

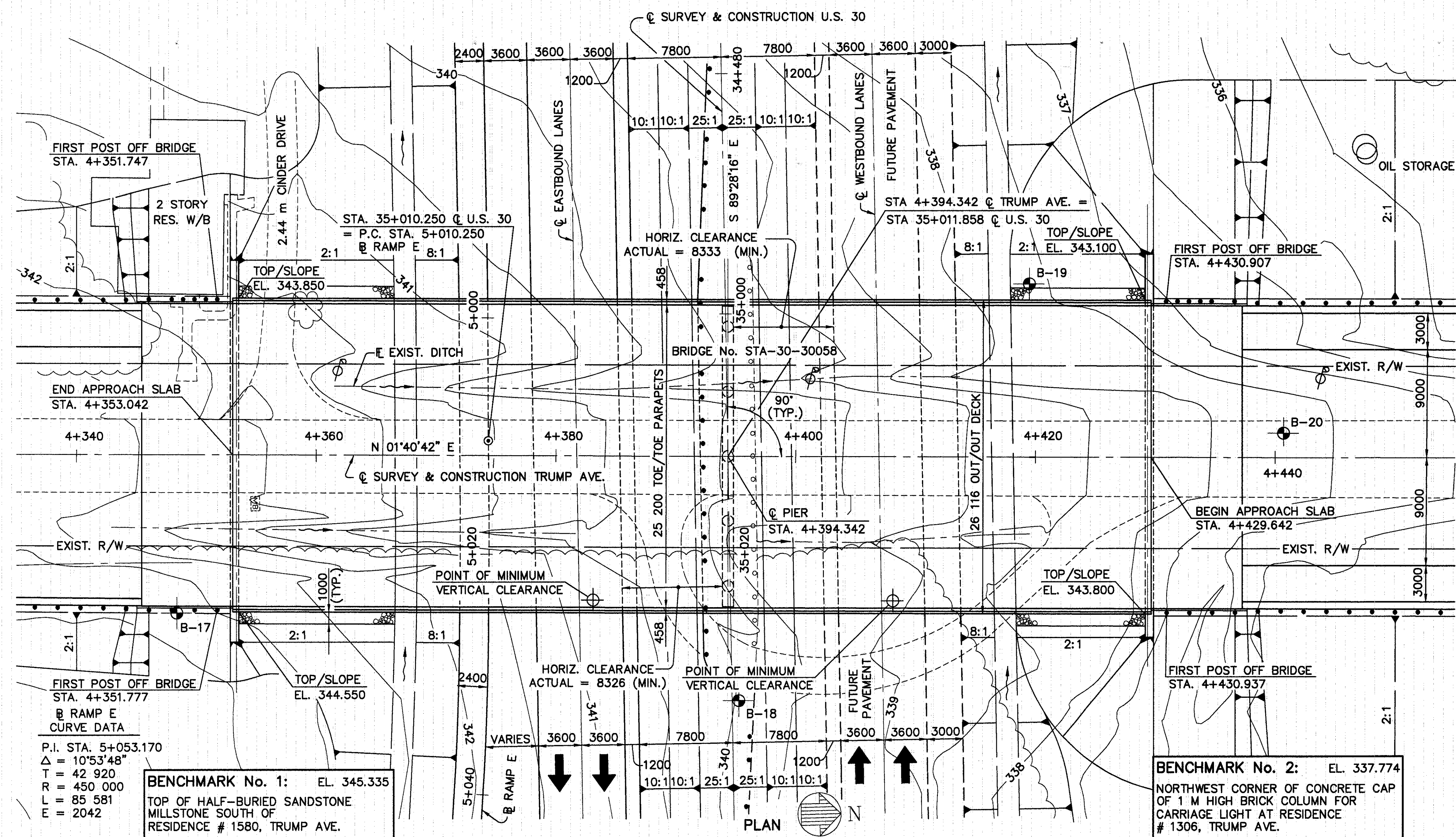
metric units

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
REGISTERED PROFESSIONAL ENGINEER & ARCHITECT
PROJ. NUMBER: 100-5-000000-000-000

DATE
3/22/96
REVIEWED
C.W.M.
DRAWN
C.C.
DESIGNED
W.M.
CHECKED
V.S.
STARK COUNTY
STA. 4+353.042
STA. 4+429.642

NOTES:
ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT FOR STATIONS AND ELEVATIONS WHICH ARE IN METERS.
FOR BRIDGE TERMINAL ASSEMBLY TYPES AND QUANTITIES, SEE PLAN AND PROFILE SHEETS 133 OF 520 AND 134 OF 520.
ESTIMATED AVERAGE PAY LENGTH FOR HP310x79 STEEL PILES DRIVEN TO REFUSAL ON ROCK:
REAR ABUTMENT = 4.0 m(±)
FORWARD ABUTMENT = 10.0 m(±)
PIER = 4.0 m(±)
EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

B-17 BORING LOCATION

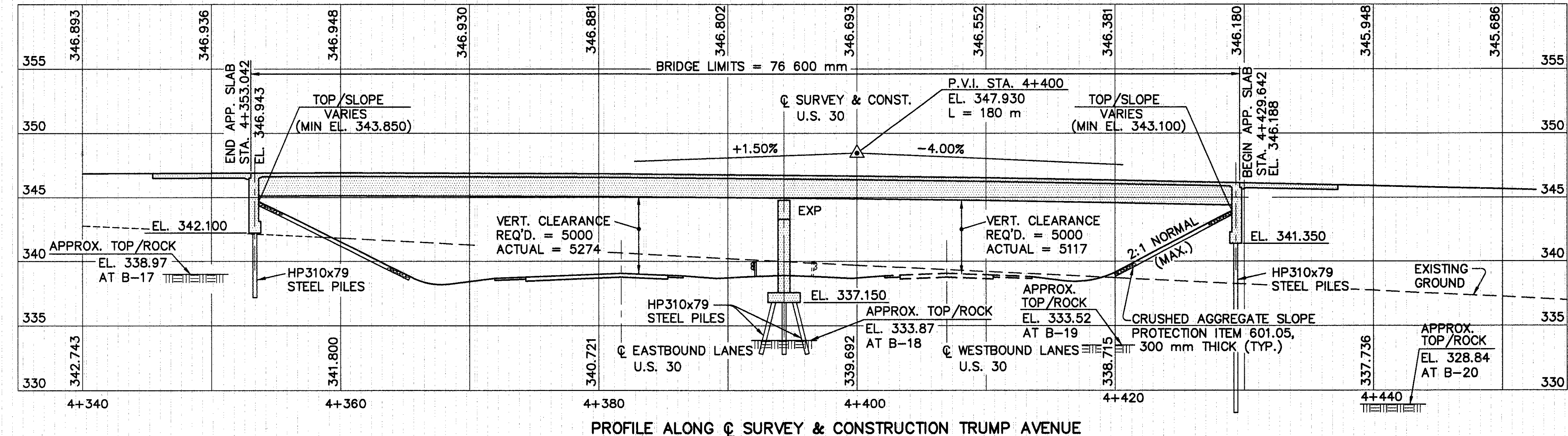


TRAFFIC DATA

CURRENT A.D.T. (2001) = 16480
DESIGN A.D.T. (2021) = 19150
DESIGN A.D.T.T. = 958

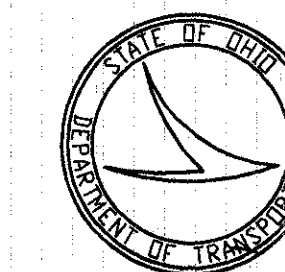
PROPOSED STRUCTURE

TYPE: TWO SPAN CONTINUOUS STEEL PLATE GIRDER (A572M, PAINTED) COMPOSITE WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE
SPANS: 41 000 mm AND 35 000 mm CENTER TO CENTER OF BEARINGS
SKEW: NONE
ALIGNMENT: TANGENT
ROADWAY: 25 200 mm TOE TO TOE OF CONCRETE PARAPETS
DESIGN LOADING: MS18 (CASE II) AND THE ALTERNATE MILITARY LOADING
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-81M, 7600 mm LONG
CROWN: 0.016
LATITUDE: 40°47'05" N
LONGITUDE: 81°26'04" W



SITE PLAN
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

GENERAL NOTES



**metric
units**

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
INCORPORATED
ENGINEERING • ARCHITECTURE • ENVIRONMENTAL
PLANNING • INTERIOR DESIGN • CONSTRUCTION SERVICES

DESIGNED
V.S.
CHECKED
B.R.H.

DRAWN
V.O.
REVIEWED

REVIEWED
C.W.M.
DATE
10/16/96
STRUCTURE FILE NUMBER
7601077

GENERAL NOTES
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696

3/17

343
520

GENERAL:

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:
AS-1-81M DATED 10-25-94
BR-1M DATED 12-15-94
ICD-1-82M DATED 3-20-95
AND TO SUPPLEMENTAL SPECIFICATIONS:
944 DATED 12-7-95

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATION FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

MS18, CASE II AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA:

HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE - ASSUMED COMPRESSIVE STRENGTH 31.0 MPa
HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE - ASSUMED COMPRESSIVE STRENGTH 27.5 MPa
REINFORCING STEEL - ASTM A615M, A616M OR A617M
GRADE 400 MINIMUM YIELD STRENGTH 400 MPa
SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82M OR A615M
STRUCTURAL STEEL, A572M - UNIT STRESS 186.2 MPa

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
65 mm CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25 mm THICK.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, THE SPILL THROUGH SLOPES AND BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS SHALL BE CONSTRUCTED UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 60 METERS BEHIND EACH ABUTMENT. THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES SHALL NOT BEGIN UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 GRANULAR MATERIAL PLACED IN 150 mm LIFTS AND COMPACTED IN ACCORDANCE WITH 304.04.

PILES:

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.

THE DESIGN LOAD IS 640 kN PER PILE FOR THE ABUTMENT PILES AND 630 kN PER PILE FOR THE PIER PILES.

UTILITY LINES:

ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND THE UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

HIGH PERFORMANCE CONCRETE:

THE CONCRETE USED FOR THE FOLLOWING ITEMS SHALL BE MIX 3:
ITEM SPECIAL - HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK)
ITEM SPECIAL - HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET)
ITEM SPECIAL - HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE

ITEM 516 - INTEGRAL ABUTMENT EXPANSION JOINT SEAL:

INSTALL A 900 mm WIDE STRIP, 2.5 mm THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS AND ON STANDARD DRAWING ICD-1-82M. SECURE THE 1 METER WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 32 x 3 mm (LENGTH x SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 25 mm OUTSIDE DIAMETER, 3 mm GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 225 mm. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER. CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 150 mm (±) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 150 mm (±) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 150 mm CENTER TO CENTER ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST 300 mm IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 150 mm IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS. THE NEOPRENE SHEETING SHALL BE 2.5 mm THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, mm	D 751	2.5 +/- .25
BREAKING STRENGTH, GRAB WXF, N, MINIMUM	D 751	3130 x 3130
ADHESIVE 25 mm STRIP, 50 mm MINIMUM, N MINIMUM	D 751	27
BURST STRENGTH (MULLEN) MPa, MINIMUM	D 751	9.65
HEAT AGING 70 HOURS T 100°C, 180 BEND WITHOUT CRACKING	D 2136	NO CRACKING OF COATING
LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40°C, BEND AROUND 6 mm MANDREL	D 2136	NO CRACKING OF COATING

PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 516 INTEGRAL ABUTMENT EXPANSION JOINT SEAL.

ITEM 518 - 150 mm PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN:

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 150 mm DIAMETER PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE SP.

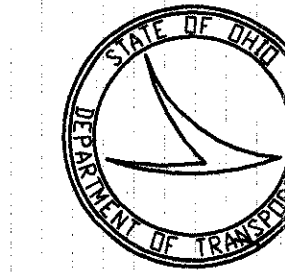
ITEM 518 - 150 mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN:

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE, SHALL BE 150 mm DIAMETER, PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE S. THIS ITEM SHALL INCLUDE ALL ELBOWS, TEES AND END CAPS REQUIRED TO COMPLETE THE ABUTMENT DRAINAGE SYSTEM.

CONCRETE PARAPETS:

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25 mm DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 2000 mm AND A MAXIMUM OF 3000 mm. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 6 mm. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 25 mm WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E.

ESTIMATED QUANTITIES



**metric
units**

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REAR ABUT.	FWD. ABUT.	PIER	SUPER.	GENERAL	SEE SHEET NO.
503	11100	LUMP		COFFERDAMS, CRIBS, AND SHEETING					LUMP	
503	21101	387	CU METER	UNCLASSIFIED EXCAVATION, AS PER PLAN	155	155	77			3
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION					LUMP	
507	14400	310	METER	STEEL PILES HP 310x79	60	150	100			
509	15830	102 547	KILOGRAM	EPOXY COATED REINFORCING STEEL, GRADE 400	3901	3901	8143	86 602		
SPECIAL	51148000	544	CU METER	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK) *				544		
SPECIAL	51148020	45	CU METER	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) *				45		
SPECIAL	51148040	392	CU METER	HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE *	153	153	86			
SPECIAL	51149000	LUMP		HIGH PERFORMANCE CONCRETE, TRIAL MIX *					LUMP	
SPECIAL	51149010	LUMP		HIGH PERFORMANCE CONCRETE TESTING *					LUMP	
SPECIAL	51267510	700	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	40	40	176	444		
513	12400	329 300	KILOGRAM	STRUCTURAL STEEL, A572-50 AISC CATEGORY III *				329 300		
513	20000	3996	EACH	WELDED STUD SHEAR CONNECTOR				3996		
816	00610	329 300	KILOGRAM	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU *				329 300		
516	13200	16	SQ METER	13 MM PREFORMED EXPANSION JOINT FILLER	8	8				
516	13600	18	SQ METER	25 MM PREFORMED EXPANSION JOINT FILLER	9	9				
516	14014	62	METER	INTEGRAL ABUTMENT EXPANSION JOINT SEAL	31	31				3
516	44100	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) 550 MM X 550 MM PAD AND 576 MM X 576 MM LOAD PLATE *			9			
518	21200	180	CU METER	POROUS BACKFILL WITH FILTER FABRIC	90	90				
518	40001	72	METER	150 MM PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	36	36				3
518	40011	22	METER	150 MM NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	11	11				3
601	20000	644	SQ METER	CRUSHED AGGREGATE SLOPE PROTECTION	364	280				

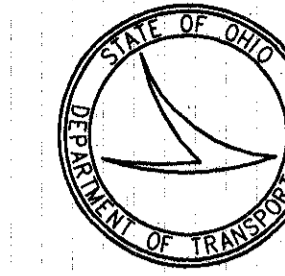
* SEE PROPOSAL NOTE

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
ENGINEERING • ARCHITECTURE • ENVIRONMENTAL
PLANNING • ROAD • COLLEGE, AND MORE

DATE
10/16/96
REVIEWED
C.W.M.
DRAWN
V.O.
DESIGNED
V.S.
CHECKED
B.R.H.

ESTIMATED QUANTITIES
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696



metric units

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
REGISTERED PROFESSIONAL ENGINEER & ARCHITECT
STATE OF CALIFORNIA LICENSE NO. 40504

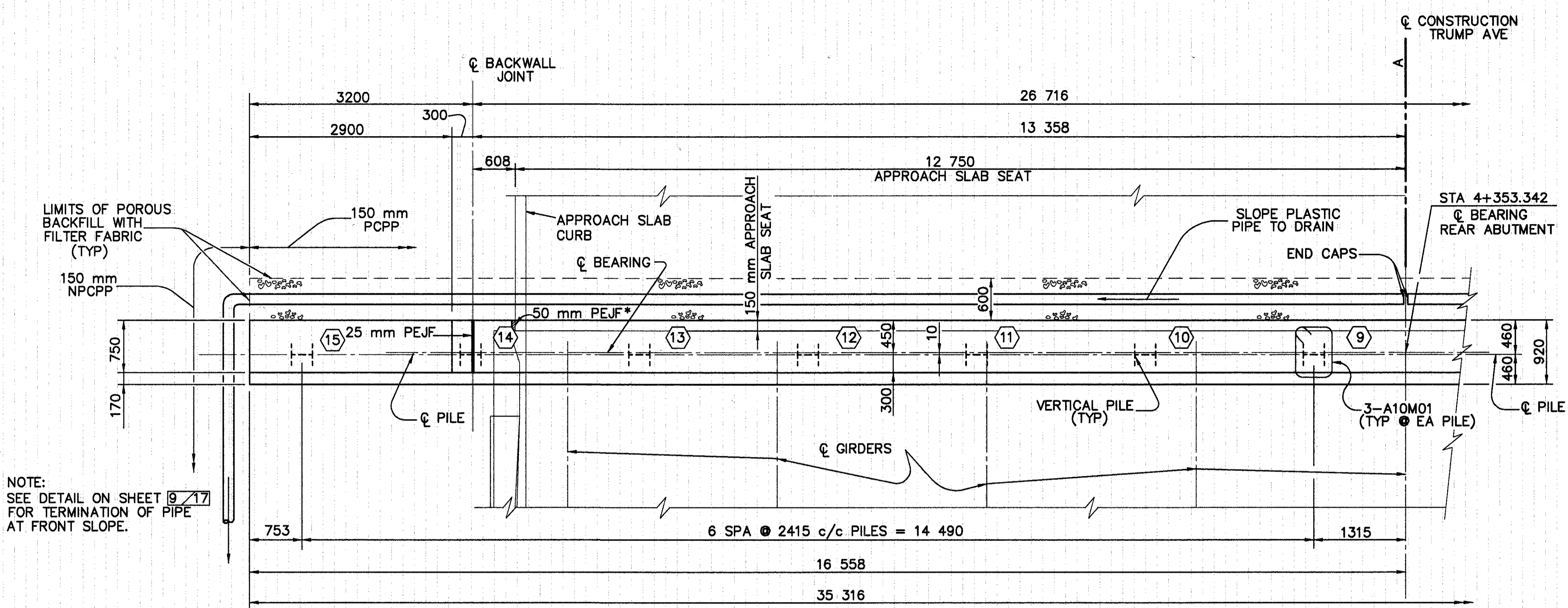
DESIGNED	V.S.	DRAWN	V.O.	REVIEWED	C.W.M.	DATE	10/16/96
CHECKED	B.R.H.	FILE NUMBER	7601077	STRUCTURE FILE NUMBER			

ABUTMENT DETAILS
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

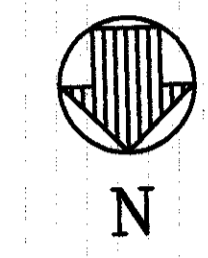
STA-30-27.696

5/17

345
520



NOTE:
SEE DETAIL ON SHEET 9/17
FOR TERMINATION OF PIPE
AT FRONT SLOPE.

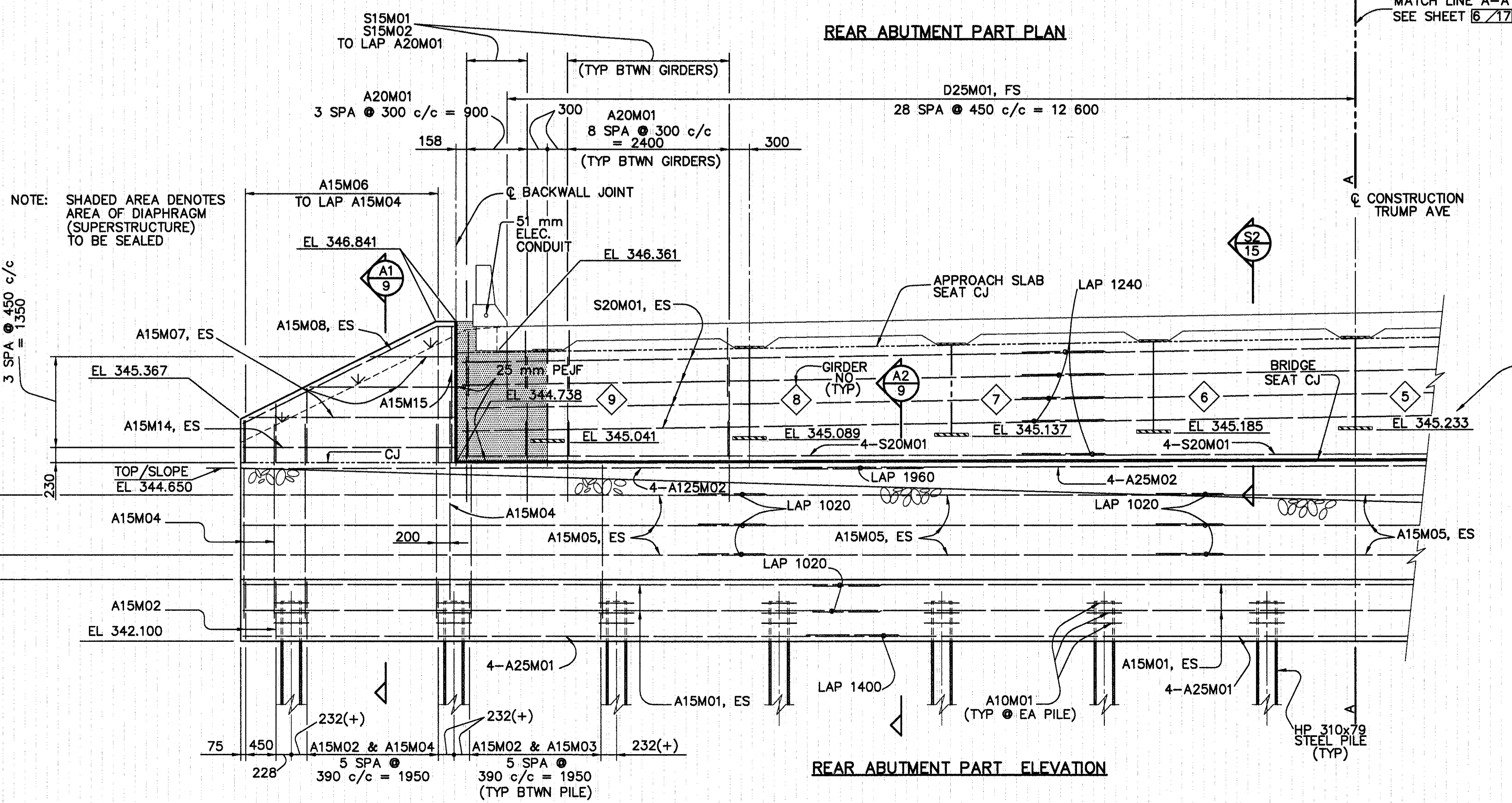


* INCLUDE WITH APPROACH
SLAB FOR PAYMENT

ABUTMENT NOTES:

- 900 mm WIDE NEOPRENE SHEETING CENTERED ON THE HORIZONTAL BRIDGE SEAT CONSTRUCTION JOINT AND ON THE VERTICAL BACKWALL JOINTS SHALL BE INSTALLED AT BOTH ABUTMENTS AS DETAILED ON STANDARD DRAWING ICD-1-82M.
- REINFORCING STEEL CLEARANCES SHALL BE AS PER STANDARD DRAWING ICD-1-82M.
- FOR ALL OTHER ABUTMENT DETAILS AND NOTES NOT SHOWN, SEE STANDARD DRAWING ICD-1-82M.
- 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.

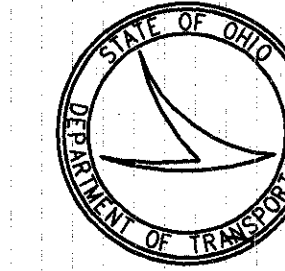
REAR ABUTMENT PART PLAN



ABUTMENT LEGEND:

- BTWN - BETWEEN
- CJ - CONSTRUCTION JOINT
- EA - EACH
- ES - EACH SIDE
- FS - FAR SIDE
- NO - NUMBER
- NPCPP - NON PERFORATED CORRUGATED PLASTIC PIPE
- OPT CJ - OPTIONAL CONSTRUCTION JOINT
- PCPP - PERFORATED CORRUGATED PLASTIC PIPE
- PEJF - PREFORMED EXPANSION JOINT FILTER
- SPA - SPACES
- TYP - TYPICAL
- (11) - PILE NUMBER
- - VERTICAL PILE

REAR ABUTMENT PART ELEVATION



metric units

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
ENGINEERING ARCHITECTURE & ENVIRONMENTAL DESIGN
1001 MARKET STREET, SUITE 2000, SAN FRANCISCO, CA 94102

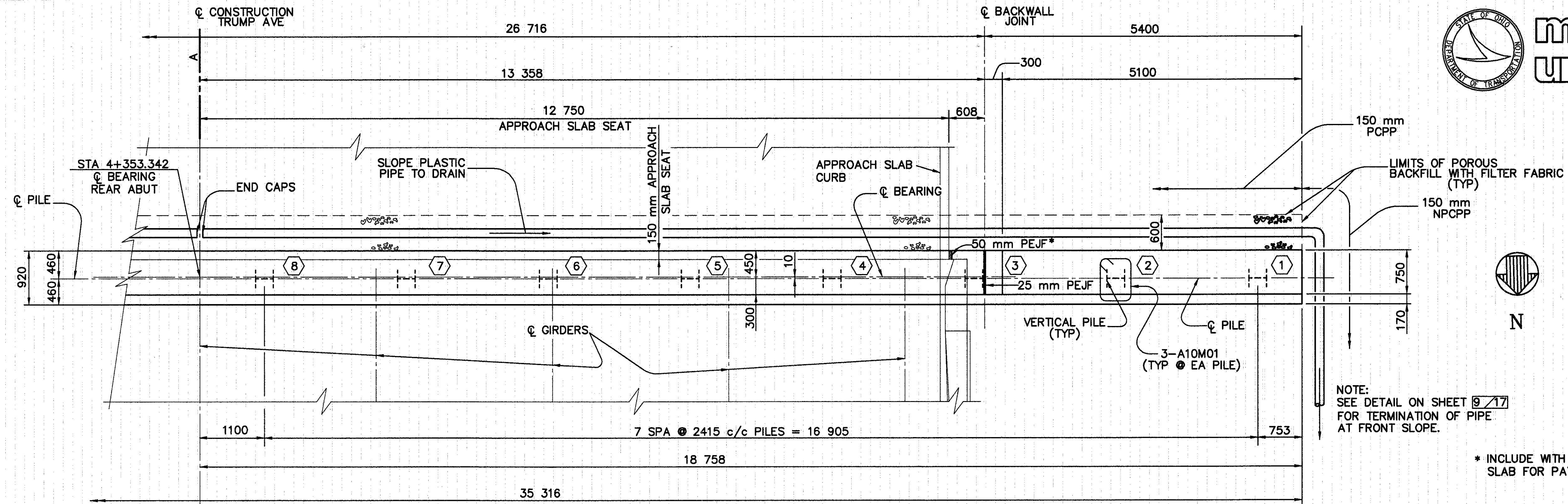
DATE 10/16/96
REVIEWED C.W.M. 10/16/96
STRUCTURE FILE NUMBER 7601077
DRAWN V.O.
CHECKED B.R.H.
DESIGNED V.S.

ABUTMENT DETAILS
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696

6 / 17

346
520

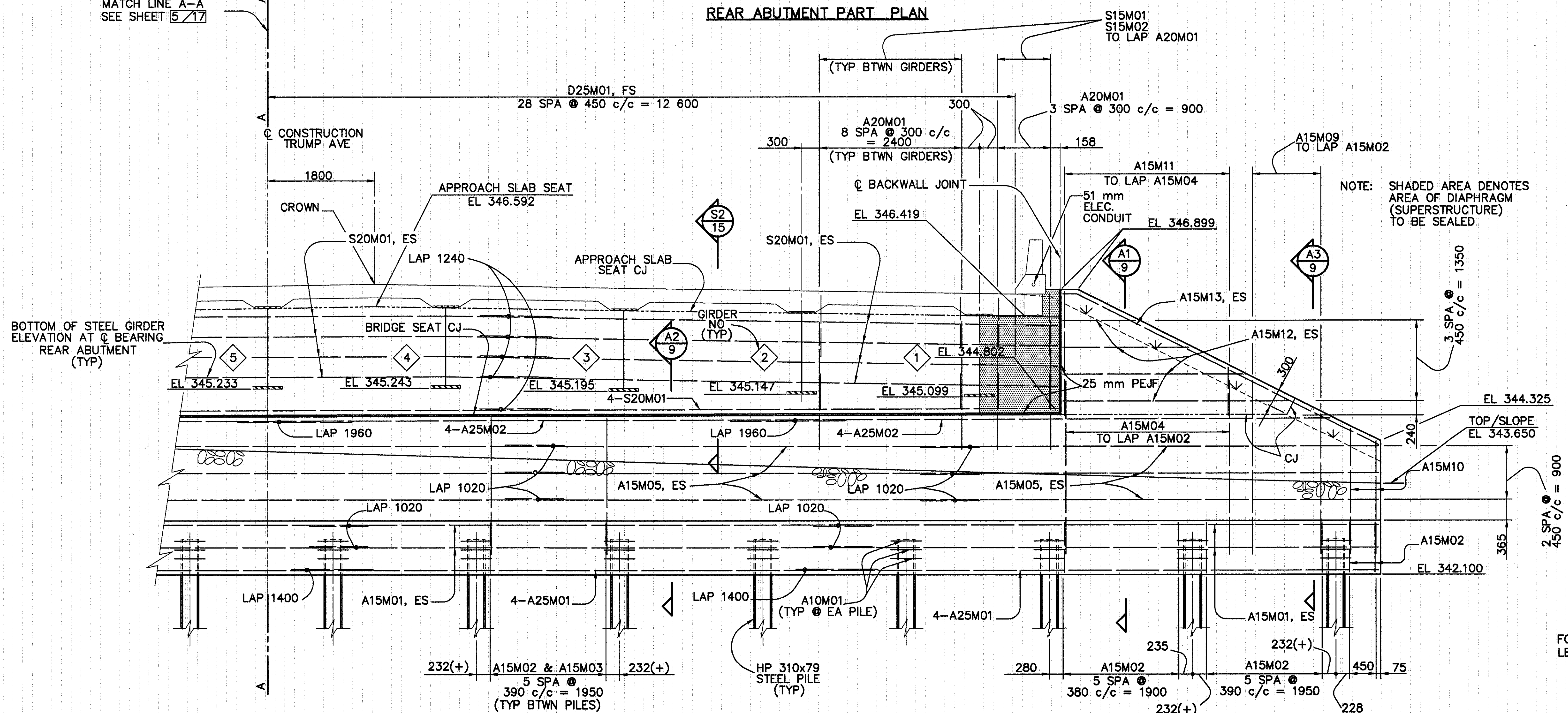


NOTE:
SEE DETAIL ON SHEET 9/17
FOR TERMINATION OF PIPE
AT FRONT SLOPE.

* INCLUDE WITH APPROACH
SLAB FOR PAYMENT.

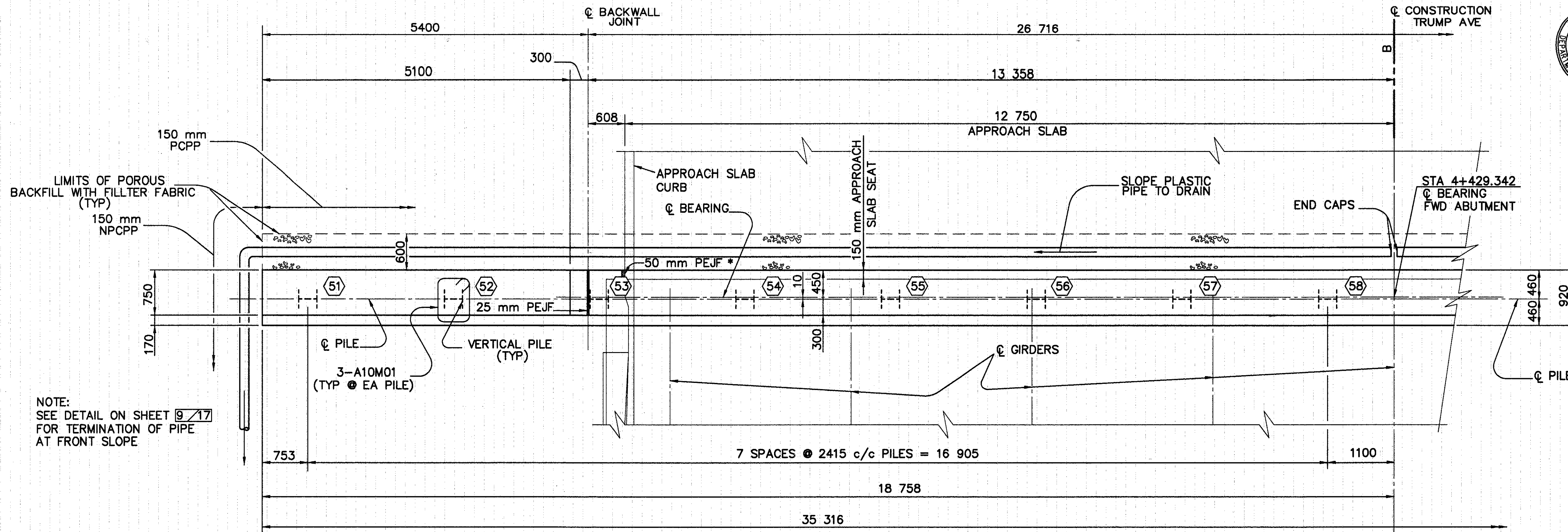
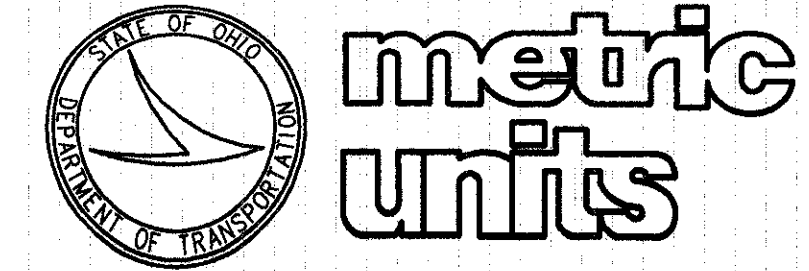
MATCH LINE A-A
SEE SHEET 5/17

REAR ABUTMENT PART PLAN

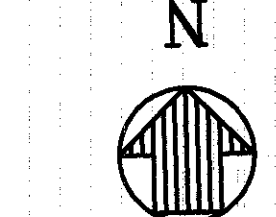


FOR ABUTMENT NOTES AND
LEGEND, SEE SHEET 5/17

REAR ABUTMENT PART ELEVATION

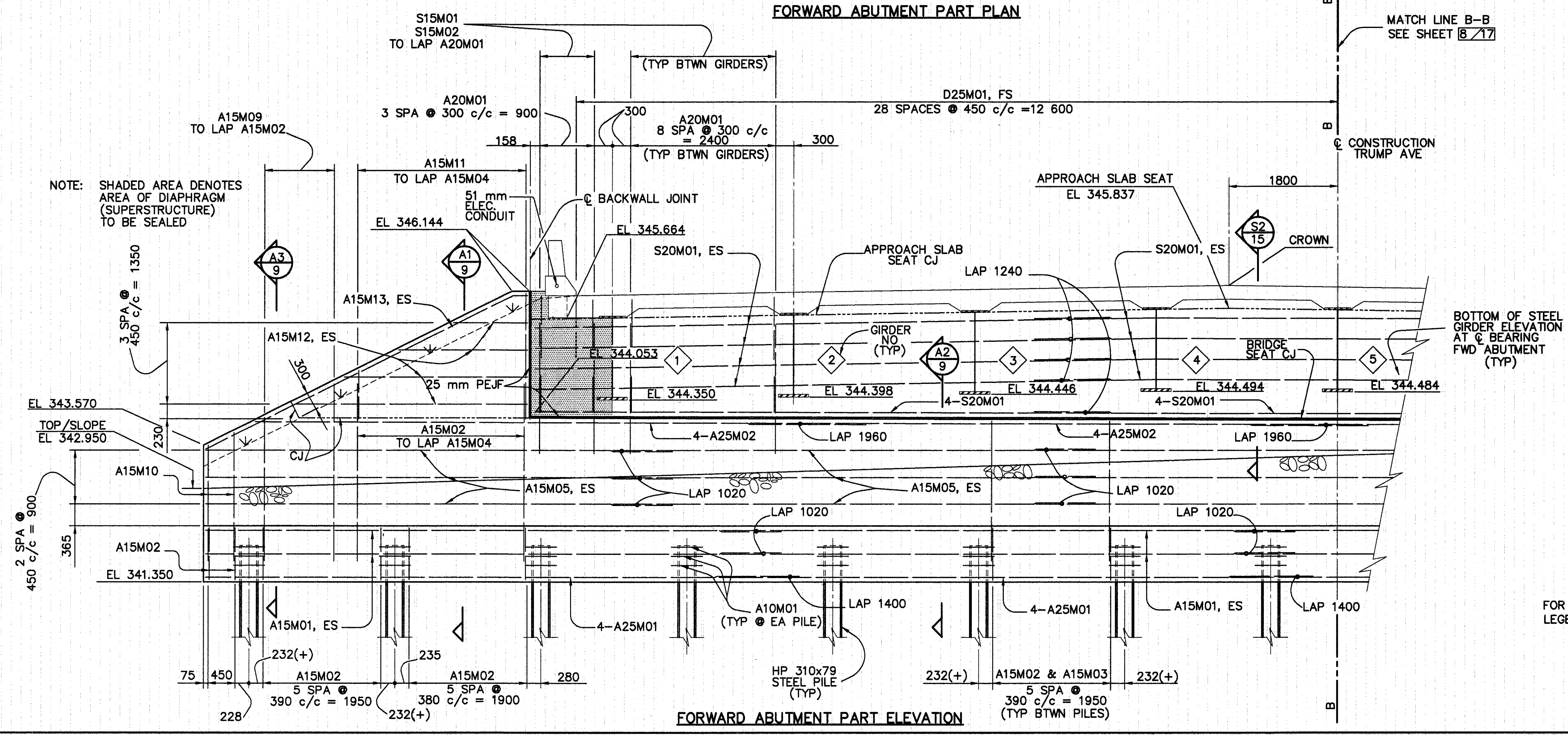


NOTE:
SEE DETAIL ON SHEET 9/17
FOR TERMINATION OF PIPE
AT FRONT SLOPE



* INCLUDE WITH APPROACH
SLAB FOR PAYMENT.

FORWARD ABUTMENT PART PLAN



NOTE: SHADED AREA DENOTES
AREA OF DIAPHRAGM
(SUPERSTRUCTURE)
TO BE SEALED

BOTTOM OF STEEL
GIRDER ELEVATION
AT @ BEARING
FWD ABUTMENT
(TYP)

FORWARD ABUTMENT PART ELEVATION

FOR ABUTMENT NOTES AND
LEGEND, SEE SHEET 5/17

DESIGN AGENCY: STILSON & ASSOCIATES, INC.
 DATE: 10/16/96
 REVIEWED: C.W.M.
 DRAWN: V.O.
 DESIGNED: V.S.
 CHECKED: B.R.H.

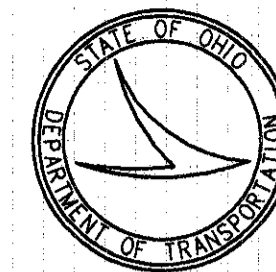
STRUCTURE FILE NUMBER: 7601077

ABUTMENT DETAILS
 BRIDGE No. STA-30-30058
 U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696

7/17

347/520



metric units

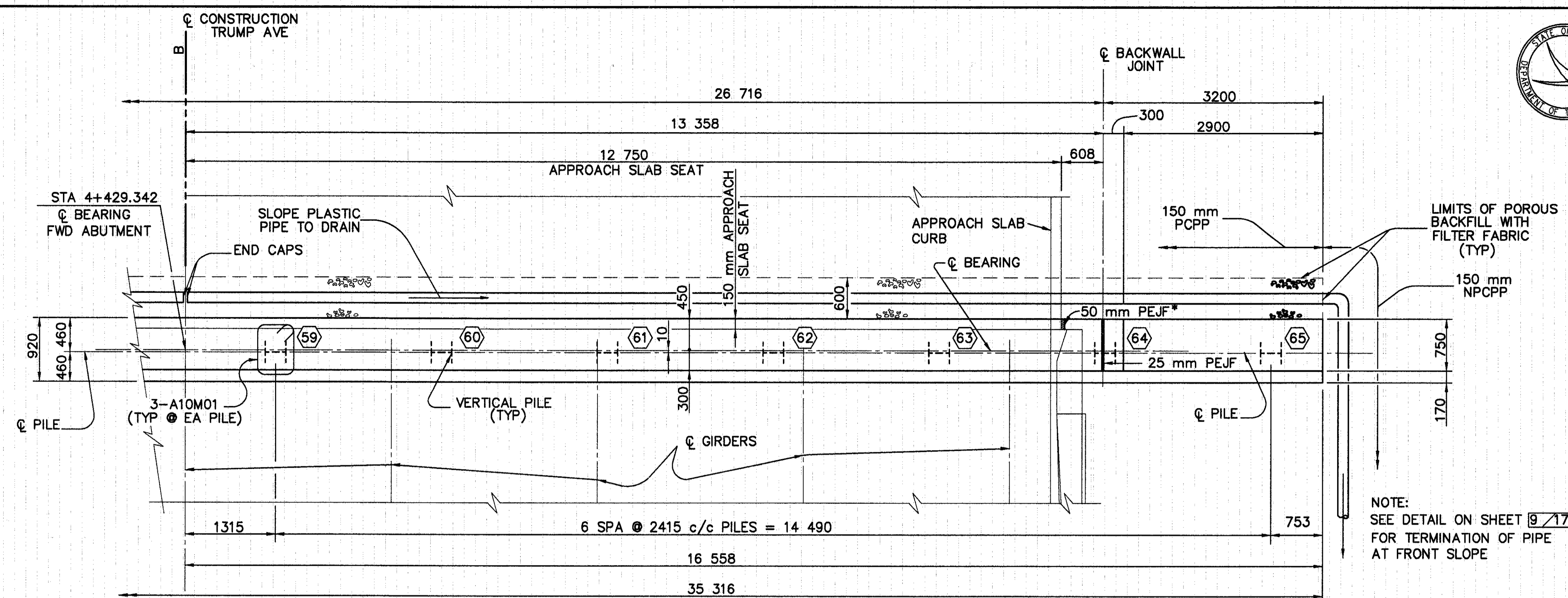
DESIGN AGENCY
STILSON & ASSOCIATES, INC.
INCORPORATED
ENGINEERING, ARCHITECTURE & ENVIRONMENTAL
SCIENCE CONSULTANTS, INC.

DATE: 10/16/96
REVIEWED: C.W.M.
DRAWN: V.O.
DESIGNED: V.S.
CHECKED: B.R.H.

ABUTMENT DETAILS
BRIDGE NO. STA-30-30058
U.S. UNDER TRUMP AVENUE

STA-30-27.696

8 / 17
348
520

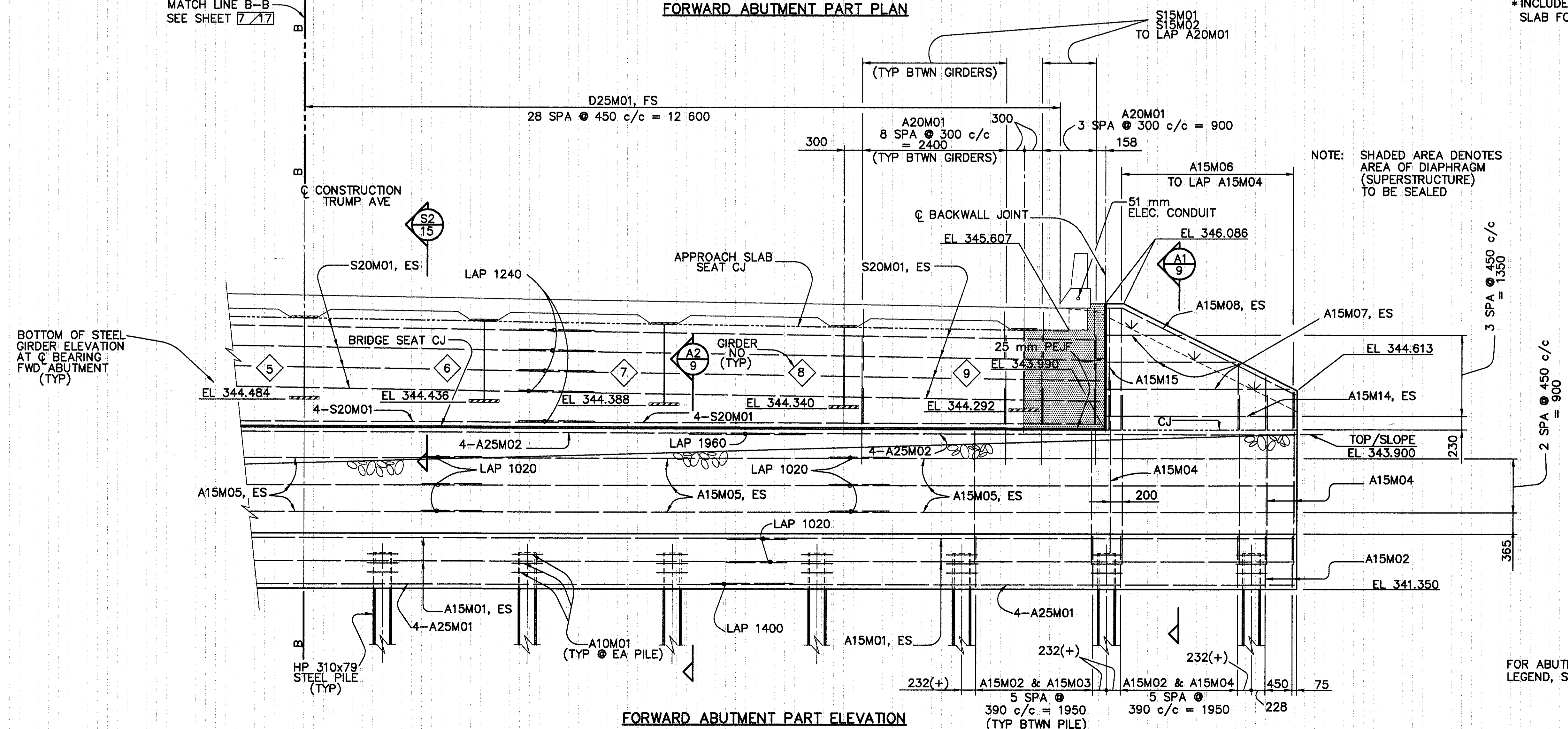


NOTE:
SEE DETAIL ON SHEET 9/17
FOR TERMINATION OF PIPE
AT FRONT SLOPE

MATCH LINE B-B
SEE SHEET 7/17

FORWARD ABUTMENT PART PLAN

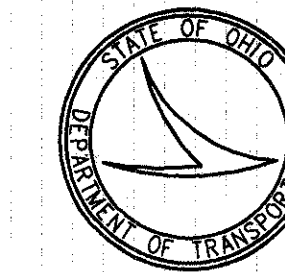
*INCLUDE WITH APPROACH
SLAB FOR PAYMENT.



NOTE: SHADED AREA DENOTES
AREA OF DIAPHRAGM
(SUPERSTRUCTURE)
TO BE SEALED

FORWARD ABUTMENT PART ELEVATION

FOR ABUTMENT NOTES AND
LEGEND, SEE SHEET 5/17



metric units

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
REGISTERED PROFESSIONAL ENGINEERS & ARCHITECTS
FIRST FLOOR, 300 S. COLLEGE, COLUMBUS, OHIO 43260

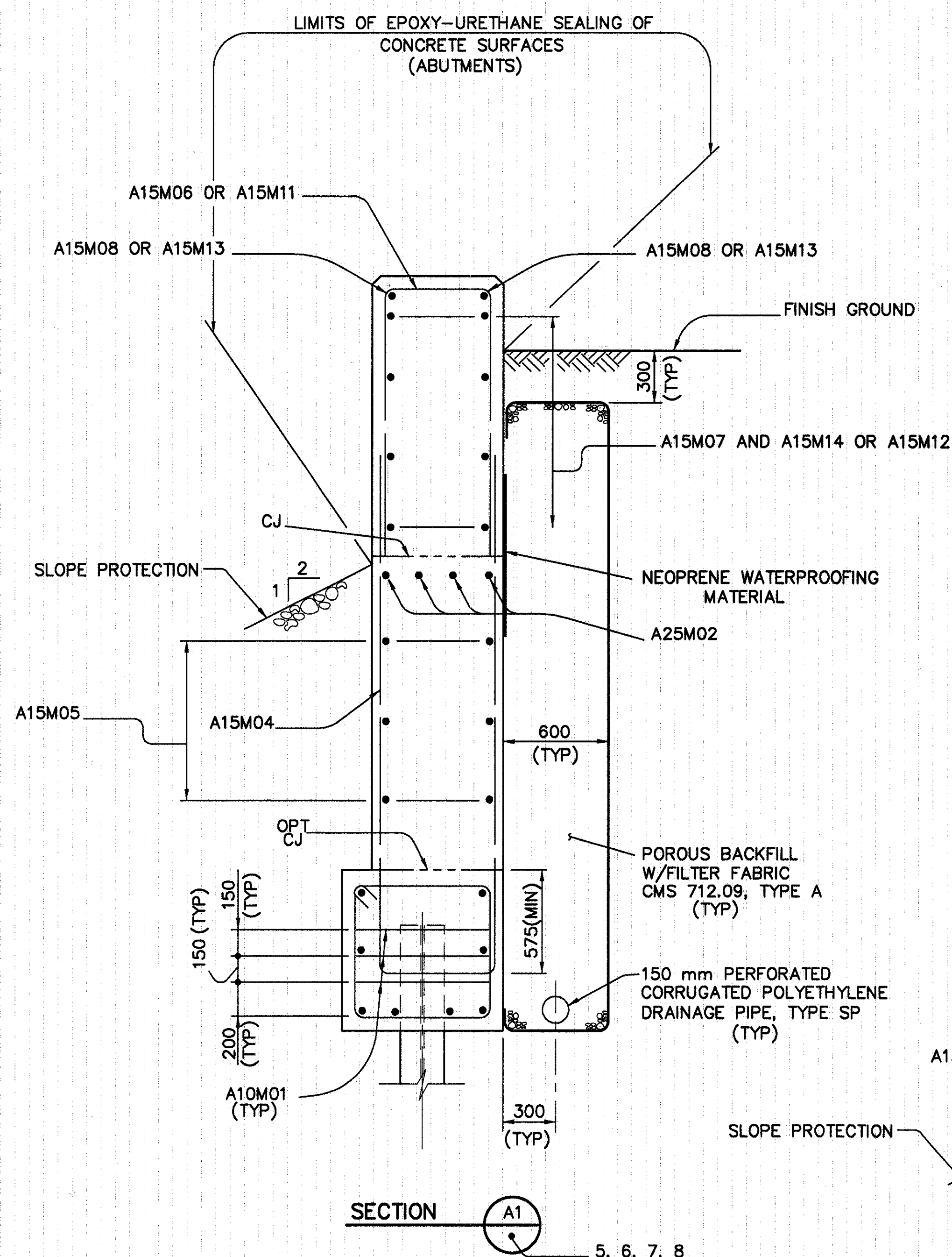
DATE
10/16/96
REVIEWED
C.W.M.
DRAWN
V.O.
DESIGNED
V.S.
CHECKED
B.R.H.

STRUCTURE FILE NUMBER
7601077
ABUTMENT DETAILS
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

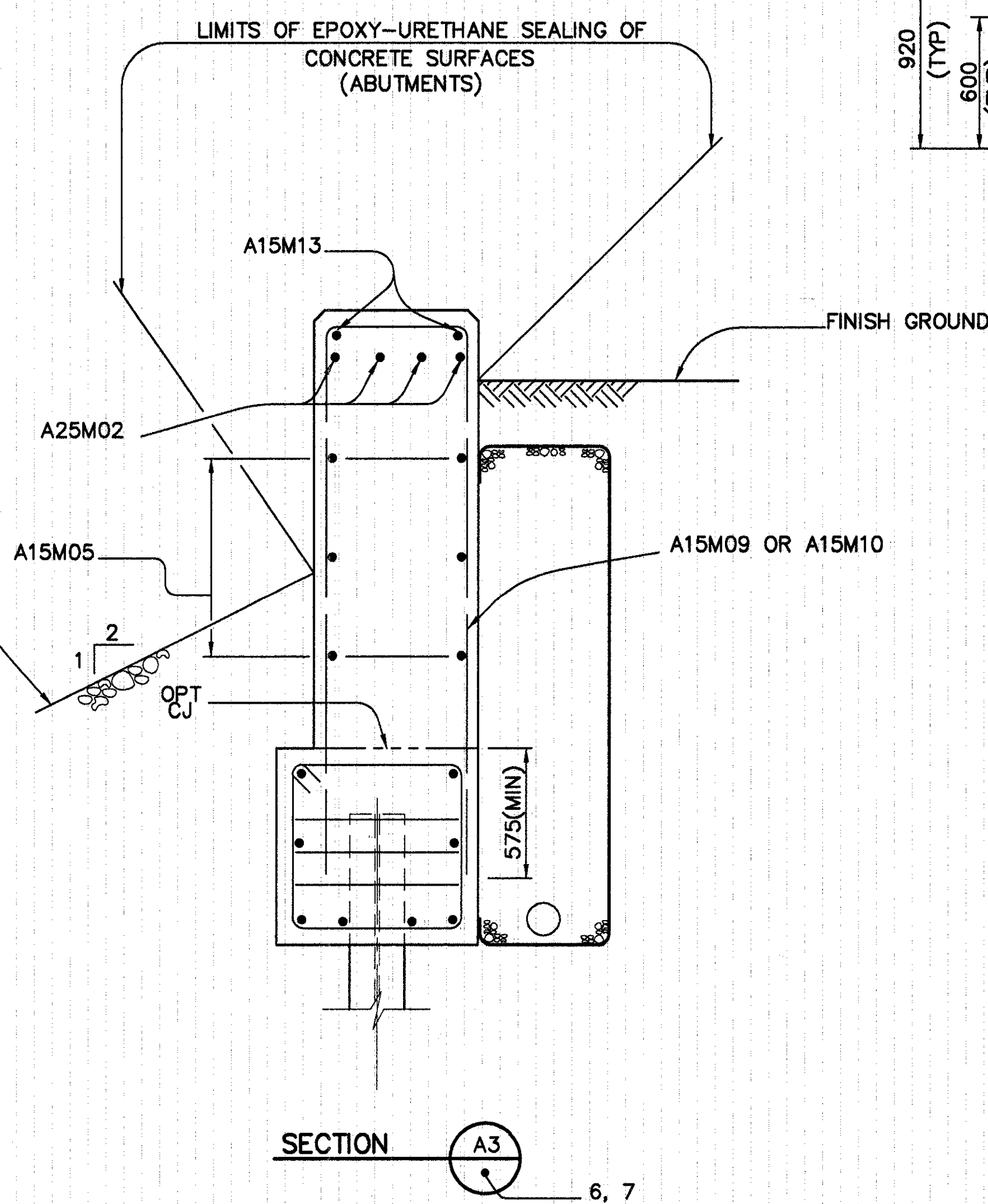
STA-30-27.696

9 / 17

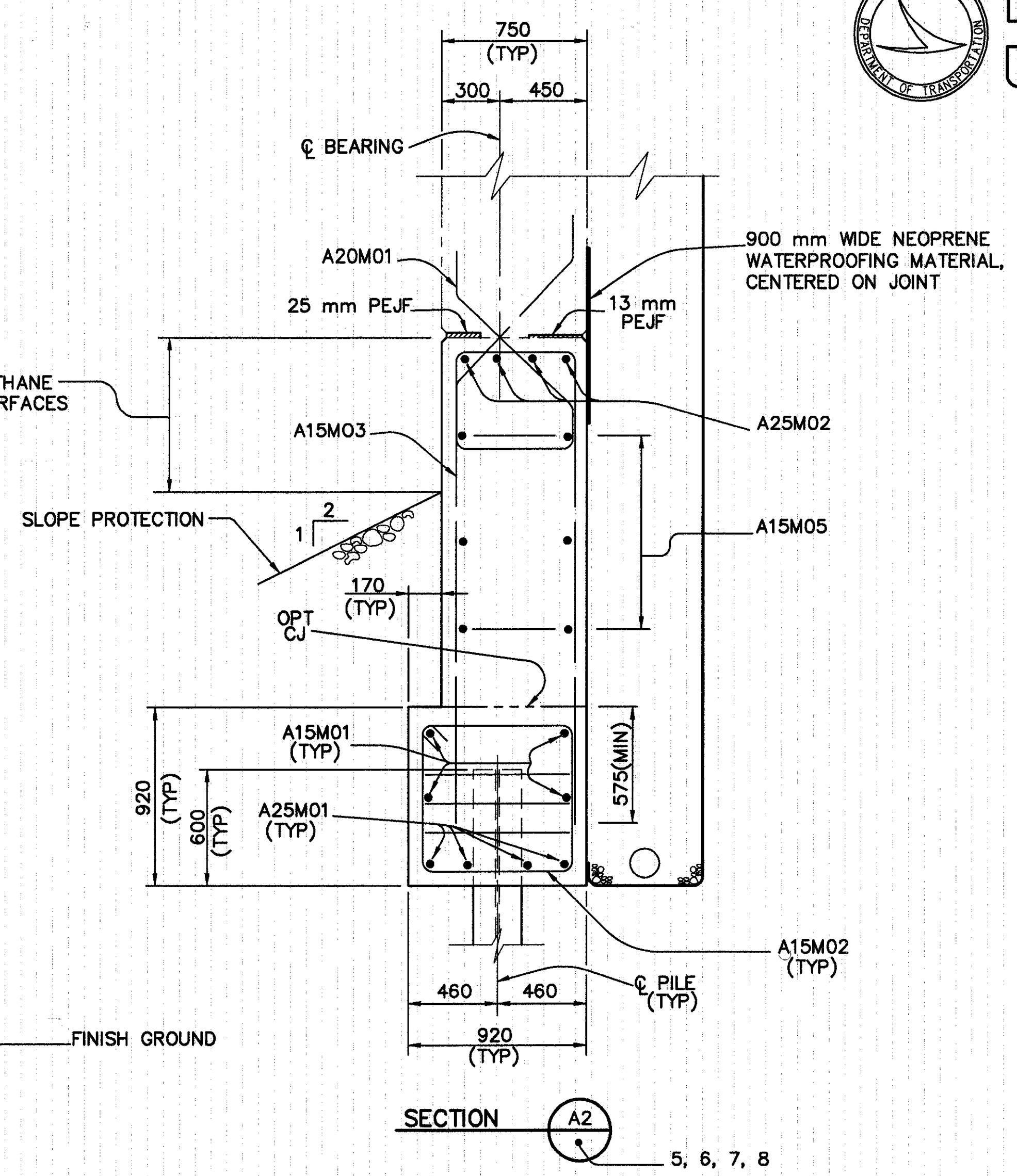
349
520



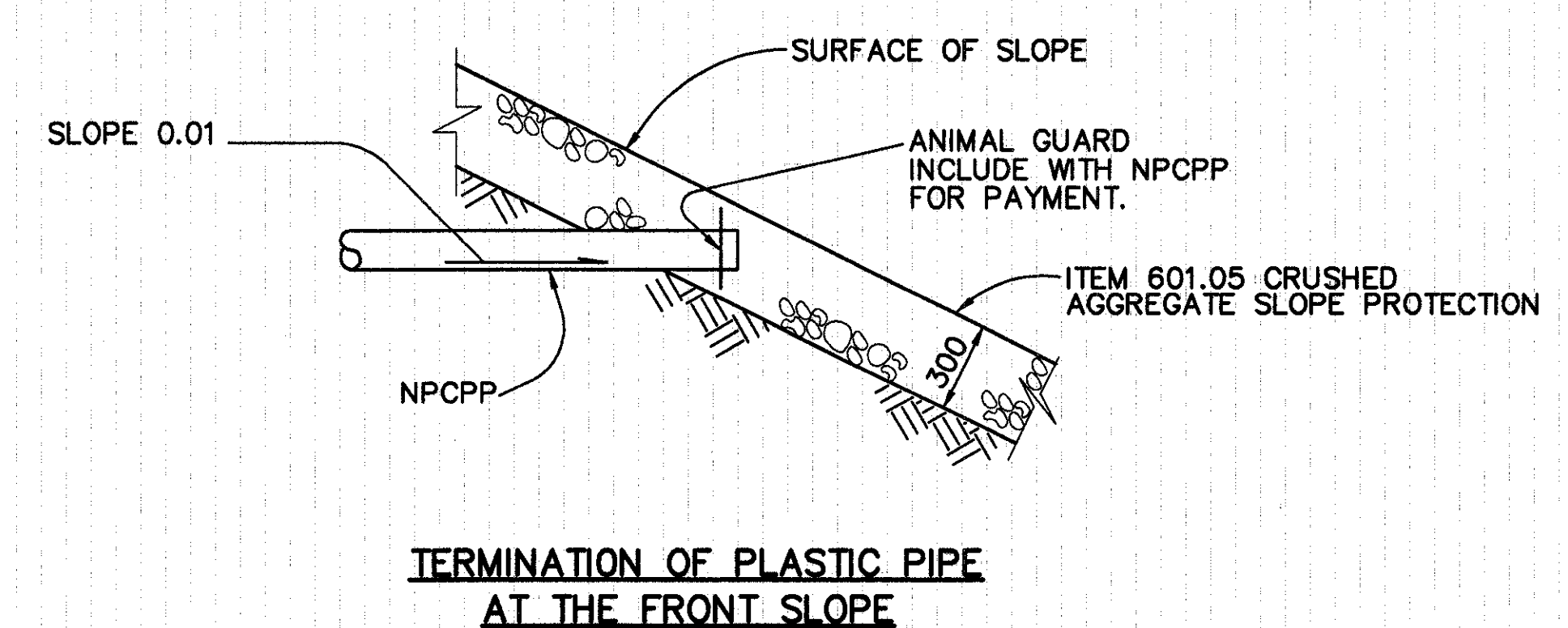
NOTE: FOR DETAILS NOT SHOWN SEE SECTION A2



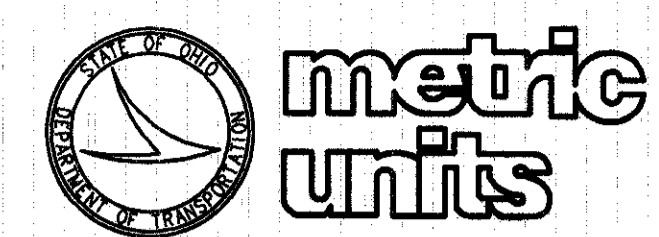
NOTE: FOR DETAILS NOT SHOWN SEE SECTIONS A1 AND A2



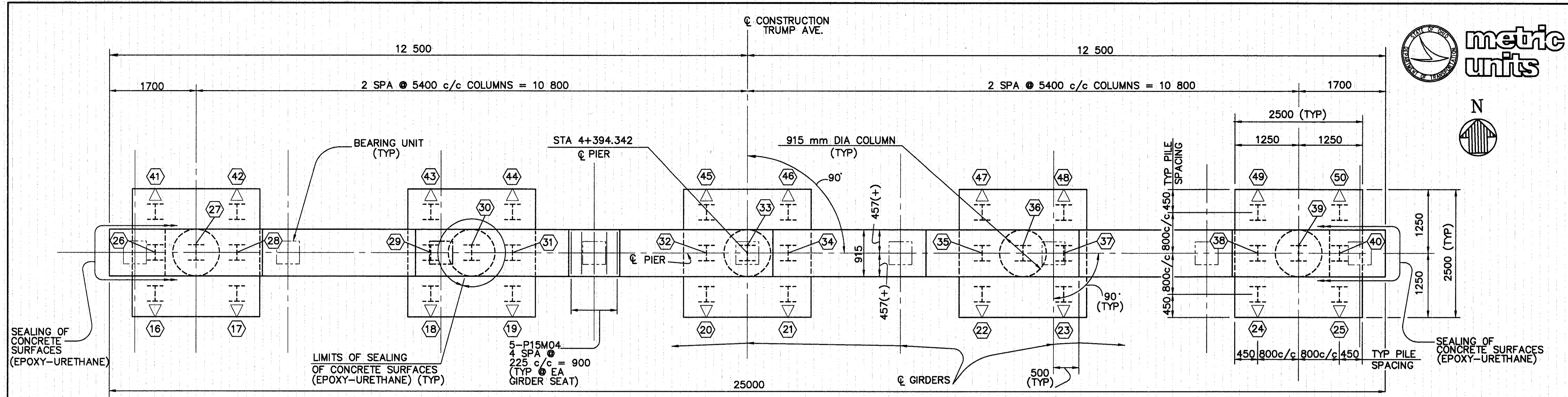
NOTE: FOR DETAILS NOT SHOWN SEE SECTION A1



FOR ABUTMENT NOTES AND LEGEND, SEE SHEET 5/17

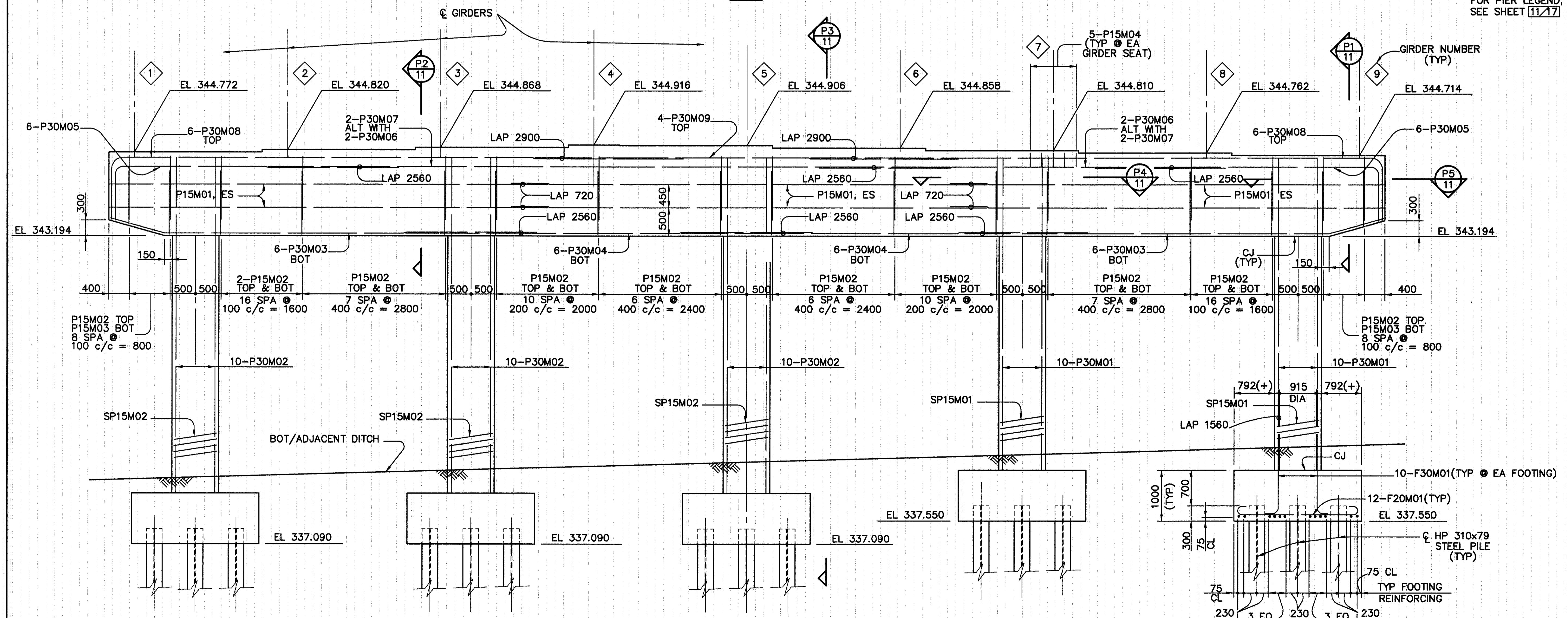


N



PLAN

FOR PIER LEGEND, SEE SHEET 11/17



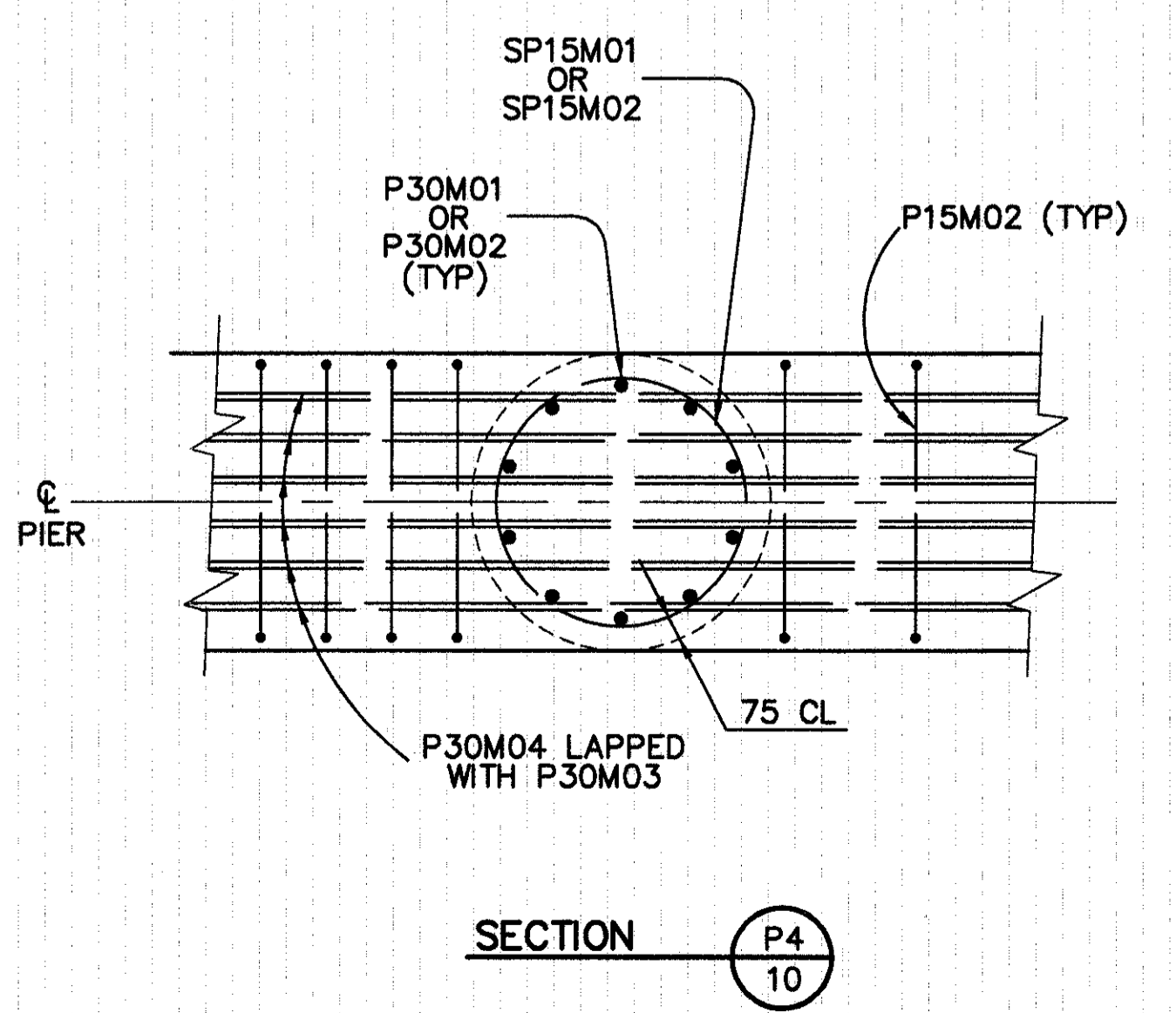
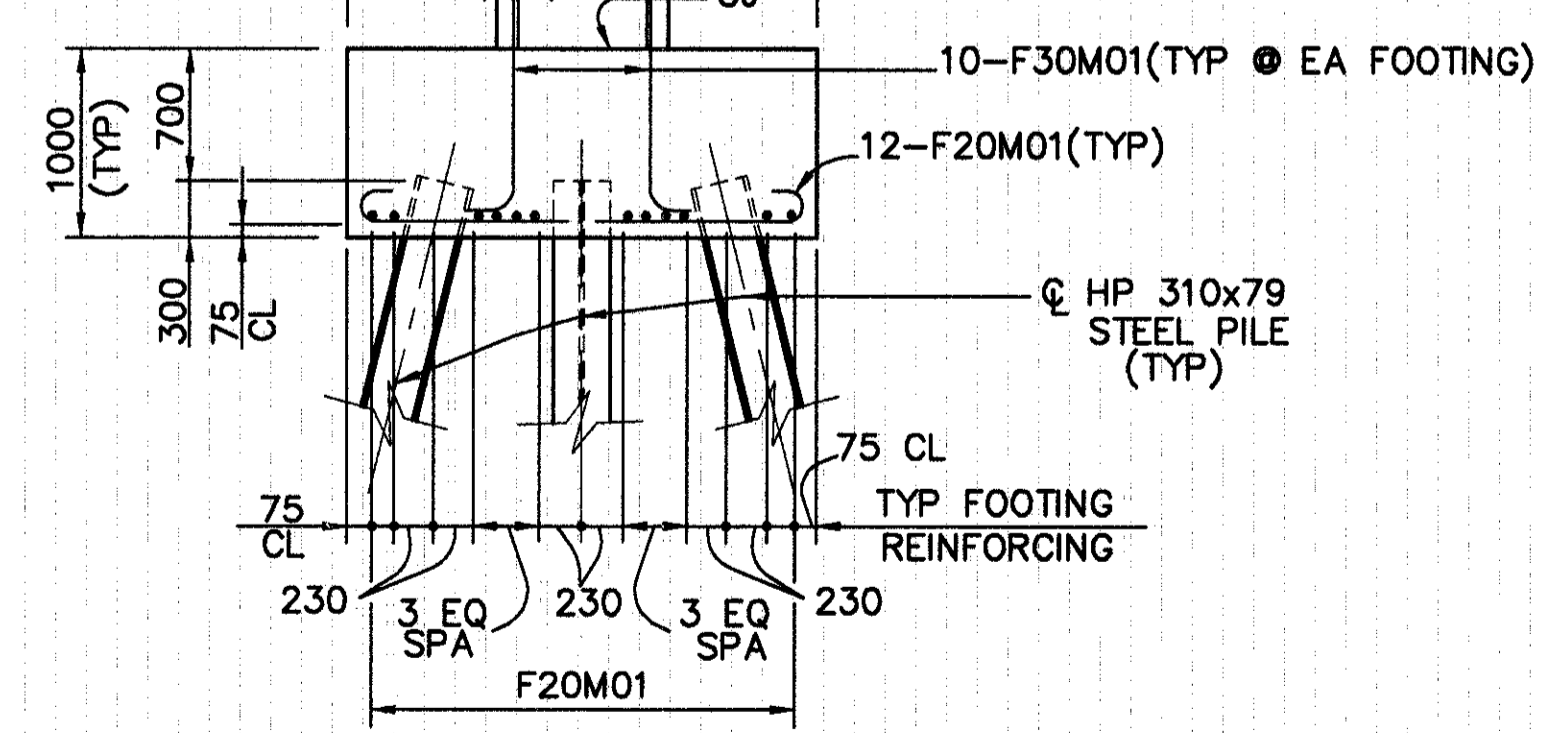
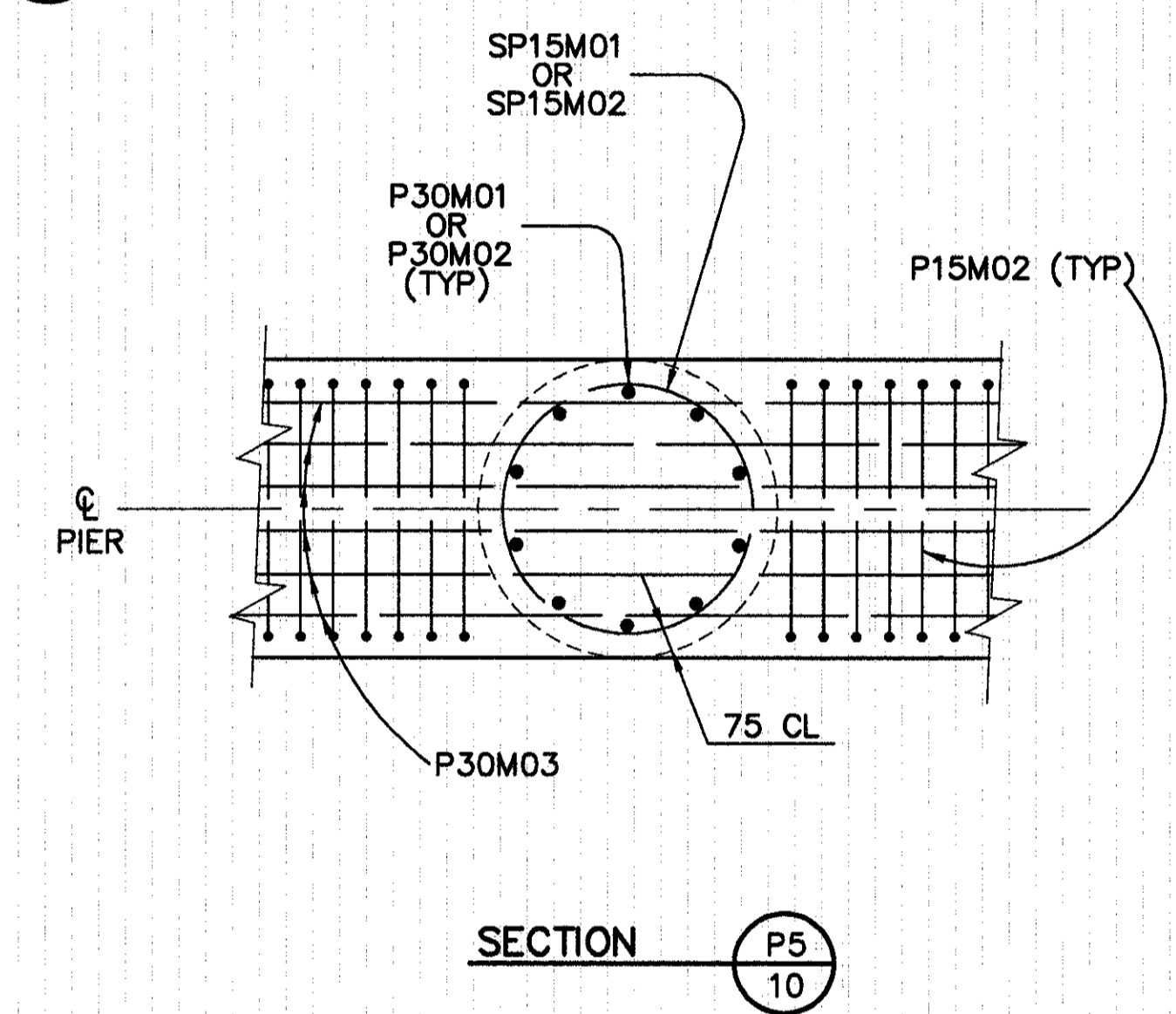
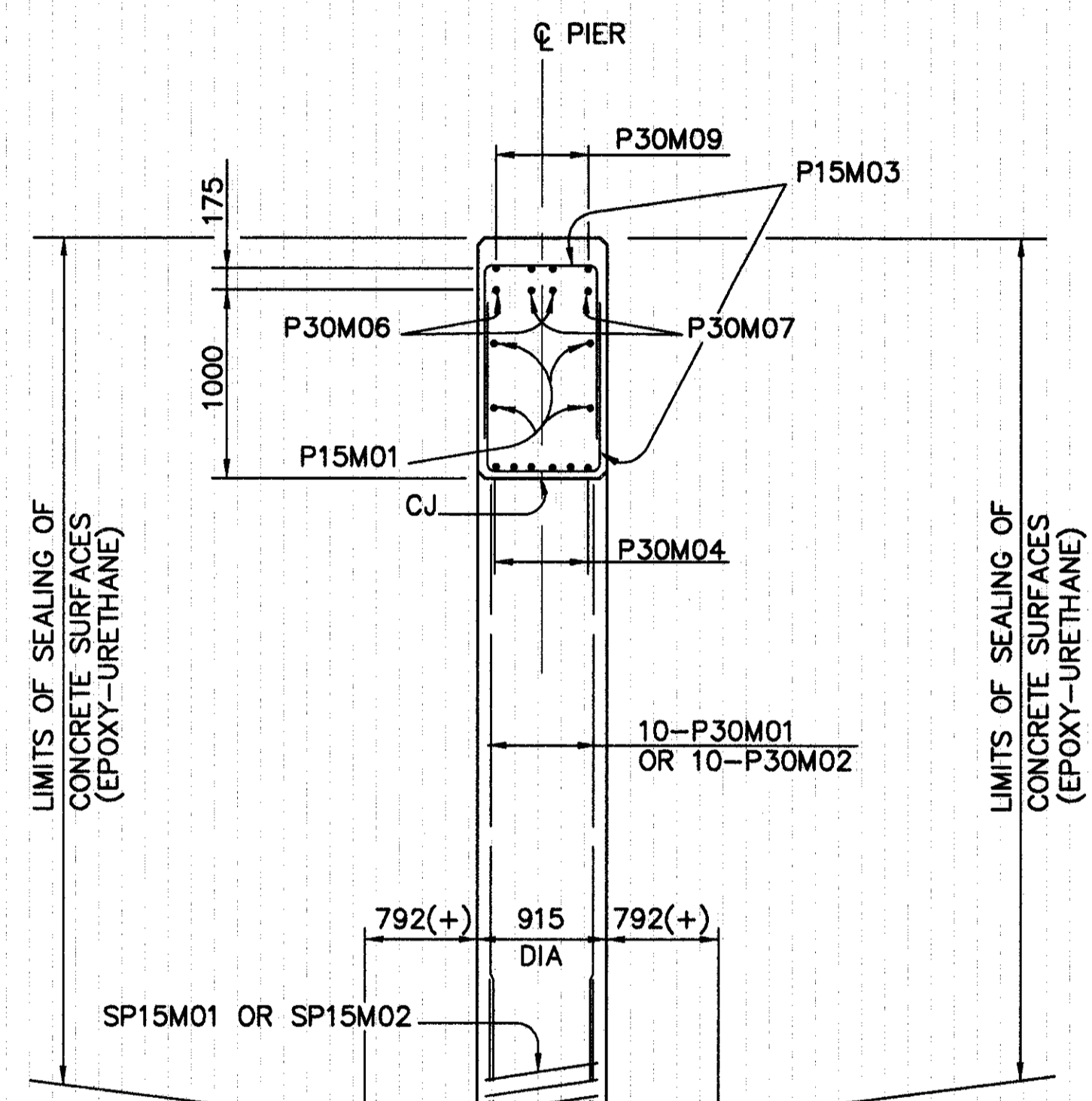
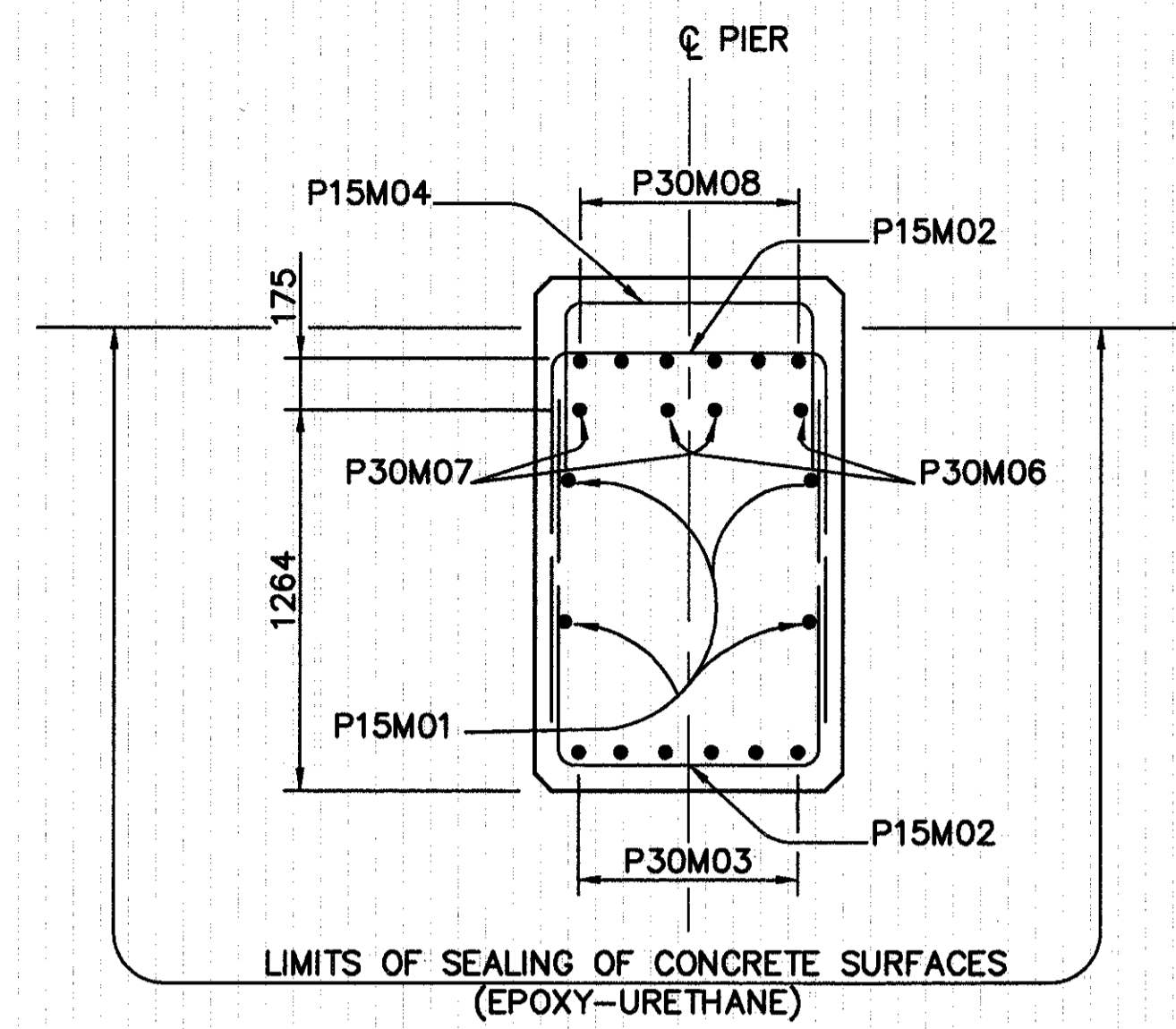
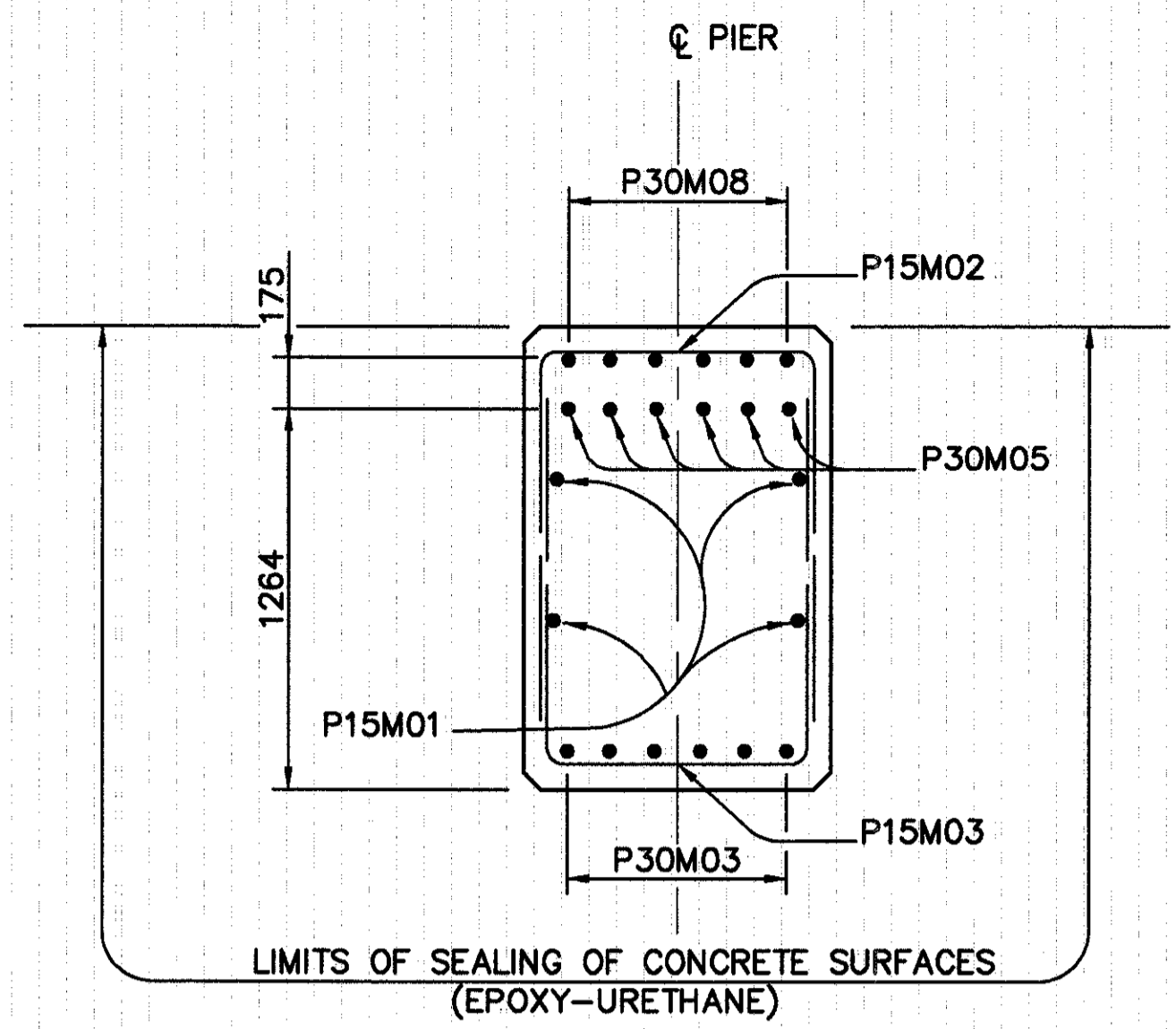
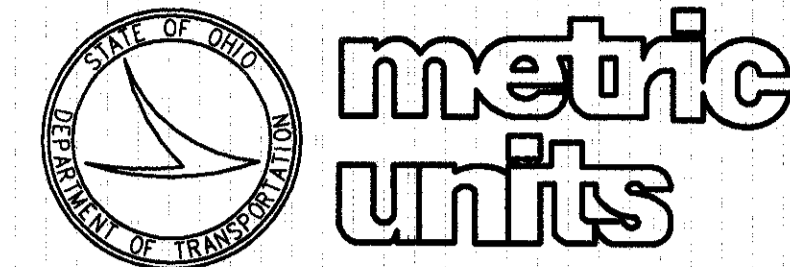
ELEVATION

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
ENGINEERING, ARCHITECTURE & ENVIRONMENTAL
PIER NUMBER ROAD - COLUMBIA, MISSISSIPPI

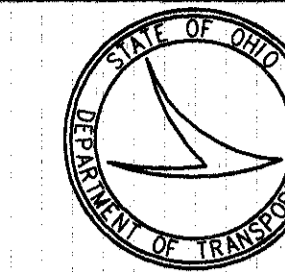
DESIGNED	V.S.	CHECKED	B.R.H.
DRAWN	V.O.	REVIEWED	
REVIEWED	G.W.M.	DATE	10/16/96
STRUCTURE FILE NUMBER	7601077		

PIER DETAILS
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696



- PIER LEGEND:**
- ALT - ALTERNATE
 - BOT - BOTTOM
 - CJ - CONSTRUCTION JOINT
 - CL - CLEAR
 - DIA - DIAMETER
 - EA - EACH
 - EQ - EQUAL
 - SPA - SPACES
 - TYP - TYPICAL
 - (25) - PILE NUMBER
 - - VERTICAL PILE
 - △ - PILE BATTERED 4 VERTICAL TO 1 HORIZONTAL IN THE DIRECTION SHOWN



metric units

DESIGN AGENCY
STILSON & ASSOCIATES, INC.
INCORPORATED
ENGINEERING • ARCHITECTURE • ENVIRONMENTAL
PLANNING • INTERIOR DESIGN • CONSTRUCTION • AND MORE

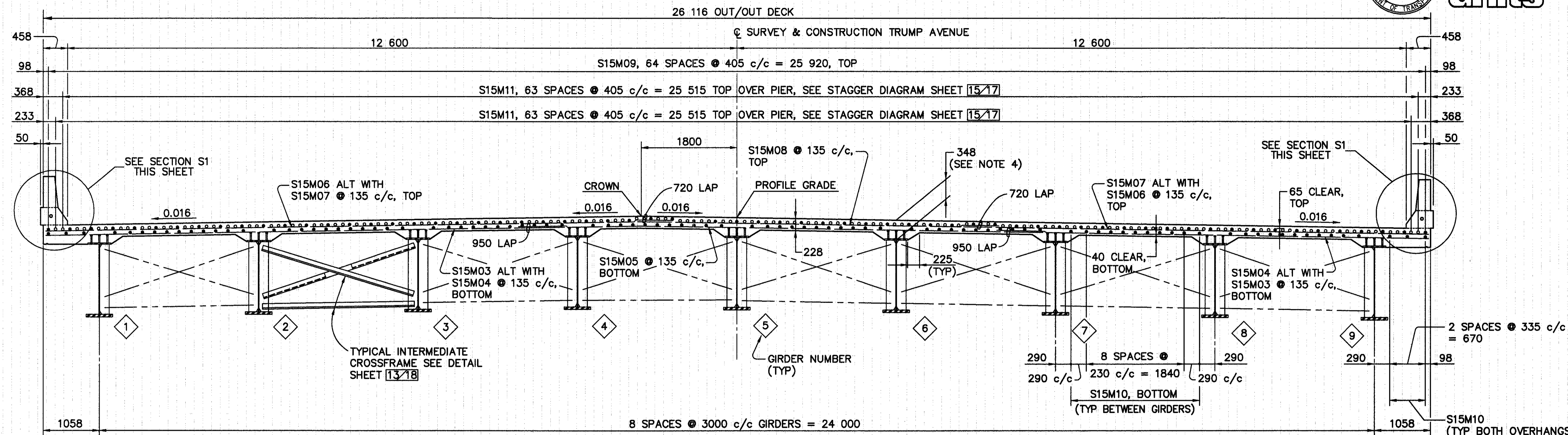
DATE
10/16/96
REVIEWED
C.W.M.
C.C.
V.S.
DESIGNED
B.R.H.

STRUCTURE FILE NUMBER
7601077
SUPERSTRUCTURE DETAILS
BRIDGE No. STA-30-30058
U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696

12/17

352
520



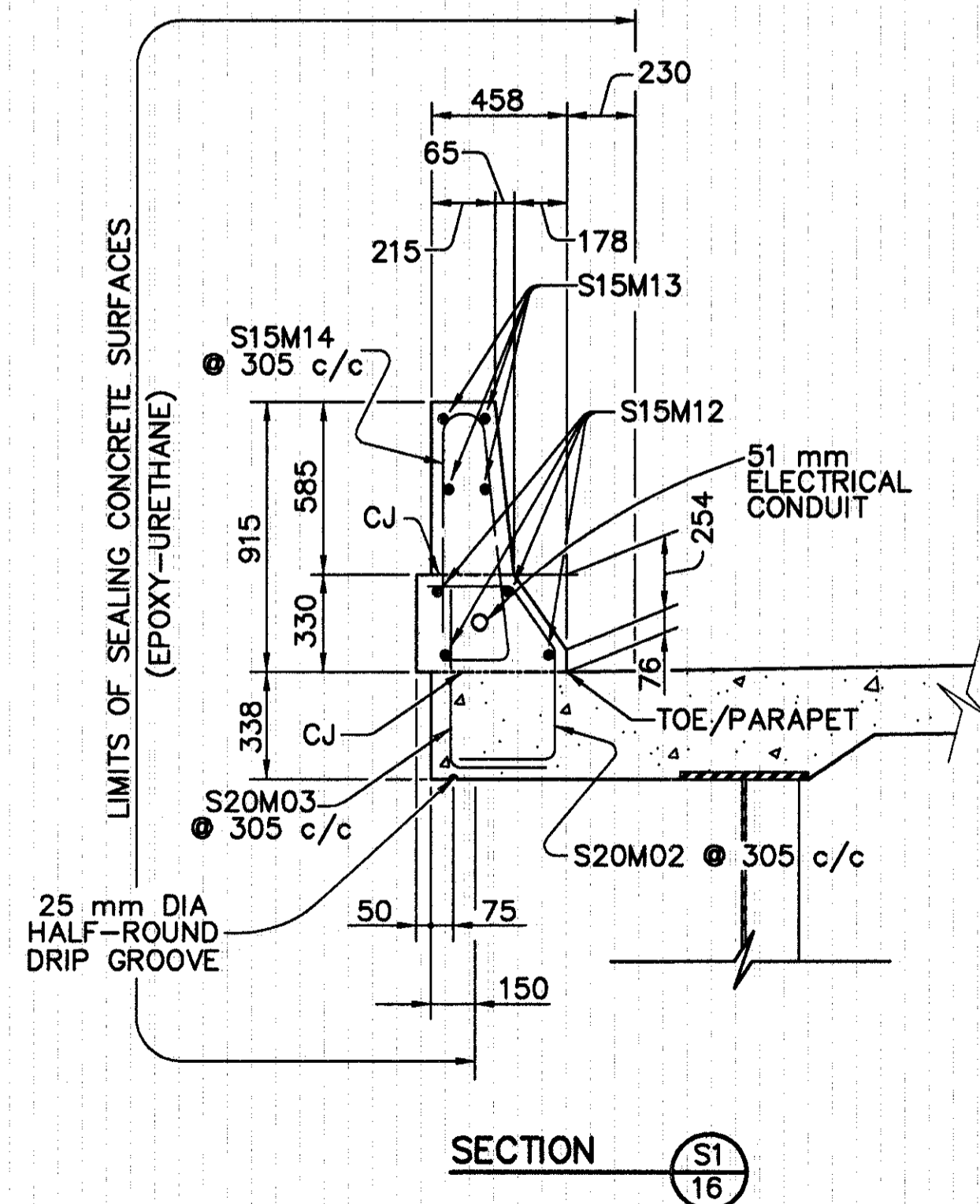
NOTE: EACH RUN OF LONGITUDINAL DECK REINFORCING, EXCLUDING TOP OVER PIER BARS, SHALL BE COMPRISED OF THE FOLLOWING:
 TOP BARS: 7 - S15M09, MINIMUM LAP = 580 mm
 BOTTOM BARS: 7 - S15M10, MINIMUM LAP = 950 mm

SUPERSTRUCTURE LEGEND:

- ABUT - ABUTMENT
- ALT - ALTERNATE
- BOT - BOTTOM
- BRG - BEARING
- CJ - CONSTRUCTION JOINT
- CJP - WELD SHALL HAVE COMPLETE JOINT PENETRATION
- CVN - MATERIAL SHALL MEET MINIMUM NOTCH TOUGHNESS REQUIREMENTS
- DIA - DIAMETER
- FWD - FORWARD
- HS - HIGH STRENGTH
- HORIZ - HORIZONTAL
- SPA - SPACES
- TYP - TYPICAL
- VERT - VERTICAL
- NS - NEAR SIDE
- FS - FAR SIDE

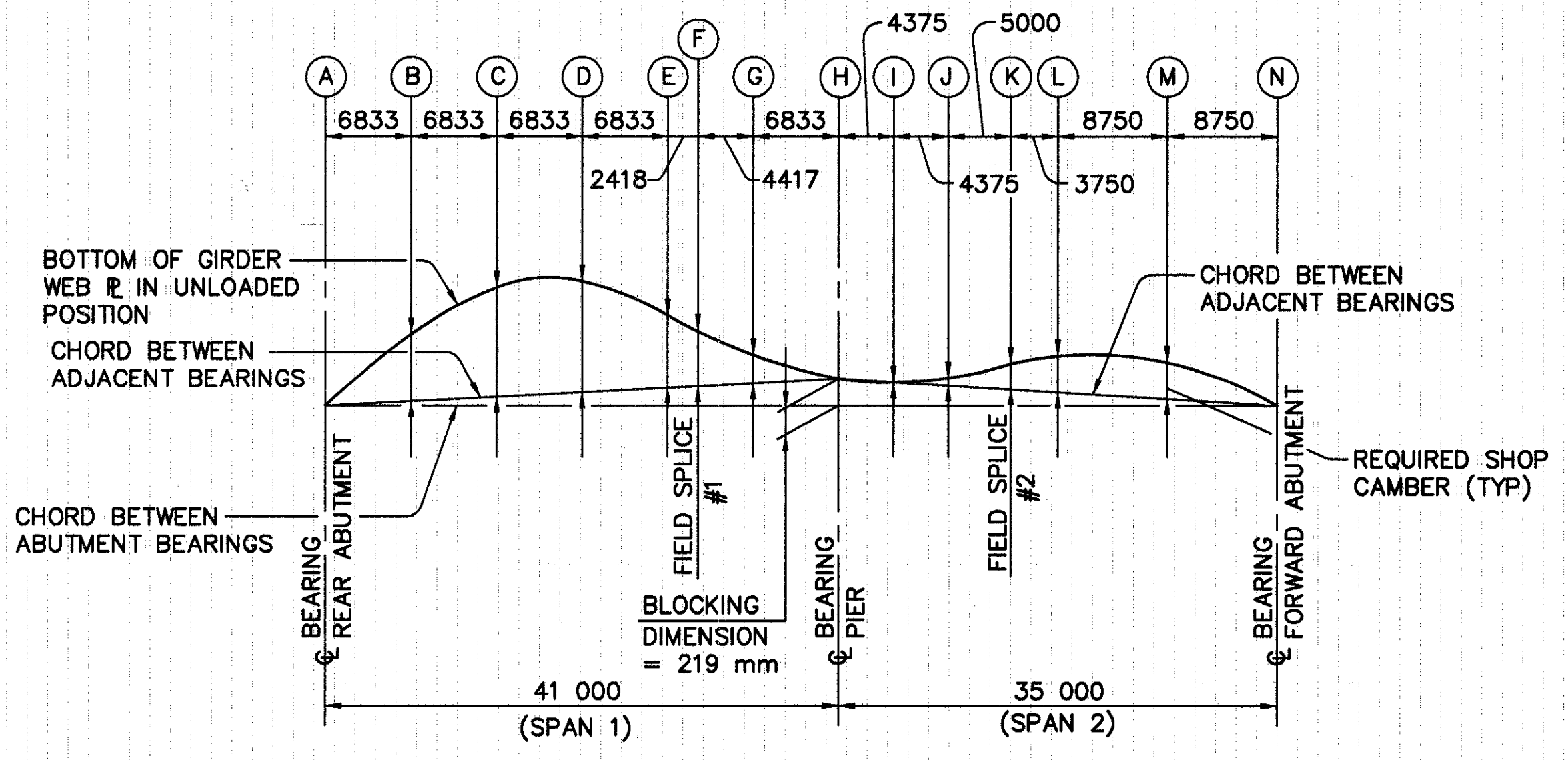
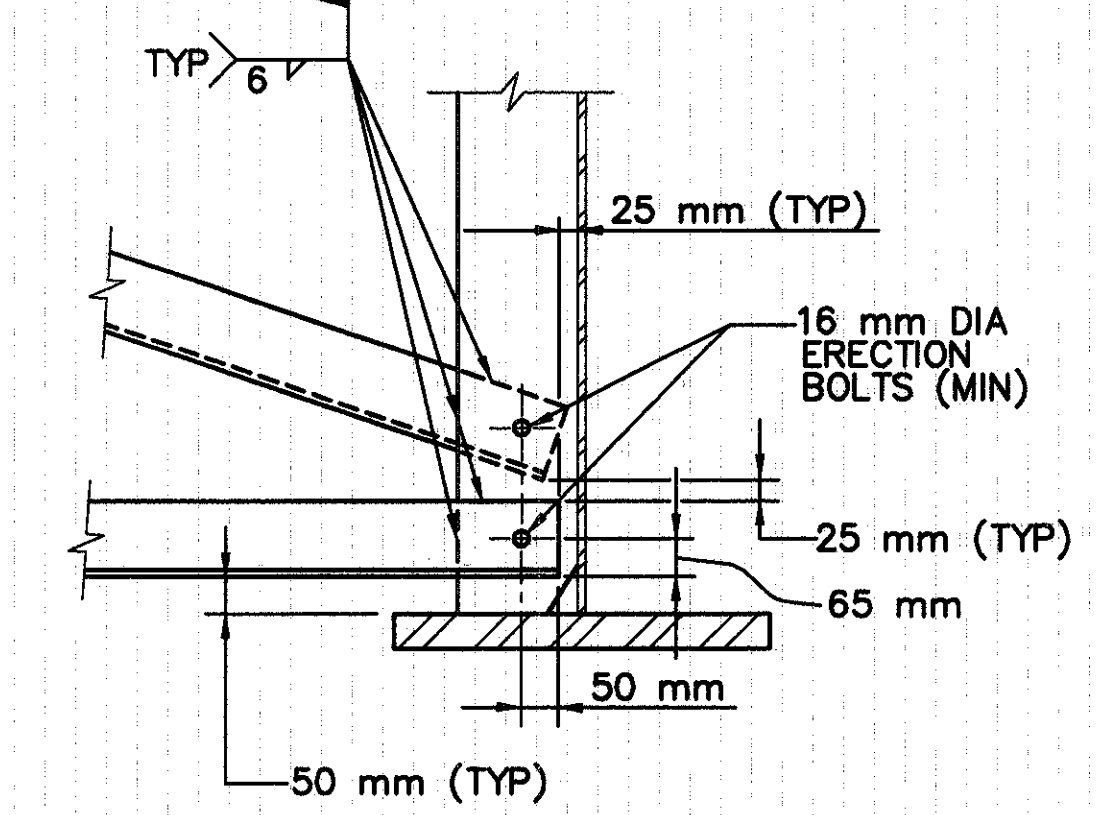
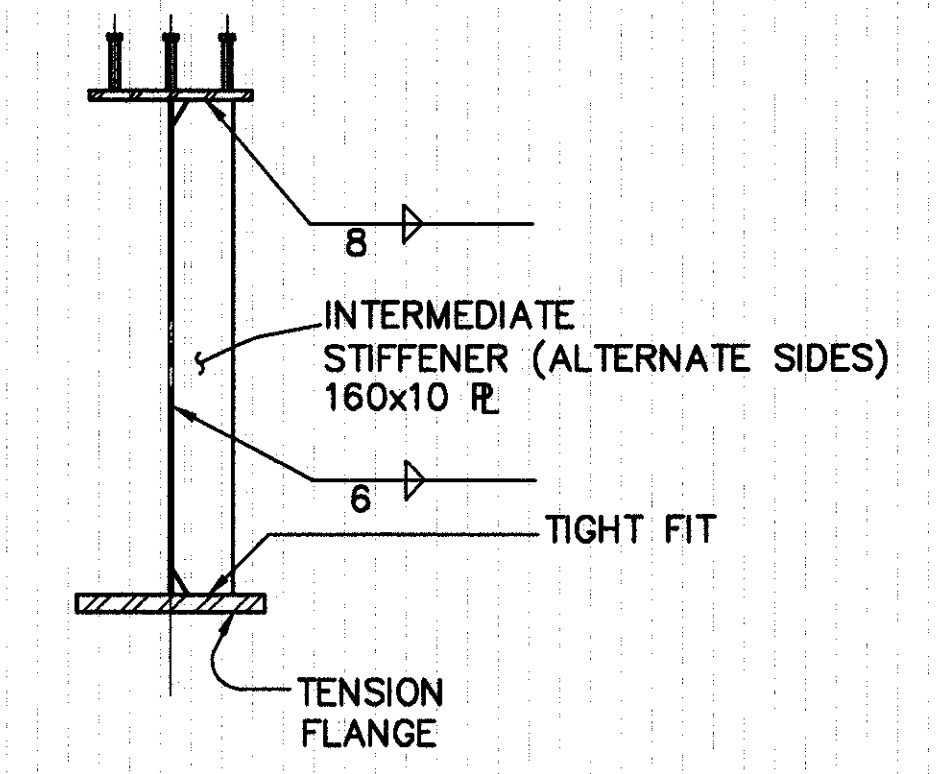
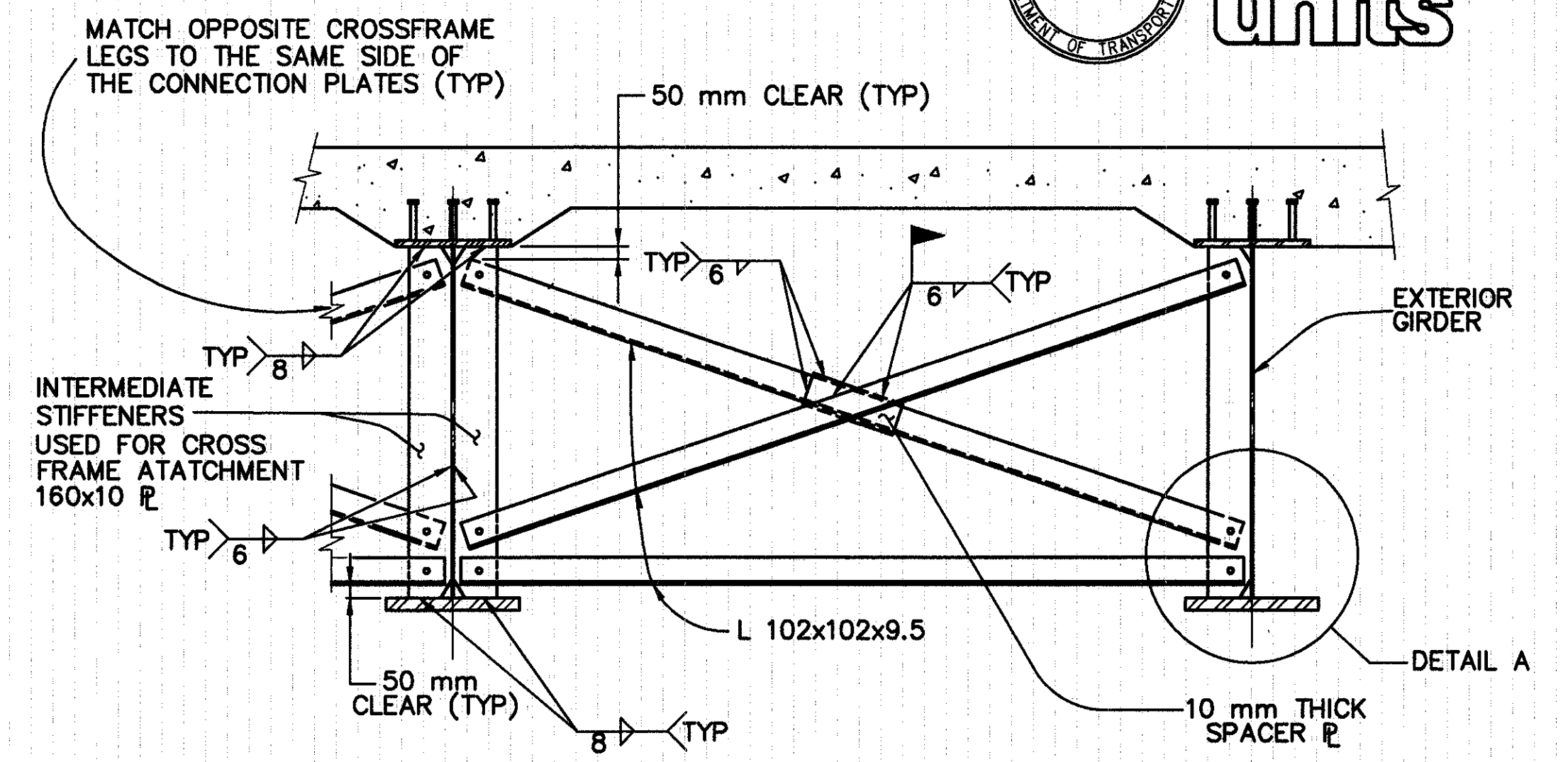
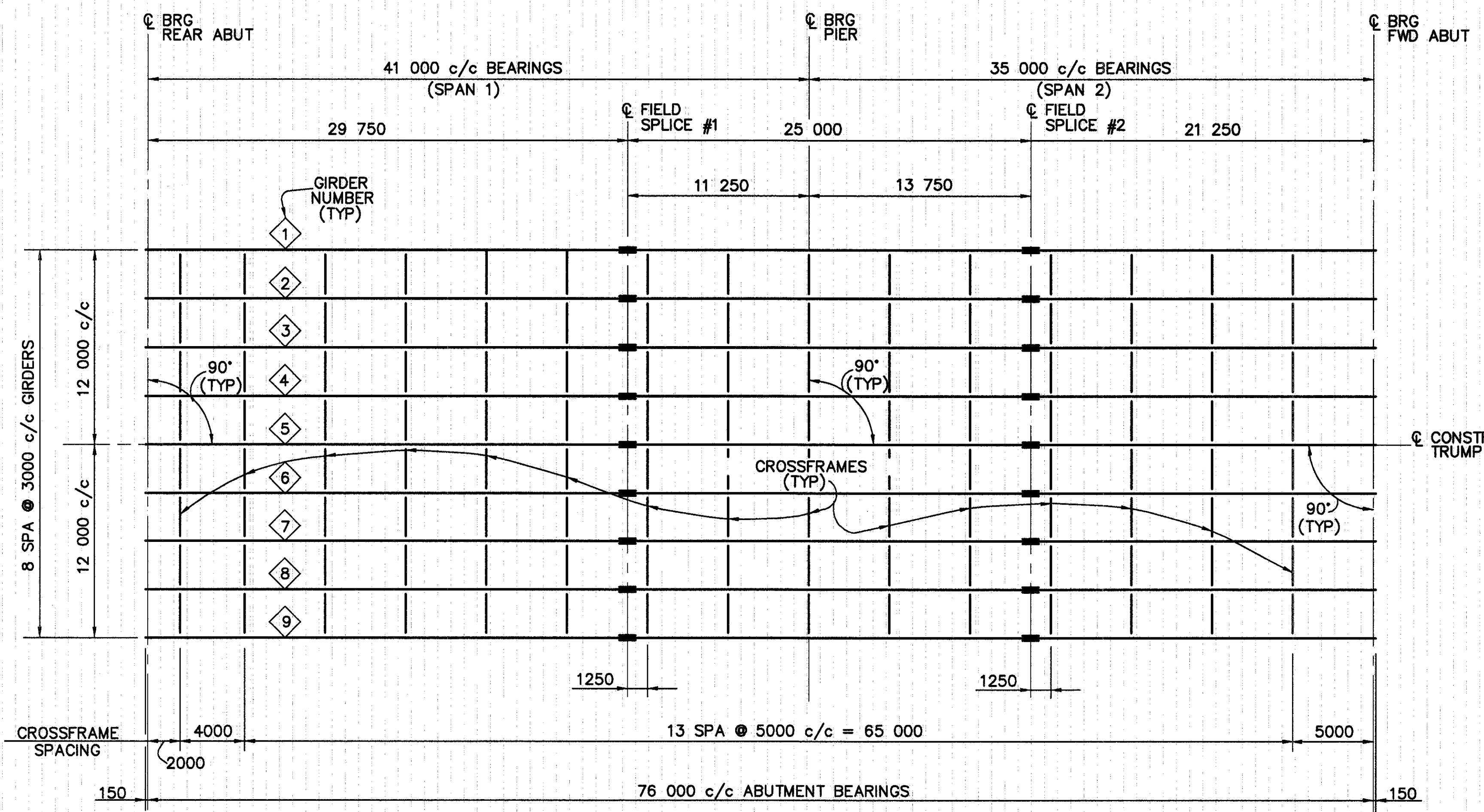
SUPERSTRUCTURE NOTES:

1. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. HIGH STRENGTH BOLTS SHALL BE 27 mm DIAMETER A325M, GALVANIZED, UNLESS OTHERWISE NOTED.
3. DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER SECTIONS SUPPORTED IN INTEGRAL TYPE ABUTMENTS SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.
4. DECK SLAB DEPTH: THE DISTANCE SHOWN FROM THE TOP OF THE DECK SLAB TO THE BOTTOM OF THE TOP FLANGE IS THE THEORETICAL DESIGN DIMENSION INCLUDING THE DESIGN HAUNCH THICKNESS OF 120 mm. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THIS DIMENSION, MINUS THE DESIGN HAUNCH THICKNESS, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR THE VOLUME OF ENCASED STEEL PLATES. AS PER 511.18.
5. DECK CONCRETE PLACEMENT SHALL BEGIN AT THE FORWARD END OF SPAN 2 (FORWARD ABUTMENT) AND PROCEED TOWARD THE REAR ABUTMENT.
6. A HAUNCH WIDTH OF 225 mm SHALL BE USED FOR COMPUTING THE QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150 mm AND 300 mm.
7. ERECTION BOLTS: THE HOLE DIAMETER IN THE CROSSFRAMES AND GIRDER STIFFENERS SHALL BE 4 mm LARGER THAN THE DIAMETER OF THE ERECTION BOLTS. UNLESS REPLACED BY PERMANENT HIGH STRENGTH BOLTS, ERECTION BOLTS SHALL REMAIN IN PLACE. LOCK WASHERS SHALL BE FURNISHED FOR OTHER THAN FULLY TORQUED HIGH STRENGTH BOLTS. BOLTS SHALL BE FURNISHED AS PART OF ITEM 513. IN LIEU OF ERECTION BOLTS AND AT THE OPTION OF THE CONTRACTOR, ALTERNATIVE MEANS OF TEMPORARY BRACING MAY BE USED, SUBJECT TO THE APPROVAL OF THE DIRECTOR (501.06)
8. WELDED ATTACHMENT OF SUPPORTS FOR THE CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS MAY 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.



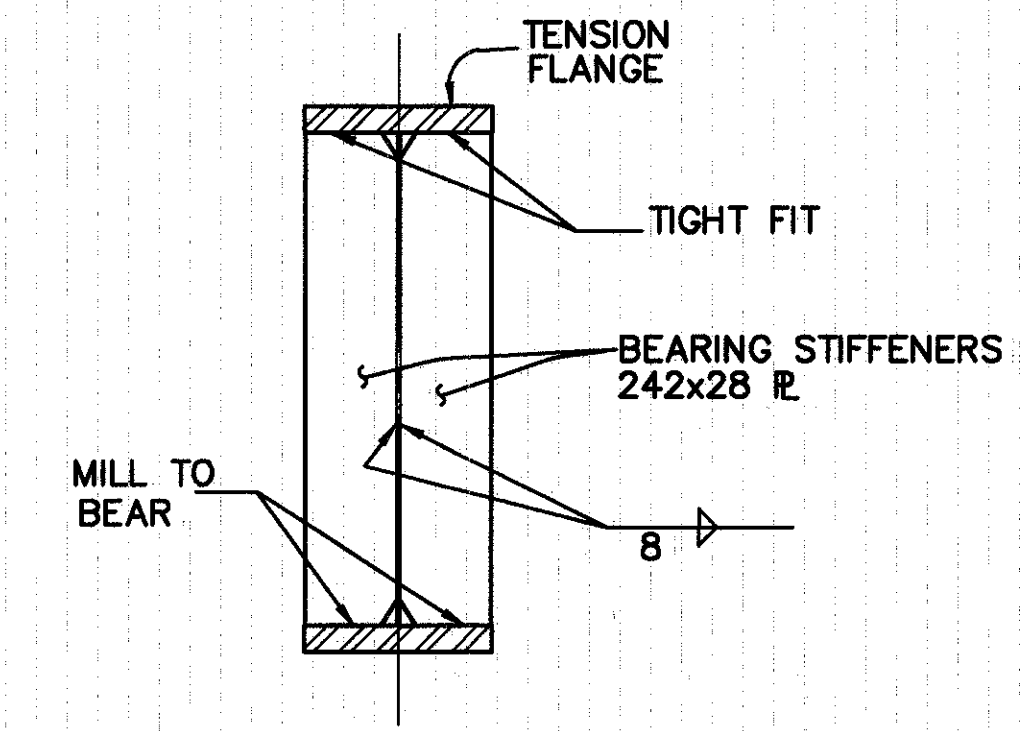
NOTE: EACH RUN OF LONGITUDINAL PARAPET REINFORCING SHALL BE COMPRISED OF THE FOLLOWING:
 7 - S15M12, MINIMUM LAP = 580 mm
 7 - S15M13, MINIMUM LAP = 1020 mm

FOR ADDITIONAL NOTES PERTAINING TO GIRDER FABRICATION, SEE SHEET 14/17

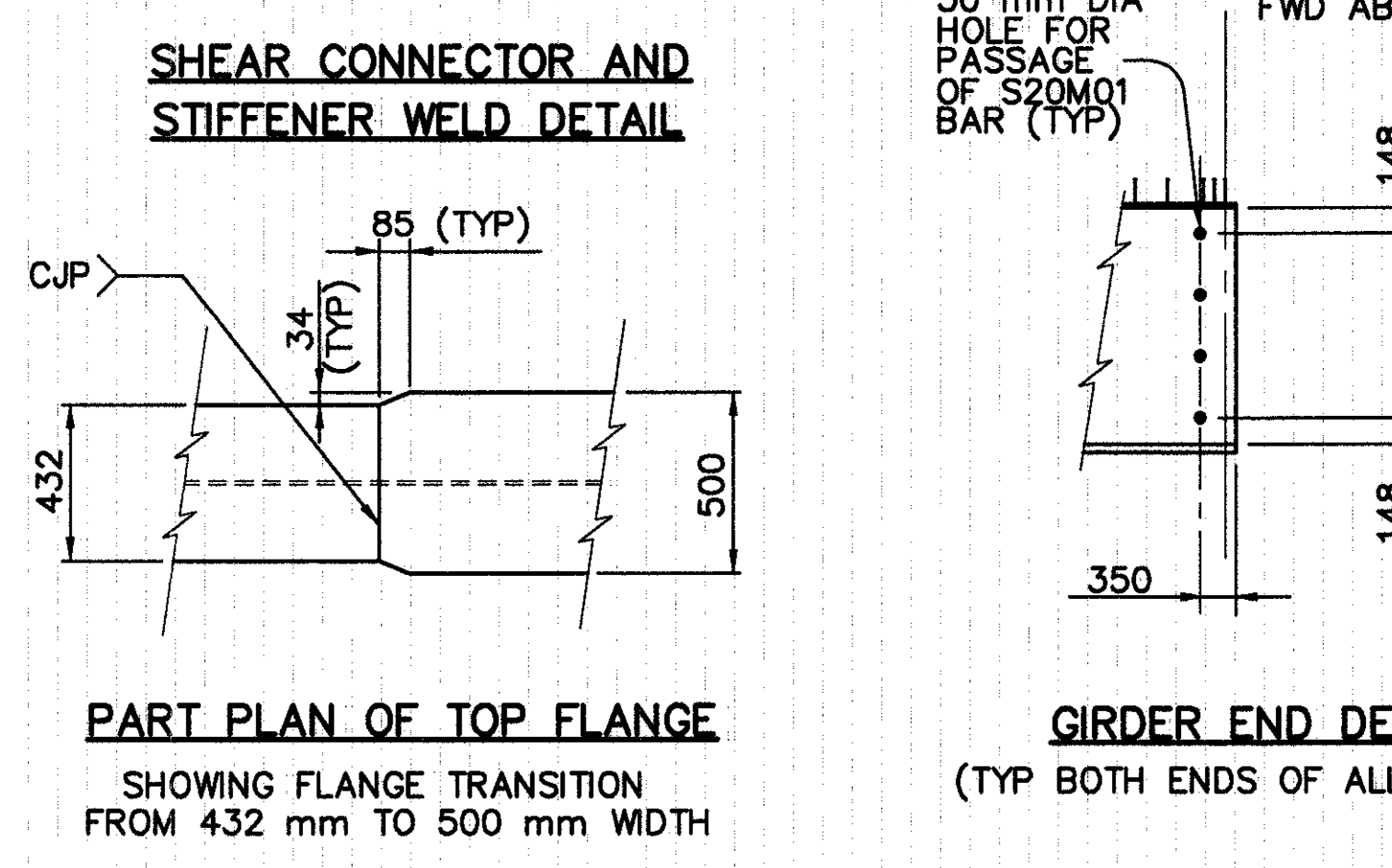
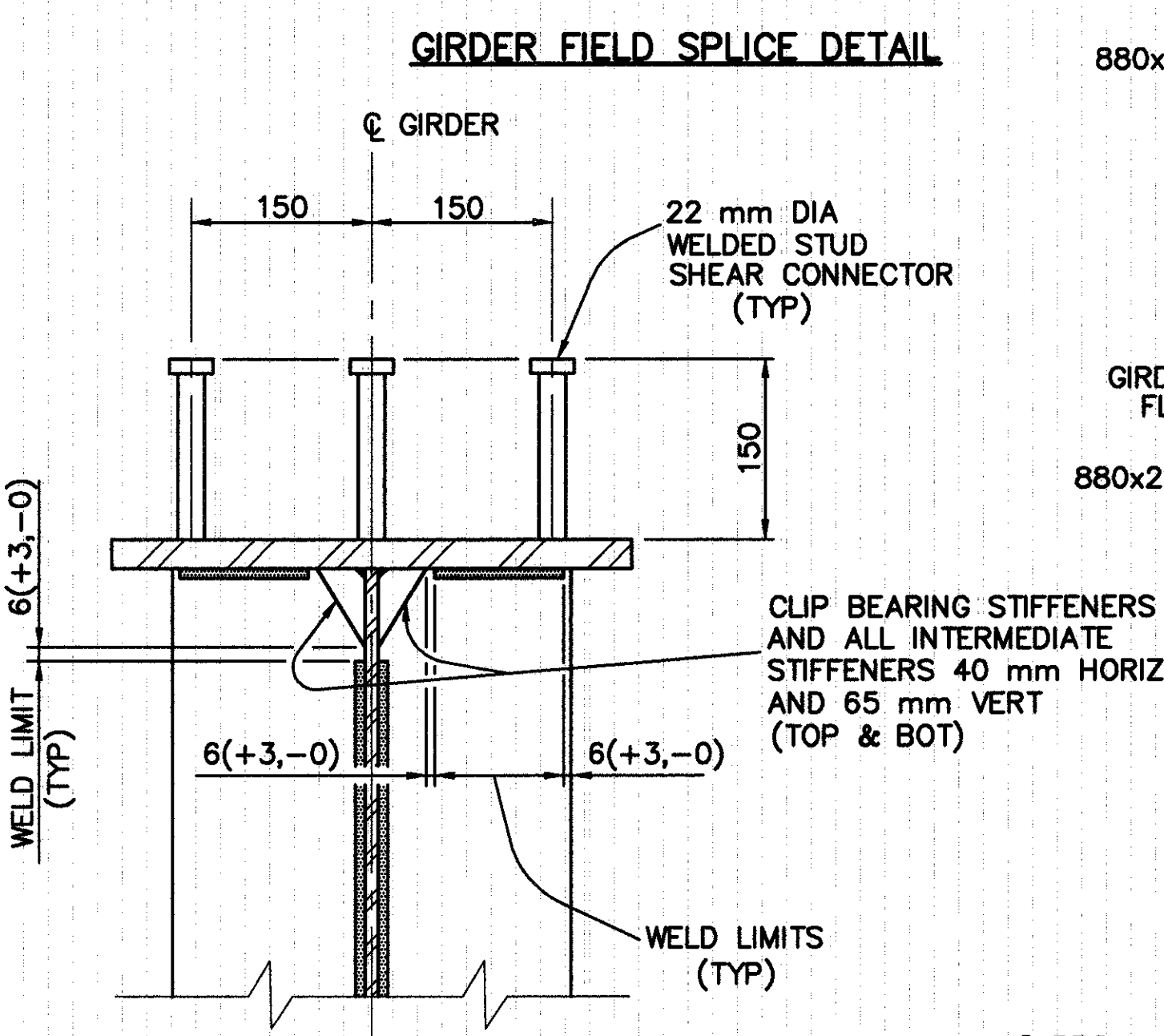
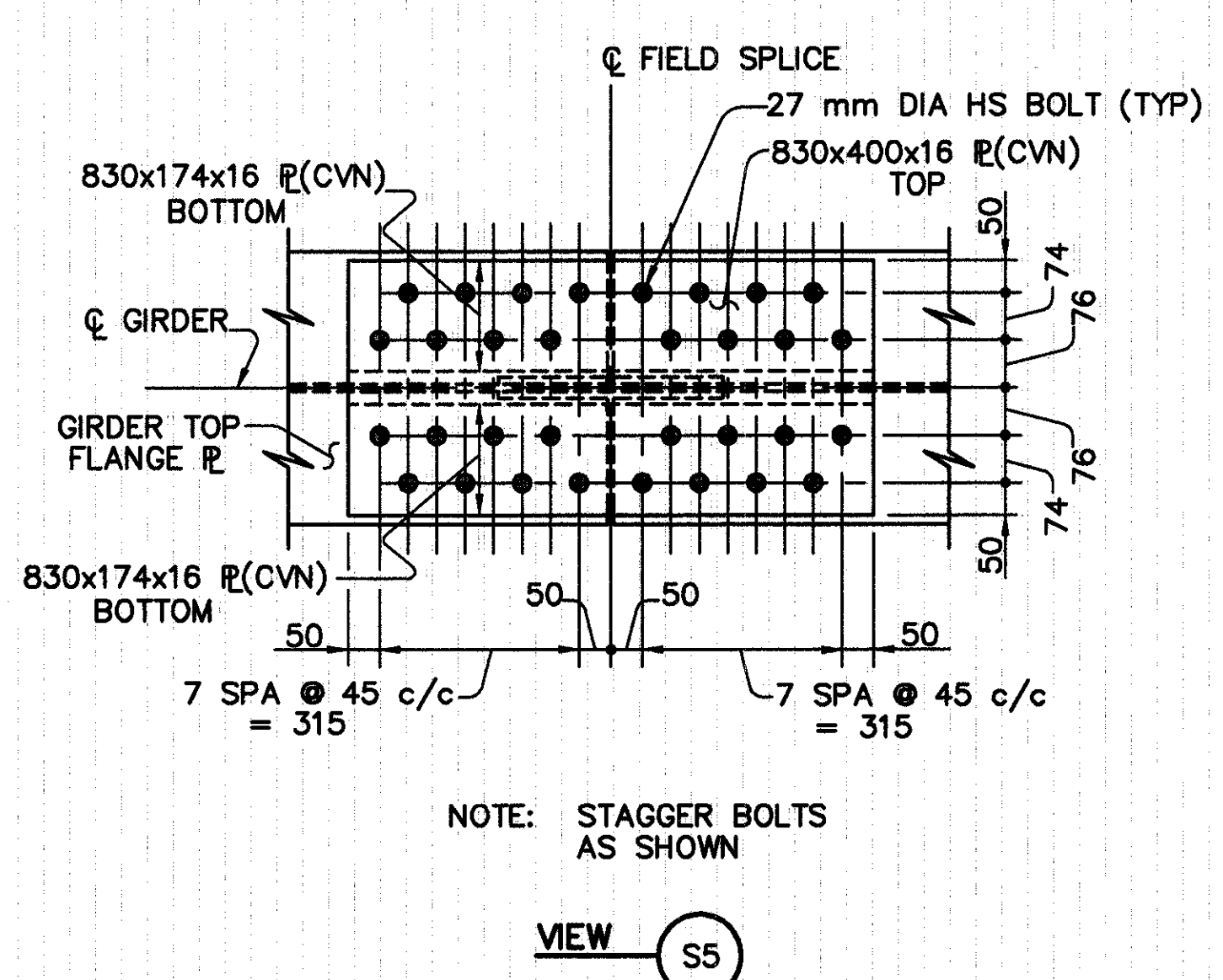
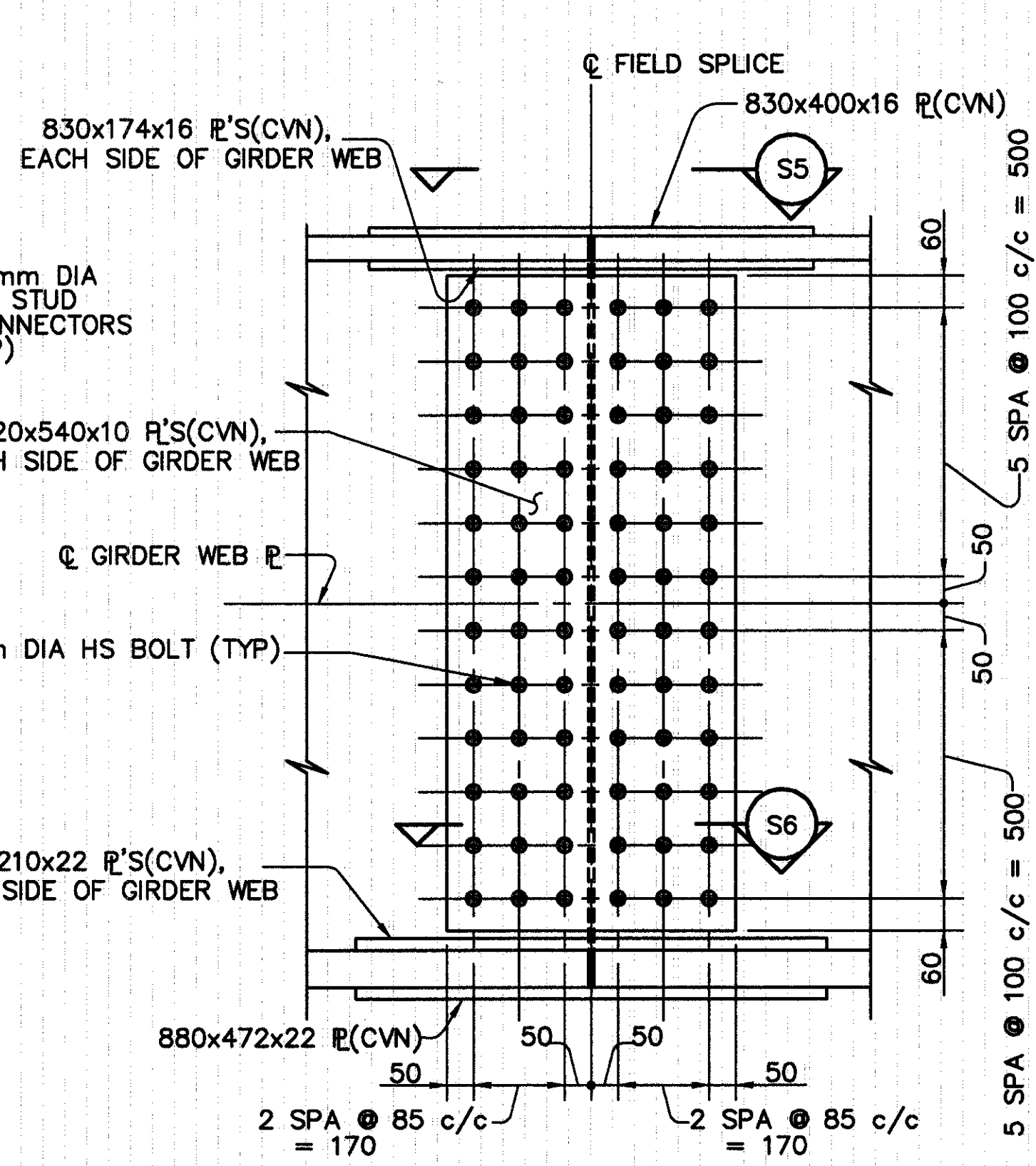
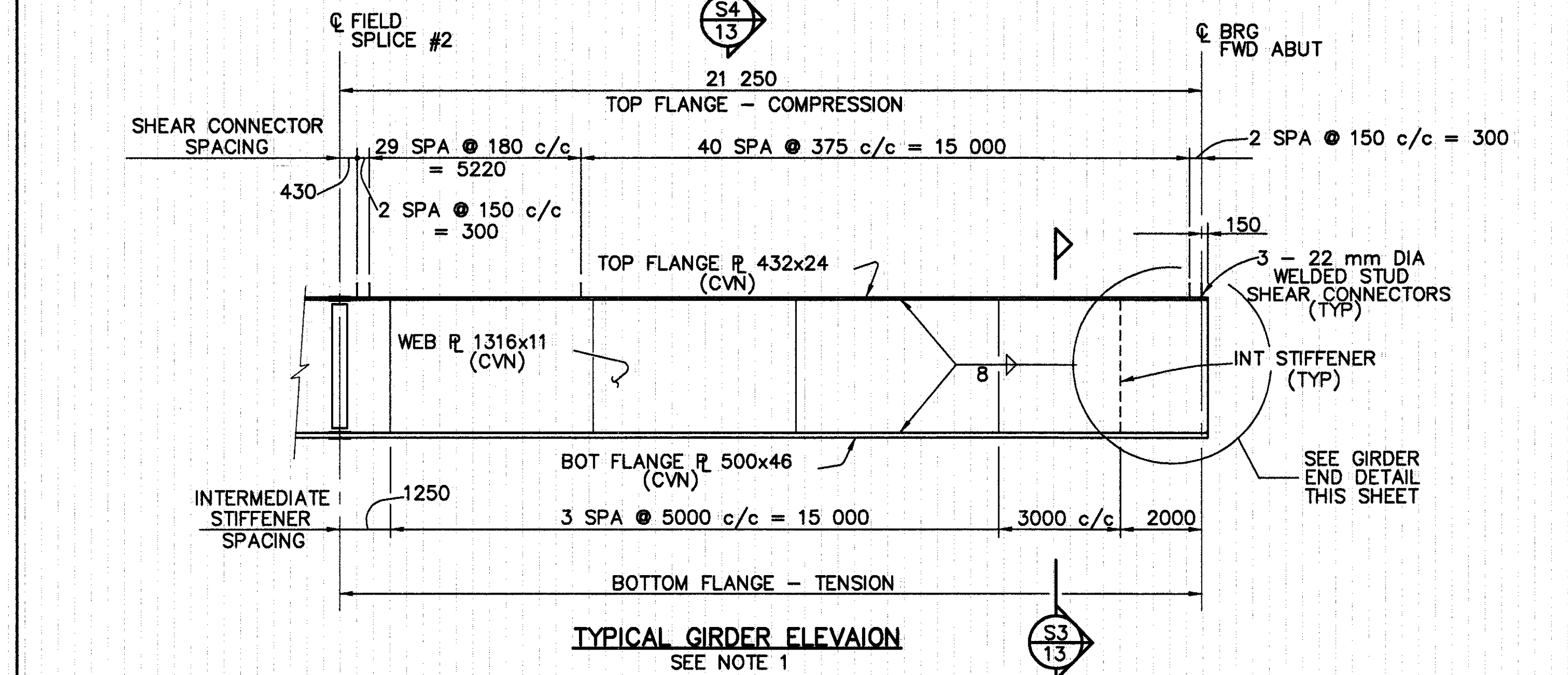
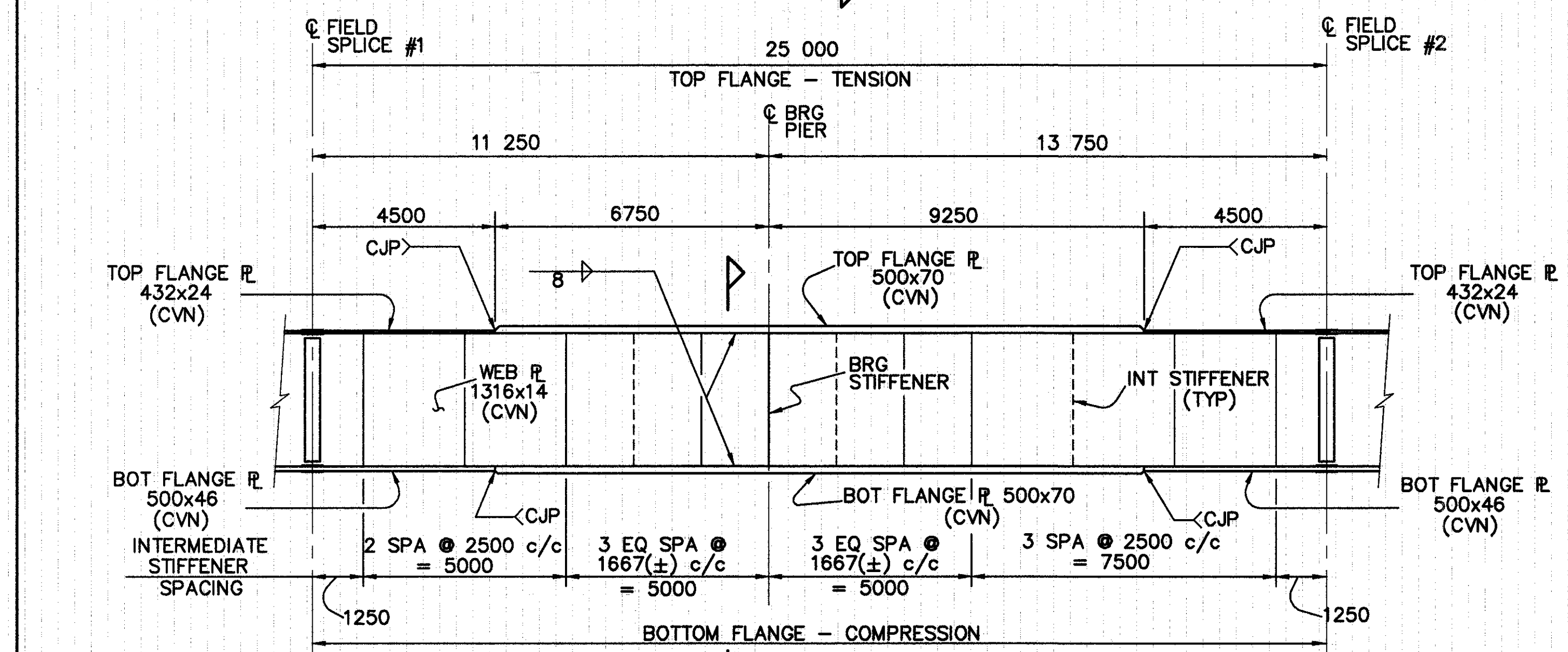
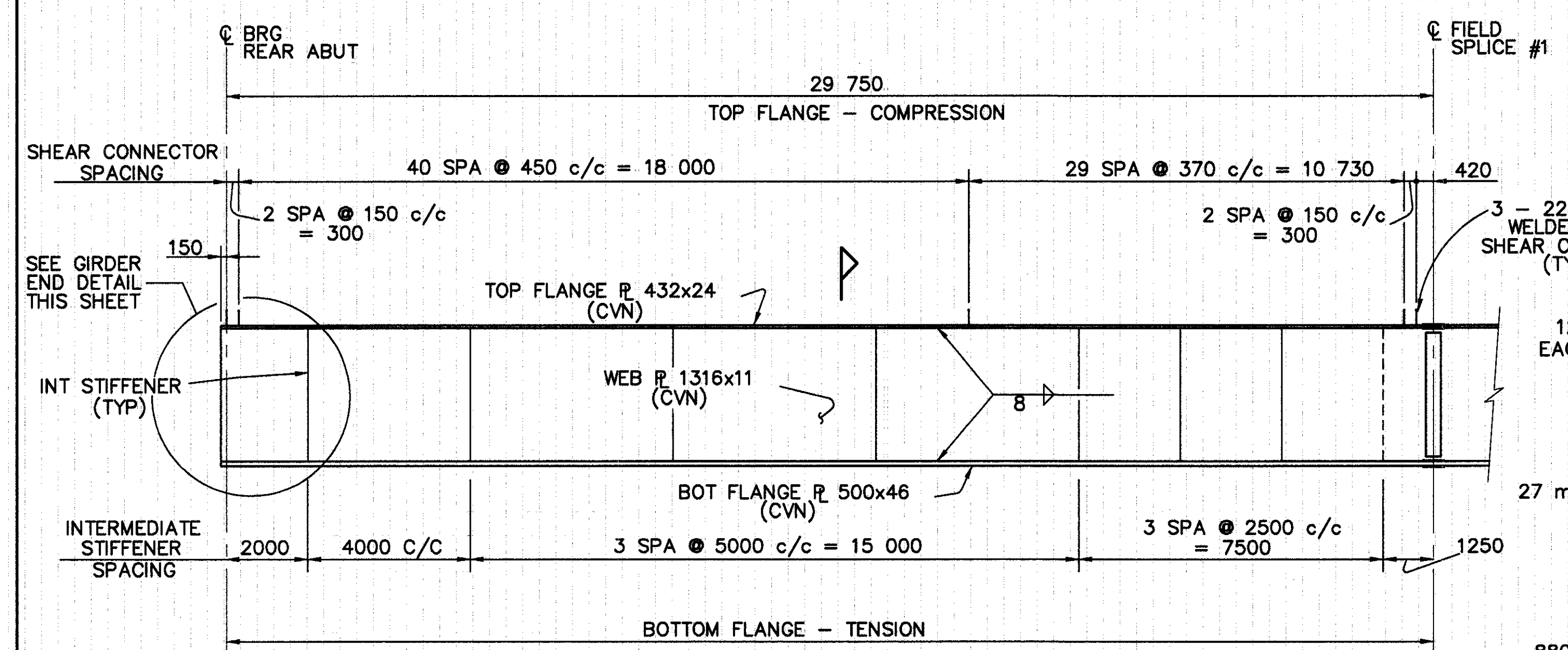


		DEFLECTION AND CAMBER (IN MILLIMETERS)													
		41 000 mm SPAN 1							35 000 mm SPAN 2						
GIRDER NUMBER	CAMBER DESCRIPTION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
1 AND 9 (EXTERIOR)	DEFLECTION DUE TO WEIGHT OF STEEL	0	12	18	18	12	9	5	0	0	2	4	6	6	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	58	91	92	64	50	26	0	-2	4	16	24	26	0
	ADJUSTMENT FOR VERTICAL CURVATURE	0	36	57	64	57	51	36	0	21	35	44	47	35	0
	REQUIRED SHOP CAMBER	0	106	166	174	133	110	67	0	19	41	64	77	67	0
2 THROUGH 8 (INTERIOR)	DEFLECTION DUE TO WEIGHT OF STEEL	0	12	18	18	12	9	5	0	0	2	4	6	6	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	61	97	98	68	54	27	0	-2	4	17	25	27	0
	ADJUSTMENT FOR VERTICAL CURVATURE	0	36	57	64	57	51	36	0	21	35	44	47	35	0
	REQUIRED SHOP CAMBER	0	109	172	180	137	114	68	0	19	41	65	78	68	0

POSITIVE DIMENSIONS INDICATE DOWNWARD DEFLECTION AND UPWARD CAMBER.

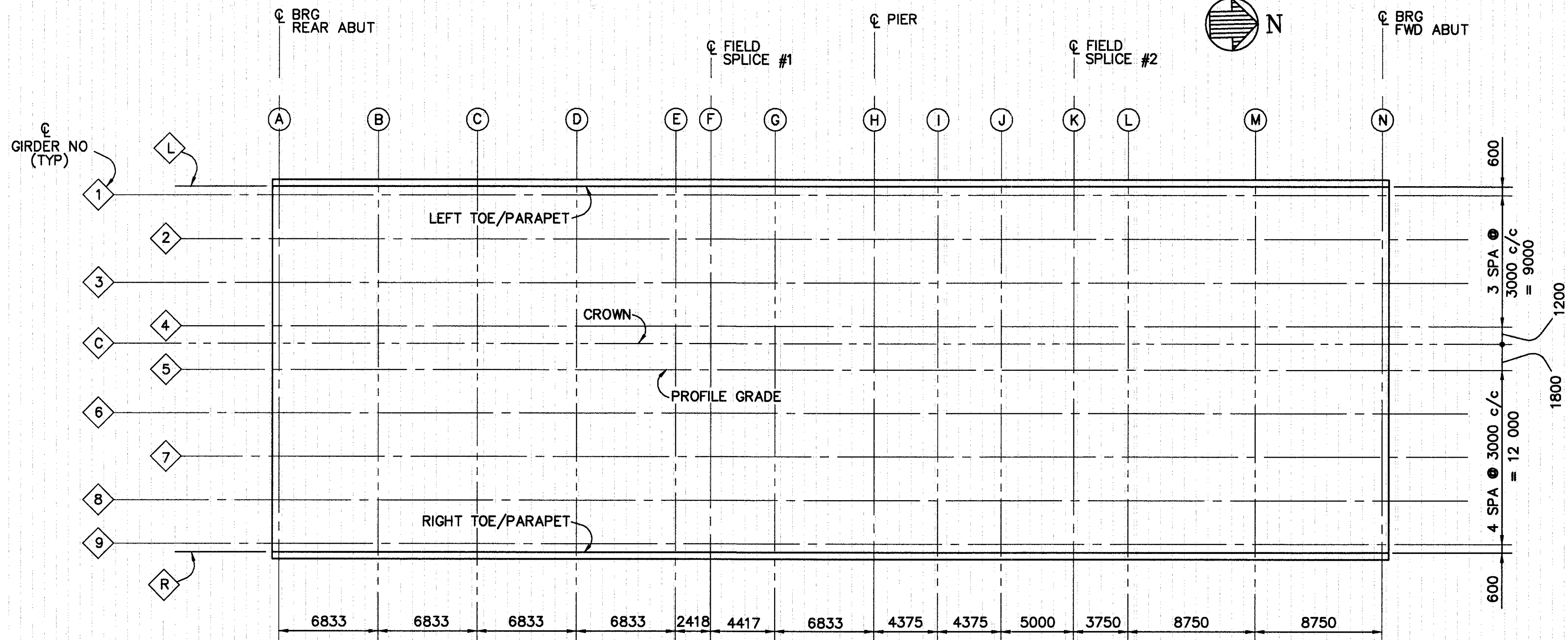


FOR SUPERSTRUCTURE NOTES AND LEGEND, SEE SHEET 12/17



- NOTES:**
- STIFFENERS THAT ARE LOCATED TO BE USED AS ATTACHMENTS FOR CROSSFRAMES SHALL BE WELDED TO BOTH FLANGES AND THE GIRDER WEB AS SHOWN ON DETAIL THIS SHEET. STIFFENERS THAT ARE NOT USED AS ATTACHMENTS FOR CROSSFRAMES SHALL BE WELDED TO THE FLANGE DESIGNATED "COMPRESSION" AND THE GIRDER WEB ONLY, AND SHALL HAVE A TIGHT FIT AGAINST THE FLANGE DESIGNATED "TENSION". STIFFENERS SHALL BE PLACED ON ALTERNATE SIDES OF THE WEB OF INTERIOR GIRDERS AS SHOWN IN THE TYPICAL GIRDER ELEVATION. INTERMEDIATE STIFFENERS SHALL NOT BE PLACED ON THE EXTERIOR SIDE OF THE WEB OF EXTERIOR GIRDERS.
 - OPTIONAL SHOP WEB SPLICES SHALL BE LOCATED A MINIMUM OF 1000 mm FROM SHOP FLANGE SPLICE LOCATIONS, AND A MINIMUM OF 150 mm FROM STIFFENER LOCATIONS. ALL WEB SPLICE WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP).
 - CJP INDICATES COMPLETE JOINT PENETRATION FOR THE FULL PENETRATION GROOVE WELDS USED AT SHOP FLANGE SPLICE LOCATIONS.

FOR ADDITIONAL SUPERSTRUCTURE NOTES AND SUPERSTRUCTURE LEGEND, SEE SHEET 12/17



SCREED ELEVATION LOCATIONS
 PLAN VIEW

TABLE OF SCREED ELEVATIONS															
LINE	BRG REAR ABUT (A)	B	C	D	E	FIELD SPLICE #1 (F)	G	PIER (H)	I	J	FIELD SPLICE #2 (K)	L	M	BRG FWD ABUT (N)	
LEFT TOE/PARAPET	L	346.799	346.862	346.886	346.863	346.797	346.766	346.707	346.614	346.562	346.512	346.453	346.403	346.252	346.050
CL GIRDER NO	1	346.809	346.872	346.896	346.873	346.807	346.776	346.717	346.624	346.572	346.522	346.463	346.413	346.262	346.060
CL GIRDER NO	2	346.857	346.923	346.950	346.927	346.859	346.828	346.766	346.672	346.620	346.570	346.512	346.462	346.311	346.108
CL GIRDER NO	3	346.905	346.971	346.998	346.975	346.907	346.876	346.814	346.720	346.668	346.618	346.560	346.510	346.359	346.156
CL GIRDER NO	4	346.953	347.019	347.046	347.023	346.955	346.924	346.862	346.768	346.716	346.666	346.608	346.558	346.407	346.204
CROWN	C	346.972	347.038	347.065	347.042	346.975	346.943	346.881	346.787	346.735	346.685	346.627	346.577	346.426	346.223
PROFILE GRADE	5	346.943	347.009	347.036	347.013	346.945	346.914	346.852	346.758	346.706	346.656	346.598	346.548	346.397	346.194
CL GIRDER NO	6	346.895	346.961	346.988	346.965	346.897	346.866	346.804	346.710	346.658	346.608	346.550	346.500	346.349	346.146
CL GIRDER NO	7	346.847	346.913	346.940	346.917	346.849	346.818	346.756	346.662	346.610	346.560	346.502	346.452	346.301	346.098
CL GIRDER NO	8	346.799	346.865	346.892	346.869	346.801	346.770	346.708	346.614	346.562	346.512	346.454	346.404	346.253	346.050
CL GIRDER NO	9	346.751	346.814	346.838	346.815	346.749	346.718	346.659	346.566	346.514	346.464	346.405	346.355	346.204	346.002
RIGHT TOE/PARAPET	R	346.741	346.804	346.828	346.805	346.739	346.708	346.649	346.556	346.504	346.454	346.395	346.345	346.194	345.992

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

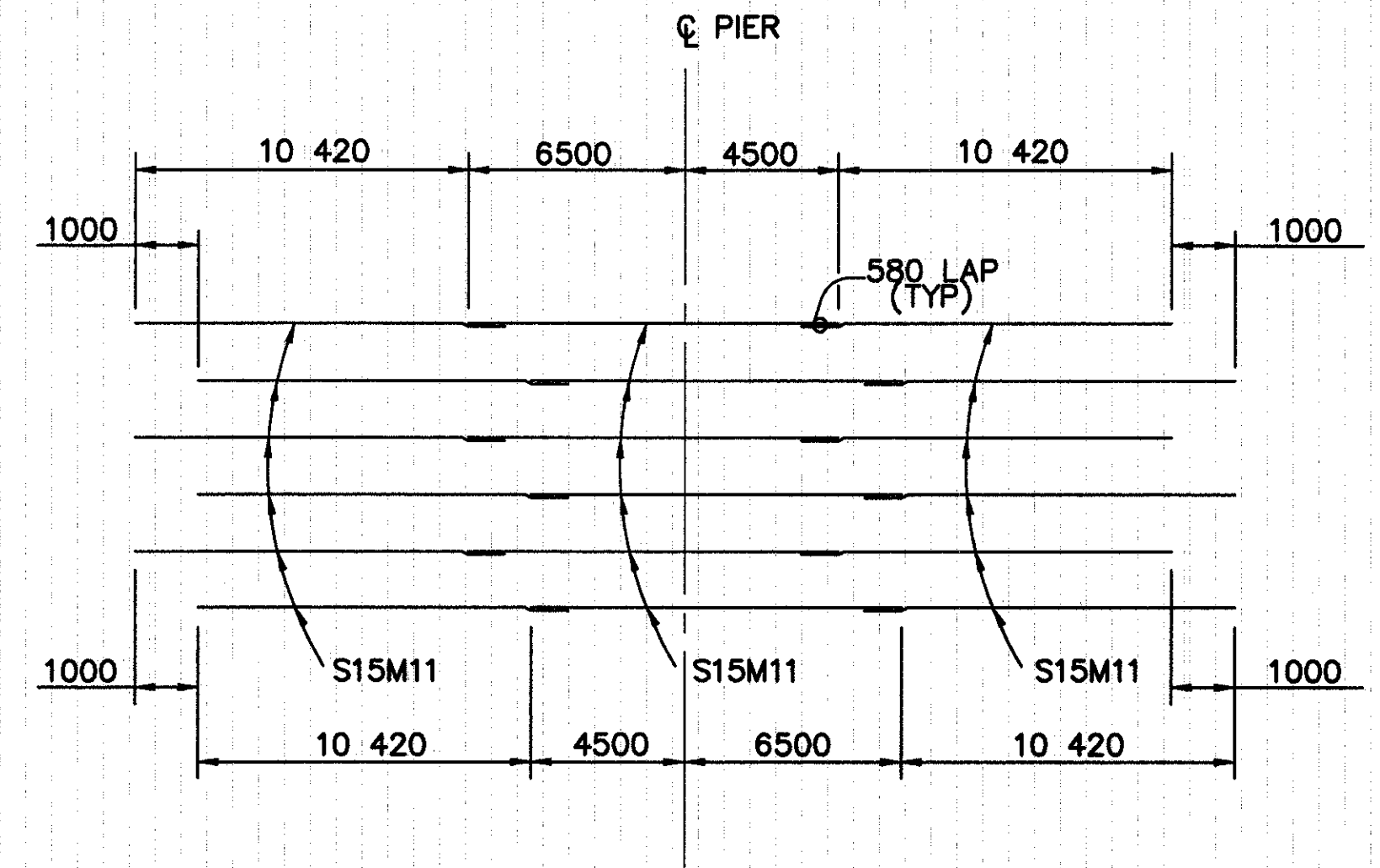
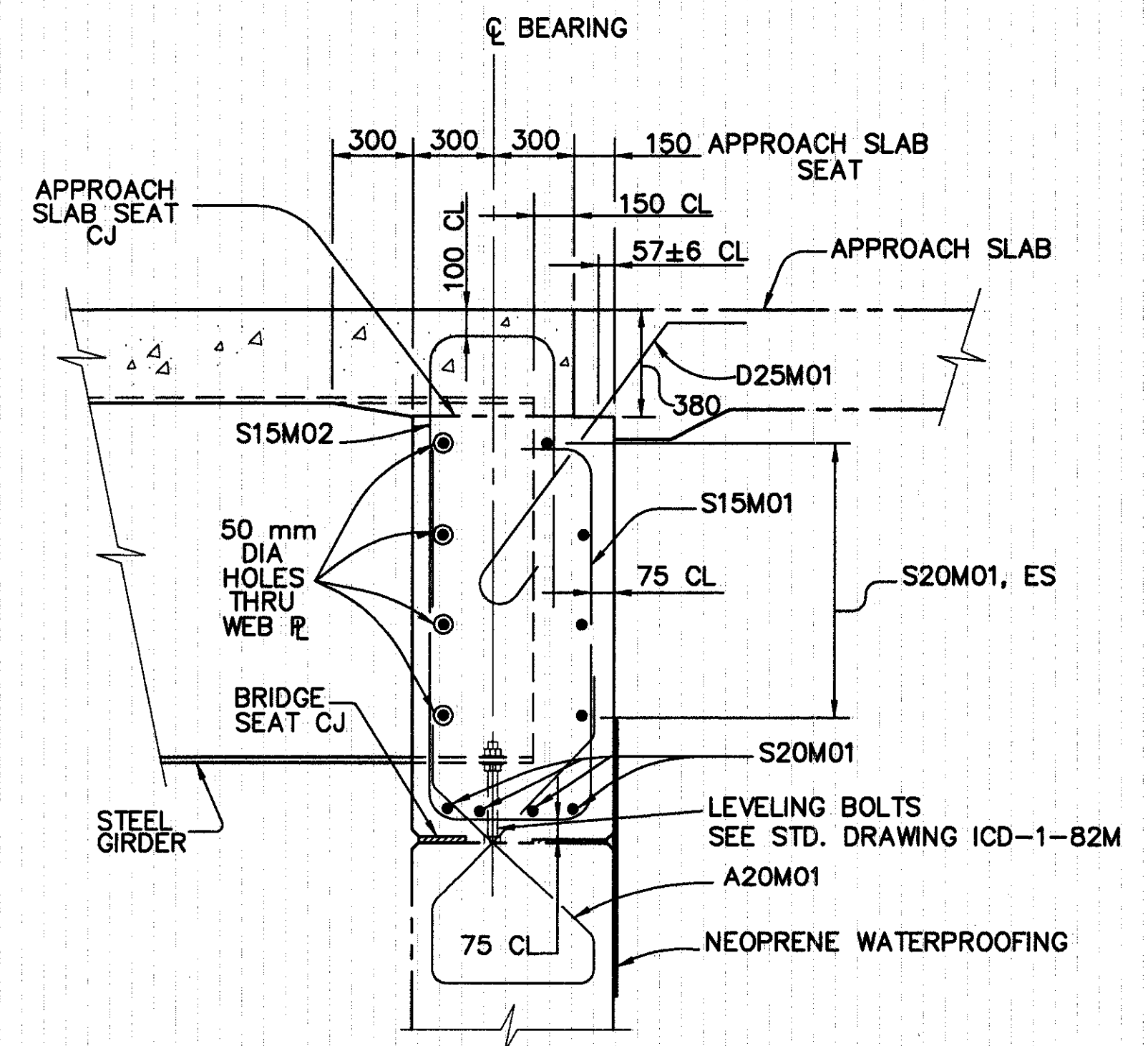


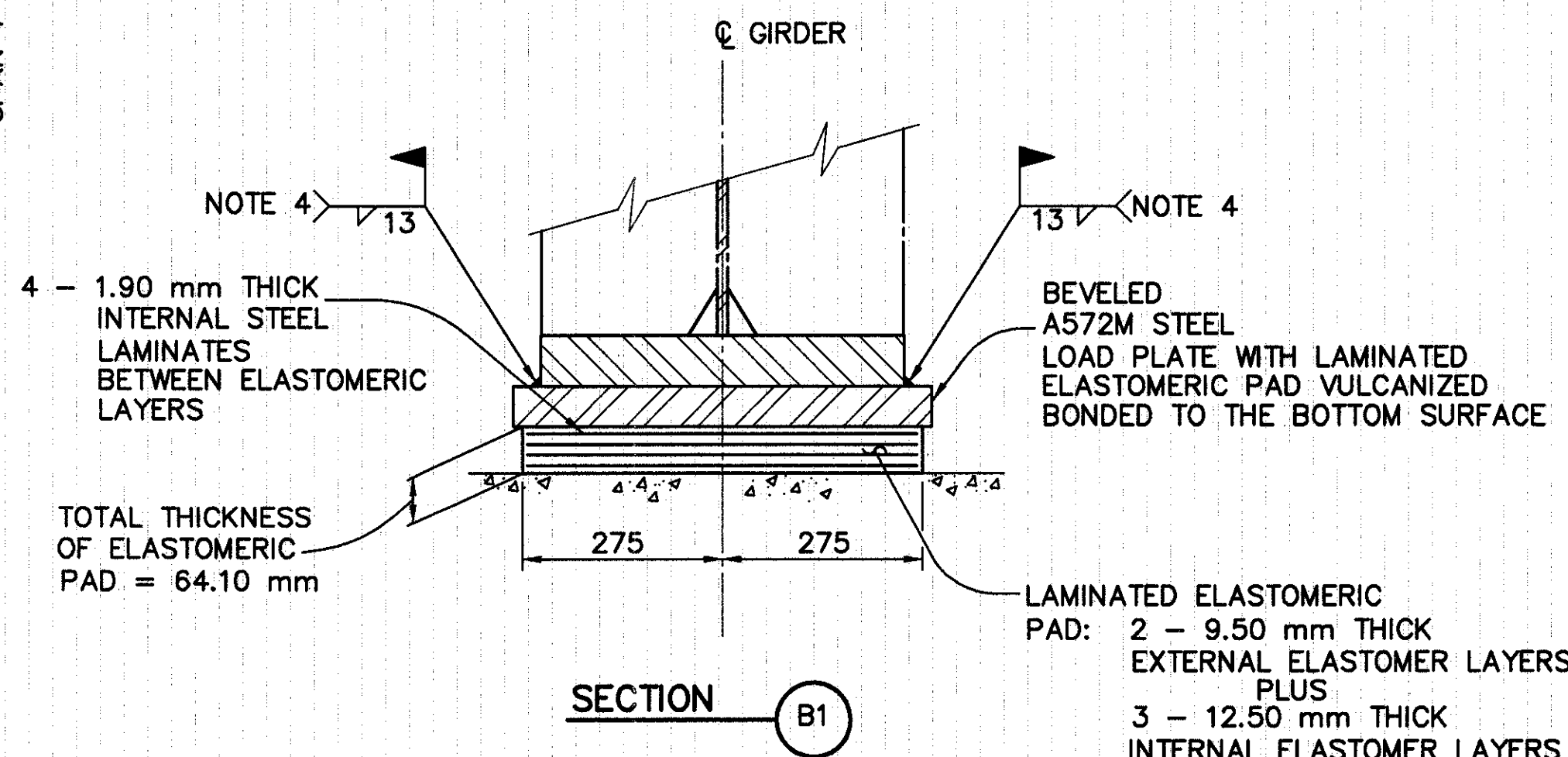
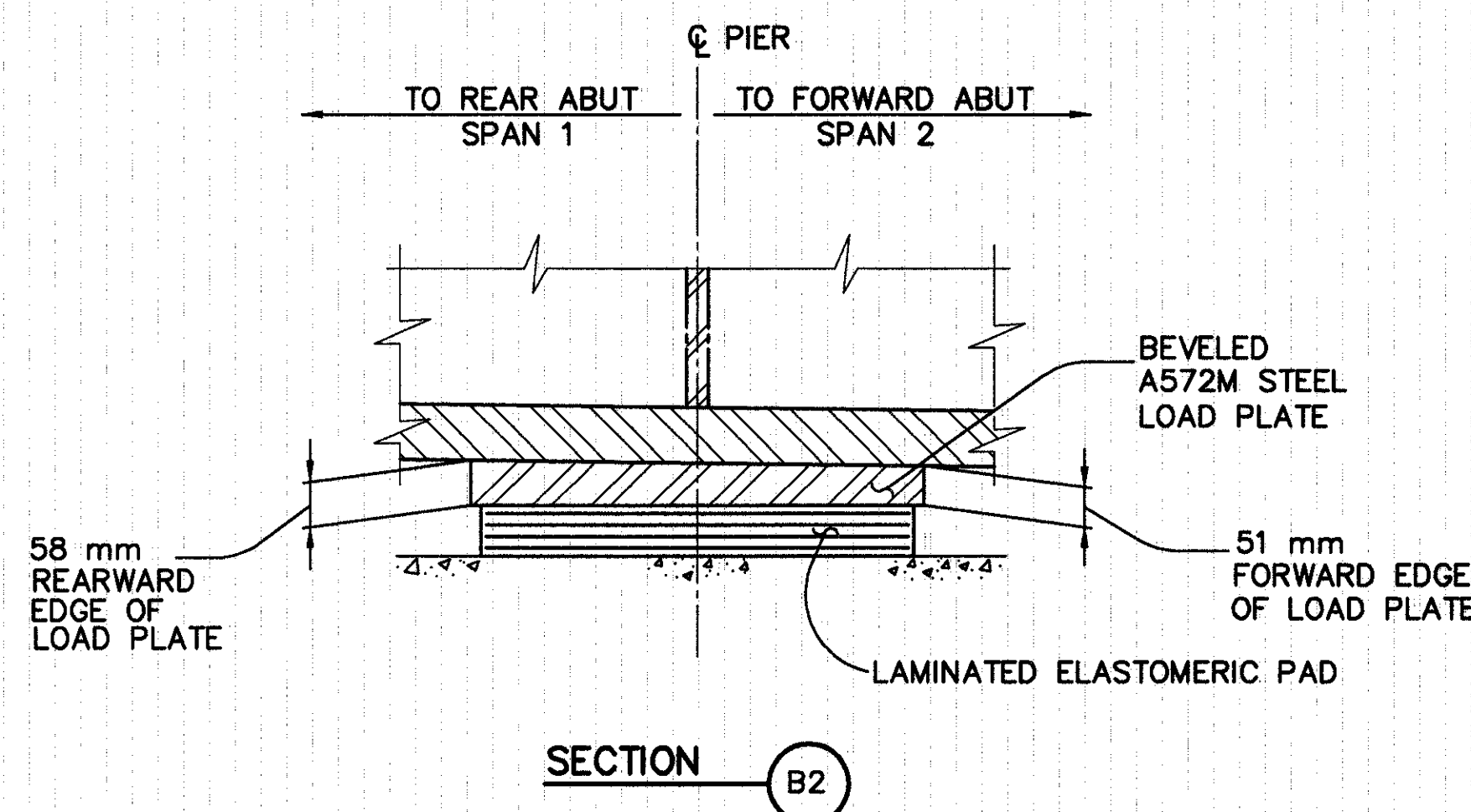
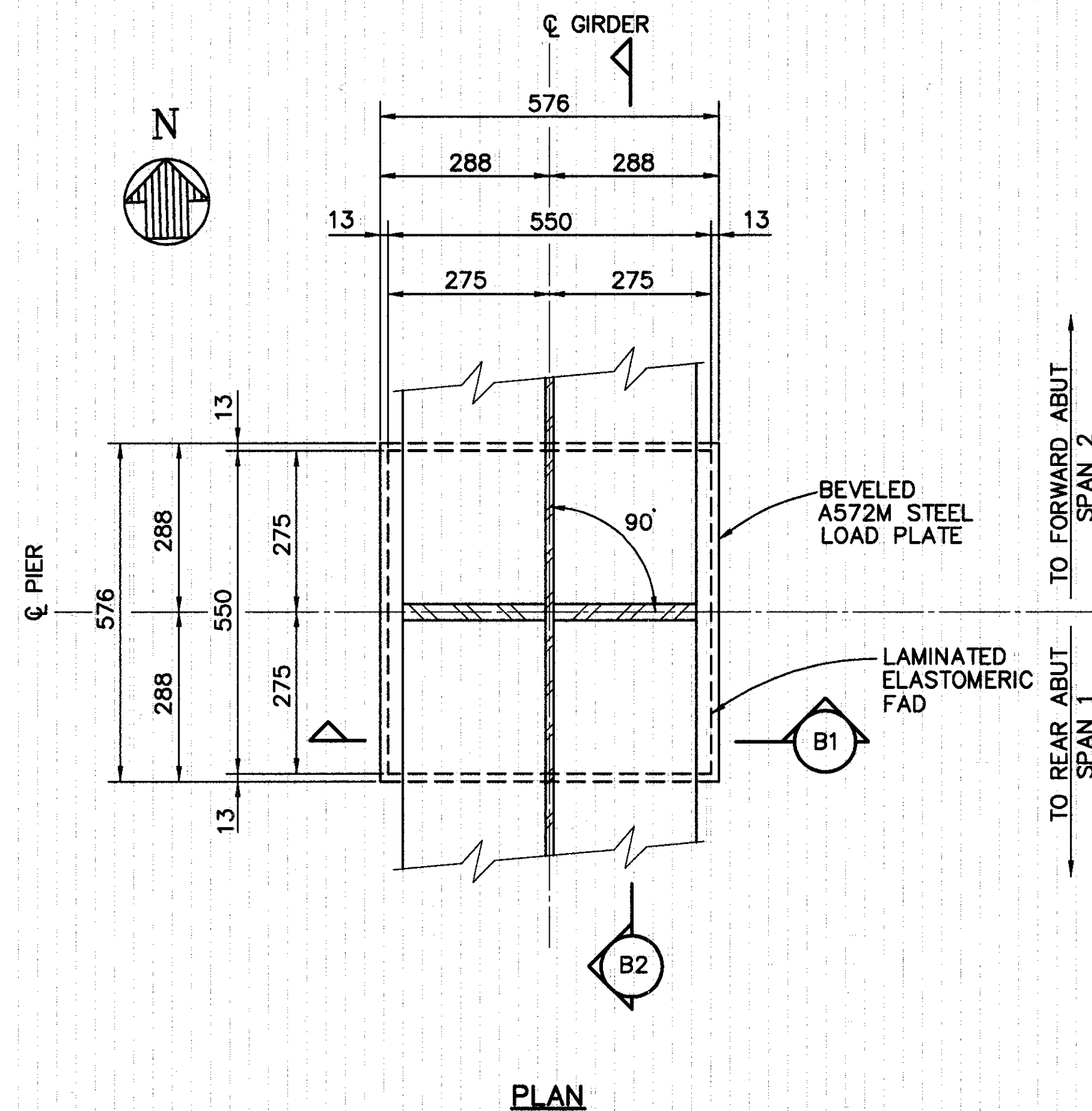
DIAGRAM SHOWING STAGGER OF TOP OVER PIER BARS



SECTION S2

5, 6, 7, 8

FOR SUPERSTRUCTURE NOTES AND LEGEND, SEE SHEET 12.17



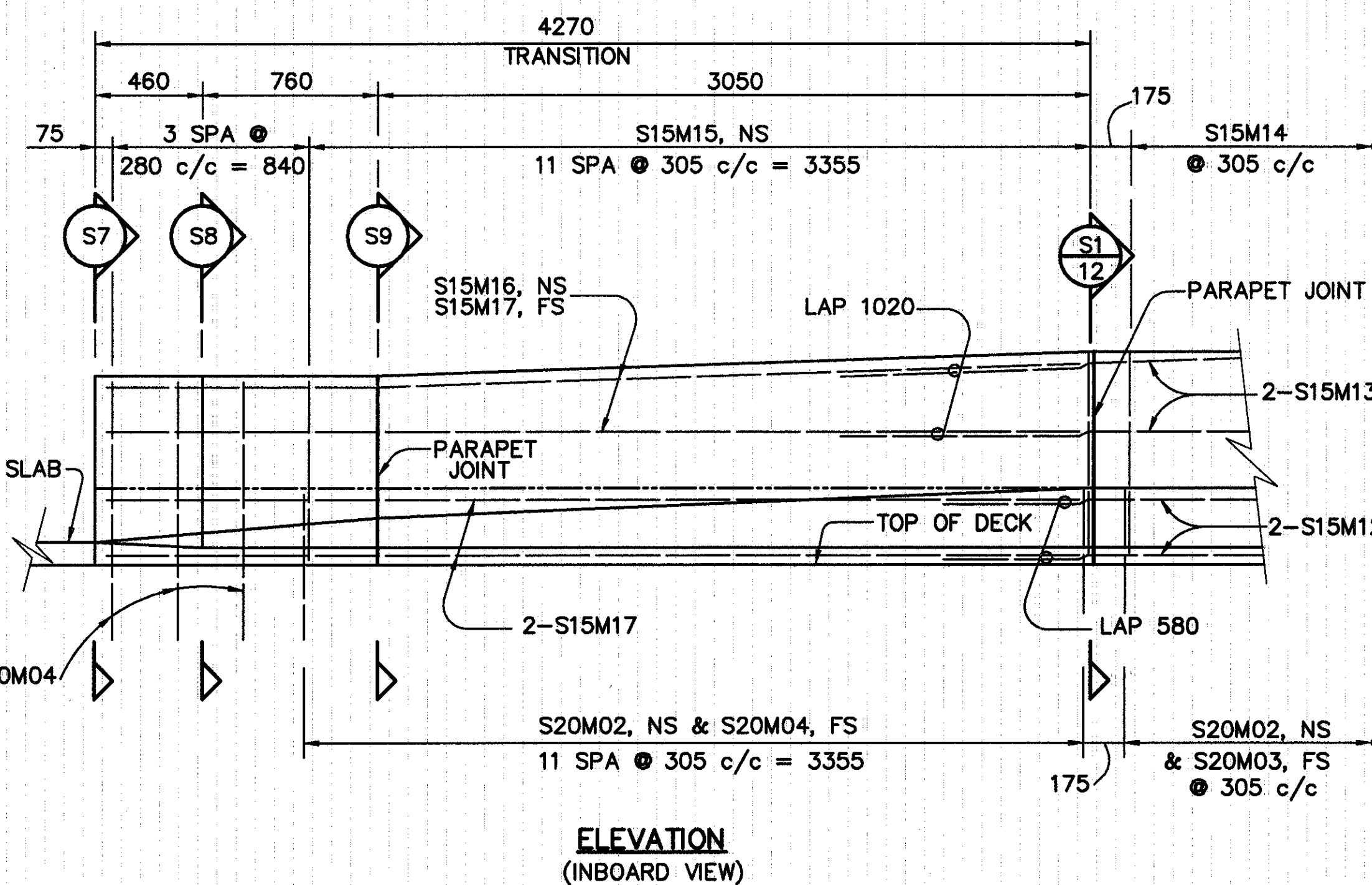
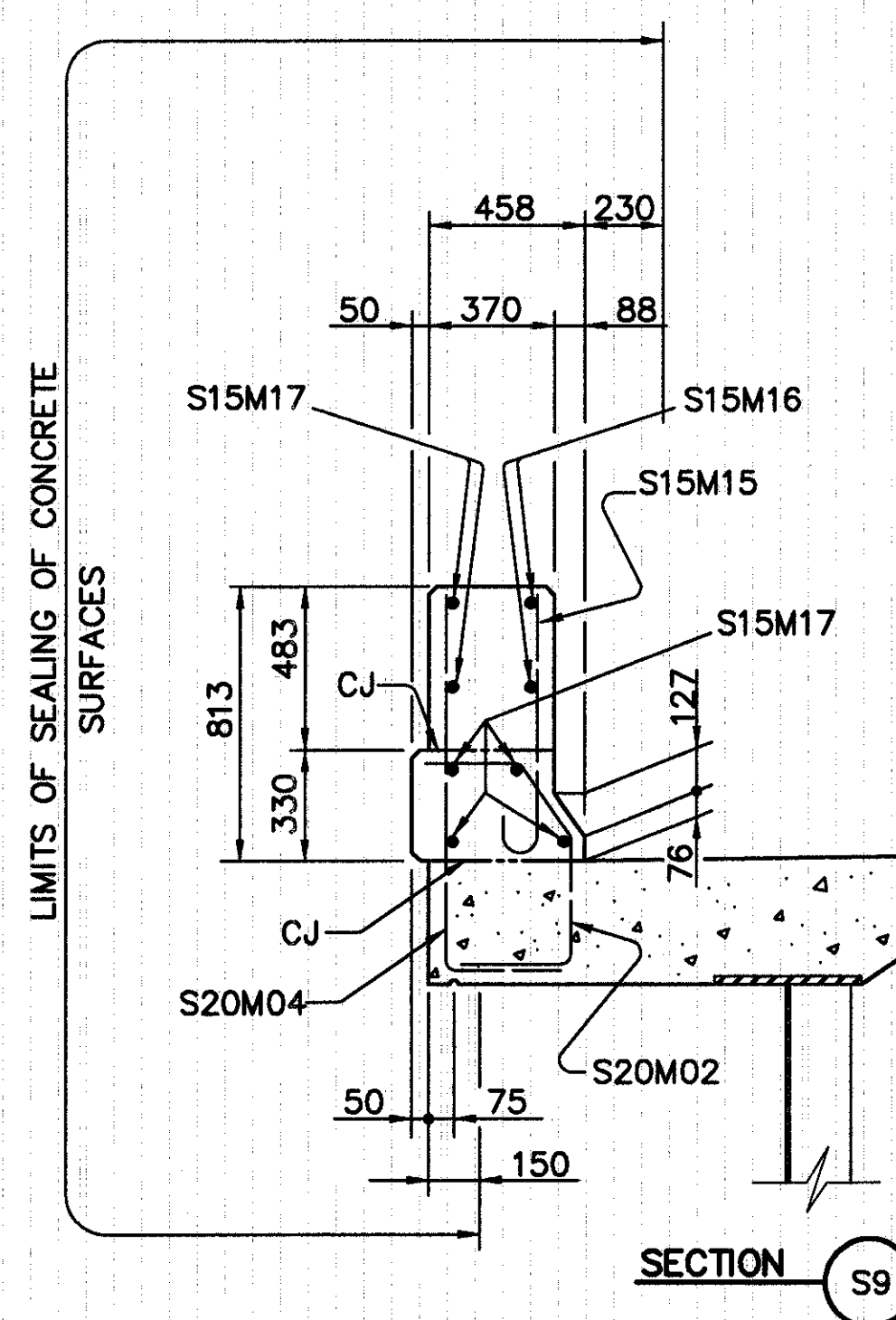
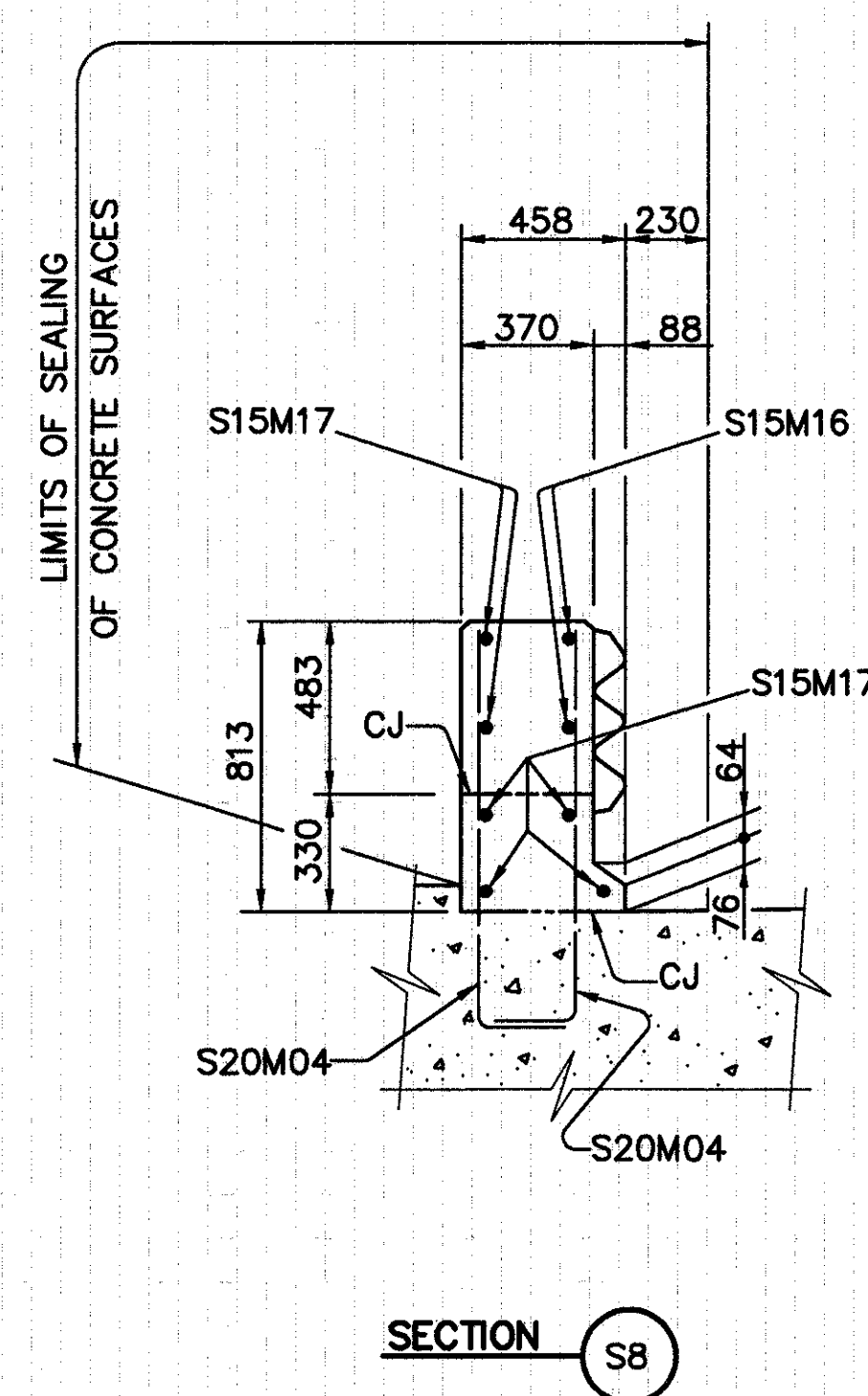
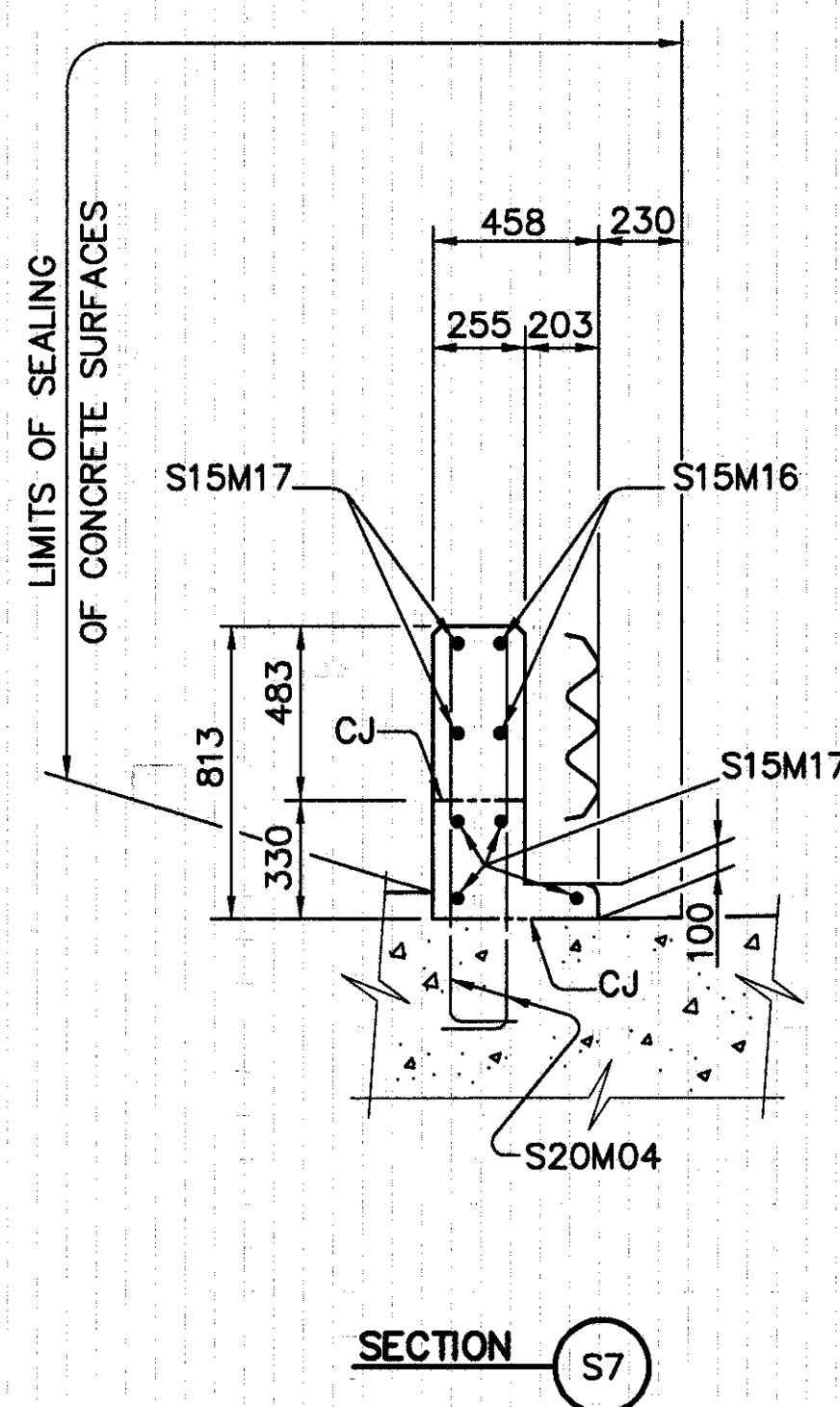
BEARING NOTES:

- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND ARTICLES 18.2.5 THROUGH 18.2.8 OF SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, OF THE AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECT TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD A. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.
- BEARING DESIGN LOADS:**

DEAD LOADS	1528 kN
LIVE LOADS (NO IMPACT)	500 kN
TOTAL DESIGN LOAD	2028 kN
- BEVELED A572M STEEL LOAD PLATES SHALL BE USED FOR ALL BEARING UNITS. PLATE THICKNESS SHALL VARY FROM 58 mm AT THE REARWARD (SOUTH) FACING EDGE, TO 51 mm AT THE FORWARD (NORTH) FACING EDGE. THE LOAD PLATE SHALL BE VULCANIZED BONDED TO THE LAMINATED ELASTOMERIC PAD DURING THE MOLDING PROCESS.
- WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 150° C AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- BEARING REPOSITIONING:** IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 27° C OR LOWER THAN 4° C AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 15° C (+/-) 5° C, THE GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 15° C (+/-) 5° C.

FOR SUPERSTRUCTURE NOTES AND LEGEND, SEE SHEET 12/17

EXPANSION BEARING DETAILS
9 REQUIRED AT PIER



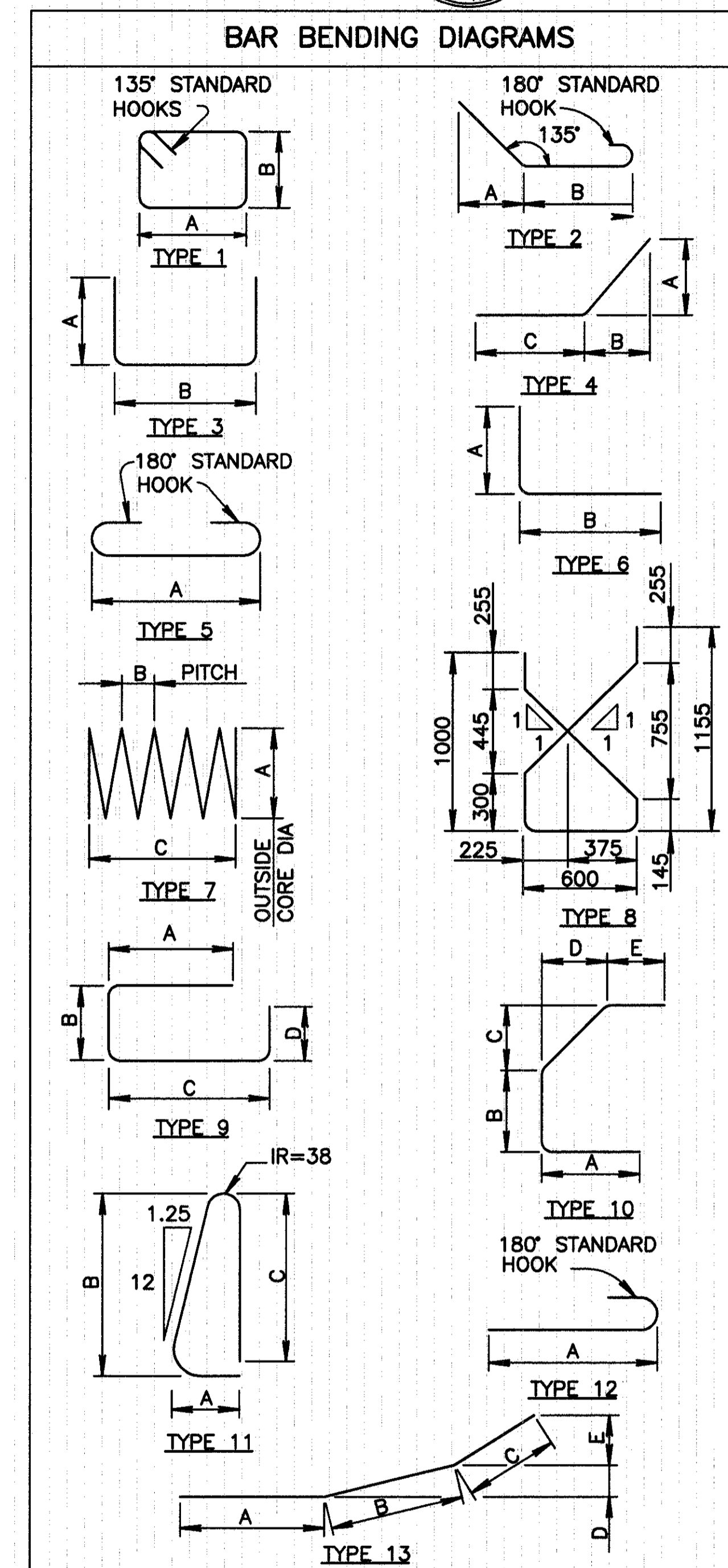
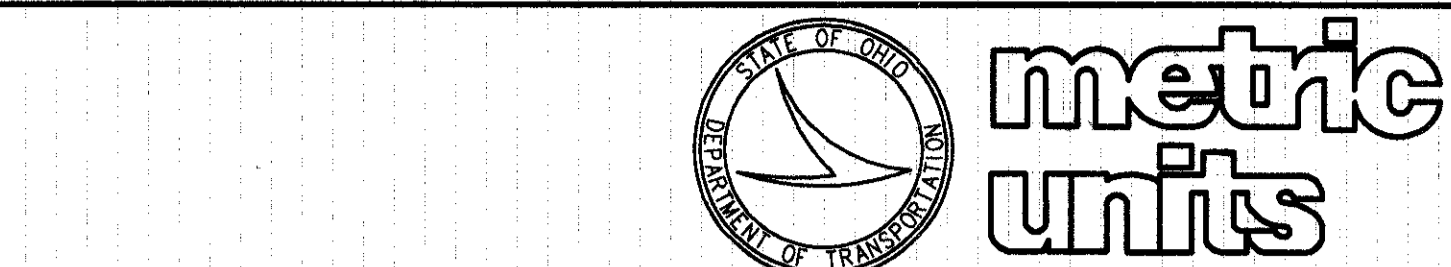
PARAPET TRANSITION DETAILS

FOR ADDITIONAL DETAILS, SEE STANDARD DRAWING BR-1M

NOTE: FOR PARAPET JOINT LOCATIONS SEE SHEET 2/17

REINFORCING STEEL LIST										
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
REAR ABUTMENT										
A10M01	45	2435	86	1	740	515				
A15M01	16	9575	241	STR						
A15M02	88	3175	439	1	770	770				
A15M03	66	5125	531	3	2300	600				
A15M04	17	6425	172	3	2950	600				
A15M05	30	7850	370	STR						
A15M06	SER OF		39		DIMENSION A VARIES BY 207					
	1	1625		3	550	600				1
	8	4525		3	2000	600				1
	2	2975		STR						1
A15M07	SER OF		20		LENGTH VARIES BY 900					
	3	1175		STR						1
A15M08	2	3375	11	4	1450	2825	200			
	1	5225		3	2350	600				1
A15M09	SER OF		36		DIMENSION A VARIES BY 192					
	4	6375		3	2925	600				1
	1	4475		3	2125	600				1
A15M10	SER OF		14		DIMENSION A VARIES BY 225					
	2	4325		3	1900	600				1
	1	1975		3	725	600				1
A15M11	SER OF		41		DIMENSION A VARIES BY 186					
	8	4575		3	2025	600				1
	2	3850		STR						1
A15M12	SER OF		31		LENGTH VARIES BY 900					
	4	1150		STR						1
A15M13	2	5825	18	4	2550	5025	200			
A15M14	2	3025	9	STR						
A15M15	1	4525	7	3	2000	600				
A20M01	80	3100	584	8	SEE BENDING DIAGRAM					
A25M01	16	9850	619	STR						
A25M02	16	10075	633	STR						
REAR ABUT. TOTAL = 3901 KILOGRAM										
FORWARD ABUTMENT										
A10M01	45	2435	86	1	740	515				
A15M01	16	9575	241	STR						
A15M02	88	3175	439	1	770	770				
A15M03	66	5125	531	3	2300	600				
A15M04	17	6425	172	3	2950	600				
A15M05	30	7850	370	STR						
A15M06	SER OF		39		DIMENSION A VARIES BY 207					
	1	1625		3	550	600				1
	8	4525		3	2000	600				1
	2	2975		STR						1
A15M07	SER OF		20		LENGTH VARIES BY 900					
	3	1175		STR						1
A15M08	2	3375	11	4	1450	2825	200			
	1	5225		3	2350	600				1
A15M09	SER OF		36		DIMENSION A VARIES BY 192					
	4	6375		3	2925	600				1
	1	4475		3	2125	600				1
A15M10	SER OF		14		DIMENSION A VARIES BY 225					
	2	4325		3	1900	600				1
	1	1975		3	725	600				1
A15M11	SER OF		41		DIMENSION A VARIES BY 186					
	8	4575		3	2025	600				1
	2	3850		STR						1
A15M12	SER OF		31		LENGTH VARIES BY 900					
	4	1150		STR						1
A15M13	2	5825	18	4	2550	5025	200			
A15M14	2	3025	9	STR						
A15M15	1	4525	7	3	2000	600				
A20M01	80	3100	584	8	SEE BENDING DIAGRAM					
A25M01	16	9850	619	STR						
A25M02	16	10075	633	STR						
FWD ABUT. TOTAL = 3901 KILOGRAM										

REINFORCING STEEL LIST										
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
PIER										
F20M01	120	2800	791	5	2350					
F30M01	50	2900	797	6	500	2500				
P15M01	12	8800	166	STR						
P15M02	178	3125	873	3	1200	815				1
	2				1200	815				
P15M03	SER OF	2925	84	3	DIMENSION A VARIES BY 25					1
	9				1000	815				
P15M04	45	1825	129	3	550	815				
P30M01	20	6100	670	STR						
P30M02	30	6550	1080	STR						
P30M03	12	8825	582	4	300	1050	7750			
P30M04	12	7960	525	STR						
P30M05	12	6250	412	6	900	5450				
P30M06	6	8825	291	STR						
P30M07	6	12500	412	STR						
P30M08	12	12225	806	6	1075	11250				
P30M09	4	8300	182	STR						
SP15M01	2	104400	164	7	765	115	4650			
SP15M02	3	113800	179	7	765	115	5100			
PIER TOTAL = 8143 KILOGRAM										
SUPERSTRUCTURE										
S15M01	160	3725	936	9	1525	600	1450	275		
S15M02	160	2375	597	3	1000	450				
S15M03	567	8000	7122	STR						
S15M04	567	9850	8768	STR						
S15M05	567	10075	8969	STR						
S15M06	567	11875	10571	STR						
S15M07	567	8875	7900	STR						
S15M08	567	6725	5987	STR						
S15M09	455	11425	8161	STR						
S15M10	658	11750	12138	STR						
S15M11	384	11000	6632	STR						
S15M12	56	10400	914	STR						
S15M13	56	10900	958	STR						
S15M14	446	1825	1278	11	205	840	765			
S15M15	48	920	69	12	740					
S15M16	8	4220	53	13	3050	738	432	38	127	
S15M17	24	4200	158	STR						
S15M18	380	1500	895	10	260	775	450	225		
S20M01	72	9675	1640	STR						
S20M02	494	925	1076	10	125	375	216	152	230	
S20M03	446	850	893	6	280	625				
S20M04	72	1275	216	6	280	1050				
D25M01	114	1500	671	2	305	800				
SUPERSTRUCTURE TOTAL = 86602 KILOGRAM										



- REINFORCING STEEL NOTES:**
- SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNTS.
 - ALL DIMENSIONS ARE OUT TO OUT.
 - TYPE 'STR' INDICATES A STRAIGHT BAR.
 - THE BAR SIZE NUMBER IS SPECIFIED IN THE 'MARK' COLUMN. THE FIRST TWO DIGITS INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A15M01 IS A 15M BAR SIZE.
 - ALL BARS SHALL BE EPOXY COATED.
 - SPACERS CONCRETE SPACERS OR OTHER APPROVED NONCORROSIVE SPACING DEVICES SHALL BE USED AT SUFFICIENT INTERVALS (NEAR THE BOTTOM AND AT INTERVALS NOT EXCEEDING 3050 mm) TO INSURE CONCENTRIC SPACING FOR THE ENTIRE CAGE LENGTH. SPACERS SHALL BE CONSTRUCTED OF APPROVED MATERIAL EQUAL IN QUALITY AND DURABILITY TO THE CONCRETE SPECIFIED FOR THE SHAFT. THE SPACERS SHALL HAVE ADEQUATE DIMENSIONS TO ENSURE A MINIMUM 75 mm CLEAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCING CAGE AND THE DESIGN DIMENSION OF THE DRILLED SHAFT OR COLUMN. CYLINDRICAL CONCRETE FEET (BOTTOM SUPPORTS) SHALL BE PROVIDED TO ENSURE THAT THE BOTTOM OF THE CAGE IS MAINTAINED AT THE PROPER DISTANCE ABOVE THE BASE.

DESIGN AGENCY: **STILSON & ASSOCIATES, INC.**
 ENGINEERING, ARCHITECTURE, ENVIRONMENTAL
 1121 PARKER ROAD • COLLEGE, OHIO 43021

DATE: 10/16/96
 REVIEWED: G.W.M.
 DRAWN: V.O.
 CHECKED: B.R.H.

STRUCTURE FILE NUMBER: 760177

REINFORCING STEEL LIST
 BRIDGE No. STA-30-30058
 U.S. 30 UNDER TRUMP AVENUE

STA-30-27.696

17/17

357
520