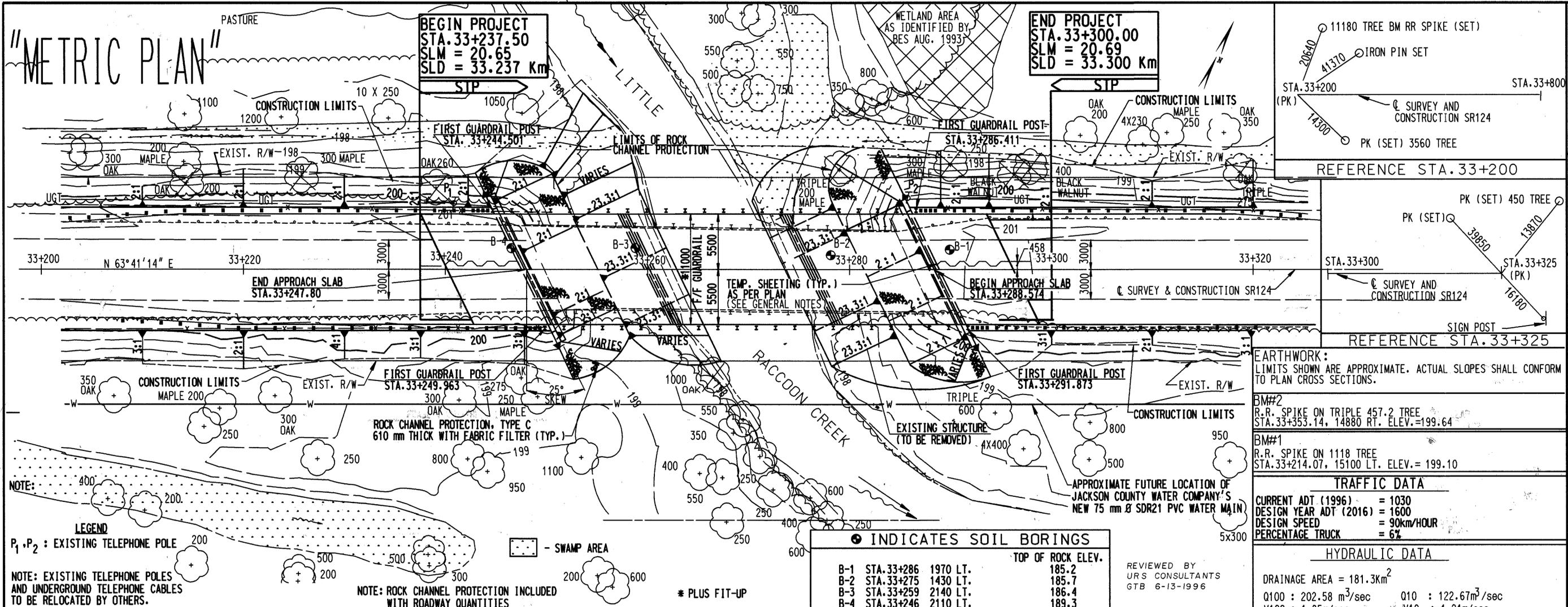


"METRIC PLAN"

BEGIN PROJECT
 STA. 33+237.50
 SLM = 20.65
 SLD = 33.237 Km

END PROJECT
 STA. 33+300.00
 SLM = 20.69
 SLD = 33.300 Km



LEGEND
 P₁, P₂ : EXISTING TELEPHONE POLE
 NOTE: EXISTING TELEPHONE POLES AND UNDERGROUND TELEPHONE CABLES TO BE RELOCATED BY OTHERS.

NOTE: ROCK CHANNEL PROTECTION INCLUDED WITH ROADWAY QUANTITIES

● INDICATES SOIL BORINGS

Boring	Station	Length (LT.)	Top of Rock Elev.
B-1	STA. 33+286	1970	185.2
B-2	STA. 33+275	1430	185.7
B-3	STA. 33+259	2140	186.4
B-4	STA. 33+246	2110	189.3

REVIEWED BY
 URS CONSULTANTS
 GTB 6-13-1996

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

BM#2
 R.R. SPIKE ON TRIPLE 457.2 TREE
 STA. 33+353.14, 14880 RT. ELEV.=199.64

BM#1
 R.R. SPIKE ON 1118 TREE
 STA. 33+214.07, 15100 LT. ELEV.= 199.10

TRAFFIC DATA

CURRENT ADT (1996)	= 1030
DESIGN YEAR ADT (2016)	= 1600
DESIGN SPEED	= 90km/HOUR
PERCENTAGE TRUCK	= 6%

HYDRAULIC DATA

DRAINAGE AREA	= 181.3Km ²
Q100	: 202.58 m ³ /sec
V100	: 1.85m/sec
HW100	: ELE.= 201.04
WATERWAY OPENING BELOW ELE= 201.04	
EXISTING	: 77.20m ²
PROPOSED	: 109.67m ²
CLEARANCE ABOVE DESIGN HW100	= 0.107m
CLEARANCE ABOVE HW100	= NONE

EXISTING STRUCTURE

TYPE : THREE SPAN CONTINUOUS STEEL STRINGER WITH STEEL JOIST, TIMBER FLOOR, SUPPORTED ON TIMBER SUBSTRUCTURE.

SPANS : 12192, 12192, 12192 C/C BRGS.

ROADWAY: 8077 F/F GUARDRAIL

LOADING: M13.5

WEARING SURFACE: BITUMINOUS

APPROACH SLAB: NONE

ALIGNMENT: TANGENT

SKEW : 25° RF

DISPOSITION: TO BE REMOVED

STRUCTURE FILE NO.: 4002318

DATE BUILT: 1932

PROPOSED STRUCTURE

TYPE : THREE SPAN COMPOSITE PRESTRESSED CONCRETE BOX BEAMS WITH CAPPED PILE SUBSTRUCTURE

SPANS : 11945, 15506, 11945 C/C BRGS.

MEASURED ALONG C SURVEY

ROADWAY: 11000 F/F GUARDRAIL

LOADING: MS18 AND THE ALTERNATE MILITARY LOADING

SKEW : 25° RF

WEARING SURFACE: 152 (MIN.) CONCRETE

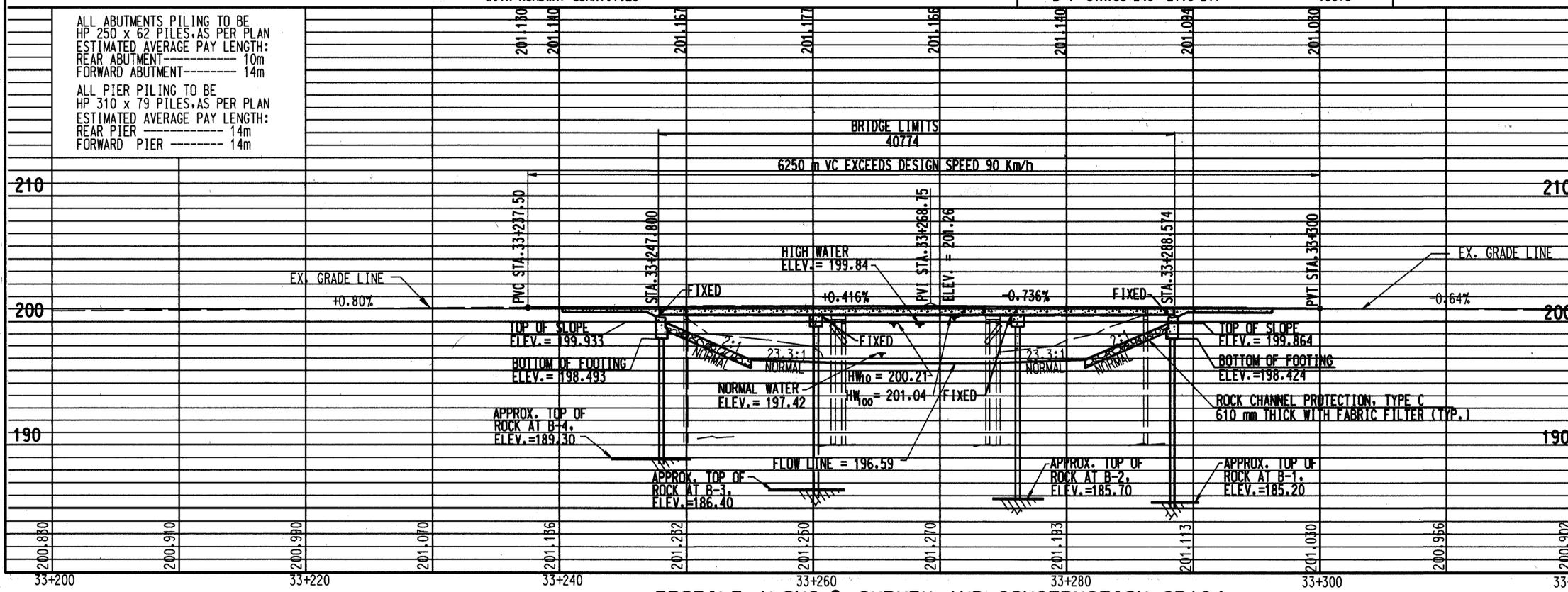
APPROACH SLAB : AS-1-81M (7620 m m)

ALIGNMENT : TANGENT

CROWN : 0.016

LATITUDE : N39°05'10"

LONGITUDE : W82°28'21"



PROFILE ALONG C SURVEY AND CONSTRUCTION SR124

DESIGN AGENCY
 WILBUR SMITH ASSOCIATES
 6660 DOUBLE TREE AVE.
 COLUMBUS, OHIO 43229

DATE
 J.M.S. 2/10/95

REVIEWED
 STRUCTURE FILE NUMBER
 4002326

DRAWN
 C.R. REVISED
 2/10/95

DESIGNED
 R.B. CHECKED
 G.T.

JACKSON COUNTY
 STA. 33+247.80
 STA. 33+288.581

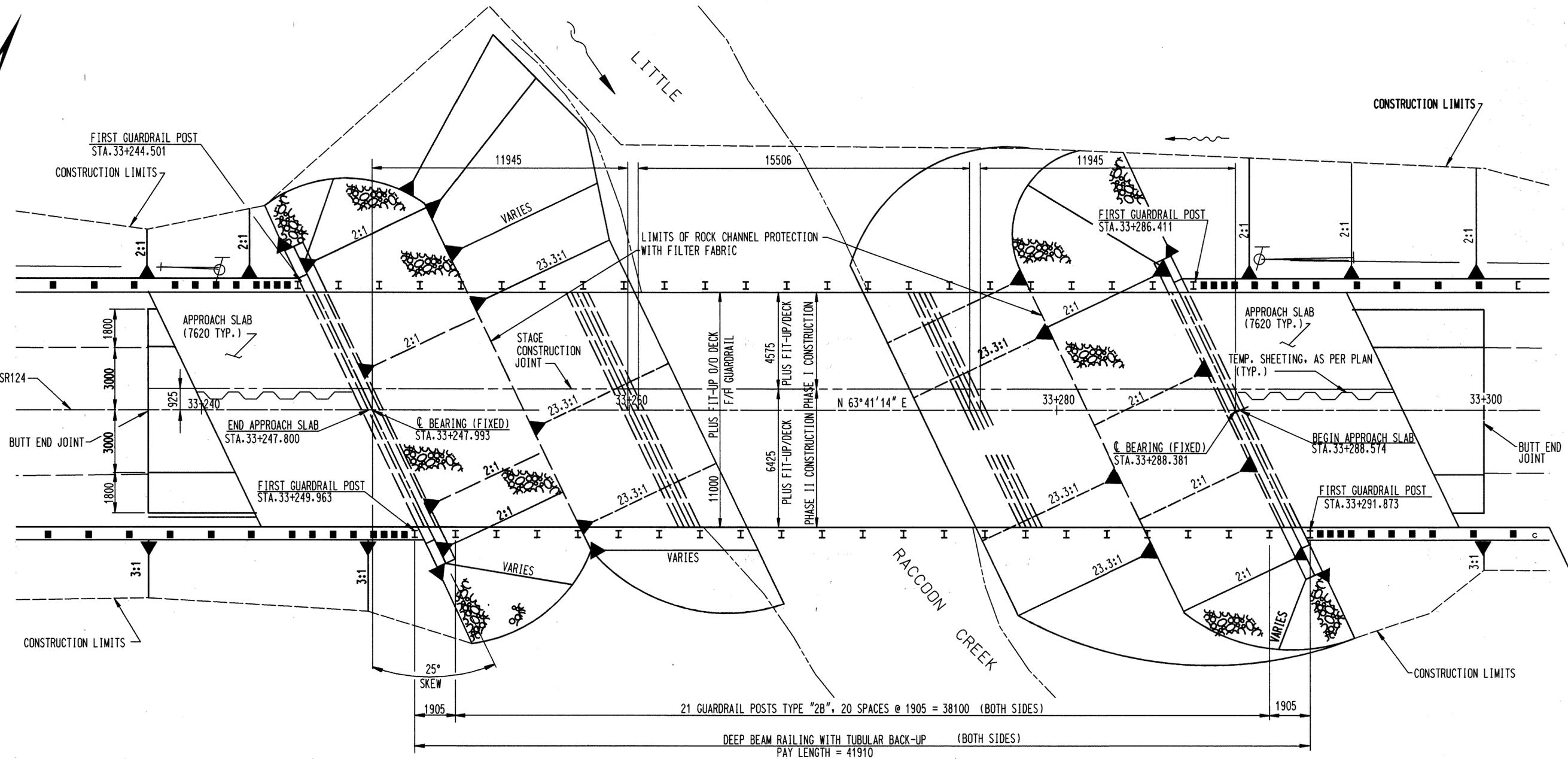
SITE PLAN
 BRIDGE NO. JAC-124-33248 OVER
 LITTLE RACCOON CREEK

JAC-124-33.237
 SLM = 20.65

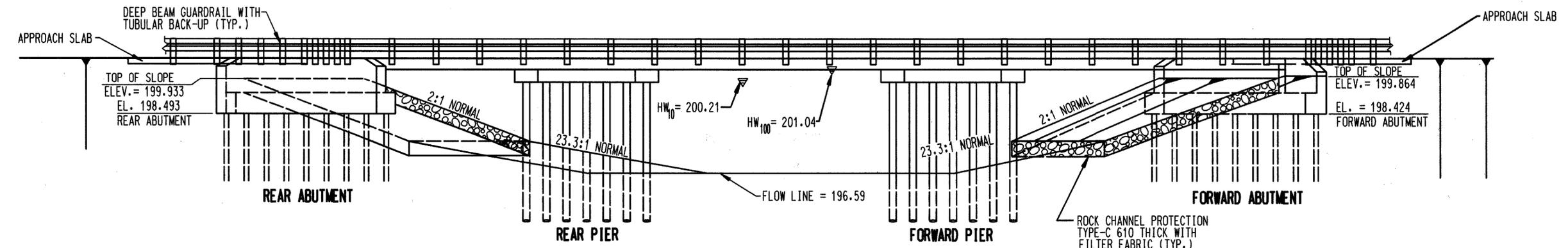
1
 17

19
 39

© SURVEY AND CONSTRUCTION SR124



PLAN



ELEVATION

DESIGN AGENCY
WILBUR SMITH ASSOCIATES
6660 DOUBLETREE AVE.
COLUMBUS, OHIO 43229

DESIGNED	DATE
R.B.	J.M.S.
CHECKED	REVIEWED
G.T.	J.M.S.
	STRUCTURE FILE NUMBER
	4002326
	REVISION
	2/19/96

GENERAL PLAN AND ELEVATION
BRIDGE NO. JAC-124-33248 OVER
LITTLE RACCOON CREEK

JAC-124-33.237
SLM = 20.65

GENERAL NOTES

DESIGNED R.B.
DATE
CHECKED J.M.S.
DATE

ESTIMATED QUANTITIES				ABUTS	PIER	SUPER	GEN'L	SEE SHEET NO.
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION				
202	11002	LUMP		STRUCTURE REMOVED, OVER 6 METER SPAN			LUMP	
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN *			LUMP	4/17
503	21101	85	CU.METER	UNCLASSIFIED EXCAVATION, AS PER PLAN	85			3/17
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION			LUMP	
507	11100	216	METER	STEEL PILES HP 250 X 62	216			
507	13300	196	METER	STEEL PILES HP 310 X 79		196		
SPECIAL	50771200	53	METER	PILE ENCASEMENT		53		4/17
509	15824	16,578	KILOGRAM	EPOXY COATED REINFORCING STEEL, GRADE 400 *	3548	1613	8670	
SPECIAL	51148000	84	CU.METER	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK), MIX 4 *			84	
SPECIAL	51148040	76	CU.METER	HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE, MIX 2 OR 4 *	54	22		
SPECIAL	51149000	LUMP		HIGH PERFORMANCE, TRIAL MIX *			LUMP	
SPECIAL	51149010	LUMP		HIGH PERFORMANCE, CONCRETE TESTING *			LUMP	
512	44400	5	SQ.METER	TYPE B WATERPROOFING	5			
SPECIAL	51267510	164	SQ.METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	50	8	106	4/17
515	51620	24	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM (12.20-15.24 METER)(CB535-915) *			24	
515	51630	12	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM (15.24-18.90 METER)(CB535-915) *			12	
516	13600	13	SQ.METER	25 m m PREFORMED EXPANSION JOINT FILLER	13			
SPECIAL	51631300	25	METER	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	25			17/17
516	41100	36	EACH	3 m m PREFORMED BEARING PAD, 711.21	12	24		
516	43100	72	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), (200 X 150 X 26) *	24	48		
517	72300	83.82	METER	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS AND ANCHOR (BOLTS) *			83.82	
518	21200	44	CU METER	POROUS BACKFILL WITH FILTER FABRIC	44			
SPECIAL	51822300	82	METER	STEEL DRIP STRIP			82	
518	40001	35	METER	150 m m PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN *	35			3/17
518	40011	18	METER	150 m m NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN *	18			3/17

* (SEE PROPOSAL NOTE)

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992, INCLUDING THE 1993, 1994 & 1995 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA

DESIGN LOADING: MS18 AND THE ALTERNATE MILITARY LOADING
HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE: COMPRESSIVE STRENGTH 31.0 MPa
HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE: COMPRESSIVE STRENGTH 27.5 MPa
REINFORCING STEEL: ASTM A615M, A616M, OR A617M - GRADE 400, MINIMUM YIELD STRENGTH 400 MPa

CONCRETE FOR PRESTRESSED BEAMS: COMPRESSIVE STRENGTH 38 MPa
UNIT STRESS: 15.2 MPa COMPRESSION
3.1 MPa TENSION

PRESTRESSING STRAND: ASTM A416 GRADE 270, 12.7 DIA., 7 WIRE, UNCOATED, STRESS-RELIEVED STRANDS WITH f's = 1860 MPa AND INITIAL STRESS = 0.70 f's. (STRESSED RELIEVED STRANDS)

MILD REINFORCING STEEL FOR THE CONCRETE PRESTRESSED BEAMS GRADE 400, MINIMUM YIELD STRENGTH 400 MPa.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL.
STEEL DRIP STRIP.
SEALING OF CONCRETE SURFACES TO LIMITS SHOWN IN THESE PLANS.
65 m m CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

REFERENCE SHALL BE MADE TO:

STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
AS-1-81M	DATED 10-25-94	944	DATED 12-7-95
DBR-2-73M	DATED 8-18-95	820	DATED 6-14-95
PSBD-1-93M	REVISED 12-19-94	942	DATED 6-14-95
PCB-91M	DATED 3-20-95	853	DATED 12-8-95
DS-1-94M	DATED 12-15-94		

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.
ABUTMENTS SHALL BE REMOVED TO ELEV. 198.00
PIERS SHALL BE REMOVED TO ELEV. 195.29

UTILITY LINES:

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

BEARING PAD SHIMS.

36-3 m m THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 200 m m BY 150 m m SHALL BE PLACED UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. THE AMOUNT SUPPLIED IS SUFFICIENT FOR 2 SHIMS PER BEAM. PAYMENT WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 516-3 m m PREFORMED BEARING PADS. ANY UNUSED SHIMS SHALL BECOME THE PROPERTY OF THE STATE.

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 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 PRICE BID FOR THE BEARINGS.

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 AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL TYPE 1 (LSM BACKFILL) WITHIN THE LIMITS OF THE APPROACH SLABS. THE CONTRACTOR ALSO MAY USE THE LSM BACKFILL TO CONSTRUCT THE SLOPES IN THIS 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, PERFORATED PLASTIC PIPE, AND POROUS BACKFILL SHALL BE PLACED AFTER THE LSM BACKFILL HAS CURED AND THE FORMS HAVE BEEN REMOVED. SEE SUPPLEMENTAL SPECIFICATION 853 FOR LSM BACKFILL.

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

ITEM 518, 150 m m PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN

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

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

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 150 m m 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.

EROSION CONTROL PAD AND ANIMAL GUARDS SHALL BE PROVIDED AT EACH OUTLET AS PER STANDARD DRAWING DM-1.1M. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 518, 150 m m NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.

DESIGN AGENCY
 WILBUR SMITH ASSOCIATES
 6660 DOUBLE TREE AVE.
 COLUMBUS, OHIO 43229

DATE
 2/22/96

REVIEWED
 J.M.S.

DRAWN
 R.J.V.

DESIGNED
 R.B.

CHECKED
 G.T.

STRUCTURE FILE NUMBER
 4002326

ESTIMATED QUANTITIES AND GENERAL NOTES
 JAC-124-33248 OVER
 LITTLE RACCON CREEK

JAC-124-33-237
 SLM = 20.65

3 / 17

21
 39

GENERAL NOTES

PILES

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

PILE DESIGN LOADS

THE DESIGN LOAD FOR THE ABUTMENT PILES IS 272 KN PER PILE.
THE DESIGN LOAD FOR THE PIERS PILES IS 613 KN PER PILE.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

A CONCRETE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES SHOWN ON SHEET [8/17] & [12/17].
SEE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES. THE COLOR OF THE URETHANE SHALL BE FEDERAL COLOR NO. 17778 (OFF-WHITE).

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, THE SPILL THROUGH SLOPES AND THE 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 AND PIER PILES FOR REAR AND FORWARD PIERS SHALL NOT BEGIN UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN: AT THE OPTION OF THE CONTRACTOR, AN ALTERNATE METHOD OF 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. FOR APPROVAL, FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN. CONSTRUCTION OF THE 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.

ITEM SPECIAL - PILE ENCASEMENT

ALL PILES FOR THE CAPPED PILE PIERS SHALL BE ENCASED IN CLASS S CONCRETE (499.03) AND SHALL BE IN ACCORDANCE WITH 511, EXCEPT AS MODIFIED AND SUPPLEMENTED HEREIN. THE REQUIRED SLUMP IS 150 m m, PLUS OR MINUS 12 m m. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.50. IF CONCRETE IS PLACED UNDER WATER, THE REQUIREMENTS OF ADDING 10 PERCENT MORE CEMENT TO THE CONCRETE, SHALL BE WAIVED. THE CONCRETE SHALL BE PLACED WITHIN A FORM THAT CONSISTS OF POLYETHYLENE PIPE (707.16 OR SS 944), OR PVC PIPE (SS 942). THE ENCASEMENT SHALL EXTEND FROM 1 METER BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP AND SHALL BE POSITIONED SO THAT AT LEAST 75 m m OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

THE LENGTH OF PILE ENCASEMENT SHALL BE MEASURED IN METERS ALONG THE LENGTH OF THE PILE. THIS ITEM INCLUDES ALL WORK AND MATERIALS NECESSARY TO FURNISH THE REQUIRED ENCASEMENT. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER METER OF PILE ENCASEMENT APPROVED IN PLACE.

IN LIEU OF ENCASING THE PILE IN CONCRETE, AT THE OPTION OF THE CONTRACTOR, THE PILE MAY BE GALVANIZED AS PER 711.02. THE GALVANIZING SHALL BE CONTINUOUS FROM A MINIMUM OF 1 METER BELOW THE FINISH GROUND SURFACE UP TO THE CONCRETE PIER CAP. THE GALVANIZED COATING THICKNESS SHALL BE A MINIMUM OF 10 MICROMETER. ALL GOUGES, SCRAPES, SCRATCHES OR OTHER SURFACE IMPERFECTIONS CAUSED BY THE HANDLING OR THE DRIVING OF THE PILE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR THE GALVANIZING WILL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM SPECIAL, PILE ENCASEMENT. PAYMENT WILL ONLY BE MADE FOR THE GALVANIZED LENGTH OF PILE AS REQUIRED BY THE PLAN AND/OR APPROVED BY THE ENGINEER. ALL GALVANIZING PROVIDED BEYOND THE PROJECT REQUIREMENTS IS AT THE CONTRACTOR'S EXPENSE.

TEMPORARY SHORING

TEMPORARY SHEETING SHALL BE CONSTRUCTED TO SUPPORT THE ROADWAY DURING PHASE I AND PHASE II CONSTRUCTION. STEEL SHEET PILING SHALL CONFORM TO ASTM A572 STEEL WITH MINIMUM YIELD STRENGTH OF 350 MPa AND MINIMUM SECTION MODULUS OF 1,290,000 m m³ PER METER OF WALL FOR BOTH REAR AND FORWARD ABUTMENTS.

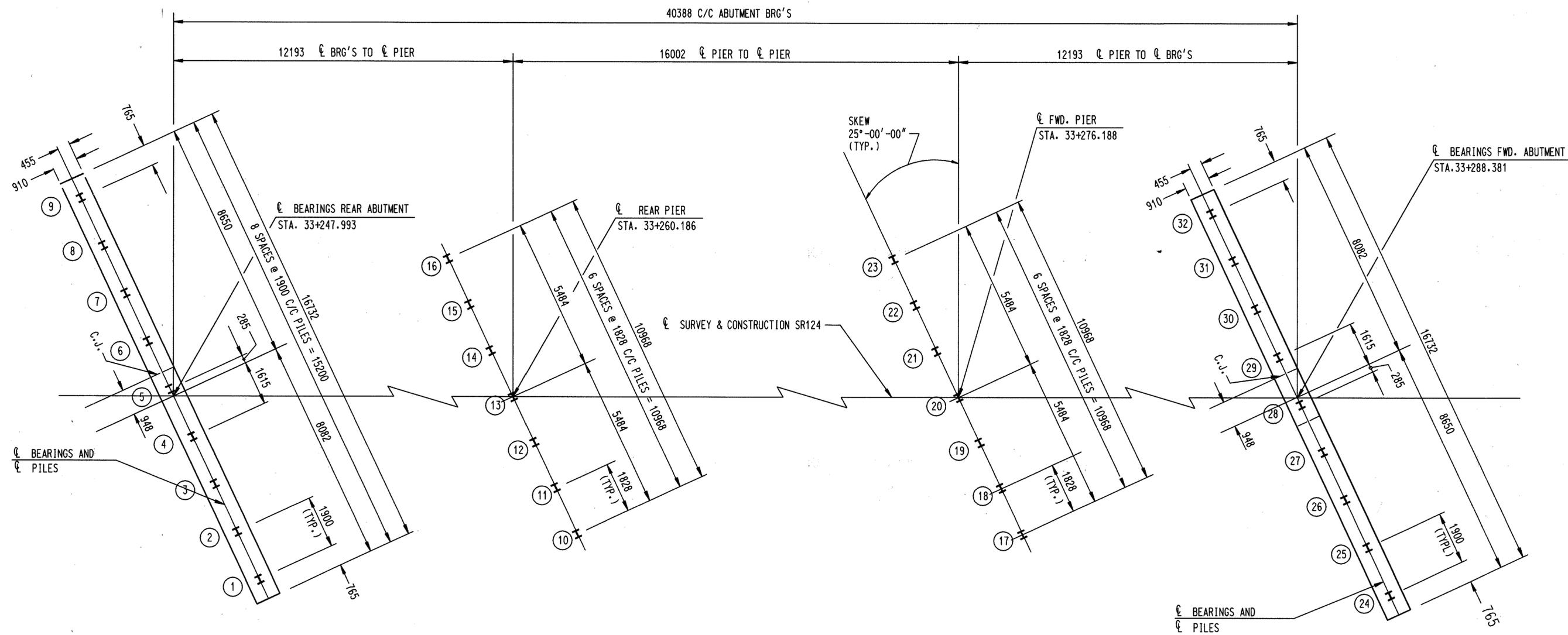
THE TOP AND BOTTOM ELEVATIONS AND LIMITS OF SHEET PILING AFTER INSTALLATION SHALL BE AS SHOWN BELOW.

	TOP ELEV.	BOTTOM ELEV.	LIMITS OF SHORING	
			FROM	TO STA.
REAR ABUTMENT	201.17	191.00	BACK OF EX. REAR ABUT.	33+245.50
FORWARD ABUTMENT	201.15	192.70	BACK OF EX. FWD. ABUT.	33+292.00

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN THE INSTALLATION WILL BE COMPLETED TO THE REQUIRED DEPTH. EXCAVATION FOR THE CONSTRUCTION OF ABUTMENTS SHALL NOT START UNTIL IT IS APPROVED BY THE ENGINEER.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 503, COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN AND SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIALS TO COMPLETE THE ITEM OF WORK.

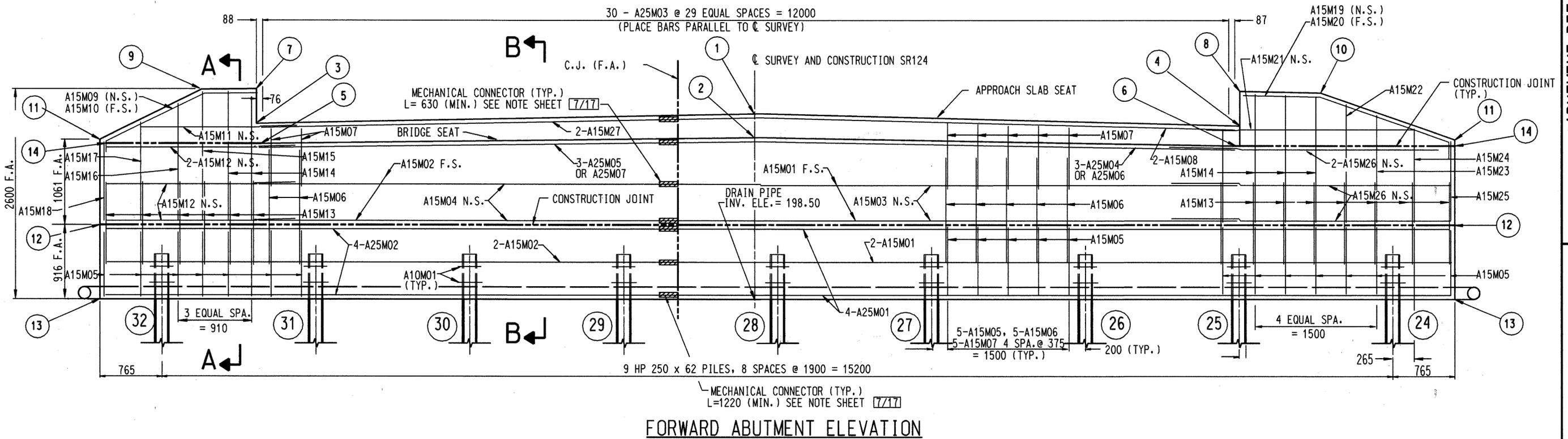
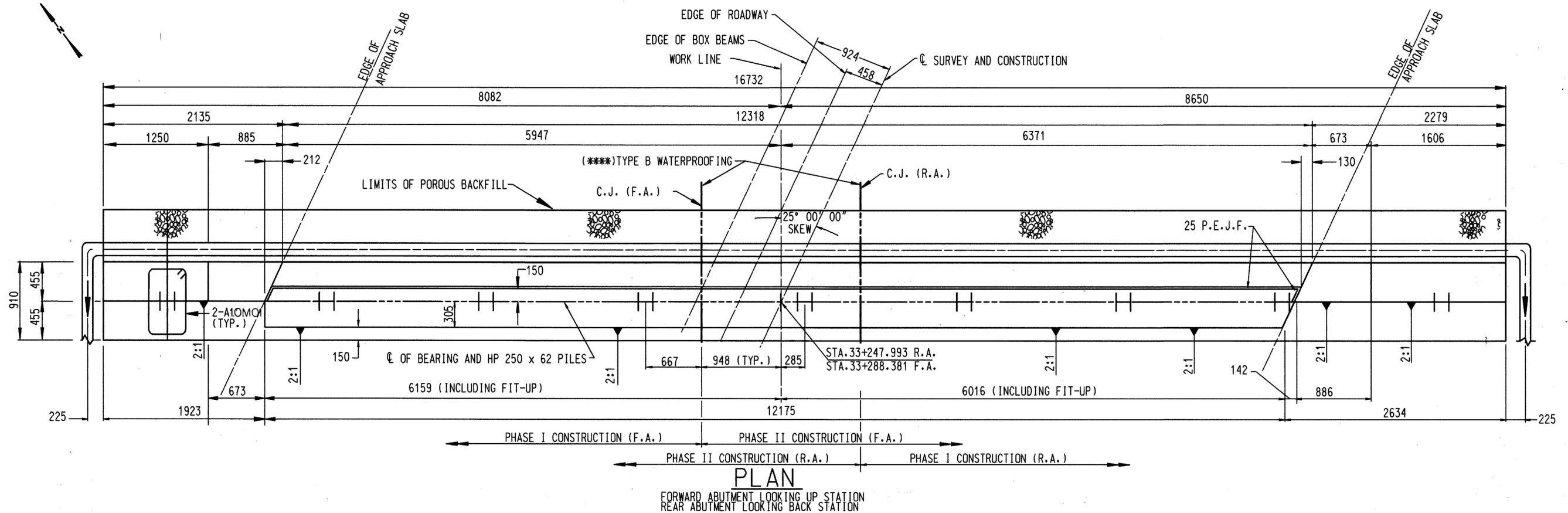
DESIGNED R.B. CHECKED G.T.	DRAWN R.L.V. REVISED 2/21/96	REVIEWED J.M.S. STRUCTURE FILE NUMBER 4002326	DATE 2/21/96	DESIGN AGENCY WILBUR SMITH ASSOCIATES 6660 DOUBLE TREE AVE. COLUMBUS, OHIO 43229
ESTIMATED QUANTITIES AND GENERAL NOTES				
BRIDGE NO. JAC-124-33248 OVER LITTLE RACCOON CREEK				
JAC-124-33.237				
SLM = 20.65				
4 / 17				
22				
39				



FOOTING PLAN

NOTE:
 ALL ABUTMENT PILES ARE HP 250 X 62 PILES
 ALL PIER PILES ARE HP 310 X 79 PILES

DESIGN AGENCY WILBUR SMITH ASSOCIATES 6660 DOUBLE TREE AVE. COLUMBUS, OHIO 43229	
DESIGN BY R.B.	REVIEWED DATE J.M.S. 2/20/96
CHECKED G.T.	STRUCTURE FILE NUMBER 4002326
FOOTING PLAN BRIDGE NO. JAC-124-33248 OVER LITTLE RACCOON CREEK	
JAC-124-33.237 SLM = 20.65	
5	17
23	39



*** ELEVATIONS AT C BEARINGS *** ELEVATIONS ALONG THE FACE OF BACKWALL

LOCATION	**1	**2	***3	***4	**5	**6	7	8	9	10	11	12	13	14
REAR ABUTMENT	200.726	200.386	200.646	200.636	200.305	200.293	201.081	201.069	201.077	201.064	200.470	199.408	198.493	200.254
FORWARD ABUTMENT	200.666	200.327	200.596	200.566	200.252	200.225	201.028	201.001	201.024	200.996	200.400	199.339	198.424	200.165

NOTE:
REFER TO SHEET [771] FOR REAR ABUTMENT ELEVATION AND NOTES

N.S. ~ DENOTES NEAR SIDE
F.S. ~ DENOTES FAR SIDE
R.A. ~ DENOTES REAR ABUTMENT
F.A. ~ DENOTES FORWARD ABUTMENT
P.E.J.F. ~ DENOTES PREFORMED EXPANSION JOINT FILLER

DESIGN AGENCY
WILBUR SMITH ASSOCIATES
6660 DOUBLETREE AVENUE
COLUMBUS, OHIO 43229

DATE
2/20/96

REVIEWED
J.M.S.

DRAWN
C.R.

DESIGNED
R.B.

CHECKED
G.T.

STRUCTURE FILE NUMBER
4002326

REVISED
2/19/96

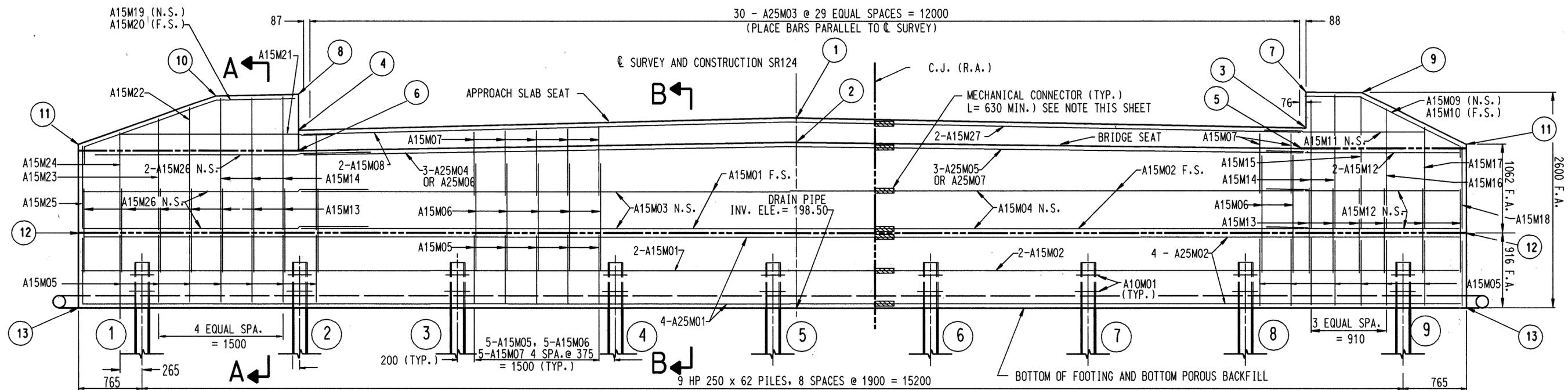
ABUTMENT DETAILS
BRIDGE NO. JAC-124-33248 OVER
LITTLE RACCON CREEK

JAC-124-33.237
SLM = 20.65

6 / 17

24

39



REAR ABUTMENT ELEVATION

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED.
2. BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE SO PLACED AS TO AVOID INTERFERENCE WITH THE DRILLING OF THE ANCHOR DOWEL HOLES FOR THE PRESTRESSED BEAMS.
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. GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A AND SHALL BE INCLUDED WITH POROUS BACKFILL FOR PAYMENT.

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

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

ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

CONNECTORS AND DOWEL BARS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE PER KILOGRAM IN ITEM 509.

ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE PRESTRESSED CONCRETE BOX BEAMS HAVE BEEN ERECTED.

(****) 915 WIDE FROM THE BOTTOM OF THE FOOTING TO THE BOTTOM OF APPROACH SLAB.

FOR SECTION A-A AND SECTION B-B, SEE SHEET NO. 8/17.

FOR TERMINATION DETAILS OF 150 C.P.P., SEE SHEET NO. 8/17.

REINFORCING STEEL SPLICES

UNLESS SHOWN OTHERWISE, ALL SPLICES SHALL BE MADE BY OVERLAPPING THE ENDS OF THE BARS NOT LESS THAN SHOWN IN THE FOLLOWING TABLE FOR EPOXY COATED BARS:

BAR SIZE	MINIMUM LAP LENGTH (mm)
15	630
20	770
25	1220
30	1710

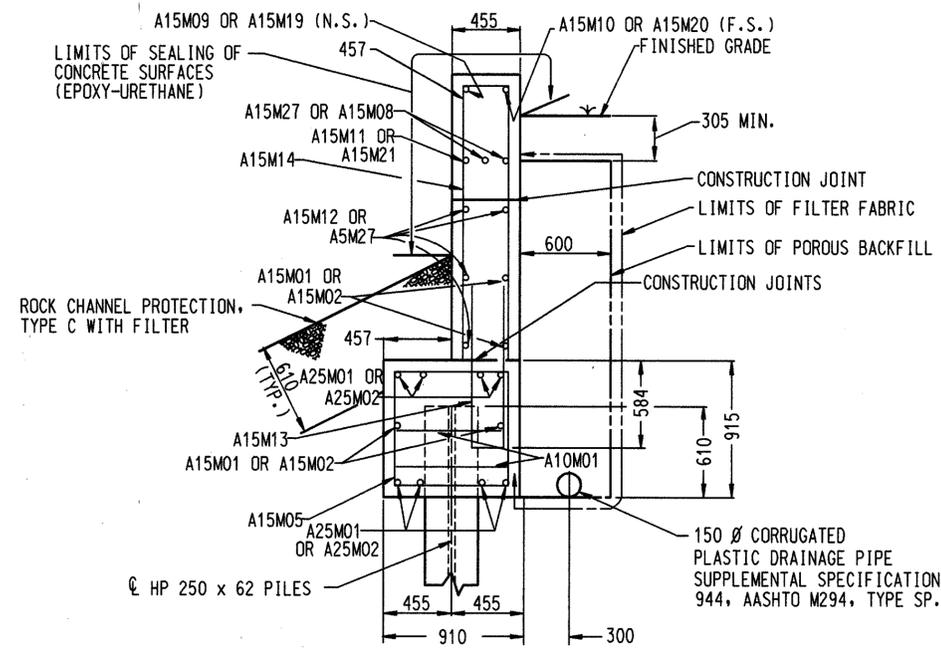
DESIGN AGENCY
WILBUR SMITH ASSOCIATES
6660 DOUBLETREE AVENUE
COLUMBUS, OHIO 43229

DATE 3/5/96
REVIEWED J.M.S.
DRAWN C.R.
DESIGNED R.B.
CHECKED G.T.
STRUCTURE FILE NUMBER 4002326
REVISED 3/5/96

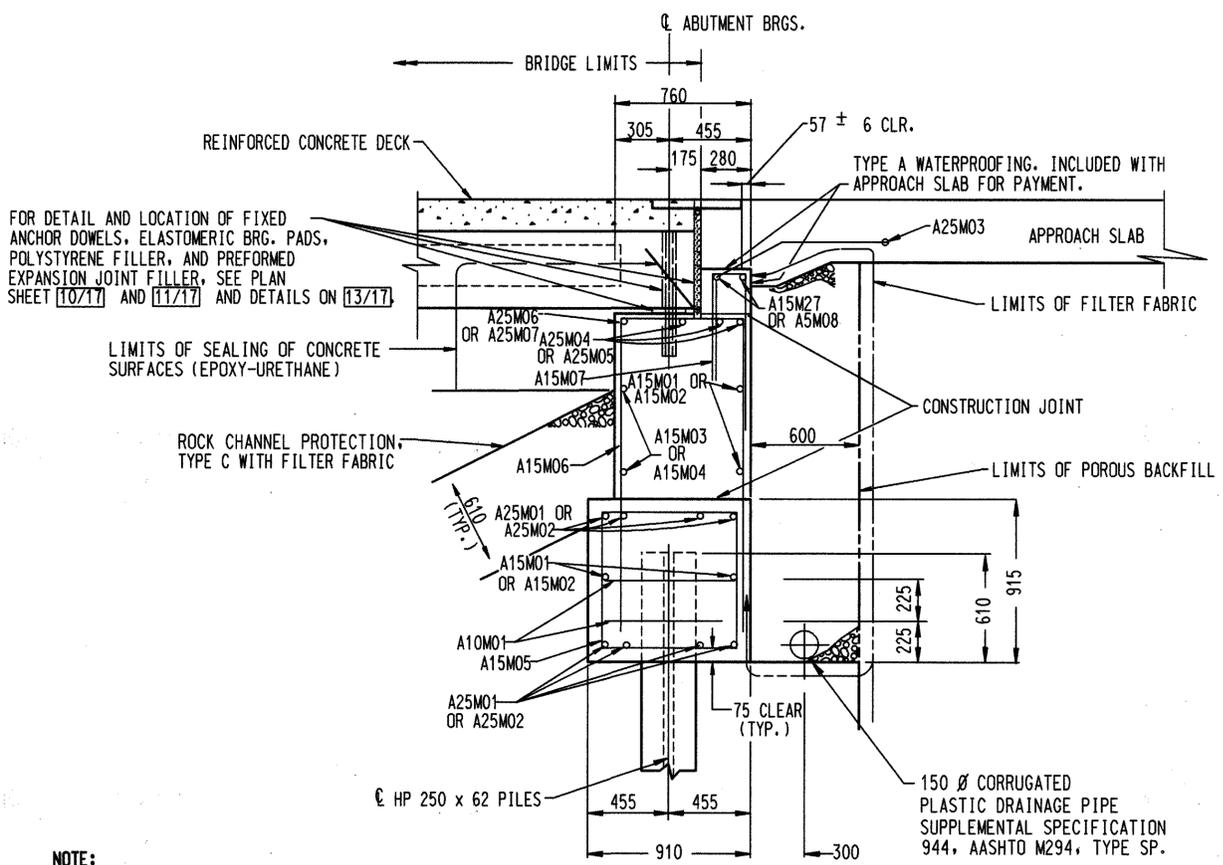
ABUTMENT DETAILS
BRIDGE NO. JAC-124-33248 OVER
LITTLE RACCOON CREEK

JAC-124-33.237
SLM = 20.65

7/17
25
39

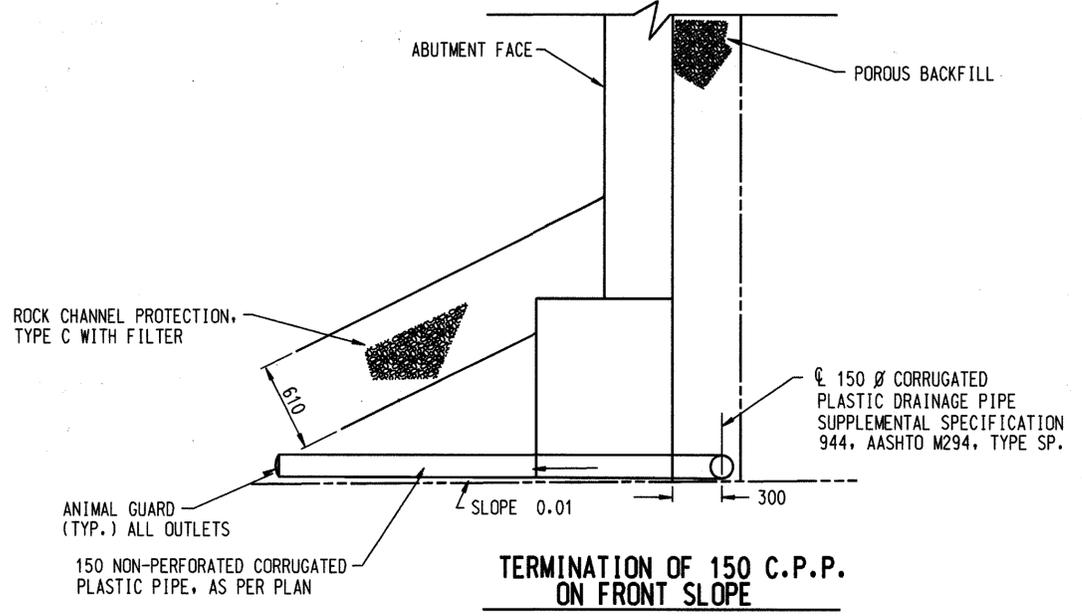


SECTION A-A



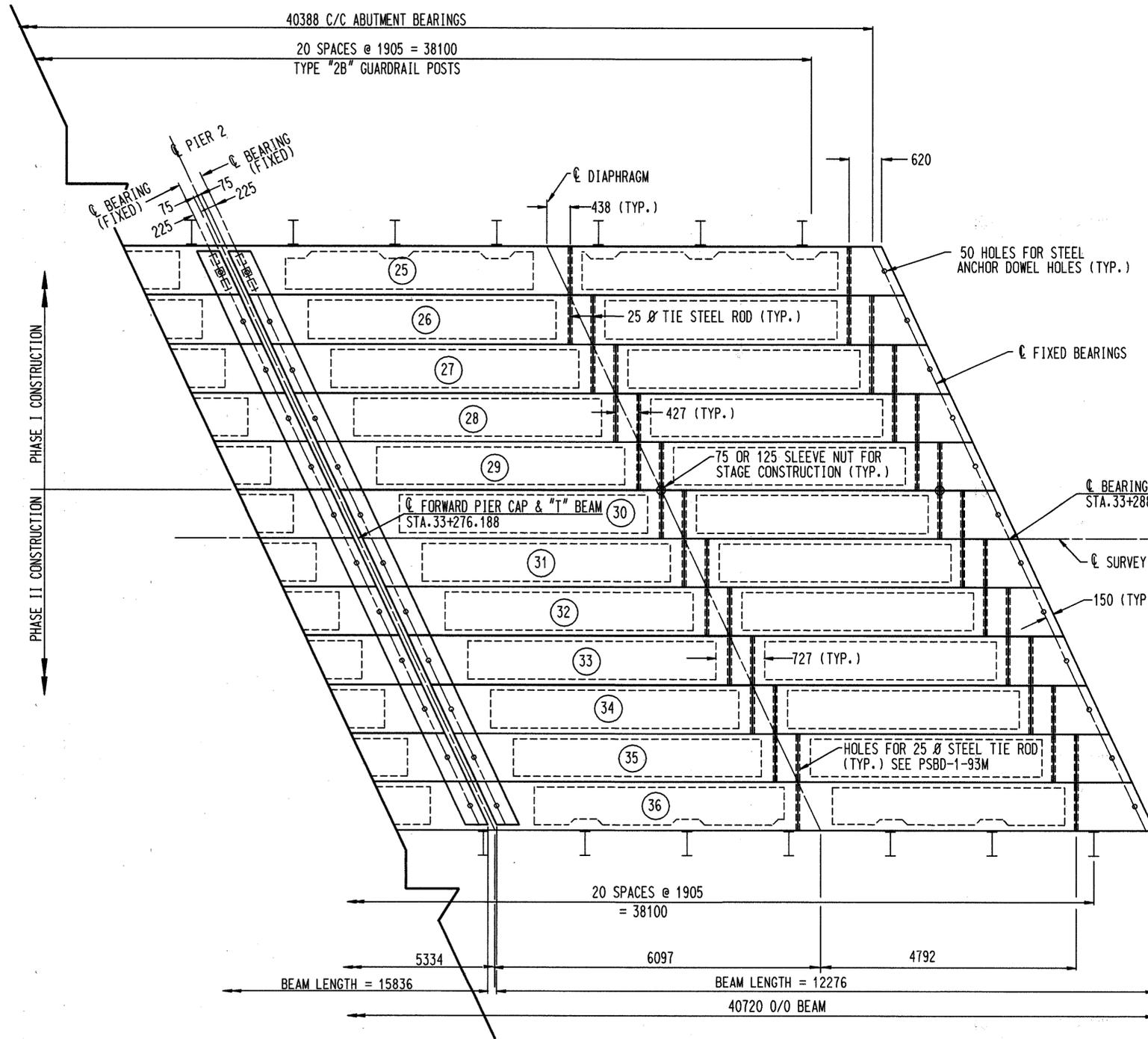
SECTION B-B

NOTE:
 ALL REINFORCING STEEL TO BE EPOXY COATED.
 FOR REAR AND FORWARD ABUTMENT PLAN AND ELEVATION, SEE SHEETS [7/17] AND [6/17]

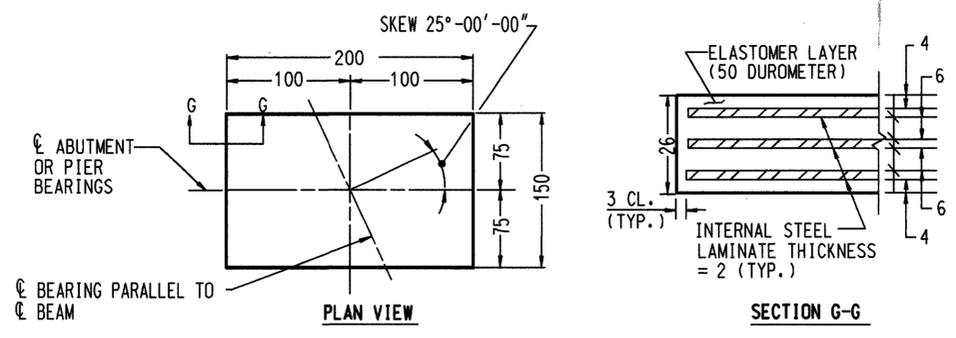


TERMINATION OF 150 C.P.P. ON FRONT SLOPE

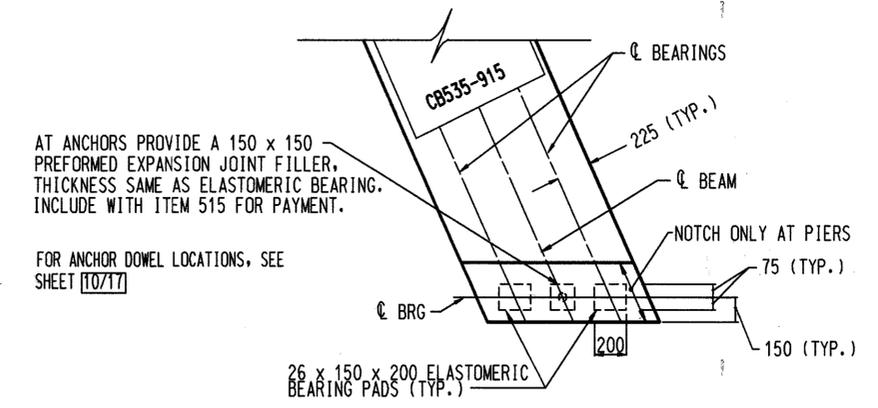
DESIGN AGENCY WILBUR SMITH ASSOCIATES 6660 DOUBLE TREE AVE. COLUMBUS, OHIO 43229	
DESIGN BY R.B.	REVIEWED DATE J.M.S. 2/20/96
DRAWN BY R.J.Y.	REVIEWED STRUCTURE FILE NUMBER 4002326
CHECKED BY G.T.	REVISOR 2/19/96
ABUTMENT DETAILS	
BRIDGE NO. JAC-124-33248 OVER LITTLE RACCOON CREEK	
JAC-124-33.237	
SLM = 20.65	
8	17
26	
39	



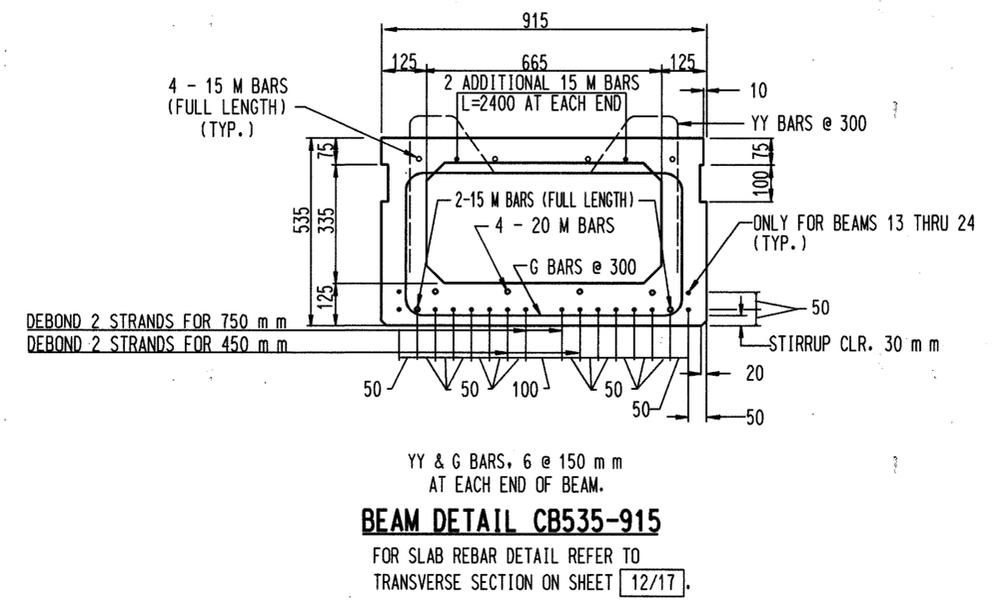
BOX BEAM - DECK PLAN
FOR BEAM DETAIL SEE THIS SHEET
FOR TRANSVERSE SECTION REFER TO SHEET 12/17
NOTE: FOR APPLICABLE SUPERSTRUCTURE AND GUARDRAIL DETAILS AND NOTES NOT SHOWN, REFER TO STD. DWGS. PSBD-1-93M



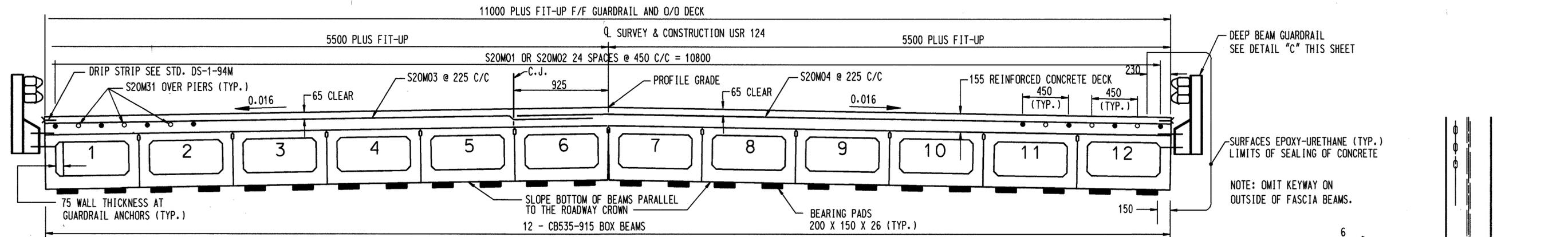
LAMINATED ELASTOMERIC BEARINGS DETAILS AT ABUTMENTS AND PIERS



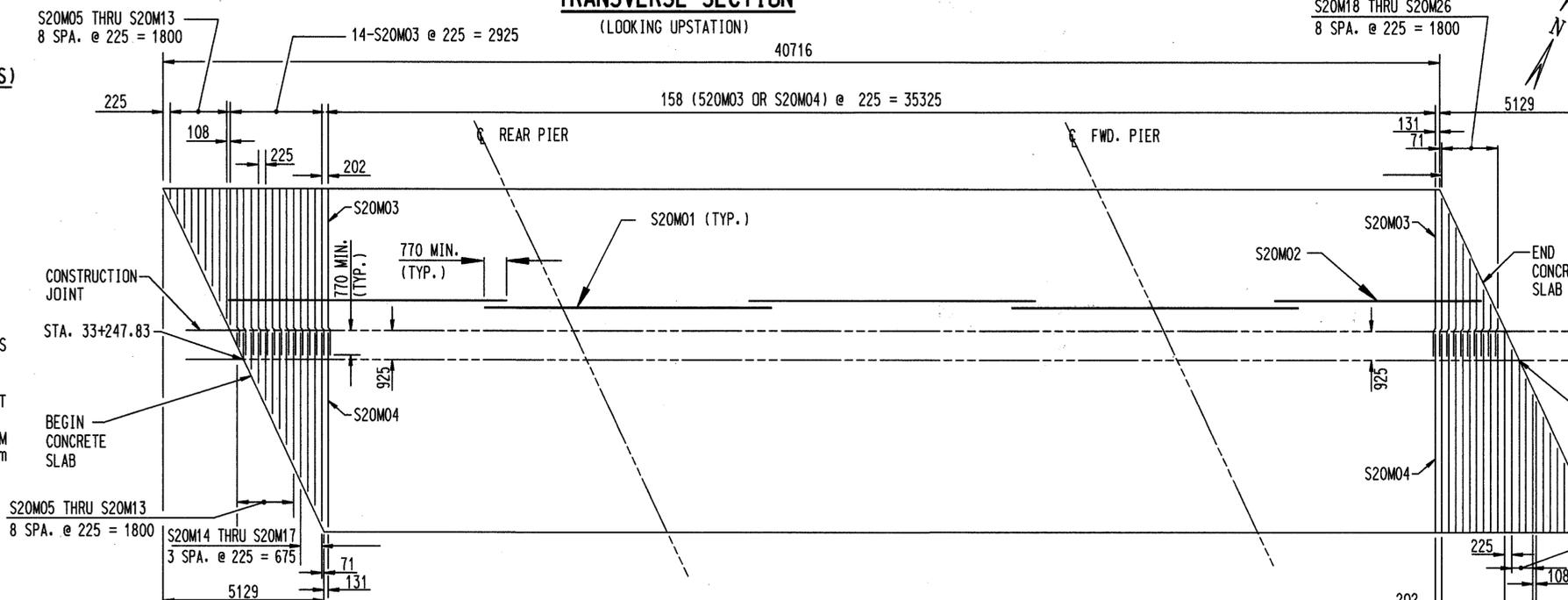
TYPICAL BEAM ENDING DETAIL AT PIERS AND ABUTMENTS



DESIGN AGENCY WILBUR SMITH ASSOCIATES 6660 DOUBLETREE AVE. COLUMBUS, OHIO 43229	DATE 3/5/96	RECEIVED J.M.S.	STRUCTURE FILE NUMBER 4002326
DESIGN BY R.B.	CHECKED G.T.	DRAWN C.R.	REVISED 3/5/96
SUPERSTRUCTURE DETAILS			
BRIDGE NO. JAC-124-33248 OVER LITTLE RACCON CREEK			
JAC-124-33.237			
SLM = 20.65			
11 17			
29			
39			

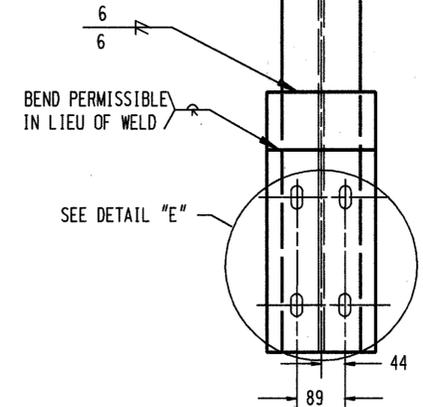


TRANSVERSE SECTION
(LOOKING UPSTATION)



CAMBER NOTES: (FOR ALL BEAMS)

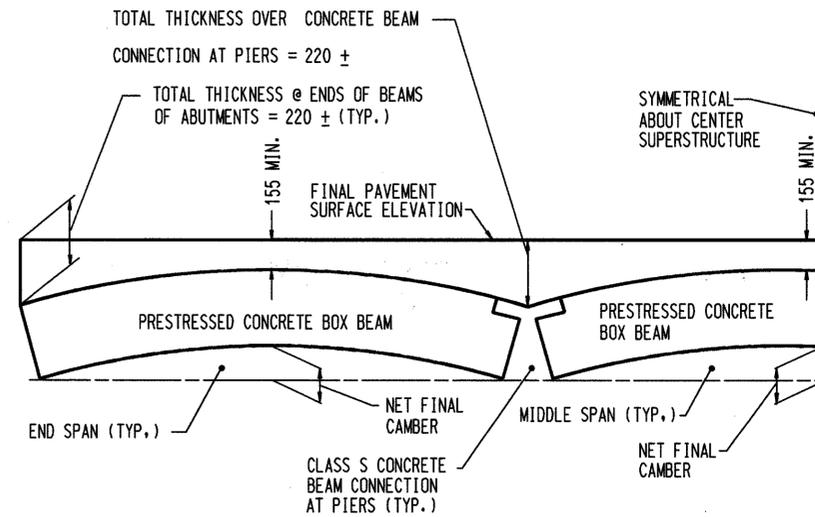
CALCULATED CAMBER AT TIME OF PLACING THE CONCRETE DECK, INCLUDING ALLOWANCE FOR CAMBER GROWTH DUE TO CREEP, IS 70 mm.
 CALCULATED DEFLECTION DUE TO WEIGHT OF CONCRETE DECK AND RAILING IS 11 mm.
 CAMBER OF 6 mm AT CENTER OF SPAN IS REQUIRED FOR THE VERTICAL CURVE.
 NET FINAL CAMBER OF BEAMS IS 65 mm. THIS IS 65 mm IN EXCESS OF THE AMOUNT REQUIRED TO PLACE THE TOP OF THE BEAM PARALLEL TO PROFILE GRADE. THIS EXCESS AMOUNT SHALL BE COMPENSATED FOR BY THICKENING THE CONCRETE DECK FROM 155 AT CENTER OF SPANS TO 220 mm AT END OF SPANS.



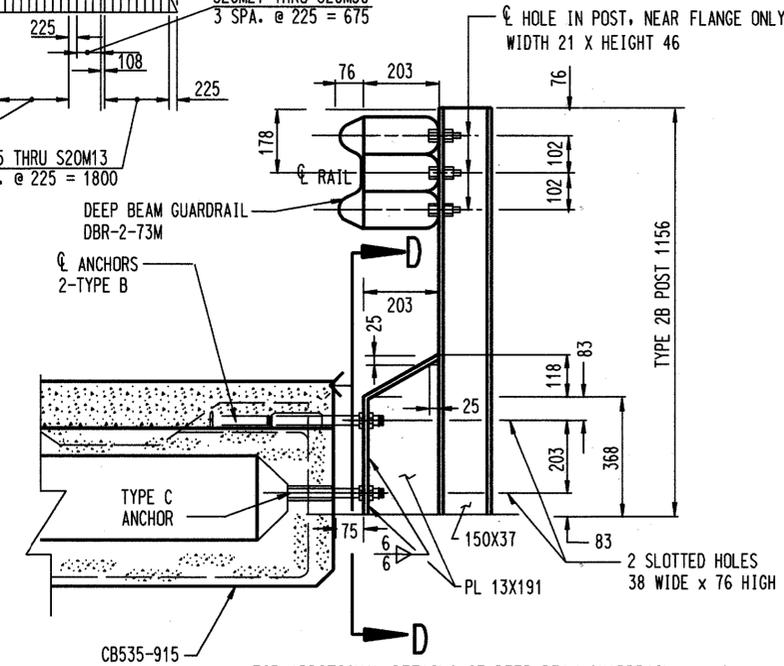
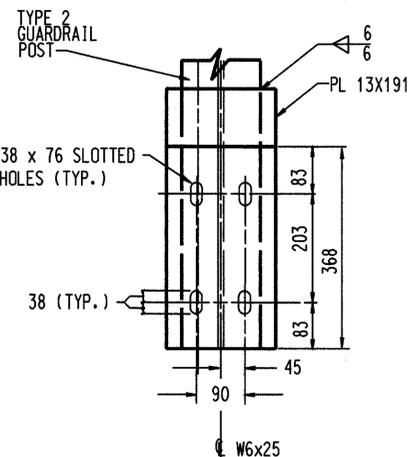
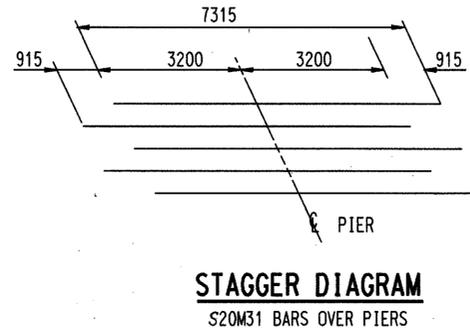
NOTE: FOR TYPE AND LOCATIONS OF POSTS SEE GENERAL PLAN SHEET AND SHEETS 2/17, 10/17 AND 11/17
VIEW D-D

DECK REINFORCING STEEL PLAN

FOR ADDITIONAL DETAILS, SEE TRANSVERSE SECTION AND STAGGER DIAGRAM THIS SHEET



CONCRETE THICKNESS DIAGRAM



DETAIL 'C'

BRIDGE RAIL POST NOTES

STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36.
 GALVANIZING: ALL SHAPES AND PLATES SHALL BE GALVANIZED IN ACCORDANCE WITH 711.02.
 ALL POSTS SHALL BE SHOP MARKED TO SHOW TYPE AND LENGTH. FOR EXAMPLE, "2B" INDICATES A TYPE 2 POST THAT IS 1156 LONG.

DESIGN AGENCY
 WILBUR SMITH ASSOCIATES
 6660 DOUBLETREE AVE.
 COLUMBUS, OH. 43230

DATE
 2/26/96

REVIEWED
 J.M.S.

STRUCTURE FILE NUMBER
 4002326

DESIGNED
 R.B.

CHECKED
 G.T.

REVISOR
 R.J.Y.

REVISION
 2/23/96

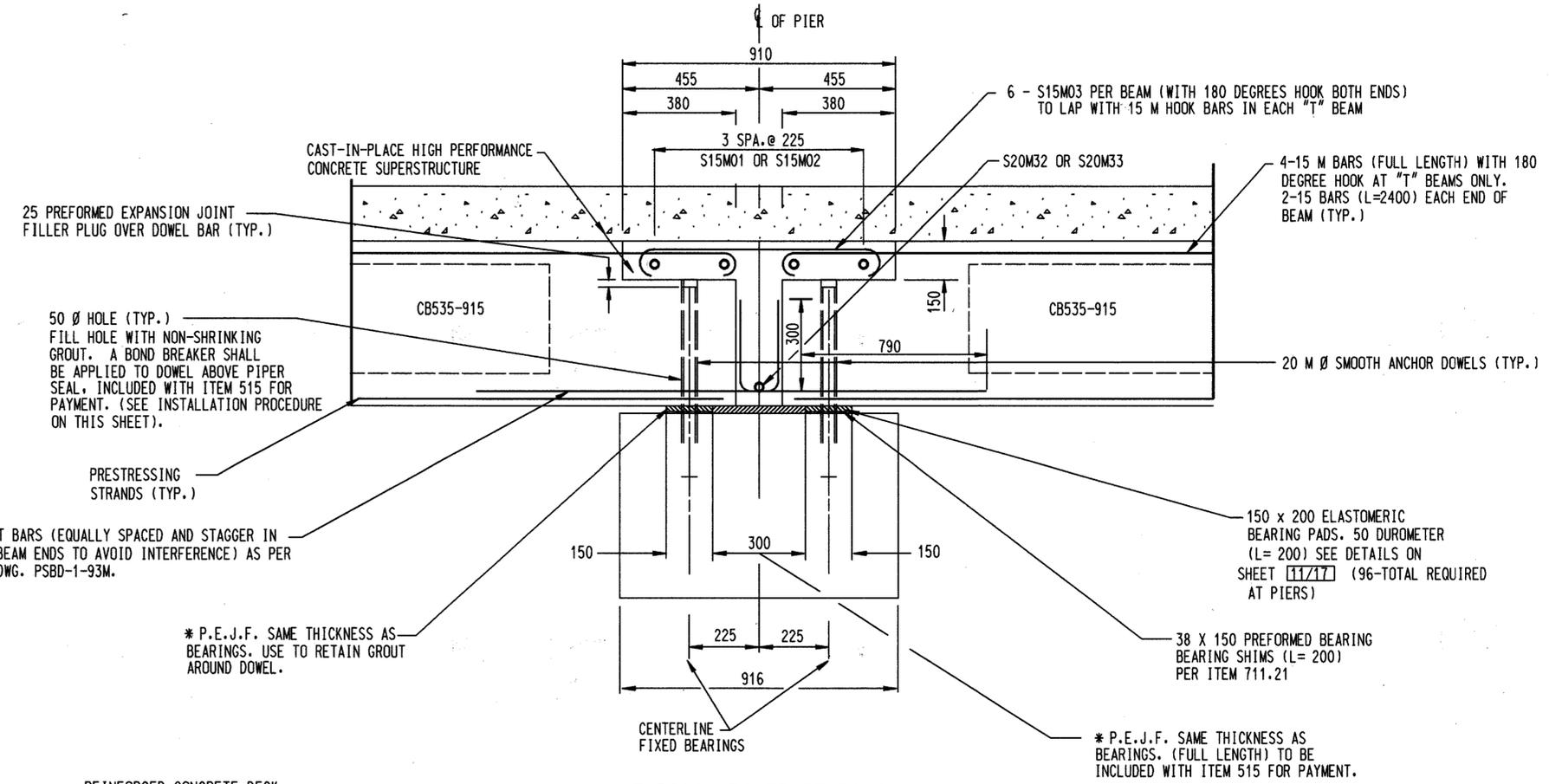
SUPERSTRUCTURE DETAIL
 BRIDGE NO. JAC-124-33248 OVER
 LITTLE RACCOON CREEK

JAC-124-33.237
 SLM = 20.65

12 17

30

39



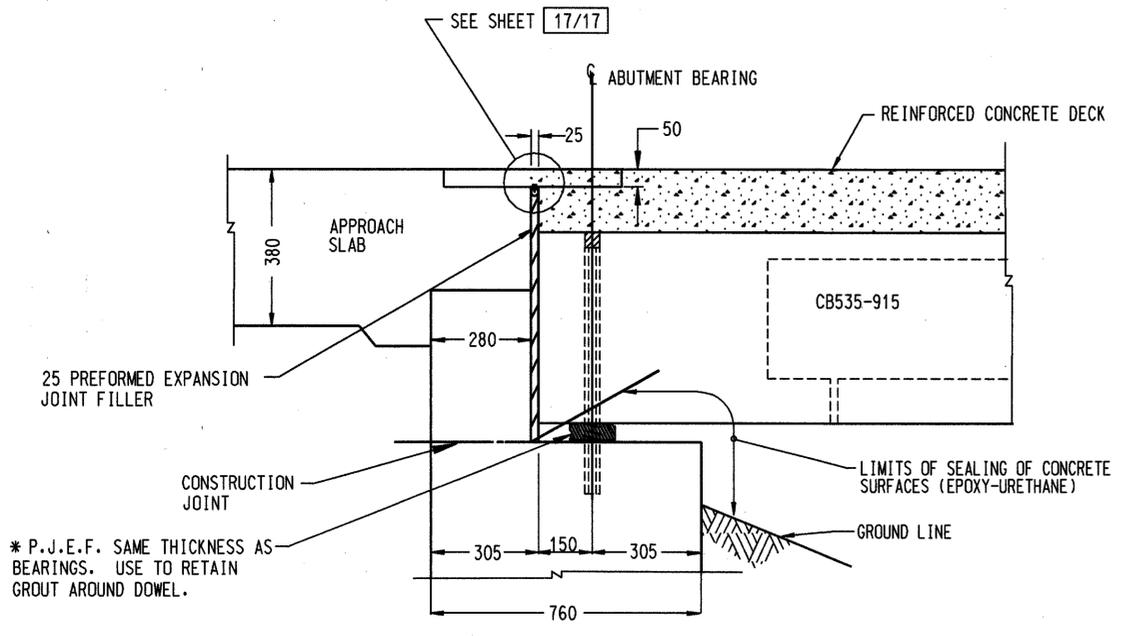
TYPICAL FIXED BEARING SECTION F-F DETAIL AT PIER

FOR PIER REINFORCING NOT SHOWN, SEE TRANSVERSE SECTION ON SHEET 1717

FIXED ANCHOR DOWEL INSTALLATION PROCEDURE

1. PLACE EXPANDED * P.E.J.F. GROUT RETAINER.
2. DRILL AND CLEAN DOWEL HOLE.
3. PLACE NON-SHRINKING MORTAR, DOWEL AND 25 MINIMUM THICKNESS PEJF PLUG.
4. FOR NON-SHRINKING MORTAR MATERIAL NOTE SEE PSBD-1-93M, SHEET 174.

* PREFORMED EXPANSION JOINT FILLER



TYPICAL FIXED ANCHOR DETAIL AT ABUTMENT

PORTION OF EXISTING STRUCTURE TO BE REMOVED DURING PHASE I CONSTRUCTION

CL OF EX. PIER 1

CL OF EX. PIER 2

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

458

356

3000± EXISTING PAVEMENT

DETAIL "B"

SEE DETAIL "B" ON THIS SHEET

ITEM 503 COFFERDAMS, CRIBS AND SHEETING AS PER PLAN (TYP.)

CL SURVEY & CONSTRUCTION SR124
1346± (TYP.)

1524± (BOTH ENDS)

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

CL OF EX. STRINGER AND TIMBER PILE

CL EX. BRIDGE

CL SURVEY & CONSTRUCTION SR124

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

EX. STRINGERS
5533 x 86.39 (TYP.)

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

CL EX. BRIDGE

CL SURVEY & CONSTRUCTION SR124

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

EX. STRINGERS
5533 x 86.39 (TYP.)

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

PORTION OF EXISTING STRUCTURE TO BE USED TO MAINTAIN TRAFFIC DURING PHASE I CONSTRUCTION

EXISTING GUARDRAIL

ALL STEEL STRINGERS
S533± x 86.39± (TYP.)

ALL STEEL CHANNEL STRUTS
C381± x 50.44± (TYP.)

1524± (BOTH ENDS)

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

CL OF EX. STRINGER AND TIMBER PILE

CL EX. BRIDGE

CL SURVEY & CONSTRUCTION SR124

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

EX. STRINGERS
5533 x 86.39 (TYP.)

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

CL EX. BRIDGE

CL SURVEY & CONSTRUCTION SR124

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

EX. STRINGERS
5533 x 86.39 (TYP.)

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

CL EX. BRIDGE

CL SURVEY & CONSTRUCTION SR124

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

EX. STRINGERS
5533 x 86.39 (TYP.)

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

CL EX. BRIDGE

CL SURVEY & CONSTRUCTION SR124

PORTABLE CONCRETE BARRIER (ANCHORED) AS PER PCB-91M

EX. STRINGERS
5533 x 86.39 (TYP.)

EX. END DIAPHRAM BEAMS
305± @ 41.7 (TYP.)

EX. TIMBER CAP
305± x 305± x 9080±

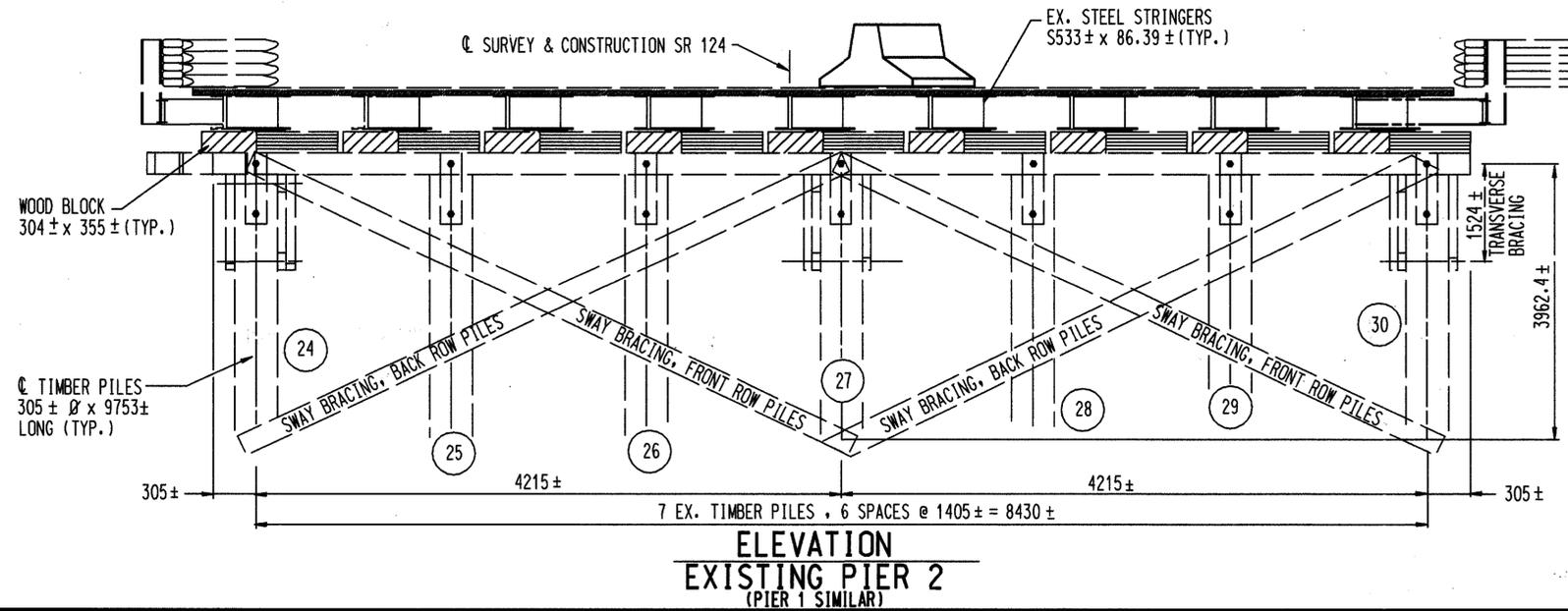
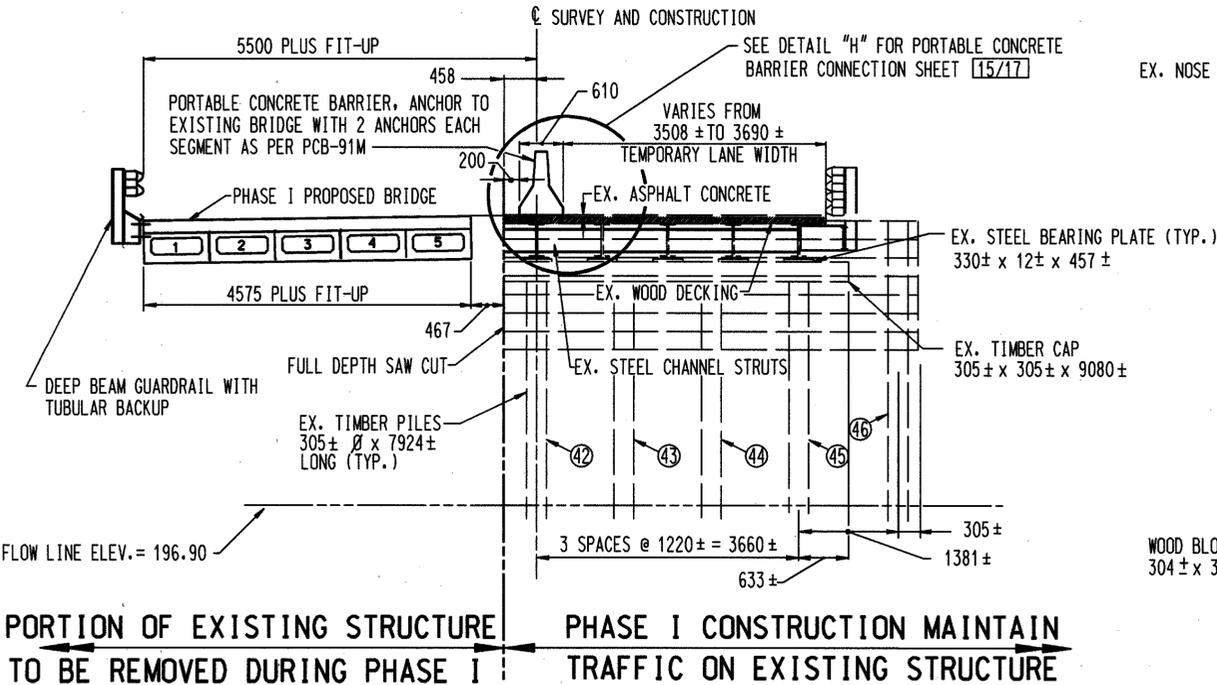
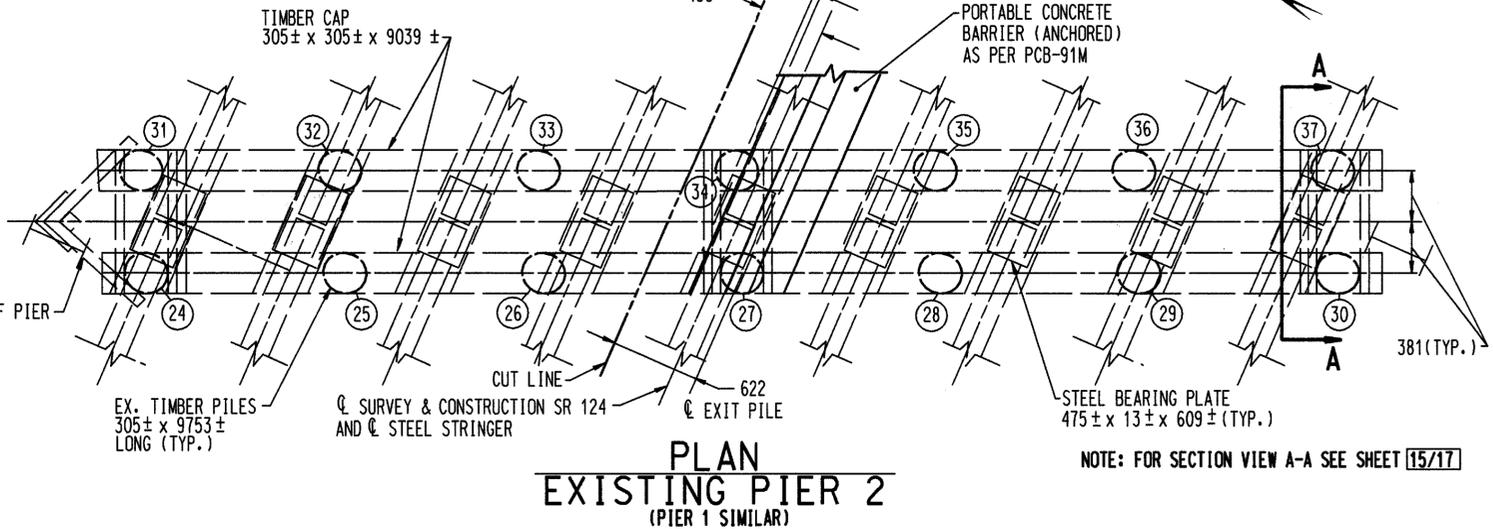
EX. STEEL BEARING PLATE
342± x 12± x 609± (TYP.)

EX. TIMBER PILE 305± Ø

PLAN - PHASE I

PART WIDTH CONSTRUCTION
REFER TO SHEET 15/17 FOR PHASE II PLAN AND SECTION

NOTE: FOR MORE DETAIL AND INFORMATION REFER TO PIER PLAN AND ELEVATION VIEW ON THIS SHEET.



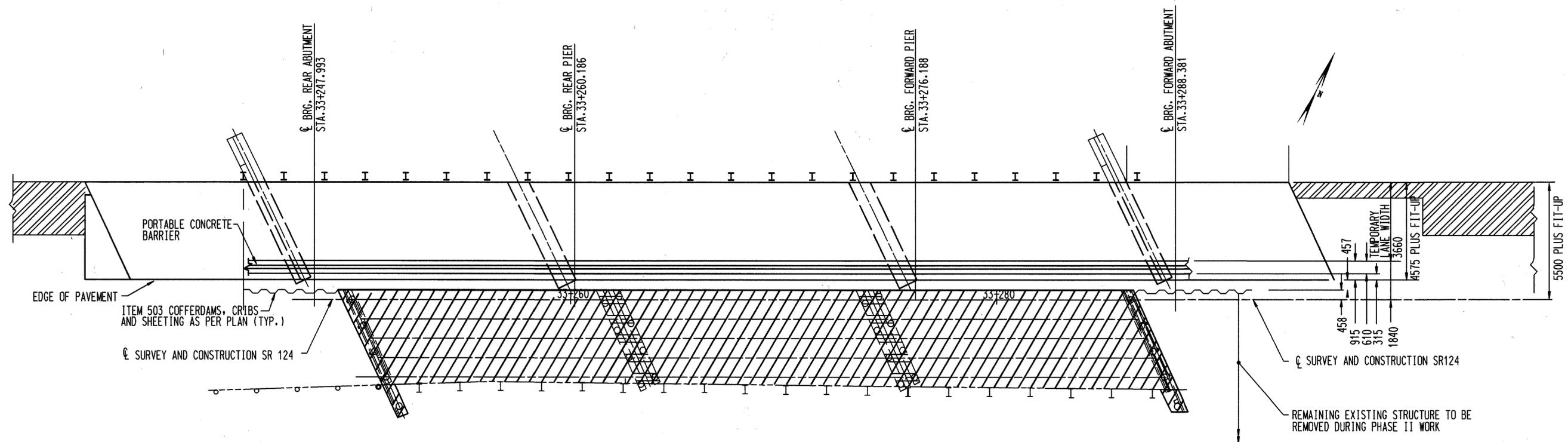
DESIGN AGENCY
WILBUR SMITH ASSOCIATES
6660 DOUBLETREE AVE.
COLUMBUS, OHIO 43229

DATE
3/5/96
REVIEWED
J.M.S.
DRAWN
C.R.
CHECKED
G.L.
STRUCTURE FILE NUMBER
4002326

PHASE I CONSTRUCTION DETAILS
BRIDGE NO. JAC-124-33248 OVER
LITTLE RACON CREEK

JAC-124-33.237
SLM = 20.65

14 17
32
39



**PLAN - PHASE II
PART WIDTH CONSTRUCTION**

PHASE CONSTRUCTION WORK

PHASE CONSTRUCTION NOTES

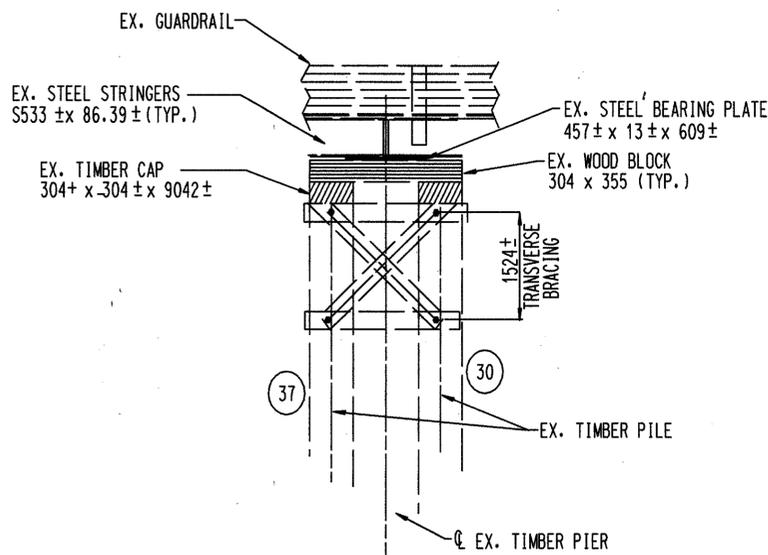
1. ALL SECTIONS ARE SHOWN LOOKING UPSTATION.
2. REFER TO THE MAINTENANCE OF TRAFFIC PLAN SHEETS FOR MAINTENANCE OF TRAFFIC DURING THE PHASE CONSTRUCTION WORK.
3. ABUTMENTS REMOVED - THE EXISTING FORWARD AND REAR ABUTMENTS SHALL BE LOWERED TO 1900 mm MINIMUM BELOW THE PROPOSED FOOTING BOTTOM ELEVATION.
4. PIERS REMOVED - EXISTING PIERS SHALL BE REMOVED DOWN 300 mm MINIMUM BELOW THE PROPOSED STREAM BOTTOM ELEVATION.

PHASE I

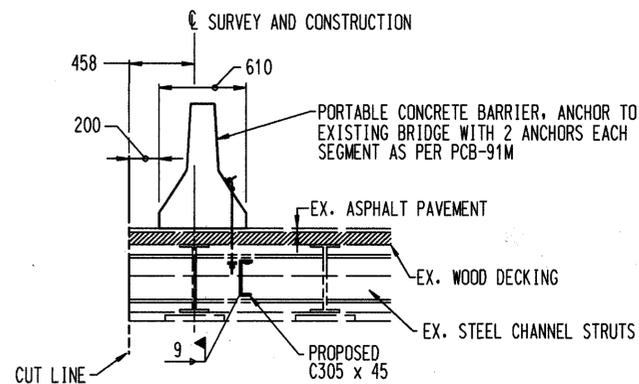
1. ERECT PORTABLE CONCRETE BARRIER AND MAINTAIN ONE LANE TWO-WAY TRAFFIC ON THE RIGHT SIDE OF THE EXISTING BRIDGE.
2. REMOVE THE LEFT PORTION OF THE EXISTING SUPERSTRUCTURE, ABUTMENTS & PIERS (SEE PHASE CONSTRUCTION NOTES ON THIS SHEET) PROVIDE ITEM 503 COFFERDAMS, CRIBS & SHEETING.
3. CONSTRUCT THE LEFT PORTION OF THE NEW STRUCTURE.

PHASE II

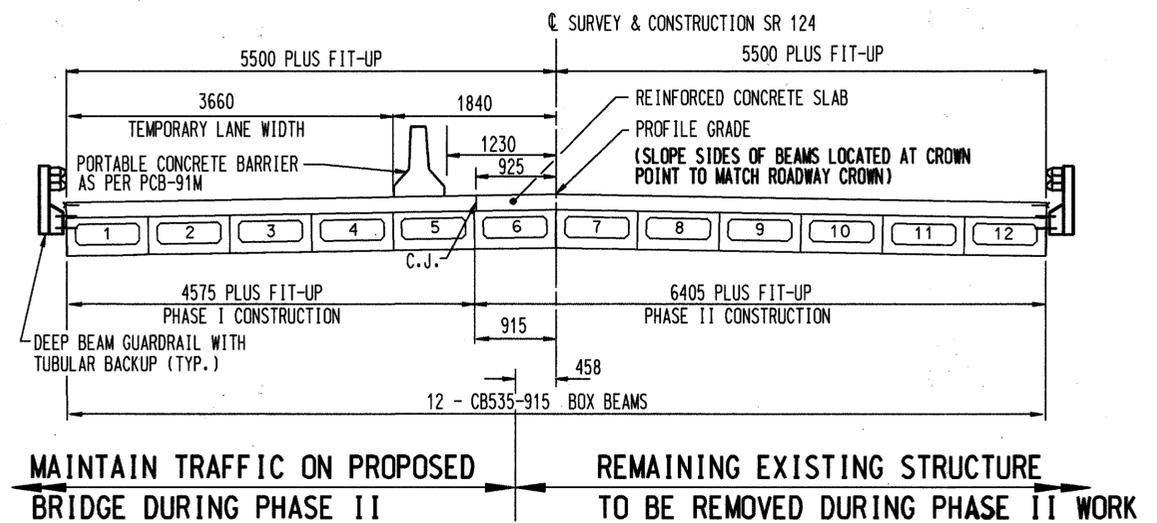
1. ERECT PORTABLE CONCRETE BARRIER AND MAINTAIN ONE LANE TWO-WAY TRAFFIC ON PHASE I PROPOSED BRIDGE.
2. REMOVE THE REMAINING PORTION OF THE EXISTING SUPERSTRUCTURE, ABUTMENTS & PIERS (SEE PHASE CONSTRUCTION NOTES ON THIS SHEET)
3. CONSTRUCT THE REMAINDER OF THE STRUCTURE AND ROADWAY.
4. REMOVE THE TEMPORARY CONCRETE BARRIER AND ALLOW TWO-WAY TRAFFIC ON THE NEW BRIDGE.



SECTION A-A



DETAIL H



**SECTION - PHASE II
PART WIDTH CONSTRUCTION
(LOOKING UPSTATION)**

DESIGN AGENCY
WILBUR SMITH ASSOCIATES
6660 DOUBLETREE AVE.
COLUMBUS, OHIO 43229

DATE
8/10/95
REVIEWED
J.M.S.
STRUCTURE FILE NUMBER
4002326

DESIGNED
R.B.
CHECKED
G.I.
DRAWN
C.R.
REVISED
8/10/95

PHASE II CONSTRUCTION DETAILS

**JAC-124-33-237
SLM = 20.65**

15 17
33
39

MARK	NUMBER			LENGTH (mm)	WEIGHT (Kg)	TYPE	DIMENSIONS (mm)				
	REAR	FWD	TOTAL				A	B	C	D	INC
SUPERSTRUCTURE											
S20M01			100	9144	2154	ST					
S20M02			25	7170	422	ST					
S20M03			172	5345	2165	ST					
S20M04			168	6435	2546	ST					
S20M05			3	432		ST					
THRU					151						483
S20M13			3	4296		ST					
S20M14			1	3327		ST					
THRU					38						483
S20M17				4776		ST					
S20M18			1	1202		ST					
THRU					66						483
S20M26			1	5066		ST					
S20M27			1	4574		ST					
THRU					50						483
S20M30			1	6023		ST					
				SUBTOTAL	7592						
S20M31			50	7315	861	ST					
S20M32			2	5684	27	ST					
S20M33			2	6933	32	ST					
S15M01			8	5684	71	ST					
S15M02			8	6933	87	ST					
				SUBTOTAL	1066						
				TOTAL	8670						
PIER CAP											
ΔP30M01	2	2	4	5798	127	6	5057	810			
P30M02	2	2	4	7793	171	6	7052	810			
ΔP30M03	1	1	2	5925	65	6	5184	810			
P30M04	1	1	2	7641	84	6	6900	810			
ΔP30M05	1	1	2	6051	67	6	5310	810			
P30M06	1	1	2	7540	83	6	6799	810			
ΔP30M07	2	2	4	6179	136	6	5438	810			
P30M08	2	2	4	7389	162	6	6648	810			
ΔP30M09	1	1	2	5510	61	ST					
P30M10	1	1	2	6959	76	ST					
ΔP30M11	1	1	2	5297	58	ST					
P30M12	1	1	2	6765	74	ST					
				SUBTOTAL	1164						
ΔP20M01	6	6	12	2032	57	7	910	450	210		
				SUBTOTAL	57						
ΔP15M01	1	1	2	5057	16	ST					
P15M02	1	1	2	7052	22	ST					
ΔP15M03	1	1	2	5438	17	ST					
P15M04	1	1	2	6648	21	ST					
				SUBTOTAL	76						
P10M01	46	46	92	3378	244	2	816	816			
P10M02	14	14	28	3277	72	2	793	793			
				SUBTOTAL	316						
				TOTAL	1613						

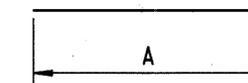
MARK	NUMBER			LENGTH (mm)	WEIGHT (Kg)	TYPE	DIMENSIONS (mm)			
	REAR	FWD	TOTAL				A	B	C	D
ABUTMENT										
ΔA25M01	8	8	16	9548	600	ST				
ΔA25M02	8	8	16	7084	444	ST				
A25M03	30	30	60	1321	290	4	432	381	381	432
ΔA25M04	3	3	6	7137	168	5	6158	948	30	
ΔA25M05	3	3	6	6010	142	ST				
ΔA25M06	1	1	2	6914	54	5	5952	948	30	
ΔA25M07	1	1	2	5160	40	ST				
				SUBTOTAL	1738					
ΔA15M01	4	4	8	9548	120	ST				
ΔA15M02	4	4	8	7084	90	ST				
ΔA15M03	2	2	4	6914	44	ST				
ΔA15M04	2	2	4	5160	32	ST				
A15M05	45	45	90	3353	474	2	813	787		
A15M06	32	32	64	3784	360	3	1600	660		
A15M07	32	32	64	1676	168	3	783	178		
ΔA15M08	2	2	4	9042	56	5	8100	948	30	
A15M09	1	1	2	2490	8	4	382	1412	600	630
A15M10	1	1	2	2740	8	4	623	1412	600	630
A15M11	1	1	2	1373	4	ST				
A15M12	4	4	8	2545	32	ST				
A15M13	13	13	26	2870	118	3	1296	355		
A15M14	5	5	10	3230	50	3	1625	355		
A15M15	1	1	2	3175	10	3	1448	355		
A15M16	1	1	2	2870	10	3	1295	355		
A15M17	1	1	2	2565	8	3	1142	355		
A15M18	1	1	2	2159	6	3	943	355		
A15M19	1	1	2	2970	10	4	838	1473	533	630
A15M20	1	1	2	2770	8	4	623	1473	533	630
A15M21	2	2	4	2000	12	ST				
A15M22	1	1	2	3073	10	3	1398	355		
A15M23	1	1	2	2819	8	3	1270	355		
A15M24	1	1	2	2464	8	3	1100	355		
A15M25	1	1	2	2210	6	3	933	355		
A15M26	4	4	8	3132	50	ST				
A15M27	2	2	4	6580	41	ST				
				SUBTOTAL	1751					
A10M01	18	18	36	2100	59	2	533	762		
				SUBTOTAL	59					
				TOTAL	3548					

NOTES

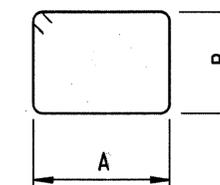
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A15M01 IS A 15M BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

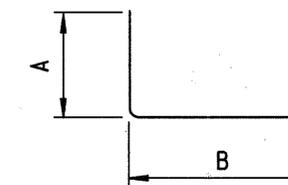
Δ REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH FOR PAYMENT IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.



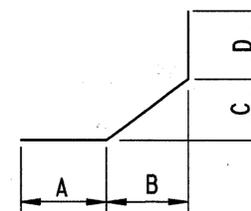
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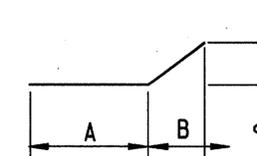
TYPE 2



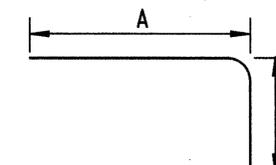
TYPE 3



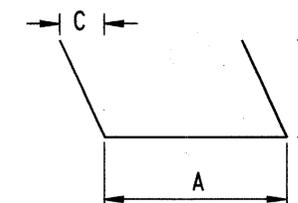
TYPE 4



TYPE 5



TYPE 6



TYPE 7

DESIGN AGENCY: WILBUR SMITH ASSOCIATES, 6660 DOUBLETREE AVE., COLUMBUS, OH 43230
 DATE: _____
 REVIEWED: J.M.S.
 DRAWN: R.J.Y.
 CHECKED: G.I.
 STRUCTURE FILE NUMBER: _____
REINFORCING BAR SCHEDULE
 BRIDGE NO. JAC-124-33248 OVER
 LITTLE RACCOON CREEK
 JAC-124-33.237
 SLM = 20.65
 16 / 17
 34 / 39

GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PAVETECH INTERNATIONAL, INC. P.O. BOX 498969 12066 MONTGOMERY RD. CINCINNATI, OH 45249 TEL: 1-800-258-0162	LINEAR DYNAMICS, INC. RD #2 BOX 311 MUNCY, PA 17756 TEL: (717) 546-6041	BRIDGESAVER, INC. 1801-A Willis Road Richmond, VA 23237 TEL: 1-800-448-3636	EXPANDEX 95 PINEVIEW DR. AMHERST, NY 14228 TEL: (716) 691-7566
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MATERIALS:

BRIDGING PLATE:

MILD STEEL 3 mm OR 6 mm THICK PLATE, 200 mm WIDE OR 18 GAUGE (APPROX. 1.3 mm) ALUMINUM, 204 mm WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 MM. MAX. AT 140 DEGREES F.
PENETRATION:	9 MM. MAX. AT 77 DEGREES F. 1 MM. MAX AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 CM. MIN. ASTM D 113
RESILIENCE:	40% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 ± 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION

THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER ROD SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN 51 MILLIMETERS DEEP (508 mm CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 1649 DEGREES C. AT A VELOCITY OF 914 METERS PER SECOND WITH 103.4 kPa GAUGE CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 152 mm OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 3 mm OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 3 mm AND 30 mm BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 300 mm INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1 mm THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 177 AND 199 DEGREES C. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 210 DEGREES C. NOR ALLOWED TO EXCEED 199 DEGREES C. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 135 TO 163 DEGREES C., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS NOT LESS THAN 13 MILLIMETERS NOR EXCEEDING 64 MILLIMETERS. THE THICKNESS OF EACH LAYER CAN BE VARIED, WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MINIMUM 51 mm). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 13 mm AND ONE 25 mm. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

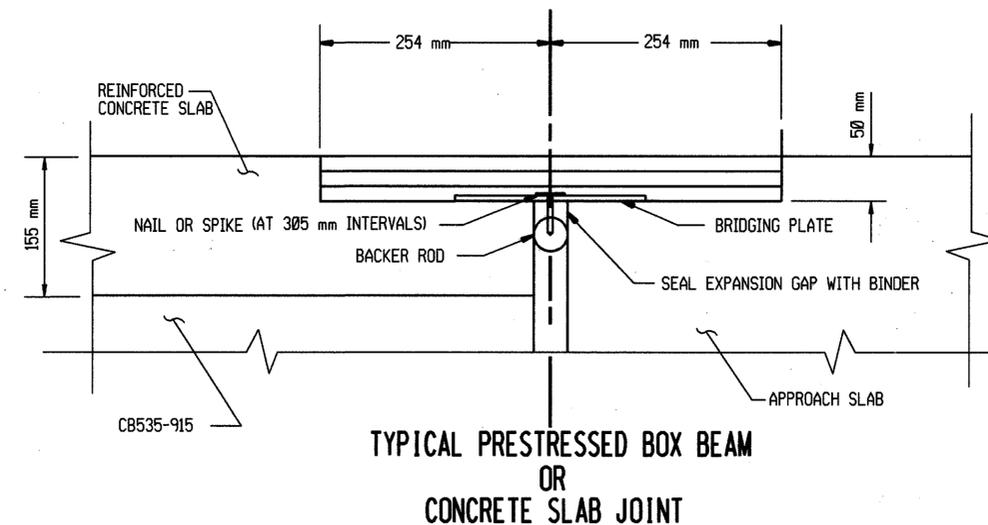
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF 51 MILLIMETERS OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T. TESTING LABORATORY.

PAYMENT:

PAYMENT FOR ALL THE ABOVE WILL BE AT THE UNIT PRICE BID PER LINEAR METER OF SEALED JOINT IN PLACE FOR ITEM SPECIAL 516 31300, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (50 MILLIMETERS THICK). THIS WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.



DESIGN AGENCY BUREAU OF BRIDGES AND STRUCTURAL DESIGNS	DATE 3/5/96	REVIEWED 3/5/96	STRUCTURE FILE NUMBER 4002326
DRAWN M.A.M.	REVISOR 3/5/96	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
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