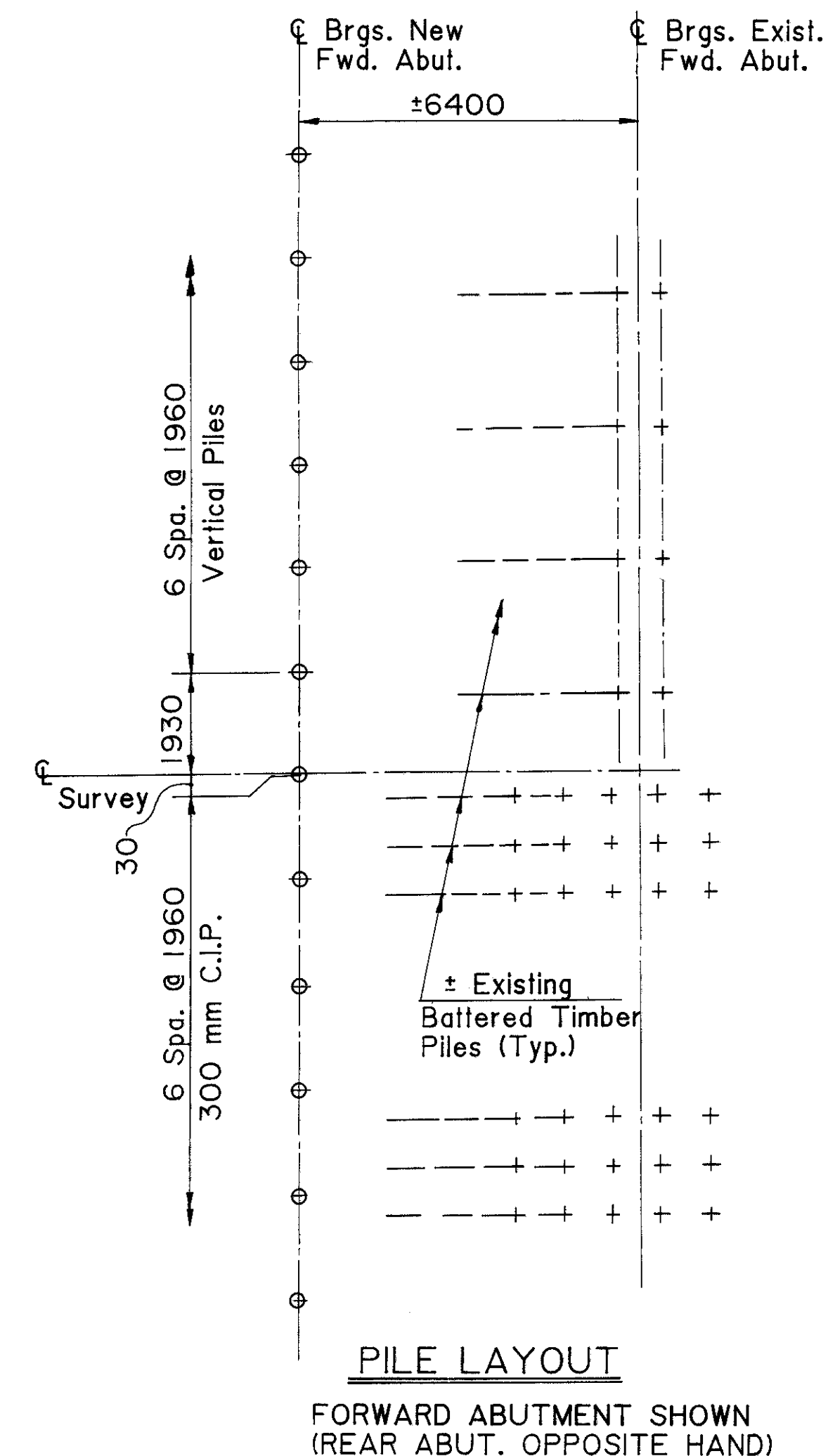




GENERAL PLAN



NOTES:

ITEM 503 - COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN

IN ADDITION TO THE NORMAL REQUIREMENTS OF SECTION 503.03 OF THE CMS FOR THE CONSTRUCTION OF THE STRUCTURE, ANY TEMPORARY SHORING REQUIRED TO SUPPORT THE EXISTING EMBANKMENT DURING PHASE CONSTRUCTION OF THE STRUCTURE, AS SHOWN ON SHEETS 2/16 AND 4/16, SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503, COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN.

MINIMUM SHEETING SIZE SHALL HAVE A MINIMUM SECTION MODULUS OF $1720 \times 10^3 \text{ MM}^2$ PER METER OF WALL. SHEETING SHALL BE CUT OFF PRIOR TO PLACING THE APPROACH SLAB IN STAGE 2. SHEETING LEFT IN PLACE SHALL BE CUT OFF EITHER AT THE APPLICABLE LIMIT OF 300MM MINIMUM BELOW THE GROUND LINE OR FLUSH WITH THE LEVEL OF THE SUBGRADE.

AT THE OPTION OF THE CONTRACTOR, AN ALTERNATE METHOD OF DESIGN FOR THE TEMPORARY SHORING FOR PART-WIDTH CONSTRUCTION MAY BE USED. PLANS FOR SUCH SHORING SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER AND CONFORM WITH 501.05. THE CONTRACTOR SHALL SUBMIT FIVE COPIES TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE OFFICE OF STRUCTURAL ENGINEERING FOR REVIEW AND APPROVAL. CONSTRUCTION OF THE TEMPORARY SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR.

PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503, COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN AND SHALL INCLUDE ALL NECESSARY LABOR, EQUIPMENT AND MATERIALS NEEDED TO COMPLETE THIS WORK.

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD

DRAWINGS:

AS-1-81M	DATED	10-25-94
BR-1M	DATED	12-15-94
BS-1-93M	DATED	12-15-94
6SD-1-96	DATED	2-12-97
ICD-1-82M	DATED	3-20-95
BP-2.31M	DATED	5-26-98
DM-1.1M	DATED	10-21-97

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

816	DATED	4-21-97
844	DATED	5-5-98
863	DATED	9-9-97
910	DATED	7-28-97
911	DATED	7-10-97
954	DATED	9-9-97

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

DESIGN LOADING - MS18 CASE 11 AND THE ALTERNATE MILITARY LOADING

CONCRETE CLASS S - UNIT STRESS 10.3 MPa (SUPERSTRUCTURE)

CONCRETE CLASS C - UNIT STRESS 9.2 MPa (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615M, A616M OR A617M, GRADE 400, UNIT STRESS 160 MPa

STRUCTURAL STEEL - ASTM A588M, UNIT STRESS 186.2 MPa

DECK PROTECTION METHOD: EPOXY COATED, REINFORCING STEEL, 65MM CONCRETE COVER AND SEALING OF CONCRETE SURFACES.

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

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED IN STAGES UPON RECEIVING PERMISSION FROM THE ENGINEER.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 836 KN PER PILE FOR THE 300 MM ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 1068 KN PER PILE FOR THE 350 MM PIER PILES.

ABUTMENT PILES:

30 PILES 18 METERS LONG, ESTIMATED LENGTH
32 PILES OF ORDER LENGTH, 18 METERS LONG
15 SPLICES

PIER PILES:

40 PILES 8 METERS LONG, ESTIMATED LENGTH
40 PILES OF ORDER LENGTH, 9.5 METERS LONG
20 SPLICES

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25MM 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 2000MM AND A MAXIMUM OF 3000MM CENTERS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE 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 6MM. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E TO A MINIMUM DEPTH OF 25MM.

ITEM 516 INTEGRAL ABUTMENT EXPANSION JOINT SEAL

THE CONTRACTOR SHALL INSTALL A 900MM WIDE STRIP, 2.5MM THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT THE LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 32 x 3MM (LENGTH x SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 25MM OUTSIDE DIAMETER, 3MM GALVANIZED WASHER, MAXIMUM FASTENER SPACING IS 225MM. 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 STRIPS BY USING A SINGLE LINE OF FASTENERS, STARTING AT 150MM (+/-) 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 150MM (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF THE ROADWAY. FOR THE VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 150MM 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 300MM IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 150MM IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 2.5MM THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003" BY I.E. DUPONT DE NEMOURS AND THE COMPANY, INC., "WINGPRENE" BY GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS	D 751	2.5 +/- .25
BREAKING STRENGTH, GRAB WXF, N MINIMUM	D 751	3130 x 3130
ADHESIVE 25MM STRIP, 50MM 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 BRITTLINESS 1 HOUR AT -40°C, BEND AROUND 6MM MANDREL	D 2136	NO CRACKING OF COATING

PAYMENT FOR ALL LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 INTEGRAL ABUTMENT EXPANSION JOINT SEAL.

ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS SHALL BE ITEM 613 LOW STRENGTH MORTAR BACKFILL, TYPE 1 (LSM BACKFILL) WITHIN THE LIMITS OF THE APPROACH SLABS AS SHOWN ON SHEET 5/16. THE CONTRACTOR ALSO MAY USE THE LSM BACKFILL TO CONSTRUCT THE SLOPES IN THE SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MEET THE FINISHED GRADE. THE AREA FOR THE POROUS BACKFILL WITH FILTER FABRIC SHALL BE FORMED UP PRIOR TO THE PLACEMENT OF THE LSM BACKFILL, AND THE FILTER FABRIC AND POROUS BACKFILL SHALL BE PLACED AFTER THE LSM BACKFILL HAS BEEN CURED AND THE FORMS HAVE BEEN REMOVED.

THE COST OF ALL LABOR, EQUIPMENT AND MATERIAL TO PLACE THE LSM BACKFILL AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM SPECIAL SEALING OF CONCRETE SURFACES

(EPOXY-URETHANE) THE COLOR OF THE URETHANE SHALL BE FEDERAL COLOR NUMBER 17778 (OFF-WHITE).

CALCULATED BY ZR, DATE 1/96		CHECKED BY HM, DATE 10/96		DESCRIPTION	SUPER	ABUT.	PIER	GEN.	SEE SHEET NO.
ITEM	ITEM TOTAL UNIT EXT.	ITEM	ITEM TOTAL UNIT EXT.						
202	11002 LUMP			STRUCTURE REMOVED, OVER 6 METER SPAN					
202	23500 4468			WEARING COURSE REMOVED	4468				
503	11101 LUMP			COFFDAMS, CRIBS AND SHEETING, AS PER PLAN					2/16
503	21301 LUMP			UNCLASSIFIED EXCAVATION, AS PER PLAN					3/16
505	11100 LUMP			PILE DRIVING EQUIPMENT MOBILIZATION					
507	00500 540			300 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		540			
507	00550 576			300 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		576			
507	00600 320			350 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN			320		
507	00650 380			350 MM CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED			380		
507	50500 35			STEEL PILE SPLICES		15	20		
SPECIAL 516	1267510 434			SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*					3/16
516	14014 50			INTEGRAL ABUTMENT EXPANSION SEAL	330	87	17		
516	44101 9			ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (270 x 485 x 50 ELASTOMERIC PAD WITH 300 x 640 BEVELED STEEL LOAD PLATE)		50		9	11/16
516	44201 9			ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (305 x 470 x 76 ELASTOMERIC PAD WITH 340 x 500 BEVELED STEEL LOAD PLATE)				9	11/16
518	12200 8			SCUPPER, INCLUDING SUPPORTS	8				
518	21230 LUMP			POROUS BACKFILL WITH FILTER FABRIC					
518	40000 59			150 MM PERFORATED CORRUGATED PLASTIC PIPE					
518	40010 13			150 MM NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS					
604	36600 4			PRECAST REINFORCED CONCRETE OUTLET					
844	48000 374			CU.M. HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK)		374			
844	48020 35			CU.M. HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE (PARAPET)		35			
844	48040 268			CU.M. HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE					
863	10040 LUMP			STRUCTURAL STEEL MEMBERS, LEVEL TWO (2) FABRICATION			85	183	
863	20000 4617			EACH WELDED STUD SHEAR CONNECTOR		LUMP			
					4617				

* SEE PROPOSAL NOTE

GENERAL NOTES AND ESTIMATED QUANTITIES
PIK-23-1335 OVER CROOKED CREEK

PIK-23-18.580

3/16

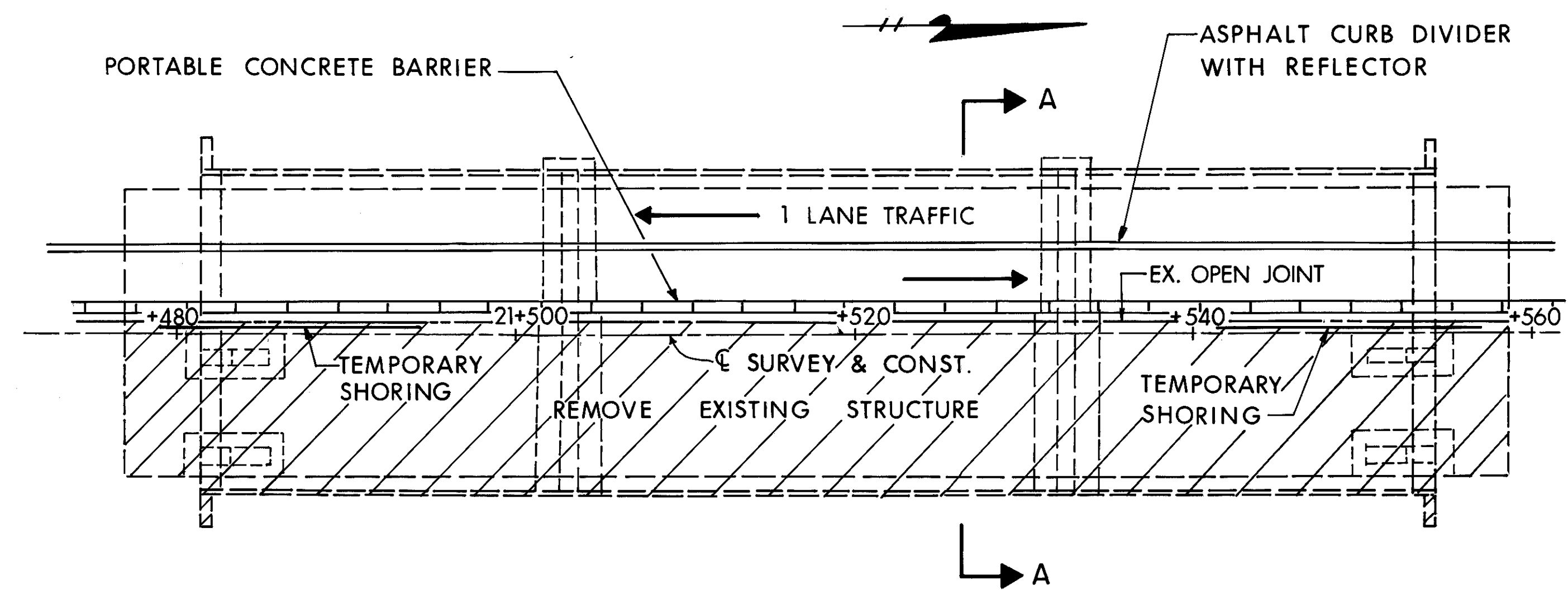
224
262

CLYDE E. WILLIAMS & ASSOCIATES, INC.
130 E. WILSON BRIDGE ROAD
WORTHINGTON, OHIO 43085

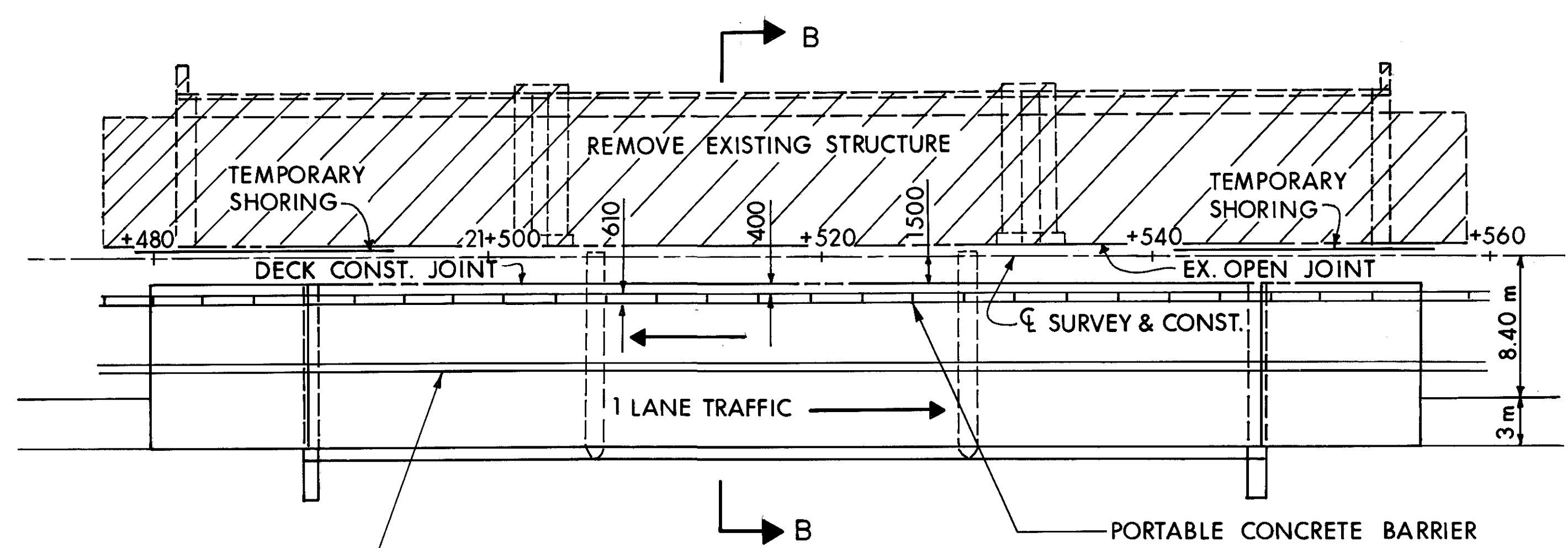
DATE
HM 10/28/96
STRUCTURE FILE NUMBER
6600778

DRAWN
CT
REVISED

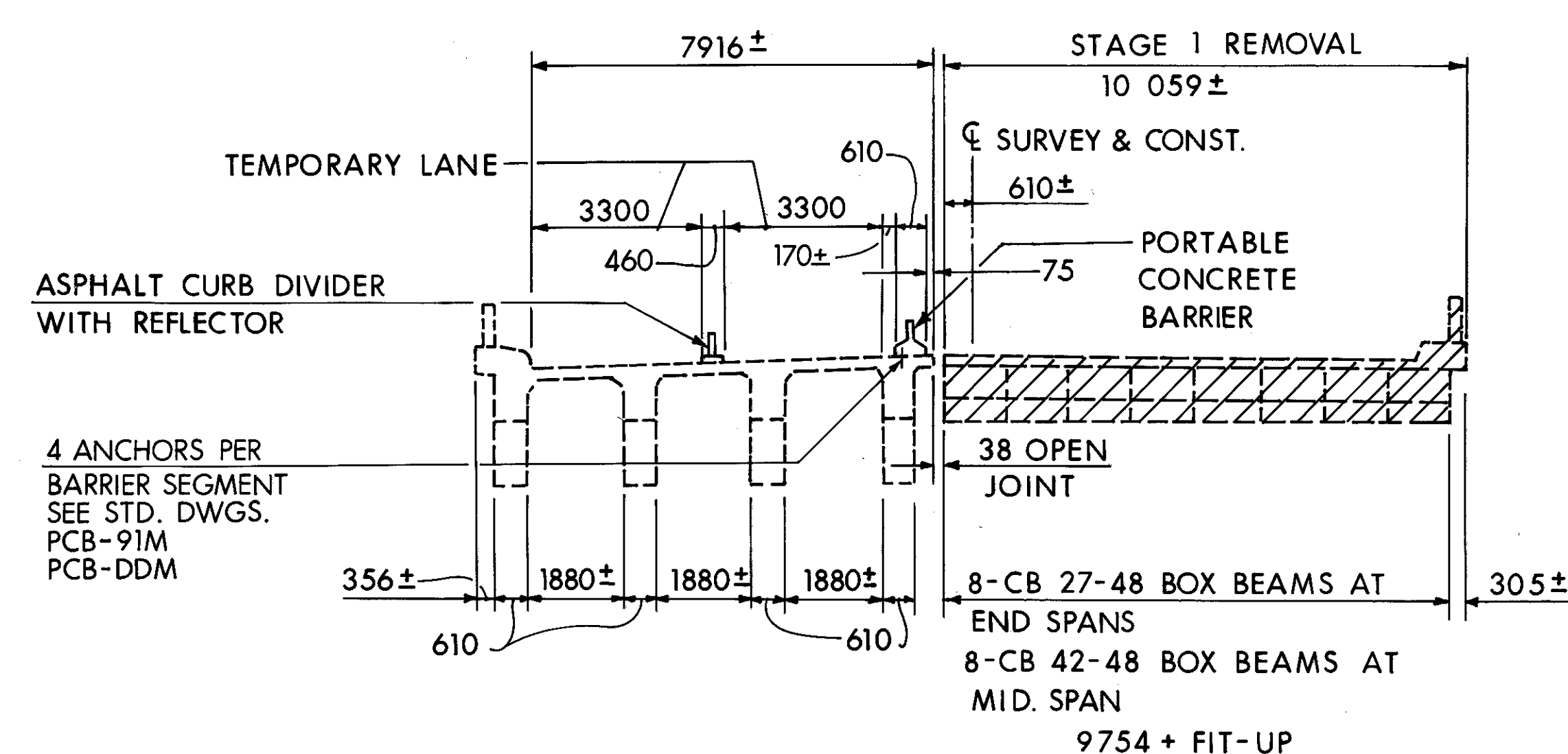
DESIGNED
ZR
CHECKED
AAH



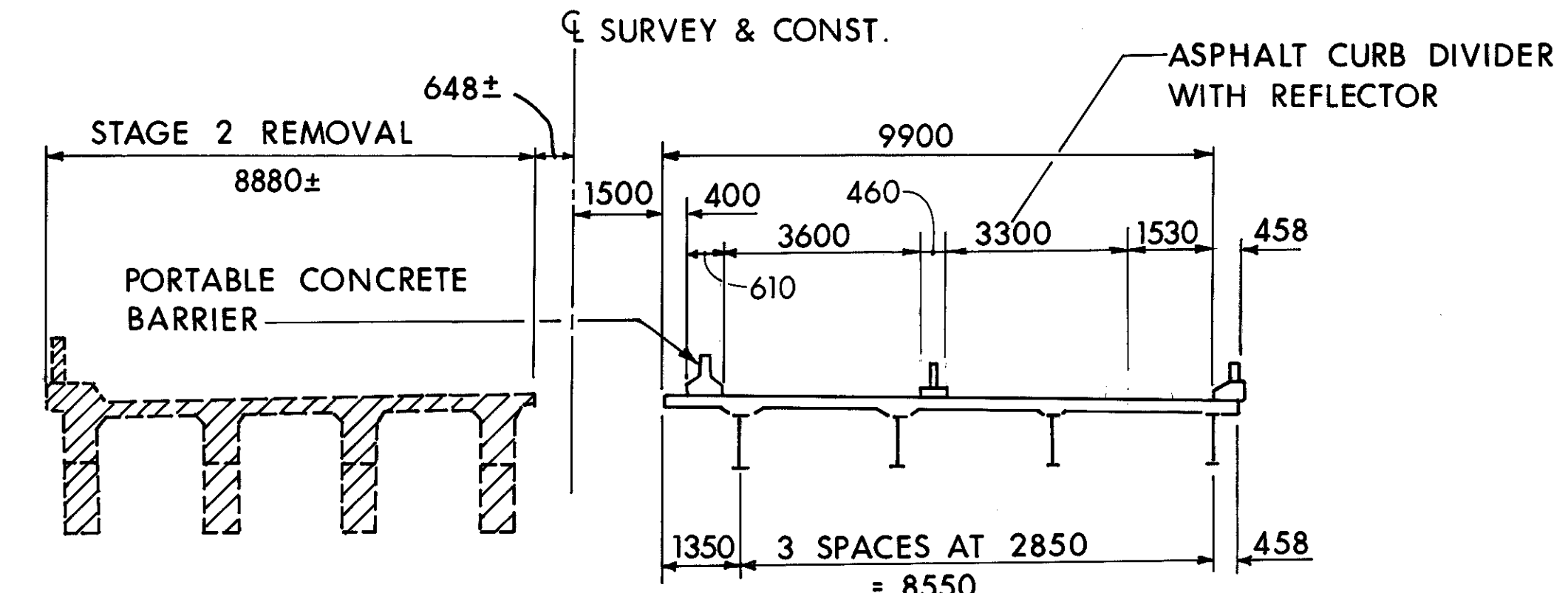
STAGE 1 - PLAN



STAGE 2 - PLAN



STAGE 1 - SECTION A-A



STAGE 2 - SECTION B-B

STAGE 1

1. ADD ASPHALT CURB DIVIDER WITH REFLECTOR AND PORTABLE CONCRETE BARRIER TO WEST SIDE OF EXISTING STRUCTURE.
2. TRANSFER TRAFFIC TO WEST SIDE OF STRUCTURE WITH ONE LANE TEMPORARY TRAFFIC IN EACH DIRECTION.
3. INSTALL TEMPORARY SHORING AT EXISTING ABUTMENTS.
4. REMOVE EXISTING STRUCTURE ON RIGHT SIDE OF EXISTING STRUCTURE UP TO THE EXISTING OPEN JOINT.
5. CONSTRUCT RIGHT SIDE OF PROPOSED STRUCTURE.

STAGE 2

1. ADD ASPHALT CURB DIVIDER WITH REFLECTOR AND PORTABLE CONCRETE BARRIER TO STRUCTURE JUST CONSTRUCTED.
2. TRANSFER TRAFFIC TO NEW STRUCTURE WITH ONE LANE TEMPORARY TRAFFIC IN EACH DIRECTION.
3. REMOVE ASPHALT CURB DIVIDER AND PORTABLE CONCRETE BARRIER FROM EXISTING WEST PORTION OF OLD STRUCTURE.
4. REMOVE EXISTING WEST PORTION OF OLD STRUCTURE.
5. CONSTRUCT LEFT SIDE OF PROPOSED STRUCTURE.

STAGE 3

- REFER TO TRANSVERSE SECTION ON SHEET 12.
1. INSTALL CROSS-FRAMING AT CLOSURE SECTION.
 2. POUR CLOSURE DECK SECTION.
 3. REMOVE ASPHALT CURB DIVIDER WITH REFLECTOR AND PORTABLE CONCRETE BARRIER AND TRANSFER TRAFFIC TO NORMAL NORTH AND SOUTH BOUND TRAFFIC OPERATION.



REVIEWED	DATE
HM	5-14-96

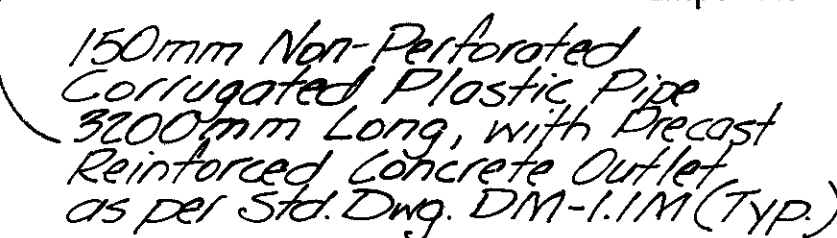
STRUCTURE FILE NUMBER

DESIGNED	DRAWN
ZR	LO'C
CHECKED	REVISED

REAR ABUTMENT - STAGE 1 CONSTRUCTION
BRIDGE NO. PIK-23-1335
OVER CROOKED CREEK

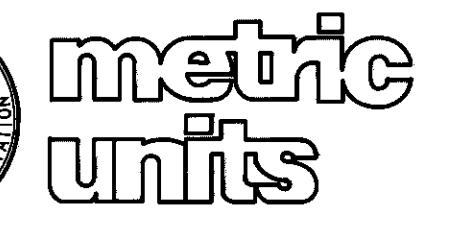
PIK-23-18.580

5 / 16

$$\frac{226}{262}$$


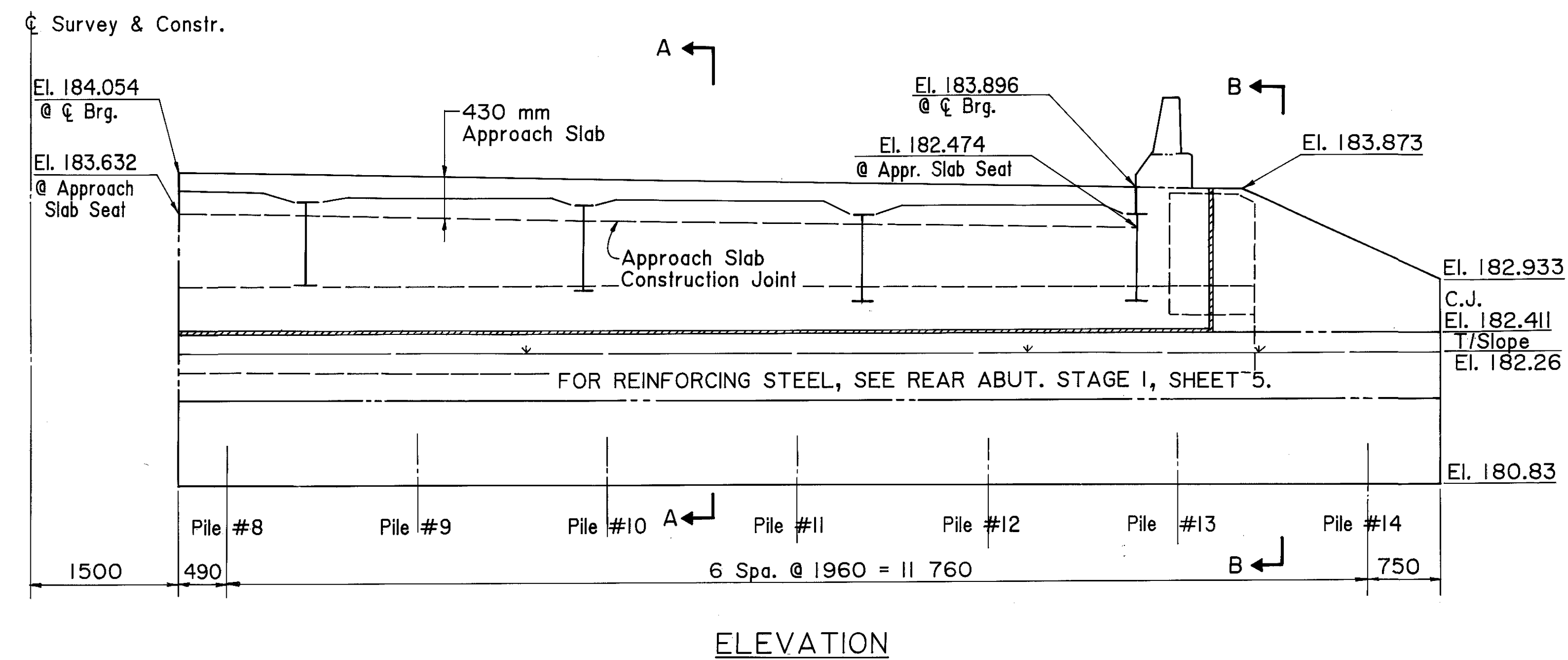
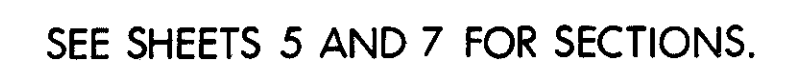
1. SEE SHEET 7/16 FOR SECTION B-B.
2. DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER SUPPORTED IN INTEGRAL-TYPE ABUTMENTS SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.
3. POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300 mm BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.

M36 BOLT	
Beam	Dim. "A" (mm)
#1 & #9	300
#2 & #8	345
#3 & #7	391
#4 & #6	436
#5	482



HM	5-14-96
STRUCTURE FILE NUMBER	
6600778	

PIK-23-18.580

$$\begin{array}{r} 227 \\ \hline 262 \end{array}$$




Point of Wingwall Elevations

Al5M09

Al5M08

Seal Concrete Surfaces

Al5M07

Al5M05

A25M04

Al5M03

Al5M11

Al5M01

150 mm Perf. Corr. Plastic Pipe

Porous Back-fill w/ Filter Fabric

300 mm ϕ Piles

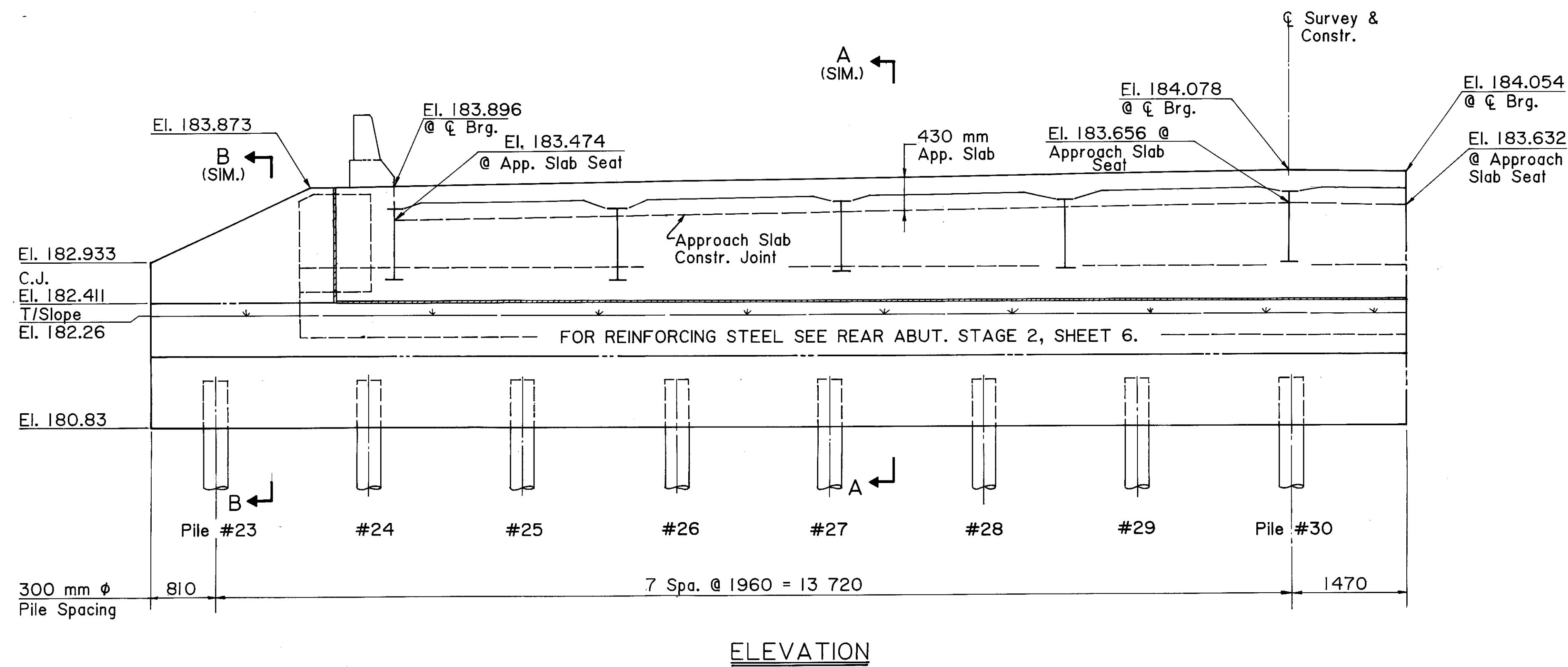
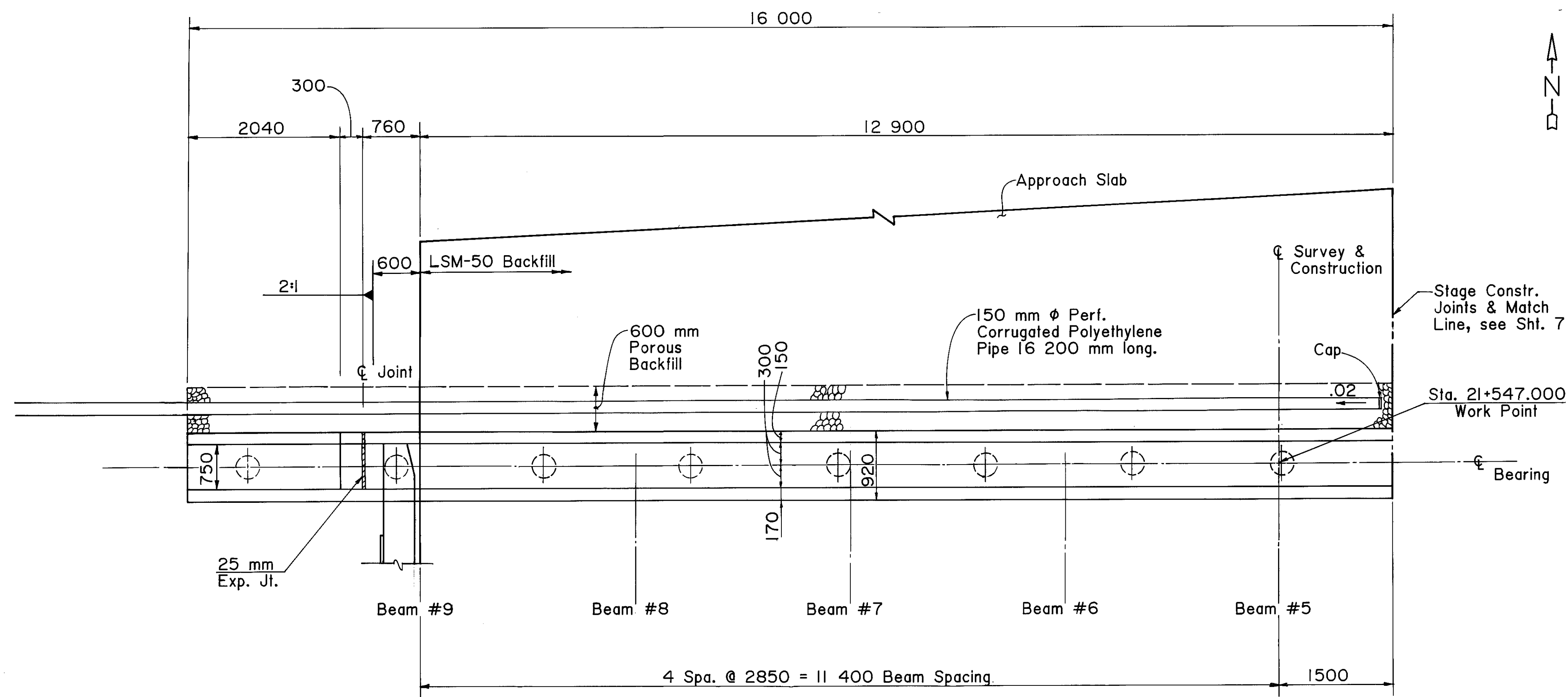
Rock Channel Protection

Dimensions: 170, 750, 300, 600, 320, 75, 150 mm c/c, 460, 920

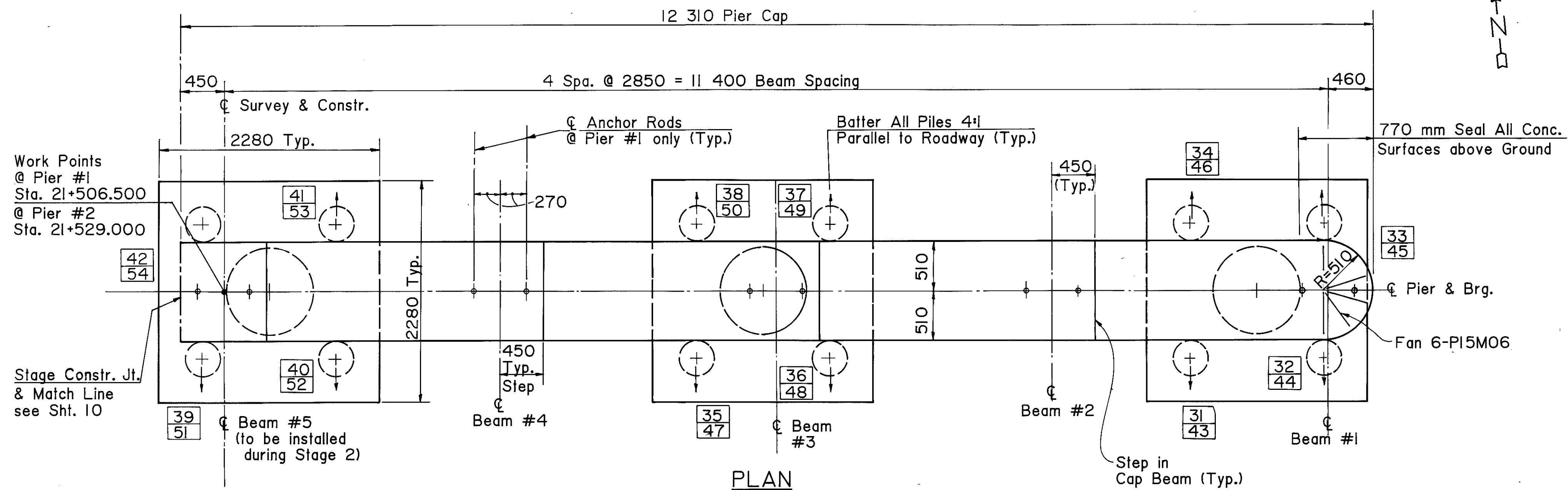
Notes: A10M01 @ 150 mm c/c, 75 Clr. Typ.

FOR SECTION A-A SEE SHT. 5

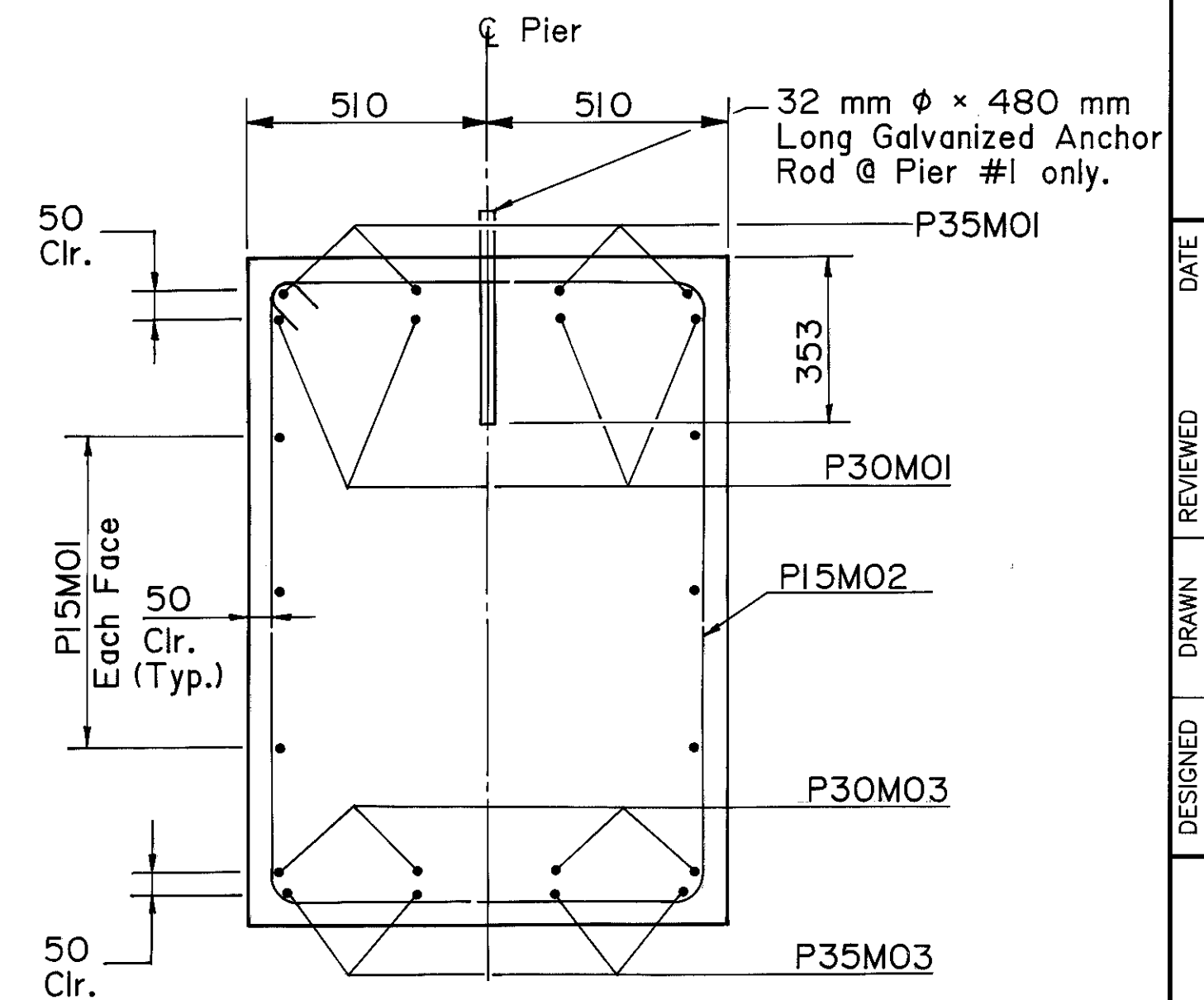




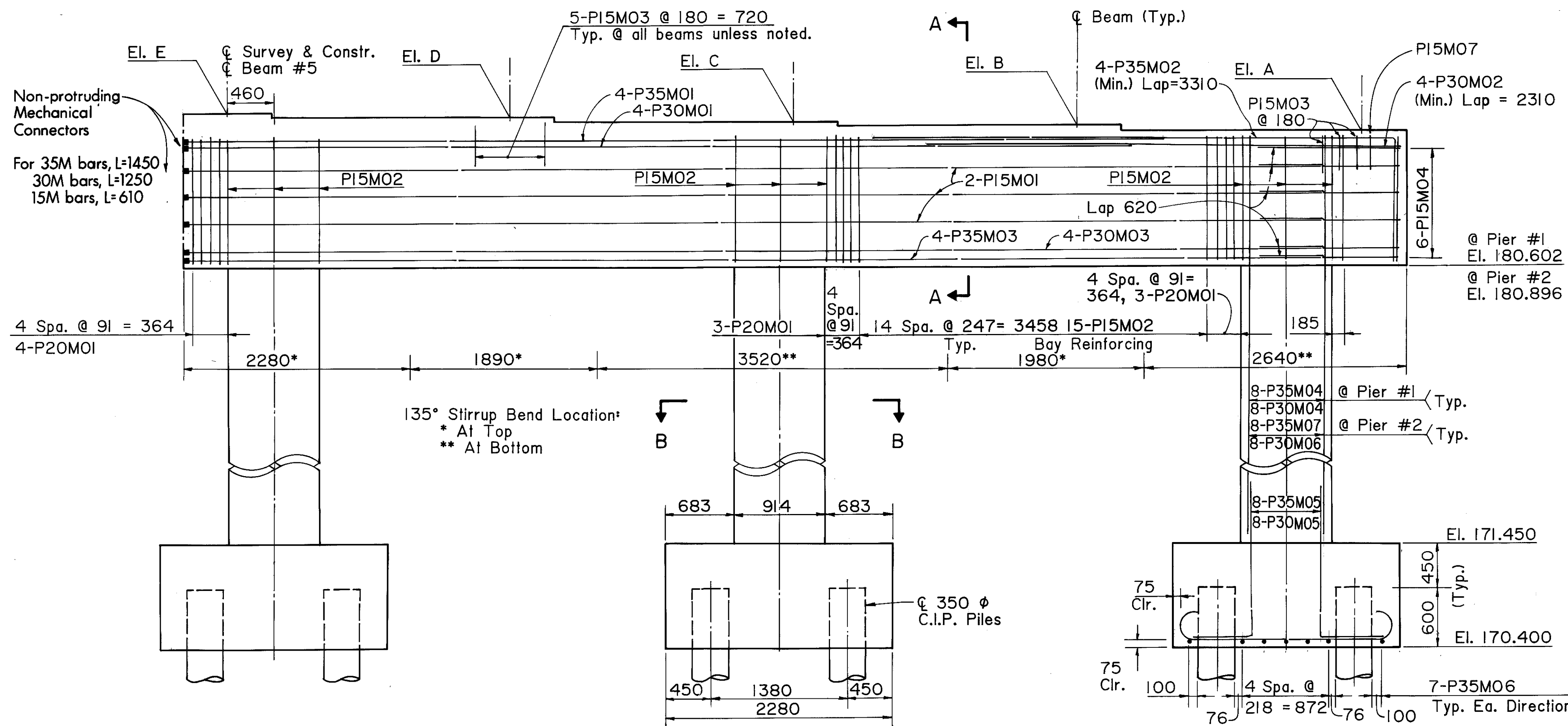
FOR SECTIONS SEE SHEETS 5 AND 7.



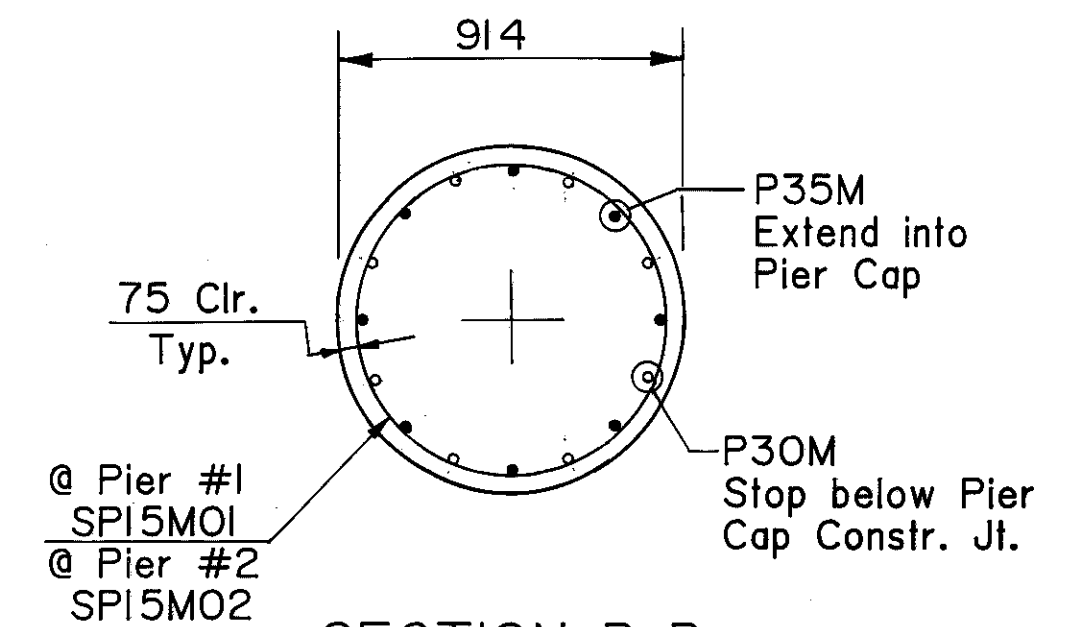
PLAN



SECTION A-A



ELEVATION



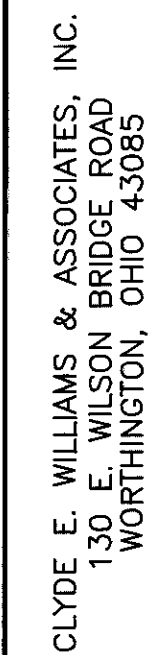
SECTION B-B

ELEVATIONS		
	PIER #1	PIER #2
A	181.977	182.271
B	182.022	182.317
C	182.068	182.362
D	182.113	182.408
E	182.159	182.454

LEGEND

AA	Pile No. @ Pier #1
BB	Pile No. @ Pier #2

Ea. = Each



DESIGNED ZR	DRAWN L O'C	REVIEWED HM	DATE 5-14-96
CHECKED AAU	REVISED	STRUCTURE FILE NUMBER	CC00770

PIERS - STAGE 2 CONSTRUCTION
BRIDGE NO. PIK-23-/335
OVER CROOKED CREEK

PIK-23-18.580

10 / 16

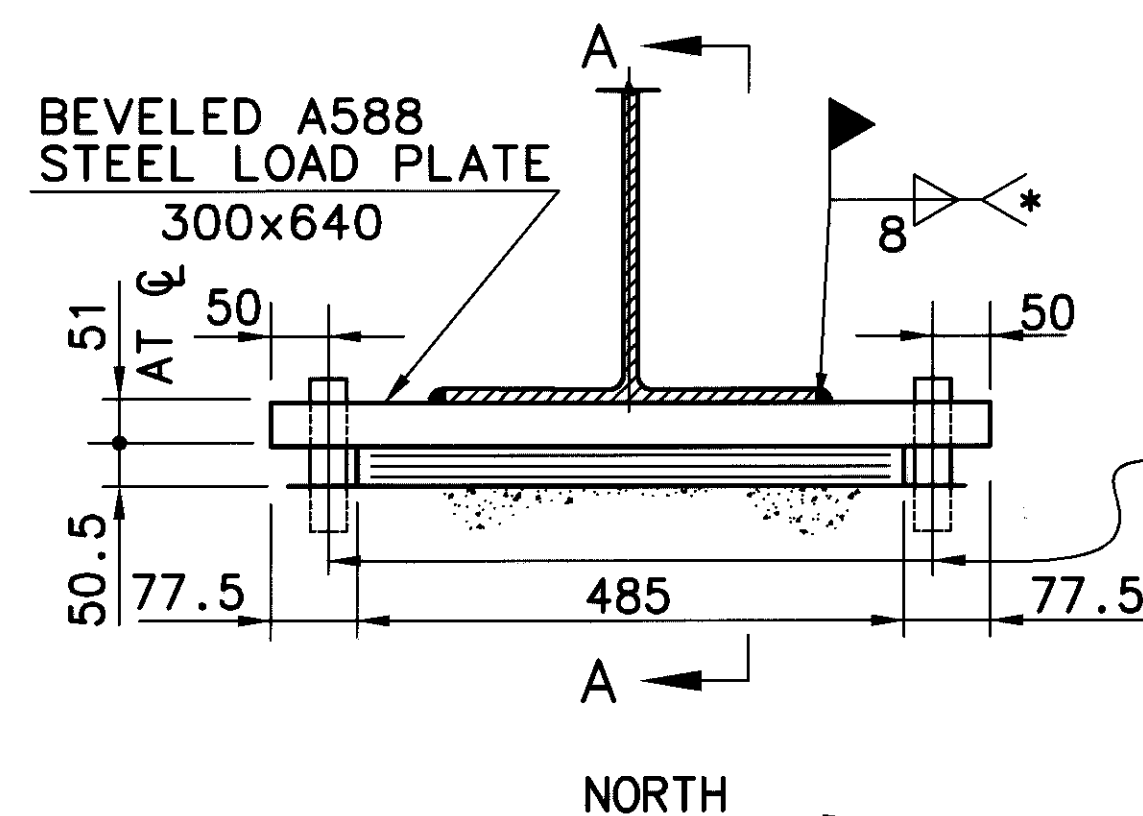
231
262

AA	Pile No. @ Pier #1
BB	Pile No. @ Pier #2

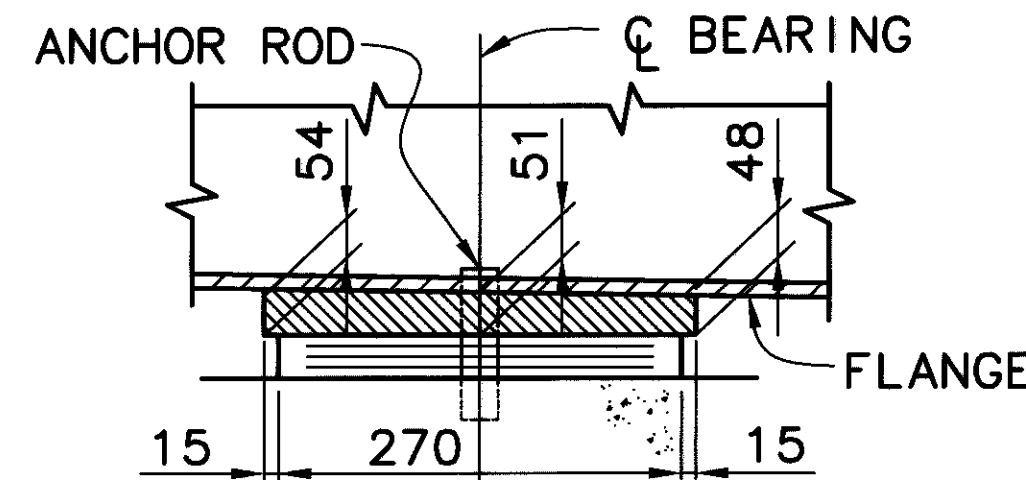
PIER NO.1 - FIXED BEARINGS

INT. ELASTOMERIC LAYERS 4 @ 7.5 mm = 30 MM
EXT. ELASTOMERIC LAYERS 2 @ 5.5 = 11
STEEL LAMINATES 5 @ 1.90 = 9.45

TOTAL = 50.5MM



Ø 45 MM Ø HOLE IN STEEL LOAD PLATE FOR 32 MM Ø X 480 MM ANCHOR ROD, GALVANIZED ACCORDING TO 711.02. INSTALL ANCHOR ROD PER 510. INCLUDE DOWEL HOLES AND ANCHOR RODS WITH ITEM 516 FOR PAYMENT.



SECTION A-A

PIER NO.1 - FIXED

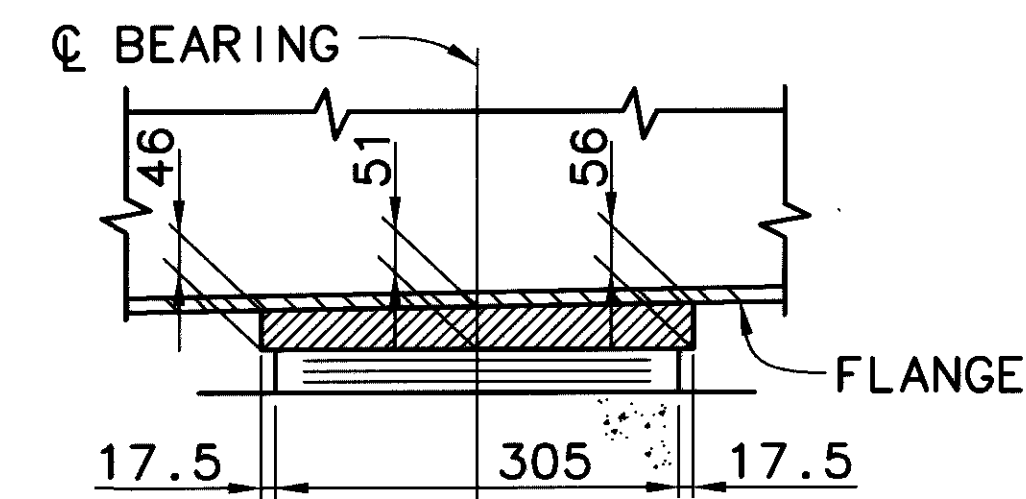
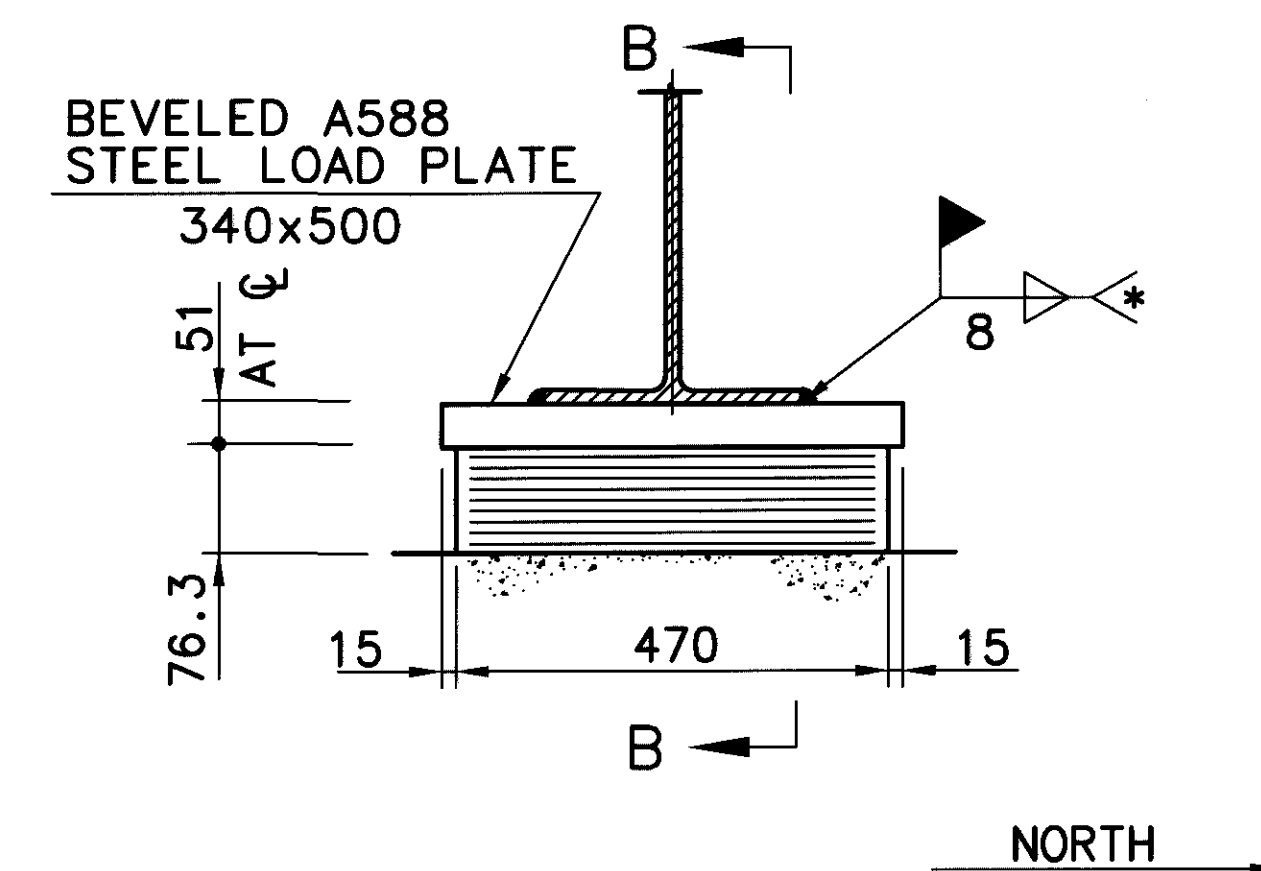
AT PIER:

DL= 618 kn
LL= 349 kn
967 kn

PIER NO.2 - EXPANSION BEARINGS

INT. ELASTOMERIC LAYERS 6 @ 8.5MM = 51.0MM
EXT. ELASTOMERIC LAYERS 2 @ 6.0 = 12.0
STEEL LAMINATES 7 @ 1.9 = 13.3

TOTAL = 76.3MM



SECTION B-B

PIER NO.2 - EXP.

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

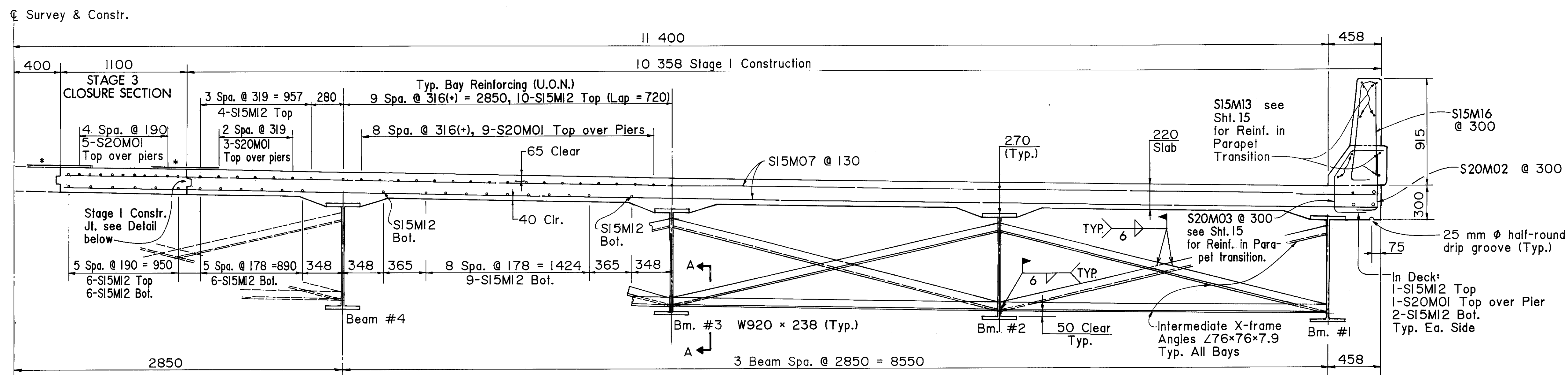
LOAD PLATE. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

STEEL DESIGNATION. THE STEEL LOAD PLATE SHALL BE A588 STEEL.

* 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.

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 BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDEFORMED SHAPE AT 15° C (+/-) 5° C.

BASIS OF PAYMENT. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE. (NEOPRENE), AS PER PLAN (SEE ESTIMATED QUANTITIES)

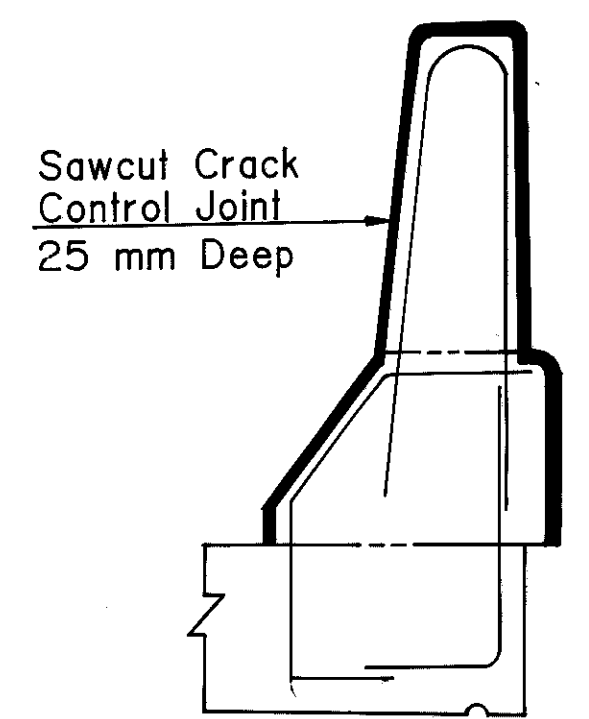
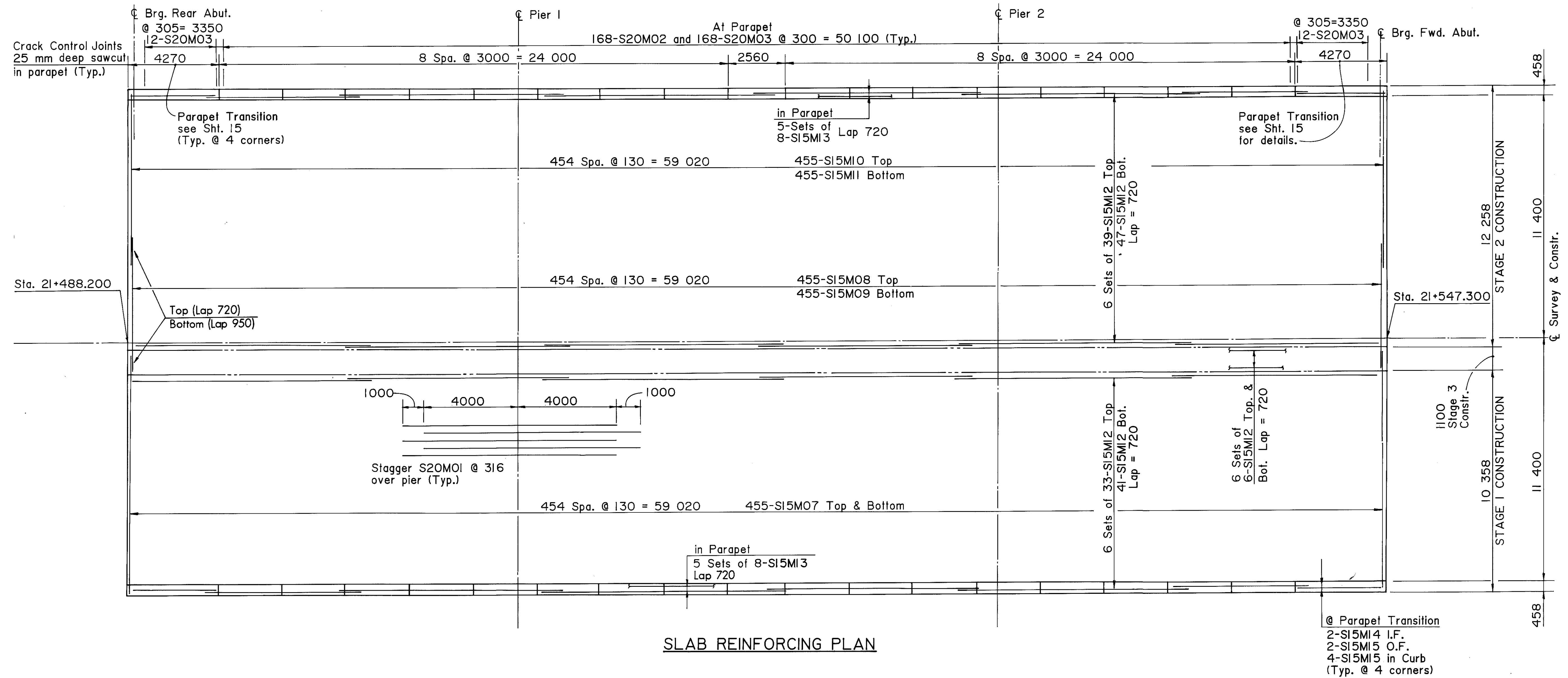


The diagram illustrates the cross-section of a composite material assembly at different curing stages. A horizontal timeline at the top marks "Stages 1 & 2" and "Stage 3". The assembly consists of several layers: a top layer, a middle layer labeled "Seal with 600 wide high molecular weight methacrylate. (HMWM)", and a bottom layer. Dimensions are indicated on the right side: a 40-unit gap between the top and seal layers, a 70-unit thickness for the seal layer, an 80-unit thickness for the middle layer, and a 70-unit thickness for the bottom layer. An arrow points from the text label to the seal layer.

Construction joint shall conform to requirements of Section 511 of CMS.

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 finish 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.

590739



SCREED ELEVATIONS (METER)									
LOCATION	SPAN 1			SPAN 2				SPAN 3	
	REAR ABUT.	MID-SPAN	PIER 1	SPLICE 1	MID-SPAN	SPLICE 2	PIER 2	MID-SPAN	FWD. ABUT.
BEAMS 1 & 9 & TOE OF PARAPET	183.063	183.167	183.263	183.323	183.428	183.522	183.583	183.744	183.895
BEAMS 2 & 8	183.108	183.213	183.309	183.369	183.474	183.568	183.629	183.789	183.941
BEAMS 3 & 7	183.154	183.258	183.354	183.414	183.519	183.614	183.675	183.835	183.987
BEAMS 4 & 6	183.199	183.304	183.400	183.460	183.565	183.659	183.720	183.881	184.032
BEAM 5 & CROWN	183.245	183.350	183.446	183.506	183.610	183.705	183.766	183.926	184.078

Screed elevations shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

Plan view of a bridge deck showing dimensions and components. The diagram includes the following labels and dimensions:

- Dimensions:**
 - 4270 Transition
 - 3050
 - 760
 - 460
 - 1265
 - 255
 - 750
- Labels:**
 - A
 - B
 - C
 - D
 - E
 - F
 - Face of Guardrail
 - Abutment Face
 - Bridge Deck
 - Approach Slab
 - Abutment
 - Bridge Roadway width
 - Toe of Parapet & ϕ Beam

25 mm SAWCUT
(TYP.)

SECTION A-A

3050

760

460

SI5M6 @ 300

25 mm deep sawcut in parapet

2-SI5M3

SI5M4 N.F.

SI5M5 F.F.

SI5M7 N.F.

2-SI5M5

2-SI5M3

S20M02 F.F. & S20M03 N.F. @ 300

11 Sp. @ 305 = 3355

12-S20M04 F.F.

12-S20M03 N.F.

S20M04 F.F.

S20M03 N.F.

2-S20M05

195

225

225

75

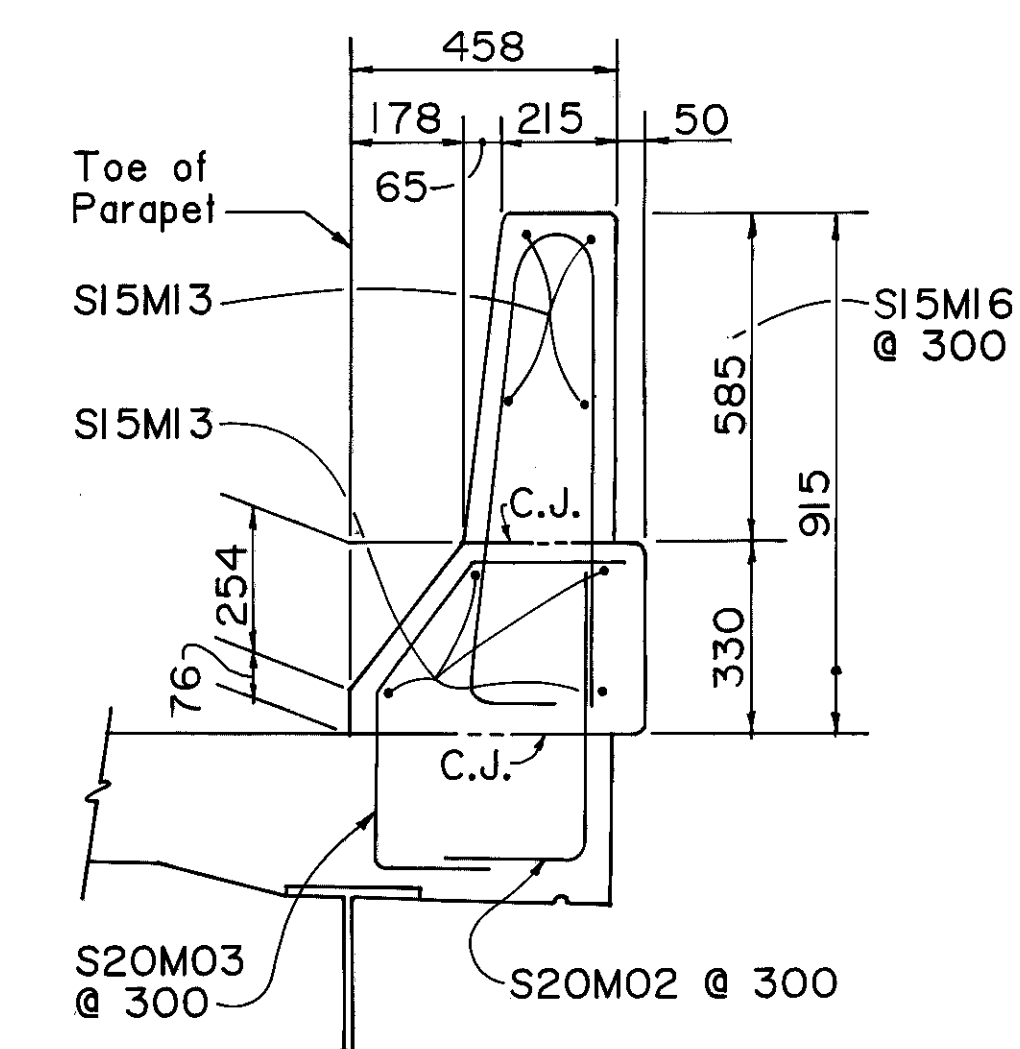
102

Provide concrete insert anchor assembly. See Std. Dwg. GR-3.1M & GR-3.2M

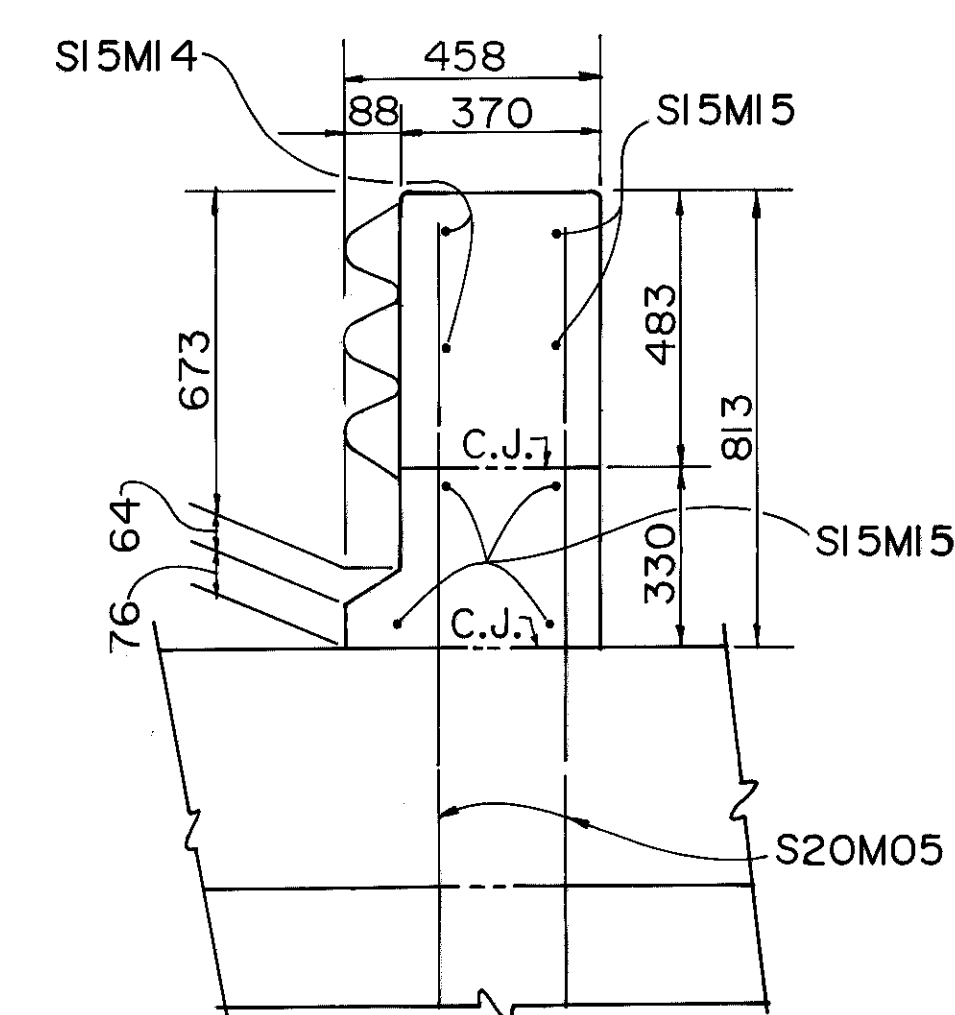
C Bearing

SECTION D-D

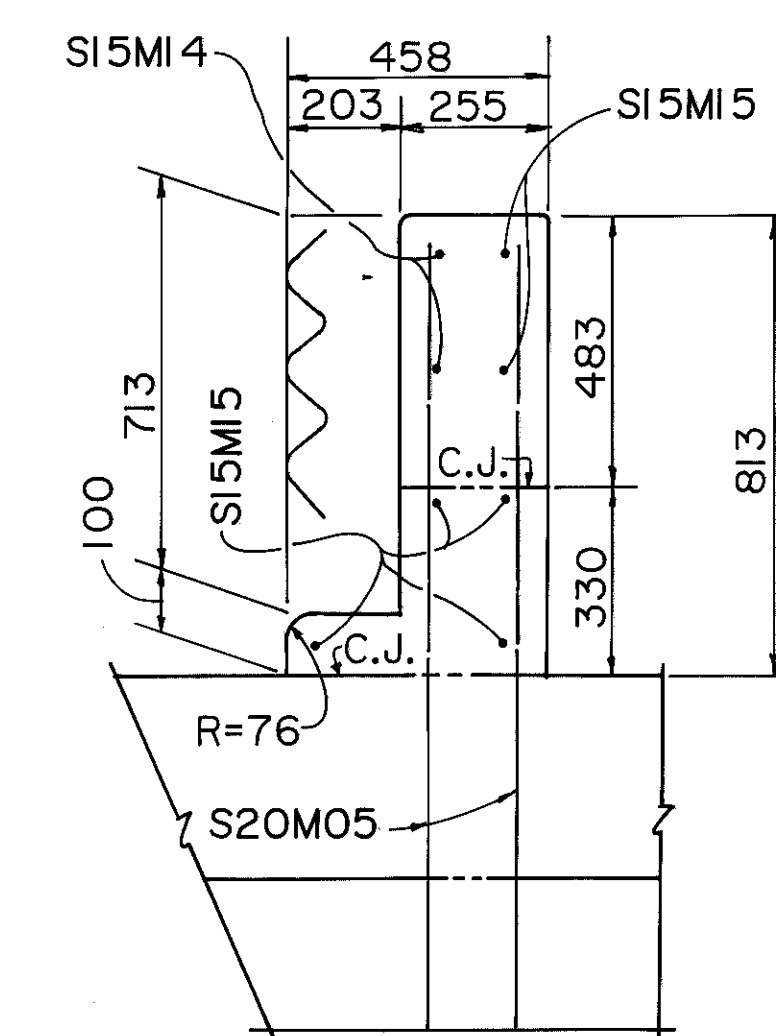
SECTION D-D



SECTIONS B-B & C-C



SECTION E-E

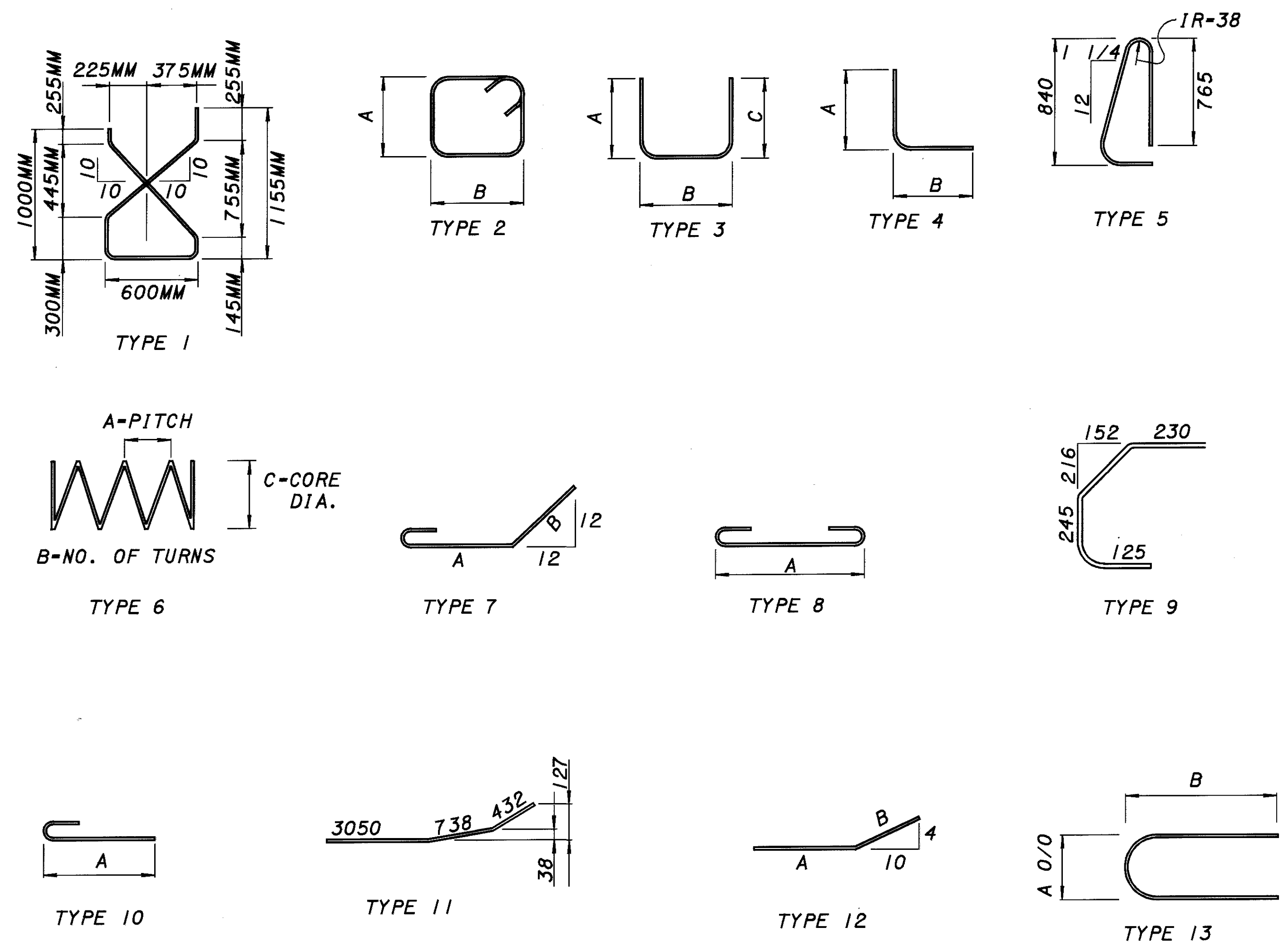


SECTION F-F

N.F. = Near Face
F.F. = Far Face

PIERS						
MARK	NO.	LENGTH MM	TYPE	A MM	B MM	C MM
P35M01	8	10 225*	ST			
P35M02	8	6475	4	5330	1245	
P35M03	8	11 575*	ST			
P35M04	40	10 375	ST			
P35M05	80	4940	4	4360	680	
P35M06	140	3050	8	2130		
P35M07	40	10 675	ST			
P35M08	8	9100*	ST			
P35M09	8	6700	4	5555	1245	
P35M10	8	10 675*	ST			
P30M01	8	9725*	ST			
P30M02	8	4700	ST			
P30M03	8	11 575*	ST			
P30M04	40	9000	ST			
P30M05	80	3950	4	3360	680	
P30M06	40	9300	ST			
P30M07	8	8600*	ST			
P30M08	8	4925	ST			
P30M09	8	10 675*	ST			
P20M01	38	4640	2	1275	920	
P15M01	12	11 575*	ST			
P15M02	156	4550	2	1275	920	
P15M03	82	1740	3	450	920	450
P15M04	24	3065	13	890	1290	
P15M05	12	10 675*	ST			
P15M06	24	1570	4	1260	350	
P15M07	4	1620	3	450	800	450
SP15M01	5	9000	6	115	83	765
SP15M02	5	9300	6	115	85	765

SUPERSTRUCTURE							
MARK	NO.	LENGTH MM	TYPE	A MM	B MM	C MM	D MM
S25M01	102	1570	7	859	430		
S25M02	8	10 450*	ST				
S25M03	8	6000*	ST				
S25M04	8	8825	ST				
S20M01	148	9000	ST				
S20M02	336	680	4	450	280		
S20M03	388	795	9				
S20M04	52	1170	4	940	280		
S20M05	24	1500	ST				
S15M01	154	2270	3	875	600	875	
S15M02	154	1285	4	875	450		
S15M03	154	2590	3	1310	450	910	
S15M04	10	10 450*	ST				
S15M05	10	5700*	ST				
S15M06	10	8530	ST				
S15M07	910	11 350	ST				
S15M08	455	5805	ST				
S15M09	455	7575	ST				
S15M10	455	7890	ST				
S15M11	455	6580	ST				
S15M12	1032	10 435	ST				
S15M13	80	10 980	ST				
S15M14	8	4220	11				
S15M15	24	4220	ST				
S15M16	336	1825	5				
S15M17	52	920	10				



NOTES:

1. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
2. ALL DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS, EXCEPT WHERE NOTED.
4. 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, A15M01 IS A 15 BAR.
5. STANDARD BENDS ARE TO BE PROVIDED, EXCEPT WHERE NOTED.
6. MECHANICAL CONNECTORS:
*AFTER BAR LENGTH INDICATES A BAR WITH A MECHANICAL CONNECTOR.

BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE AS GIVEN BY THE DIMENSION "L" SHOWN ON THE PLANS.

CONNECTORS AND DOWEL BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY MAY BE REPLACED BY MATERIAL WHICH MEETS THE SPECIFICATIONS.

CONNECTORS AND DOWEL BAR EXTRUSIONS SHALL CONFORM WITH ITEM 509 AND SHALL BE INCLUDED IN THE BID PRICE FOR THE APPROPRIATE CONCRETE ITEM.

7. SPIRAL REINFORCING BARS:

THE LENGTH SHOWN IN THE STEEL LIST FOR SPIRAL BARS IS THE LENGTH OF THE SPIRAL ALONG THE AXIS OF THE SPIRAL. ONE AND ONE-HALF CLOSED-COIL TURNS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNELS, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 1.19 KILOGRAM PER METER OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COILS. LENGTH OF CAGE PLACED BELOW FINISHED GRADE SHALL BE INCREASED FROM THE 5000MM MINIMUM SPECIFIED AS NEEDED TO ADJUST THE TOP OF THE CAGE TO PROVIDE THE REQUIRED 450MM EMBEDMENT OF PILE INTO THE PIER CAP.

SPACERS:

CONCRETE SPACERS OR OTHER APPROVED NONCORROSIVE SPACING DEVICES SHALL BE USED AT SUFFICIENT INTERVALS (NEAR BOTTOM AND AT INTERVALS NOT EXCEEDING 3050MM) TO ENSURE 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 PILE. THE SPACERS SHALL HAVE ADEQUATE DIMENSIONS TO ENSURE A MINIMUM OF 75MM CLEAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCING CAGE AND THE DESIGN DIMENSION OF THE PILE.

8. REINFORCING STEEL IS INCLUDED WITH THE APPROPRIATE CONCRETE ITEM FOR PAYMENT.

ABUTMENTS

MARK	NO.	LENGTH MM	TYPE	A MM	B MM	C MM	INCREMENT
A35M01	8	10 000	ST				
A35M02	8	5870*	ST				
A35M03	8	8800**	ST				
A35M04	8	10 075	ST				
A25M01	8	8175	ST				
A25M02	8	6000*	ST				
A25M03	8	6975**	ST				
A25M04	8	10 200	ST				
A20M01	154	3100	1				
A15M01	148	3240	2	770	770		
A15M02	124	2740	3	1110	600	1110	
A15M03	24	3970	3	1725	600	1725	
A15M04	12	7850	ST				
A15M05	4 SERIES	3180 TO	3	1330 TO	600	1330 TO	** 376
	OF 6	1300**		390		390	
A15M06	12	5720*	ST				
A15M07	24	2215	ST				
A15M08	8	1300	ST				
A15M09	8	2225	12	225	2000		
A15M10	12	6675*	ST				
A15M11	12	9900	ST				
A10M01	90	2620	2	740	515		