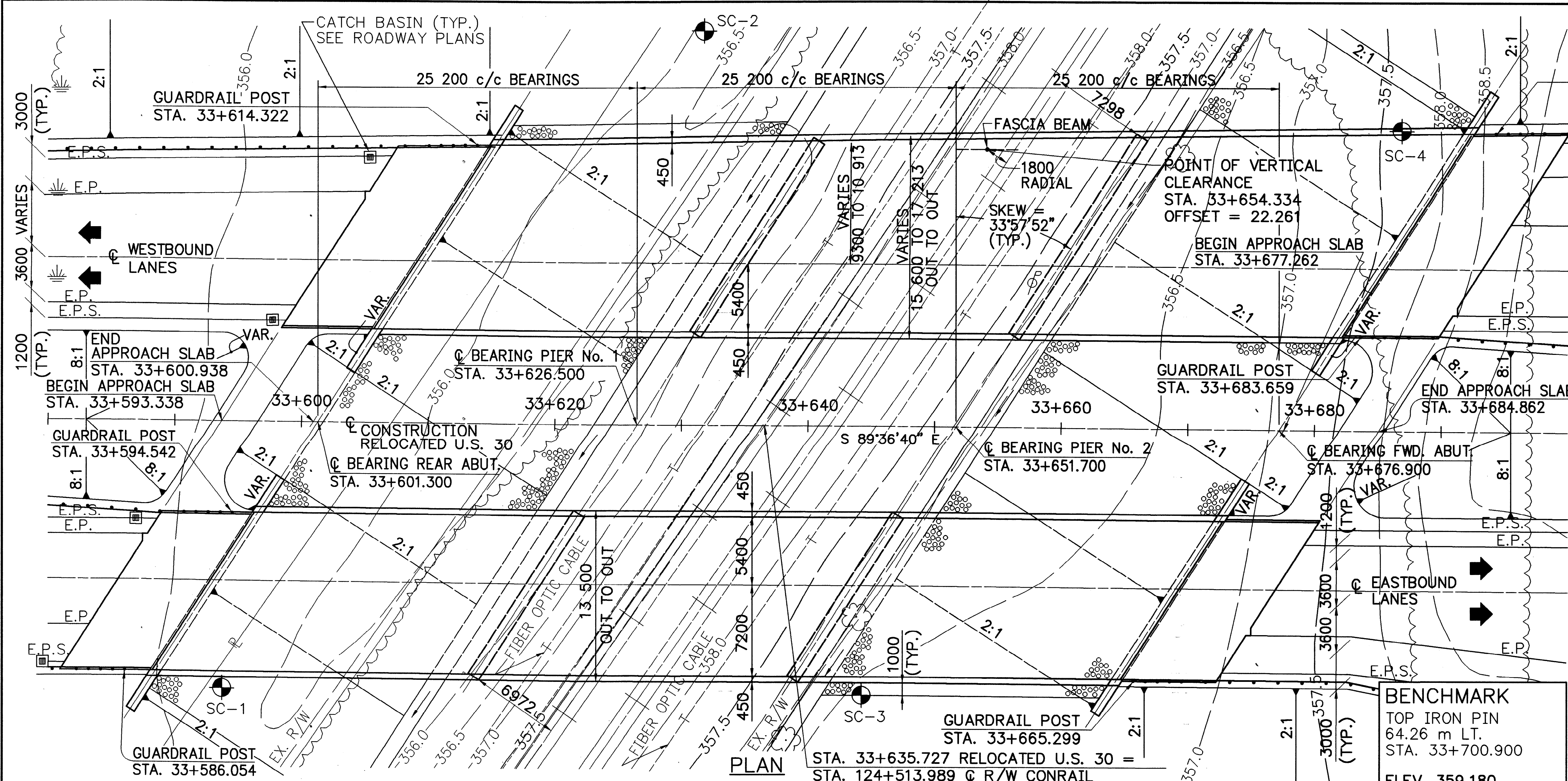
FEDERAL PROJECT NO. TE21-G990 (075)  
CONSTRUCTION PROJECT NO. 16284  
RAILROAD INVOLVEMENT CSX  
CRA/RIC-30-33.500/0.000  
1/712

CRA - USR 30 - 33.500/0.000  
020033 PID - 16284  
Dist 3 1/23/2002  
GT001.DWG  
12-27-2000 9:21 AM  
1:1000M





DESIGN AGENCY  
 McCOY/FOK & ASSOCIATES INC.  
 367 GHENT ROAD, SUITE 1A  
 AKRON, OHIO



GUARDRAIL POST  
 STA. 33+694.644

**NOTE**  
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

WHERE CONRAIL APPEARS IN THE PLANS, CSX TRANSPORTATION, INC. SHALL BE CONSIDERED.

**FOUNDATION INVESTIGATION LEGEND**

INDICATES BORING LOCATION

SITE	STATION	OFFSET mm	TOP OF GROUND ELEVATION
SC-1	33+593.0	20 000 RT.	355.92
SC-2	33+632.0	37 000 LT.	355.96
SC-3	33+644.0	20 000 RT.	356.60
SC-4	33+687.0	23 000 LT.	357.76

**TRAFFIC DATA**

DESIGN ADT (2020) = 14,160  
 DESIGN ADTT (2020) = 3965

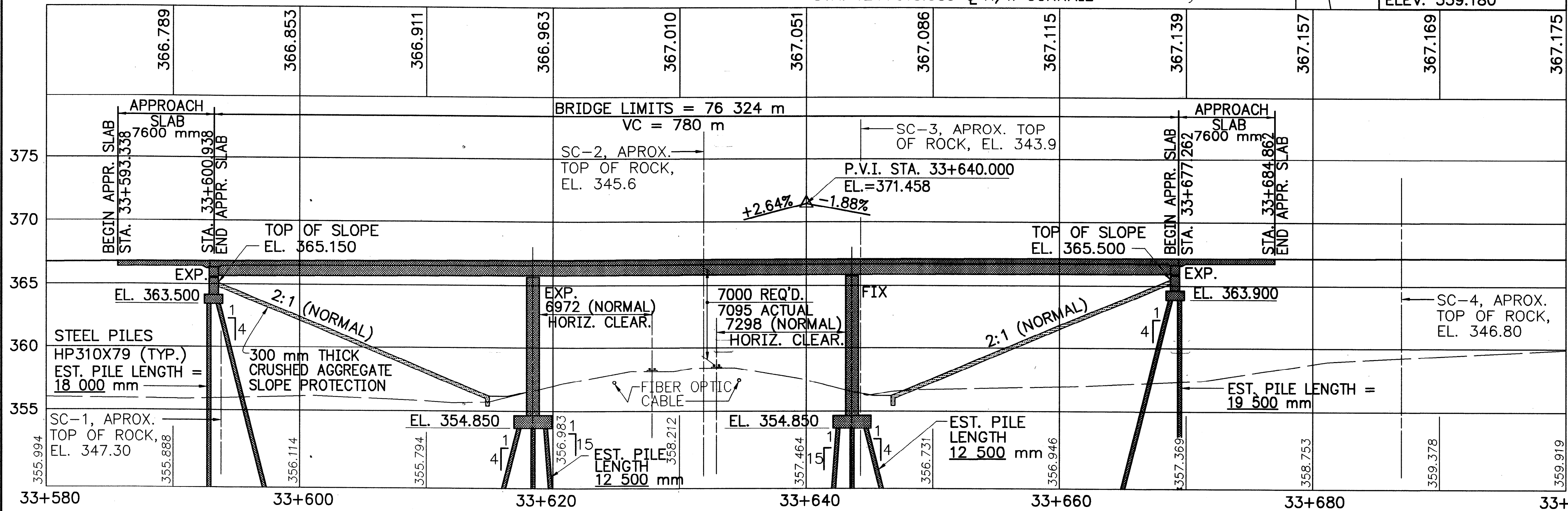
**PROPOSED STRUCTURE**

TYPE: DUAL-3 SPAN CONTINUOUS A588M STEEL BEAM BRIDGES w/COMPOSITE REINFORCED CONCRETE DECK ON T-TYPE PIERS AND SEMI-INTEGRAL ABUTMENTS  
 SPANS: 25 200, 25 200 c/c BEARINGS  
 ROADWAY: W.B. VARIES T/T PARAPETS E.B. 12 600 T/T PARAPETS  
 DESIGN LOADING: MS18 CASE I & ALTERNATE MILITARY LOADING  
 SKEW: 33'-57'-52" L.F.  
 ALIGNMENT: TANGENT  
 WEARING SURFACE: MONOLITHIC CONCRETE  
 APPROACH SLABS: 7600 (AS-1-81M)  
 CROWN: 0.016  
 LATITUDE: N40°-45'-45"  
 LONGITUDE: W82°-45'-10"

**LEGEND:**

- E.P. EDGE OF PAVEMENT
- E.P.S. EDGE OF PAVED SHOULDER
- E.S. EDGE OF SHOULDER
- TYP. TYPICAL

ALL DIMENSIONS ARE IN MILLIMETERS  
 ALL ELEVATIONS AND STATIONING ARE IN METERS



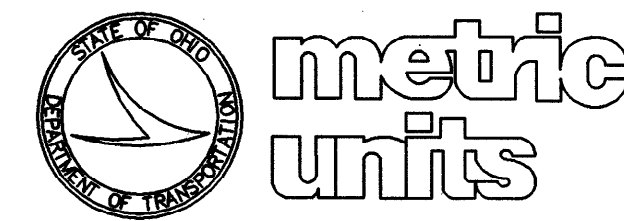
PROFILE SHOWN ALONG PROFILE GRADE OF EASTBOUND RELOCATED U.S. 30 OVER CONRAIL

CRAWFORD COUNTY  
 STA. 33+600.938  
 STA. 33+677.262

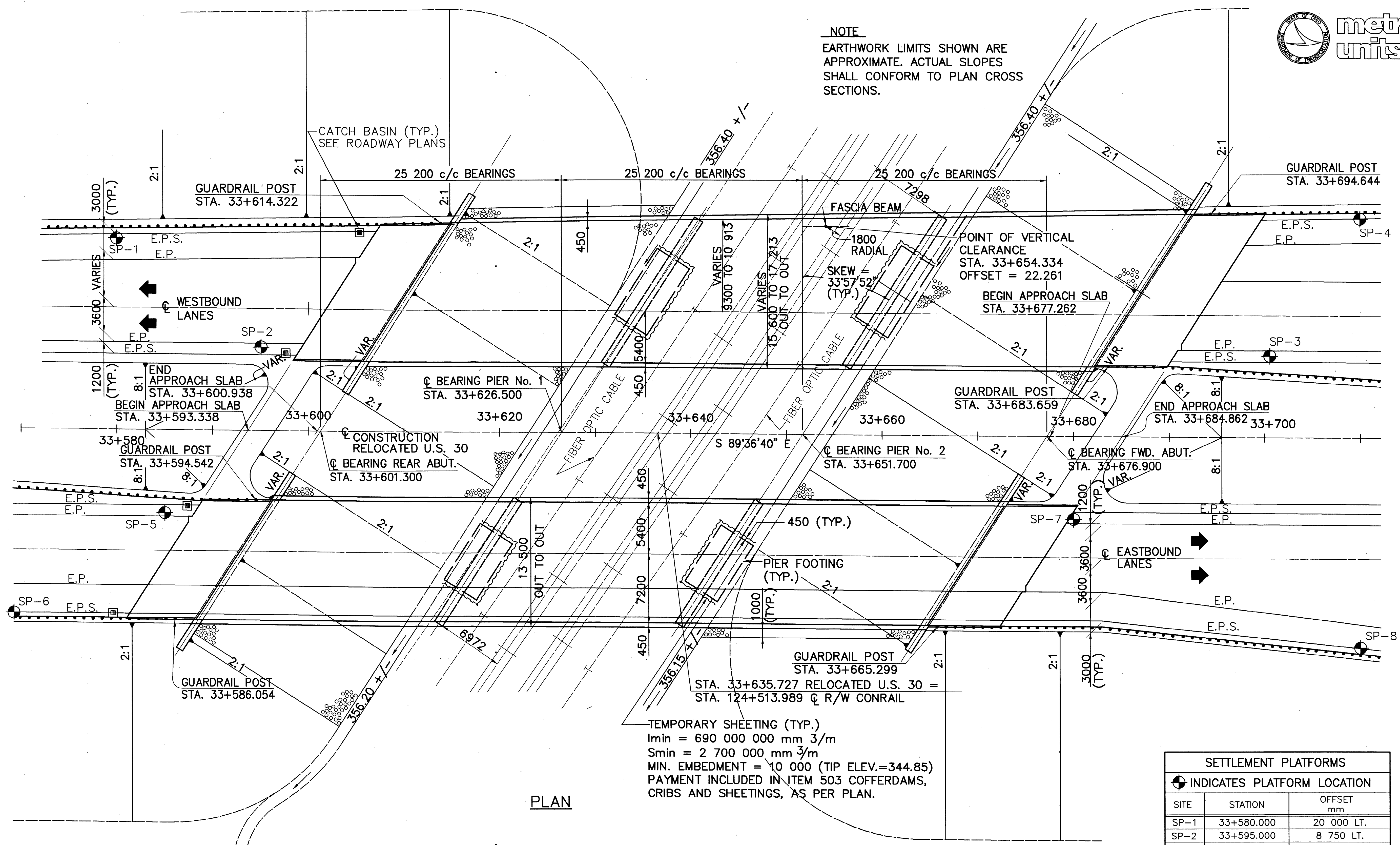
SITE PLAN  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000

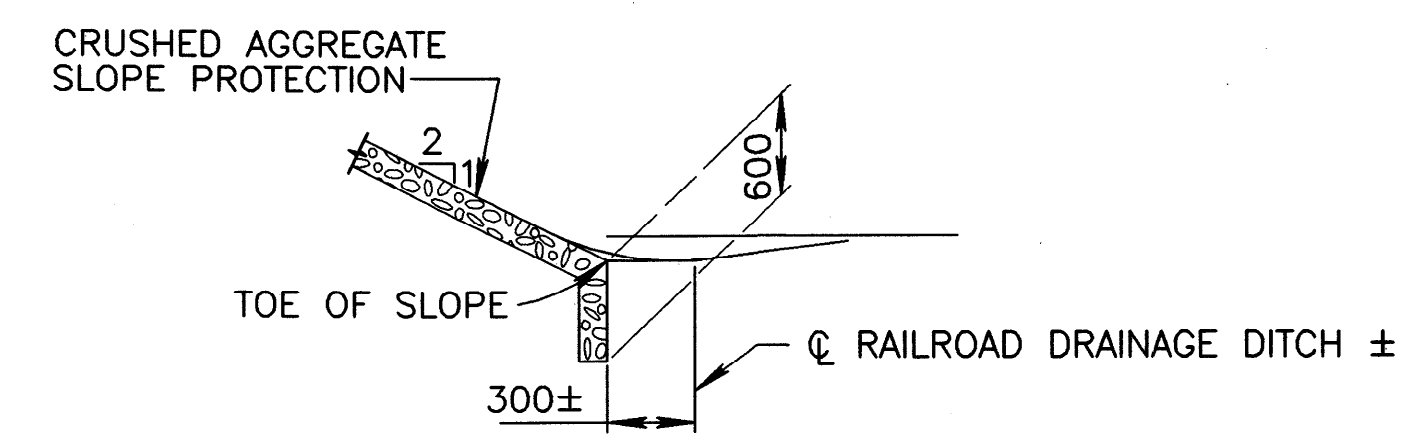
L:\DRAWINGS\93172\STRUCT\CONRAIL\93172.dwg April 22, 2003, 10:08am By:mdm



**NOTE**  
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.



**PLAN**



**TYPICAL ABUTMENT SLOPE DETAIL**

TEMPORARY SHEETING (TYP.)  
 $I_{min} = 690\ 000\ 000\ mm\ 3/m$   
 $S_{min} = 2\ 700\ 000\ mm\ 3/m$   
 MIN. EMBEDMENT = 10\ 000 (TIP ELEV.=344.85)  
 PAYMENT INCLUDED IN ITEM 503 COFFERDAMS, CRIBS AND SHEETINGS, AS PER PLAN.

SETTLEMENT PLATFORMS		
⊕ INDICATES PLATFORM LOCATION		
SITE	STATION	OFFSET mm
SP-1	33+580.000	20 000 LT.
SP-2	33+595.000	8 750 LT.
SP-3	33+700.000	8 750 LT.
SP-4	33+710.000	23 000 LT.
SP-5	33+585.000	8 750 RT.
SP-6	33+570.000	20 000 RT.
SP-7	33+680.000	8 750 RT.
SP-8	33+710.000	22 000 RT.

DESIGN AGENCY: McCOY/FOK & ASSOCIATES INC. 367 CHEST ROAD, SUITE 1A AKRON, OHIO

REVIEWED DATE: 8-14-00  
 LBD  
 STRUCTURE FILE NUMBER: L-1701851  
 R-1701878

DESIGNED: RHW  
 CHECKED: WEB

GENERAL PLAN  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000

2 / 27

538  
712



ESTIMATED QUANTITIES - WESTBOUND BRIDGE

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER	GENERAL	AS PER PLAN SHEET NO.
SPECIAL	20365000	4	EACH	SETTLEMENT PLATFORM				4	GN-1
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN				LUMP	
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP	LUMP			GN-1
									2
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00200	487.5	METER	STEEL PILES HP310x79, FURNISHED		487.5			
507	00250	487.5	METER	STEEL PILES HP310x79, DRIVEN		487.5			
507	00400	808.5	METER	STEEL PILES, MISC.: HP310x110, FURNISHED	808.5				
507	00400	808.5	METER	STEEL PILES, MISC.: HP310x110, DRIVEN	808.5				
507	50500	53	EACH	STEEL PILE SPLICES	33	20			
516	44100	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (60.0 mm X 330 mm X 510 mm WITH 50 mm X 356 mm X 660 mm LOAD PLATE)		7			
516	44100	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (60.0 mm X 330 mm X 510 mm WITH 50 mm X 356 mm X 536 mm LOAD PLATE)		7			
516	44201	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (75.0 mm X 230 mm X 355 mm WITH 38 mm X 256 mm X 381 mm LOAD PLATE)	14				22
518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	LUMP				GN-1
518	40000	52	METER	150 mm PERFORATED CORRUGATED PLASTIC PIPE	52				
518	40010	12	METER	150 mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	12				
842	41001	195	CU METER	CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN		195			GN-1
842	45501	137	CU METER	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	137				GN-1
842	46501	46	CU METER	CLASS C CONCRETE, FOOTING, AS PER PLAN		46			GN-1
844	48041	38	CU METER	HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN	38				GN-1
844	49000	LUMP		HIGH PERFORMANCE CONCRETE TRIAL MIX			LUMP		
844	49010	LUMP		HIGH PERFORMANCE CONCRETE TESTING			LUMP		
863	10061	LUMP		STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, AS PER PLAN, A588M			LUMP		3
863	20000	5037	EACH	WELDED STUD SHEAR CONNECTOR			5037		
864	10100	1065	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	83	445	537		GN-1
894	10001	358	CU METER	HIGH PERFORMANCE CONCRETE, FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN			358		GN-1



GENERAL NOTES

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ABUTMENT PILES SHALL BE HP310x110. THE PILE ULTIMATE BEARING VALUE IS 2000 KN PER PILE. AN ADDITIONAL 900 KN OF ULTIMATE BEARING VALUE PER ABUTMENT PILE IS DUE TO THE POSSIBILITY OF DOWN DRAG FORCES INDUCED BY EMBANKMENT SETTLEMENT. THIS FORCES DOES NOT CONSIDER THE POSSIBLE REDUCTION IN DOWN DRAG FORCES THAT MAY OCCUR BY ALLOWING THE EMBANKMENT TO SETTLE FOR 6 MONTHS PRIOR TO DRIVING PILES.

THE PIER PILES SHALL BE HP310x79. THE ULTIMATE BEARING VALUE IS 1300 KN PER PILE FOR THE PIER PILES.

WESTBOUND BRIDGE

REAR ABUTMENT PILES:

20 PILES 18.0 METERS LONG, ESTIMATED LENGTH  
20 PILES OF ORDER LENGTH 18.0 METERS LONG  
10 SPLICES

FORWARD ABUTMENT PILES:

23 PILES 19.5 METERS LONG, ESTIMATED LENGTH  
23 PILES OF ORDER LENGTH 18 METERS LONG  
23 PILES OF ORDER LENGTH 1.5 METERS LONG  
23 SPLICES

PIER PILES:

39 PILES 12.5 METERS LONG, ESTIMATED LENGTH  
39 PILES OF ORDER LENGTH 12.5 METERS LONG  
20 SPLICES

EASTBOUND BRIDGE

REAR ABUTMENT PILES:

17 PILES 18.0 METERS LONG, ESTIMATED LENGTH  
17 PILES OF ORDER LENGTH 18.0 METERS LONG  
8 SPLICES

FORWARD ABUTMENT PILES:

20 PILES 19.5 METERS LONG, ESTIMATED LENGTH  
20 PILES OF ORDER LENGTH 18 METERS LONG  
20 PILES OF ORDER LENGTH 1.5 METERS LONG  
20 SPLICES

PIER PILES:

32 PILES 12.5 METERS LONG, ESTIMATED LENGTH  
32 PILES OF ORDER LENGTH 12.5 METERS LONG  
16 SPLICES

PILE DRIVEN TO BEDROCK

PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL MILLIMETERS WITH A MINIMUM RESISTANCE OF 20 BLOWS PER 25 mm OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

PROTECTION OF RAILROAD TRAFFIC

PRIOR TO CONSTRUCTION OF THE NEW STRUCTURES, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR FOR APPROVAL HIS PLANS FOR THE PROTECTION OF CSX TRANSPORTATION, INC. TRAFFIC ADJACENT TO AND/OR UNDER THE STRUCTURE. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. FOR ADDITIONAL RESTRICTIONS AND REQUIREMENTS WHEN WORKING ON OR ADJACENT TO CSX TRANSPORTATION, INC. PROPERTY, REFER TO THE SPECIAL CLAUSES IN THE PROPOSAL.

PAYMENT FOR THIS WORK, EXCEPT TEMPORARY SHEETING, SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE BID FOR ITEM 863, AS PER PLAN. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

DESIGN AGENCY  
McCOY/FOK & ASSOCIATES INC.  
367 GHEENT ROAD, SUITE 1A  
AKRON, OHIO

DATE 8-14-00  
REVIEWED LBD  
STRUCTURAL ENGINEER  
R-1701878  
DRAWN MCM  
REVISION 12-8-00

ESTIMATED QUANTITIES AND GENERAL NOTES  
BRIDGE NO. CRA-30-33802-L & R  
RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000



ESTIMATED QUANTITIES - EASTBOUND BRIDGE

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER	GENERAL	AS PER PLAN SHEET NO.
SPECIAL	20365000	4	EACH	SETTLEMENT PLATFORM				4	GN-1
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN				LUMP	
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP	LUMP			GN-1
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00200	400	METER	STEEL PILES HP310x79, FURNISHED		400			
507	00250	400	METER	STEEL PILES HP310x79, DRIVEN		400			
507	00400	696	METER	STEEL PILES, MISC.: HP310x110, FURNISHED	696				
507	00400	696	METER	STEEL PILES, MISC.: HP310x110, DRIVEN	696				
507	50500	44	EACH	STEEL PILE SPLICES	28	16			
516	44100	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (60.0 mm X 330 mm X 510 mm WITH 50 mm X 356 mm X 660 mm LOAD PLATE)		6			
516	44100	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (60.0 mm X 330 mm X 510 mm WITH 50 mm X 356 mm X 536 mm LOAD PLATE)		6			
516	44201	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (75.0 mm X 230 mm X 355 mm WITH 38 mm X 256 mm X 381mm LOAD PLATE)	12				22
518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	LUMP				GN-1
518	40000	45	METER	150 mm PERFORATED CORRUGATED PLASTIC PIPE	45				
518	40010	12	METER	150 mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	12				
842	41001	154	CU METER	CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN		154			GN-1
842	45501	118	CU METER	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	118				GN-1
842	46501	38	CU METER	CLASS C CONCRETE, FOOTING, AS PER PLAN		38			GN-1
844	48041	31	CU METER	HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN	31				GN-1
844	49000	LUMP		HIGH PERFORMANCE CONCRETE TRIAL MIX			LUMP		
844	49010	LUMP		HIGH PERFORMANCE CONCRETE TESTING			LUMP		
863	10061	LUMP		STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, AS PER PLAN, A588M			LUMP		3
863	20000	4194	EACH	WELDED STUD SHEAR CONNECTOR			4194		
864	10100	961	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	71	357	533		GN-1
894	10001	305	CU METER	HIGH PERFORMANCE CONCRETE FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN			305		GN-1



RAILROAD AERIAL LINES

RAILROAD AERIAL LINES WILL BE RELOCATED BY THE RAILROAD. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING THE CONSTRUCTION STAGE AND SHALL COOPERATE WITH THE RAILROAD IN THE RELOCATION. WORK SHALL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT.

FOR ADDITIONAL GENERAL NOTES SEE SHEET GN-1, <sup>536</sup>/<sub>712</sub>.

NOTE: FOR REINFORCED CONCRETE APPROACH SLAB AND CRUSHED AGGREGATE SLOPE PROTECTION QUANTITIES, SEE ROADWAY PLANS, SHEET <sup>58</sup>/<sub>712</sub> AND <sup>61</sup>/<sub>712</sub>.

DESIGN AGENCY  
McCOY/FOK & ASSOCIATES INC.  
367 GHENT ROAD, SUITE 1A  
AKRON, OHIO

DATE  
8-14-00  
LBD  
STRUCTURE FILE NUMBER  
L-1701851  
R-1701878

DRAWN  
MCM  
REVISION  
12-8-00

CHECKED  
WEB

ESTIMATED QUANTITIES AND GENERAL NOTES  
BRIDGE NO. CRA-30-33602-L & R  
RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000

4 / 27

<sup>540</sup>/<sub>712</sub>

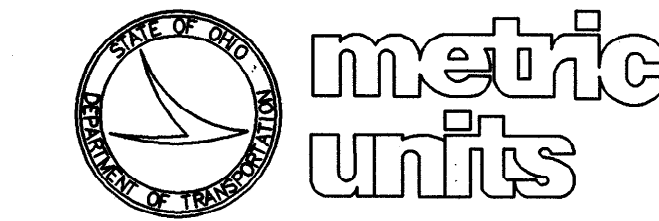
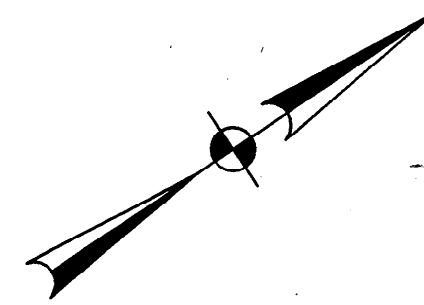
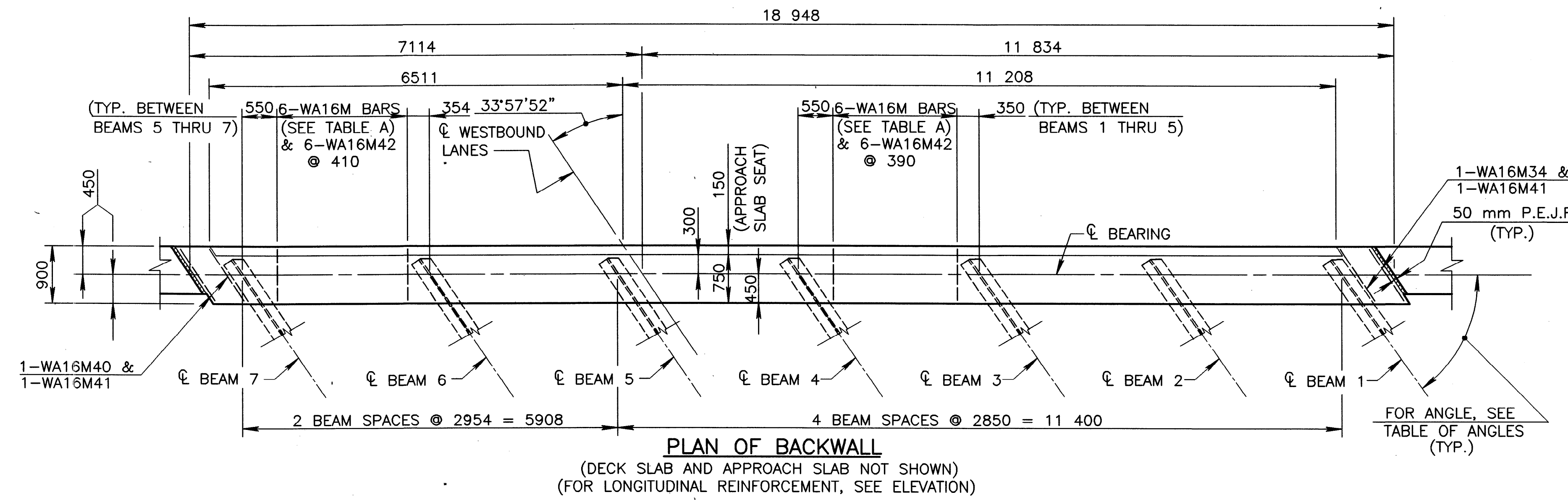
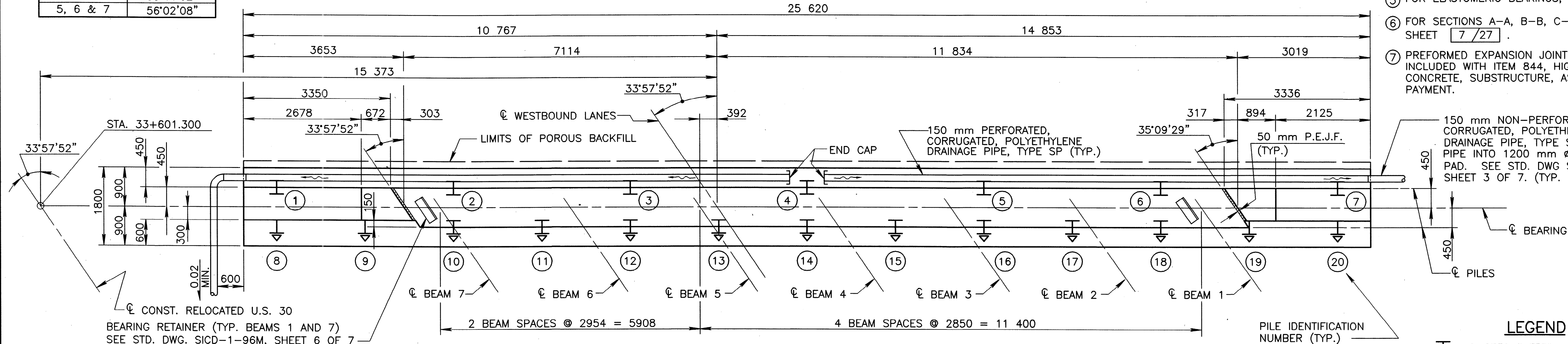


TABLE A		
LOCATION	BAR MARK	
BEAM 1 - BEAM 2	WA16M35	
BEAM 2 - BEAM 3	WA16M36	
BEAM 3 - BEAM 4	WA16M37	
BEAM 4 - BEAM 5	WA16M38	
BEAM 5 - BEAM 6	WA16M37	
BEAM 6 - BEAM 7	WA16M39	

TABLE OF ANGLES	
BEAM	ANGLE
1	54°50'31"
2	55°08'14"
3	55°26'04"
4	55°44'02"
5, 6 & 7	56°02'08"

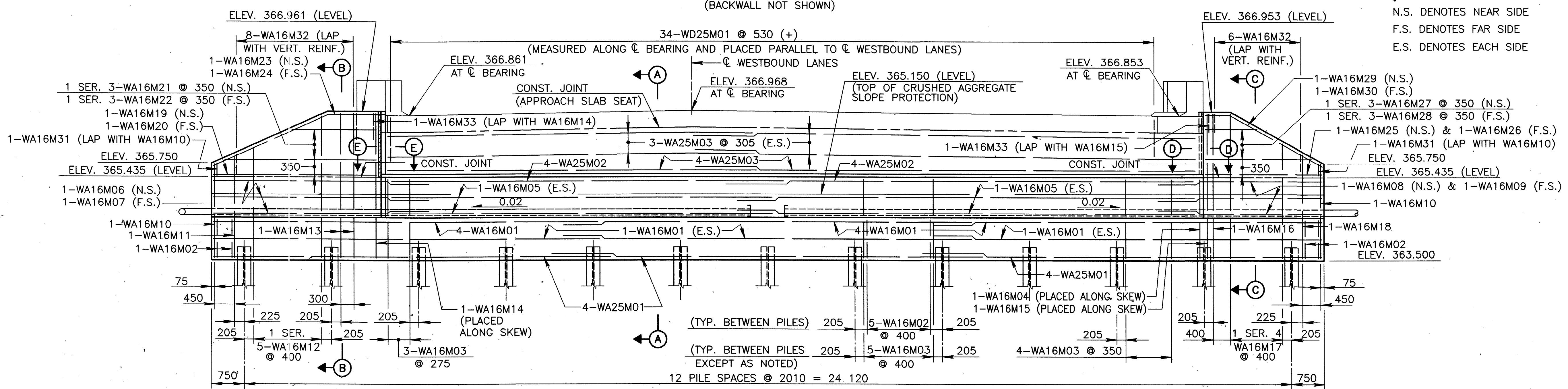


- NOTES**
- BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING RETAINER ANCHOR HOLES.
  - DIAPHRAGM (BACKWALL) CONCRETE ENCASING THE STRUCTURAL MEMBER SECTIONS SUPPORTED IN SEMI-INTEGRAL TYPE ABUTMENTS SHALL BE HIGH PERFORMANCE CONCRETE, MIX 4, AND SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.
  - MINIMUM LAP UNLESS OTHERWISE NOTED:  
 16M BARS = 875 mm  
 25M BARS = 1500 mm  
 WA16M31 = 290 mm  
 WA16M32 & WA16M33 = 400 mm  
 WA25M02 = 2090 mm
  - ALL PILES ARE HP310x110 STEEL PILES.
  - FOR ELASTOMERIC BEARINGS, SEE SHEET 22/27.
  - FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E, SEE SHEET 7/27.
  - PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED WITH ITEM 844, HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE, AS PER PLAN, FOR PAYMENT.



150 mm NON-PERFORATED, CORRUGATED, POLYETHYLENE DRAINAGE PIPE, TYPE S. OUTLET PIPE INTO 1200 mm Ø DRAINAGE PAD. SEE STD. DWG SICD-1-96M, SHEET 3 OF 7. (TYP. BOTH ENDS)

- LEGEND**
- ⊥ DENOTES BATTERED PILE (1:4)
  - N.S. DENOTES NEAR SIDE
  - F.S. DENOTES FAR SIDE
  - E.S. DENOTES EACH SIDE



DESIGN AGENCY: McCOY/FOK & ASSOCIATES INC. 367 GHEENT ROAD, SUITE 1A AKRON, OHIO  
 DATE: 8-14-00  
 REVIEWED: LBD  
 DRAWN: WEB  
 CHECKED: HK  
 DESIGNED: RHW  
 STRUCTURE FILE NUMBER: L-1701851  
 R-1701818  
**REAR ABUTMENT - WESTBOUND BRIDGE**  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.  
 CRA/RIC-30-33.500/0.000  
 5/27  
 541  
 712



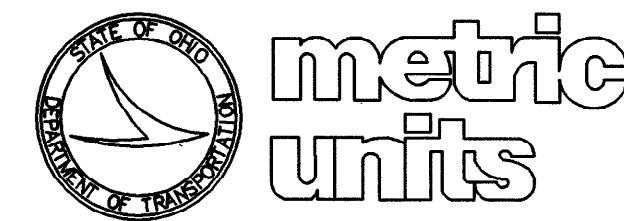
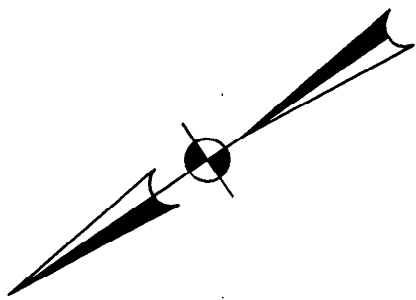
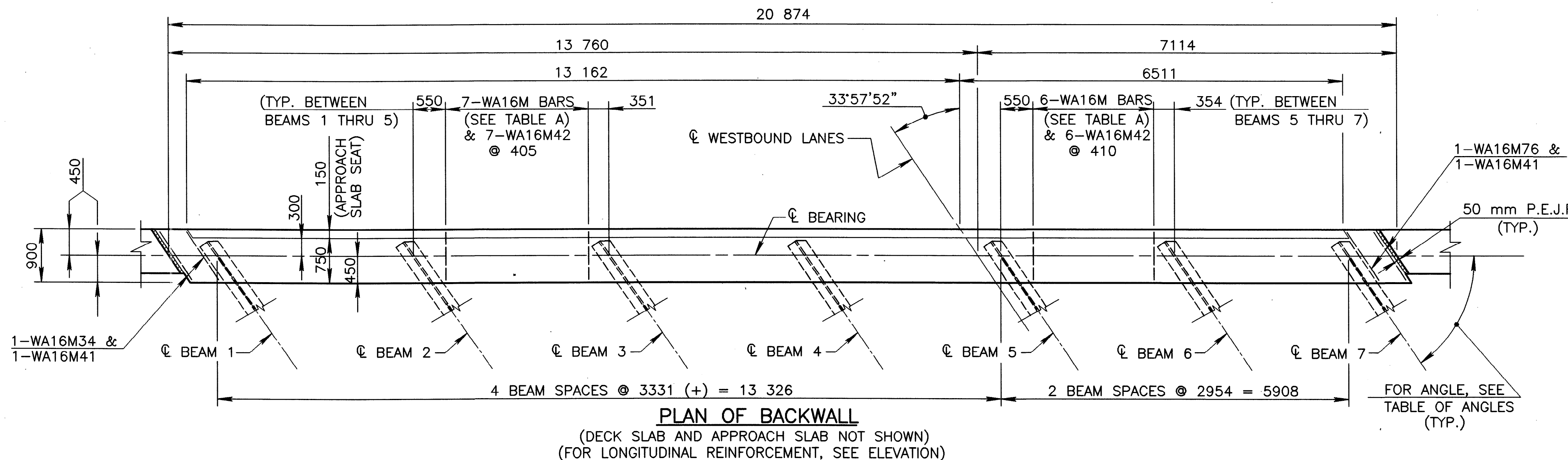
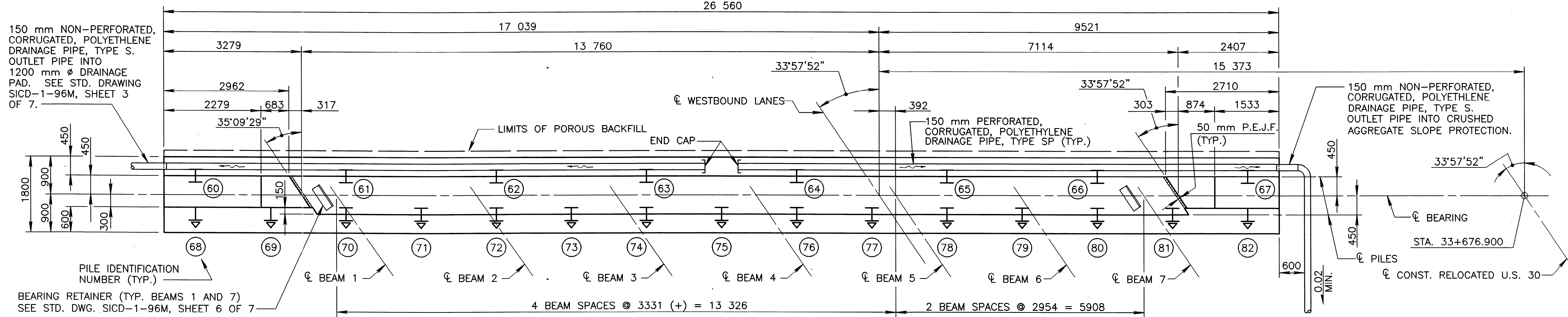


TABLE A		
LOCATION	BAR MARK	
BEAM 1 - BEAM 2	WA16M35	
BEAM 2 - BEAM 3	WA16M73	
BEAM 3 - BEAM 4	WA16M38	
BEAM 4 - BEAM 5	WA16M74	
BEAM 5 - BEAM 6	WA16M74	
BEAM 6 - BEAM 7	WA16M75	

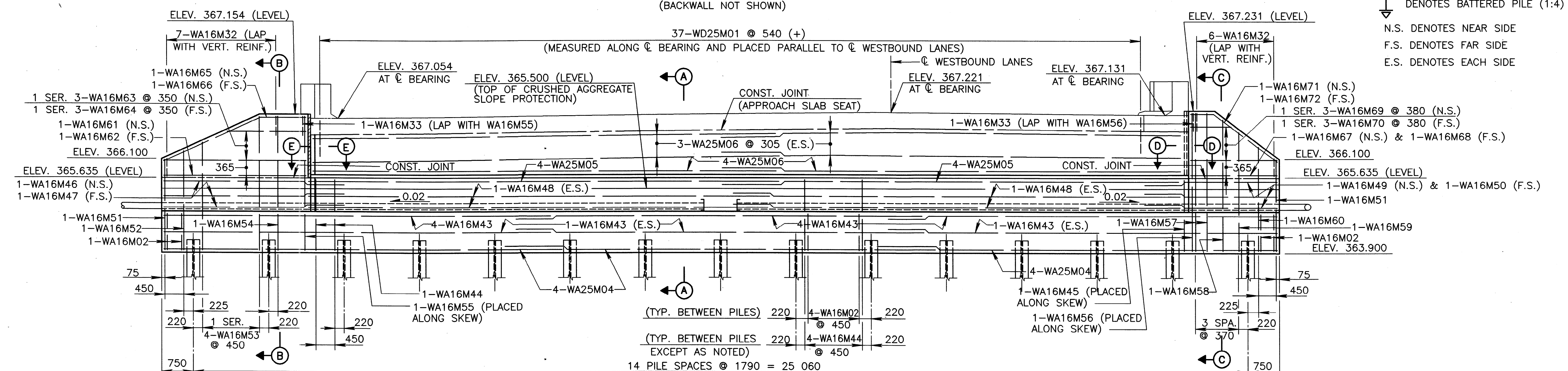
TABLE OF ANGLES	
BEAM	ANGLE
1	54°50'31"
2	55°08'14"
3	55°26'04"
4	55°44'02"
5, 6 & 7	56°02'08"



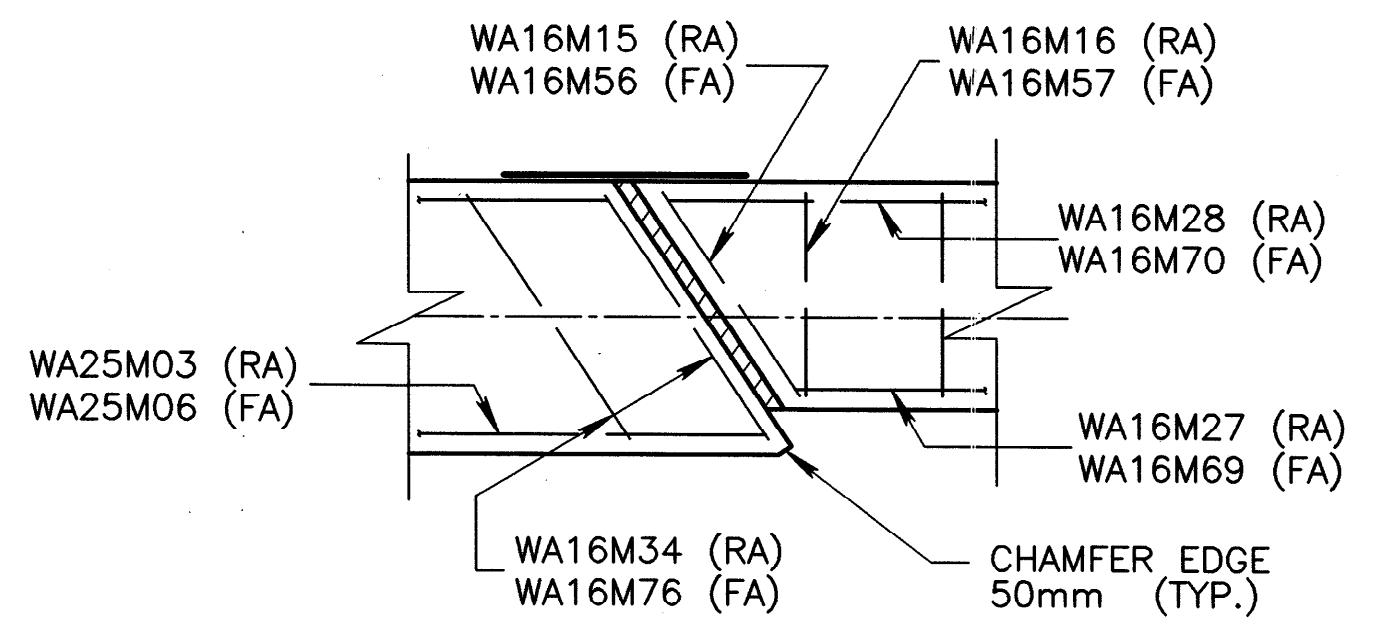
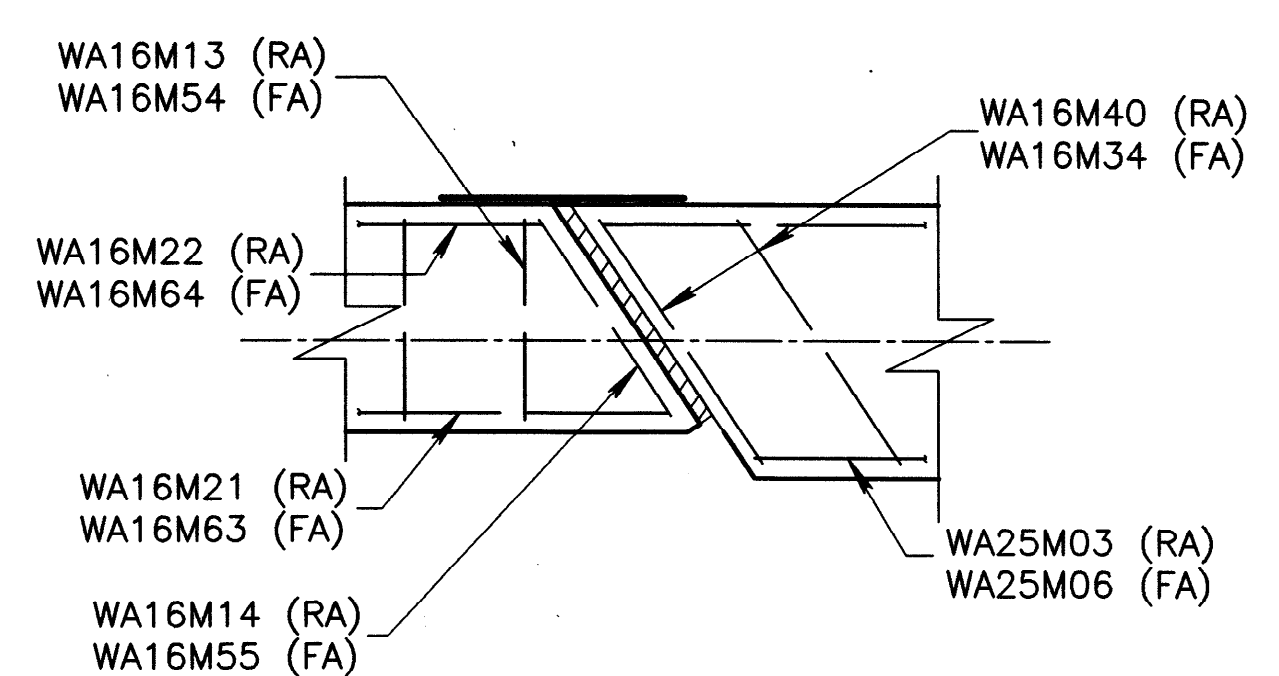
- NOTES**
- FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E, SEE SHEET 7/27.
  - MINIMUM LAP UNLESS NOTED OTHERWISE:  
 16M BARS = 875 mm  
 25M BARS = 1500 mm  
 WA16M32 & WA16M33 = 400 mm  
 WA25M05 = 2090 mm
  - ALL PILES ARE HP310x110 STEEL PILES.
  - FOR ADDITIONAL NOTES, SEE SHEET 5/27.



- LEGEND**
- ⏚ DENOTES BATTERED PILE (1:4)
  - N.S. DENOTES NEAR SIDE
  - F.S. DENOTES FAR SIDE
  - E.S. DENOTES EACH SIDE

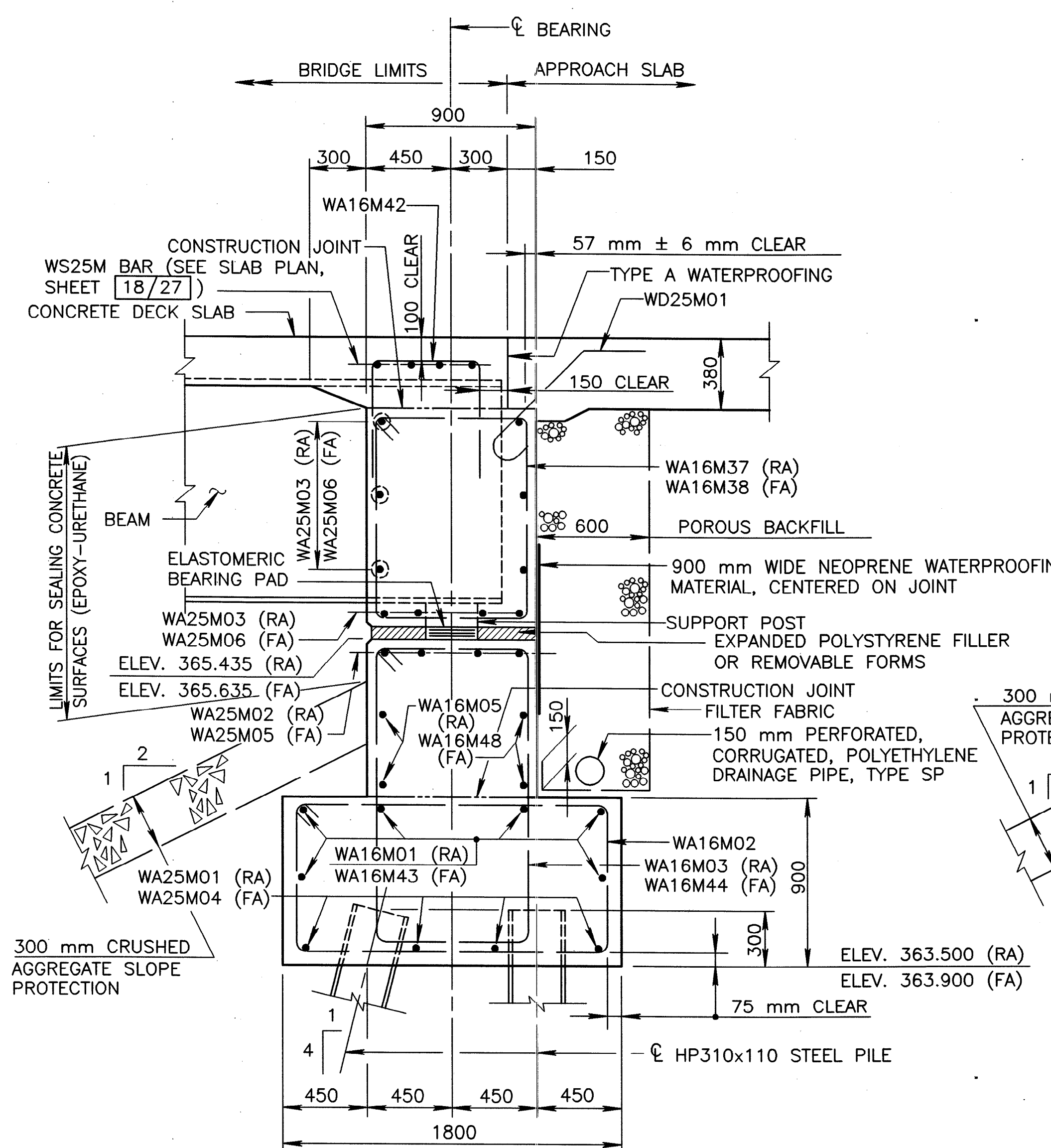
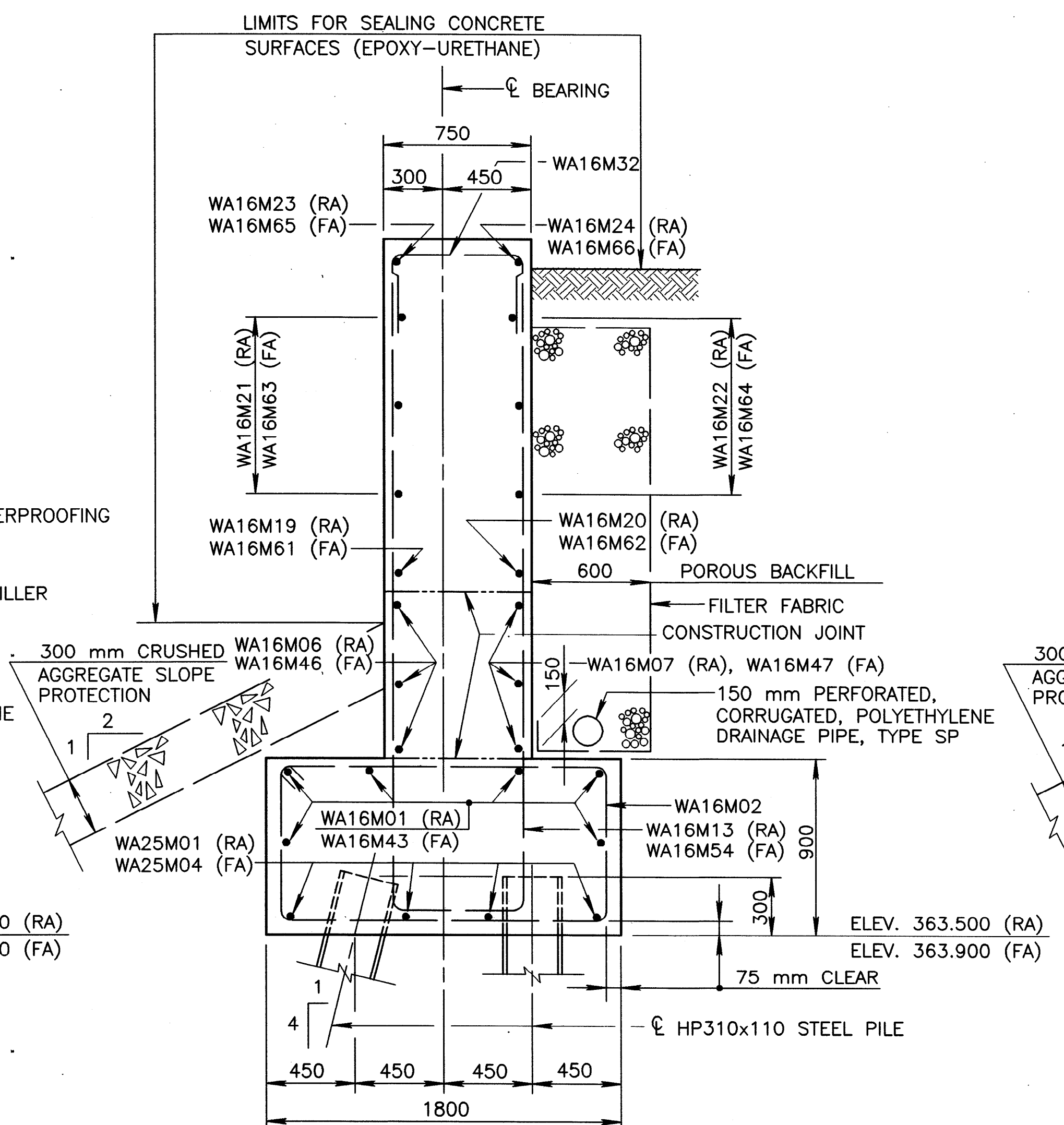
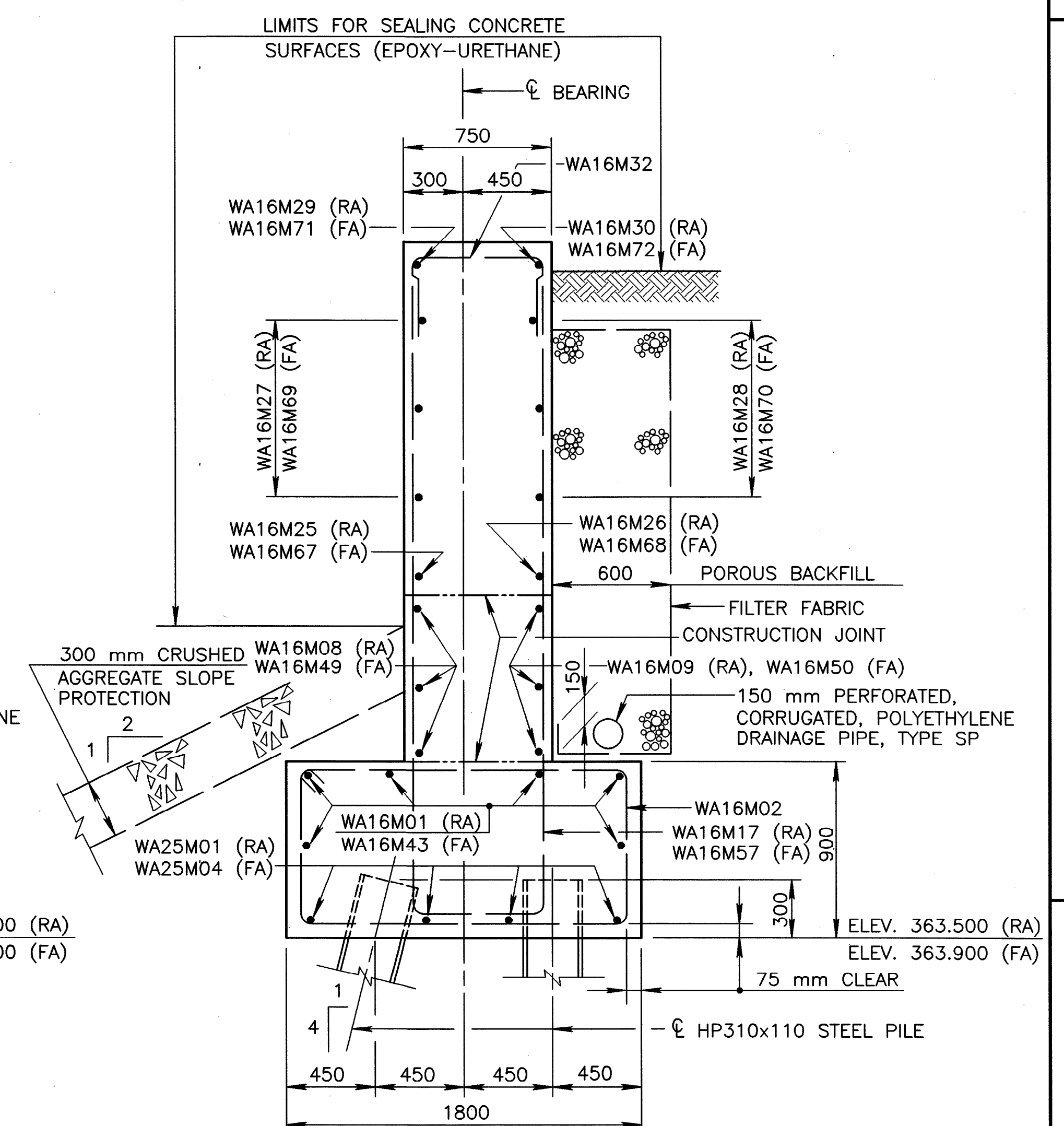


DESIGN AGENCY: McCOY/FOK & ASSOCIATES INC. 367 GHENT ROAD, SUITE 1A AKRON, OHIO  
 DATE: 8-14-00  
 REVIEWED: LBD  
 DRAWN: WEB  
 DESIGNED: HK  
 CHECKED: RHW  
 STRUCTURE FILE NUMBER: L-1701951  
 PROJECT FILE NUMBER: R-1701878  
**FORWARD ABUTMENT - WESTBOUND BRIDGE**  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.  
 CRA/RIC-30-33-500/0.000  
 6/27  
 542  
 712


**SECTION D-D**

**SECTION E-E**
**NOTES**

- ① FOR LOCATION OF SECTIONS A-A, B-B, C-C, D-D, AND E-E AND ADDITIONAL NOTES, SEE SHEETS 5/27 AND 6/27.
- ② FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING SICD-1-96M, SHEETS 1 THRU 7.
- ③ POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300 mm BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.

**LEGEND**

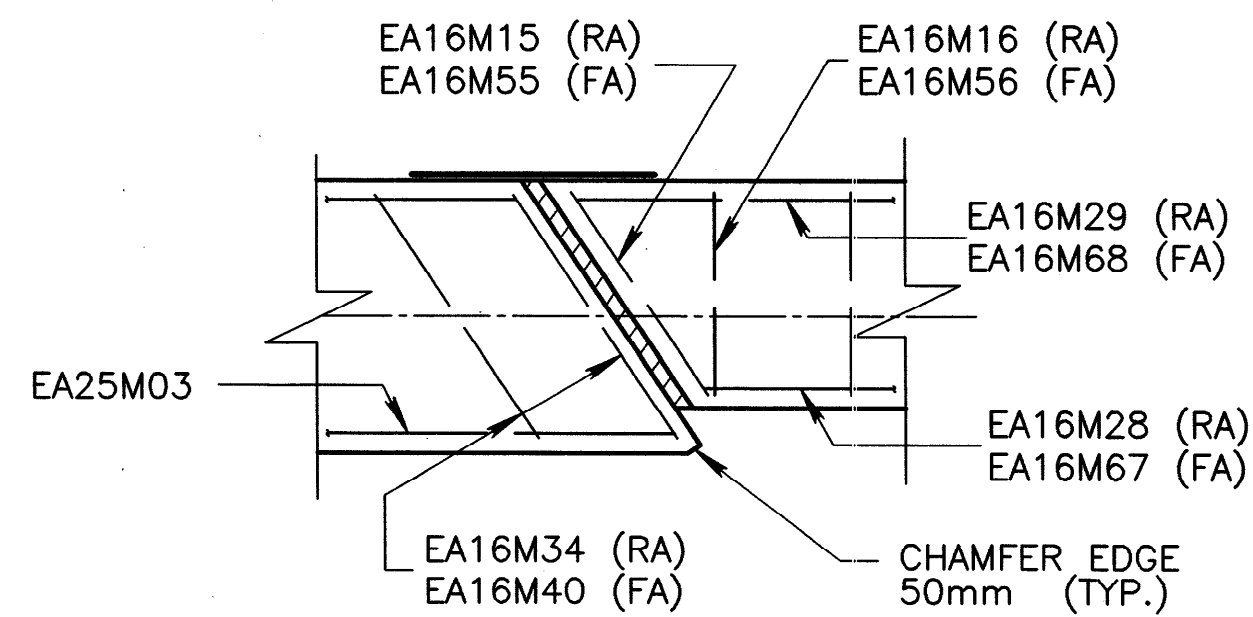
 RA DENOTES REAR ABUTMENT  
 FA DENOTES FORWARD ABUTMENT

**SECTION A-A**

**SECTION B-B**

**SECTION C-C**



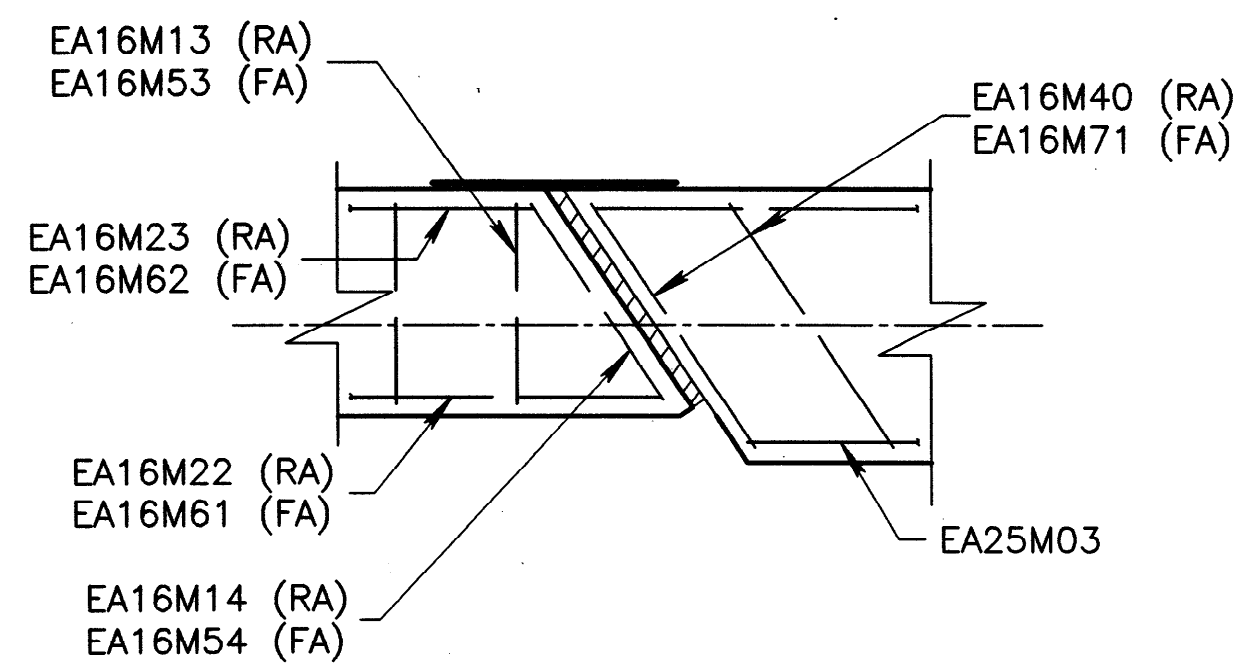








SECTION D-D



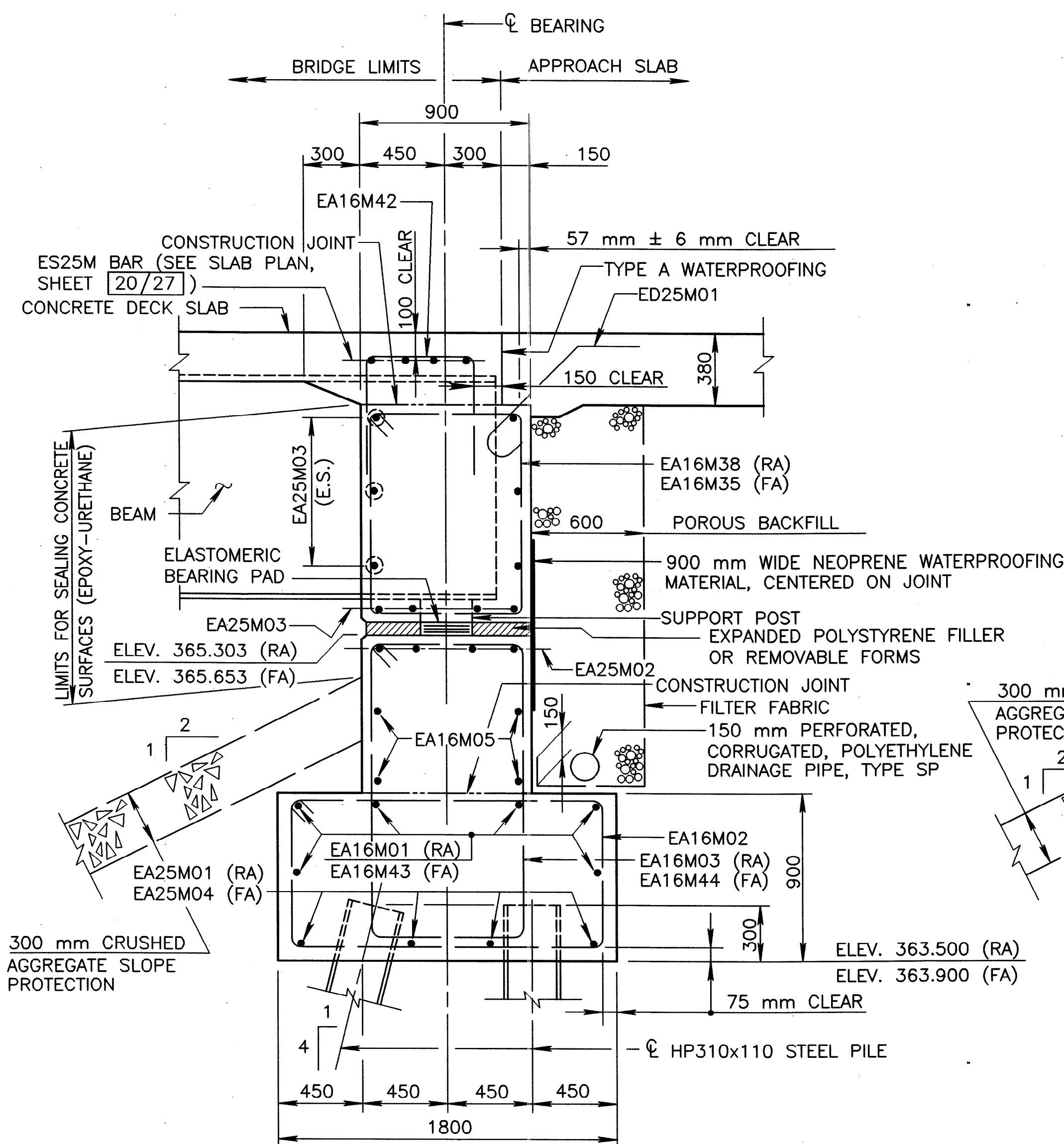
SECTION E-E

NOTES

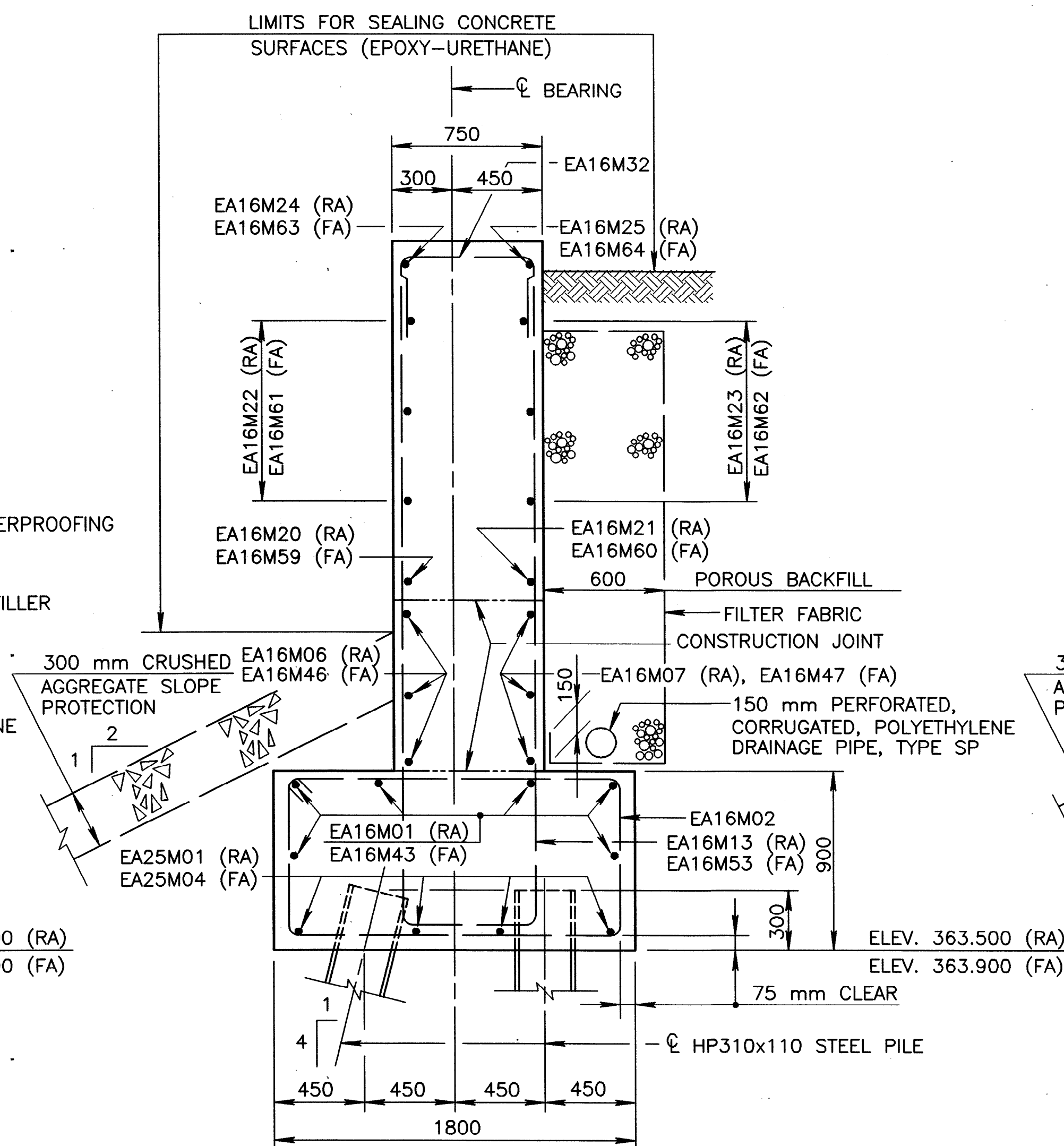
- FOR LOCATION OF SECTIONS A-A, B-B, C-C, D-D AND E-E AND ADDITIONAL NOTES, SEE SHEETS 8/27 AND 9/27.
- FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING SICD-1-96M, SHEETS 1 THRU 7.
- POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300 mm BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.

LEGEND

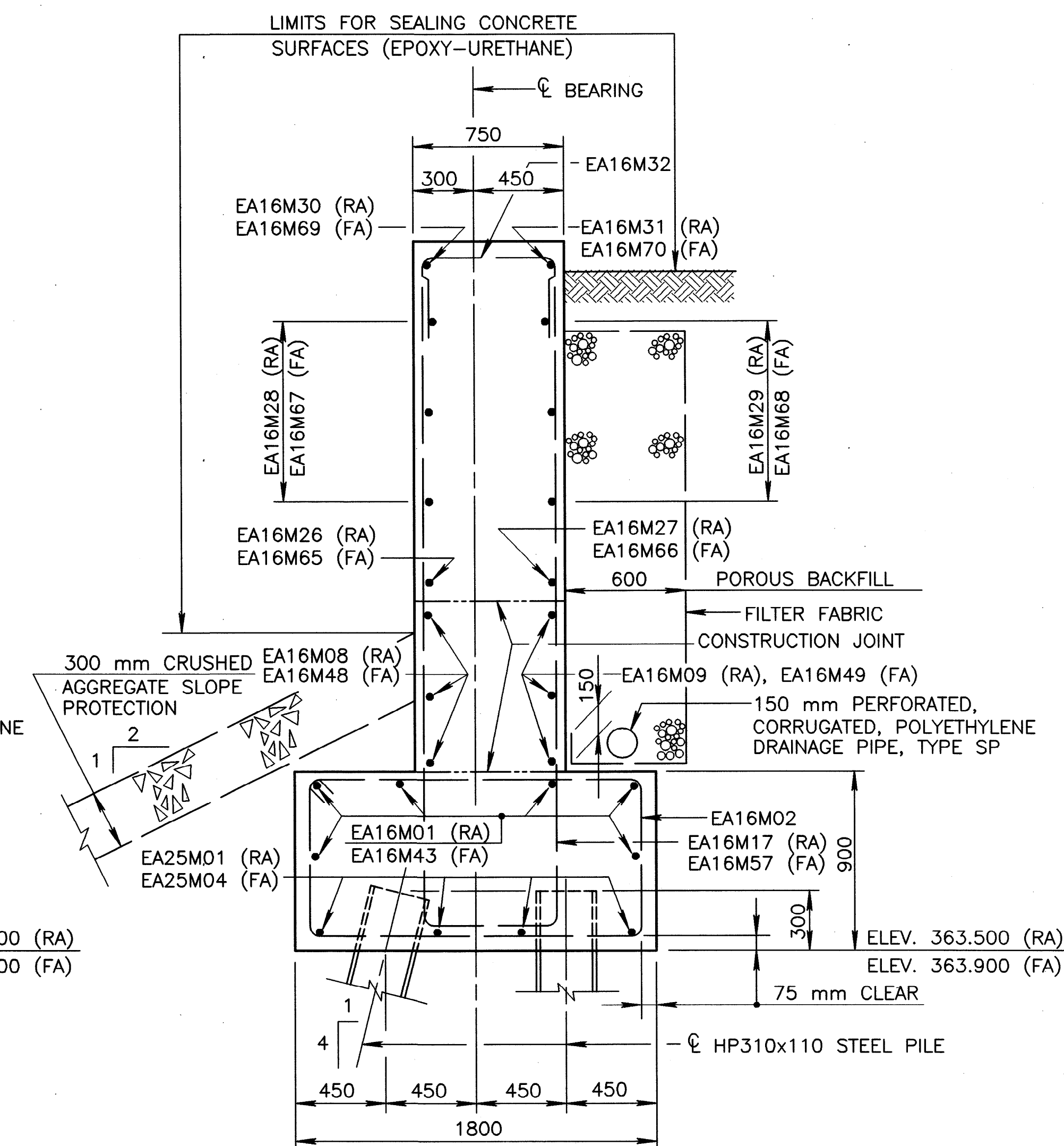
RA DENOTES REAR ABUTMENT  
 FA DENOTES FORWARD ABUTMENT



SECTION A-A



SECTION B-B



SECTION C-C

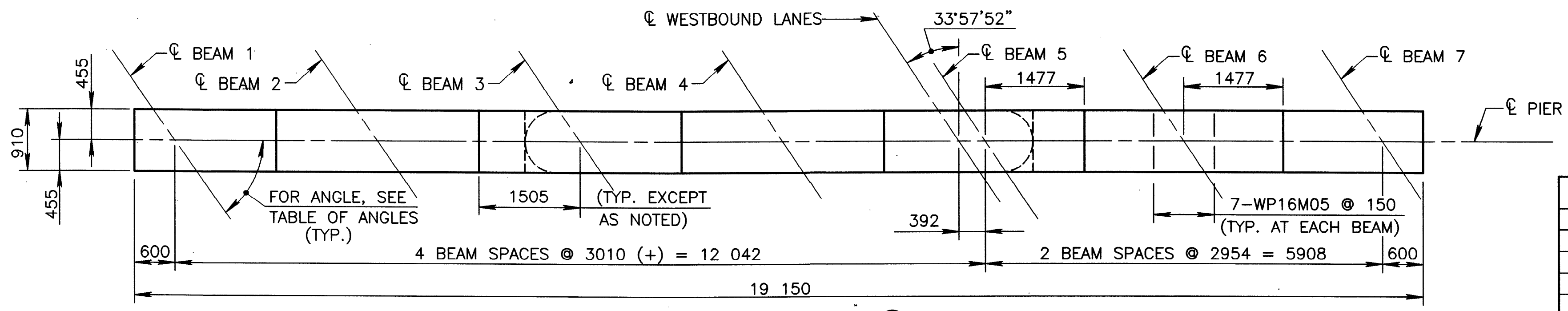
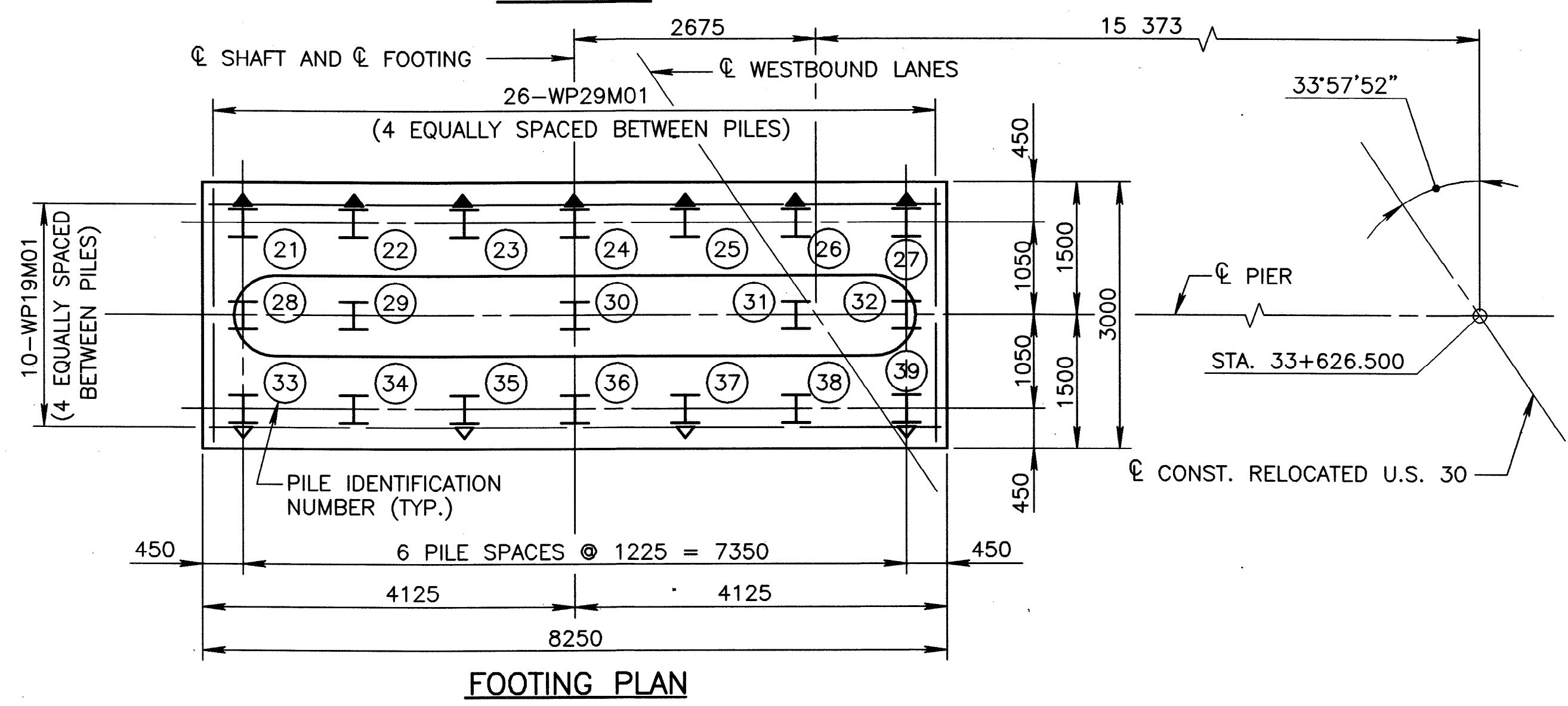
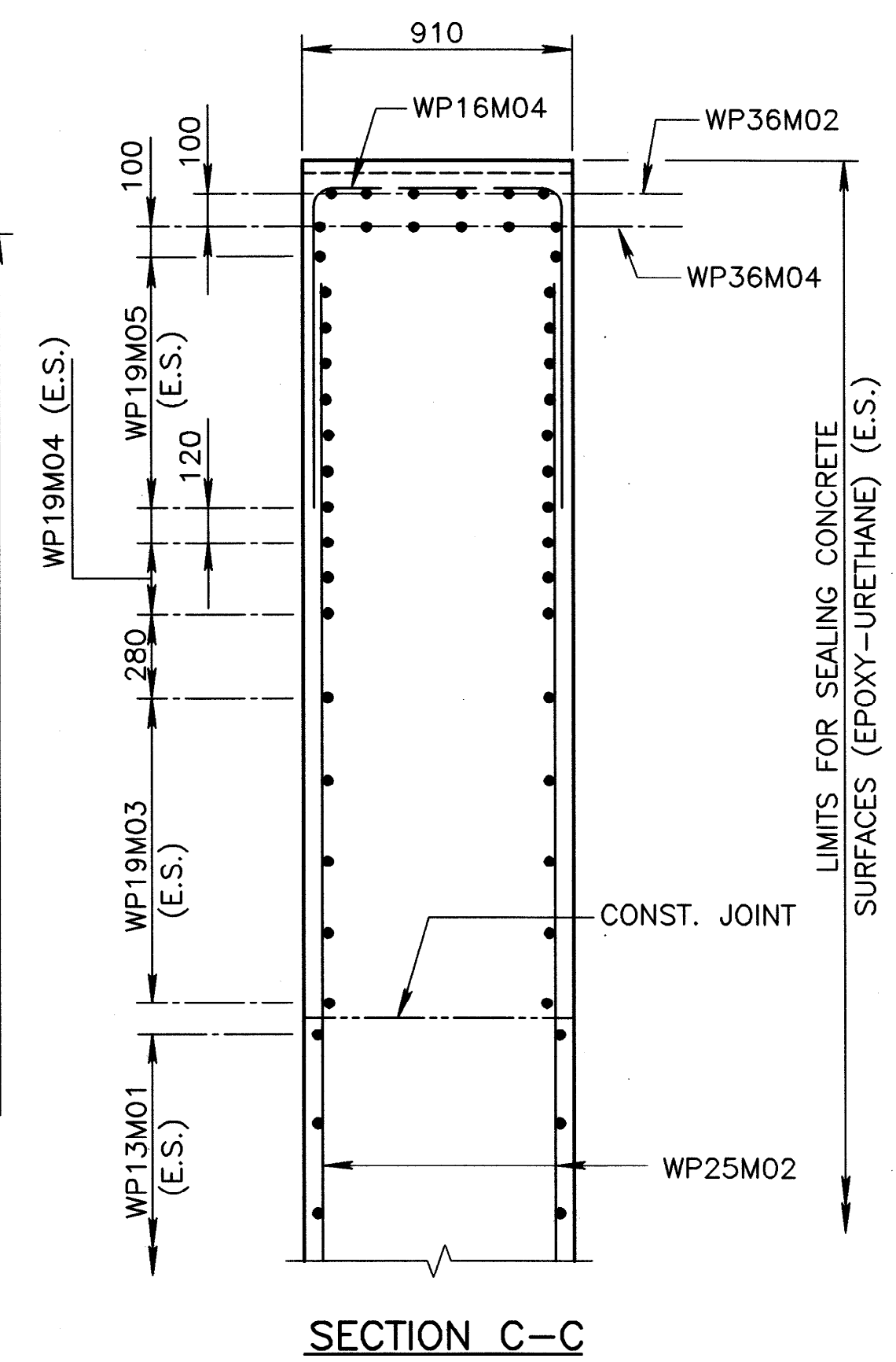
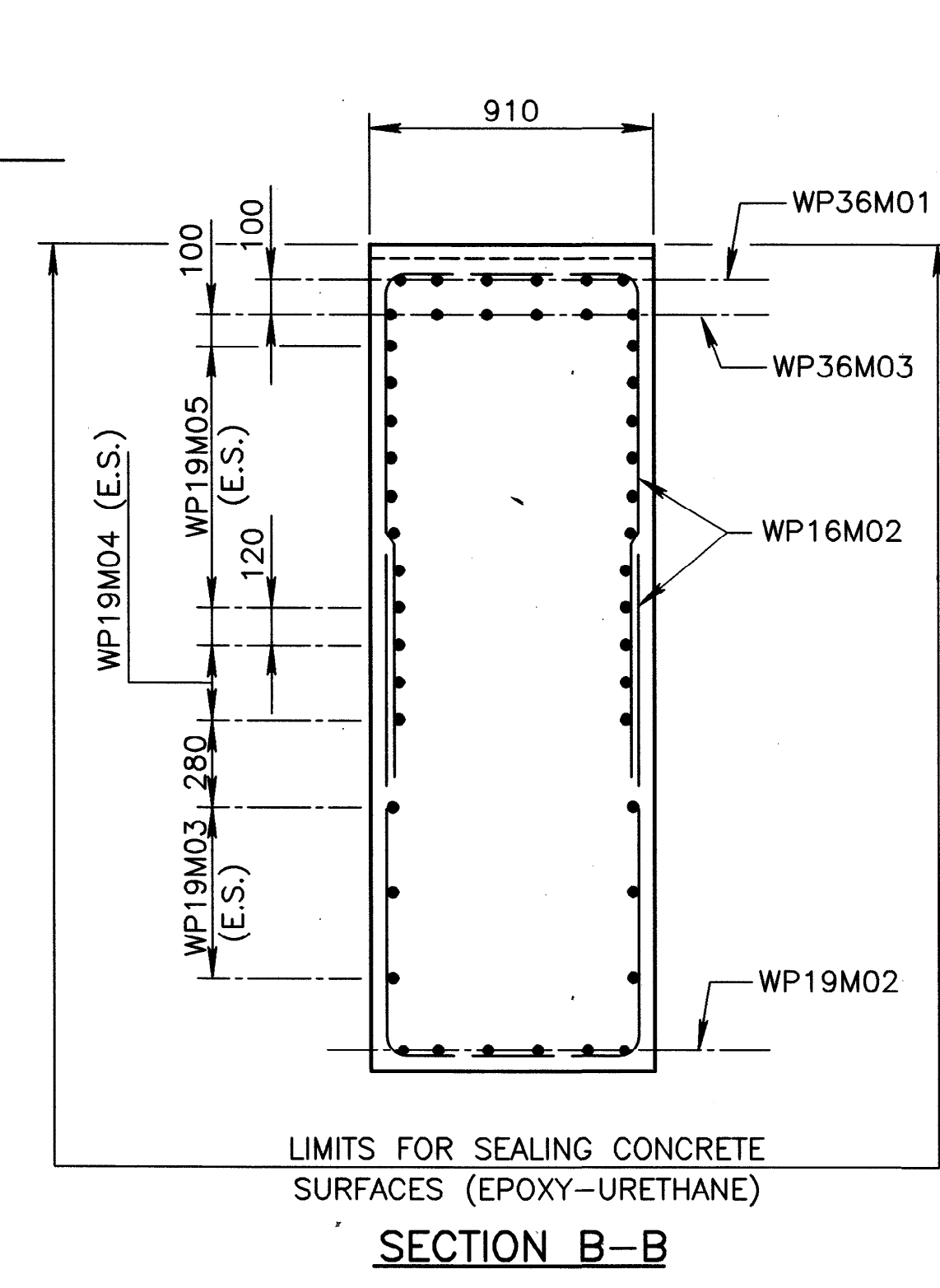
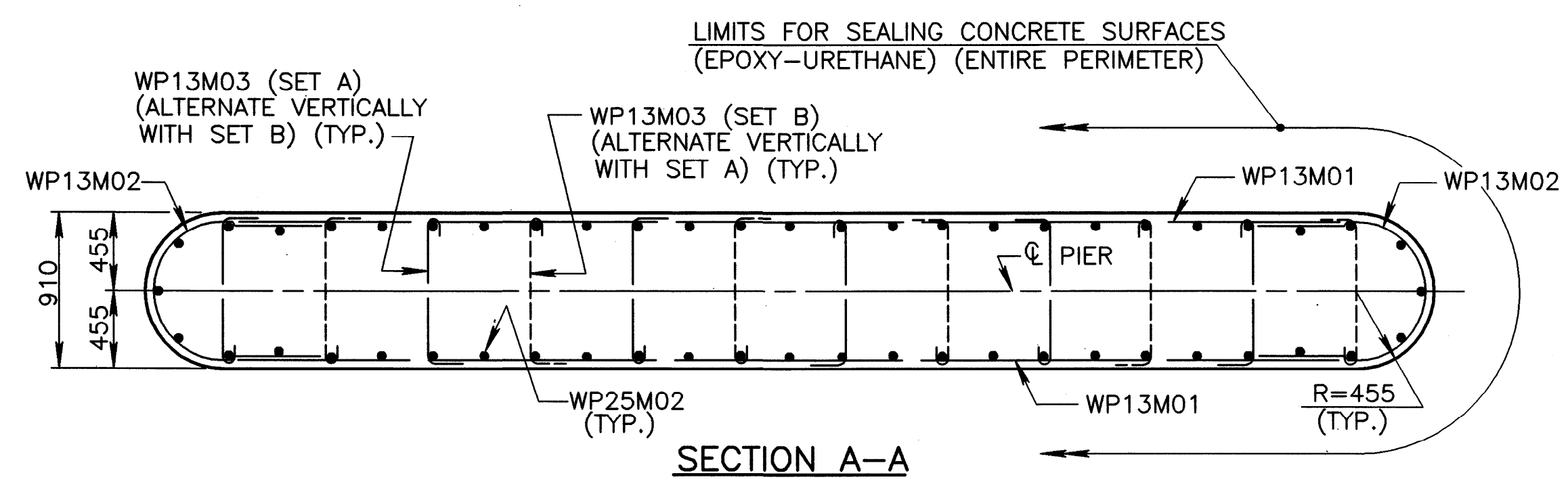
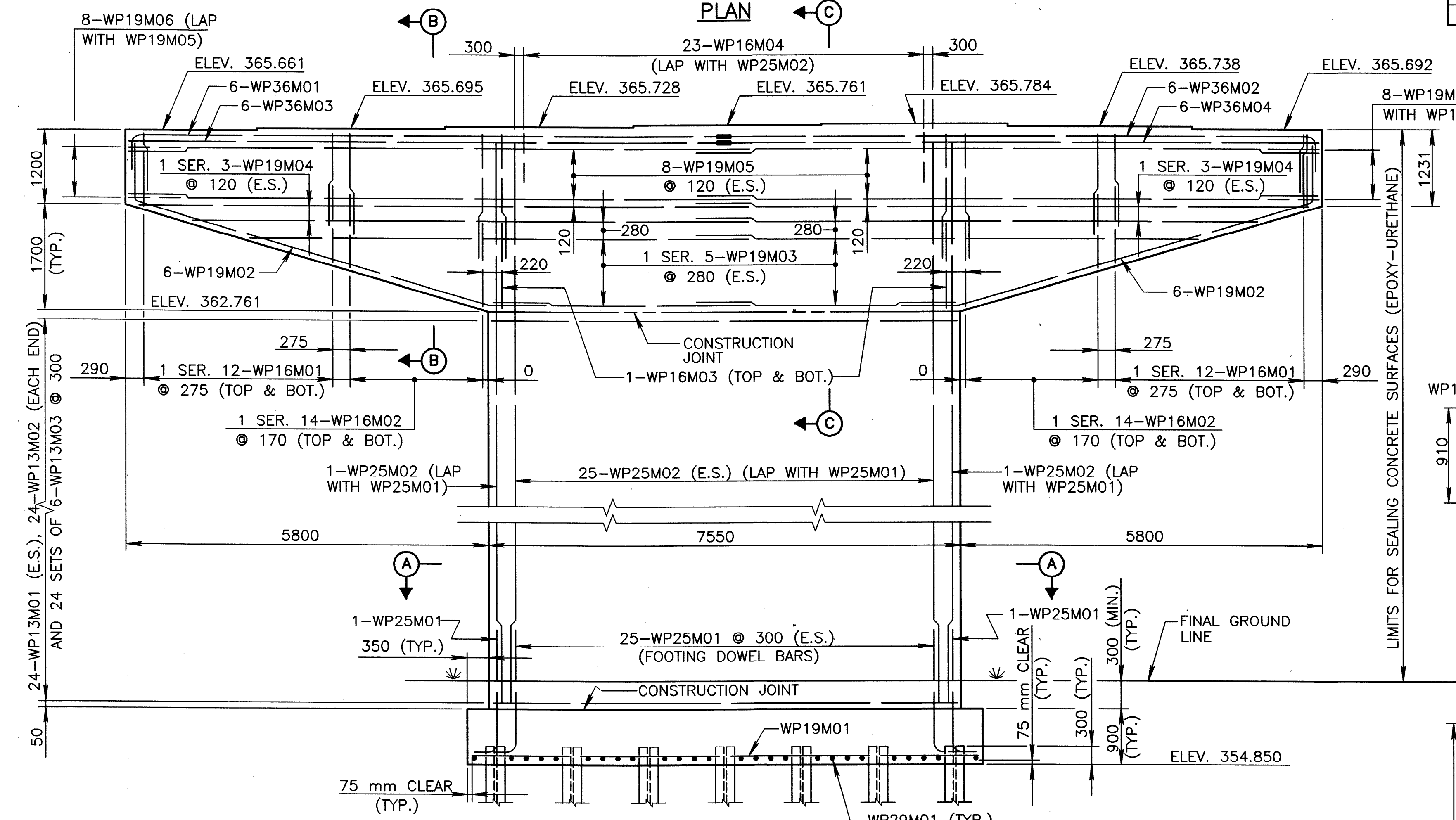


TABLE OF ANGLES	
BEAM	ANGLE
1	54°50'31"
2	55°08'14"
3	55°26'04"
4	55°44'02"
5, 6 & 7	56°02'08"

- NOTES**
- MINIMUM LAP UNLESS NOTED OTHERWISE:  
 13M BARS = 590 mm    16M BARS = 750 mm  
 19M BARS = 890 mm    25M BARS = 1500 mm
  - ALL PILES ARE HP310x79 STEEL PILES.
  - PILE LAYOUT DIMENSIONS ARE MEASURED ALONG BOTTOM OF FOOTING.

- LEGEND**
- ⌋ DENOTES BATTERED PILE (1:15)
  - ⌋ DENOTES BATTERED PILE (1:4)
  - E.S. DENOTES EACH SIDE
  - BOT. DENOTES BOTTOM
  - DENOTES MECHANICAL CONNECTOR



DESIGNED: HK

CHECKED: RHW

DRAWN: WEB

REVIEWED: RHW

DATE: 8-14-00

REVIEWED: LBD

STRUCTURE FILE NUMBER: L-1701851

PROJECT NUMBER: R-1701878

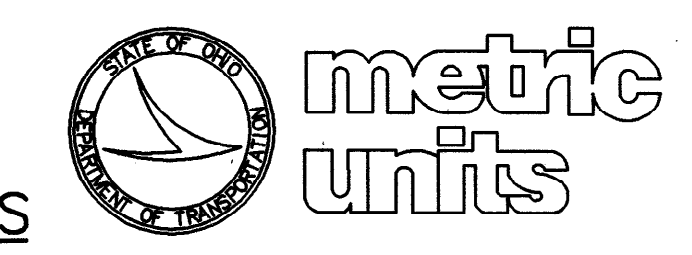
PIER 1 - WESTBOUND BRIDGE

BRIDGE NO. CRA-30-33602-L & R

RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000





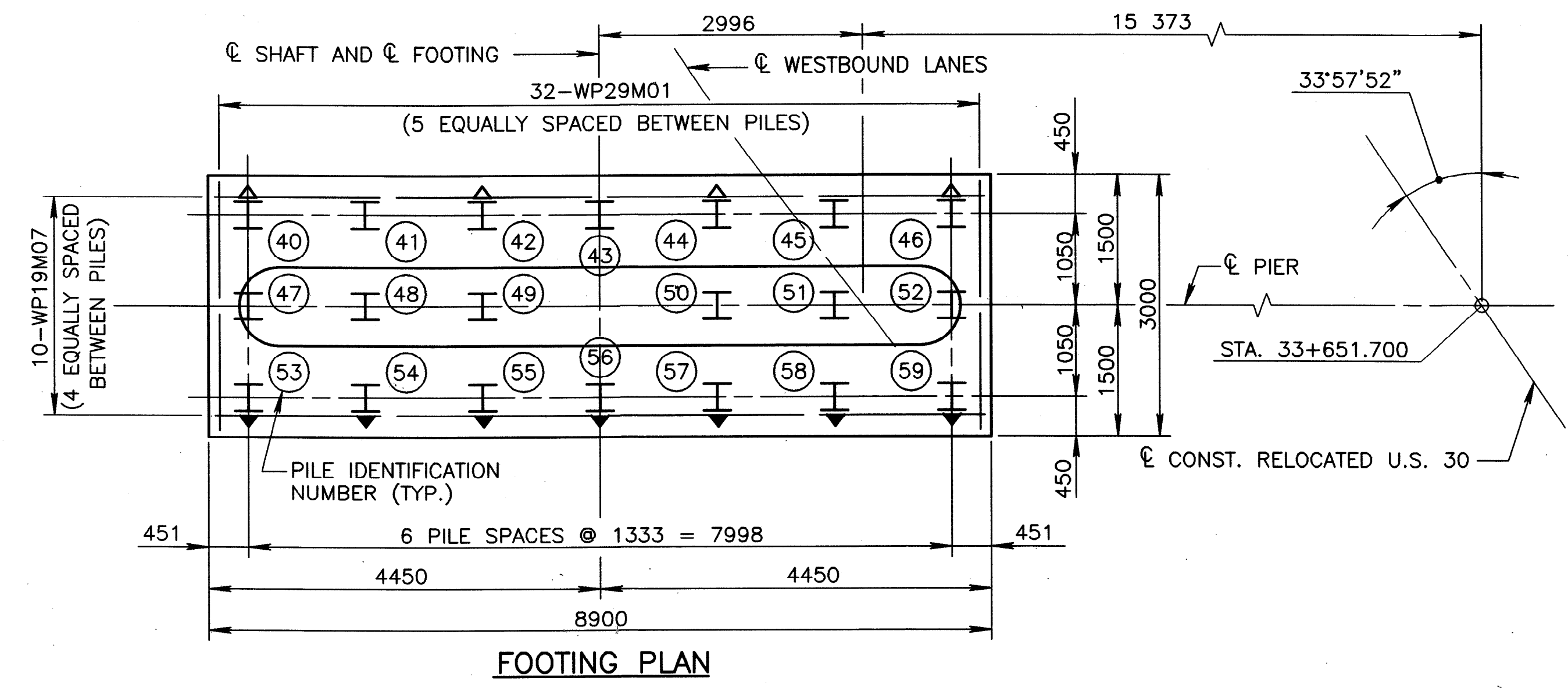
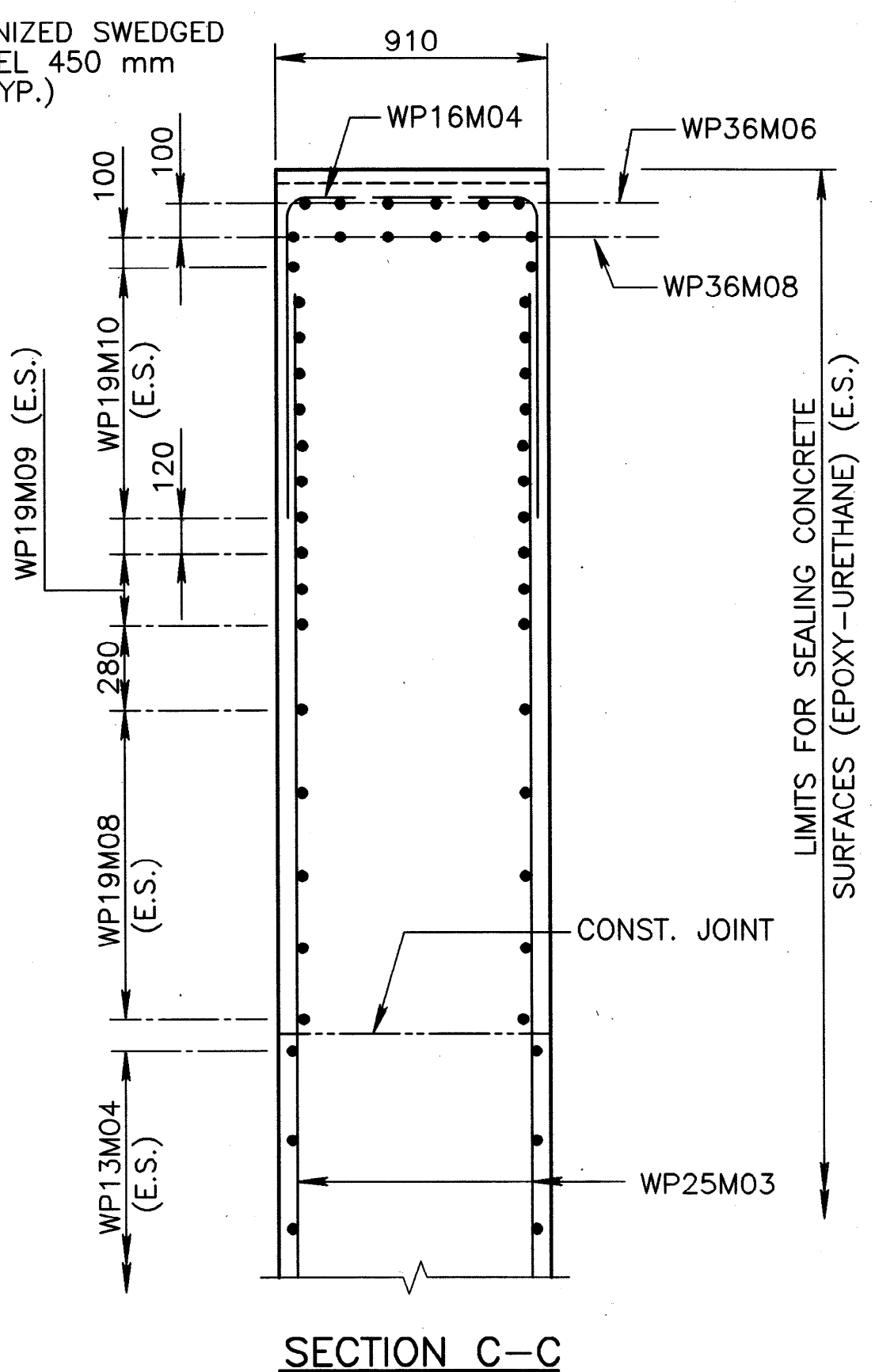
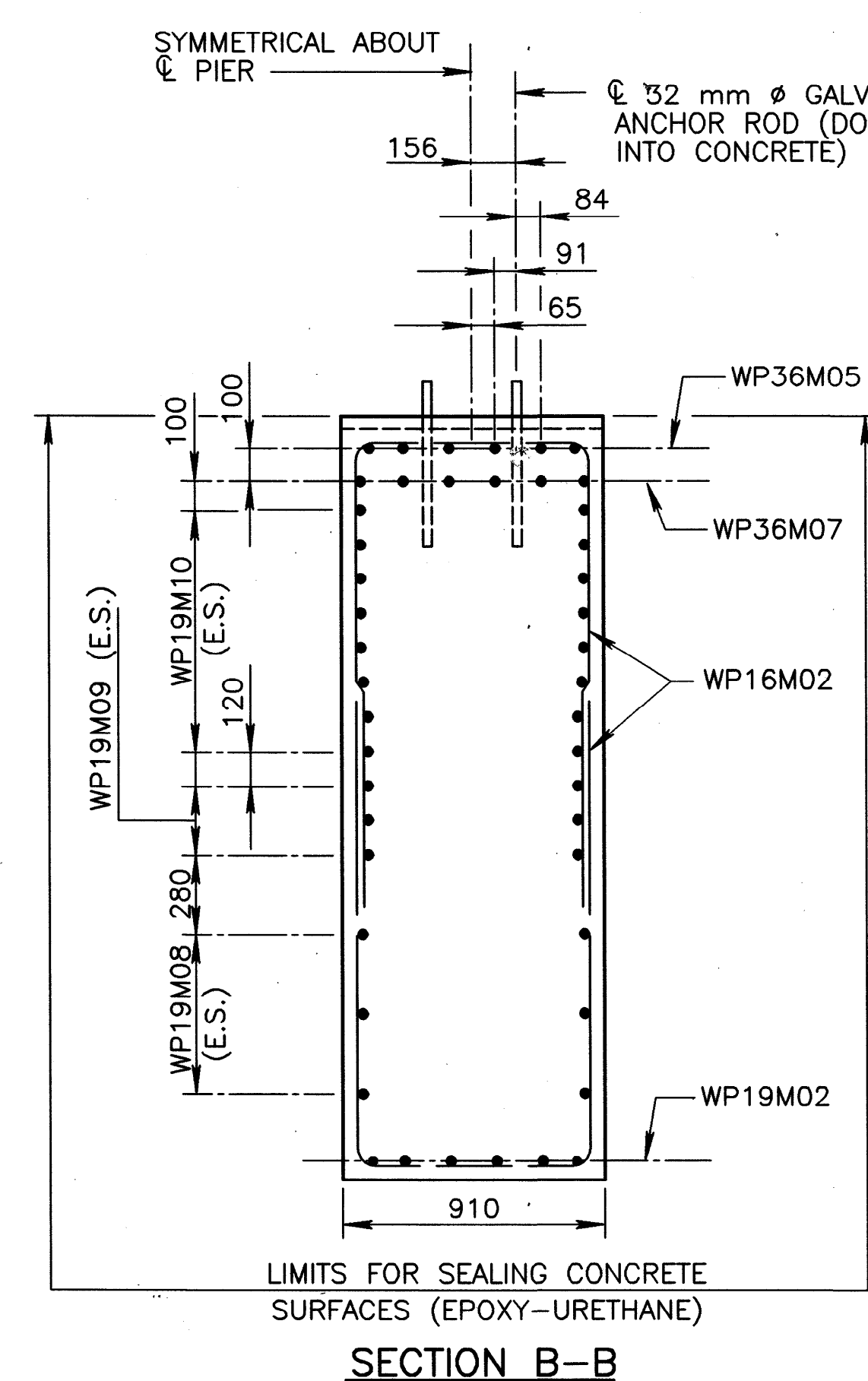
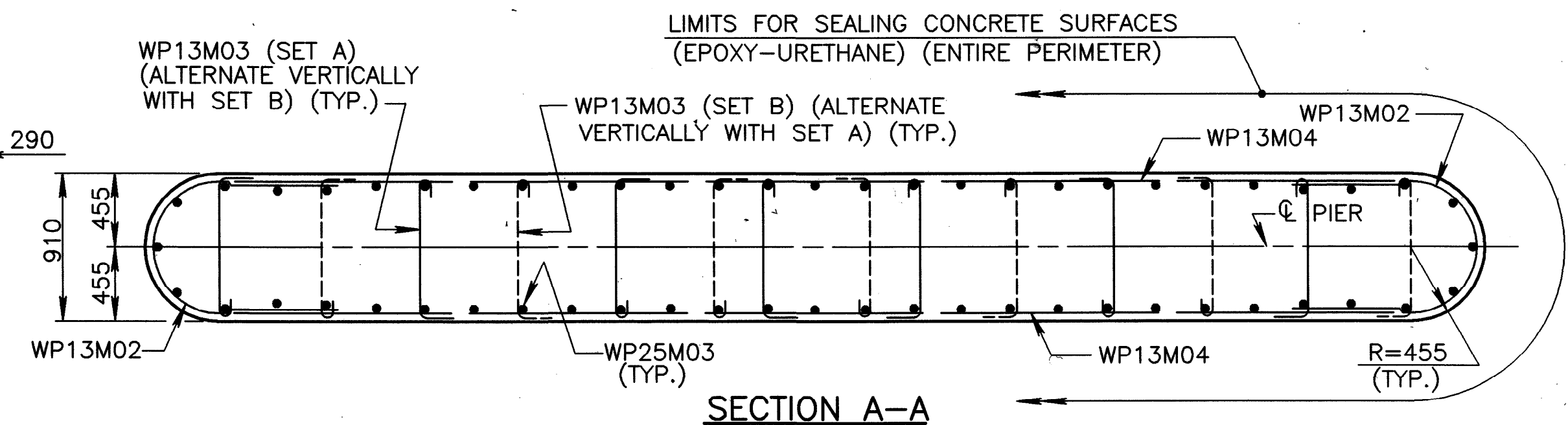
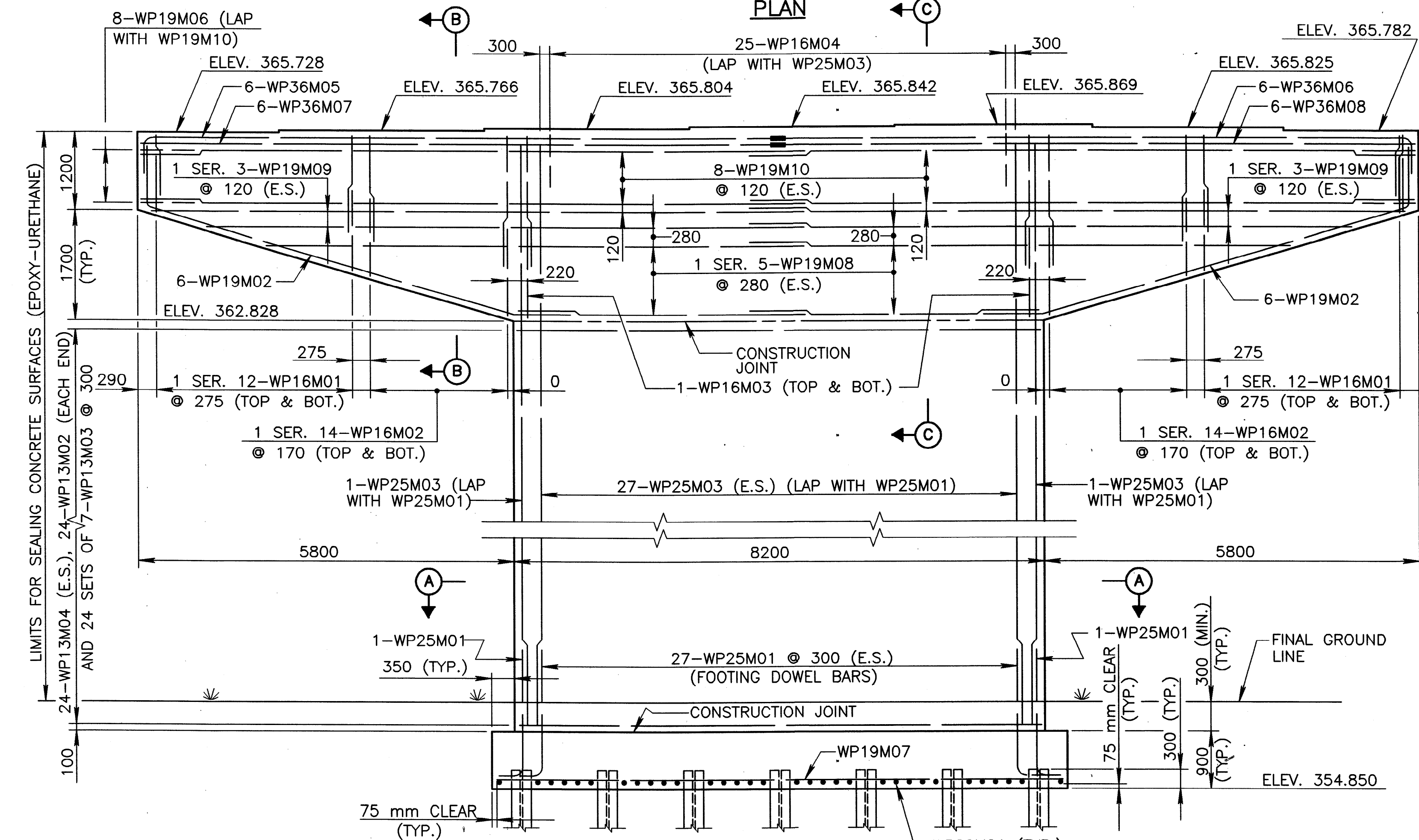
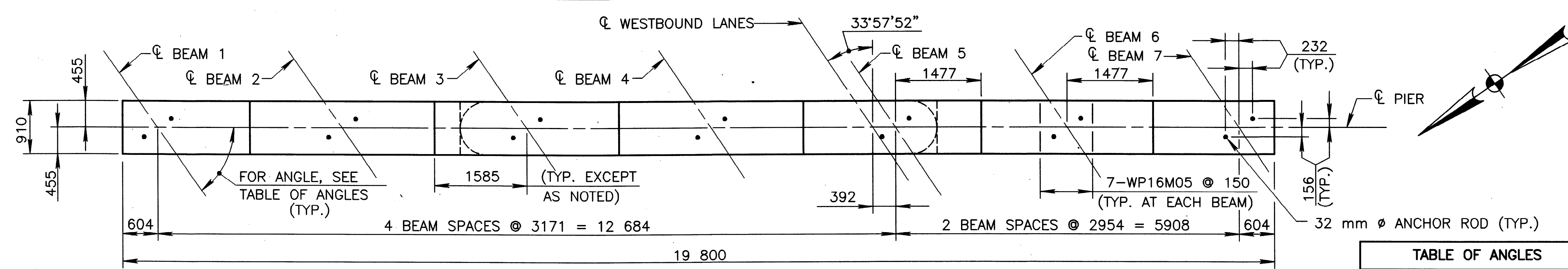
**NOTES**

- BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF THE BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.
- MINIMUM LAP UNLESS NOTED OTHERWISE:  
 13M BARS = 590 mm    16M BARS = 750 mm  
 19M BARS = 890 mm    25M BARS = 1500 mm
- ALL PILES ARE HP310x79 STEEL PILES.
- PILE LAYOUT DIMENSIONS ARE MEASURED ALONG BOTTOM OF FOOTING.

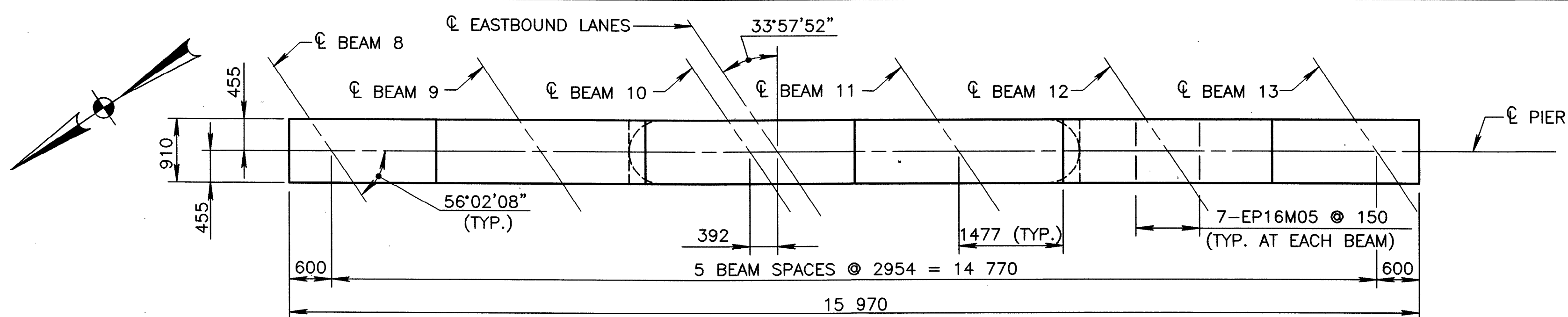
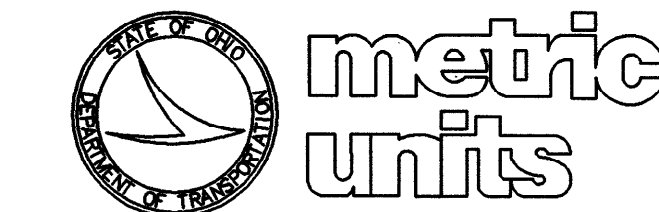
TABLE OF ANGLES	
BEAM	ANGLE
1	54°50'31"
2	55°08'14"
3	55°26'04"
4	55°44'02"
5, 6 & 7	56°02'08"

**LEGEND**

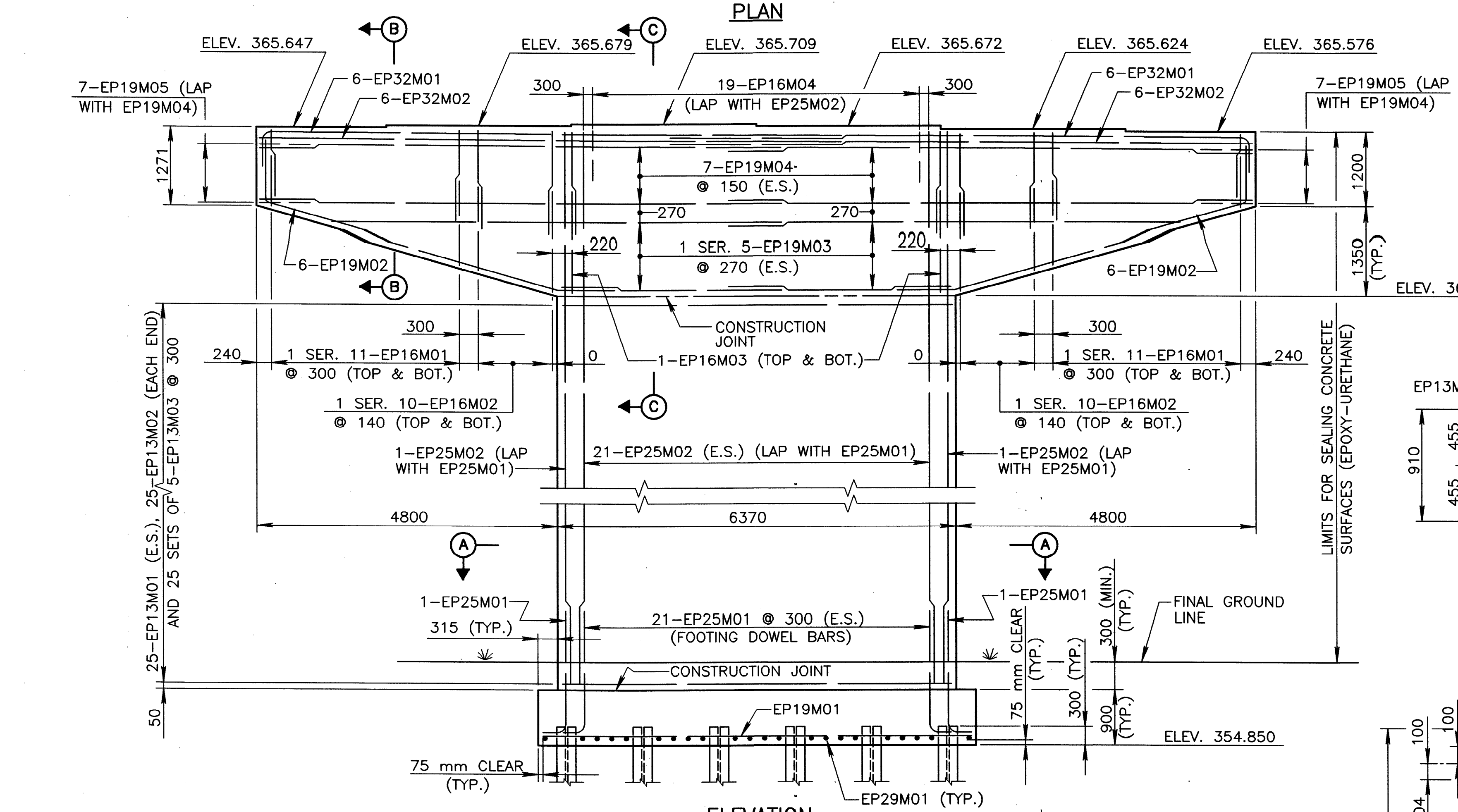
- DENOTES BATTERED PILE (1:15)
- DENOTES BATTERED PILE (1:4)
- E.S. DENOTES EACH SIDE
- BOT. DENOTES BOTTOM
- DENOTES MECHANICAL CONNECTOR



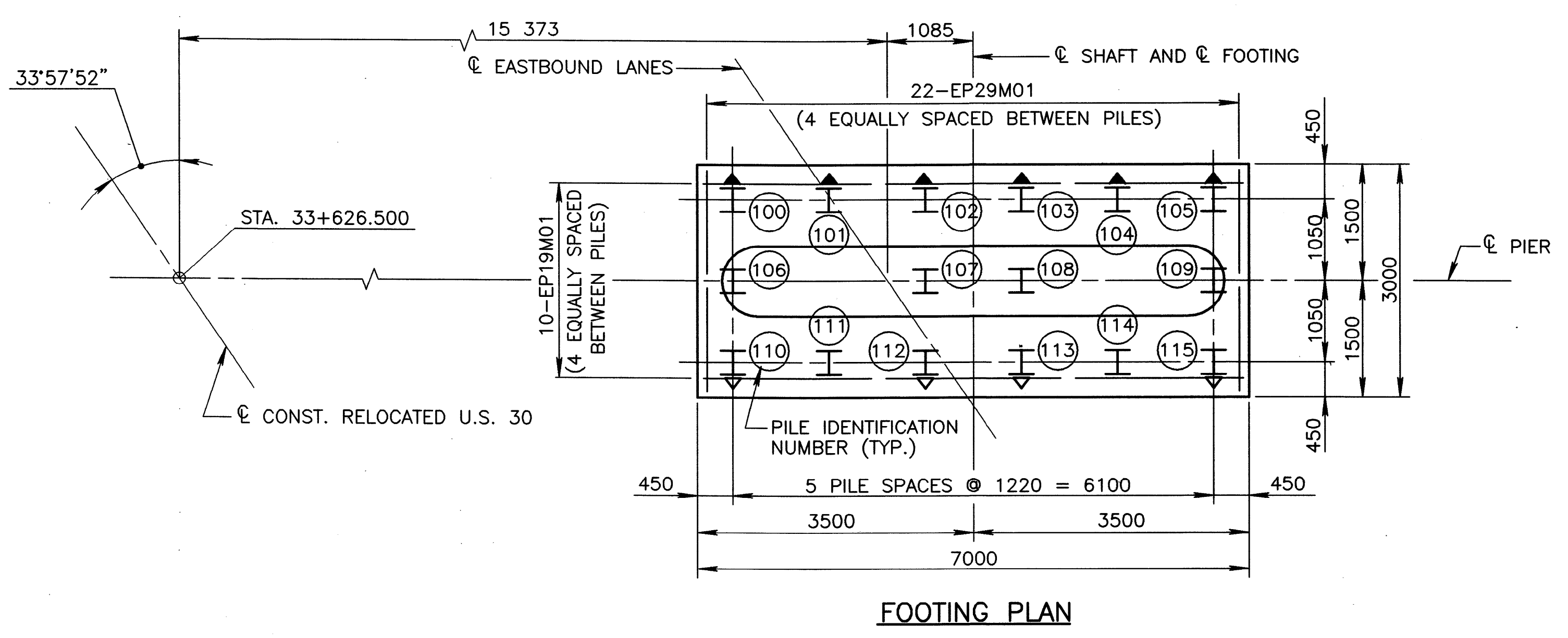
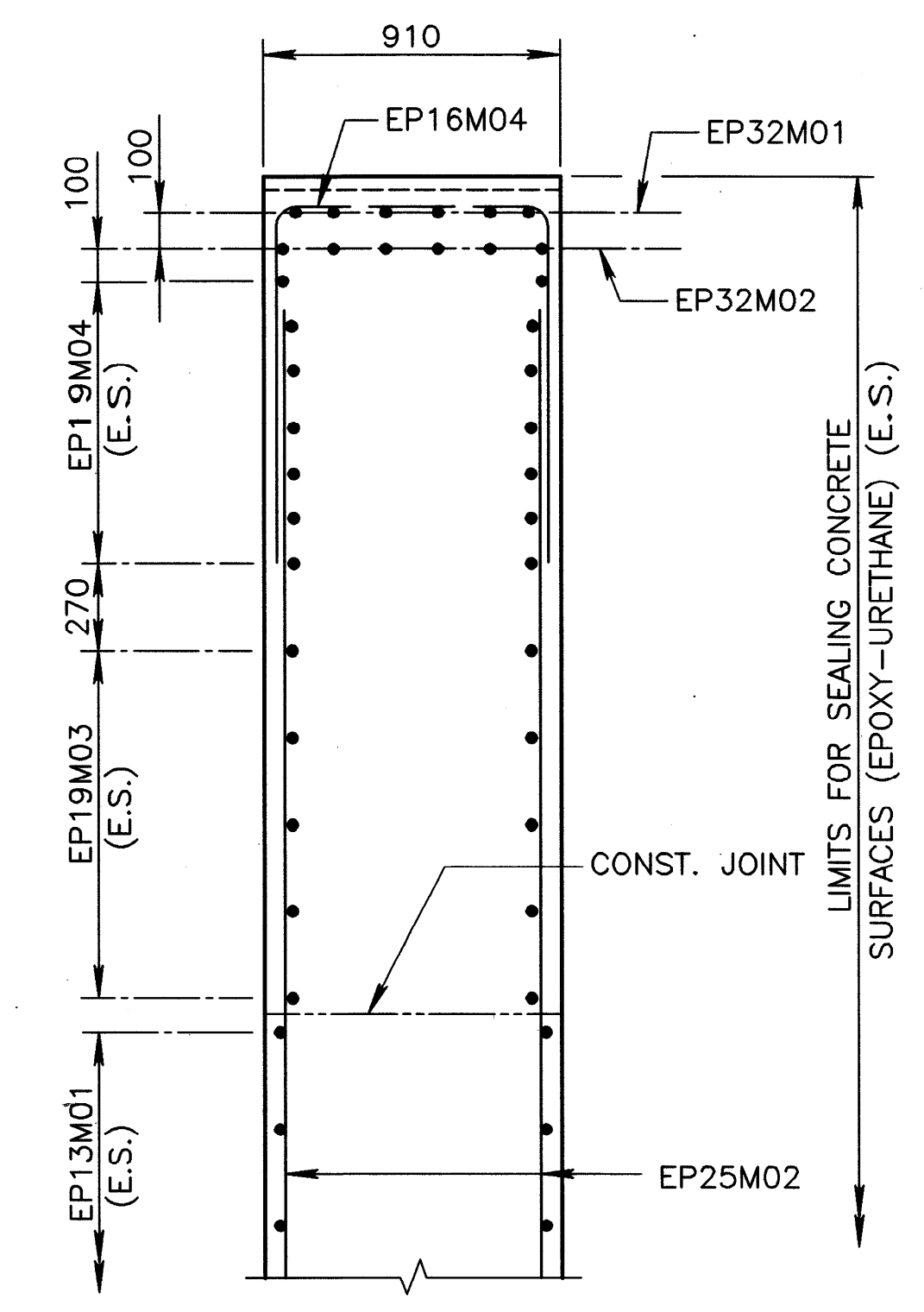
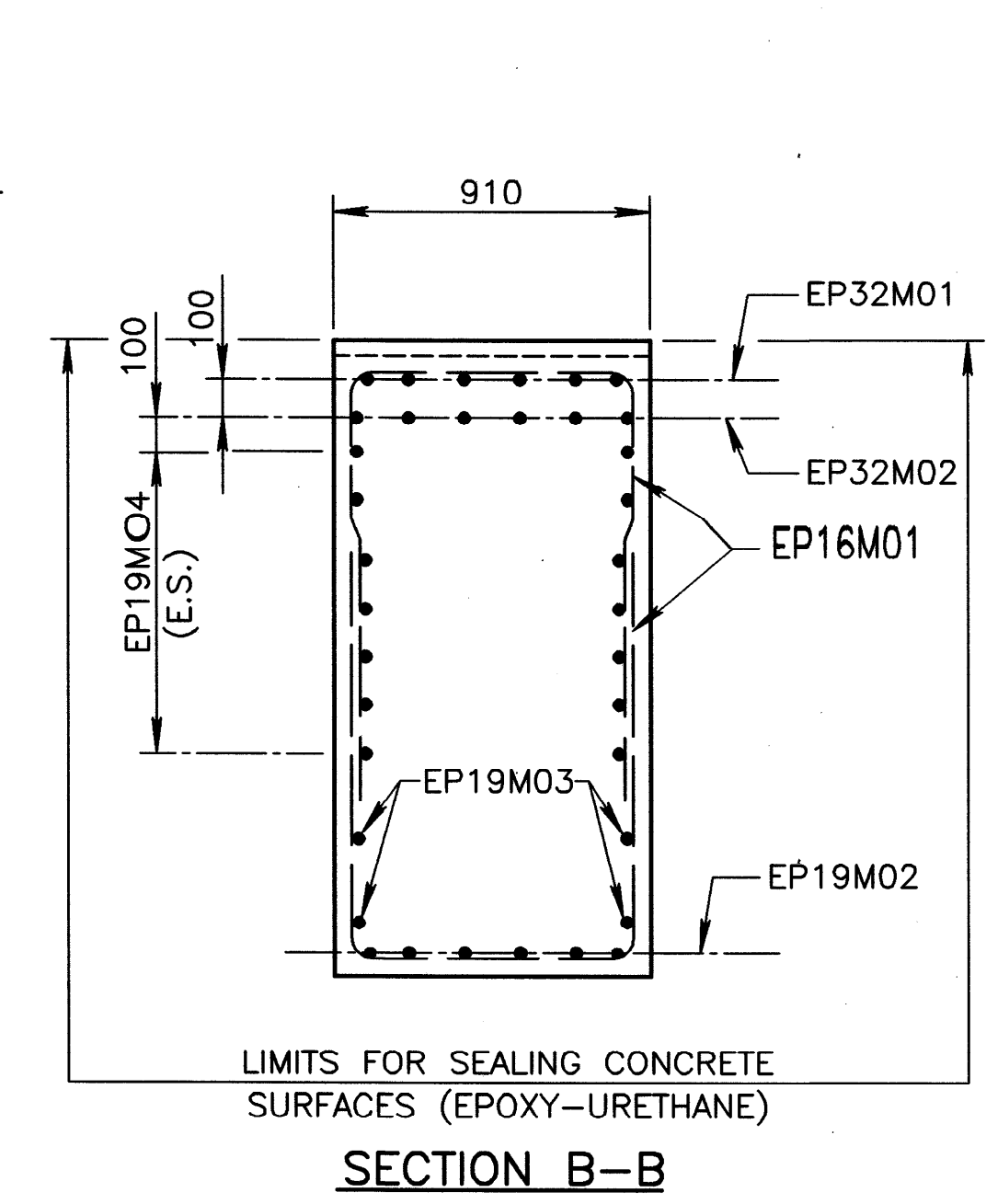
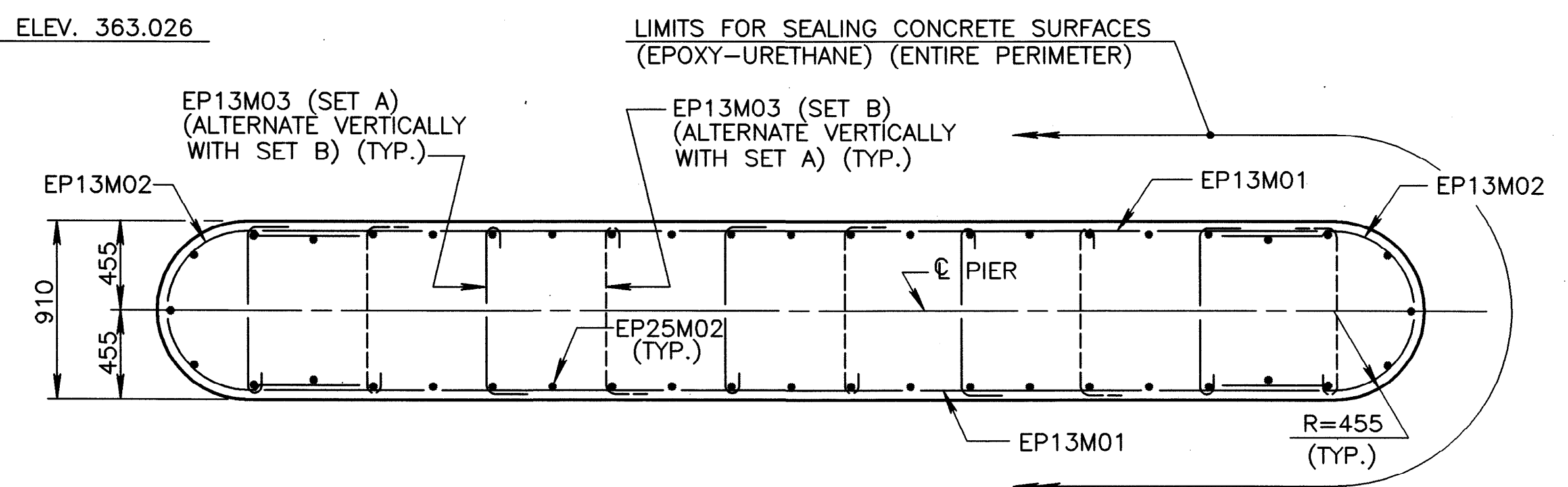
DESIGN AGENCY: MCCOY/FOK & ASSOCIATES, INC. 367 CHEST ROAD, SUITE 1A AKRON, OHIO  
 DATE: 8-14-00  
 DRAWN: LBD  
 CHECKED: HKK  
 DESIGNED: RHW  
 STRUCTURE FILE NUMBER: L-1701851  
 REVISION: R-1701878  
**PIER 2 - WESTBOUND BRIDGE**  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.  
 CRA/RIC-30-33.500/0.000  
 12/27  
 548  
 712



- NOTES**
- MINIMUM LAP UNLESS NOTED OTHERWISE:  
 13M BARS = 590 mm    16M BARS = 750 mm  
 19M BARS = 890 mm    25M BARS = 1500 mm  
 32M BARS = 2750 mm
  - ALL PILES ARE HP310x79 STEEL PILES.
  - PILE LAYOUT DIMENSIONS ARE MEASURED ALONG BOTTOM OF FOOTING.



- LEGEND**
- ⌋ DENOTES BATTERED PILE (1:15)
  - ⌋ DENOTES BATTERED PILE (1:4)
  - E.S. DENOTES EACH SIDE
  - BOT. DENOTES BOTTOM



LIMITS FOR SEALING CONCRETE SURFACES (EPOXY-URETHANE) (ENTIRE PERIMETER)

SECTION A-A

LIMITS FOR SEALING CONCRETE SURFACES (EPOXY-URETHANE)

SECTION B-B

LIMITS FOR SEALING CONCRETE SURFACES (EPOXY-URETHANE) (E.S.)

SECTION C-C

DESIGN AGENCY: MccoY/FOK & ASSOCIATES INC. 367 CHEST ROAD, SUITE 1A AKRON, OHIO

DATE: 8-14-00

REVISION: LBD (STRUCTURE FILE NUMBER: L-1701851, R-1701878)

DESIGNED: HK

CHECKED: RHW

DRAWN: WEB

REVISION: RHW

PIER 1 - EASTBOUND BRIDGE

BRIDGE NO. CRA-30-33602-L & R

RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000

13/27

549/712





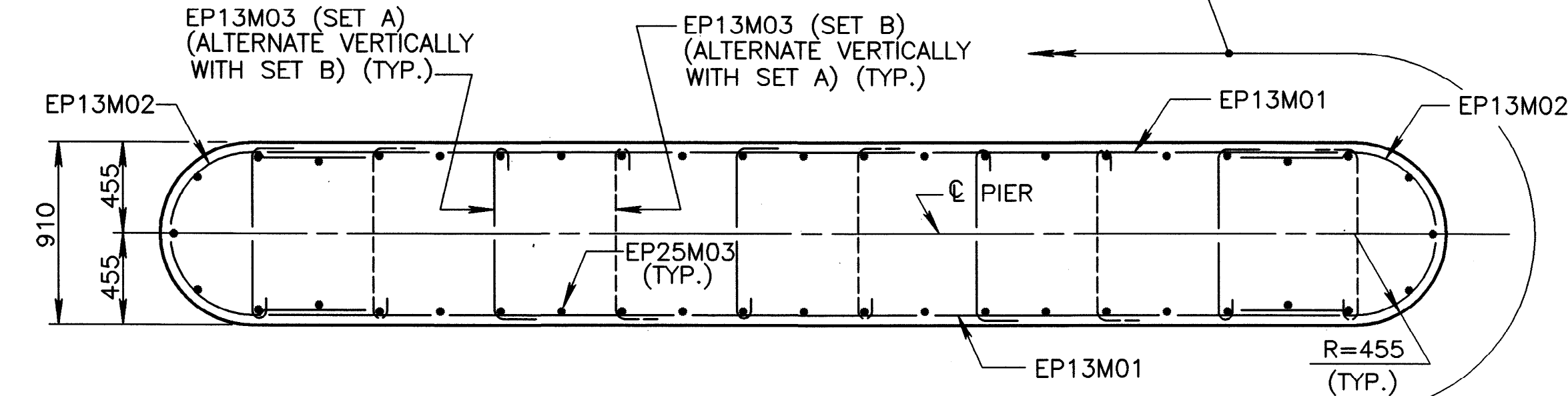
**NOTES**

- ① BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF THE BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.
- ② MINIMUM LAP UNLESS NOTED OTHERWISE:  
 13M BARS = 590 mm    16M BARS = 750 mm  
 19M BARS = 890 mm    25M BARS = 1500 mm  
 32M BARS = 2750 mm
- ③ ALL PILES ARE HP310x79 STEEL PILES.
- ④ PILE LAYOUT DIMENSIONS ARE MEASURED ALONG BOTTOM OF FOOTING.

**LEGEND**

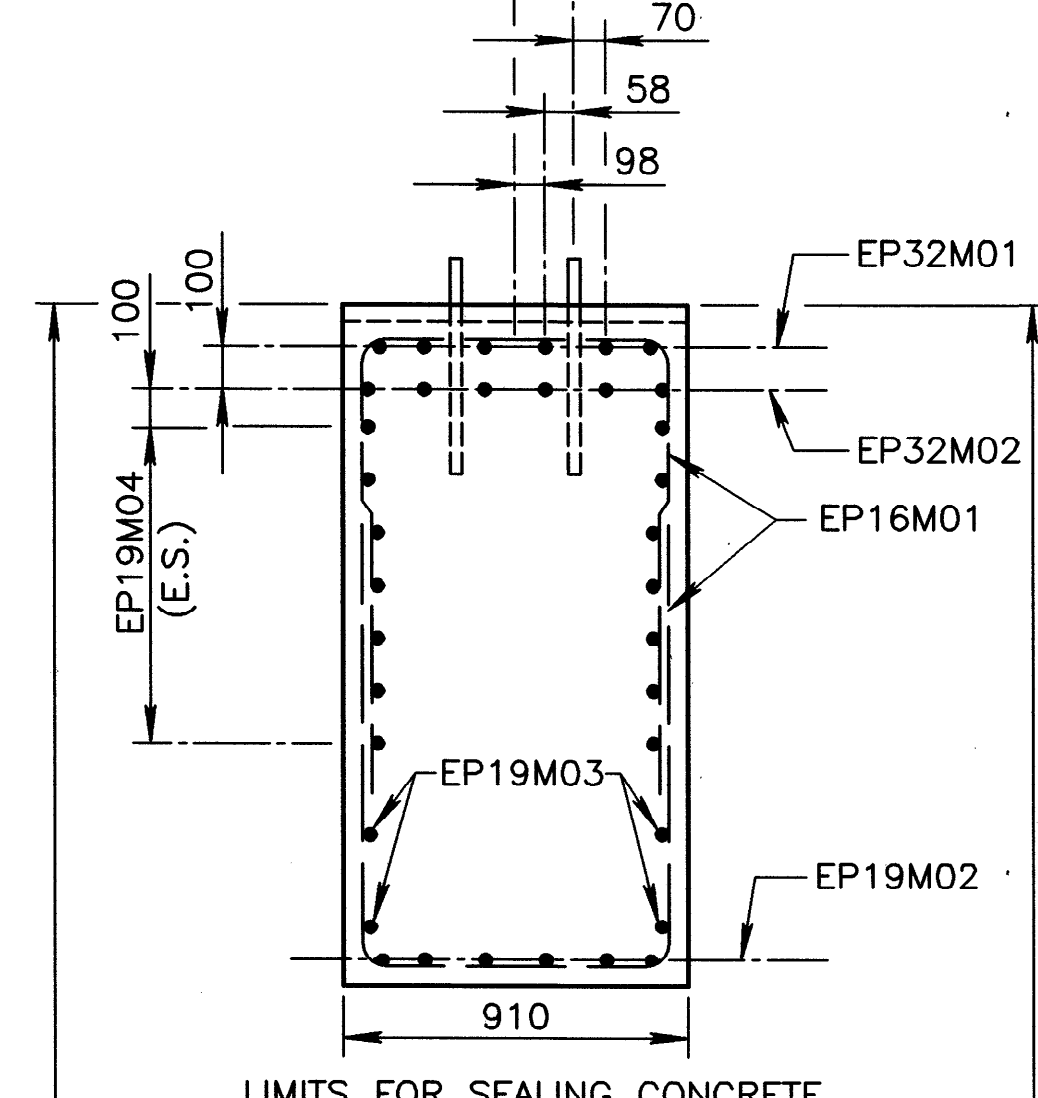
- ⌋ DENOTES BATTERED PILE (1:4)
- ⌋ DENOTES BATTERED PILE (1:15)
- E.S. DENOTES EACH SIDE
- BOT. DENOTES BOTTOM

LIMITS FOR SEALING CONCRETE SURFACES (EPOXY-URETHANE) (ENTIRE PERIMETER)

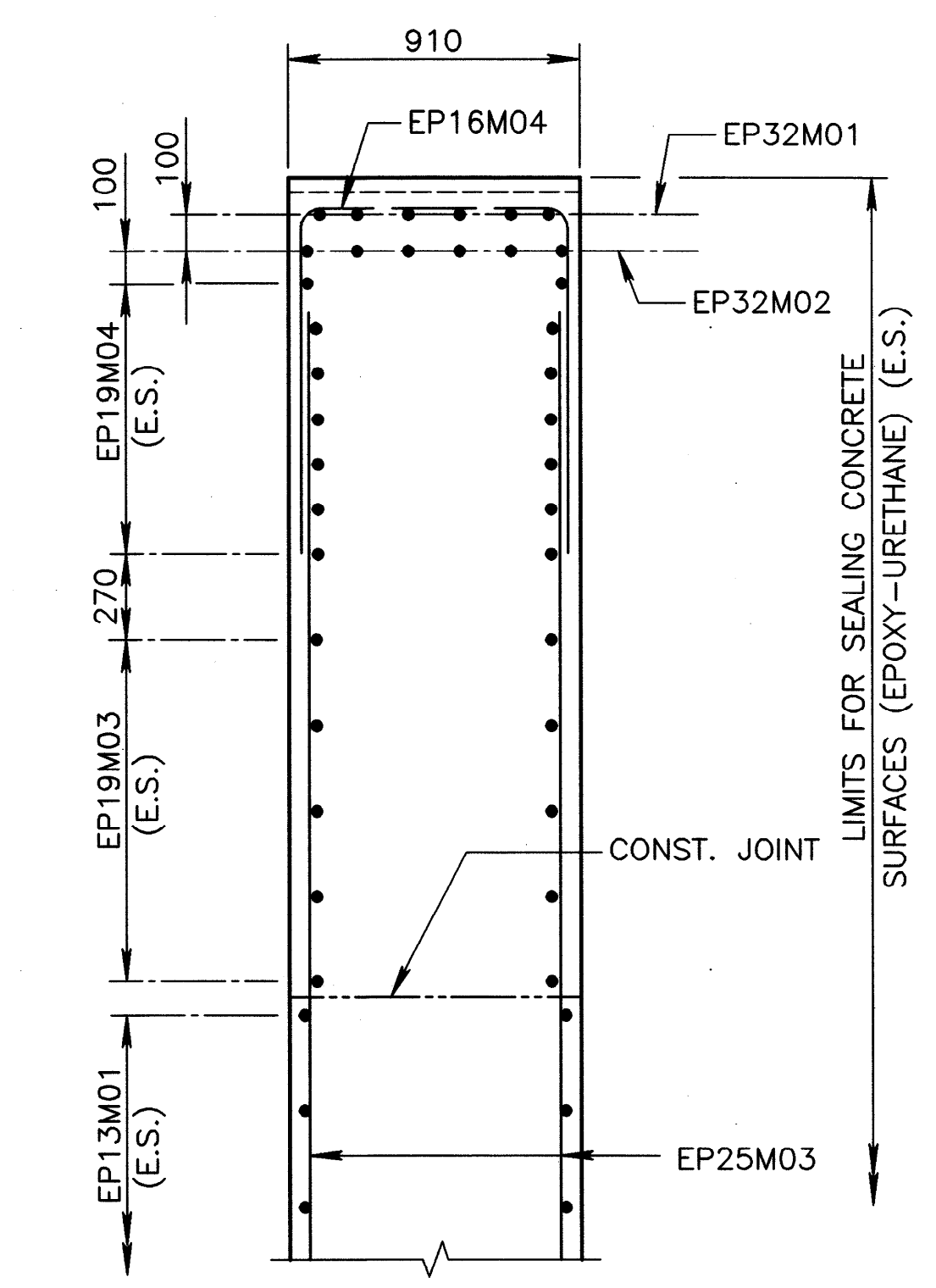


**SECTION A-A**

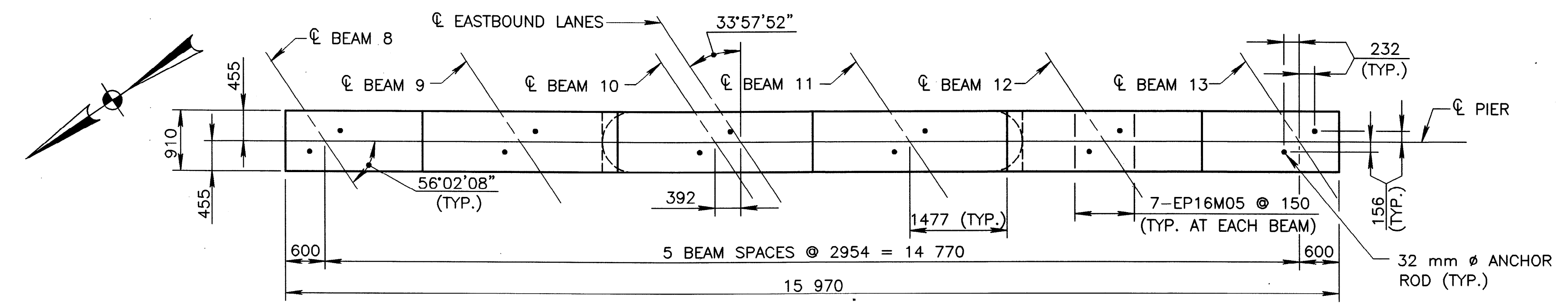
SYMMETRICAL ABOUT  $\varnothing$  PIER  
 $\varnothing$  32 mm  $\varnothing$  GALVANIZED SWEDGED ANCHOR ROD (DOWEL 450 mm INTO CONCRETE) (TYP.)



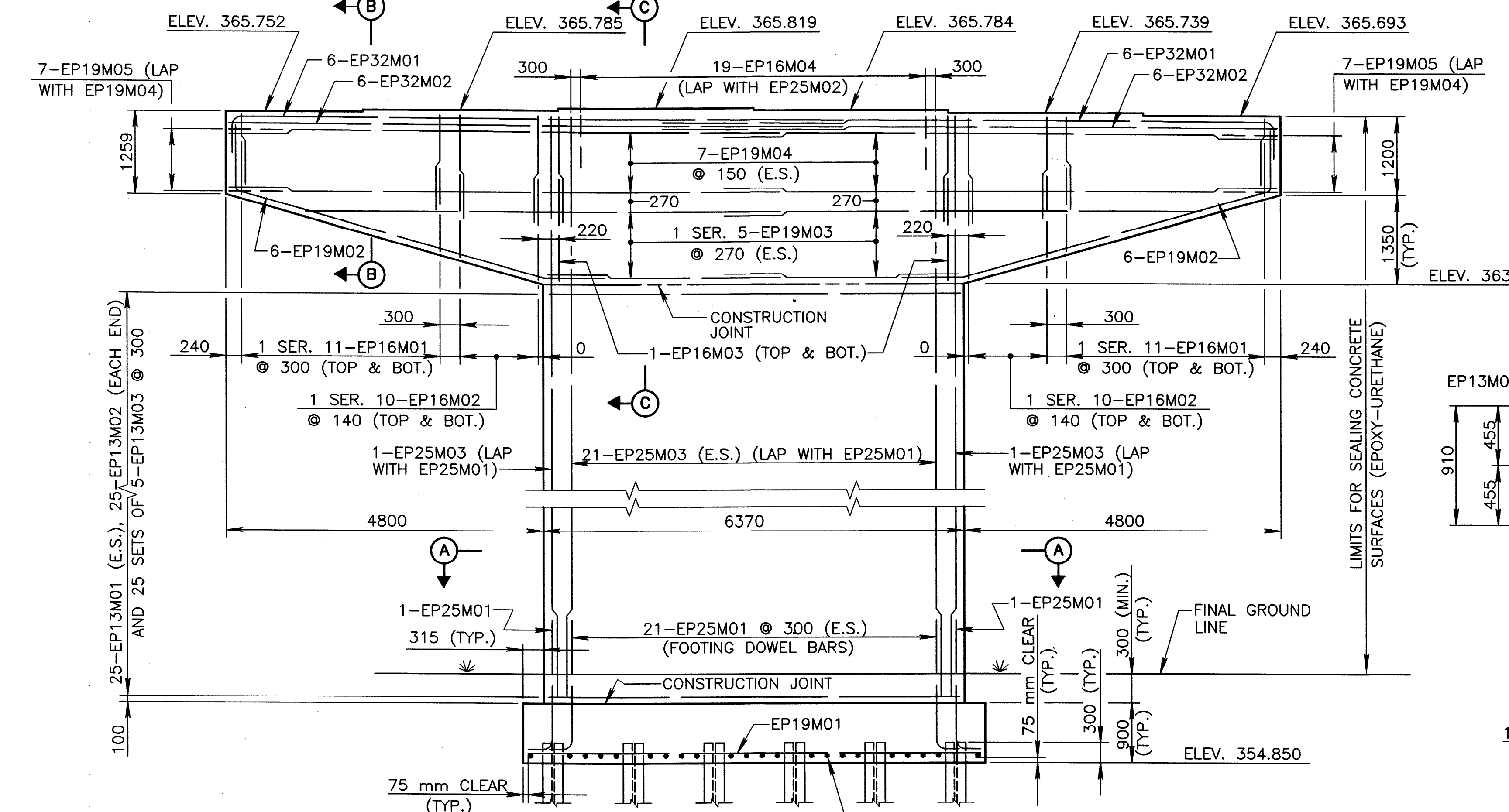
**SECTION B-B**



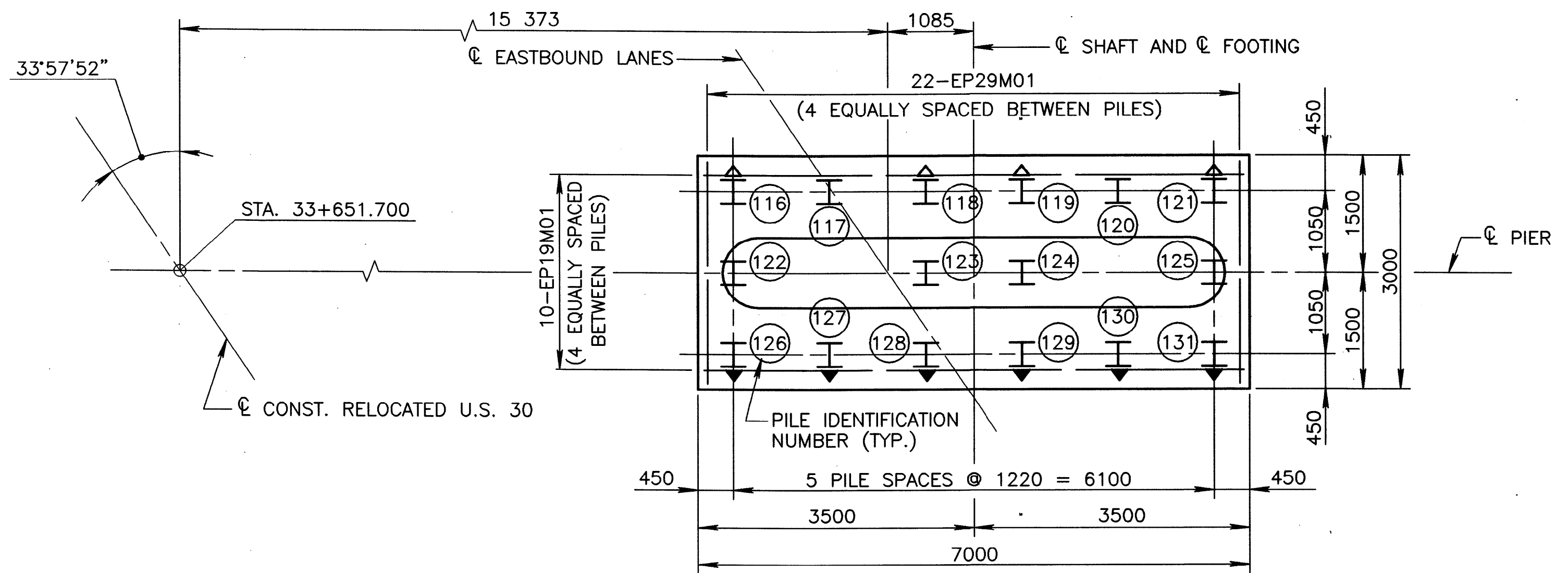
**SECTION C-C**



**PLAN**



**ELEVATION**



**FOOTING PLAN**

DESIGN AGENCY: McCOY/FOK & ASSOCIATES INC. 367 GHENT ROAD, SUITE 1A AKRON, OHIO

DESIGNED: HK

CHECKED: RHW

DRAWN: WEB

REVISIONS:

REVIEWED	DATE	BY
LBD	8-14-00	

STRUCTURE FILE NUMBER: L-1701851

PROJECT FILE NUMBER: R-1701878

PIER 2 - EASTBOUND BRIDGE

BRIDGE NO. CRA-30-33602-L & R

RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

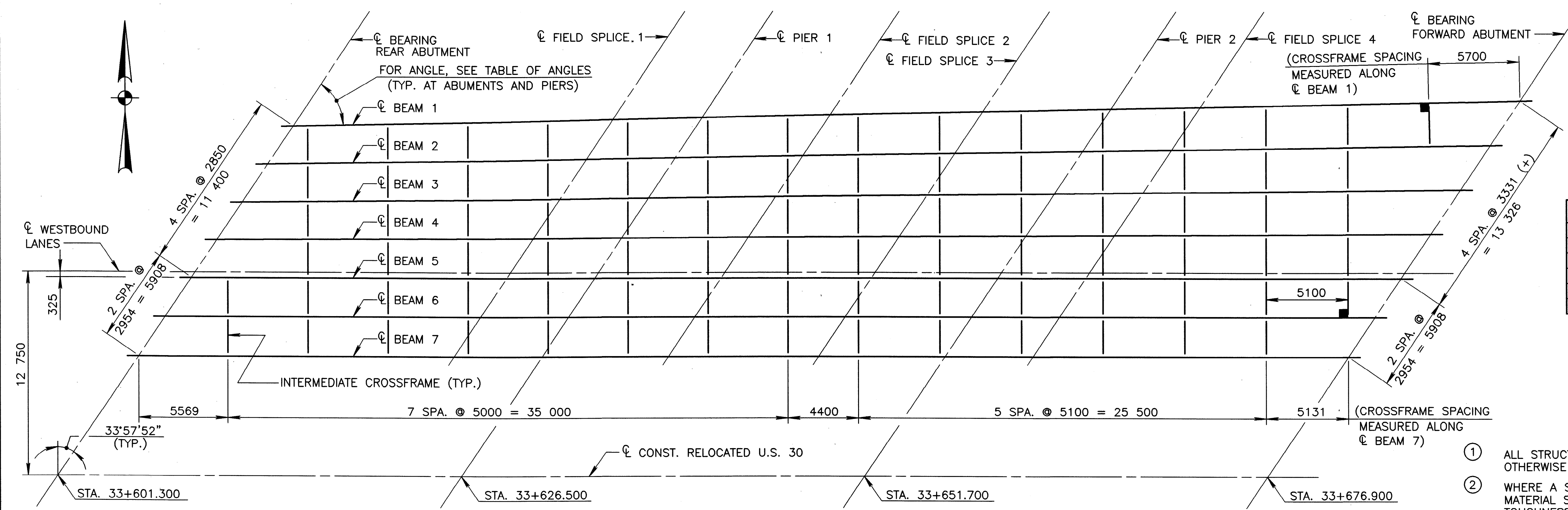
CRA/RIC-30-33.500/0.000

14 27

550 712



DESIGN AGENCY  
 McCOY/FOK & ASSOCIATES INC.  
 367 GHEENT ROAD, SUITE 1A  
 AKRON, OHIO

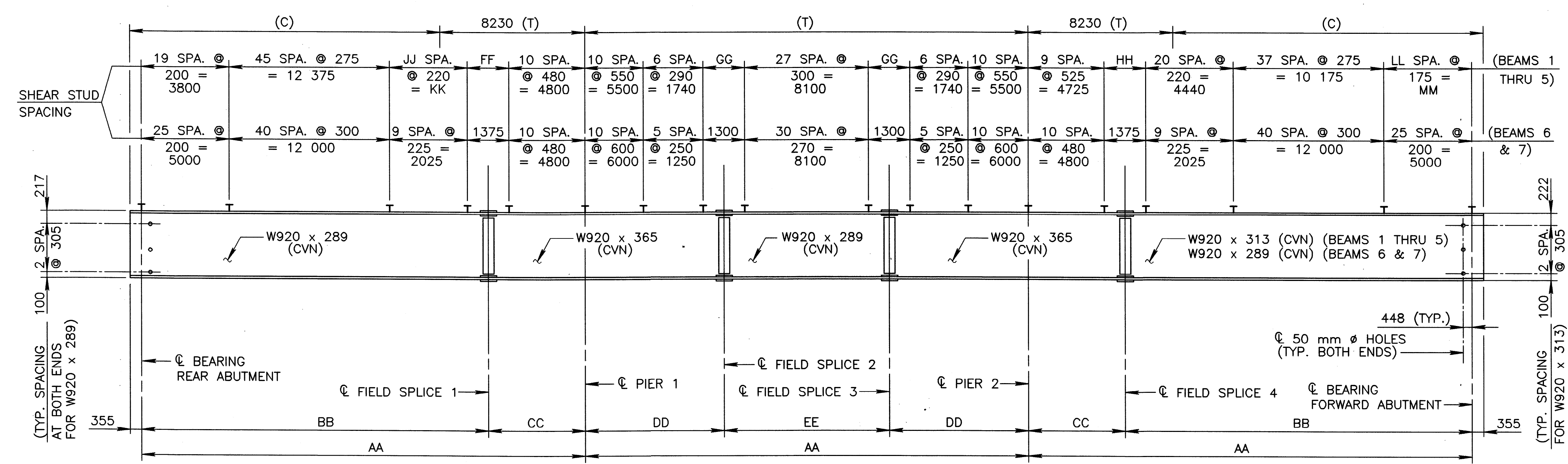


BEAM	ANGLE
1	54°50'31"
2	55°08'14"
3	55°26'04"
4	55°44'02"
5, 6 & 7	56°02'08"

**NOTES**

- ALL STRUCTURAL STEEL SHALL BE A588M, UNLESS OTHERWISE NOTED.
- WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
- FOR FIELD SPLICE DETAILS, SEE STANDARD DRAWING BS-1-93M, AND THE MODIFICATIONS ON THIS SHEET.
- ALL CROSSFRAMES ARE SET PERPENDICULAR TO BEAM 7, EXCEPT AS SHOWN.
- FOR INTERMEDIATE CROSSFRAME DETAILS, SEE STANDARD DRAWING GSD-1-96M, SHEET 1 OF 3. (TYPE 3)
- FOR TRANSVERSE SECTION, SEE SHEET 18/27.
- FOR ELASTOMERIC BEARING DETAILS, SEE SHEETS 22/27 AND 23/27.
- WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 25 mm FROM EDGE OF FLANGE, BE NOT MORE THAN 50 mm LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

**FRAMING PLAN**



**LEGEND**

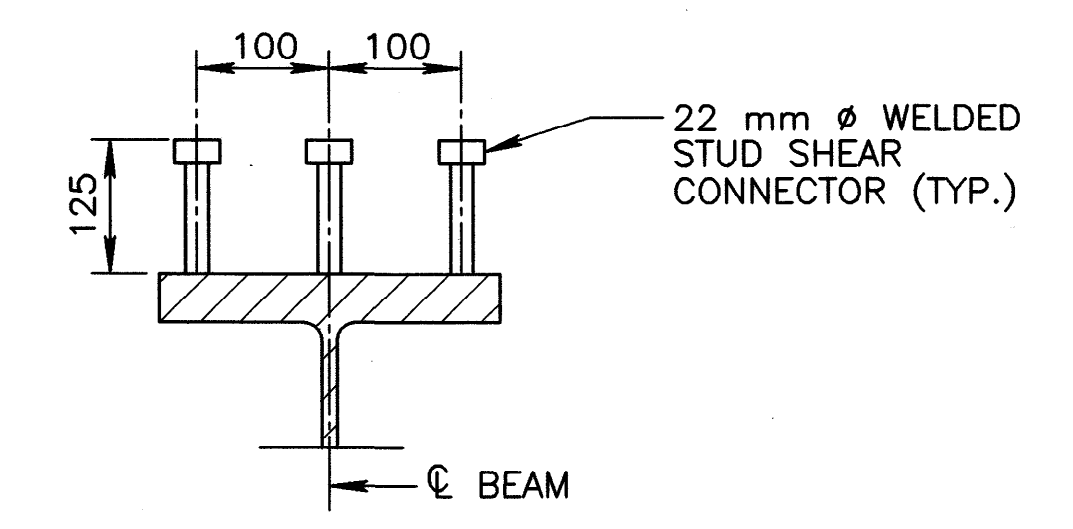
- (T) DENOTES AREA OF TENSION IN THE TOP FLANGE. THE BOTTOM FLANGE IN THESE AREAS IS IN COMPRESSION.
- (C) DENOTES AREA OF COMPRESSION IN THE TOP FLANGE THE BOTTOM FLANGE IN THESE AREAS IS IN TENSION.
- DENOTES 90°00'00"

**BEAM ELEVATION**

BEAM	DIMENSION				
	AA	BB	CC	DD	EE
1	25 564	19 985	5579	8014	9536
2	25 472	19 913	5559	7985	9502
3	25 381	19 841	5540	7957	9467
4	25 290	19 770	5520	7928	9434
5 THRU 7	25 200	19 700	5500	7900	9400

BEAM	FF	GG	HH	JJ	KK	LL	MM
1	1509	1492	1674	14	3080	26	4550
2	1417	1446	1582	14	3080	26	4550
3	1546	1401	1666	13	2860	25	4375
4	1455	1355	1575	13	2860	25	4375
5	1365	1310	1660	13	2860	24	4200

BEAM	FLANGE PLATES		FLANGE BOLTS	
	OUTSIDE	INSIDE	NUMBER	N SPA.
W920 x 313	300 x 16 x 1390	110 x 16 x 1390	64	7
W920 x 289	300 x 16 x 1220	110 x 16 x 1220	56	6

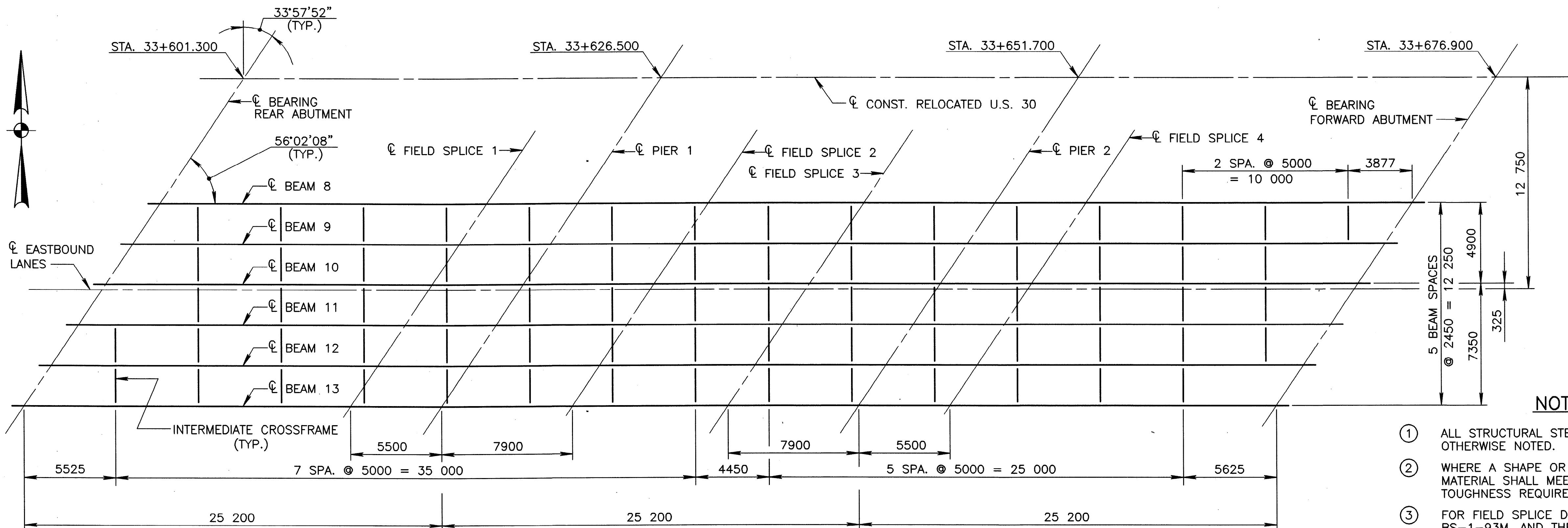


**SHEAR STUD CONNECTOR DETAIL**

FRAMING PLAN AND BEAM ELEVATION - WESTBOUND BRIDGE  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000





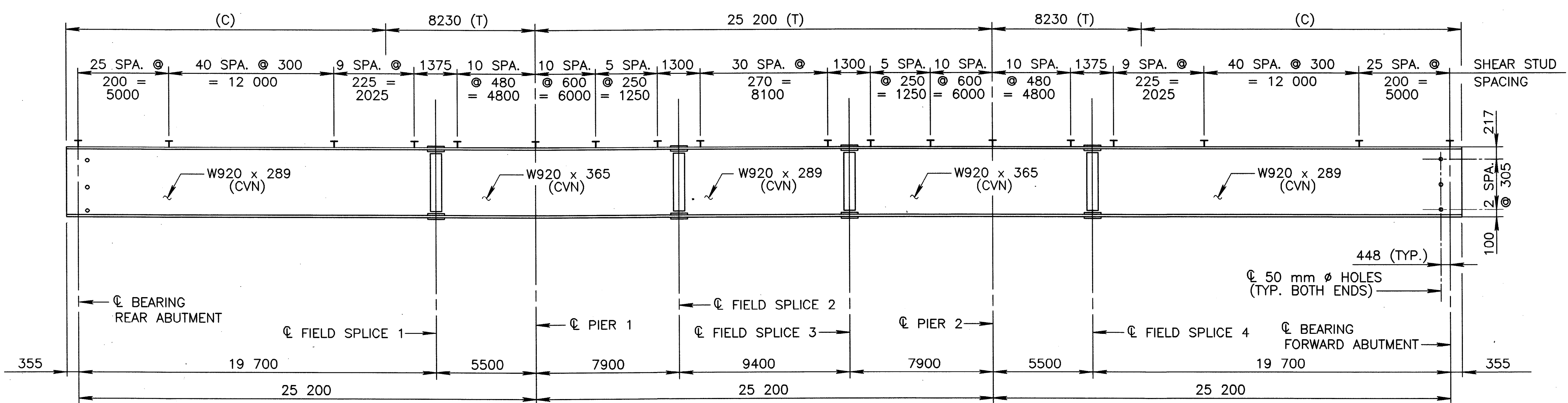
FRAMING PLAN

NOTES

- ① ALL STRUCTURAL STEEL SHALL BE A588M, UNLESS OTHERWISE NOTED.
- ② WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
- ③ FOR FIELD SPLICE DETAILS, SEE STANDARD DRAWING BS-1-93M, AND THE MODIFICATIONS ON THIS SHEET.
- ④ ALL CROSSFRAMES ARE SET PERPENDICULAR TO BEAMS.
- ⑤ FOR INTERMEDIATE CROSSFRAME DETAILS, SEE STANDARD DRAWING GSD-1-96M, SHEET 1 OF 3. (TYPE 3)
- ⑥ FOR TRANSVERSE SECTION, SEE SHEET [20/27].
- ⑦ FOR ELASTOMERIC BEARING DETAILS, SEE SHEETS [22/27] AND [23/27].
- ⑧ WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 25 mm FROM EDGE OF FLANGE, BE NOT MORE THAN 50 mm LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

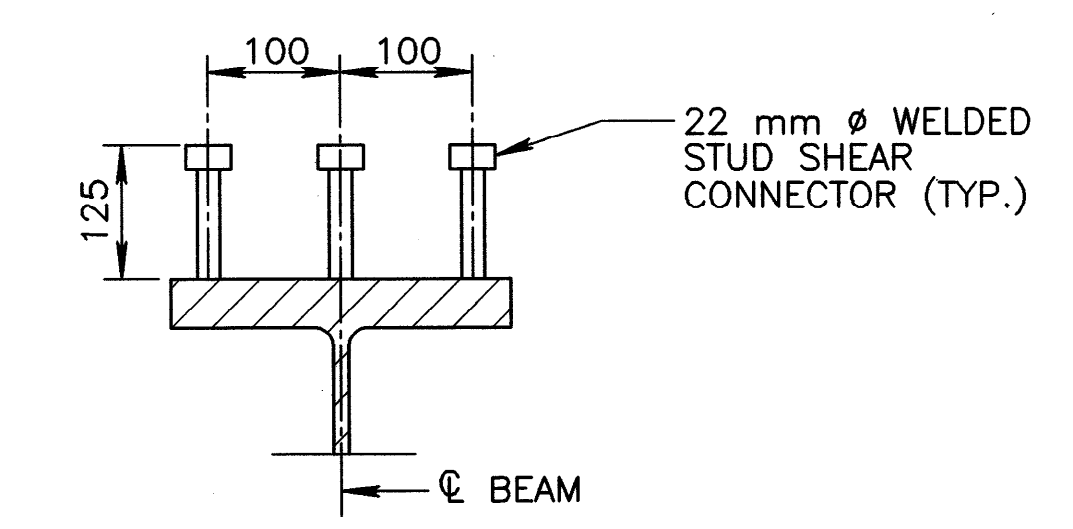
LEGEND

- (T) DENOTES AREA OF TENSION IN THE TOP FLANGE. THE BOTTOM FLANGE IN THESE AREAS IS IN COMPRESSION.
- (C) DENOTES AREA OF COMPRESSION IN THE TOP FLANGE. THE BOTTOM FLANGE IN THESE AREAS IS IN TENSION.



BEAM ELEVATION

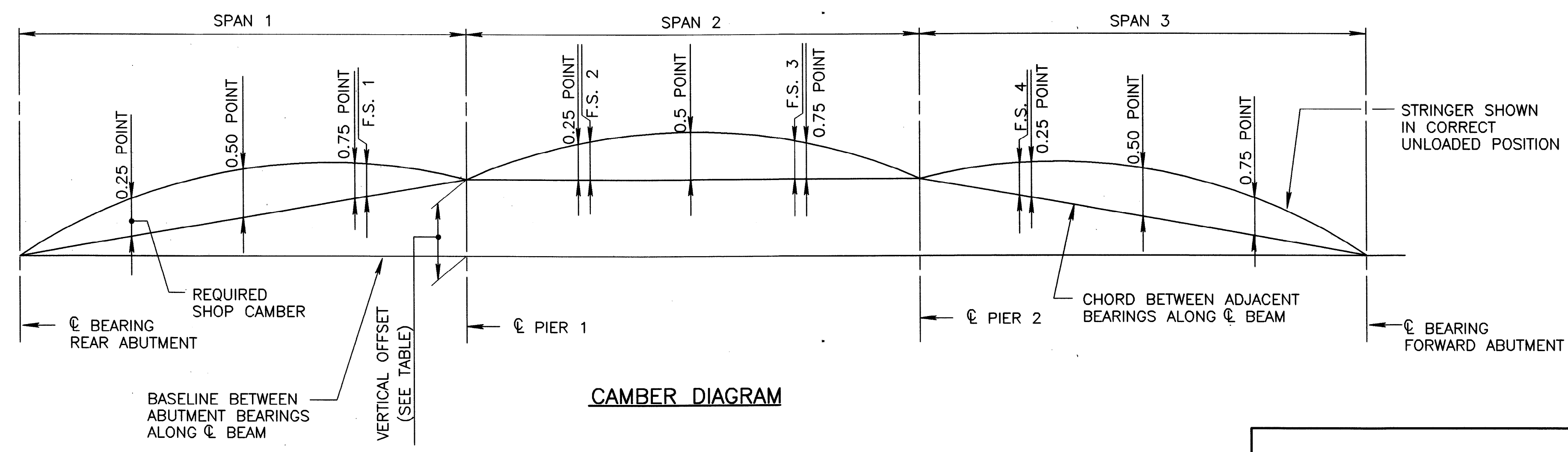
BEAM	FIELD SPLICE MODIFICATIONS			
	FLANGE PLATES		FLANGE BOLTS	
	OUTSIDE	INSIDE	NUMBER	N SPA.
W920 x 289	300 x 16 x 1220	110 x 16 x 1220	56	6



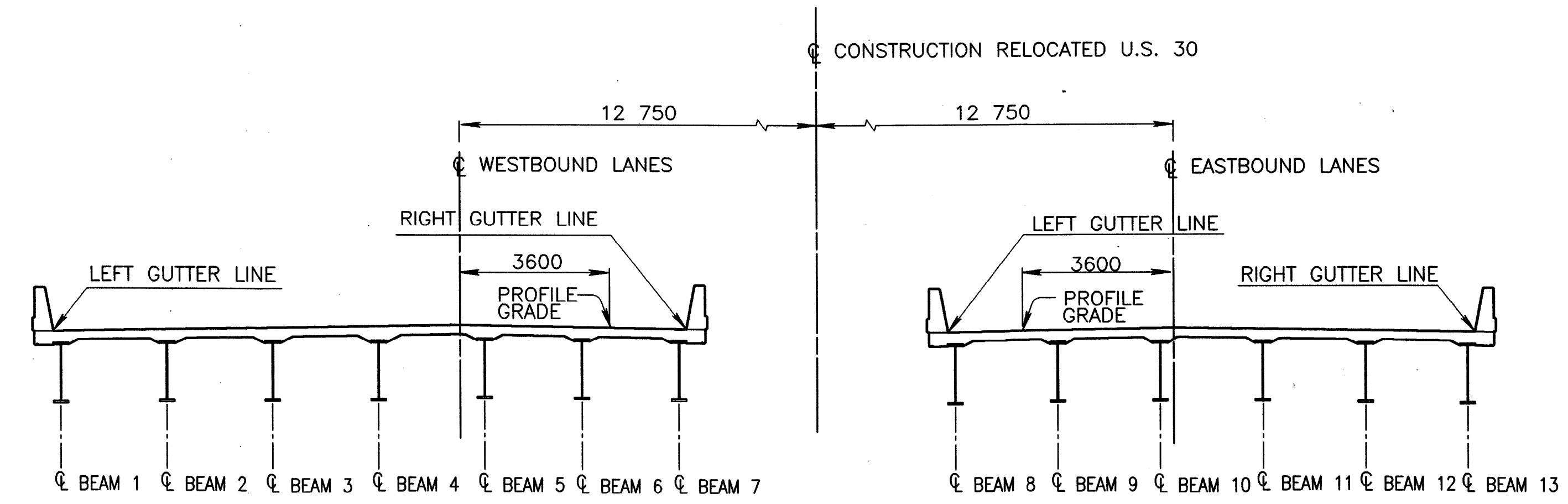
SHEAR STUD CONNECTOR DETAIL



VERTICAL OFFSETS AT PIER 1		VERTICAL OFFSETS AT PIER 2	
LOCATION	OFFSET	LOCATION	OFFSET
BEAM 1	37	BEAM 1	37
BEAM 2	37	BEAM 2	37
BEAM 3	37	BEAM 3	37
BEAM 4	37	BEAM 4	37
BEAM 5	37	BEAM 5	37
BEAM 6	37	BEAM 6	37
BEAM 7	37	BEAM 7	37
BEAM 8	37	BEAM 8	37
BEAM 9	37	BEAM 9	37
BEAM 10	37	BEAM 10	37
BEAM 11	37	BEAM 11	37
BEAM 12	37	BEAM 12	37
BEAM 13	37	BEAM 13	37



**CAMBER DIAGRAM**



**SCREED LOCATION KEY**

DEFLECTION AND CAMBER TABLE														
BEAMS	POINTS	SPAN 1				SPAN 2				SPAN 3				
		.25 PT.	.50 PT.	.75 PT.	F.S. 1	.25 PT.	F.S. 2	.50 PT.	F.S. 3	.75 PT.	F.S. 4	.25 PT.	.50 PT.	.75 PT.
BEAMS 1, 7, 8 & 13	DEFLECTION DUE TO WEIGHT OF STEEL	5	7	4	4	0	0	1	0	0	4	4	7	5
	DEFLECTION DUE TO REMAINING DEAD LOAD	24	31	17	15	-2	-2	-1	-2	-2	17	17	31	24
	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	3	5	4	3	3	4	5	4	4	3	3	5	3
	REQUIRED SHOP CAMBER	32	43	25	22	1	2	5	2	2	22	24	43	32
BEAMS 2 THRU 6 & 9 THRU 12	DEFLECTION DUE TO WEIGHT OF STEEL	5	7	4	4	0	0	1	0	0	4	4	7	5
	DEFLECTION DUE TO REMAINING DEAD LOAD	31	39	21	19	-3	-2	-1	-2	-3	19	21	39	31
	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	3	5	4	3	3	4	5	4	3	3	3	5	3
	REQUIRED SHOP CAMBER	39	51	29	26	0	2	5	2	0	26	28	51	39

**NOTES**

① SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

SCREED ELEVATIONS - WESTBOUND											SCREED ELEVATIONS - EASTBOUND									
POINT	CL WESTBOUND	LEFT GUTTER LINE	BEAM							RIGHT GUTTER LINE	CL EASTBOUND	LEFT GUTTER LINE	BEAM							RIGHT GUTTER LINE
			1	2	3	4	5	6	7				8	9	10	11	12	13		
CL BRG. REAR ABUT.	366.968	366.853	366.855	366.884	366.914	366.943	366.962	366.913	366.864	366.861	366.864	366.801	366.803	366.832	366.860	366.821	366.771	366.720	366.717	
.25	367.033	366.907	366.910	366.946	366.977	367.007	367.026	366.979	366.924	366.920	366.935	366.864	366.866	366.902	366.931	366.892	366.843	366.786	366.782	
.50	367.072	366.942	366.944	366.984	367.015	367.046	367.066	367.019	366.963	366.960	366.981	366.907	366.909	366.947	366.977	366.939	366.890	366.832	366.829	
.75	367.083	366.952	366.954	366.992	367.024	367.057	367.077	367.031	366.980	366.976	366.998	366.927	366.930	366.964	366.994	366.957	366.908	366.856	366.852	
F.S. 1	367.084	366.953	366.955	366.991	367.023	367.056	367.078	367.032	366.981	366.978	367.001	366.930	366.932	366.966	366.997	366.959	366.911	366.858	366.855	
CL PIER 1	367.089	366.958	366.960	366.994	367.027	367.060	367.083	367.037	366.991	366.988	367.011	366.942	366.944	366.976	367.006	366.969	366.921	366.873	366.870	
.25	367.112	366.976	366.978	367.012	367.047	367.081	367.106	367.059	367.015	367.012	367.038	366.970	366.972	367.003	367.034	366.998	366.950	366.904	366.901	
F.S. 2	367.118	366.981	366.983	367.018	367.053	367.088	367.112	367.066	367.021	367.018	367.047	366.977	366.979	367.011	367.043	367.006	366.959	366.912	366.909	
.50	367.136	366.996	366.998	367.034	367.070	367.105	367.130	367.084	367.039	367.036	367.069	366.998	367.000	367.033	367.065	367.029	366.982	366.935	366.932	
F.S. 3	367.149	367.006	367.008	367.045	367.081	367.118	367.143	367.099	367.054	367.051	367.088	367.016	367.018	367.051	367.083	367.048	367.002	366.955	366.952	
.75	367.153	367.010	367.012	367.048	367.085	367.121	367.148	367.103	367.060	367.056	367.093	367.022	367.024	367.056	367.089	367.053	367.007	366.962	366.959	
CL PIER 2	367.174	367.025	367.027	367.065	367.103	367.141	367.168	367.124	367.081	367.077	367.120	367.047	367.049	367.082	367.116	367.081	367.036	366.990	366.987	
F.S. 4	367.205	367.053	367.056	367.095	367.134	367.173	367.200	367.158	367.110	367.107	367.158	367.079	367.082	367.120	367.154	366.119	367.075	367.026	367.022	
.25	367.213	367.053	367.055	367.099	367.138	367.177	367.205	367.161	367.114	367.111	367.163	367.084	367.086	367.124	367.158	367.124	367.079	367.030	367.027	
.50	367.240	367.076	367.079	367.127	367.167	367.207	367.235	367.193	367.143	367.140	367.200	367.116	367.118	367.161	367.196	367.162	367.118	367.065	367.062	
.75	367.242	367.075	367.078	367.126	367.167	367.208	367.237	367.197	367.148	367.145	367.209	367.125	367.127	367.169	367.205	367.172	367.128	367.077	367.074	
CL BRG. FWD. ABUT.	367.221	367.054	367.057	367.099	367.142	367.184	367.216	367.175	367.133	367.131	367.193	367.114	367.117	367.153	367.188	367.156	367.113	367.070	367.067	

DESIGN AGENCY: McCOY/FOK & ASSOCIATES INC. 367 GHENT ROAD, SUITE 1A AKRON, OHIO

DATE: 8-14-00

REVIEWED: LBD (L-1701951), R-1701878

DESIGNED: RHW (R-1701951), HK

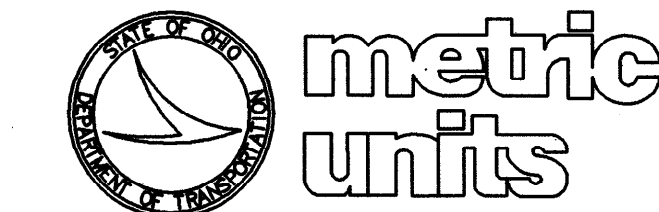
SCREED ELEVATIONS AND DEFLECTION AND CAMBER TABLES  
BRIDGE NO. CRA-30 33602-L & R  
RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000

17/27

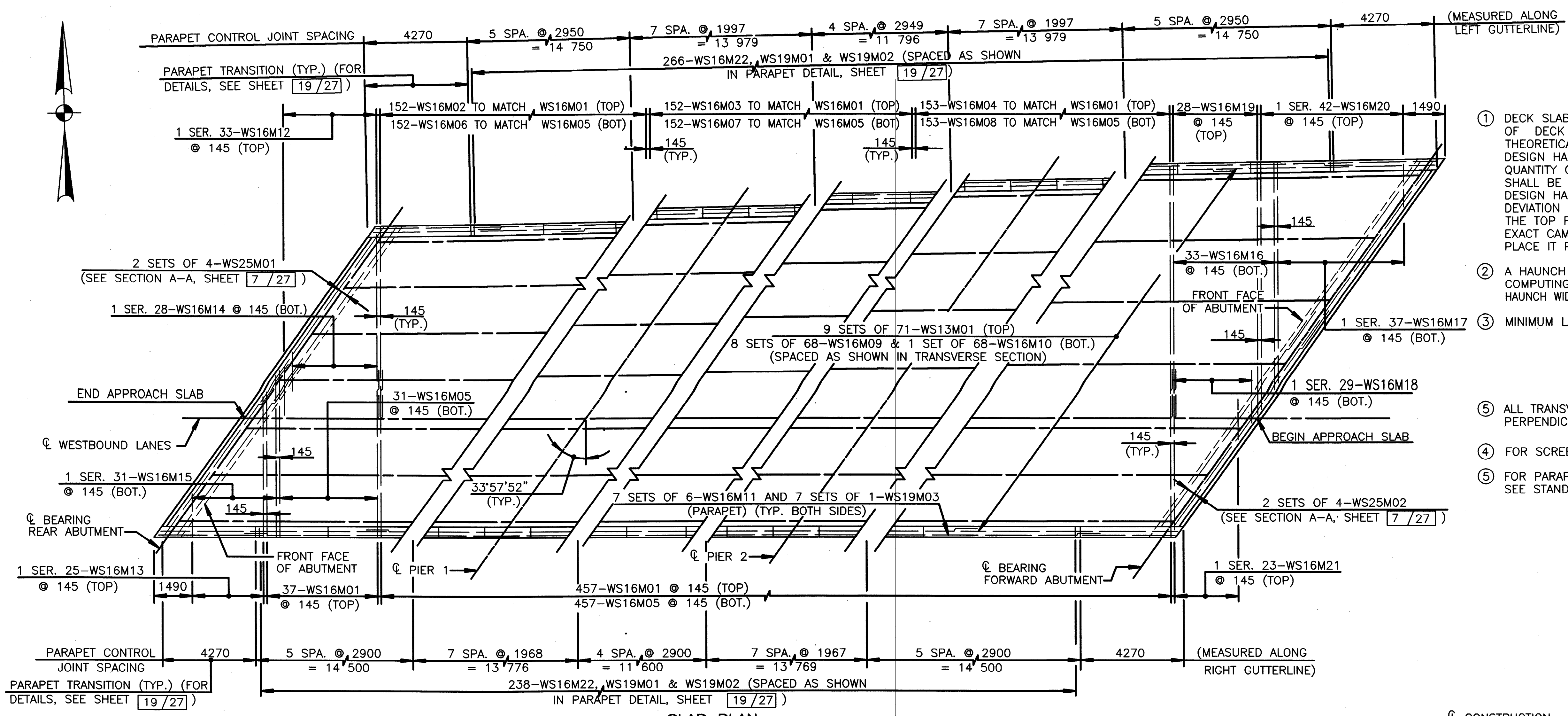
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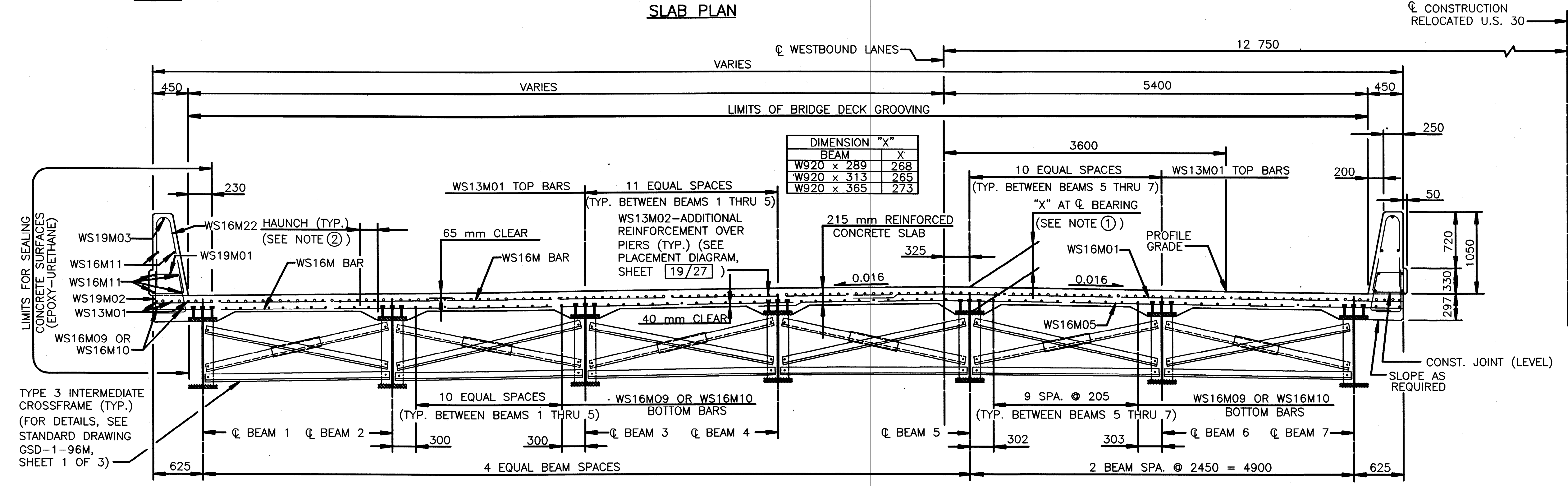


**NOTES**

- ① DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE THEORETICAL DESIGN DIMENSION INCLUDING THE DESIGN HAUNCH THICKNESS OF 50 mm. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, MINUS THE DESIGN HAUNCH THICKNESS, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.
- ② A HAUNCH WIDTH OF 225 mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150 mm AND 300 mm.
- ③ MINIMUM LAP UNLESS OTHERWISE NOTED:  
 13M BARS = 500 mm  
 16M BARS = 890 mm  
 19M BARS = 1040 mm  
 25M BARS = 1500 mm
- ④ FOR SCREED ELEVATIONS, SEE SHEET 17/27.
- ⑤ ALL TRANSVERSE REINFORCEMENT SHALL BE PLACED PERPENDICULAR TO  $\phi$  WESTBOUND LANES.



**SLAB PLAN**



**TRANSVERSE SECTION**

McCOY/FOK & ASSOCIATES INC.  
 367 GHEENT ROAD, SUITE 1A  
 AKRON, OHIO

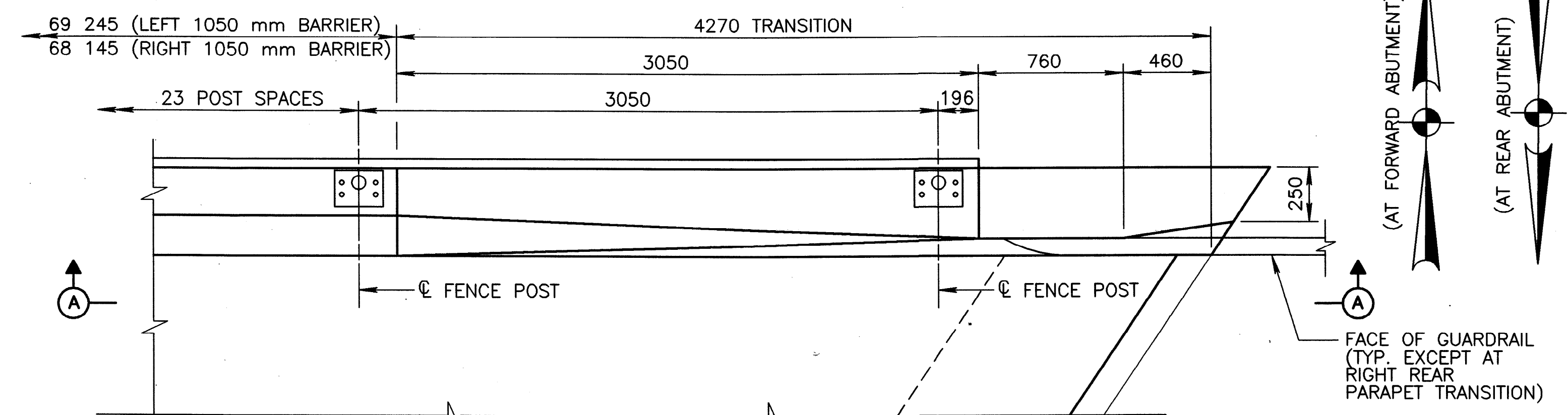
DATE: 8-14-00  
 REVISION: LBD  
 DRAWN: RHW  
 CHECKED: HKK  
 WEB

SLAB PLAN AND TRANSVERSE SECTION - WESTBOUND BRIDGE  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

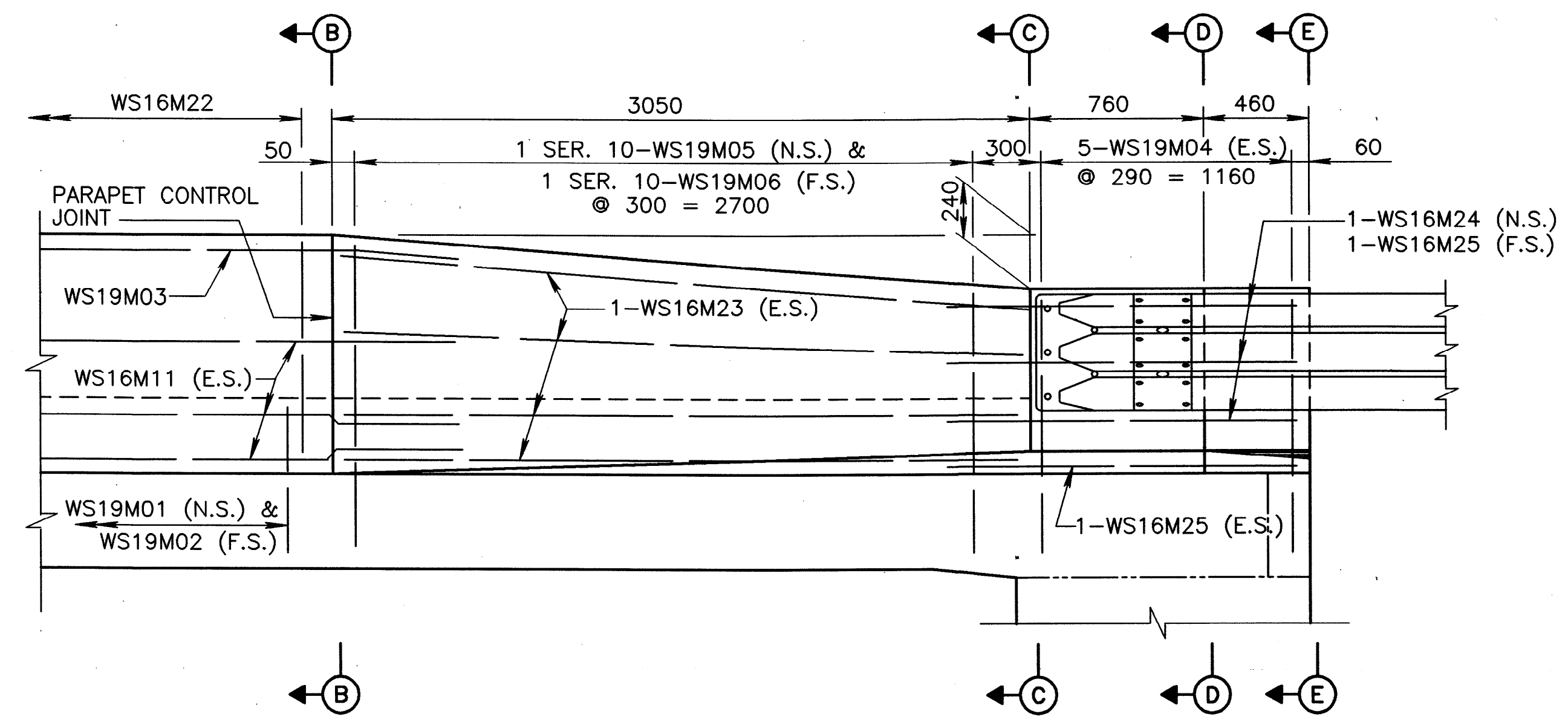
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18/27

554  
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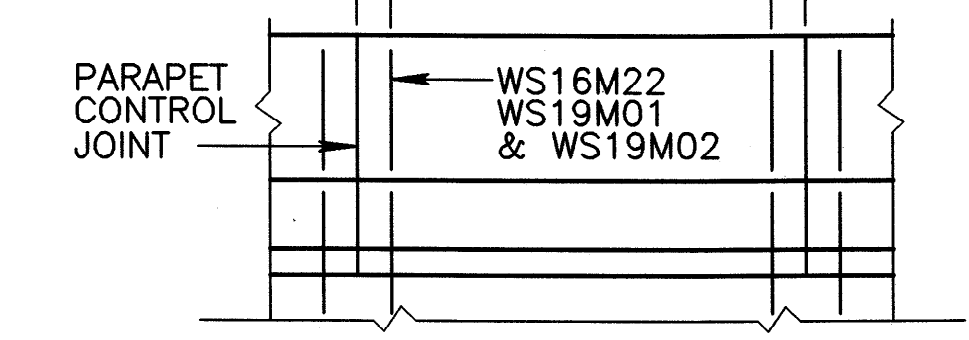


**PARAPET TRANSITION PLAN**  
 (RIGHT REAR AND LEFT FORWARD PARAPET TRANSITION SHOWN, LEFT REAR AND RIGHT FORWARD PARAPET TRANSITION SIMILAR)



**SECTION A-A**  
 (FENCE NOT SHOWN)  
 (LEFT FORWARD PARAPET TRANSITION SHOWN, RIGHT FORWARD AND REAR PARAPET TRANSITIONS SIMILAR)

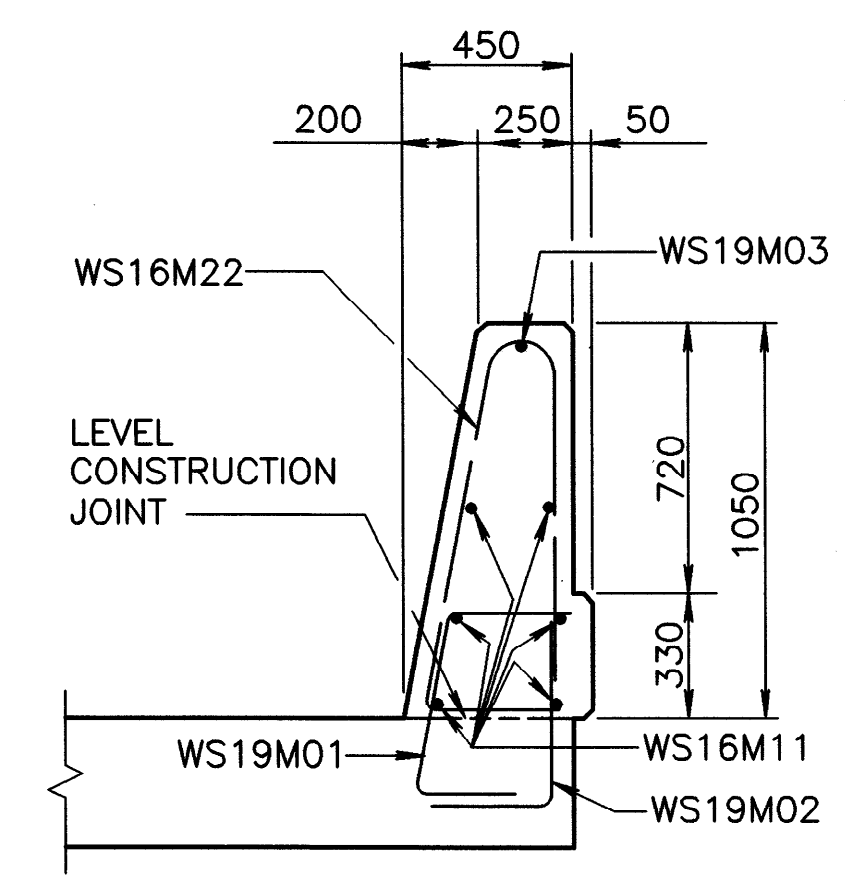
(1997 PANEL LENGTH)	71	7 SPA. @ 265	71
(2949+ PANEL LENGTH)	75	10 SPA. @ 280	74+
(2900 PANEL LENGTH)	100	9 SPA. @ 300	100
(1967+ PANEL LENGTH)	84	6 SPA. @ 300	83+



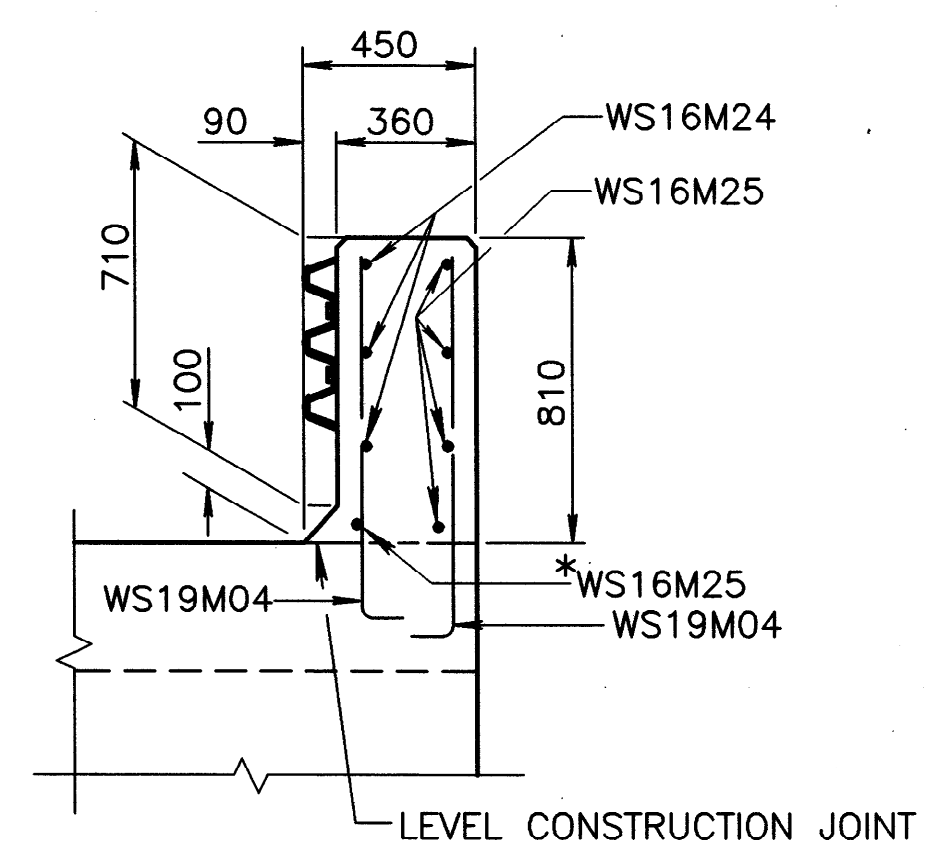
**PARAPET DETAIL**

**LEGEND**

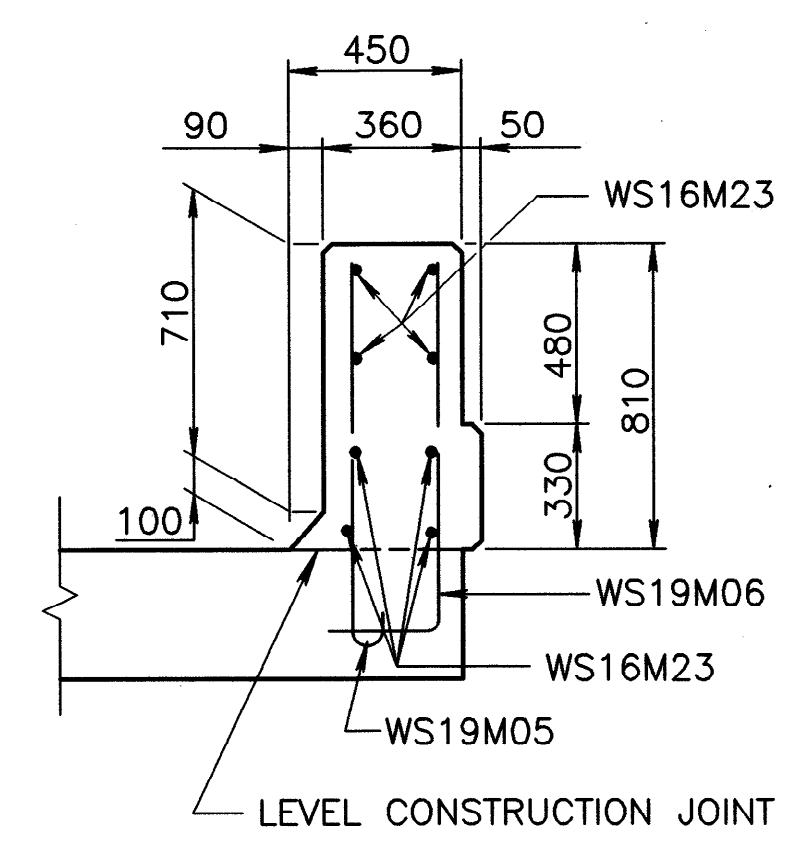
N.S. DENOTES NEAR SIDE  
 F.S. DENOTES FAR SIDE  
 E.S. DENOTES EACH SIDE



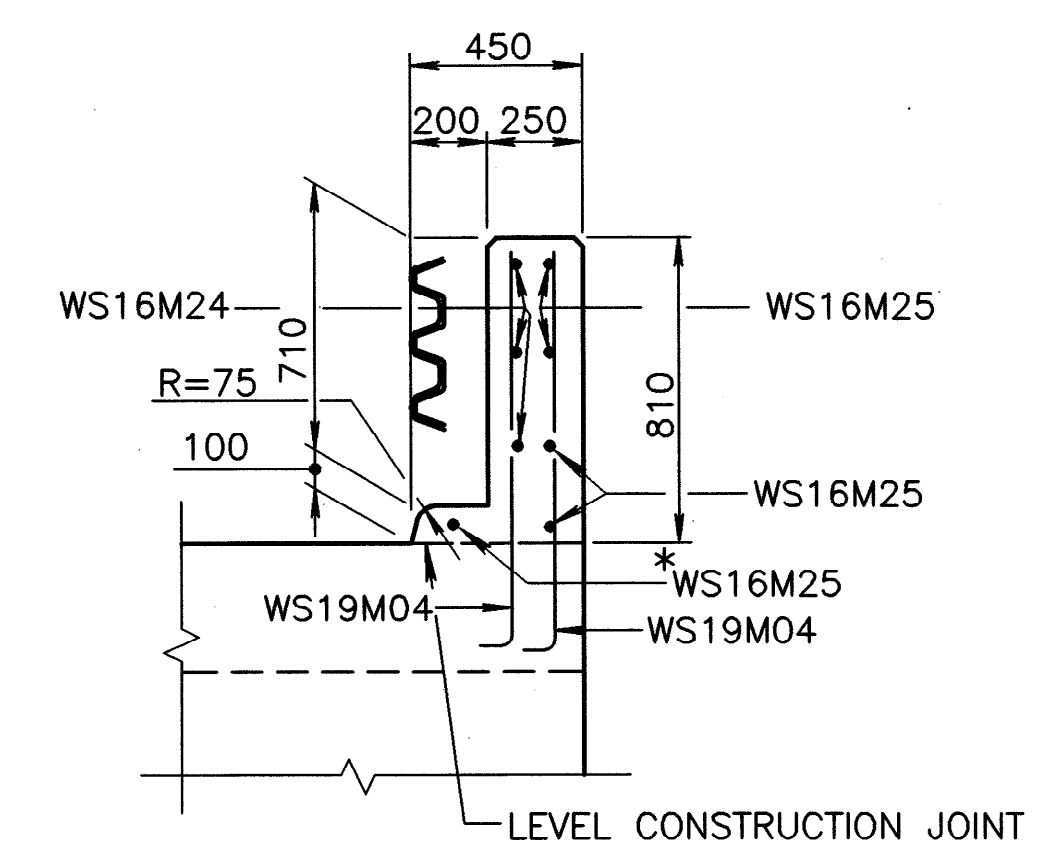
**SECTION B-B**



**SECTION D-D**

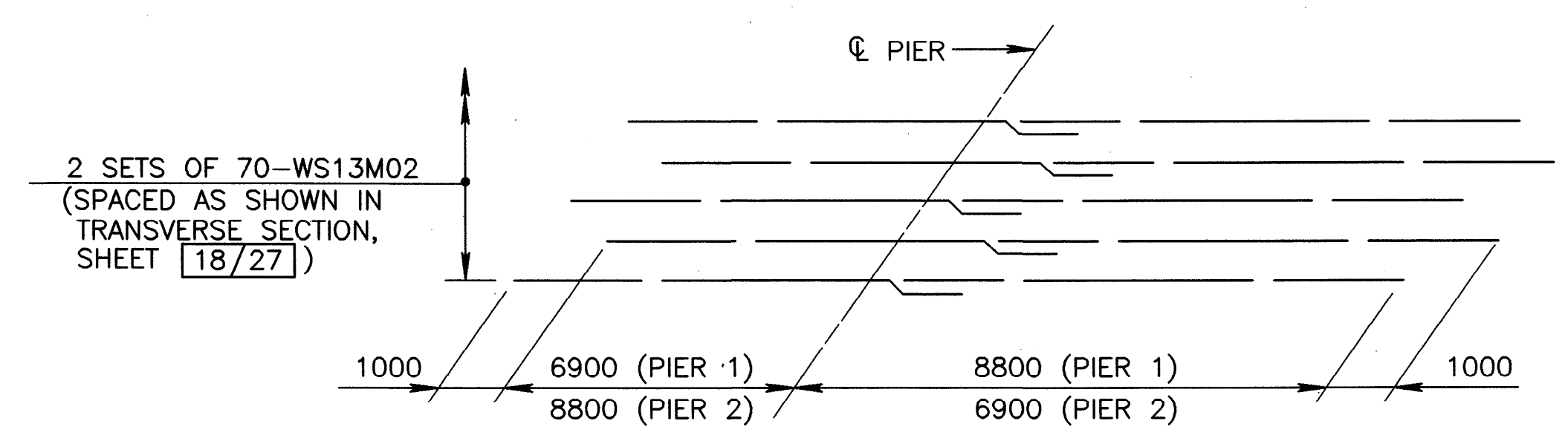


**SECTION C-C**



**SECTION E-E**

\* FIELD BEND AS REQUIRED.

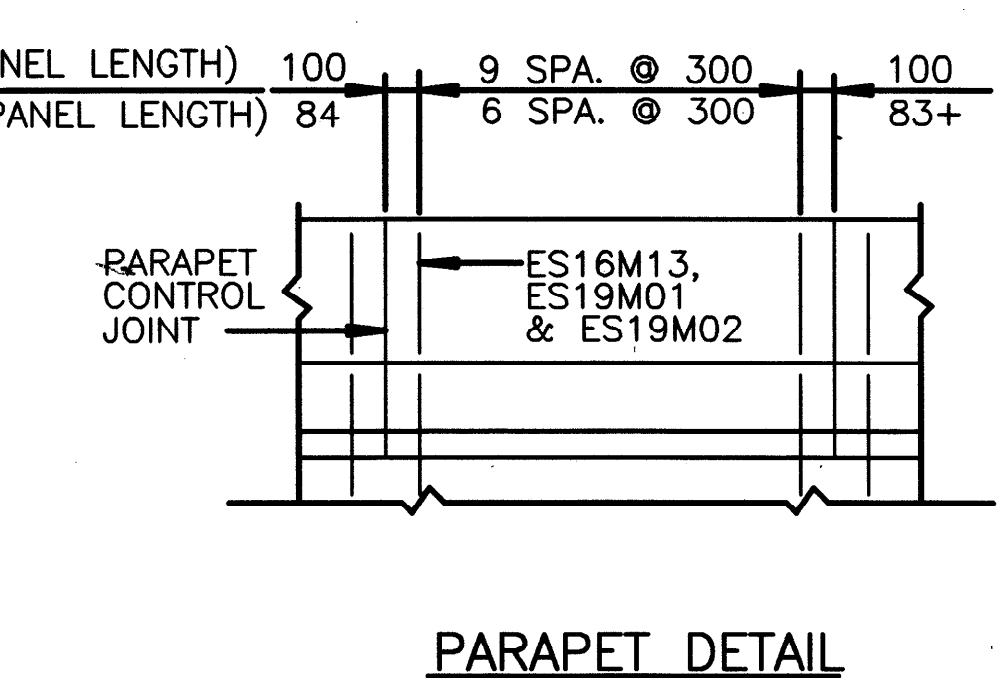
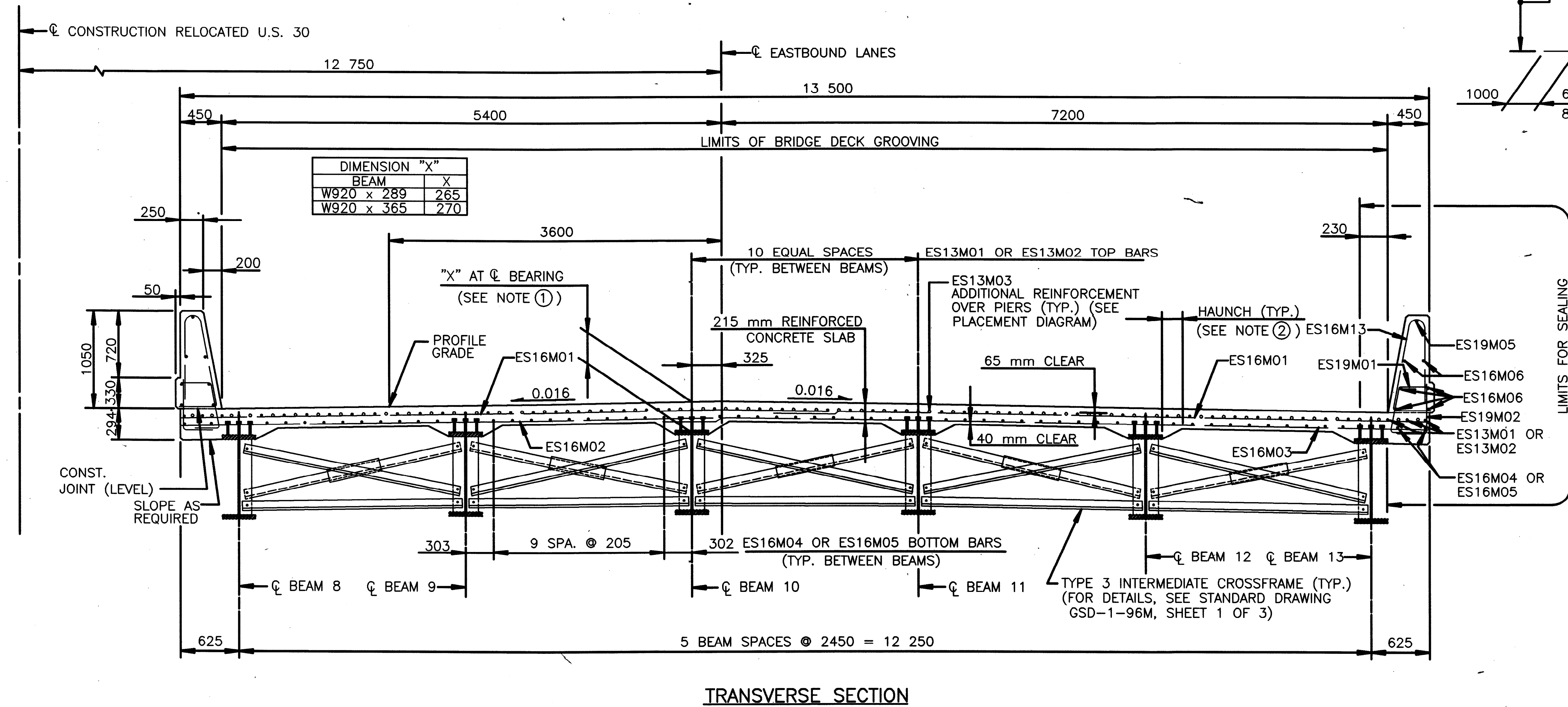
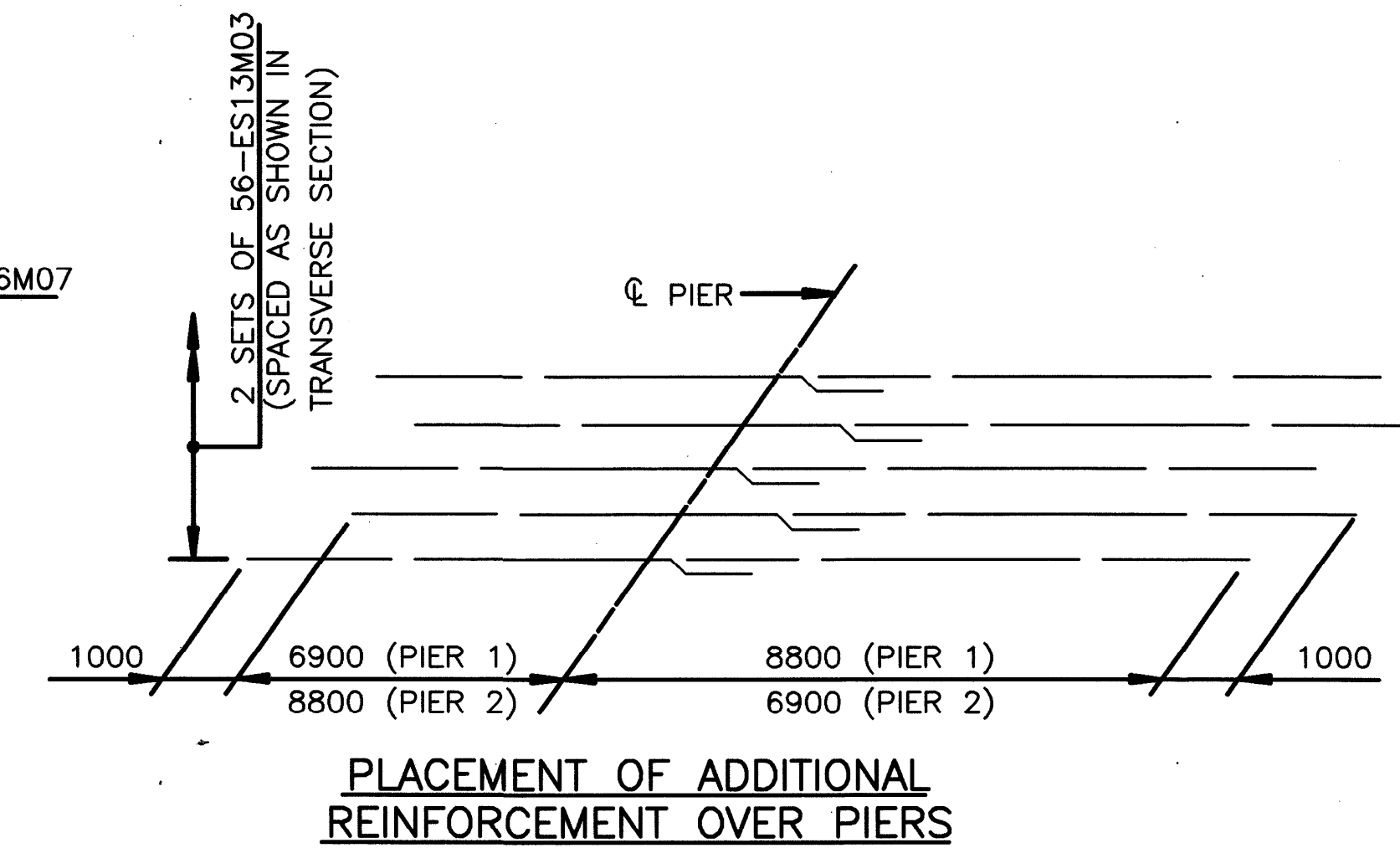
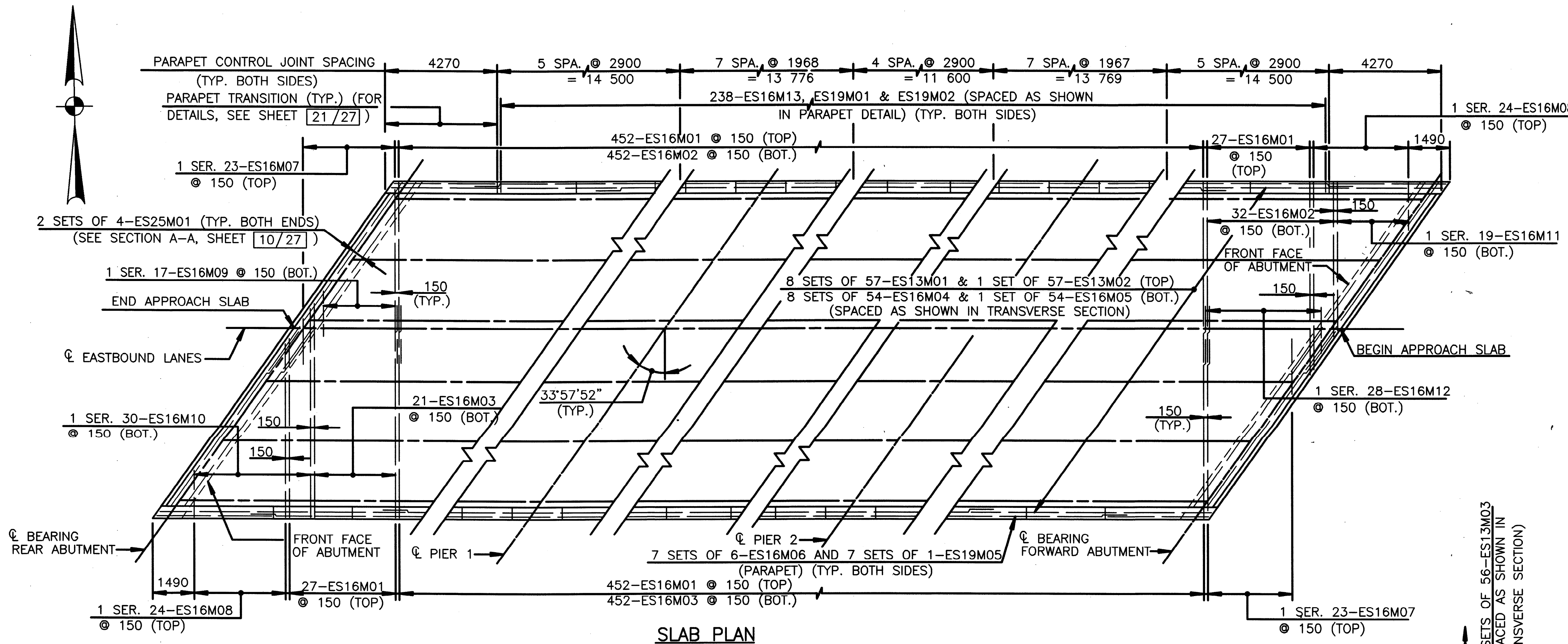


**PLACEMENT OF ADDITIONAL REINFORCEMENT OVER PIERS**



**NOTES**

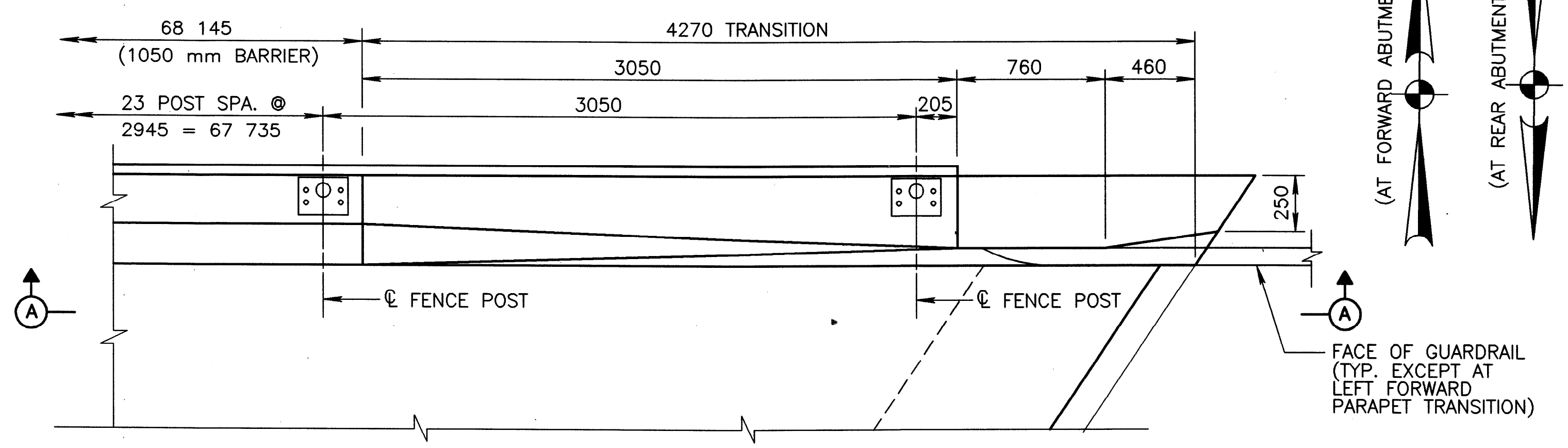
- DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE THEORETICAL DESIGN DIMENSION INCLUDING THE DESIGN HAUNCH THICKNESS OF 50 mm. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, MINUS THE DESIGN HAUNCH THICKNESS, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.
- A HAUNCH WIDTH OF 225 mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150 mm AND 300 mm.
- MINIMUM LAP UNLESS OTHERWISE NOTED:  
 13M BARS = 500 mm  
 16M BARS = 890 mm  
 19M BARS = 1040 mm  
 25M BARS = 1500 mm
- FOR SCREED ELEVATIONS, SEE SHEET 17/27.
- FOR PARAPET CONTROL JOINT DETAILS AND NOTES, SEE STANDARD DRAWING SBR-1-99M.



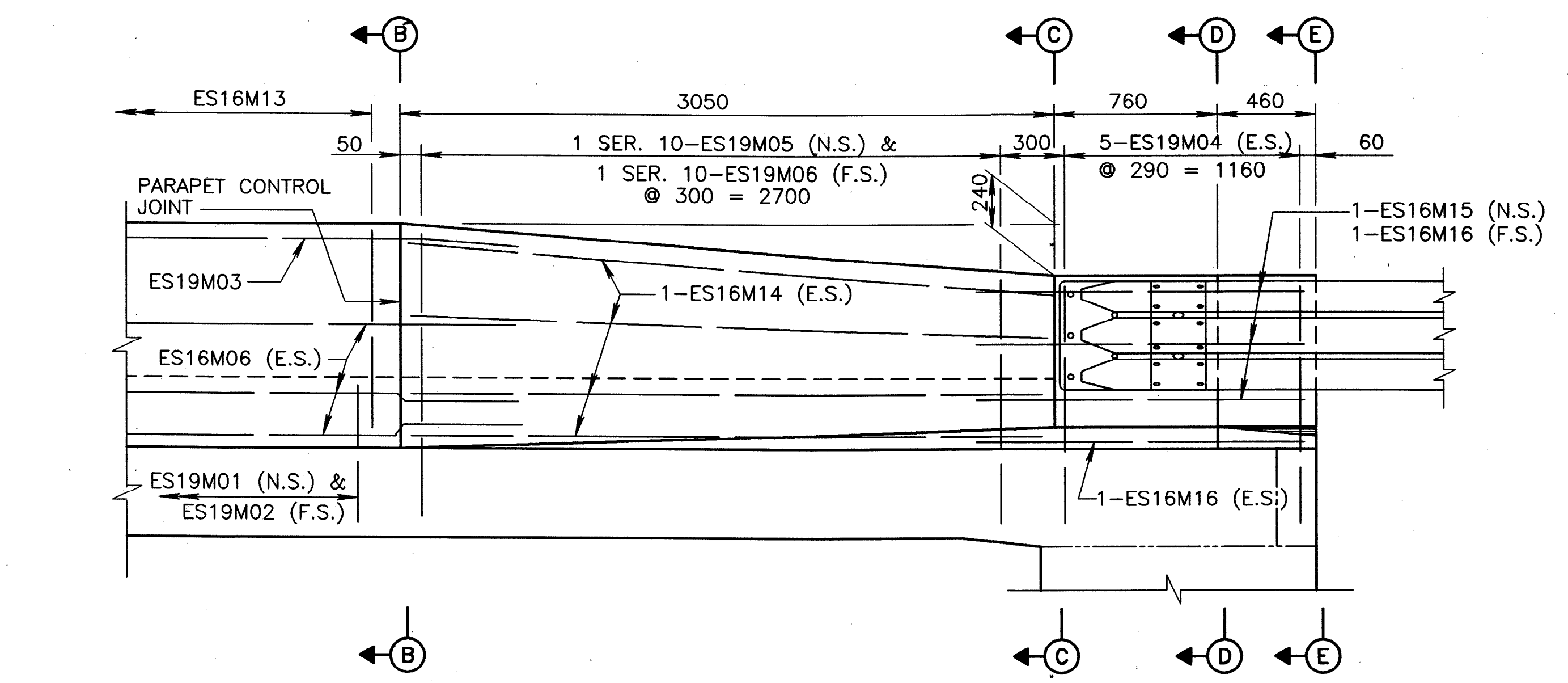
DATE	REVISION
8-14-00	1
12-8-00	2
12-8-00	3
12-8-00	4
12-8-00	5

SLAB PLAN AND TRANSVERSE SECTION - EASTBOUND BRIDGE  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

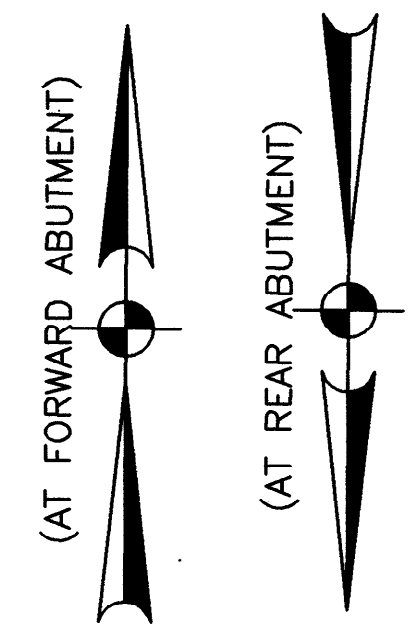
CRA/RIC-30-33.500/0.000



**PARAPET TRANSITION PLAN**  
 (RIGHT REAR AND LEFT FORWARD PARAPET TRANSITION SHOWN,  
 LEFT REAR AND RIGHT FORWARD PARAPET TRANSITION SIMILAR)



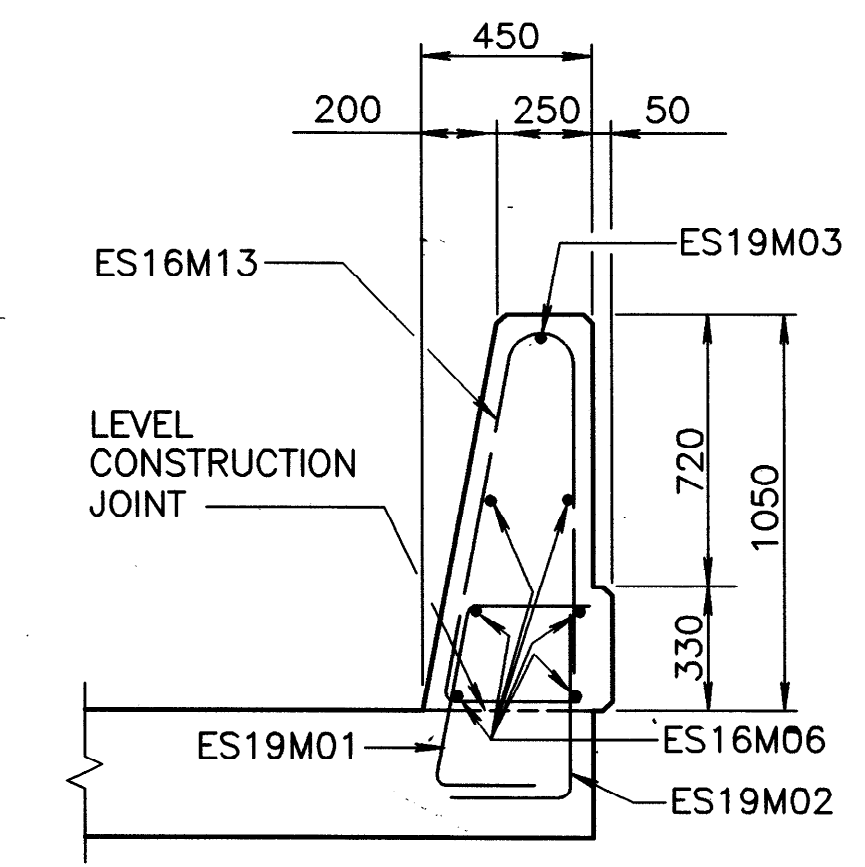
**SECTION A-A**  
 (FENCE NOT SHOWN)  
 (RIGHT REAR PARAPET TRANSITION SHOWN,  
 LEFT REAR AND FORWARD PARAPET TRANSITIONS SIMILAR)



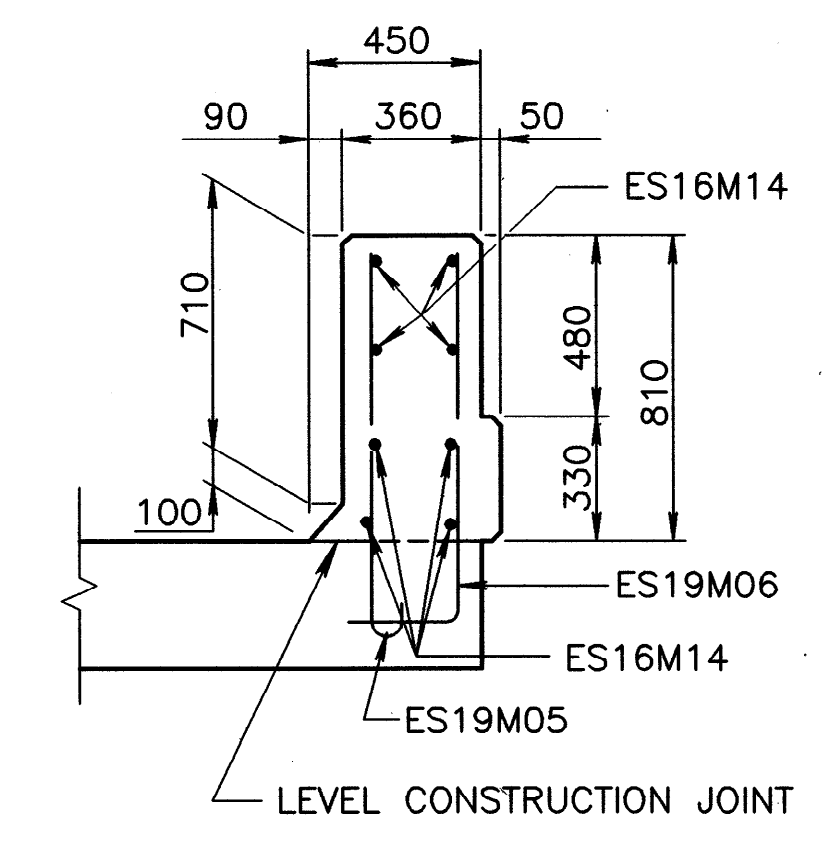
- NOTES**
- FOR SLAB PLAN AND ADDITIONAL NOTES, SEE SHEET 20/27.
  - MINIMUM LAP - 16M BARS = 890 mm

**LEGEND**

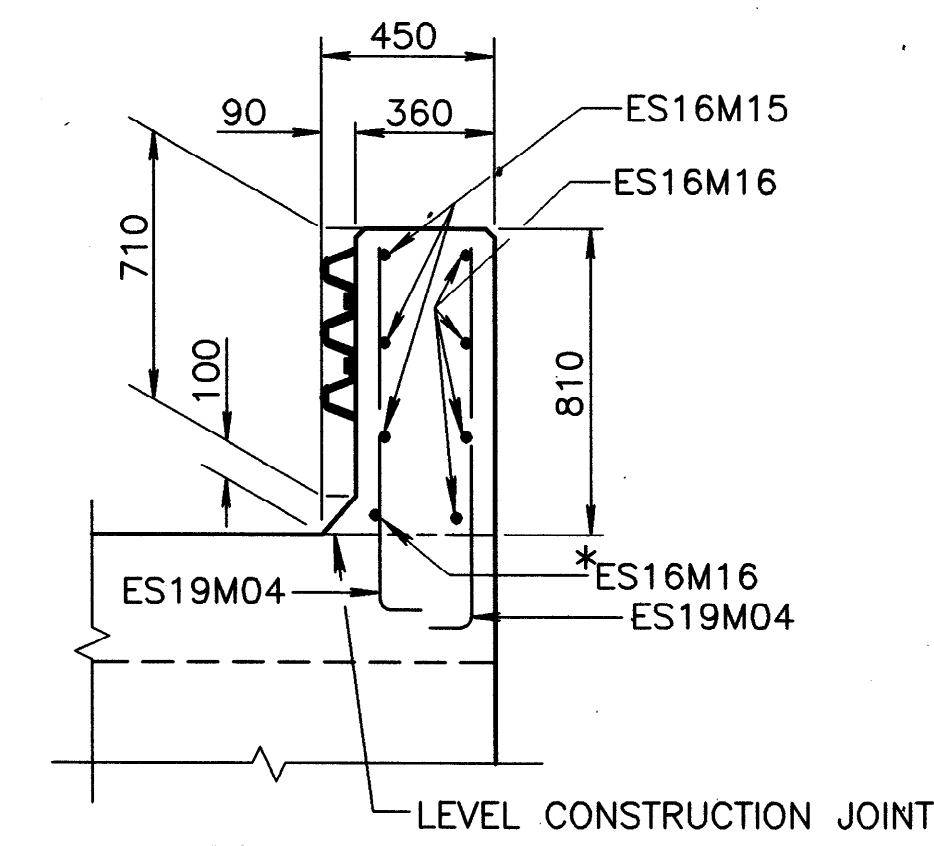
N.S. DENOTES NEAR SIDE  
 F.S. DENOTES FAR SIDE  
 E.S. DENOTES EACH SIDE



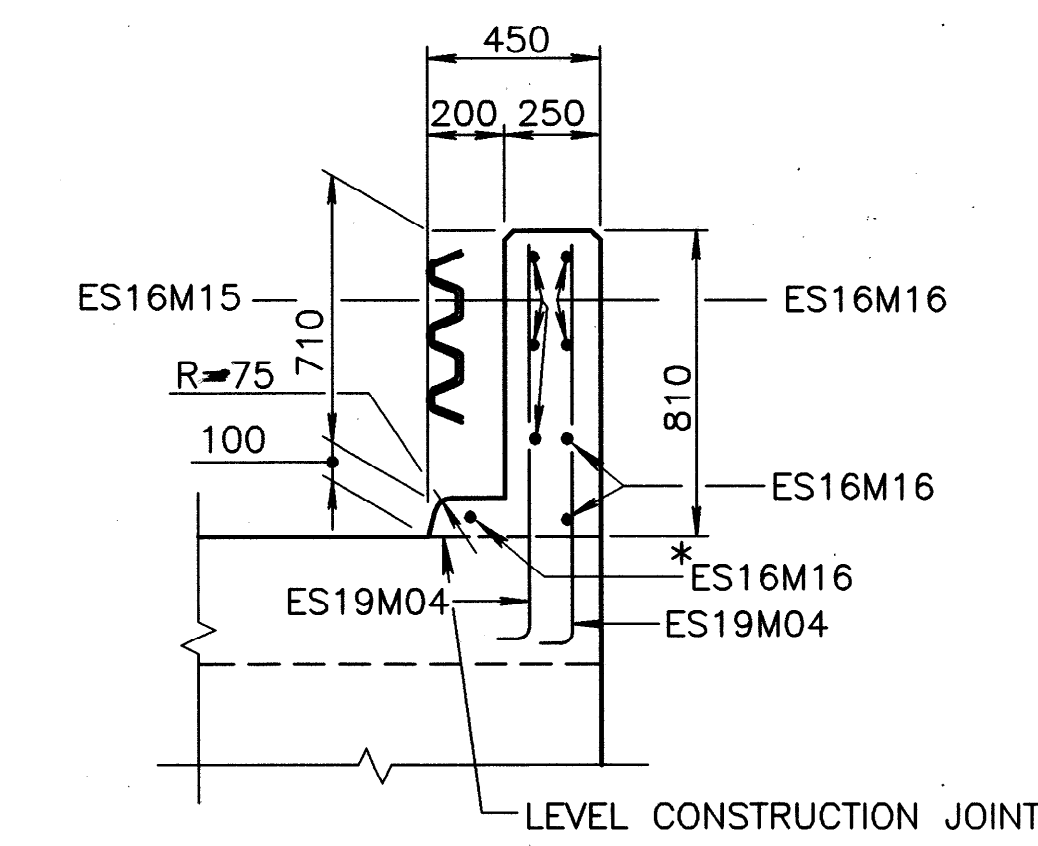
**SECTION B-B**



**SECTION C-C**



**SECTION D-D**



**SECTION E-E**

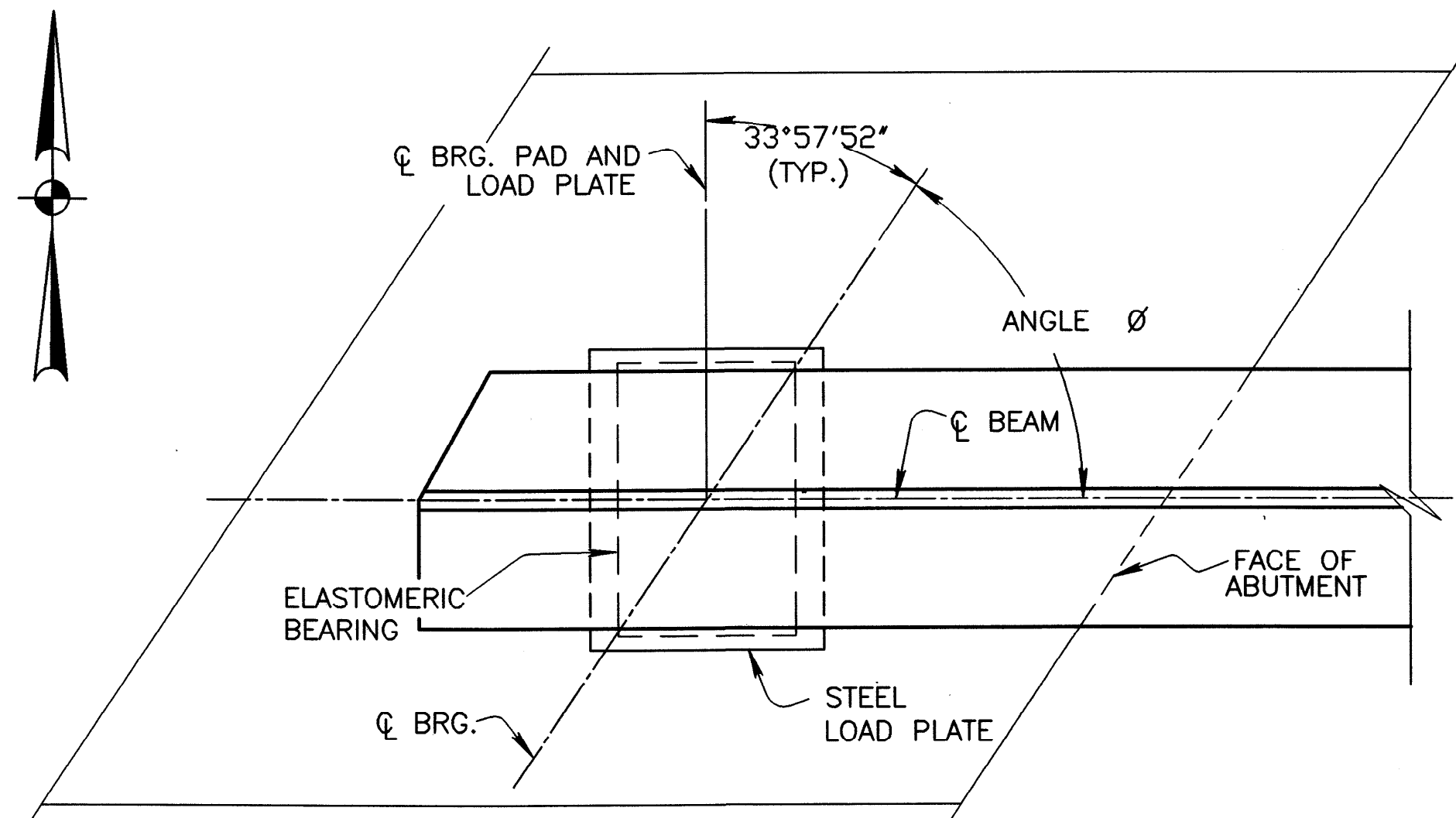
\* FIELD BEND AS REQUIRED.

DESIGNED	CHKD	DESIGNED	CHKD
HK	WEB	HK	WEB

**SLAB DETAILS - EASTBOUND BRIDGE**  
 \* BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

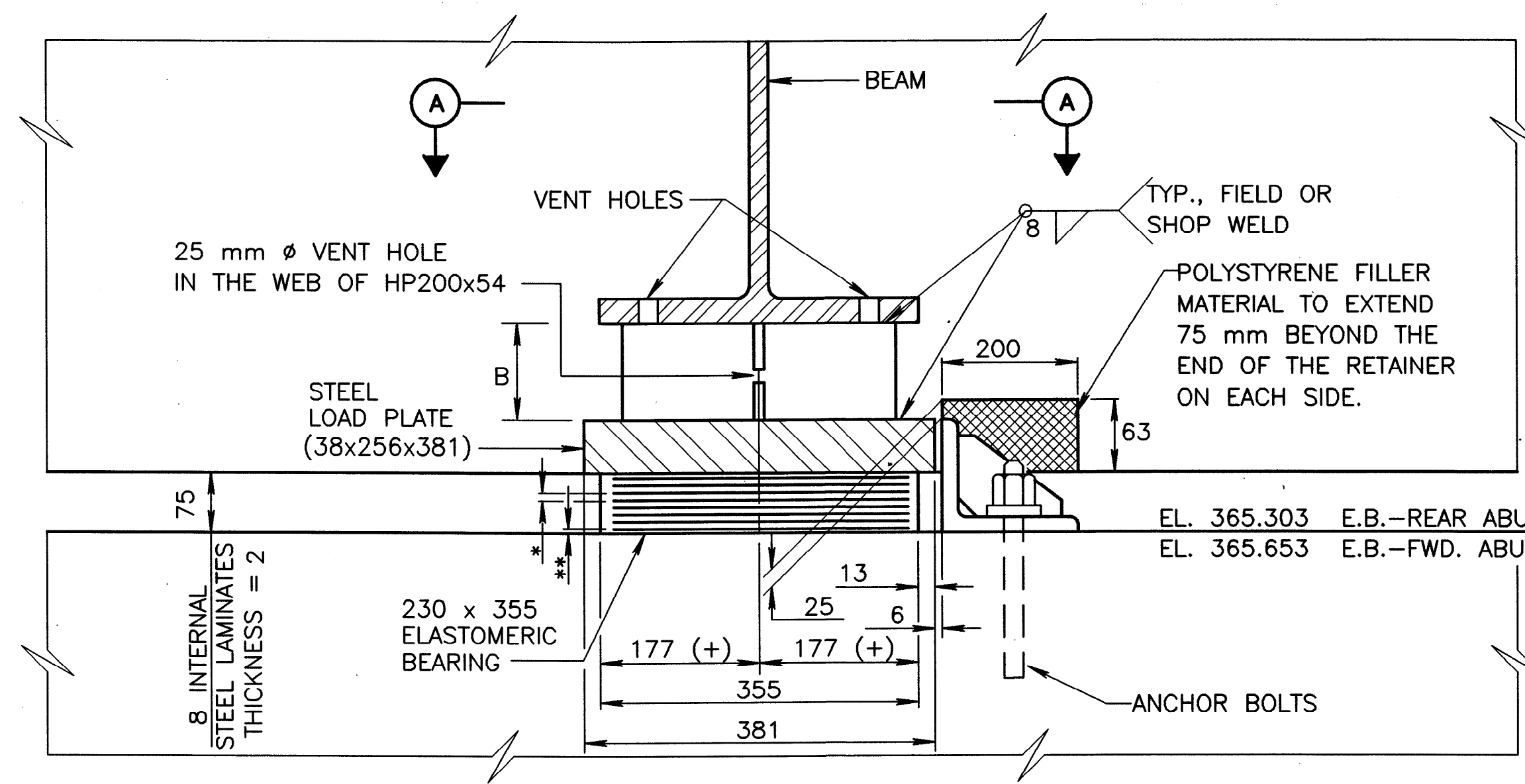
CRA/RIC-30-33.500/0.000





**VIEW A-A**  
 (REAR ABUTMENT SHOWN)  
 (HP SHAPE AND RETAINER NOT SHOWN)

LOCATION	ANGLE Ø
BEAM 1	54° 50' 31"
BEAM 2	55° 08' 14"
BEAM 3	55° 26' 04"
BEAM 4	55° 44' 02"
BEAMS 5 THRU 13	56° 02' 08"



**ABUTMENT BEARINGS**

DEAD LOAD REACTION = 270 kN  
 LIVE LOAD REACTION = 240 kN  
 TOTAL DESIGN LOAD = 510 kN

\*  $t_i$  = 7.0 (TYP.) 7 LAYERS  
 \*\*  $t_e$  = 5.0

WESTBOUND - DIMENSION B							
LOCATION	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7
REAR ABUT.	112	141	171	200	219	170	121
FORWARD ABUT.	111	153	196	238	270	232	190

EASTBOUND - DIMENSION B						
LOCATION	BEAM 8	BEAM 9	BEAM 10	BEAM 11	BEAM 12	BEAM 13
REAR ABUT.	195	224	252	213	163	112
FORWARD ABUT.	159	195	230	198	155	112

**NOTES**

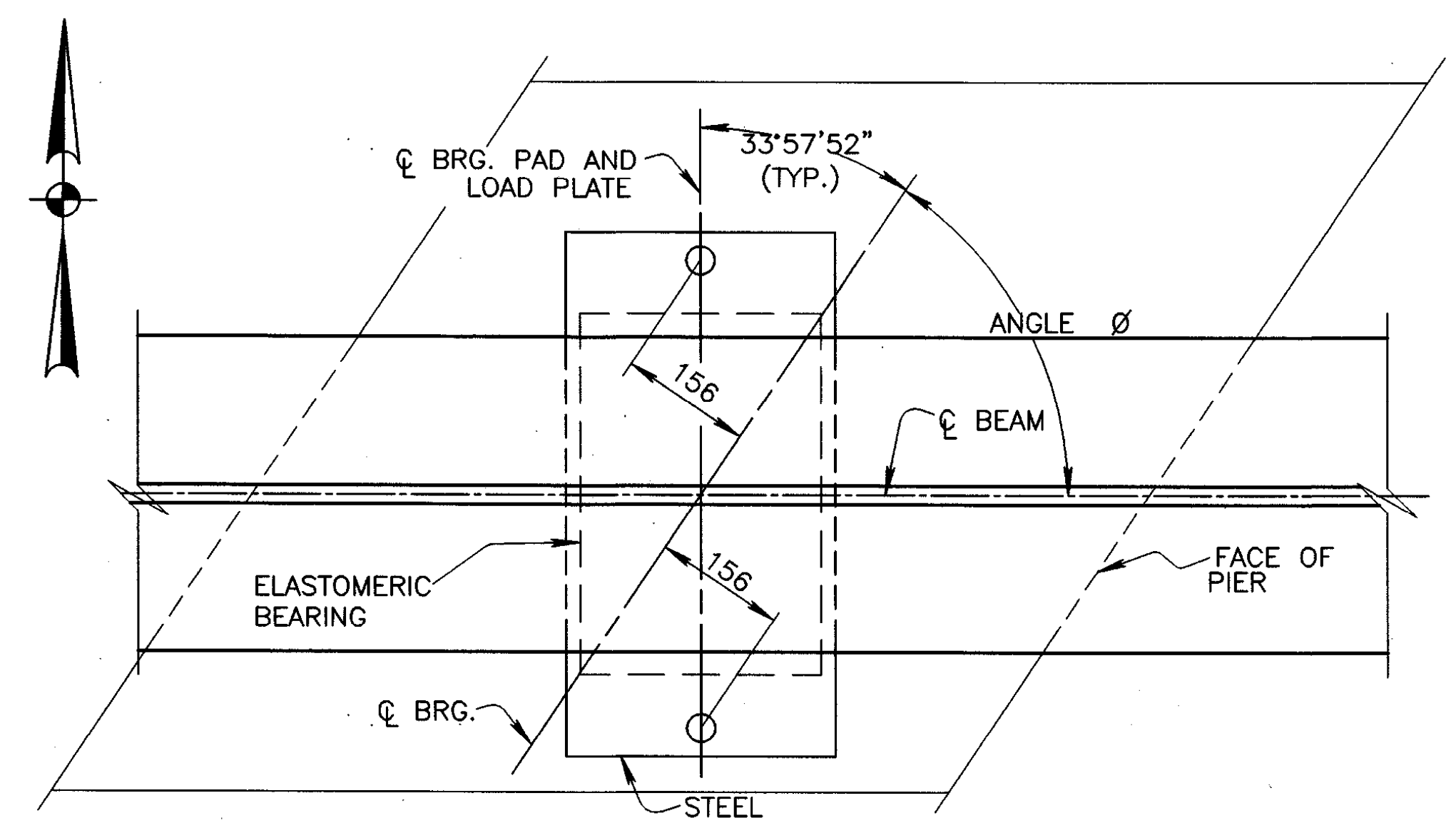
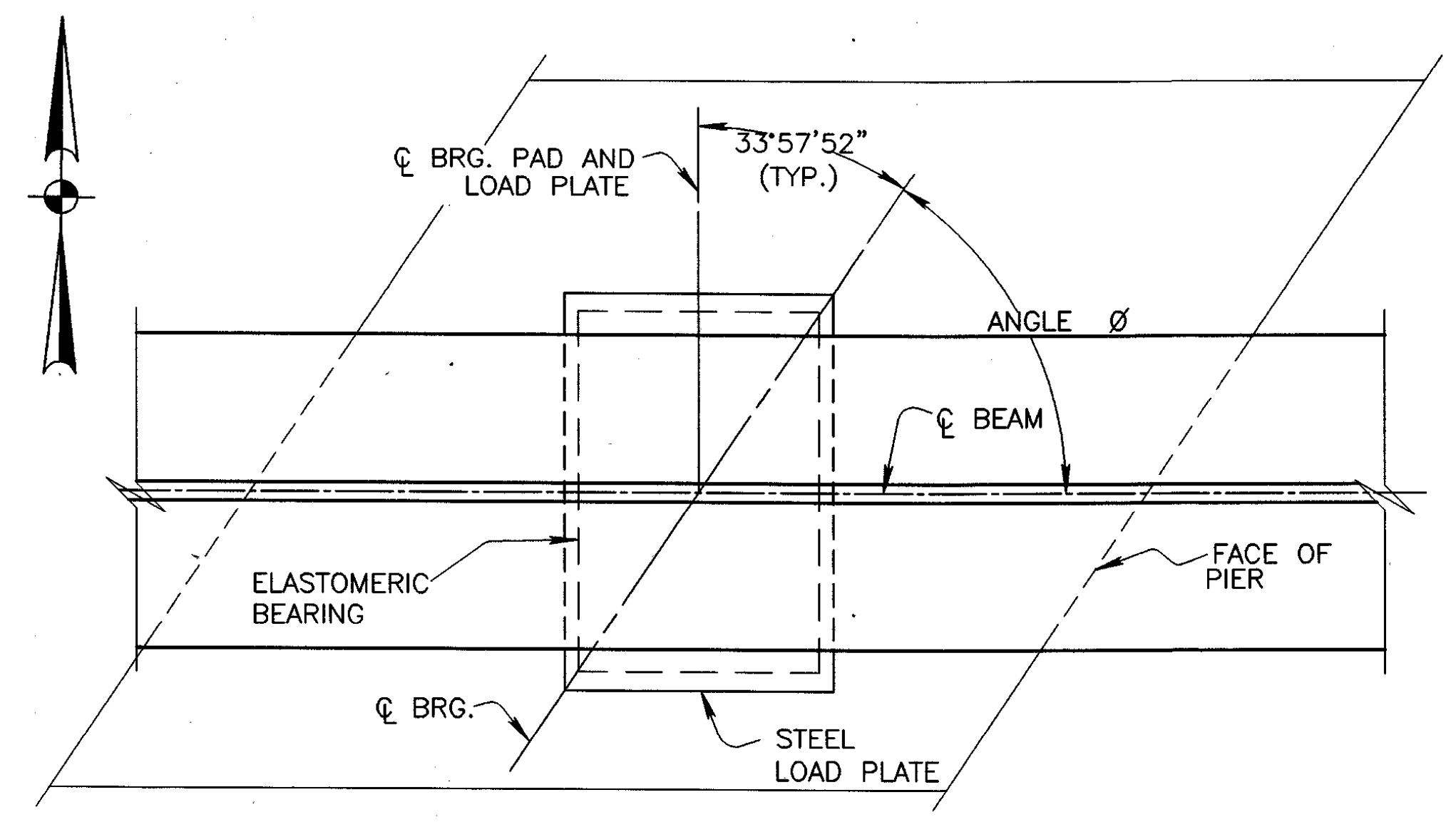
- STEEL LOAD PLATE AND HP200x54 SHALL BE ASTM A588M AND INCLUDED WITH ITEM 516, ELASTOMERIC BEARING FOR PAYMENT.
- FOR ADDITIONAL BEARING RETAINER DETAILS, SEE STANDARD DRAWING SICD-1-96M, SHEETS 6 AND 7.
- MATERIALS: THE STEEL RETAINER ASSEMBLY AND SQUARE PLATE WASHER SHALL BE ASTM A572M-50. ANCHOR BOLTS AND NUTS SHALL BE ASTM A325M. STEEL RETAINER ASSEMBLIES, ANCHOR BOLTS, NUTS AND SQUARE PLATE WASHERS SHALL BE GALVANIZED AS PER 711.02.
- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 OF SECTION 14, BEARINGS DIVISION I, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.
- WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 150° C AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR TESTING, ANCHOR RODS, RETAINERS AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):  
  
 230 mm x 355 mm x 75.0 mm WITH 256 mm x 381 mm x 38 mm LOAD PLATE, AS PER PLAN  
  
 330 mm x 510 mm x 60.0 mm WITH 356 mm x 536 mm x 50 mm LOAD PLATE.  
  
 330 mm x 510 mm x 60.0 mm WITH 356 mm x 660 mm x 50 mm LOAD PLATE.

DATE	REVIEWED	DATE	DESIGNED
8-14-00	LBD		RHW
			RHW
			WEB

STRUCTURE FILE NUMBER	REVISION
L-1701951	
R-1701878	

BEARING DETAILS #1  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.

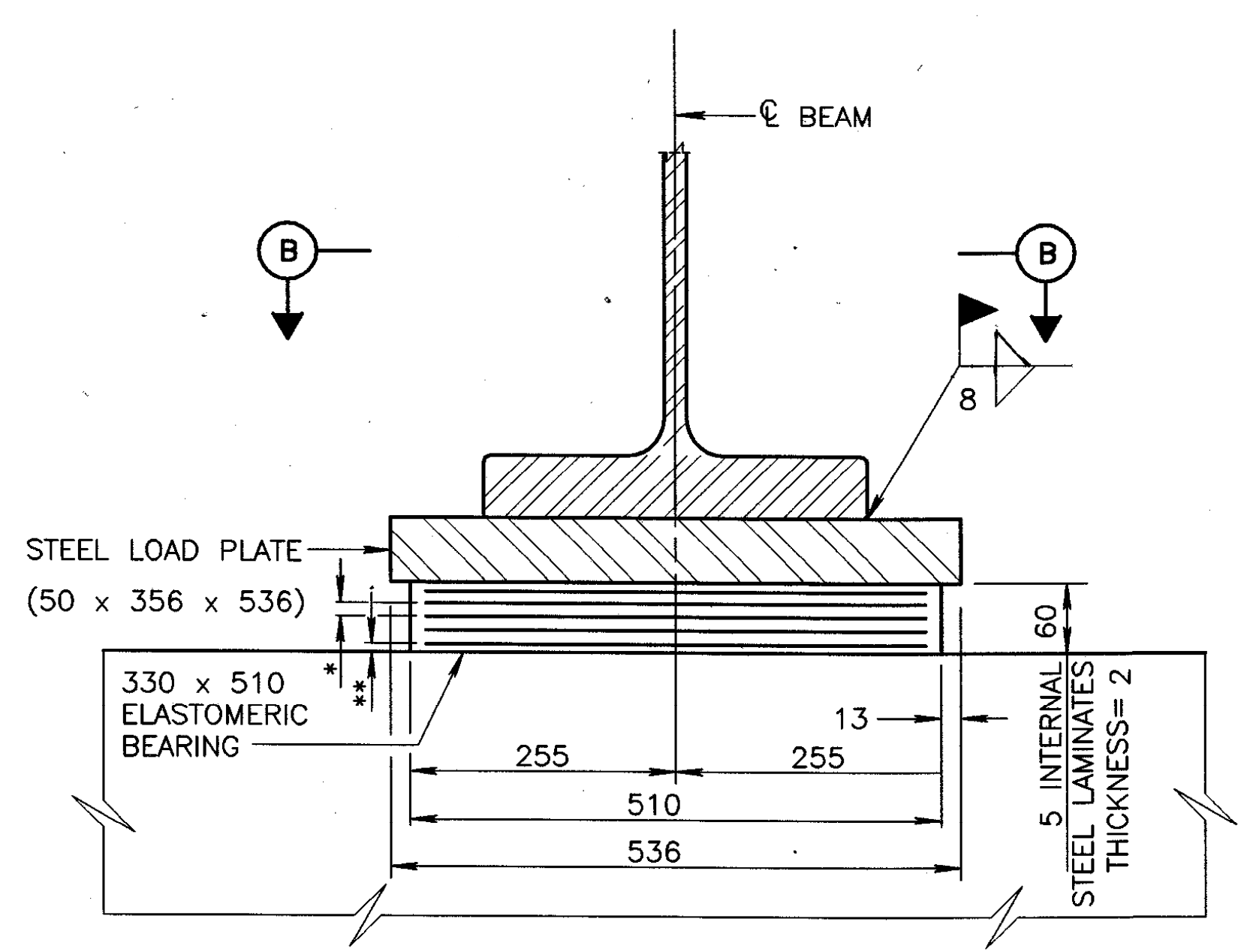
CRA/RIC-30-33.500/0.000



**NOTES**

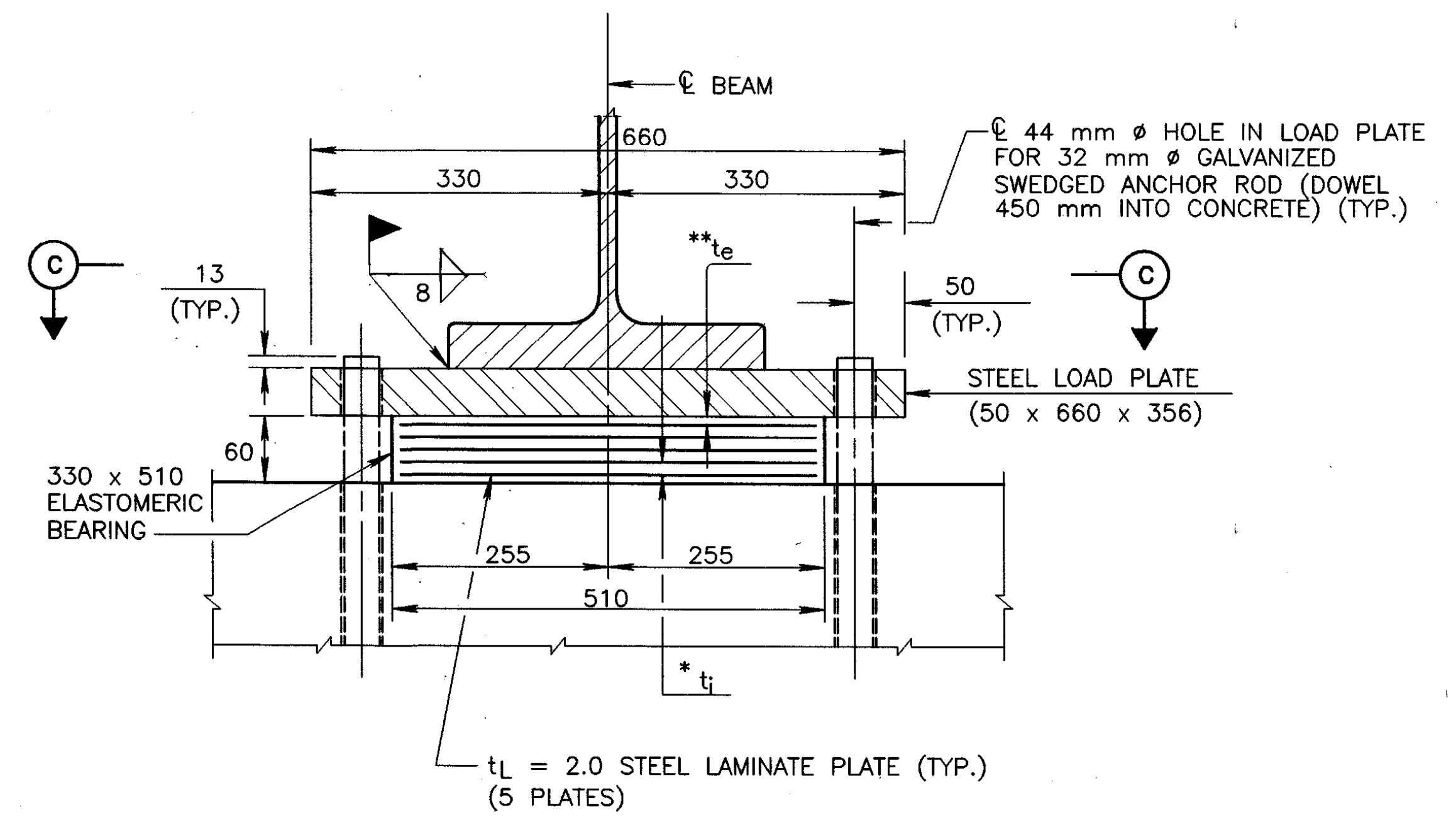
① FOR ADDITIONAL NOTES AND DETAILS SEE SHEET 22/27.

LOCATION	ANGLE $\theta$
BEAM 1	54° 50' 31"
BEAM 2	55° 08' 14"
BEAM 3	55° 26' 04"
BEAM 4	55° 44' 02"
BEAMS 5 THRU 13	56° 02' 08"



DEAD LOAD REACTION = 750 kN  
 LIVE LOAD REACTION = 350 kN  
 TOTAL DESIGN LOAD = 1100 kN

\*  $t_i$  = 9.0 (TYP.) 4 LAYERS  
 \*\*  $t_e$  = 7.0



DEAD LOAD REACTION = 750 kN  
 LIVE LOAD REACTION = 350 kN  
 TOTAL DESIGN LOAD = 1100 kN

\*  $t_i$  = 9.0 (TYP.) 4 LAYERS  
 \*\*  $t_e$  = 7.0

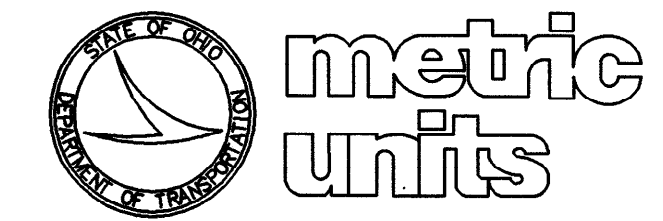


REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	LOCATION	DIMENSIONS				INCRM.
					A	B	C	D	
<b>ABUTMENTS</b>									
				REAR	FWD.				
WA16M01	18	9090	STR.	18					
WA16M02	124	5010	14	64	60	775	1650		
WA16M03	47	5290	14	47		800	1765		
WA16M04	1	5620	14	1		965	1765		
WA16M05	8	9810	STR.	8					
WA16M06	3	4300	STR.	3					
WA16M07	3	4325	STR.	3					
WA16M08	3	3315	STR.	3					
WA16M09	3	4260	STR.	3					
WA16M10	2	4800	2	2		650	2115		
WA16M11	1	5210	2	1		650	2320		
SERIES	1 SET	5600 TO		1 SET					
WA16M12	OF 5	7040	2	OF 5		650	2515 TO		180
WA16M13	2	7160	2	2		650	3295		
WA16M14	1	7295	2	1		785	3295		
WA16M15	1	7275	2	1		785	3285		
WA16M16	1	7140	2	1		650	3285		
SERIES	1 SET	5800 TO		1 SET					
WA16M17	OF 4	7140	2	OF 4		650	2615 TO		223
WA16M18	1	5320	2	1		650	3285		
WA16M19	1	3700	STR.	1					
WA16M20	1	3285	STR.	1					
SERIES	1 SET	1965 TO		1 SET					
WA16M21	OF 3	3515	STR.	OF 3					775
SERIES	1 SET	1550 TO		1 SET					
WA16M22	OF 3	3100	STR.	OF 3					775
WA16M23	1	4050	10	1		1170	1185	2625	
WA16M24	1	3535	10	1		655	1185	2625	
WA16M25	1	2760	STR.	1					
WA16M26	1	3175	STR.	1					
SERIES	1 SET	1360 TO		1 SET					
WA16M27	OF 3	2610	STR.	OF 3					625
SERIES	1 SET	1770 TO		1 SET					
WA16M28	OF 3	3020	STR.	OF 3					625
WA16M29	1	3065	10	1		655	1175	2100	
WA16M30	1	3480	10	1		1070	1175	2100	
WA16M31	2	1150	2	2		650	290		
WA16M32	27	1370	2	14	13	650	400		
WA16M33	4	1505	2	2	2	785	400		
WA16M34	4	3810	14	2	2	965	860		
WA16M35	13	3480	14	6	7	800	860		
WA16M36	6	3540	14	6		800	890		
WA16M37	12	3600	14	12		800	920		
WA16M38	13	3660	14	6	7	800	950		
WA16M39	6	3500	14	6		800	870		
WA16M40	2	3830	14	2		965	870		
WA16M41	8	2040	2	4	4	660	730		
WA16M42	76	1930	2	36	40	550	730		
WA16M43	18	9410	STR.		18				
WA16M44	46	4890	14		46	800	1565		
WA16M45	1	5220	14		1	965	1565		
WA16M46	3	3935	STR.		3				
WA16M47	3	3955	STR.		3				
WA16M48	8	10 770	STR.		8				
WA16M49	3	2690	STR.		3				
WA16M50	3	3640	STR.		3				
WA16M51	1	4700	2		1	650	2065		
WA16M52	1	5110	2		1	650	2270		
SERIES	1 SET	5520 TO		1 SET					
WA16M53	OF 4	6750	2	OF 4		650	2475 TO		205
WA16M54	1	6740	2		1	650	3085		
WA16M55	1	6875	2		1	785	3085		
WA16M56	1	7035	2		1	785	3165		
WA16M57	1	6900	2		1	650	3165		
WA16M58	1	6610	2		1	650	3020		
WA16M59	1	6070	2		1	650	2750		
WA16M60	1	5410	2		1	650	2420		
WA16M61	1	3335	STR.		1				
WA16M62	1	2920	STR.		1				
SERIES	1 SET	1800 TO		1 SET					
WA16M63	OF 3	3335	STR.		OF 3				768
SERIES	1 SET	1385 TO		1 SET					
WA16M64	OF 3	2920	STR.		OF 3				768

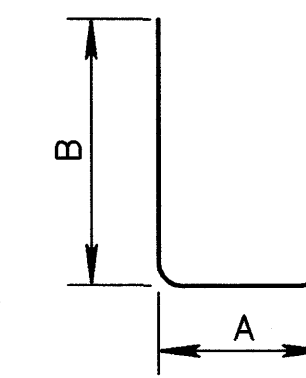
REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	LOCATION	DIMENSIONS				INCRM.
					A	B	C	D	
<b>ABUTMENTS</b>									
				REAR	FWD.				
WA16M65	1	3655	10		1	1170	1030	2260	
WA16M66	1	3140	10		1	655	1030	2260	
WA16M67	1	2140	STR.		1				
WA16M68	1	2555	STR.		1				
SERIES	1 SET	1110 TO		1 SET					
WA16M69	OF 3	2140	STR.	OF 3					515
SERIES	1 SET	1525 TO		1 SET					
WA16M70	OF 3	2555	STR.	OF 3					515
WA16M71	1	2495	10		1	655	1090	1480	
WA16M72	1	2910	10		1	1070	1090	1480	
WA16M73	7	3570	14		7	800	905		
WA16M74	13	3740	14		13	800	990		
WA16M75	6	3640	14		6	800	940		
WA16M76	2	3970	14		2	965	940		
WA25M01	12	9510	STR.	12					
WA25M02	8	10 420	STR.	8					
WA25M03	20	10 120	STR.	20					
WA25M04	12	9820	STR.		12				
WA25M05	8	11 380	STR.		8				
WA25M06	20	11 090	STR.		20				
WD25M01	71	1655	13	34	37	950	431	305	

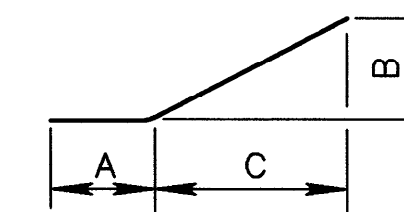


NOTES

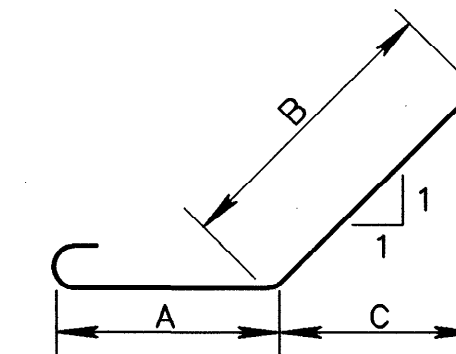
- ① ALL REINFORCING STEEL TO BE EPOXY COATED.
- ② THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A 16M01 IS A 16M BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.



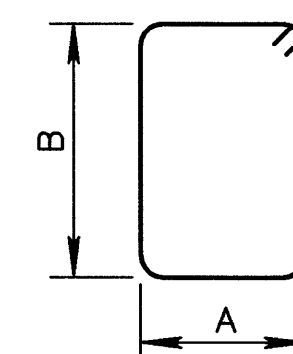
TYPE 2



TYPE 10



TYPE 13



TYPE 14

REINFORCING SCHEDULE - WESTBOUND BRIDGE

BRIDGE NO. CRA-30-33602-L & R  
RELOCATED U.S 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000

24/27

560  
712

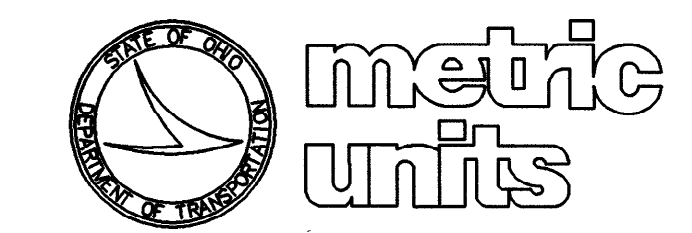
DESIGN AGENCY: MCCOY/FOK & ASSOCIATES INC.  
 367 CHEST ROAD, SUITE 1A  
 AKRON, OHIO  
 DATE: 8-14-00  
 REVIEWED: LBD  
 DRAWN: WEB  
 CHECKED: RHW  
 STRUCTURE FILE NUMBER: L-1701851  
 R-1701878

REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	PIER 1	PIER 2	DIMENSIONS				INCRM.
						A	B	C	D	
<b>PIERS</b>										
WP13M01	48	6640	STR.	48						
WP13M02	96	2455	21	48	48	810	600			
WP13M03	312	1105	6	144	168	810	205			
WP13M04	48	7290	STR.	48						
SERIES WP16M01	8 SETS OF 12	2720 TO 3610	2	4 SETS OF 12	4 SETS OF 12	810	995 TO 1440			40
SERIES WP16M02	8 SETS OF 14	3710 TO 4340	2	4 SETS OF 14	4 SETS OF 14	810	1490 TO 1805			24
WP16M03	8	4340	2	4	4	810	1805			
WP16M04	48	2930	2	23	25	810	1100			
WP16M05	98	1850	2	49	49	810	560			
WP19M01	10	8100	STR.	10						
WP19M02	24	7785	7	12	12	900	1697	5791	900	
SERIES WP19M03	4 SETS OF 5	4290 TO 8110	STR.	4 SETS OF 5						955
SERIES WP19M04	4 SETS OF 3	9065 TO 9885	STR.	4 SETS OF 3						410
WP19M05	32	9970	STR.	32						
WP19M06	32	2455	2	16	16	775	890			
WP19M07	10	8750	STR.	10						
SERIES WP19M08	4 SETS OF 5	4615 TO 8435	STR.	4 SETS OF 5						955
SERIES WP19M09	4 SETS OF 3	9390 TO 10 210	STR.	4 SETS OF 3						410
WP19M10	32	10 295	STR.	32						
WP25M01	108	2675	1	52	56	2325	410			
WP25M02	52	9670	STR.	52						
WP25M03	56	9750	STR.	56						
WP29M01	58	3610	5	26	32	2850				
WP36M01	6	9990	62	6		610	9480			
WP36M02	6	9990	63	6		610	9480			
WP36M03	6	9480	60	6		9480				
WP36M04	6	9480	61	6		9480				
WP36M05	6	10 310	62		6	610	9800			
WP36M06	6	10 310	63		6	610	9800			
WP36M07	6	9800	60		6	9800				
WP36M08	6	9800	61		6	9800				

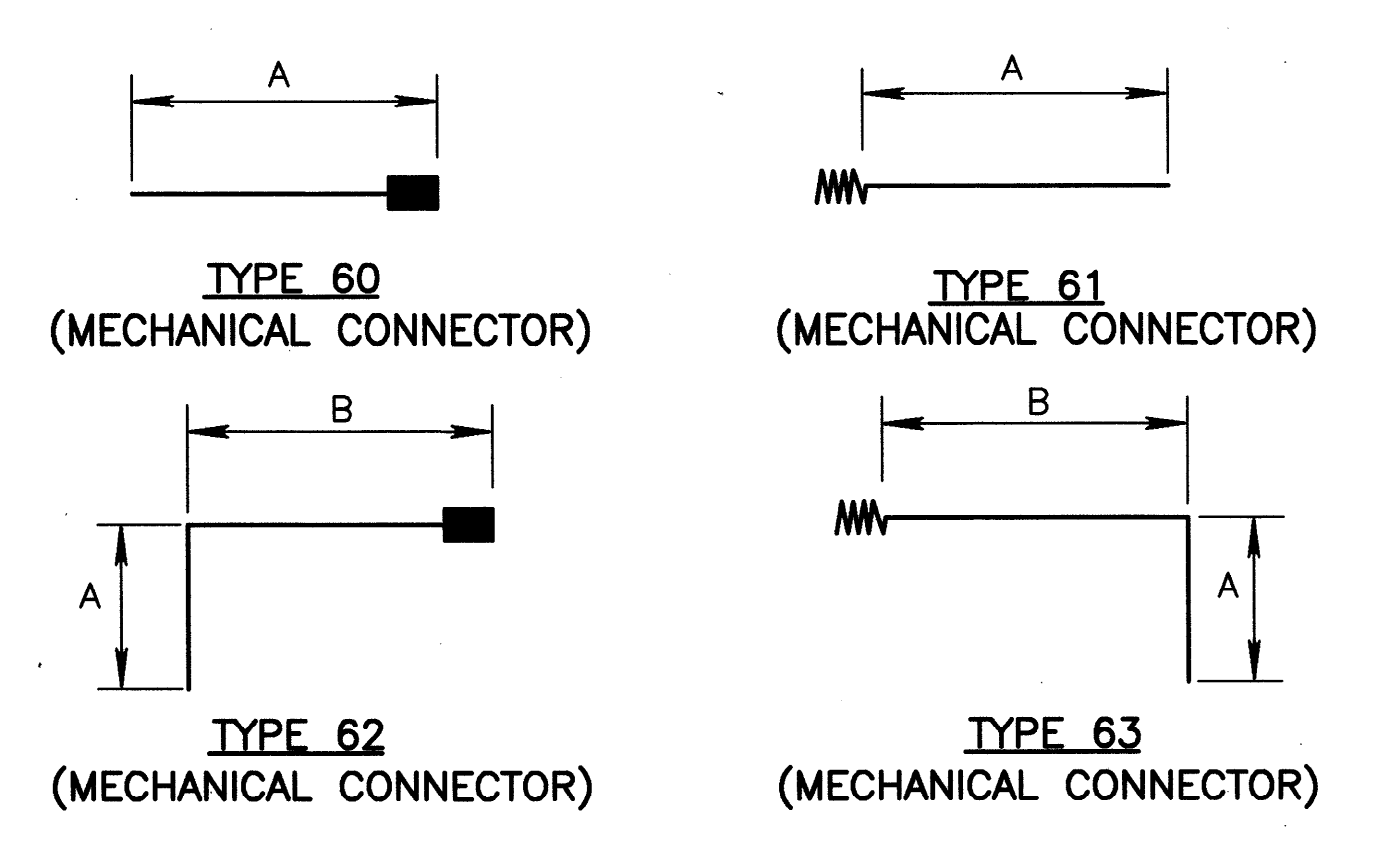
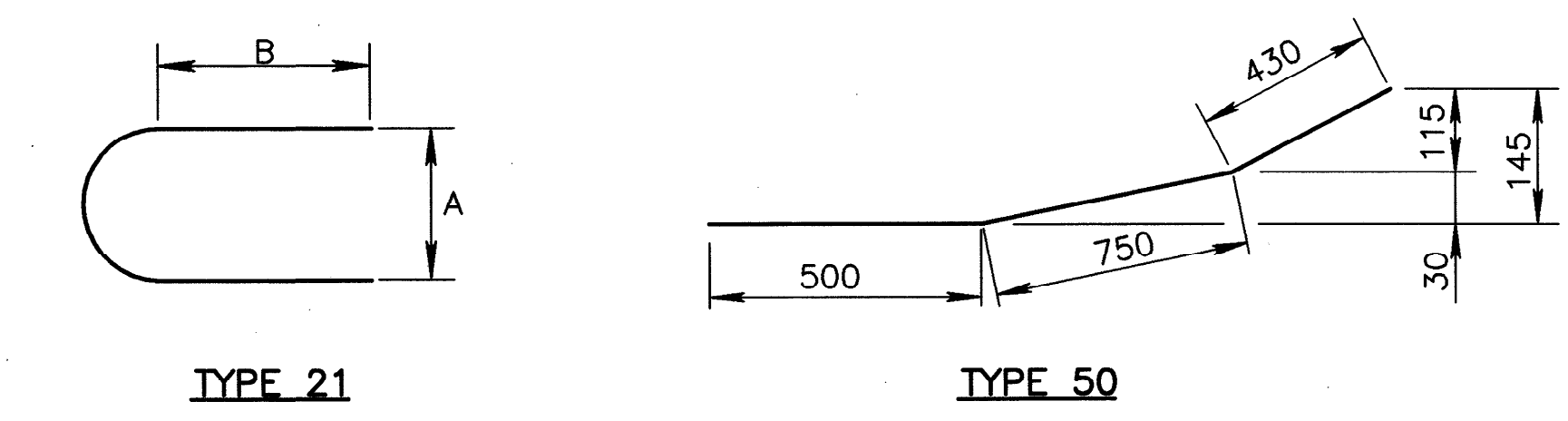
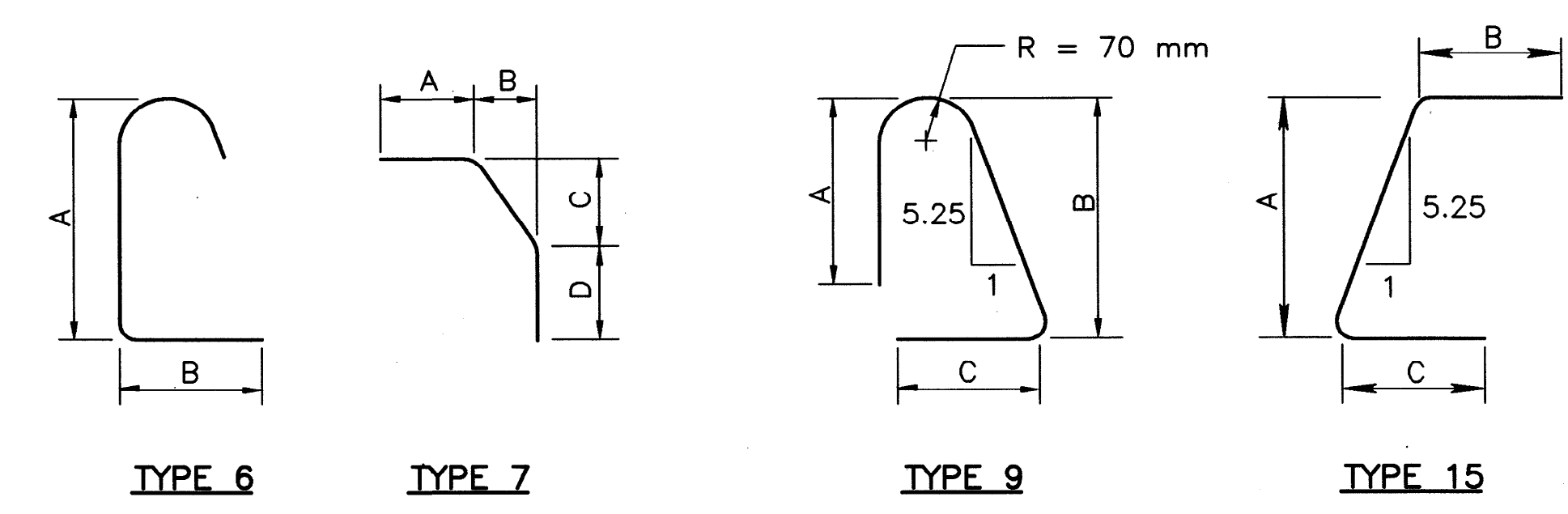
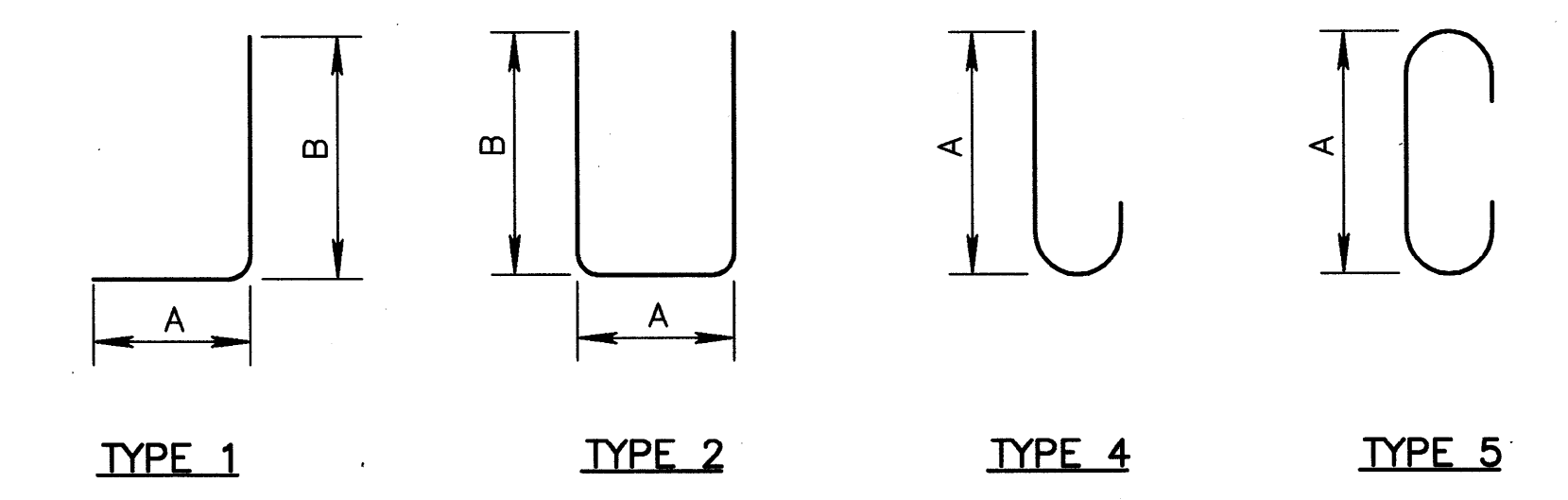
REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				INCRM.
				A	B	C	D	
<b>SUPERSTRUCTURE</b>								
WS13M01	639	9140	STR.					
WS13M02	280	8600	STR.					
WS16M01	494	7125	STR.					
WS16M02	152	9750	STR.					
WS16M03	152	10 200	STR.					
WS16M04	153	10 675	STR.					
WS16M05	488	8300	STR.					
WS16M06	152	8550	STR.					
WS16M07	152	9000	STR.					
WS16M08	153	9475	STR.					
WS16M09	544	9140	STR.					
WS16M10	68	11 800	STR.					
WS16M11	84	10 910	STR.					
SERIES WS16M12	1 SET OF 33	1800 TO 8680	STR.					215
SERIES WS16M13	1 SET OF 25	1800 TO 6960	STR.					215
SERIES WS16M14	1 SET OF 28	1800 TO 7605	STR.					215
SERIES WS16M15	1 SETS OF 31	1800 TO 8250	STR.					215
WS16M16	33	9570	STR.					
SERIES WS16M17	1 SET OF 37	1800 TO 9360	STR.					210
SERIES WS16M18	1 SET OF 29	1800 TO 7820	STR.					215
WS16M19	28	10 750	STR.					
SERIES WS16M20	1 SET OF 42	1800 TO 10 410	STR.					210
SERIES WS16M21	1 SET OF 23	1940 TO 6670	STR.					215
WS16M22	504	2205	9	900	950	320		
WS16M23	32	1680	STR.					
WS16M24	12	1680	50					
WS16M25	20	1680	STR.					
WS19M01	504	995	15	455	320	320		
WS19M02	504	725	1	320	455			
WS19M03	14	11 100	STR.					
WS19M04	40	1010	1	125	935			
SERIES WS19M05	4 SETS OF 10	1140 TO 1365	4	935 TO 1160				25
SERIES WS19M06	4 SETS OF 10	1135 TO 1360	1	935 TO 1160	250			25
WS25M01	8	10 185	STR.					
WS25M02	8	11 150	STR.					



NOTES

- 1 ALL REINFORCING STEEL TO BE EPOXY COATED.
- 2 THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A 16M01 IS A 16M BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.



DESIGN AGENCY: MCCOY/FOK & ASSOCIATES INC. 367 GHENT ROAD, SUITE 1A AKRON, OHIO  
 DATE: 8-14-00  
 REVIEWED: LBD  
 DRAWN: WEB  
 CHECKED: RHW  
 STRUCTURE FILE NUMBER: L-1701851  
 PROJECT NUMBER: R-1701878  
**REINFORCING SCHEDULE - WESTBOND BRIDGE**  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S. 30 OVER CSX TRANSPORTATION, INC.  
 CRA/RIC-30-33.500/0.000  
 25 / 27  
 561  
 712

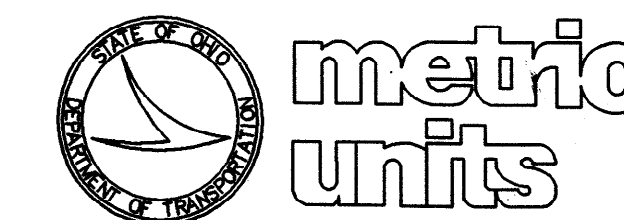


REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	LOCATION	DIMENSIONS				INCRM.
					A	B	C	D	
<b>ABUTMENTS</b>									
				REAR	FWD.				
EA16M01	12	11 460	STR.	12					
EA16M02	106	5010	14	54	52	775	1650		
EA16M03	38	5030	14	38		800	1635		
EA16M04	1	5360	14	1		965	1635		
EA16M05	16	8535	STR.	8	8				
EA16M06	3	3950	STR.	3					
EA16M07	3	3975	STR.	3					
EA16M08	3	2725	STR.	3					
EA16M09	3	3670	STR.	3					
EA16M10	2	4800	2	2		650	2115		
EA16M11	1	5210	2	1		650	2320		
SERIES EA16M12	1 SET OF 4	5620 TO 6740	2	1 SET OF 4		650	2525 TO 3085		187
EA16M13	2	6870	2	2		650	3150		
EA16M14	1	7005	2	1		785	3150		
EA16M15	1	7175	2	1		785	3235		
EA16M16	2	7040	2	2		650	3235		
EA16M17	1	6750	2	1		650	3090		
EA16M18	1	6150	2	1		650	2790		
EA16M19	1	5510	2	1		650	2470		
EA16M20	1	3350	STR.	1					
EA16M21	1	2935	STR.	1					
SERIES EA16M22	1 SET OF 3	1820 TO 3350	STR.	1 SET OF 3					765
SERIES EA16M23	1 SET OF 3	1405 TO 2935	STR.	1 SET OF 3					765
EA16M24	1	3670	10	1		1170	1040	2275	
EA16M25	1	3155	10	1		655	1040	2275	
EA16M26	1	2170	STR.	1					
EA16M27	1	2585	STR.	1					
SERIES EA16M28	1 SET OF 3	1130 TO 2170	STR.	1 SET OF 3					520
SERIES EA16M29	1 SET OF 3	1545 TO 2585	STR.	1 SET OF 3					520
EA16M30	1	2535	10	1		655	1115	1510	
EA16M31	1	2950	10	1		1070	1115	1510	
EA16M32	28	1370	2	14	14	650	400		
EA16M33	4	1505	2	2	2	785	400		
EA16M34	2	3970	14	2		965	940		
EA16M35	18	3640	14	2	12	800	940		
EA16M36	6	3700	14	6		800	970		
EA16M37	6	3670	14	6		800	955		
EA16M38	12	3570	14	6	6	800	905		
EA16M39	12	3470	14	6	6	800	855		
EA16M40	4	3800	14	2	2	965	855		
EA16M41	8	2040	2	4	4	660	730		
EA16M42	60	1930	2	30	30	550	730		
EA16M43	12	11 880	STR.	36	12				
EA16M44	36	4930	14		36	800	1585		
EA16M45	1	5260	14		1	965	1585		
EA16M46	3	4400	STR.		3				
EA16M47	3	4320	STR.		3				
EA16M48	3	3215	STR.		3				
EA16M49	3	4165	STR.		3				
EA16M50	2	4700	2		2	650	2065		
EA16M51	1	5070	2		1	650	2250		
SERIES EA16M52	1 SET OF 4	5440 TO 6560	2		1 SET OF 4	650	2435 TO 2995		187
EA16M53	2	6860	2		2	650	3145		
EA16M54	1	6995	2		1	785	3145		
EA16M55	1	6905	2		1	785	3100		
EA16M56	1	6770	2		1	650	3100		
SERIES EA16M57	1 SET OF 3	5640 TO 6570	2		1 SET OF 3	650	2535 TO 3000		233
EA16M58	1	5180	2		1	650	2305		
EA16M59	1	3695	STR.		1				
EA16M60	1	3280	STR.		1				
SERIES EA16M61	1 SET OF 3	1915 TO 3695	STR.		1 SET OF 3				890
SERIES EA16M62	1 SET OF 3	1500 TO 3280	STR.		1 SET OF 3				890
EA16M63	1	4015	10		1	1170	1095	2625	
EA16M64	1	3500	10		1	655	1095	2625	

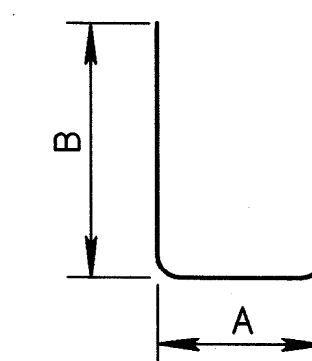
REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	LOCATION	DIMENSIONS				INCRM.
					A	B	C	D	
<b>ABUTMENTS</b>									
				REAR	FWD.				
EA16M65	1	2665	STR.		1				
EA16M66	1	3080	STR.		1				
SERIES EA16M67	1 SET OF 3	1315 TO 2665	STR.		1 SET OF 3				675
SERIES EA16M68	1 SET OF 3	1730 TO 3080	STR.		1 SET OF 3				675
EA16M69	1	2915	10		1	655	1040	2005	
EA16M70	1	3335	10		1	1075	1040	2005	
EA16M71	2	3900	14		2	965	905		
EA16M72	6	3550	14		6	800	895		
EA25M01	8	11 770	STR.	8					
EA25M02	16	9150	STR.	8	8				
EA25M03	40	8850	STR.	20	20				
EA25M04	12	8630	STR.		12				
ED25M01	58	1655	13	29	29	950	431	305	

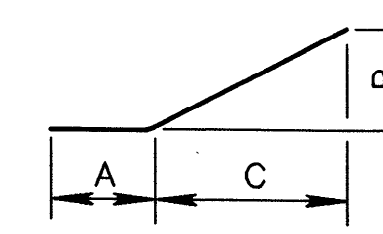


NOTES

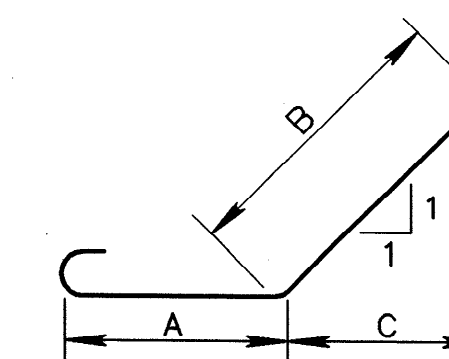
- ① ALL REINFORCING STEEL TO BE EPOXY COATED.
- ② THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A 16M01 IS A 16M BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.



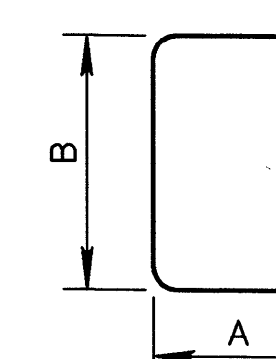
TYPE 2



TYPE 10



TYPE 13



TYPE 14

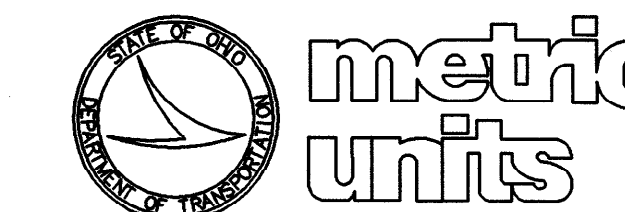
DESIGN AGENCY: MCCOY/FOK & ASSOCIATES INC. 367 GHEINT ROAD, SUITE 1A AKRON, OHIO  
 DATE: 8-14-00  
 REVIEWED: LBD  
 DRAWN: WEB  
 CHECKED: RHW  
 REINFORCING SCHEDULE - EASTBOUND BRIDGE  
 BRIDGE NO. CRA-30-33602-1 & R  
 RELOCATED U.S 30 OVER CSX TRANSPORTATION, INC.  
 CRA/RIC-30-33.500/0.000  
 26/27  
 562/712

REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	PIER 1	PIER 2	DIMENSIONS				INCRM.
						A	B	C	D	
<b>PIERS</b>										
EP13M01	100	5460	STR.	50	50					
EP13M02	100	2455	21	50	50	810	600			
EP13M03	250	1105	6	125	125	810	205			
SERIES EP16M01	8 SETS OF 11	2730 TO 3570	2	4 SETS OF 11	4 SETS OF 11	810	1000 TO 1420			42
SERIES EP16M02	8 SETS OF 10	3650 TO 4010	2	4 SETS OF 10	4 SETS OF 10	810	1460 TO 1640			20
EP16M03	8	4010	2	4	4	810	1640			
EP16M04	38	2930	2	19	19	810	1100			
EP16M05	84	1880	2	42	42	810	575			
EP19M01	20	6850	STR.	10	10					
EP19M02	24	6730	7	12	12	900	1348	4794	900	
SERIES EP19M03	8 SETS OF 5	3710 TO 7550	STR.	4 SETS OF 5	4 SETS OF 5					960
EP19M04	56	8380	STR.	28	28					
EP19M05	28	2455	2	14	14	775	890			
EP25M01	88	2675	1	44	44	2325	410			
EP25M02	44	9575	STR.	44						
EP25M03	44	9690	STR.		44					
EP29M01	44	3610	5	22	22	2850				
EP32M01	24	9765	1	12	12	555	9310			
EP32M02	24	9310	STR.	12	12					

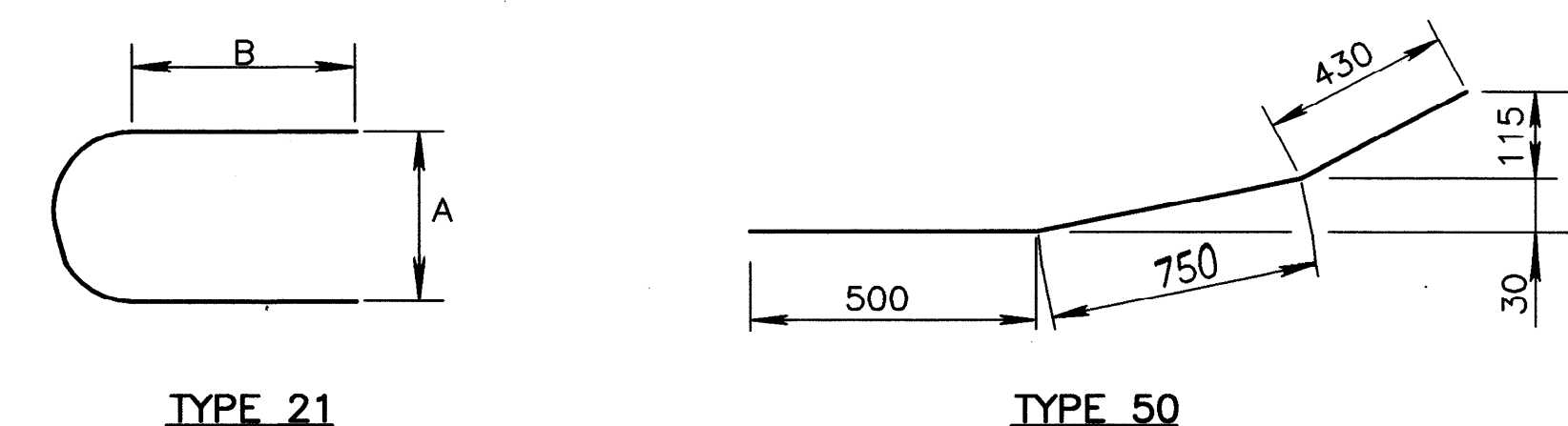
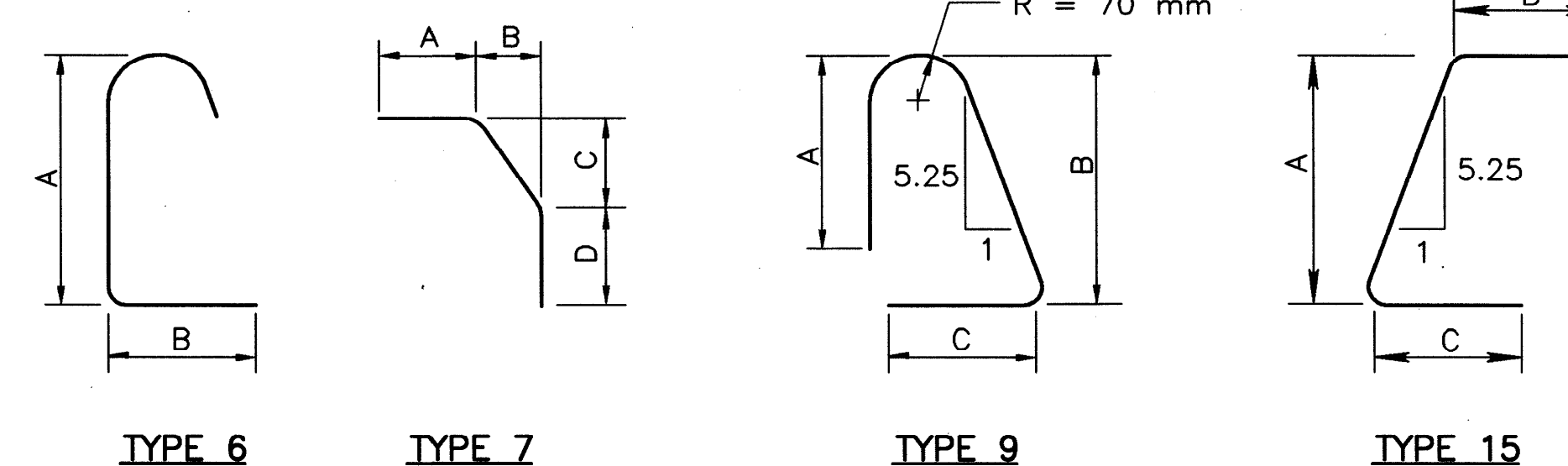
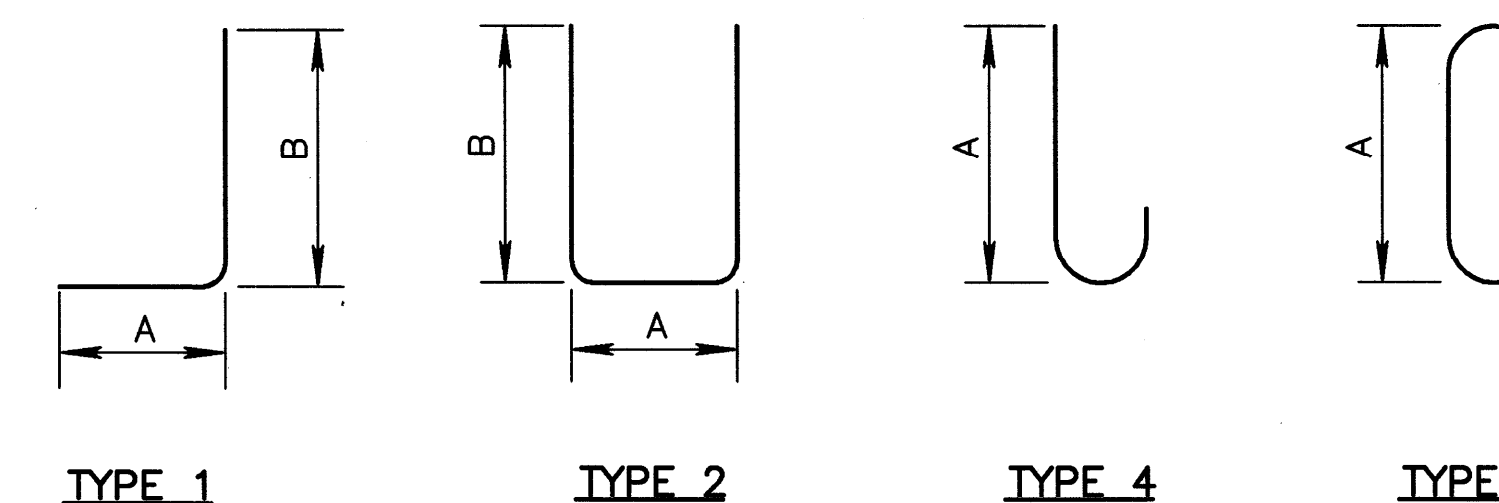
REINFORCING SCHEDULE

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				INCRM.
				A	B	C	D	
<b>SUPERSTRUCTURE</b>								
ES13M01	456	9140	STR.					
ES13M02	57	7565	STR.					
ES13M03	224	8600	STR.					
ES16M01	958	7150	STR.					
ES16M02	484	5930	STR.					
ES16M03	473	8380	STR.					
ES16M04	432	9140	STR.					
ES16M05	54	10 685	STR.					
ES16M06	84	10 750	STR.					
SERIES ES16M07	2 SETS OF 23	1800 TO 6705	STR.					223
SERIES ES16M08	2 SETS OF 24	1800 TO 6930	STR.					223
SERIES ES16M09	1 SET OF 17	1900 TO 5468	STR.					223
SERIES ES16M10	1 SET OF 30	1800 TO 8267	STR.					223
SERIES ES16M11	1 SET OF 19	1800 TO 5814	STR.					223
SERIES ES16M12	1 SET OF 28	1900 TO 7921	STR.					223
ES16M13	476	2205	9	900	950	320		
ES16M14	32	1680	STR.					
ES16M15	12	1680	50					
ES16M16	20	1680	STR.					
ES19M01	476	995	15	455	320	320		
ES19M02	476	725	1	320	455			
ES19M03	14	10 940	STR.					
ES19M04	40	1010	1	125	935			
SERIES ES19M05	4 SETS OF 10	1140 TO 1365	4	935 TO 1160				25
SERIES ES19M06	4 SETS OF 10	1135 TO 1360	1	935 TO 1160	250			25
ES25M01	16	8910	STR.					



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DESIGN AGENCY  
 Mccoy/FOK & ASSOCIATES, INC.  
 367 CHEST ROAD, SUITE 1A  
 AKRON, OHIO

DATE  
 8-14-00  
 REVIEWED  
 LBD  
 DRAWN  
 WEB  
 CHECKED  
 RHW

REINFORCING SCHEDULE - EASTBOND BRIDGE  
 BRIDGE NO. CRA-30-33602-L & R  
 RELOCATED U.S 30 OVER CSX TRANSPORTATION, INC.

CRA/RIC-30-33.500/0.000