

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MED-71-6.06

**RECONSTRUCTION OF EXISTING
SEPARATED CROSSING WITH CSXT RR
WESTFIELD TOWNSHIP
GUILFORD TOWNSHIP
MEDINA COUNTY**

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE RECONSTRUCTION OF 3.15 MILES OF I-71 INCLUDING THE ADDITION OF A THIRD LANE IN EACH DIRECTION IN THE MEDIAN AREA. NEW GUARDRAIL, NEW OR RECONSTRUCTED DRAINAGE IN THE MEDIAN. ADDING DIRECTIONAL RAMPS BETWEEN I-71 AND I-76. RECONSTRUCTING AND REALIGNING THE REMAINING INTERCHANGE RAMPS TO ELIMINATE WEAVES. THE REPLACEMENT OF I-71/I-76 INTERCHANGE BRIDGES OVER I-71 AND US-224. THE RECONSTRUCTION AND WIDENING OF THE I-71 MAINLINE STRUCTURES OVER GREENWICH ROAD, CHIPPEWA DITCH AND RYAN ROAD/CSXT RAILROAD. REPLACING THE I-76EB MAINLINE STRUCTURE OVER CHIPEWA DITCH AND WIDENING THE I-76 WB STRUCTURE OVER RYAN ROAD/CSXT RAILROAD.

PROJECT EARTH DISTURBED AREA 186.7 AC.
ESTIMATED CONTRACTOR EARTH DISTURBED AREA 1.0 AC.
NOTICE OF INTENT EARTH DISTURBED AREA 187.7 AC.

LIMITED ACCESS

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

2005 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF MAINLINE I.R. 71 OR MAINLINE I.R.76 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF THE TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

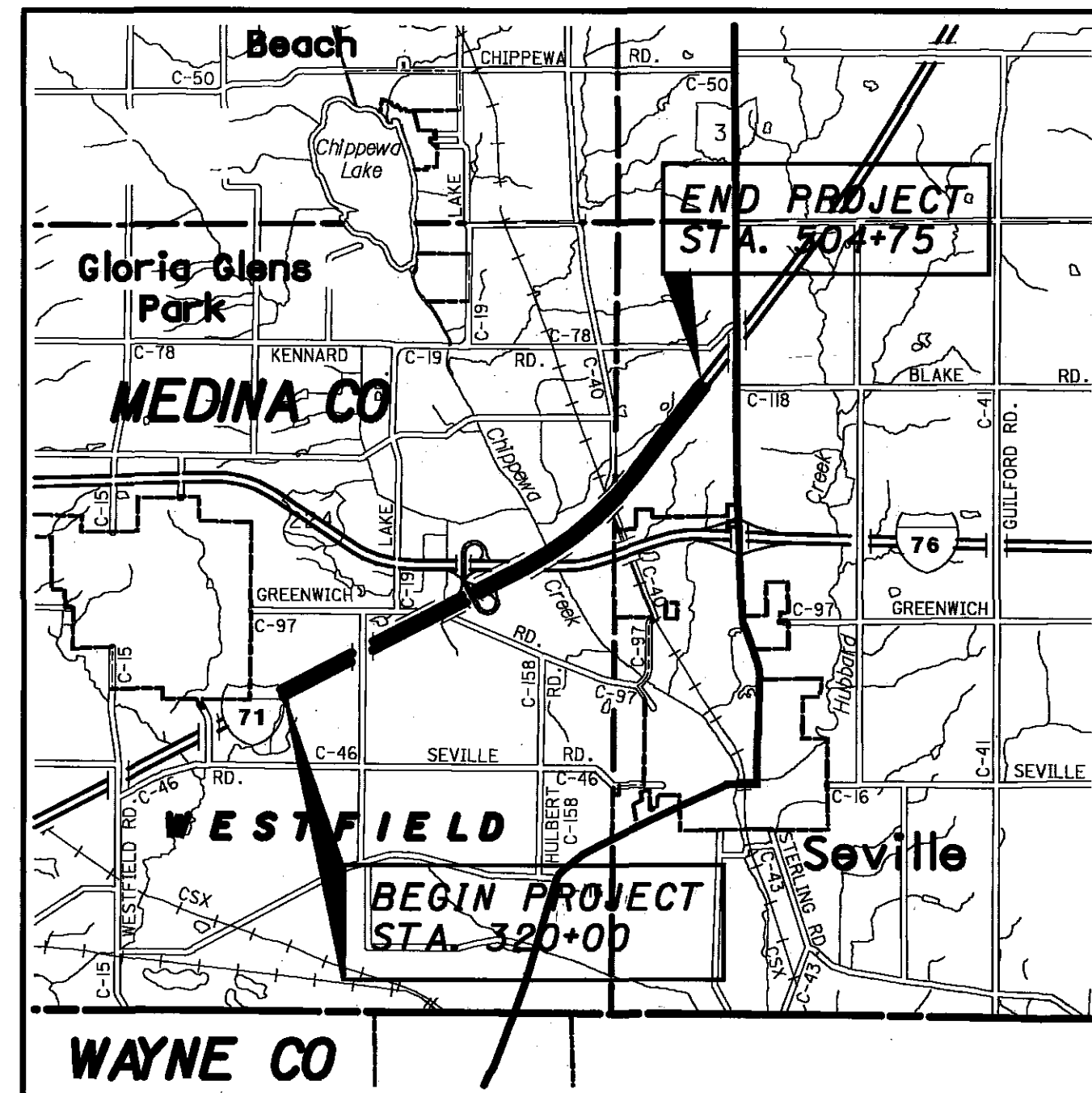
UNDER AUTHORITY OF SECTION 4511.21, DIVISION (1) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME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

APPROVED Thomas M. O'Leary
DATE 3-21-06 DISTRICT DEPUTY DIRECTOR

APPROVED John P. ...
DATE 5-8-06 DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
CALL 1-800-925-0988 (TOLL FREE)
OHIO OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION
SERVICE (OGPUPS)
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
BURGESS & NIPLE
100 W. ERIE ST.
PAINESVILLE, OH. 44077



LOCATION MAP

LATITUDE: 41°01'50" LONGITUDE: 81°53'25"

SCALE IN MILES

0 1 2 3 4



PORTION TO BE IMPROVED.....
INTERSTATE & DIVIDED HIGHWAY.....
UNDIVIDED STATE & FEDERAL ROUTES.....
OTHER ROADS.....

DESIGN DESIGNATION	IR71	IR76
CURRENT ADT (2007).....	48,930	32,230
DESIGN YEAR ADT (2027)	68,660	42,730
DESIGN HOURLY VOLUME (2027).....	7,209	4,957
DIRECTIONAL DISTRIBUTION	55%	55%
TRUCKS (24 HOUR B&C).....	31%	35%
DESIGN SPEED.....	70 MPH	70 MPH
LEGAL SPEED.....	65 MPH	65 MPH

DESIGN FUNCTIONAL ----- RURAL RURAL
CLASSIFICATION INTERSTATE INTERSTATE

DESIGN EXCEPTIONS: NONE

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STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS
BP-1.1	7/28/00	DM-4.3	7/19/02	HW-2.1	1/20/06	HL-30.21	4/19/02	MT-98.12	4/19/02	TC-41.20	1/19/01	
BP-2.1	7/16/04	DM-4.4	7/19/02	HW-2.2	7/15/05	HL-30.22	1/21/05	MT-98.13	4/19/02	TC-42.10	1/19/01	
BP-2.2	7/16/04	DM-5.1	7/19/02	LA-1.2	7/28/00	HL-30.31	1/21/05	MT-98.14	4/19/02	TC-42.20	7/16/04	
BP-2.3	7/16/04			MH-1.1	7/19/02	HL-40.10	4/19/02	MT-98.15	7/16/04	TC-51.11	4/20/01	
BP-3.1	7/16/04	F-1.1	7/16/04	MH-1.2	1/20/06	HL-40.20	1/16/04	MT-98.16	4/19/02	TC-51.12	4/20/01	800 4/21/06
BP-4.1	7/16/04	F-2.1	7/28/00	MH-1.3	7/20/01	HL-50.11	7/20/01	MT-98.17	10/18/02	TC-52.10	4/20/01	802 4/15/05
BP-5.1	7/28/00	F-3.1	7/28/00			HL-50.21	1/21/05	MT-98.18	10/18/02	TC-52.20	4/20/01	832 4/25/06
BP-8.1	7/28/00	F-3.3	7/28/00	RM-1.1	1/20/06	HL-60.11	1/16/04	MT-98.19	10/18/02	TC-61.10	1/19/01	
BP-9.1	4/15/05	F-3.4	7/28/00	RM-4.2	4/18/03	HL-60.12	1/21/05	MT-99.20M	1/30/95	TC-65.10	1/21/05	843 4/18/03
CB-1.1	7/15/05	GR-1.1	7/16/04	RM-4.3	4/18/03	HL-60.21	1/21/05	MT-99.60	10/18/02	TC-65.11	1/21/05	873 10/30/03
CB-2.2	7/15/05	GR-2.1	1/16/04	RM-4.4	4/18/03	HL-60.31	7/20/01	MT-101.60	10/18/02	TC-72.20	1/21/05	880 4/15/05
CB-2.3	7/15/05	GR-2.1	1/16/04	RM-4.5	4/18/03			MT-101.70	10/18/02	TC-73.10	1/19/01	894 4/15/05
CB-3.1	7/15/05	GR-3.1	4/18/03	RM-4.6	1/16/04	MT-35.10	4/20/01	MT-102.10	10/18/02			
CB-3.2	7/15/05	GR-3.2	4/18/03	RM-7.1	4/15/05	MT-95.30	7/16/04	MT-105.10	10/18/02	AS-1-81	7/19/02	
CB-3.4	7/15/05	GR-4.2	4/15/05	RM-7.2	4/15/05	MT-95.31	7/16/04	MT-105.11	10/18/02	BR-1	7/19/02	
		GR-5.1	4/18/03			MT-95.32	7/16/04					
DM-1.1	10/21/05	GR-5.2	1/16/04	HL-10.11	1/16/04	MT-95.40	7/16/04	TC-12.30	1/19/01	EXJ-4-87	7/19/02	
DM-1.2	10/21/05	GR-5.3	1/16/04	HL-10.12	1/21/05	MT-95.41	7/16/04	TC-15.115	7/18/03	GSD-1-96	7/19/02	
DM-1.3	7/20/01	GR-6.1	4/18/03	HL-10.13	1/17/03	MT-96.10	4/19/02	TC-18.24	1/18/02	ICD-1-82	7/19/02	
DM-1.4	1/21/05	GR-6.2	4/18/03	HL-10.31	7/20/01	MT-96.20	4/19/02	TC-21.10	1/19/01	PCB-91	7/19/02	
DM-4.1	7/19/02			HL-20.11	4/19/02	MT-96.21	4/19/02	TC-21.20	1/19/01	PSID-1-99	7/18/03	
DM-4.2	1/21/05	I-1.1	7/15/05	HL-20.21	1/21/05	MT-97.10	4/19/02	TC-22.20	1/19/01	SBR-1-99	7/19/02	
				HL-30.11	1/21/05	MT-97.11	4/19/02	TC-41.10	1/19/01	SICD-1-99	7/19/02	

SPECIAL PROVISIONS

MED-IR 71-6.06
060349 PID-75657
DIST 3 8/23/2006

FEDERAL PROJECT NO.
E035(602)

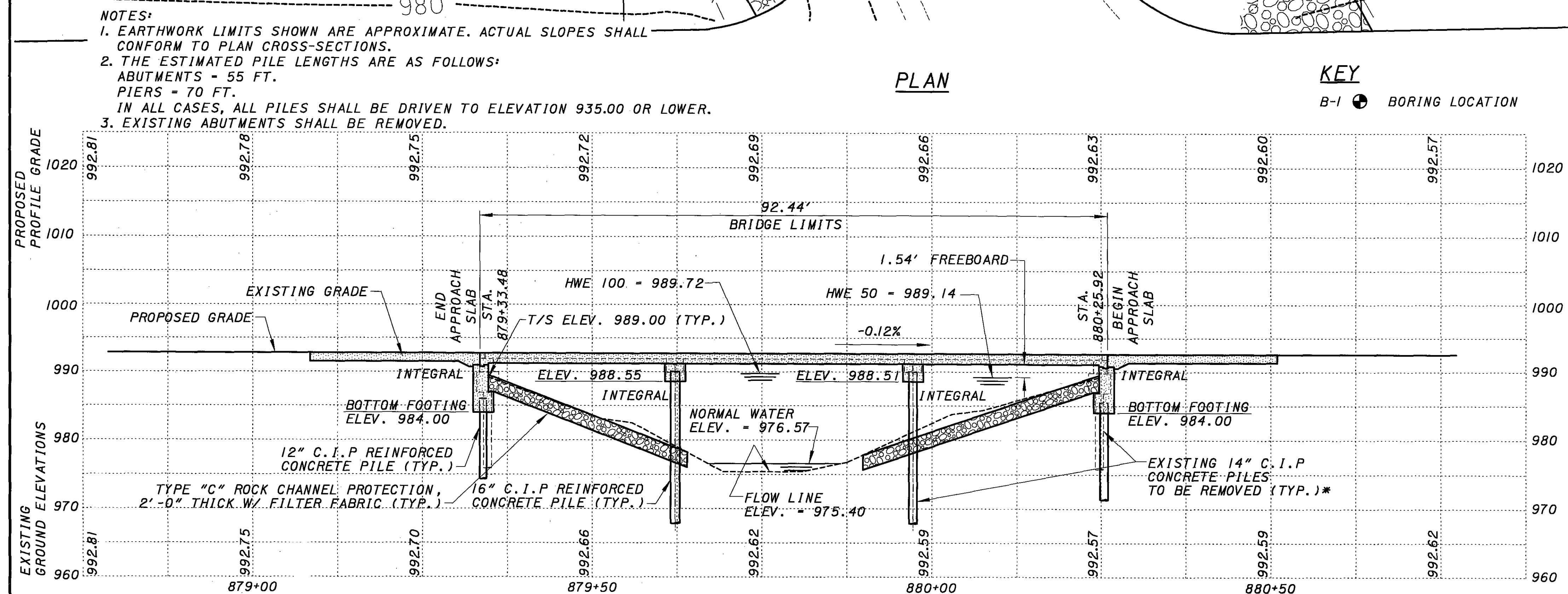
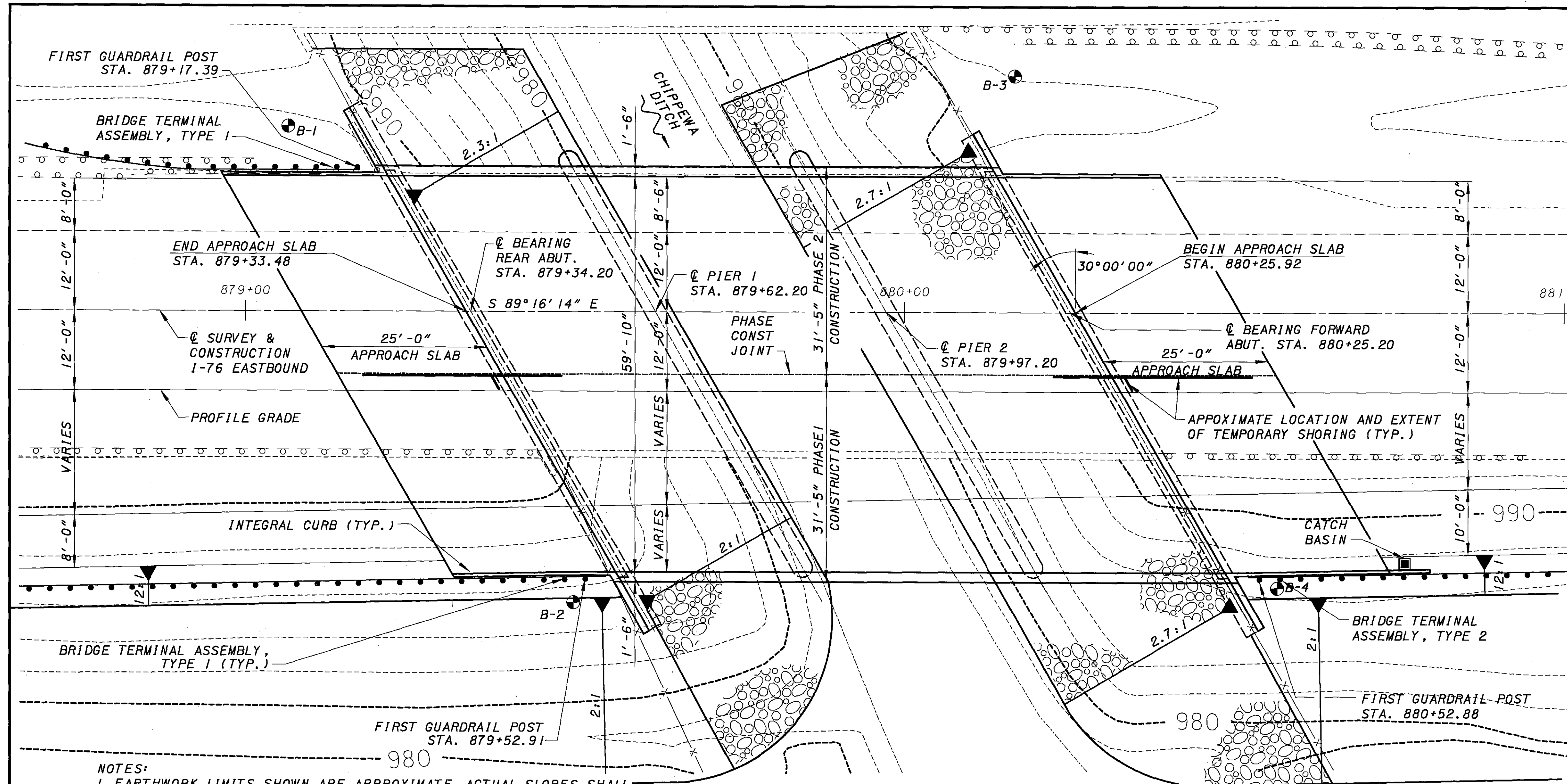
PID NO.
75657

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
CSXT R.R.

MED-71-6.06

1120



* EXIST. ABUT. PILES TO BE REMOVED TO 1'-0" BELOW PROPOSED ABUT. BOTTOM FOOTING ELEVATION. EXIST. PIER PILES TO BE REMOVED TO BELOW CONCRETE ENCASEMENT OR 1'-0" BELOW GROUND, WHICHEVER IS GREATER.

HORIZONTAL ALIGNMENT DATA

BEARING - S 89° 16' 14" E

HYDRAULIC DATA

Q₅₀ = 2358 CFS V₅₀ = 4.31 FT/S
Q₁₀₀ = 2529 CFS V₁₀₀ = 4.37 FT/S
DRAINAGE AREA = 10.65 SQ MI

BENCHMARK INFORMATION

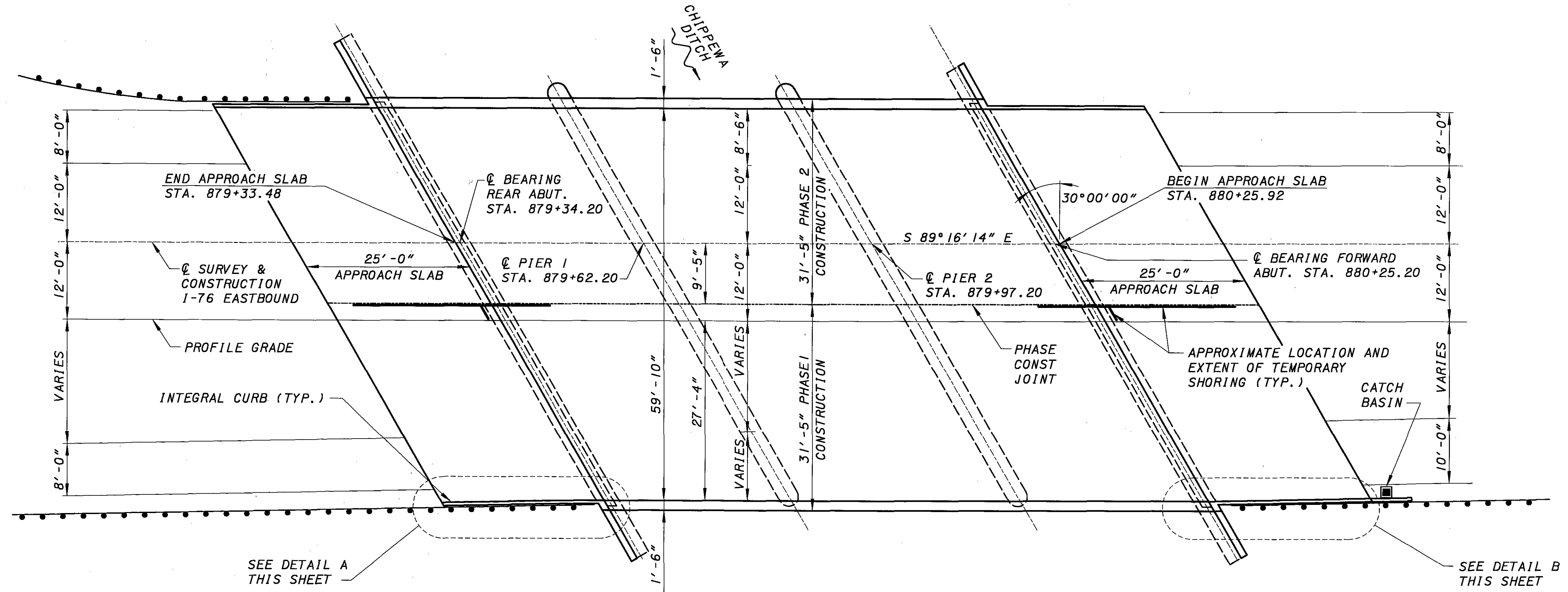
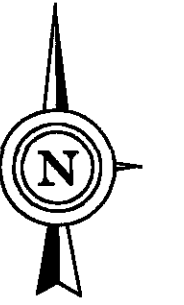
BM #51: CUT SQUARE ON THE SOUTHEAST CORNER OF THE SOUTHWEST WINGWALL OF I-76 WESTBOUND BRIDGE OVER CHIPPEWA DITCH
BM #52: CUT SQUARE ON THE SOUTHWEST CORNER OF THE SOUTHWEST WINGWALL OF I-76 WESTBOUND BRIDGE OVER CHIPPEWA DITCH

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB ON CAPPED PILE SUBSTRUCTURES
SPANS: 28'-0" (±), 35'-0" (±), 28'-0" (±)
ROADWAY: 41'-0" TOE/ TOE PARAPET
DESIGN LOADING: CF2000 (51)
SKEW: 30°00'00" RIGHT FORWARD
WEARING SURFACE: CONCRETE OVERLAY
ALIGNMENT: TANGENT
APPROACH SLAB: AS-1-81 (25'-0" LONG)
DATE CONSTRUCTED: 1959
CONDITION: FUNCTIONALLY OBSOLETE
DISPOSTION: STRUCTURE TO BE REMOVED & REPLACED
STRUCTURE FILE NUMBER: 5204380

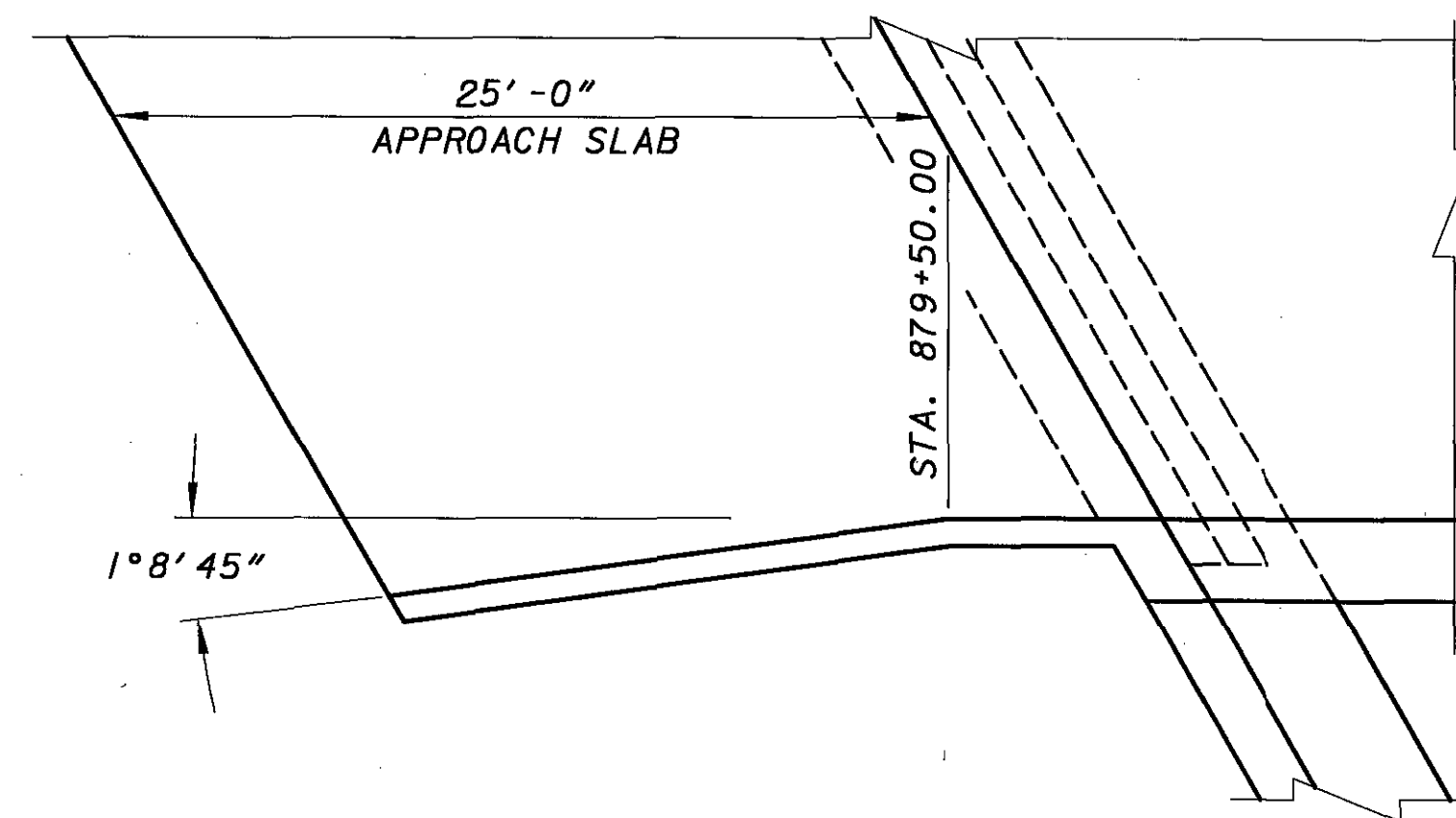
PROPOSED STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB ON CAPPED PILE SUBSTRUCTURES
SPANS: 28'-0", 35'-0", 28'-0"
ROADWAY: 59'-10" TOE/ TOE PARAPET
DESIGN LOADING: H25 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE LOADING: 60 PSF
SKEW: 30°00'00" RIGHT FORWARD
WEARING SURFACE: 1" MONOLITHIC CONCRETE
ALIGNMENT: TANGENT
APPROACH SLAB: AS-1-81, 25'-0" LONG (MODIFIED)
CROWN: 0.0156 FT./ FT.
AVERAGE DAILY TRAFFIC: 16140 (2006)
21450 (2026)
AVG. DAILY TRUCK TRAFFIC: 5648 (2006)
7508 (2026)
COORDINATES: LAT. 41°31'48"
LONG. 81°53'12"

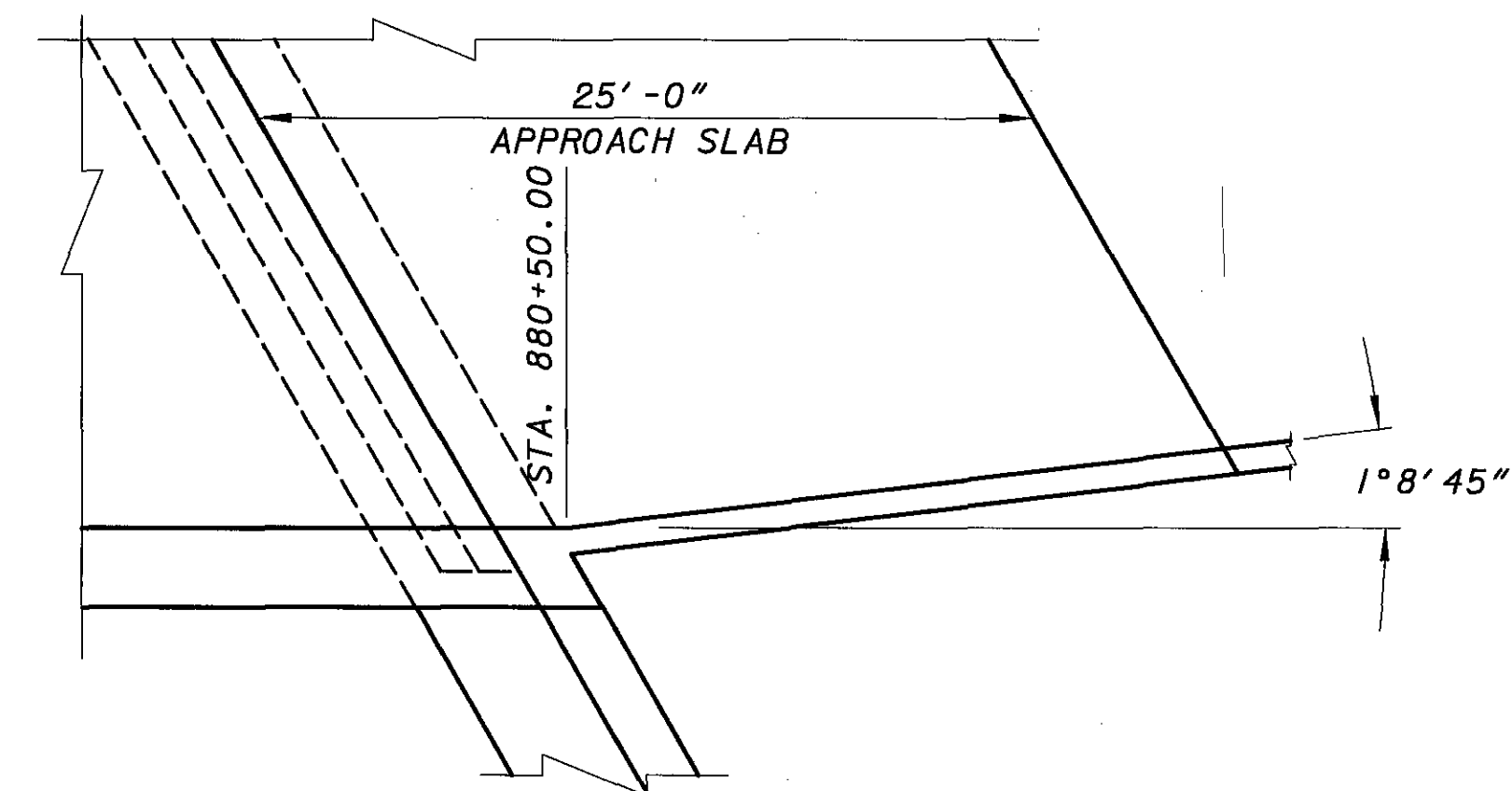


PLAN

NOTE:
THE BRIDGE DECK SLAB HAS A CONSTANT ROADWAY WIDTH OF 59'-10" TOE/TOE PARAPET. BOTH GUTTER LINES ARE PARALLEL TO ϕ SURVEY BETWEEN STATION 879+50.00 AND STATION 880+50.00. THE SOUTH GUTTER LINE BEFORE STATION 879+50.00 AND AFTER STATION 880+50.00 ARE NOT PARALLEL TO ϕ SURVEY. (SEE DETAILS A & B THIS SHEET).



DETAIL A
NOT TO SCALE



DETAIL B
NOT TO SCALE

ESTIMATED QUANTITIES										CALC BY: GKL CHECK BY: PA			DATE: 05/13/03 DATE: 05/20/03	
ITEM	ITEM EXT.	FUNDING**		TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT. REAR	ABUT. FWD.	PIER 1	PIER 2	GENERAL	AS PER PLAN SHEET REFERENCE	
202	11003	LUMP	LUMP	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN						LUMP	1, 3, 5, 6	
503	11101	LUMP	LUMP	LUMP		COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN						LUMP	1, 2, 3	
503	21301	LUMP	LUMP	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN						LUMP	3	
505	11100	LUMP	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION						LUMP		
507	00500	1232	308	1540	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		770	770					
507	00550	1344	336	1680	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		840	840					
507	00700	1680	420	2100	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN				1050	1050			
507	00750	1800	450	2250	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED				1125	1125			
509	10000	80239	20060	100299	POUND	EPOXY COATED REINFORCING STEEL (SEE PROPOSAL NOTE 525)	83586	6153	6156	2202	2202			
511	34450	30	8	38	CU YD	CLASS S CONCRETE, MISC: PIER CAP				19	19			
511	43501	99	25	124	CU YD	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN		62	62				3, 8, 9, 10	
511	52000	LUMP	LUMP	LUMP		CLASS HP CONCRETE, TEST SLAB	LUMP							
512	10101	256	64	320	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	217	43	42	9	9		3	
512	33000	11	3	14	SQ YD	TYPE 2 WATERPROOFING		7	7					
518	21230	LUMP	LUMP	LUMP		POROUS BACKFILL WITH FILTER FABRIC						LUMP		
518	40000	147	37	184	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		92	92					
518	40010	39	10	49	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		22	27					
523	20000	1		1	EACH	DYNAMIC LOAD TESTING						1		
526	25001	266	66	332	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN						332	10, 15, 16	
601	32200	530	133	663	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER FABRIC						663		
*894	10001	288	72	360	CU YD	HIGH PERFORMANCE CONCRETE, FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN	360						4	

* THIS QUANTITY INCLUDES CONCRETE IN PARAPETS.

** ALL QUANTITIES ARE SPLIT 80% IM & 20% NHS.

ITEM 894 HIGH PERFORMANCE CONCRETE FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN

GENERAL REQUIREMENTS.

THE PROVISIONS OF ITEM 511 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS.

ALL SUPERSTRUCTURE CONCRETE SHALL BE THIS MIX (HP4, AS PER PLAN).

ALL OTHER STRUCTURE CONCRETE SHALL BE THIS MIX OR MIX 2 CONCRETE.

THE FOLLOWING PROPORTIONS WILL BE USED AS A STARTING MIX DESIGN.

CONCRETE TABLE
QUANTITIES PER CUBIC YARD
AGGREGATES (SSD)

HP4, AS PER PLAN (GGBF SLAG + MICROSILICA)									
AGGREGATE TYPE	FINE AGGRE. (LB)	* #8 COARSE AGGRE. (LB)	* #57 COARSE AGGRE. (LB)	TOTAL (LB)	CEMENT CONTENT (LB)	GGBF SLAG (LB)	MICROSILICA (LB)	WATER/CEMENT RATIO +/- .02	AIR CONTENT +/- 2%
GRAVEL	1245	360	1315	2920	400	170	30	0.42	7
LIMESTONE	1245	360	1335	2940	400	170	30	0.42	7
SLAG	1245	315	1155	2715	400	170	30	0.42	7

*ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER, AS DEFINED PER ASTM C127 THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, FLY ASH 2.65, GGBF SLAG 2.90, MICROSILICA SOLIDS 2.20 AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

PARAPET CONSTRUCTION (FORMED AND POURED)

FORMS SHALL NOT BE REMOVED UNTIL AT LEAST 2 HOURS AFTER THE FINAL SET. DETERMINATION OF THE FINAL SET SHALL BE AS PER ASTM C266 (GILLMORE NEEDLE). TESTING SHALL BE PERFORMED BY THE CONTRACTOR AT NO COST TO THE STATE.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF FORMED CONCRETE PARAPETS SHALL BE 6 INCHES, WITH A MAXIMUM SLUMP OF 8 INCHES.

PARAPET CONSTRUCTION (SLIP FORMED)

THE CONTRACTOR IS ALLOWED THE OPTION OF SLIP FORMING BRIDGE PARAPETS ONLY AFTER THE SUCCESSFUL COMPLETION OF A TEST SECTION TWENTY FEET LONG. A MINIMUM OF 3 DAYS AFTER PLACING THE TEST SECTION, THE CONTRACTOR SHALL CORE THE TEST SECTION (A MINIMUM OF 3 CORES) AT LOCATIONS AS DIRECTED BY THE ENGINEER. APPROVAL TO SLIP FORM SHALL NOT BE GRANTED UNTIL AFTER THE CORING AND AFTER A SUCCESSFUL SLIP FORMING RESULT IS OBTAINED.

IN ADDITION TO THE REQUIREMENTS OF THE LAST PARAGRAPH OF 511.11 THE ENGINEER WILL INSPECT THE SLIP FORMED SURFACE FOR HORIZONTAL CRACKING 6 MONTHS AFTER COMPLETION OF THE SLIP FORMING OPERATION. ANY ADDITIONAL CRACKS FOUND SHALL BE REPAIRED AS PER THE SPECIFICATIONS AT NO ADDITIONAL COST TO THE STATE.

THE CONTRACTOR IS ONLY ALLOWED THE OPTION OF SLIP FORMING BRIDGE PARAPETS OVER NON-TRAVELED WAYS, AND ONLY AFTER THE SUCCESSFUL COMPLETION OF A TEST SECTION TWENTY FEET LONG. A MINIMUM OF 3 DAYS AFTER PLACING THE TEST SECTION, THE CONTRACTOR SHALL CORE THE TEST SECTION (A MINIMUM OF 3 CORES) AT LOCATIONS AS DIRECTED BY THE ENGINEER. APPROVAL TO SLIP FORM SHALL NOT BE GRANTED UNTIL AFTER THE CORING AND AFTER A SUCCESSFUL SLIP FORMING RESULT IS OBTAINED.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF SLIP FORMED CONCRETE PARAPETS SHALL BE 1 INCH, WITH A MAXIMUM SLUMP OF 1½ INCHES.

THE WATER CEMENT RATIO FOR SLIP FORMED PARAPETS SHALL NOT BE LESS THAN THE WATER CEMENT RATIO USED FOR THE DECK CONCRETE. REDUCE SLUMP BY LIMITING THE USE OF SUPERPLASTICIZERS.

CRACK CONTROL JOINTS

FOR BOTH SLIP FORMED AND FORMED AND POURED PARAPETS, THE CONTRACTOR SHALL CONSTRUCT 1½" DEEP AND ¼" WIDE CRACK CONTROL JOINTS SPACED AT A MINIMUM OF 6 FT. AND A MAXIMUM OF 8 FT. ON CENTER. THE CRACK CONTROL JOINTS SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE TOP OF THE CONCRETE DECK. THE CONTRACTOR MAY EITHER FORM THE CRACK CONTROL JOINTS IN WITH FORM LINERS, OR, WITHIN 24 HOURS OF PLACEMENT, SAW CUT THE CRACK CONTROL JOINTS IN WITH THE USE OF AN EDGE GUIDE, FENCE, OR JIG WHICH IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE ENTIRE LENGTH OF EACH CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1½" WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E.

BASIS OF PAYMENT.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNITS	DESCRIPTION
894E10001	C.Y.	HIGH PERFORMANCE CONCRETE FOR BRIDGE DECK, AS PER PLAN
511E52000	LUMP SUM	CLASS HP CONCRETE, TEST SLAB

ABBREVIATIONS

ABUT. ADD'L. BOT. OR BOTT. BRG. C. C.J. C/C CLR. COL. CONSTR. OR CONST. DIA. DWG. E.F. EA. ELEV. OR EL. EQ. EX. OR EXIST. EXT. F.A. F.F.	ABUTMENT ADDITIONAL BOTTOM BEARING CENTERLINE CONSTRUCTION JOINT CENTER TO CENTER CLEAR OR CLEARANCE COLUMN CONSTRUCTION DIAMETER DRAWING EACH FACE EACH ELEVATION EQUAL EXISTING EXTERIOR FORWARD ABUTMENT FAR FACE	FDN. FT. FTG. FWD. GRD. INT. JT. LB. LIN. FT. LT. MAX. MFR. OR MANUF MIN. MISC. N.F. O/C O/O P	FOUNDATION FEET OR FOOT FOOTING FORWARD GROUND INTERIOR JOINT POUND LINEAL FOOT LEFT MAXIMUM MANUFACTURER MINIMUM MISCELLANEOUS NEAR FACE ON CENTERS OUT TO OUT PLATE	PEJF PROP. R.A. REF. RT. SER. SHLDR. SHT. SP. OR SPA. STA. STD. STR. T & B T/S OR T.O.S. TEMP. TYP. W/	PREFORMED EXPANSION JOINT FILLER PROPOSED REAR ABUTMENT REFERENCE RIGHT SERIES SHOULDER SHEET SPACE OR SPACES STATION STANDARD STRAIGHT TOP AND BOTTOM TOP OF SLOPE TEMPORARY TYPICAL WITH
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ESTIMATED QUANTITIES & GENERAL NOTES
BRIDGE NO. MED-76-0112R
I-76 EASTBOUND OVER CHIPPEWA DITCH

MED-71-6.06
PID 75657

4/18

1013
1120

ms consultants, inc.
CONSULTING ENGINEERS & PLANNERS
2225 ROCK HILL COLLEMS, 980

DATE
02/2005
REVIEWED
PA
STRUCTURE FILE NUMBER
5204399

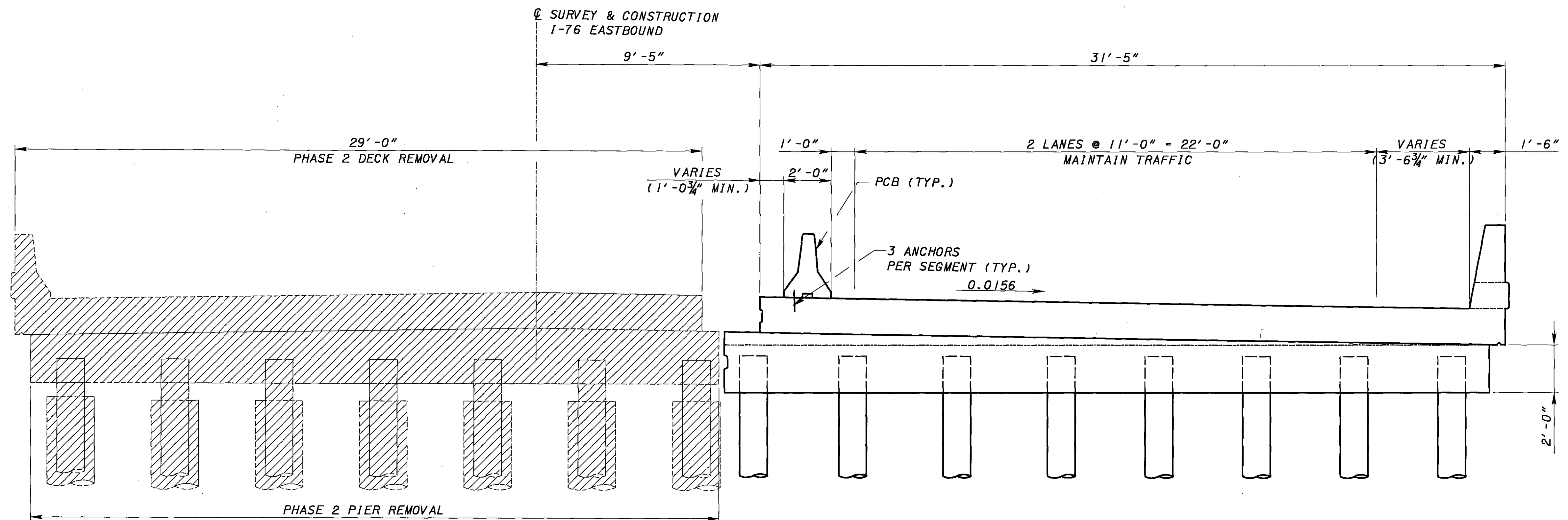
DRAWN
MLH
REVISID
DESIGNED
JNS
CHECKED
GKL



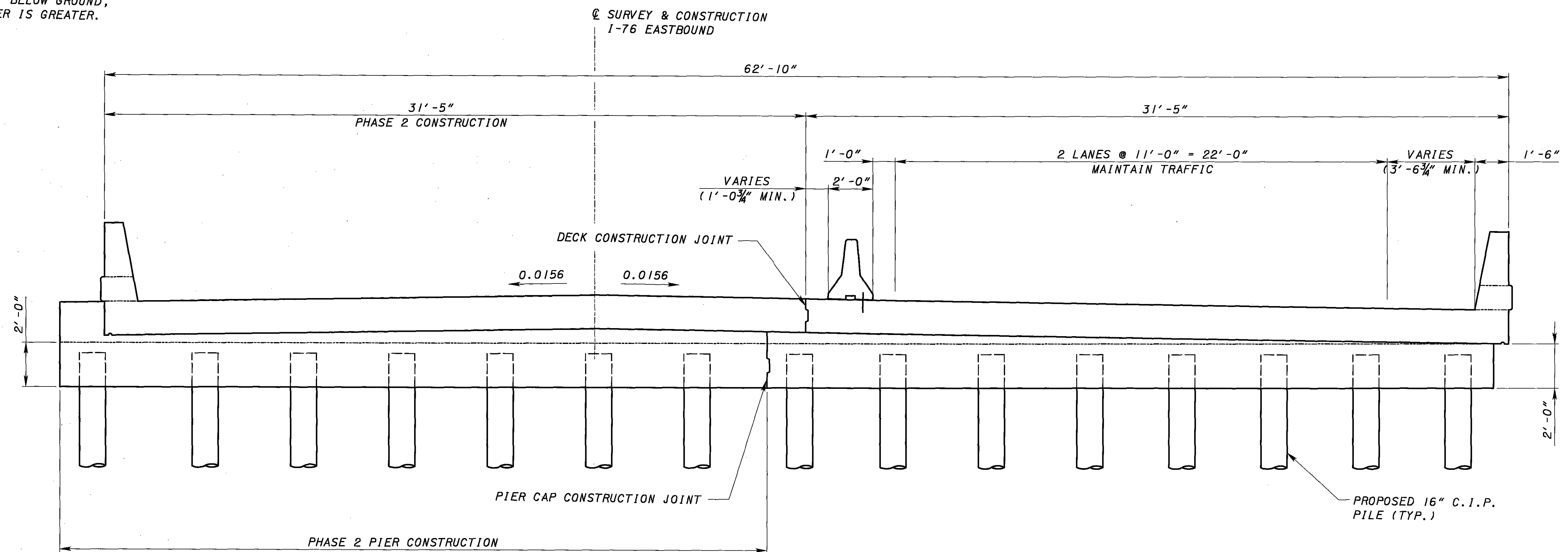
1'-6"
 25'-6"
 20'-6"
 5'-0"
 2'-0"
 9'-5"
 31'-5"
 PHASE I DECK CONSTRUCTION
 2'-6"
 2 LANES @ 11'-0" = 22'-0"
 MAINTAIN TRAFFIC
 1'-0"
 1'-2"
 0.0156
 CONST. JOINT
 PROPOSED 16" C.I.P. REINFORCED CONCRETE PILE (TYP.)
 2'-0"
 PHASE I PIER CONSTRUCTION

PHASE I CONSTRUCTION

1. PLACE PORTABLE CONCRETE BARRIER AND DIVERT AND MAINTAIN TRAFFIC ON THE RIGHT SIDE OF THE BRIDGE.
2. REMOVE THE REMAINING PORTIONS OF EXISTING LEFT SIDE DECK, PARAPETS, APPROACH SLABS AND PIERS AS NOTED ON THE PLANS.
3. EXCAVATE FOR PHASE 2 PORTIONS OF ABUTMENTS AND REMOVE ABUTMENTS.
4. REMOVE SHEETING LINE B.
5. CONSTRUCT PHASE 2 PORTIONS OF PIERS AND ABUTMENTS.
6. BACKFILL.
7. PLACE SLOPE PROTECTION ON RIGHT SIDE OF BRIDGE.
8. PLACE PHASE 2 PORTIONS OF CONCRETE DECK, PARAPETS, AND APPROACH SLAB.



NOTE:
EXISTING PILES AT PIERS TO
BE REMOVED TO BELOW
THE CONCRETE ENCASEMENT
OR 1'-0" BELOW GROUND,
WHICHEVER IS GREATER.

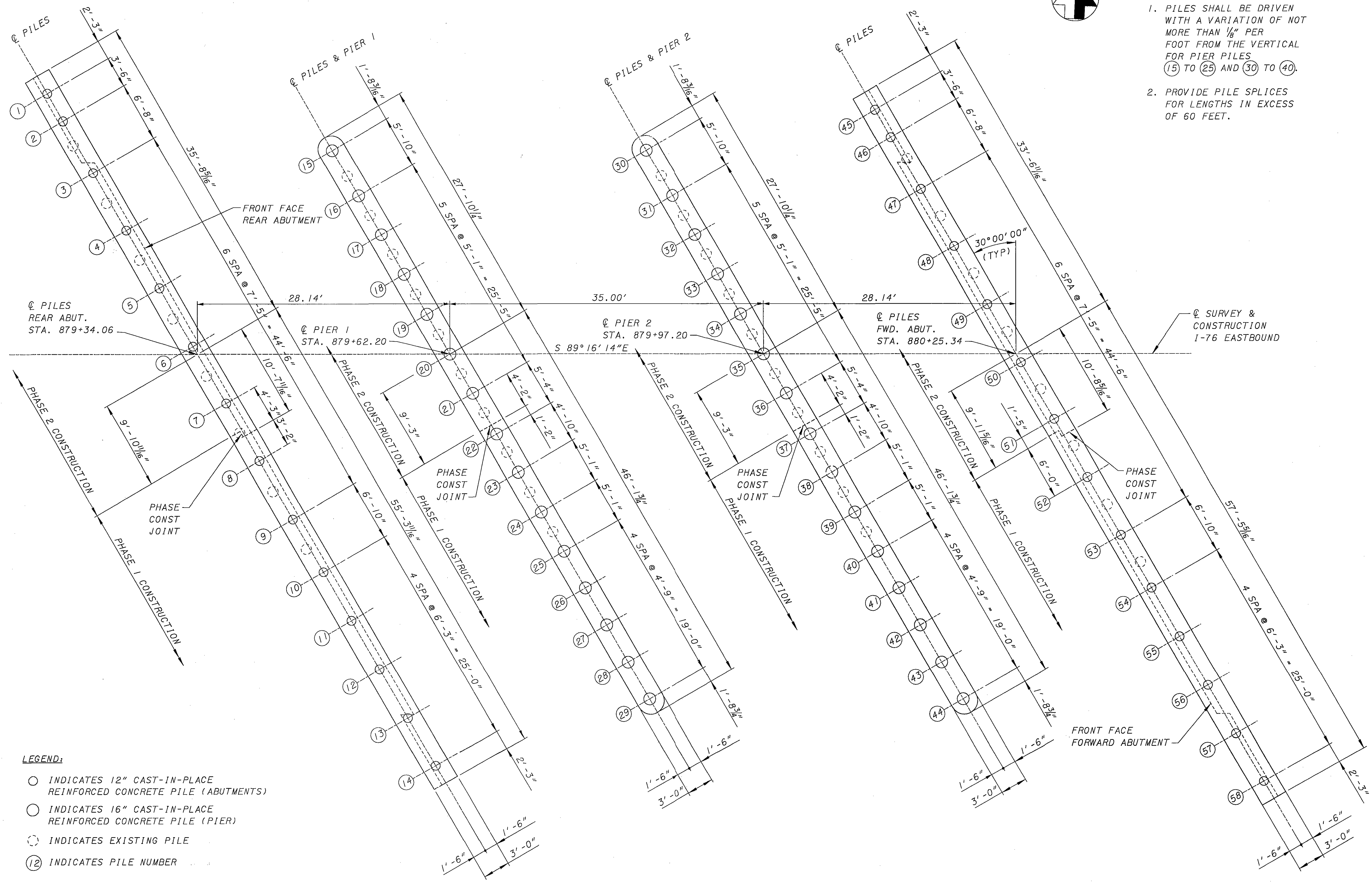


LEGEND:

REMOVAL

PCB PORTABLE CONCRETE BARRIER

PHASE 2 CONSTRUCTION

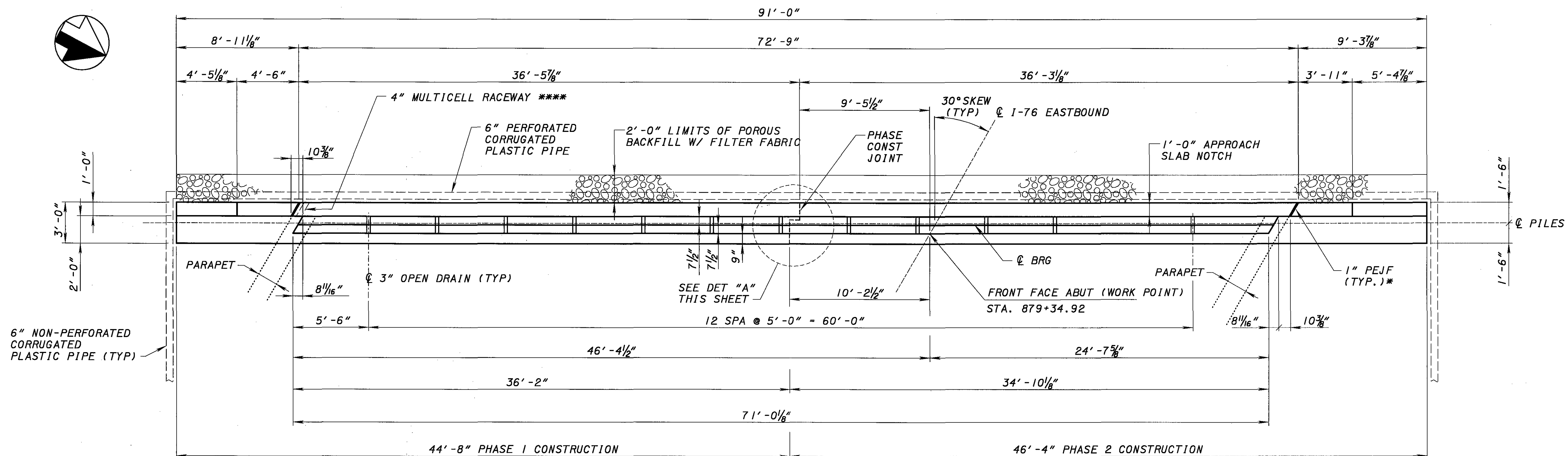
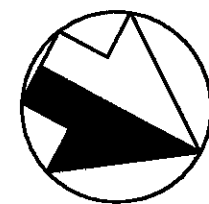


- NOTES:**
- PILES SHALL BE DRIVEN WITH A VARIATION OF NOT MORE THAN $\frac{1}{8}$ " PER FOOT FROM THE VERTICAL FOR PIER PILES (15 TO 25) AND (30 TO 40).
 - PROVIDE PILE SPLICES FOR LENGTHS IN EXCESS OF 60 FEET.

- LEGEND:**
- INDICATES 12" CAST-IN-PLACE REINFORCED CONCRETE PILE (ABUTMENTS)
 - INDICATES 16" CAST-IN-PLACE REINFORCED CONCRETE PILE (PIER)
 - INDICATES EXISTING PILE
 - ⑫ INDICATES PILE NUMBER

FOUNDATION PLAN

PREPARED BY ms consultants, inc. CONSULTING ENGINEERS & PLANNERS 222 SOUTH MAIN, SUITE 200, ANDOVER, MA 01810	
DATE 02/2005	REVIEWED PA
DRAWN MLH	CHECKED JNS
DESIGNED JNS	REVISION GKL
STRUCTURE FILE NUMBER 5204399	
FOUNDATION PLAN BRIDGE NO. MED-76-0112R I-76 EASTBOUND OVER CHIPPEWA DITCH	
MED-71-6.06 PID 75657	
7 / 18	
1016 1120	



* 1" PEJF SHALL BE INCLUDED WITH ITEM 511, CLASS C CONCRETE ABUTMENT INCLUDING FOOTING, AS PER PLAN.

** MECHANICAL CONNECTOR IS PLACED AT PHASE CONSTRUCTION JOINT.

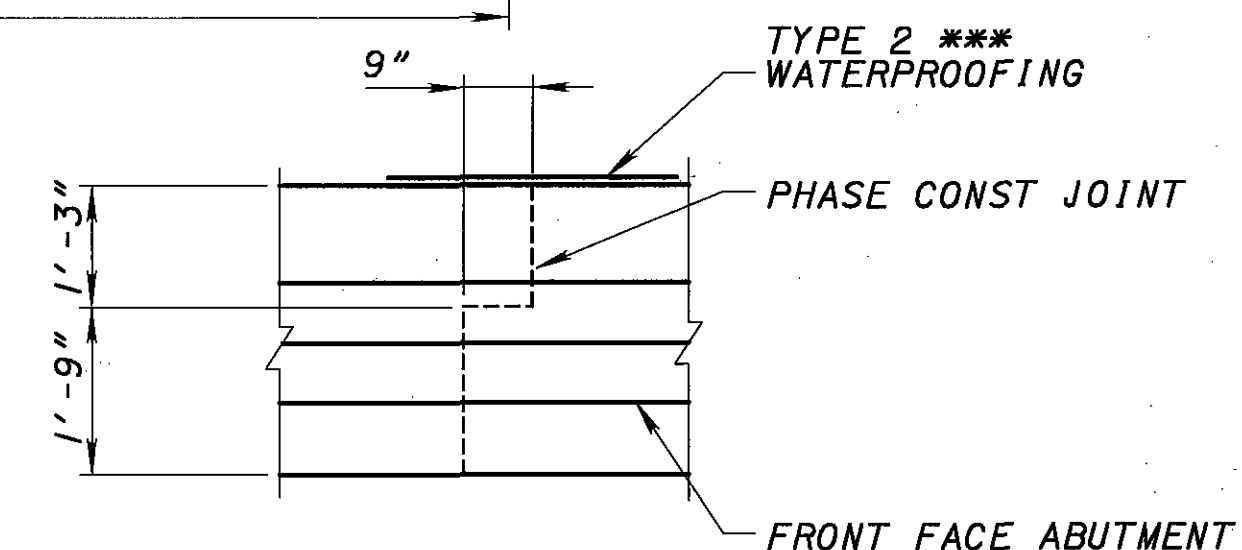
*** SEAL VERTICAL JOINT BETWEEN CONSTRUCTION PHASES ON THE BACKSIDE OF ABUTMENT BREASTWALL FROM TOP OF FOOTING TO THE APPROACH SLAB SEAT WITH ITEM 512, TYPE 2 WATERPROOFING, 3 FEET WIDE CENTERED OVER JOINT.

**** SEE LIGHTING SHEETS FOR QUANTITIES & PAYMENT.

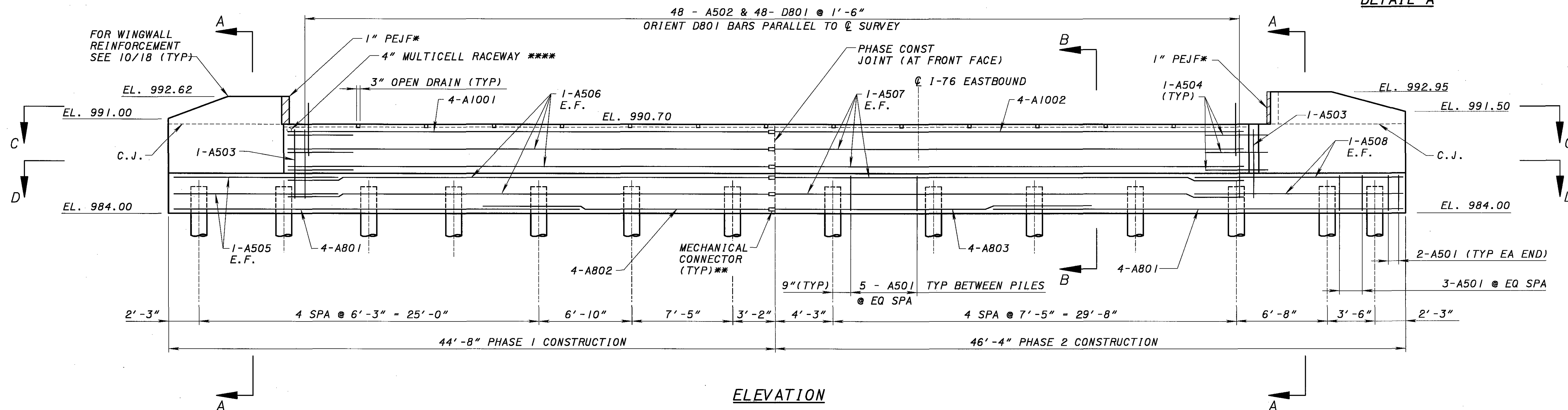
PLAN
(PILES NOT SHOWN FOR CLARITY)

MINIMUM LAP LENGTH

#5 BAR - 3'-5"
#8 BAR - 7'-3"

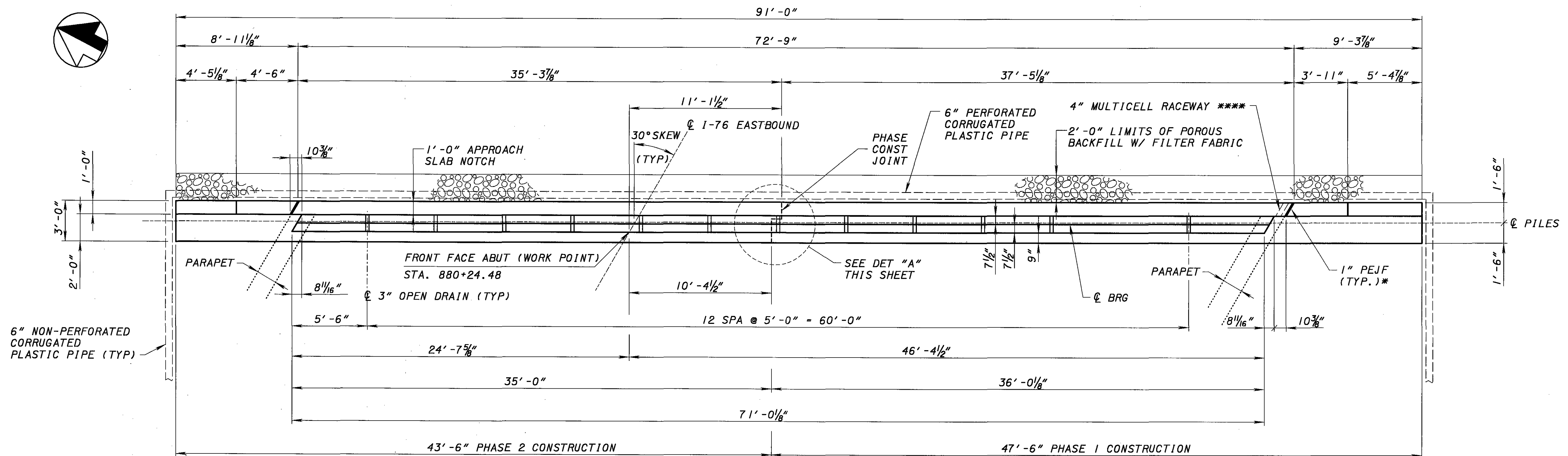
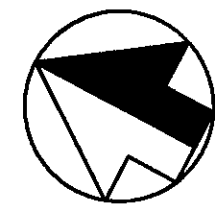


DETAIL A

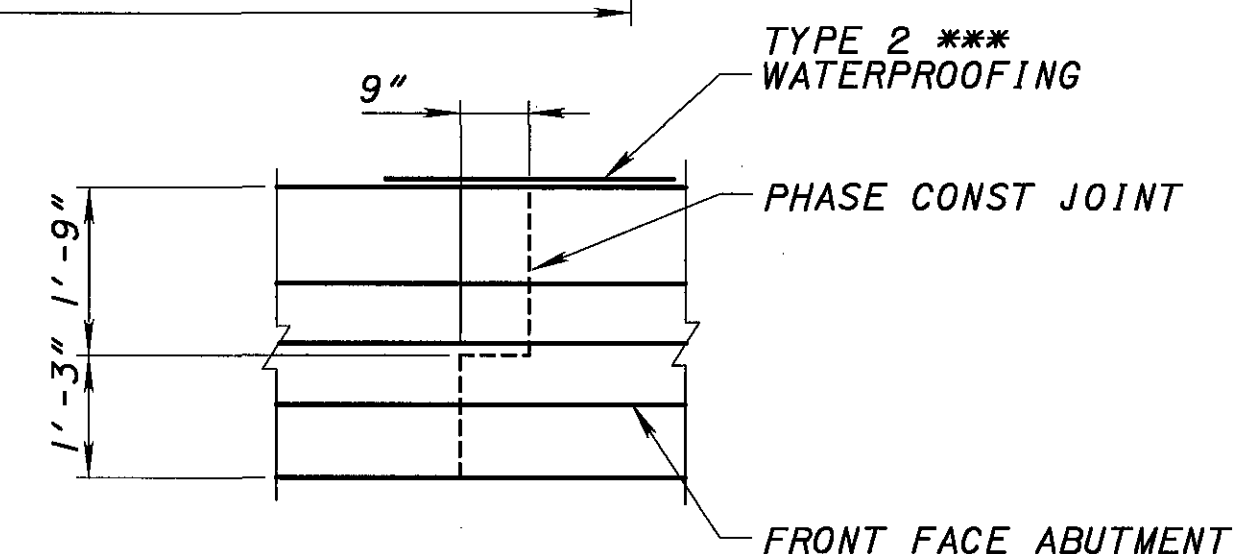


NOTES

1. FOR SECTIONS A-A, B-B, C-C, & D-D SEE SHEET 10/18.



PLAN
(PILES NOT SHOWN FOR CLARITY)



DETAIL A

MINIMUM LAP LENGTH

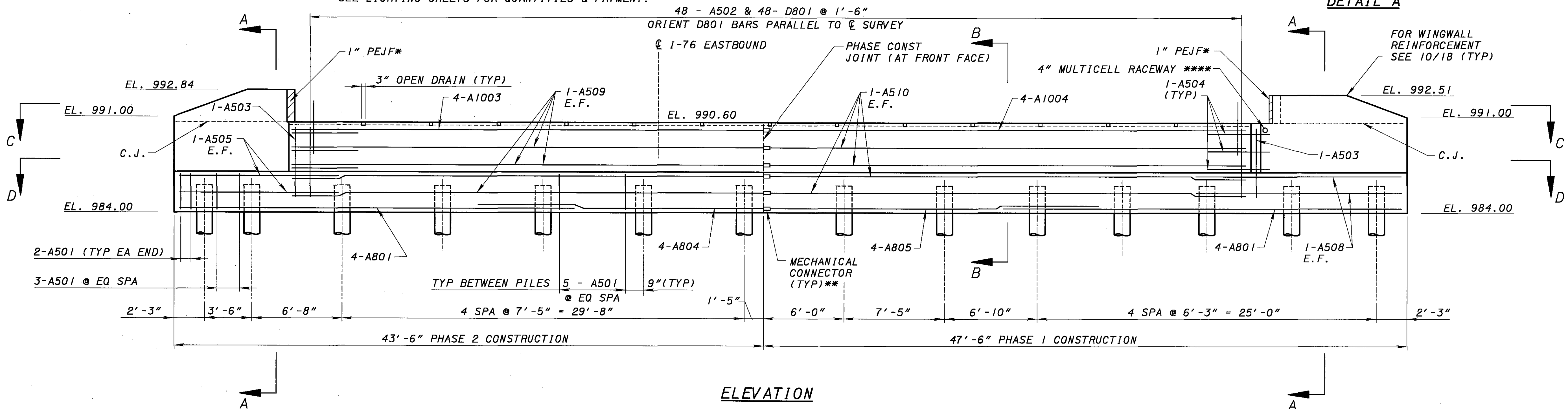
#5 BAR - 3'-5"
#8 BAR - 7'-3"

* 1" PEJF SHALL BE INCLUDED WITH ITEM 511, CLASS C CONCRETE ABUTMENT INCLUDING FOOTING, AS PER PLAN.

** MECHANICAL CONNECTOR IS PLACED AT PHASE CONSTRUCTION JOINT.

*** SEAL VERTICAL JOINT BETWEEN CONSTRUCTION PHASES ON THE BACKSIDE OF ABUTMENT BREASTWALL FROM TOP OF FOOTING TO THE APPROACH SLAB SEAT WITH ITEM 512, TYPE 2 WATERPROOFING, 3 FEET WIDE CENTERED OVER JOINT.

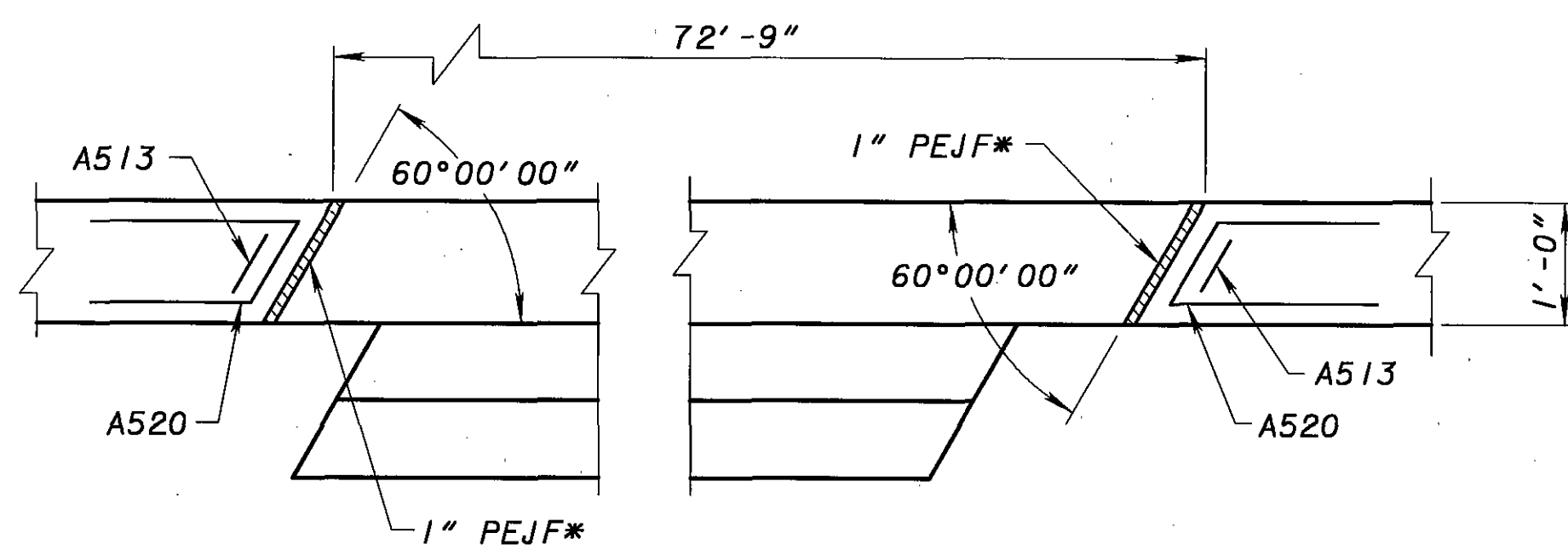
**** SEE LIGHTING SHEETS FOR QUANTITIES & PAYMENT.



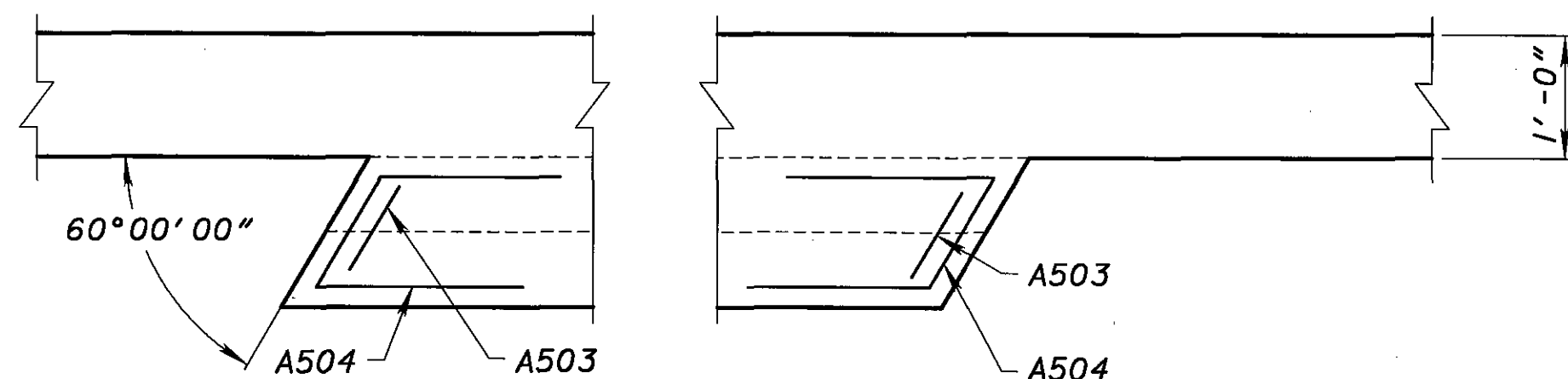
ELEVATION

NOTES

1. FOR SECTIONS A-A, B-B, C-C, & D-D, SEE SHEET 10/18.



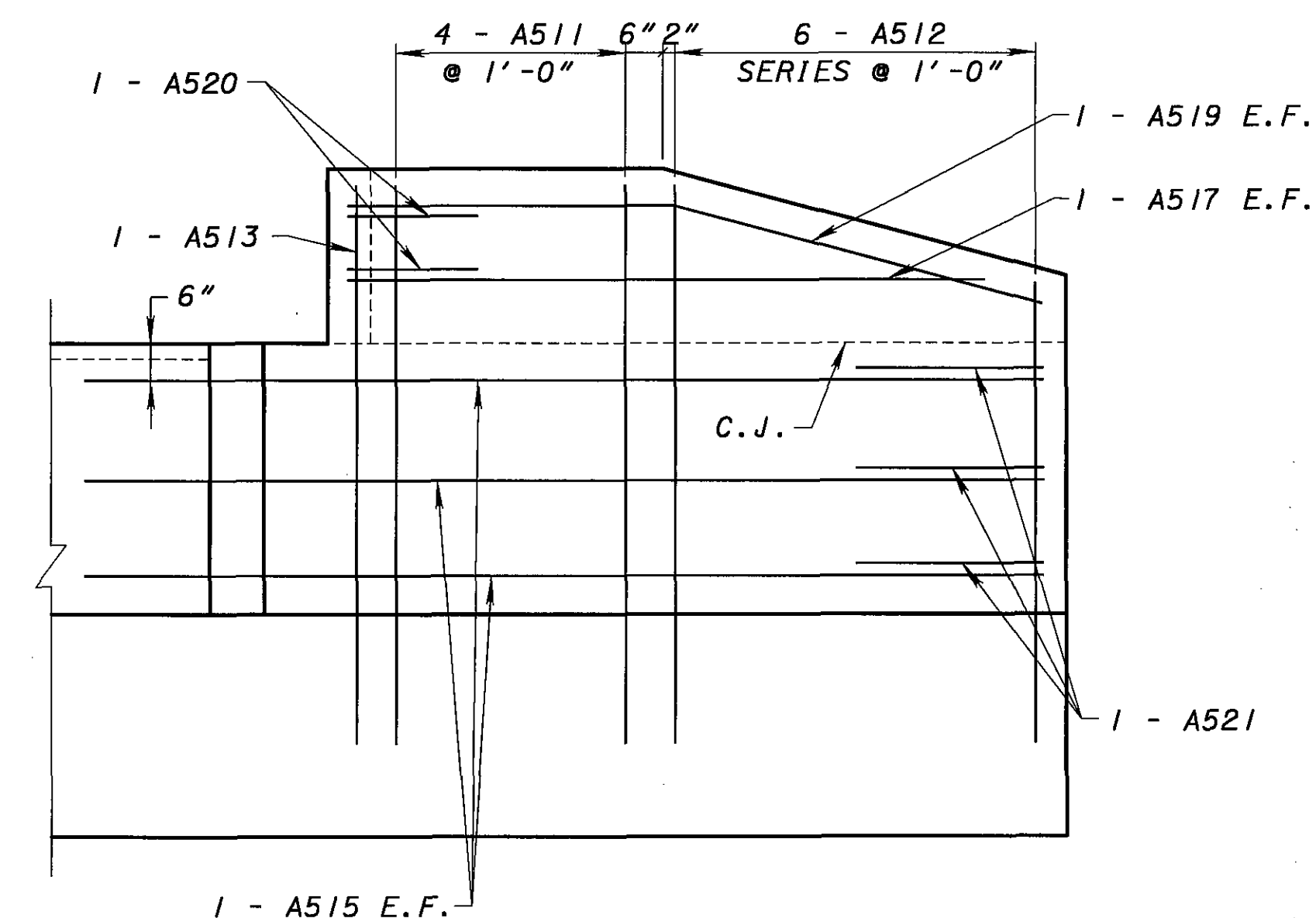
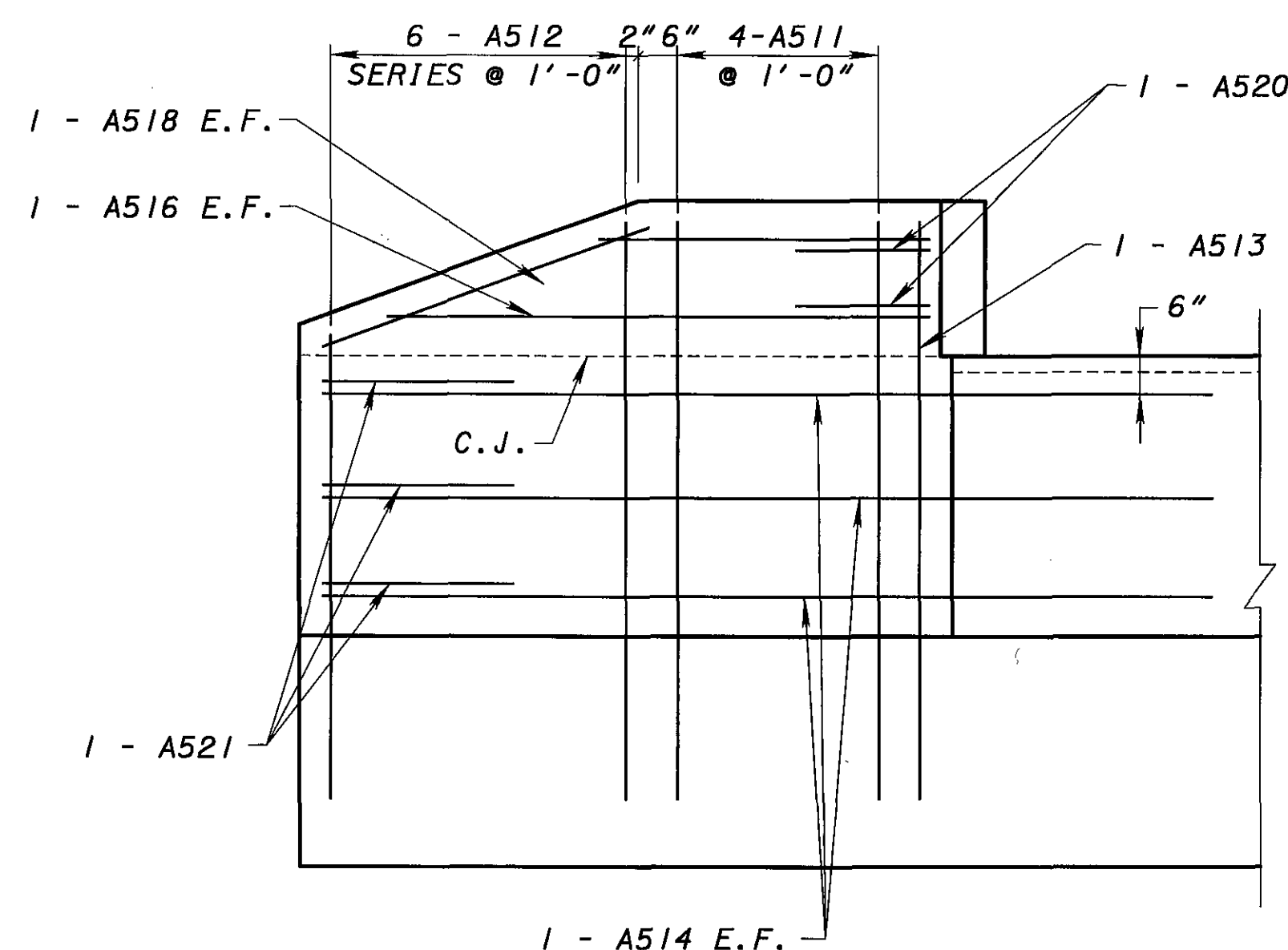
SECTION C-C



SECTION D-D

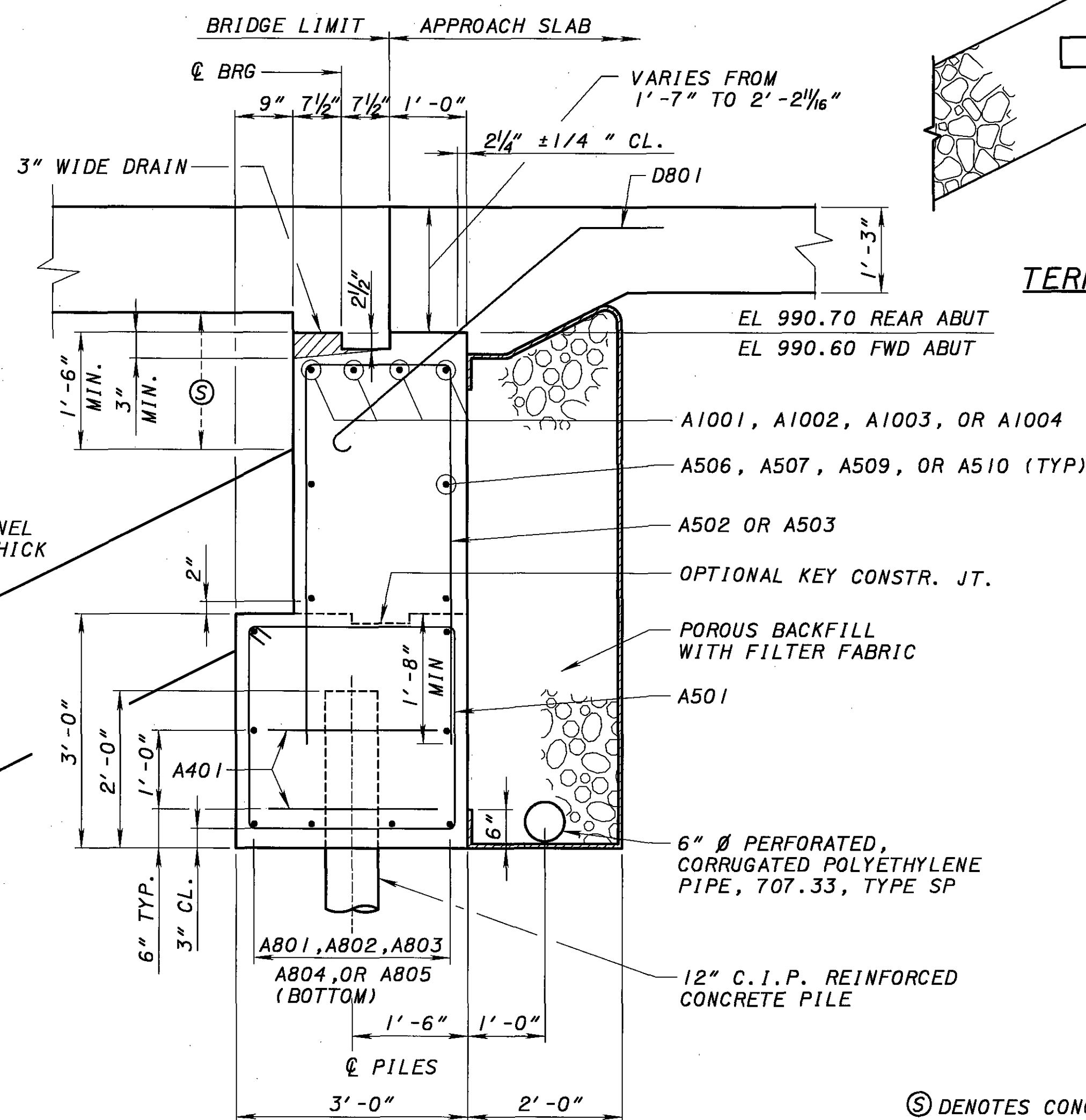
SEE ABUTMENT ELEVATION
FOR COMPLETE REINFORCEMENT

* 1" PEJF SHALL BE INCLUDED WITH ITEM 511,
CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING,
AS PER PLAN

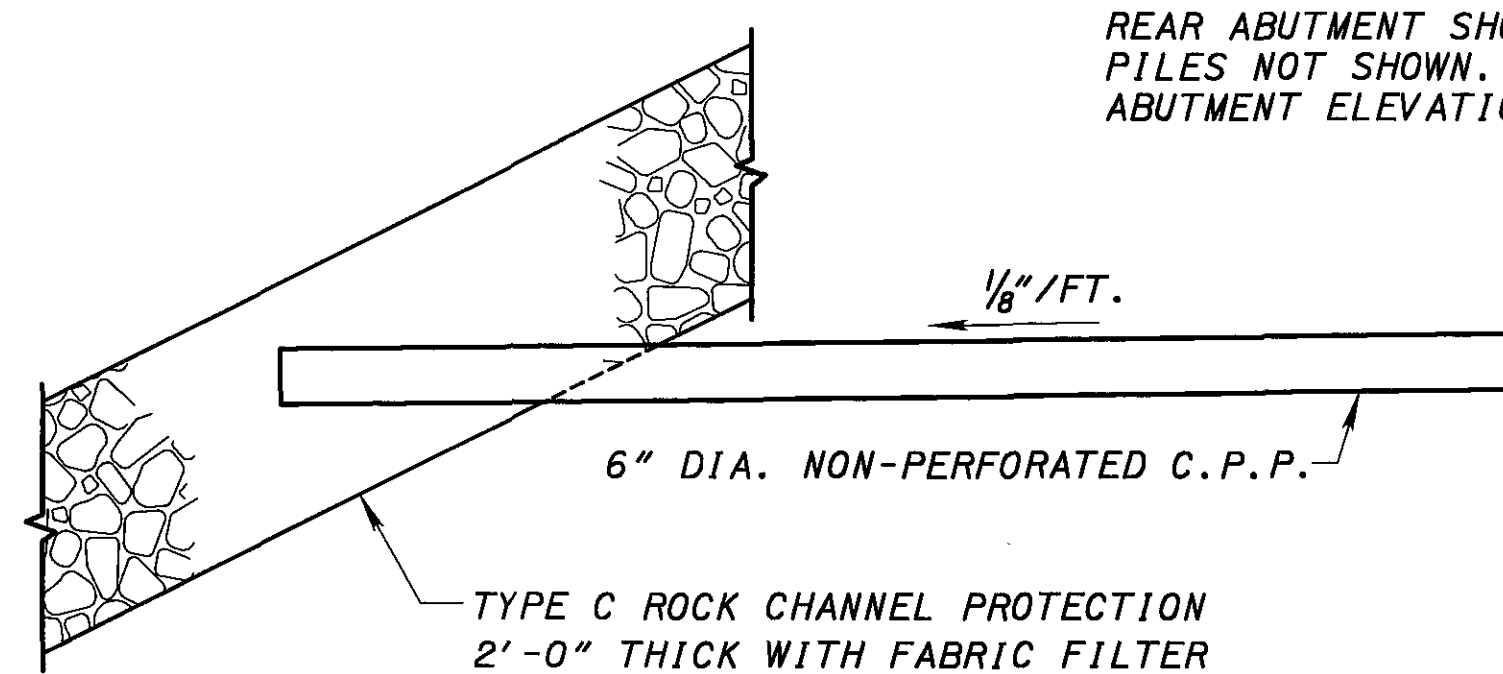


WINGWALL REINFORCEMENT

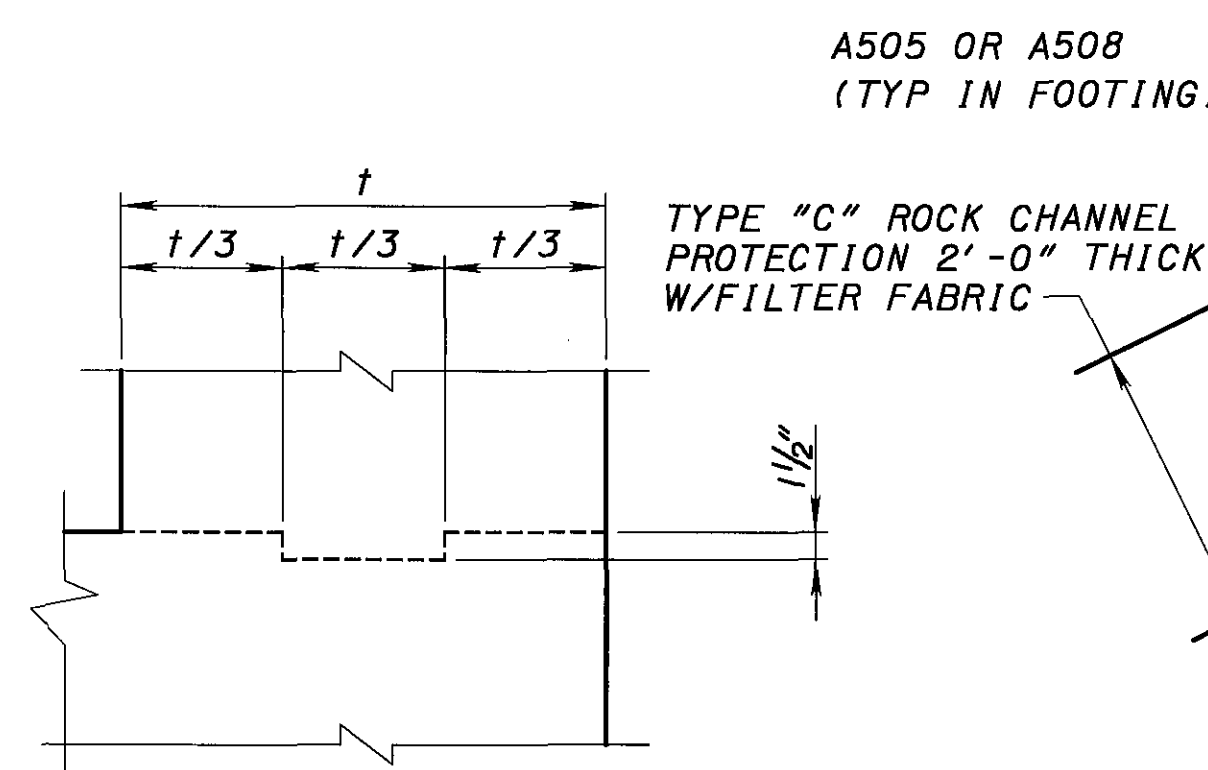
REAR ABUTMENT SHOWN, FORWARD ABUTMENT OPPOSITE HAND
PILES NOT SHOWN. FOR REINFORCEMENT IN BREASTWALL, SEE
ABUTMENT ELEVATION.



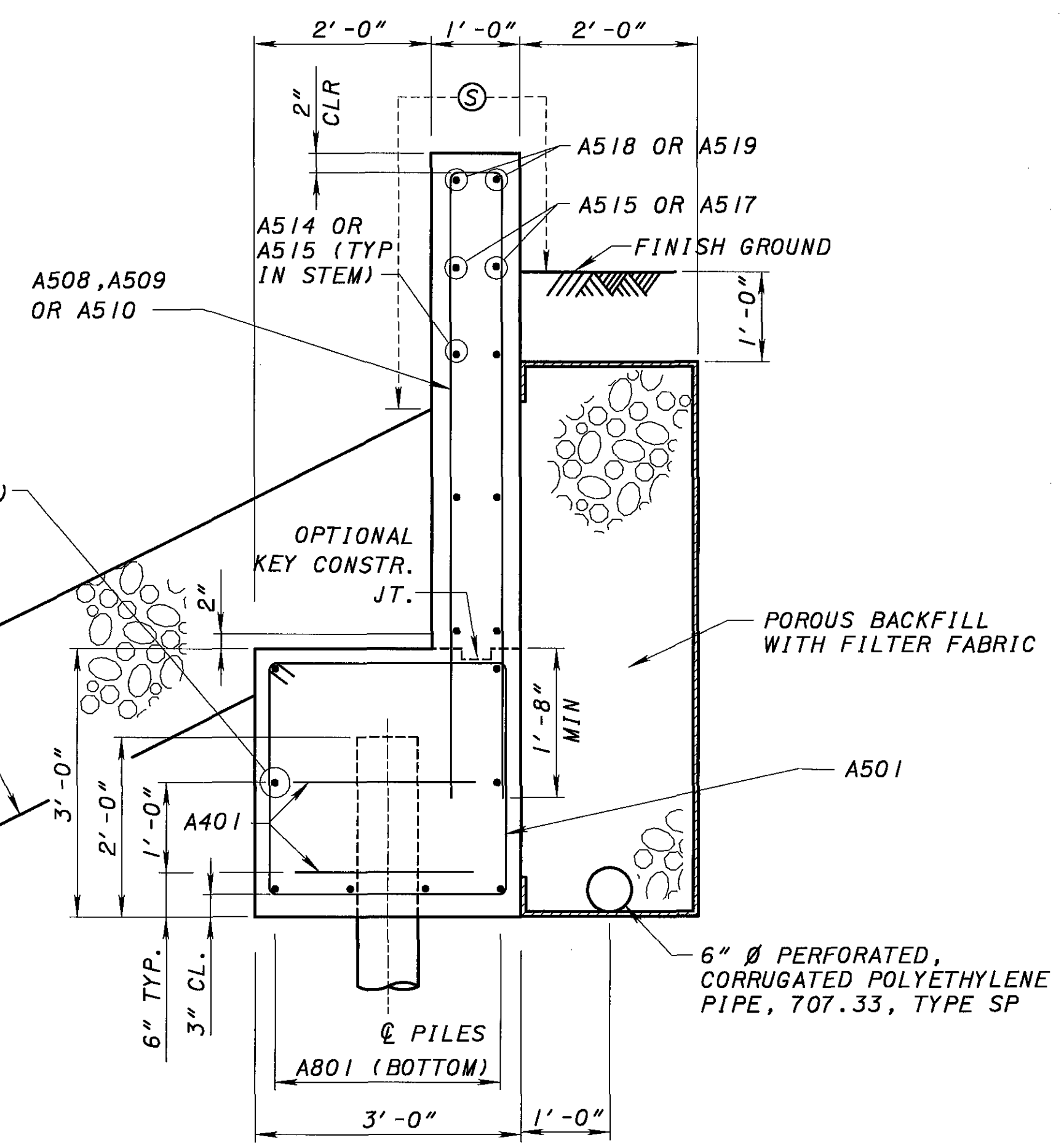
SECTION B-B



TERMINATION OF 6" N.P.C.P.P. DETAIL

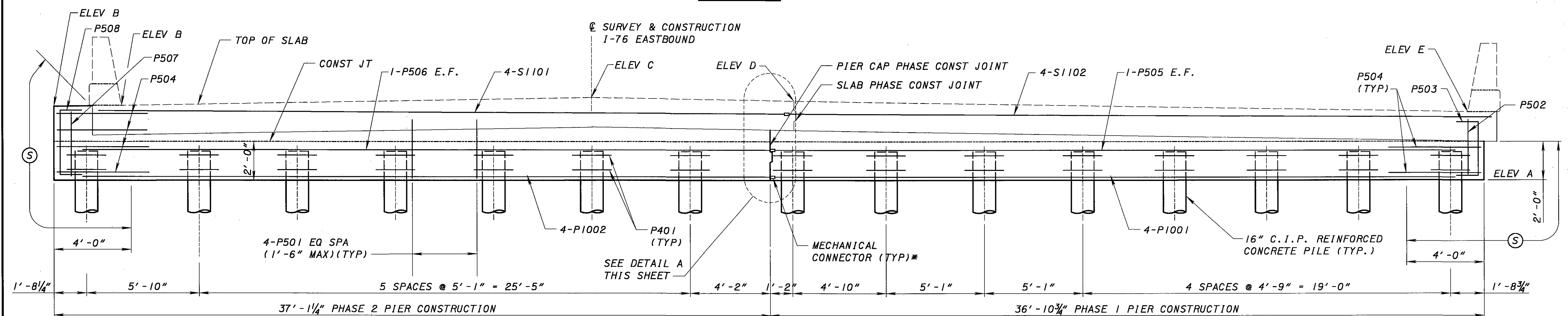
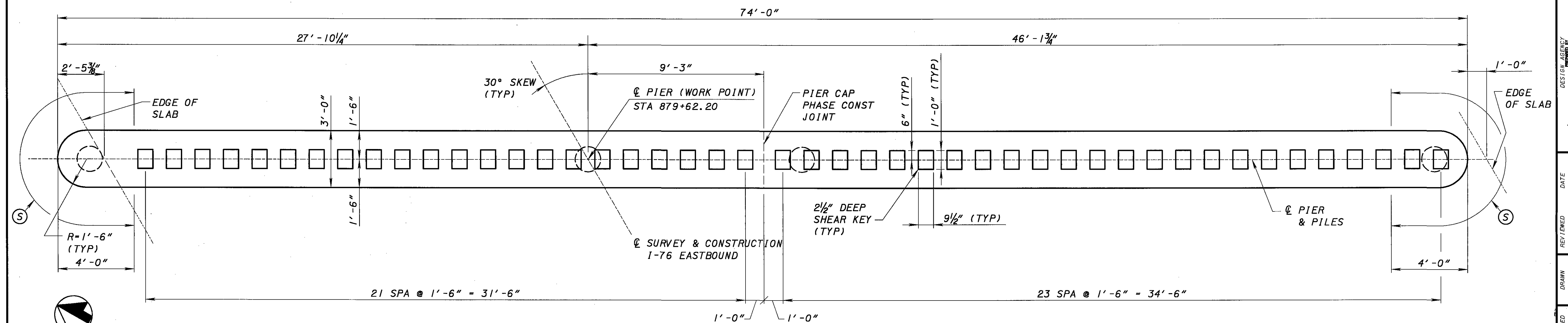


KEY CONSTRUCTION JOINT DETAIL



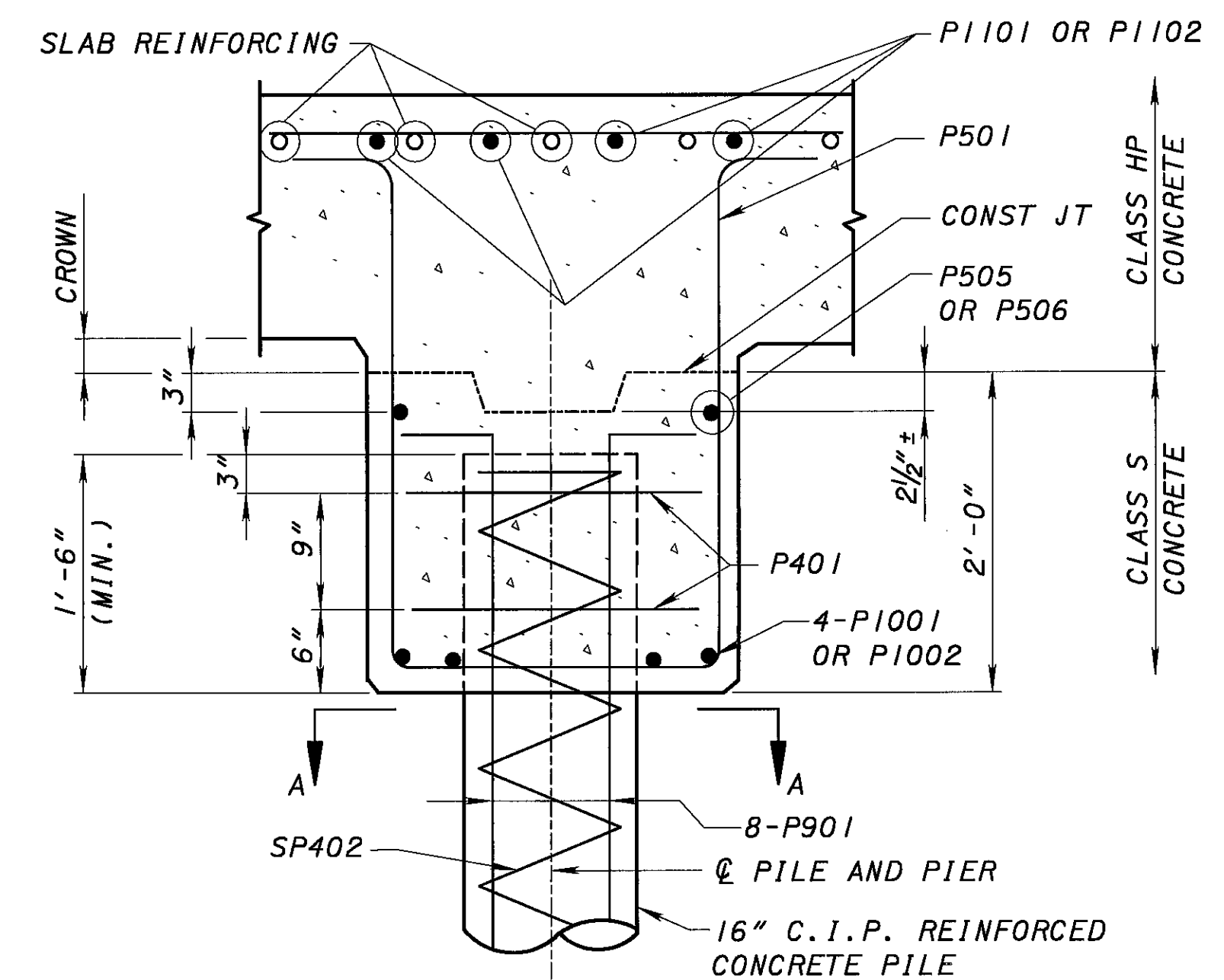
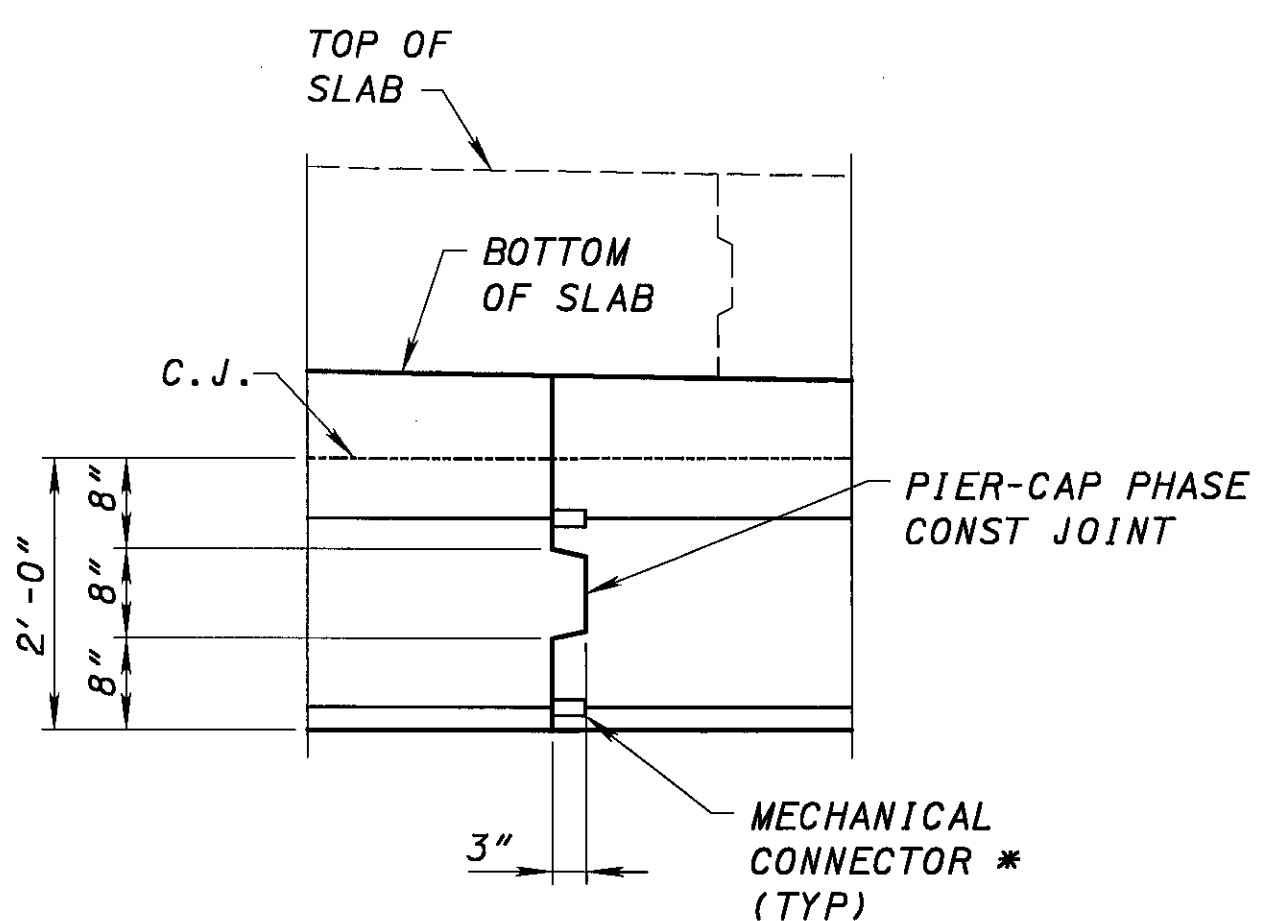
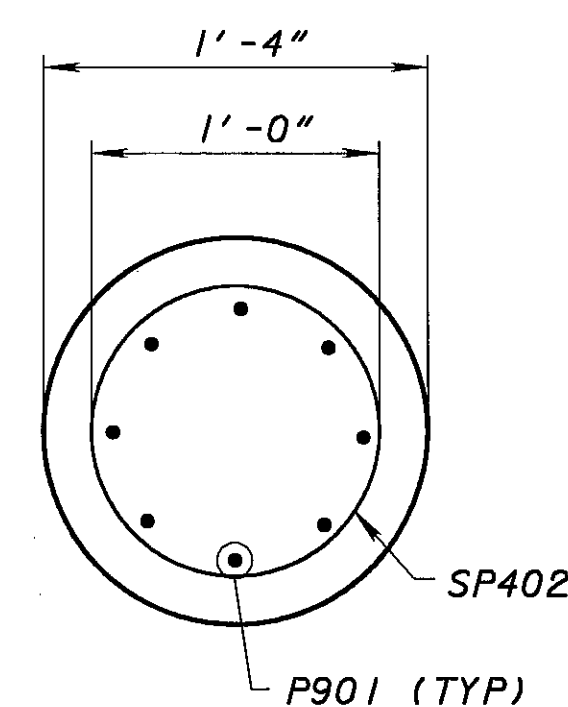
SECTION A-A

Ⓢ DENOTES CONCRETE SURFACES TO
BE SEALED BY EPOXY URETHANE.



* MECHANICAL CONNECTOR IN PIER CAP IS PLACED AT PHASE CONSTRUCTION JOINT. MECHANICAL CONNECTOR IN SLAB IS PLACED OUTSIDE PHASE CONSTRUCTION JOINT. DISTANCE FROM JOINT TO END OF CONNECTOR FOR #11 BARS IS 1'-3".

⑤ DENOTES CONCRETE SURFACES TO BE
SEALED BY EPOXY URETHANE



<i>ELEV</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>PIER 1</i>	<i>988.75</i>	<i>992.59</i>	<i>992.89</i>	<i>992.74</i>	<i>992.25</i>
<i>PIER 2</i>	<i>988.71</i>	<i>992.54</i>	<i>992.85</i>	<i>992.70</i>	<i>992.21</i>

ms consultants, inc.
CONSULTING ENGINEERS & PLANNERS
2221 SCHROCK ROAD, COLUMBUS, OHIO

PA 02/2005	STRUCTURE FILE NUMBER
	5204399

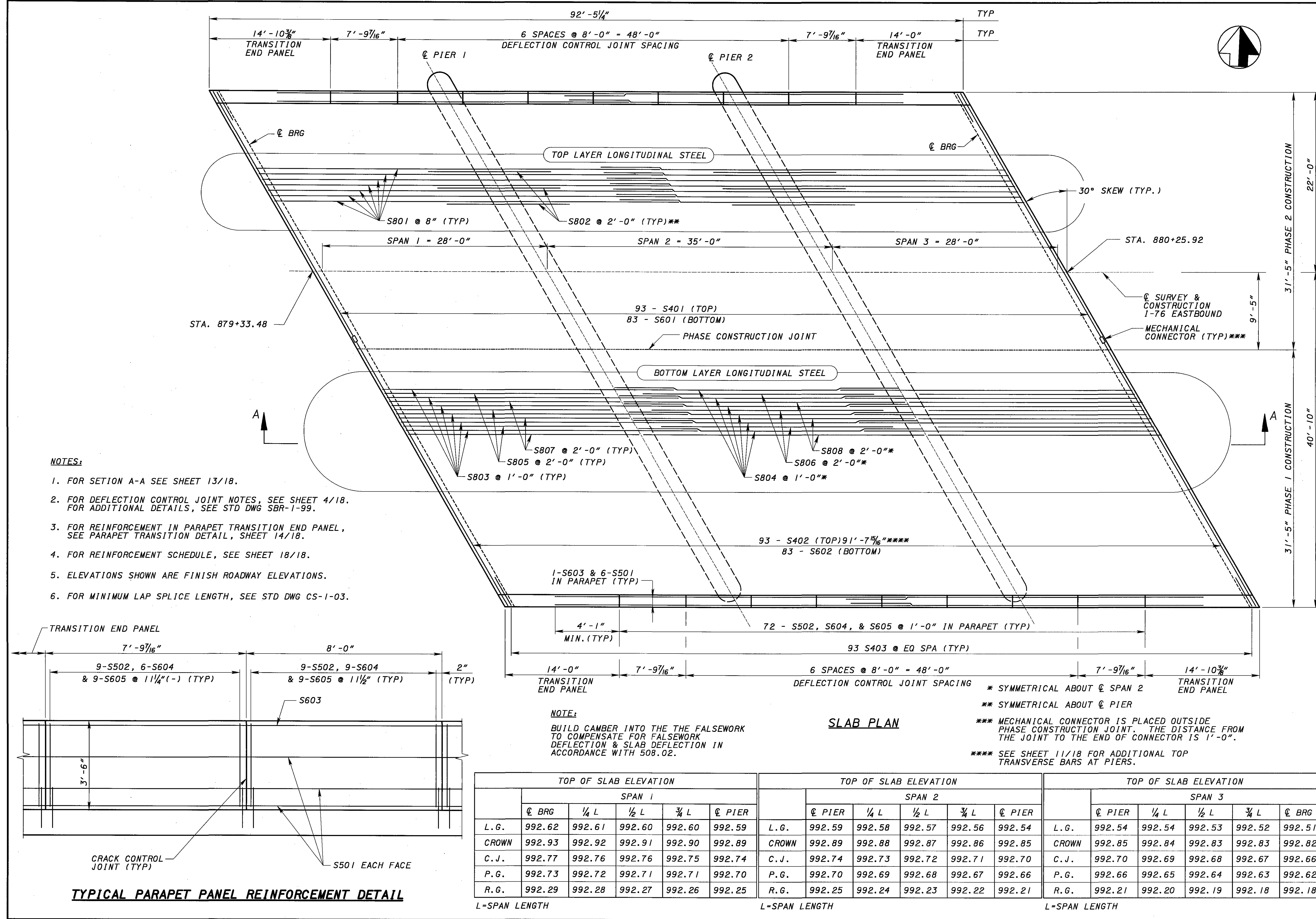
JNS	MLH
CHECKED	REVISED
GKL	

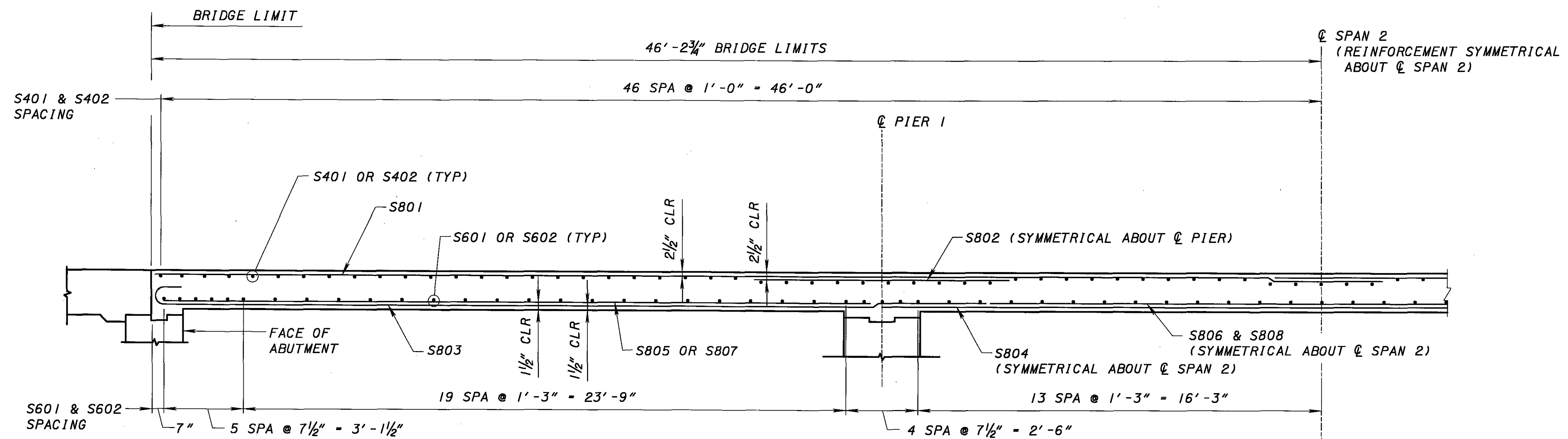
BRIDGE NO. MED-76-0112R
I-76 EASTBOUND OVER CHIPPEWA DITCH

MED-71-6.06
PID 75657

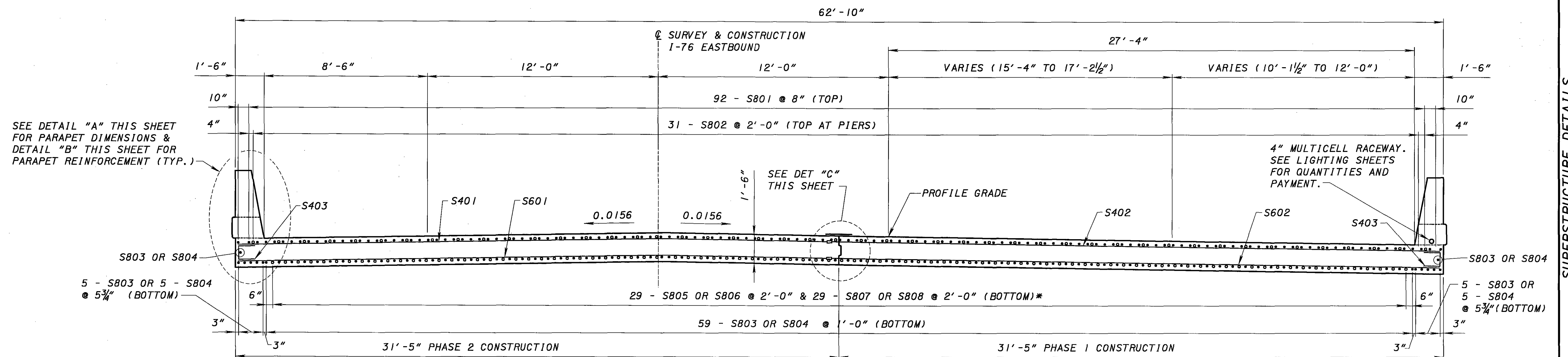
11/18

$$\frac{1020}{1120}$$





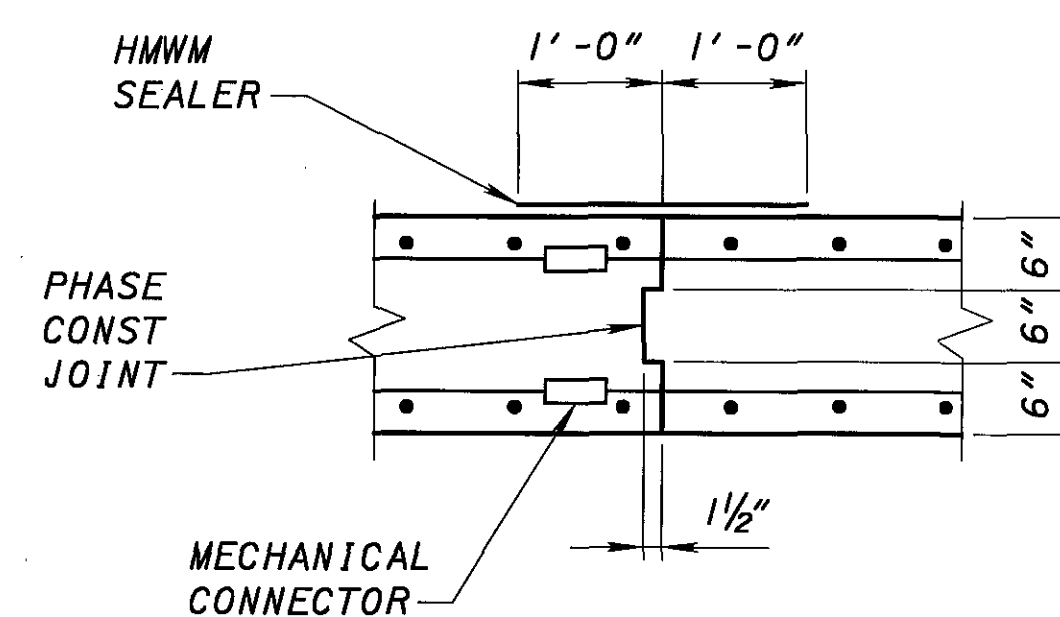
HALF SECTION A-A



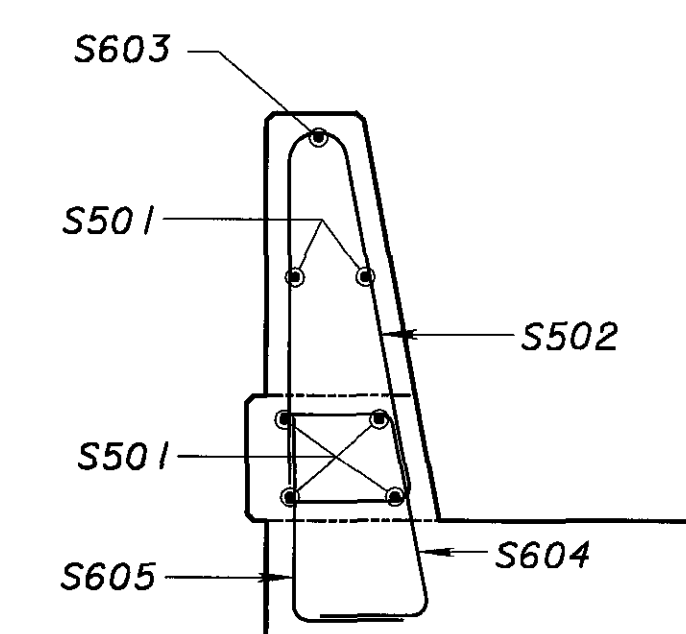
TRANSVERSE SECTION

* ALTERNATE S805 WITH S807
& S806 WITH S808

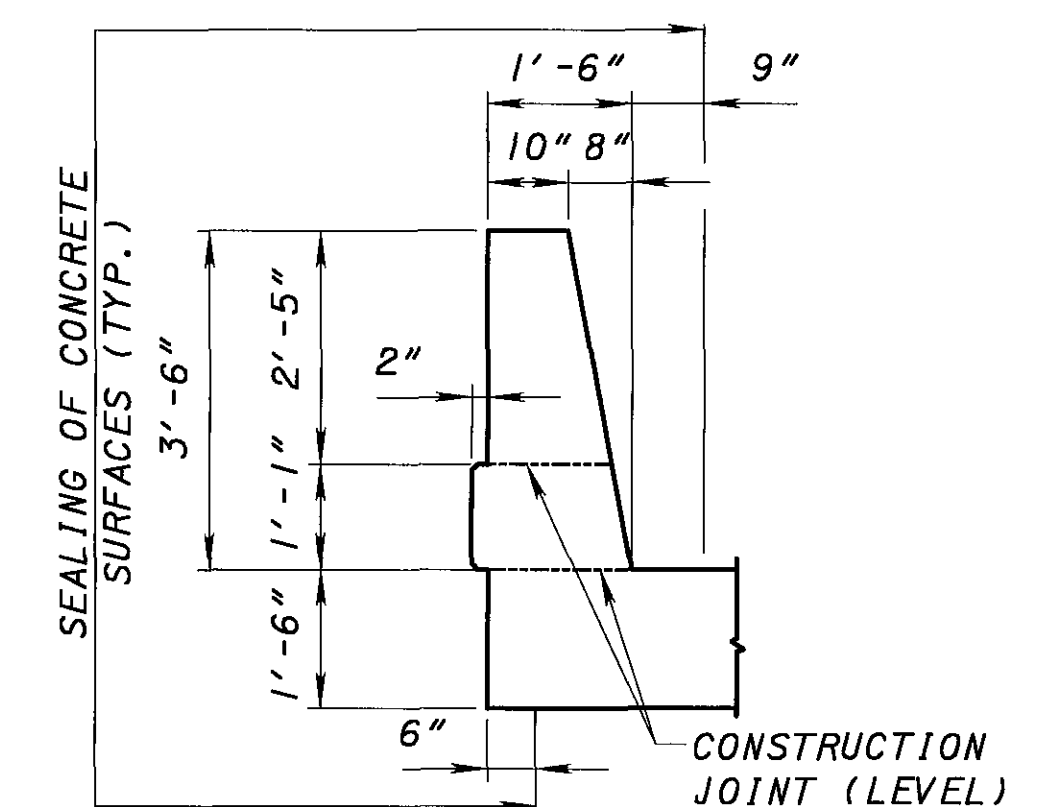
NOTE:
FOR MINIMUM LAP SPLICE LENGTH,
SEE STD DWG CS-1-03.



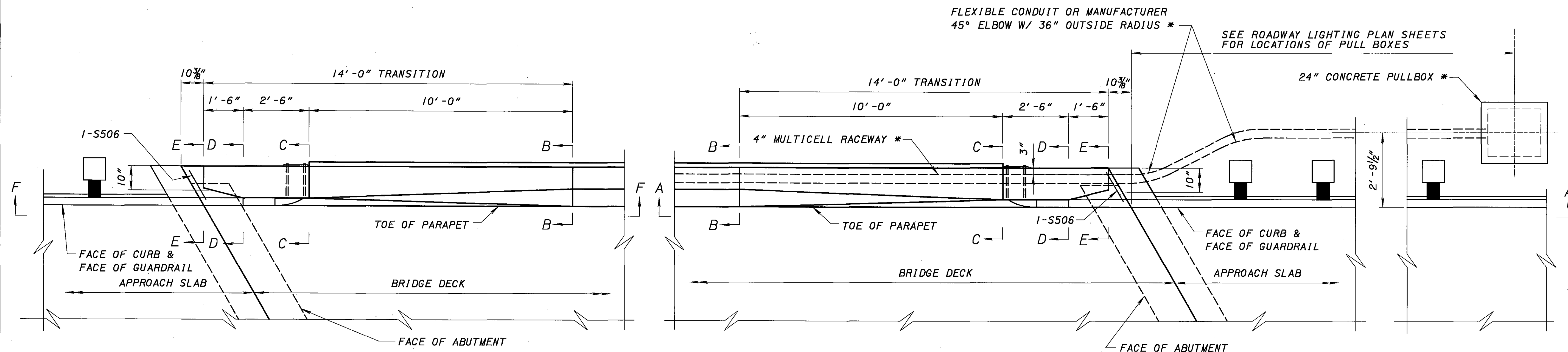
DETAIL C



DETAIL B



DETAIL A



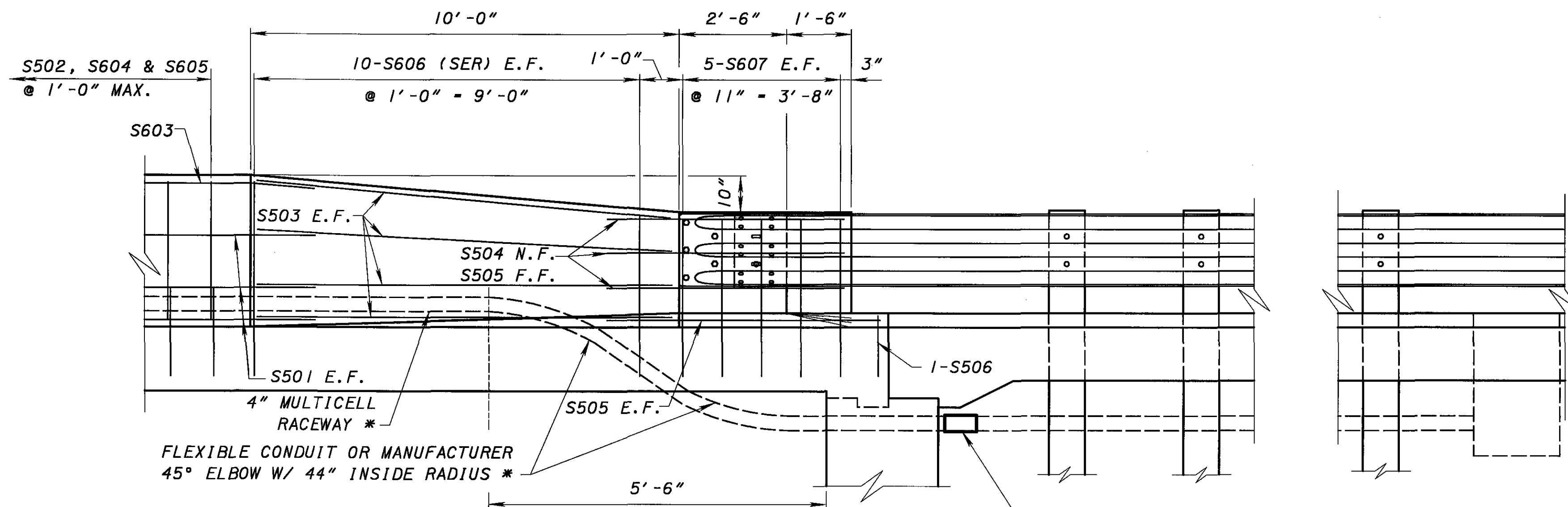
PARAPET TRANSITION PLAN
 LEFT CORNER AT REAR ABUTMENT SHOWN
 RIGHT CORNER AT FWD ABUTMENT SIMILAR
 (CONDUIT AND PULLBOX NOT SHOWN)

PARAPET TRANSITION PLAN
 LEFT CORNER AT FWD ABUTMENT SHOWN
 RIGHT CORNER AT REAR ABUTMENT SIMILAR

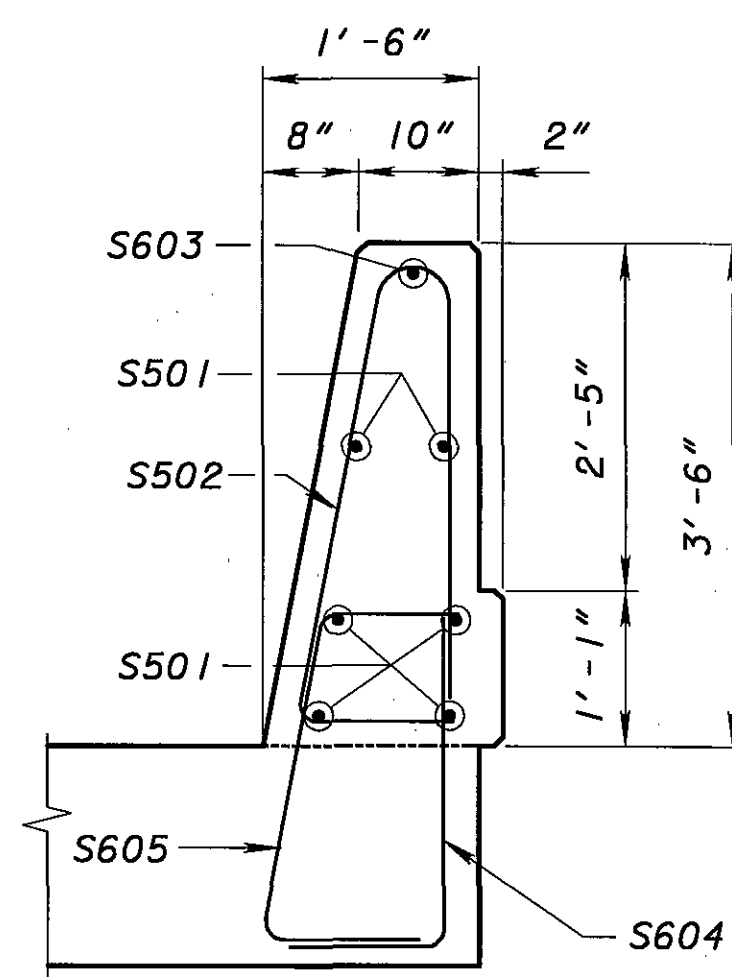
* AT RIGHT PARAPET ONLY. SEE LIGHTING SHEETS FOR QUANTITIES & PAYMENTS.

- NOTES:**
1. REFER TO LIGHTING SHEETS L42 & L46.
 2. REFER TO SITE PLAN SHEET 1/18 FOR GUIDRAIL ASSEMBLY.

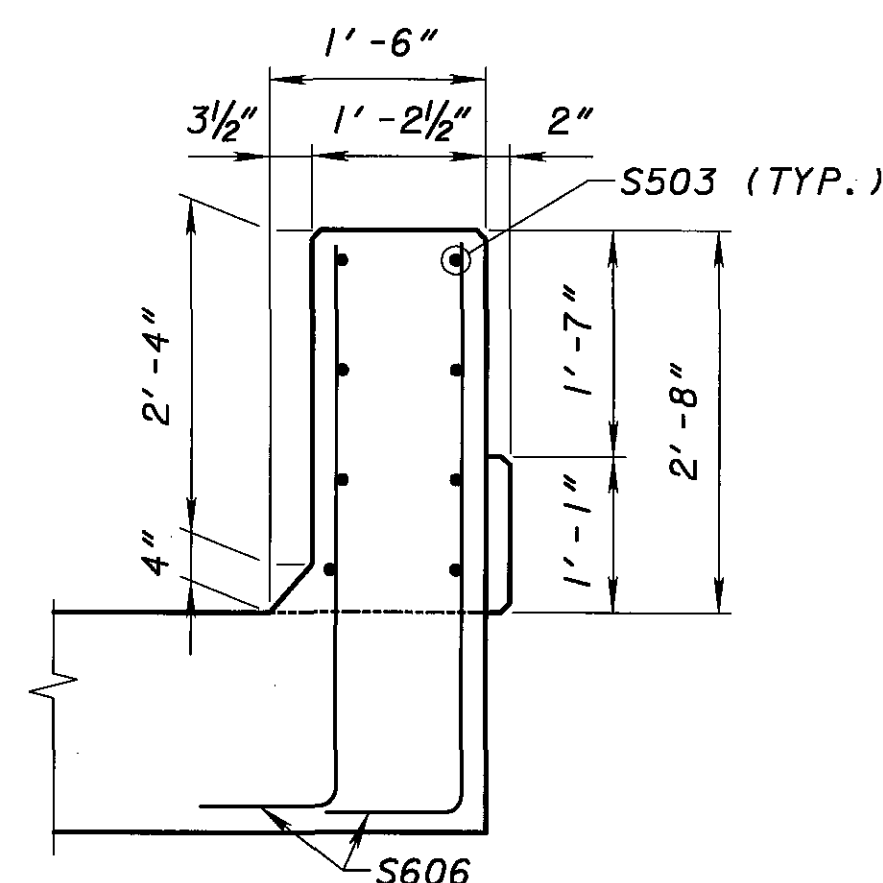
MINIMUM LAP LENGTHS
 #5 BARS - 3'-2"
 #6 BARS - 4'-1"



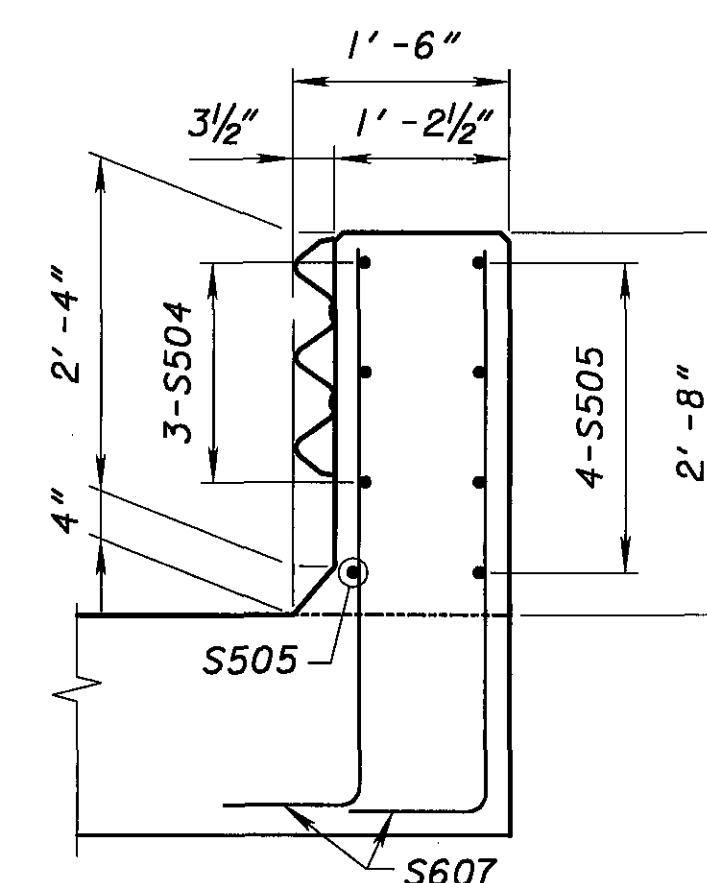
SECTION A-A
SECTION F-F (OPPOSITE HAND)



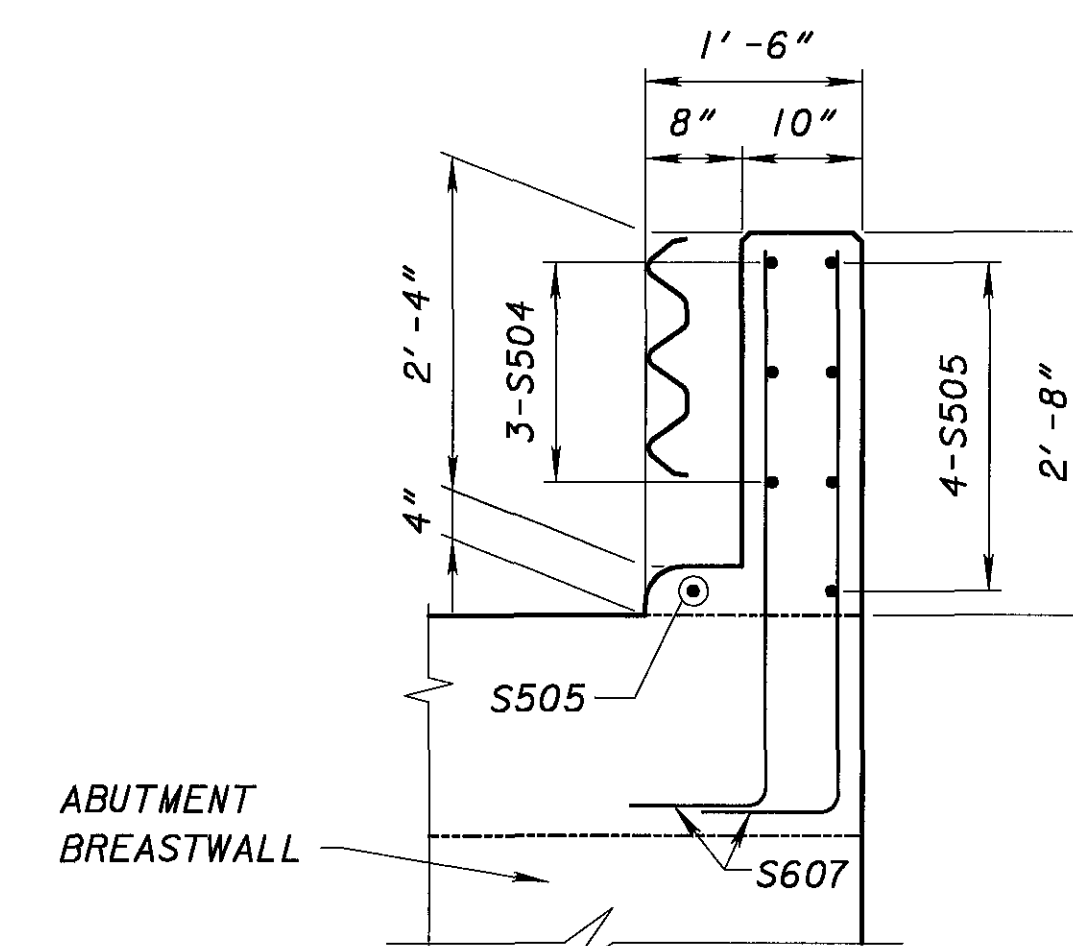
SECTION B-B



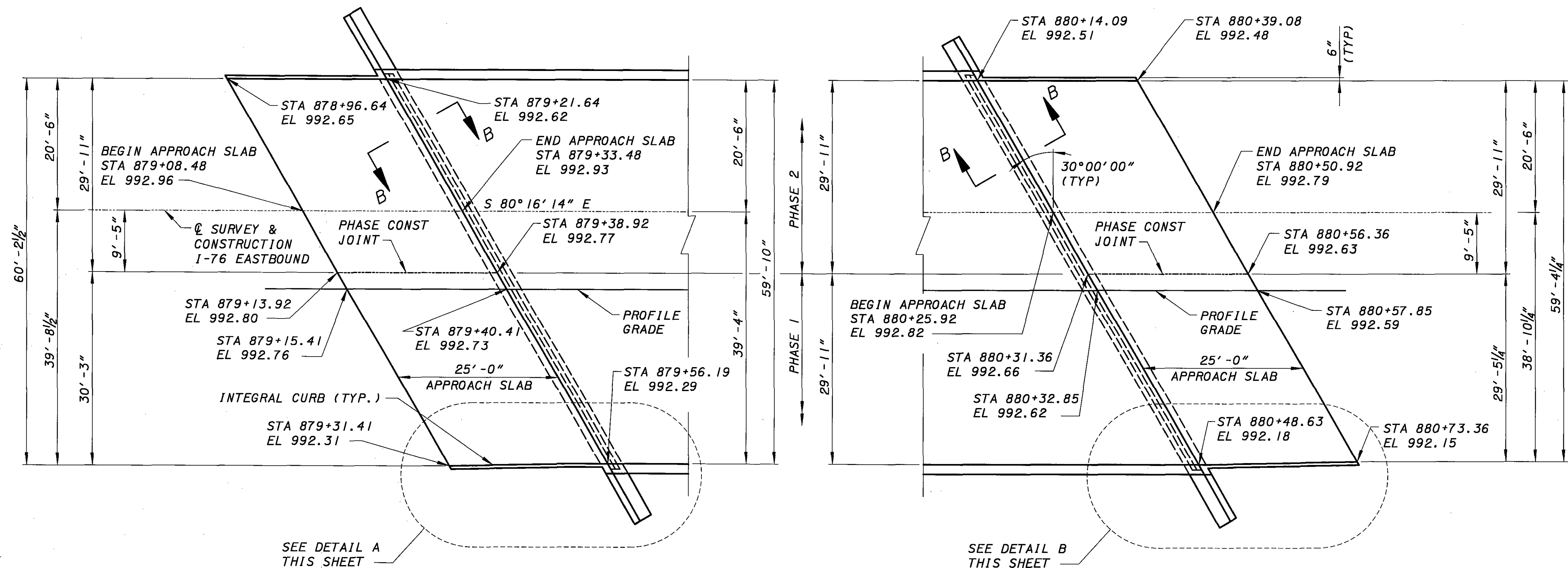
SECTION C-C



SECTION D-D



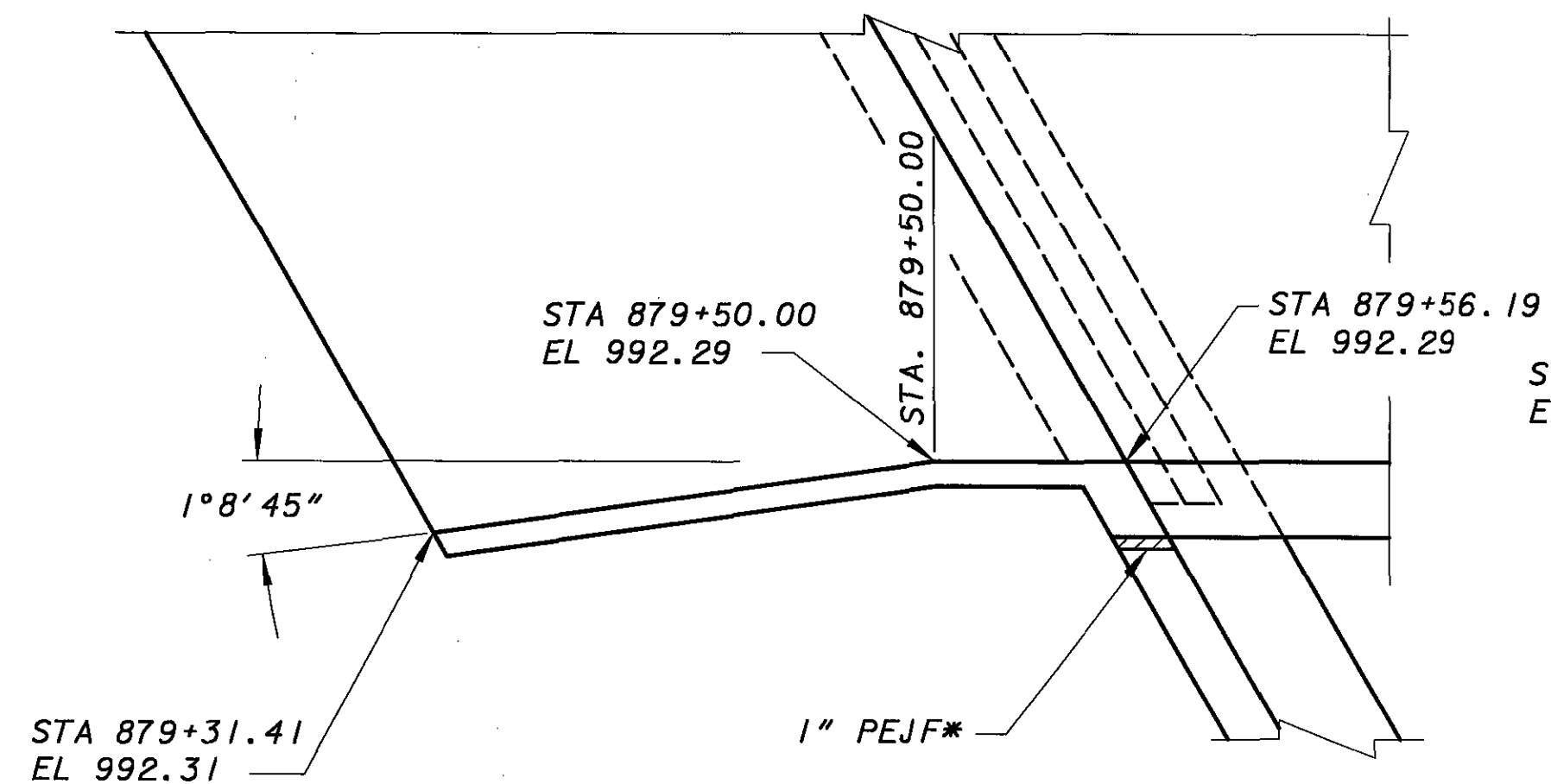
SECTION E-E



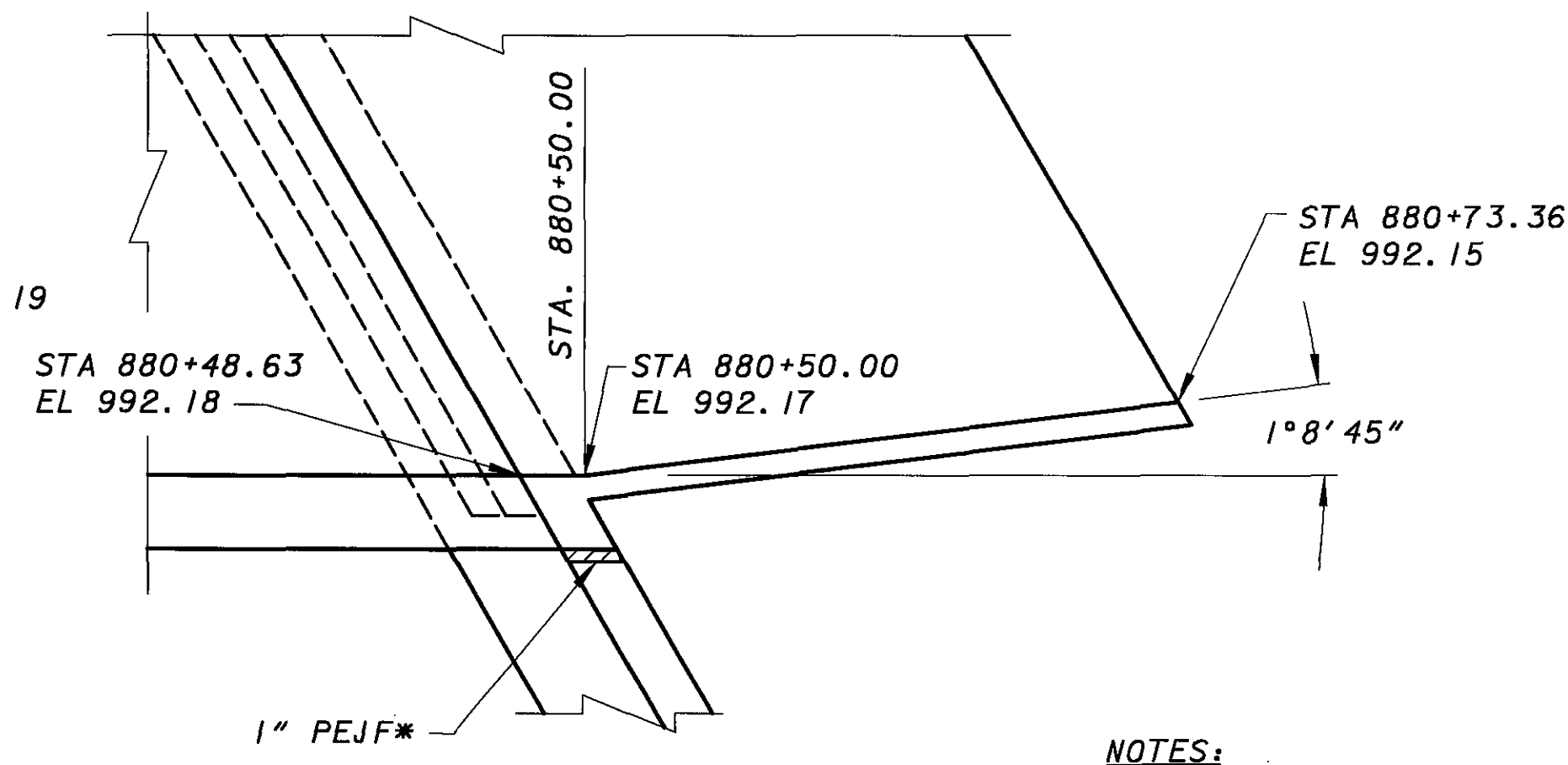
APPROACH SLAB PLAN

* 1" PEJF SHALL BE INCLUDED WITH ITEM 511, CLASS C CONCRETE ABUTMENT INCLUDING FOOTING, AS PER PLAN.

NOTE:
FOR SECTION B-B, SEE SHEET 10/18.

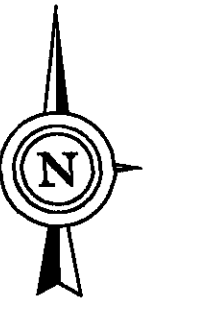


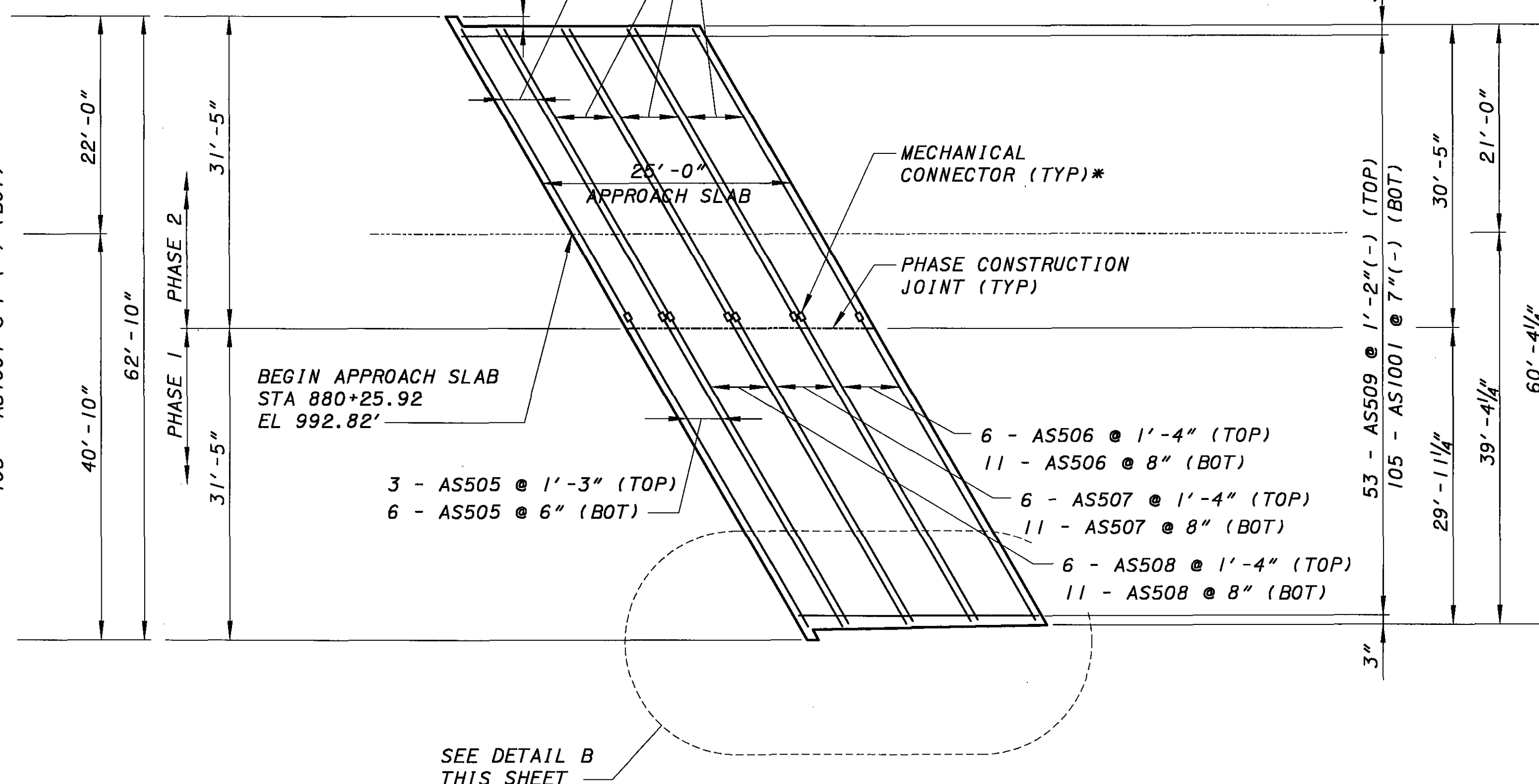
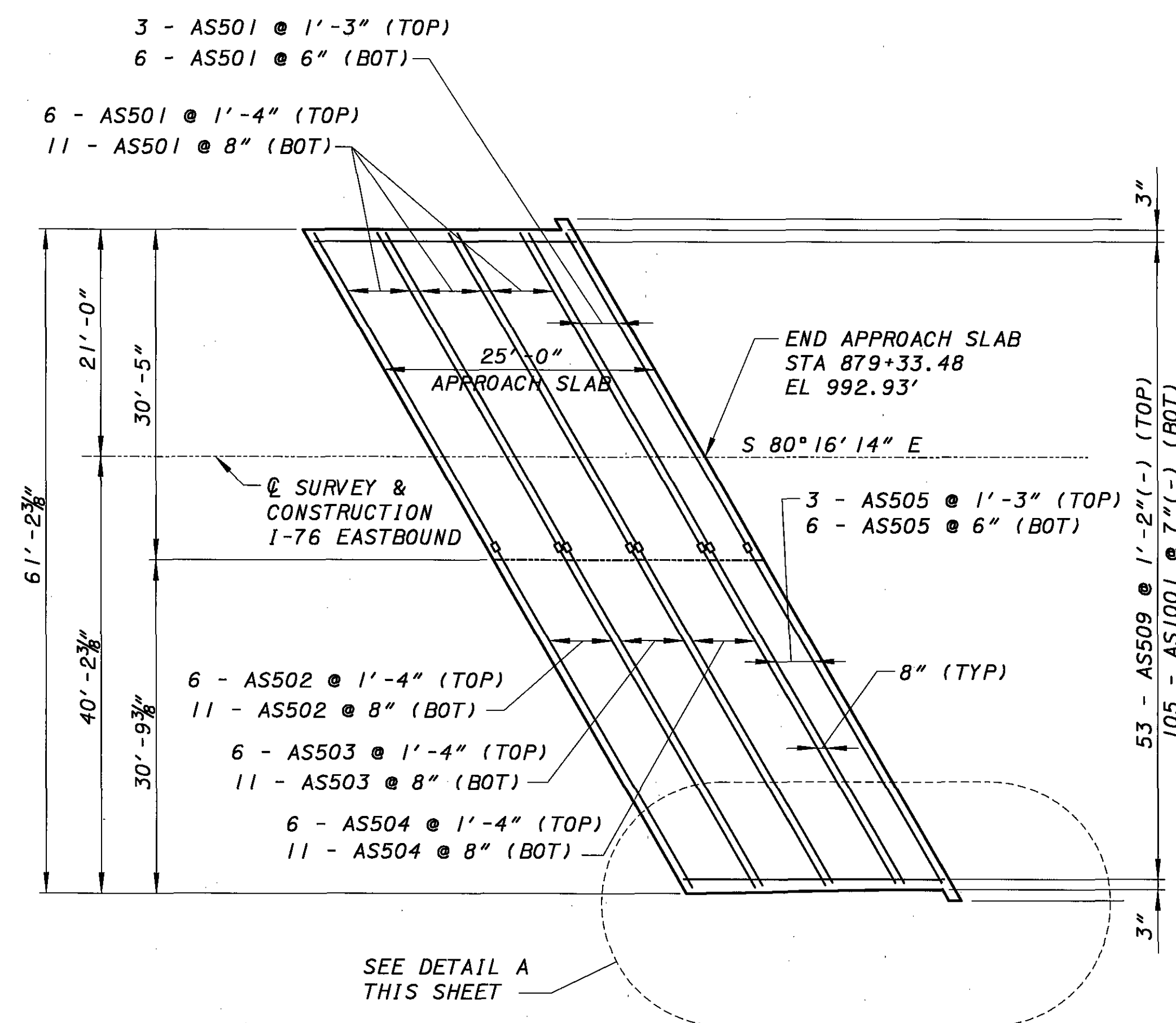
DETAIL A
NOT TO SCALE



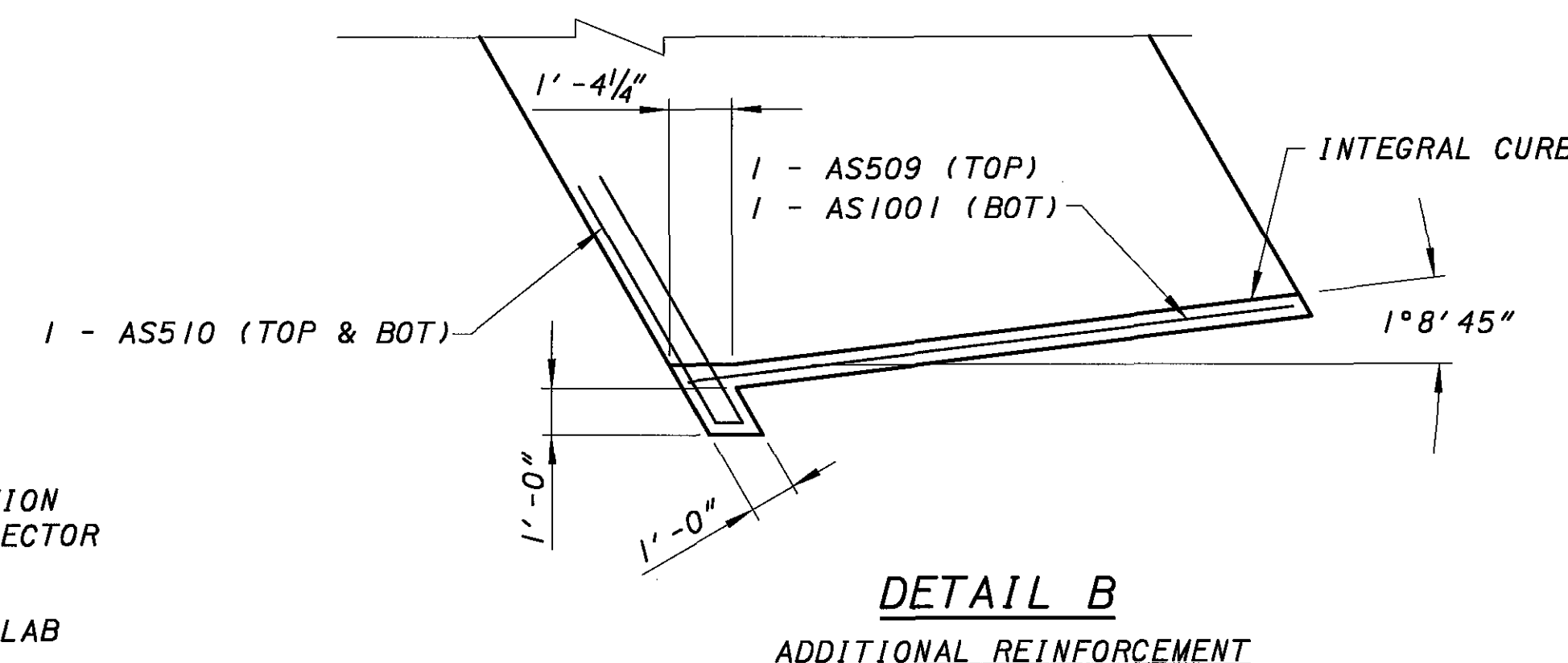
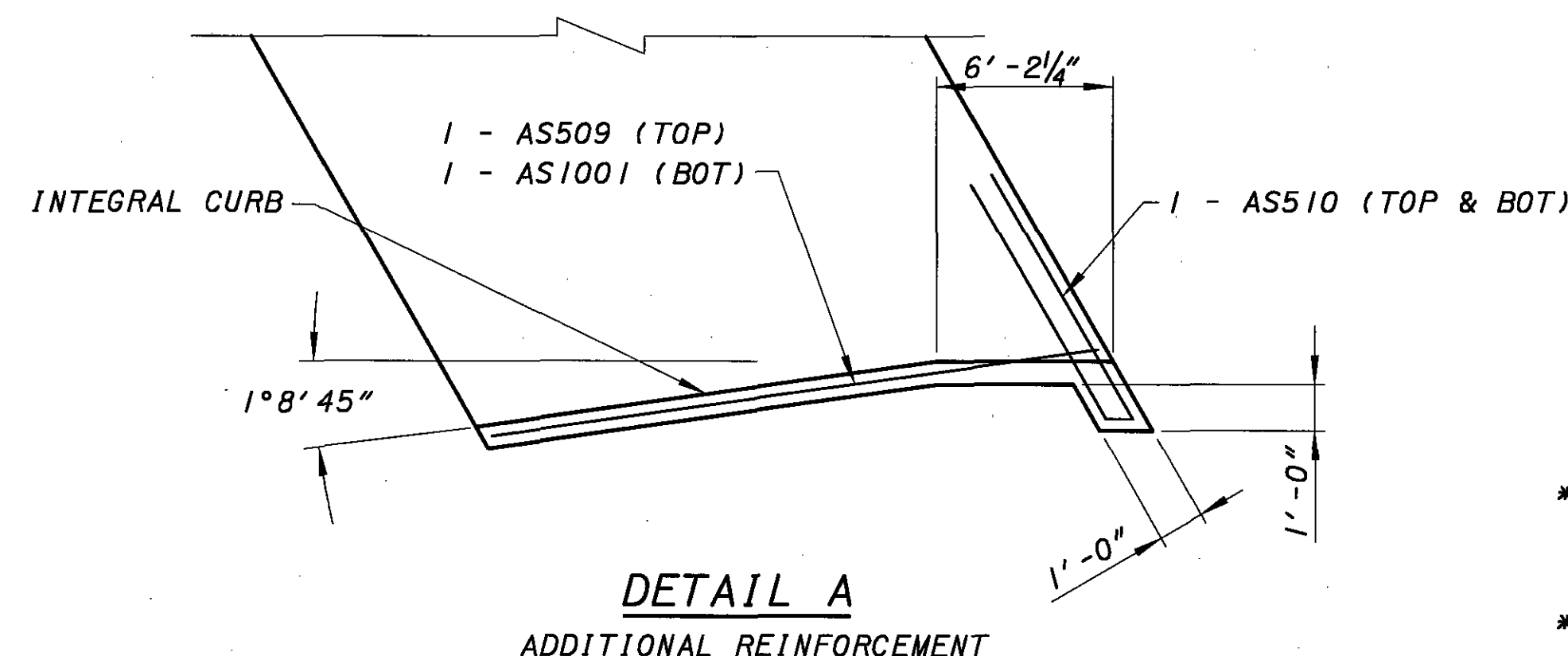
DETAIL B

NOTES:
FOR ADDITIONAL DETAILS, SEE STANDARD DRAWING AS-1-81.





APPROACH SLAB REINFORCING PLAN
CURB NOT SHOWN FOR CLARITY

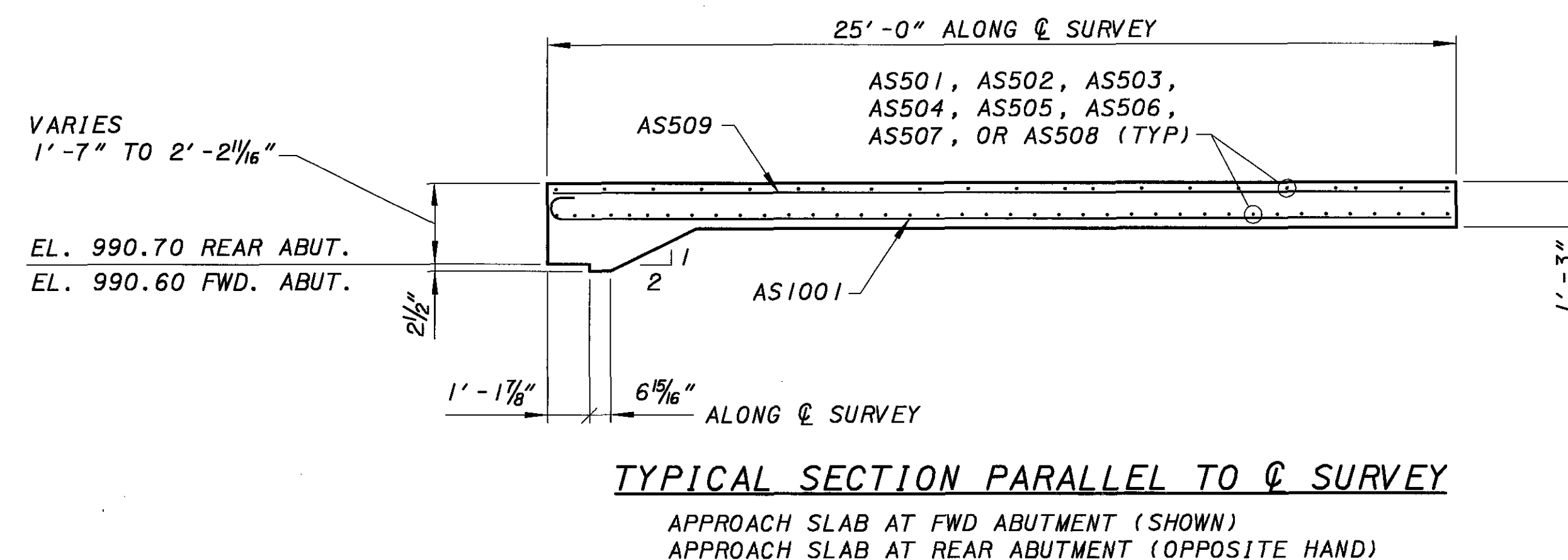


- * MECHANICAL CONNECTOR IS PLACED OUTSIDE PHASE CONSTRUCTION JOINT. THE DISTANCE FROM THE JOINT TO THE END OF CONNECTOR IS 1'-0".
- ** INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN FOR PAYMENT.

APPROACH SLAB REINFORCING										
MARK	TOTAL	LENGTH	WEIGHT (POUNDS)	TYPE	DIMENSIONS					
					A	B	C	D	E	INC
AS501	120	33' - 11"	4,245	8						
AS502	17	36' - 2"	641	9						
AS503	17	36' - 1"	640	9						
AS504	17	35' - 11"	637	9						
AS505	18	35' - 11"	674	9						
AS506	17	35' - 5"	628	9						
AS507	17	35' - 7"	631	9						
AS508	17	35' - 9"	634	9						
AS509	108	24' - 6"	2,760	STR.						
AS510	8	9' - 8"	80	18	4' - 8"	0' - 3"	0' - 6"			
AS1001	212	25' - 11"	23,642	6	24' - 6"					
		TOTAL	35,212							

NOTES:

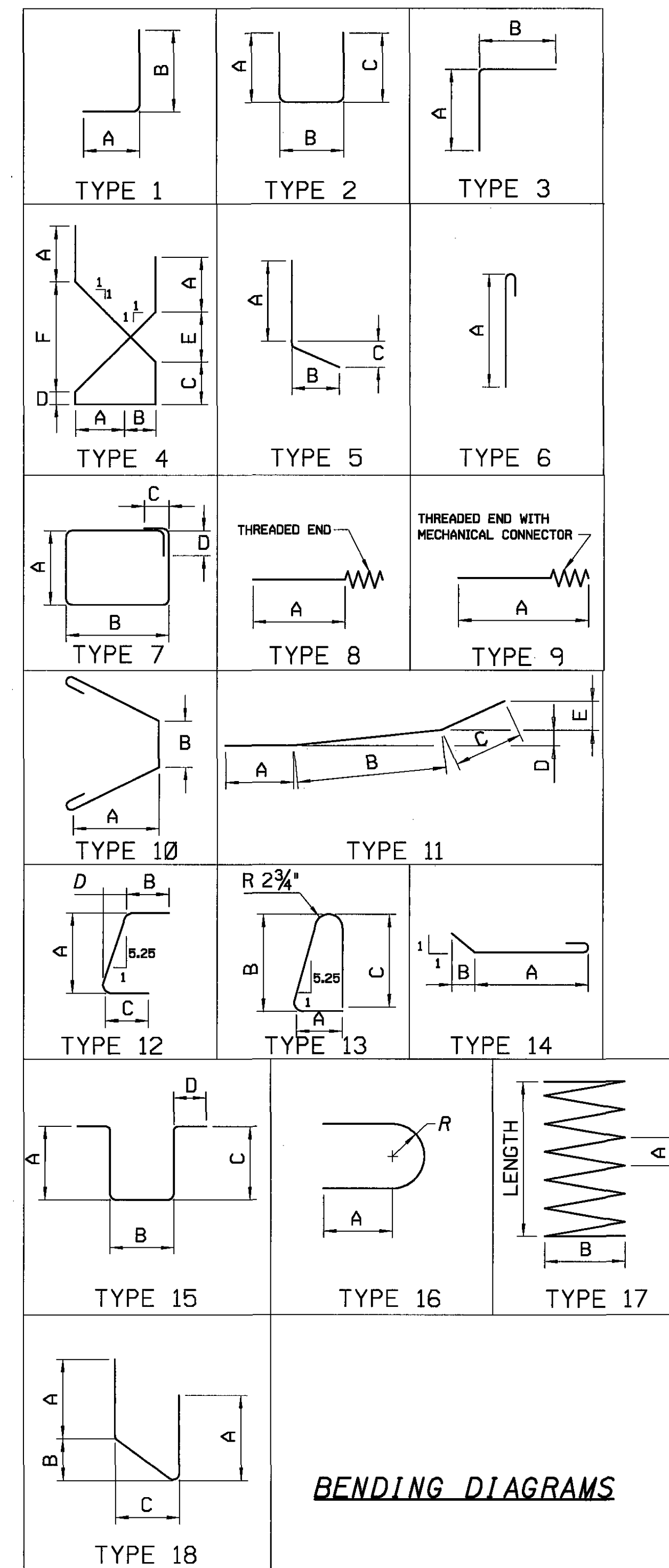
- FOR ADDITIONAL DETAILS, SEE STANDARD DRAWING AS-1-81.
- FOR REINFORCING NOTES AND BENDING DIAGRAM, SEE SHEET 17/18.



PIER REINFORCING												
MARK	NUMBER		LENGTH	WEIGHT (POUNDS)		TYPE	DIMENSIONS					
	PIER 1	PIER 2		PIER 1	PIER 2		A	B	C	D	E	INC
P401	30	30	10' - 0"	200	200	7	2' - 0"	2' - 6"	0' - 10"	0' - 10"		
P402	15	15	253' - 4"	*	*	17	0' - 6"	1' - 0"				
P501	56	56	9' - 6"	553	553	15	2' - 10"	2' - 8"	2' - 10"	0' - 10"		
P502	1	1	9' - 3"	10	10	15	2' - 10"	2' - 6"	2' - 10"	0' - 10"		
P503	1	1	4' - 3"	4	4	2	0' - 10"	2' - 10"	0' - 10"			
P504	6	6	9' - 3"	58	58	16	3' - 5"				1' - 3"	
P505	2	2	35' - 2"	73	73	9						
P506	2	2	35' - 5"	74	74	8						
P507	1	1	9' - 9"	10	10	15	3' - 1"	2' - 6"	3' - 1"	0' - 10"		
P508	1	1	4' - 6"	5	5	2	0' - 10"	3' - 1"	0' - 10"			
P901	120	120	41' - 1"	*	*	1	1' - 4"					
P1001	4	4	35' - 2"	605	605	9						
P1002	4	4	35' - 5"	610	610	8						
TOTAL				2,202	2,202							

* PAYMENT FOR BARS P402, P901 SHALL BE INCLUDED WITH ITEM 507, 16" CAST IN PLACE REINFORCED CONCRETE PILES, DRIVEN FOR PAYMENT

ABUTMENT REINFORCING														
MARK	NUMBER		TOTAL	LENGTH	WEIGHT (POUNDS)		TYPE	DIMENSIONS						
	REAR	FWD.			REAR	FWD.		A	B	C	D	E	R	INC
A401	28	28	56	9' - 0"	168	168	7	1' - 9"	2' - 6"	0' - 10"	0' - 10"			
A501	67	67	134	11' - 0"	769	769	7	2' - 7"	2' - 8"	0' - 10"	0' - 10"			
A502	48	48	96	11' - 5"	572	572	2	4' - 11"	1' - 11"	4' - 11"				
A503	2	2	4	11' - 9"	24	24	2	4' - 11"	2' - 3"	4' - 11"				
A504	6	6	12	9' - 11"	62	62	12	1' - 11"	4' - 2"	4' - 2"	0' - 10"			
A505	4	4	8	13' - 2"	55	55	STR.							
A506	8		8	35' - 7"	297		9							
A507	8		8	34' - 4"	287		8							
A508	4	4	8	15' - 3"	64	64	STR.							
A509		8	8	34' - 10"		291	8							
A510		8	8	35' - 6"		296	9							
A511	8	8	16	15' - 8"	130	130	2	7' - 7"	0' - 8"	7' - 7"				
SER	2	2	4	12' - 9"				6' - 2"	0' - 8"	6' - 2"				
A512	SER OF 6	SER OF 6	SER OF 6	15' - 6"	176	176	2	7' - 6"	0' - 8"	7' - 6"				0' - 7"
A513	2	2	4	15' - 9"	33	33	2	7' - 7"	0' - 9"	7' - 7"				
A514	6	6	12	12' - 5"	78	78	STR.							
A515	6	6	12	13' - 4"	83	83	STR.							
A516	2	2	4	8' - 6"	18	18	STR.							
A517	2	2	4	9' - 5"	20	20	STR.							
A518	2	2	4	8' - 7"	18	18	5	4' - 2"	1' - 9"	4' - 1"				
A519	2	2	4	8' - 10"	18	18	5	3' - 7"	1' - 6"	5' - 1"				
A520	4	4	8	8' - 9"	36	36	12	0' - 8"	4' - 2"	4' - 2"	0' - 5"			
A521	6	6	12	7' - 3"	45	45	2	3' - 5"	0' - 8"	3' - 5"				
A801	8	8	16	30' - 0"	641	641	STR.							
A802	4		4	22' - 7"	241		9							
A803	4		4	23' - 5"	250		8							
A804		4	4	21' - 4"		228	8							
A805		4	4	24' - 7"		263	9							
A1001	4		4	35' - 7"	612		9							
A1002	4		4	34' - 8"	597		8							
A1003		4	4	34' - 5"		592	8							
A1004		4	4	35' - 10"		617	9							
D801	48	48	96	6' - 8"	859	859	14	4' - 5"	1' - 0"					
TOTAL					6,153	6,156								



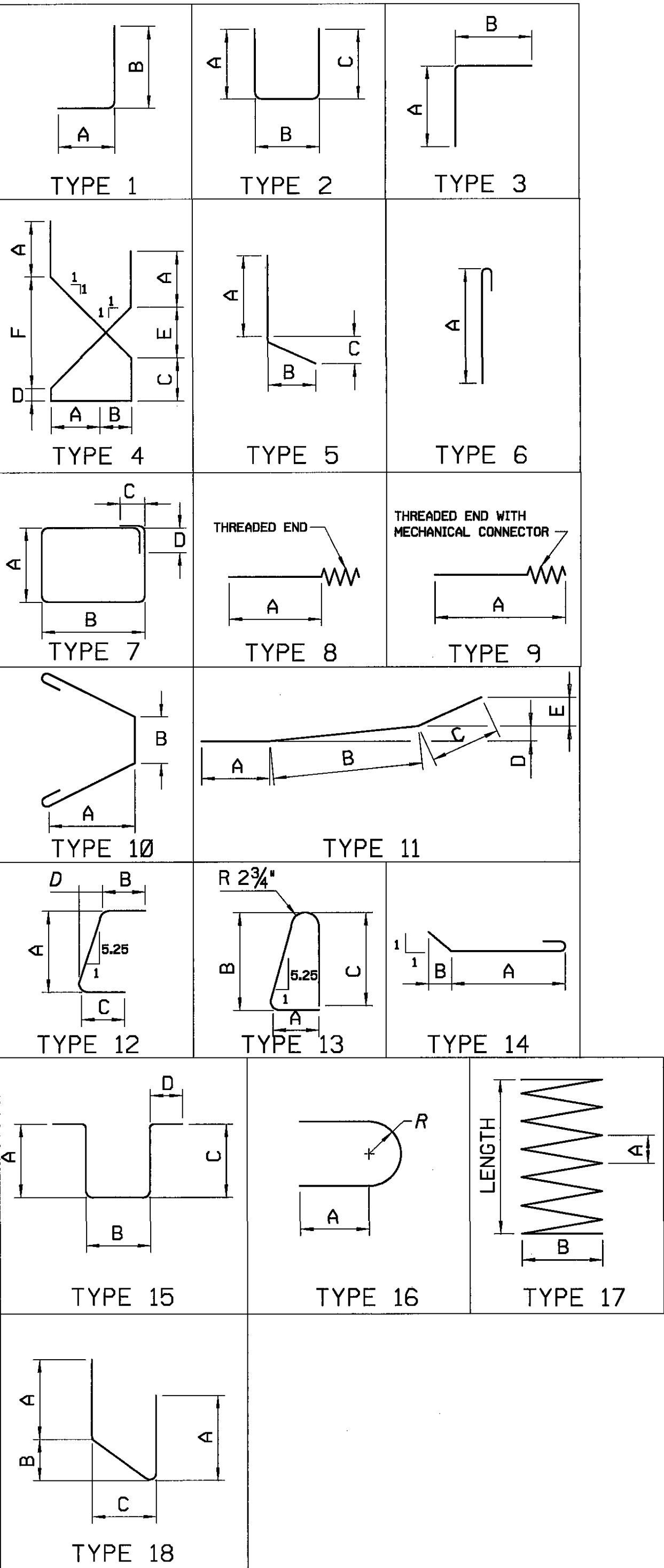
NOTES:

BAR SIZE:
THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 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 BARS TO BE EPOXY COATED.

REINFORCING BAR SAMPLES:
REFER TO C.M.S. SECTION 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING FOR EACH BRIDGE. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH THE PROJECT PLANS.

SUPERSTRUCTURE REINFORCING											
MARK	TOTAL	LENGTH	WEIGHT (POUNDS)	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
S401	93	35' - 1"	2,180	8							
S402	93	37' - 1"	2,304	9							
S403	252	3' - 10"	645	2	1' - 6"	1' - 0"	1' - 6"				
S501	24	38' - 0"	951	STR.							
S502	144	7' - 5"	1,114	13	1' - 1"	3' - 2"	3' - 0"				
S503	32	10' - 0"	334	STR.							
S504	12	5' - 6"	69	11	1' - 8"	2' - 5"	1' - 5"	0' - 2"	0' - 5"		
S505	20	6' - 6"	136	STR.							
S506	4	4' - 1"	17	2	1' - 6"	1' - 4"	1' - 6"				
S601	83	35' - 1"	4,374	8							
S602	83	37' - 1"	4,623	9							
S603	4	38' - 4"	230	STR.							
S604	144	4' - 2"	901	12	2' - 2"	1' - 1"	1' - 1"	0' - 5"			
S605	144	3' - 1"	667	1	2' - 2"	1' - 1"					
SER	8	4' - 9"			1' - 1"	3' - 10"					
	SER OF	TO	616	1							0' - 1"
S606	10	5' - 6"			1' - 1"	4' - 7"					
S607	40	5' - 4"	320	1	1' - 9"	3' - 9"					
S801	188	49' - 8"	24,931	STR.							
S802	62	15' - 0"	2,483	STR.							
S803	142	36' - 7"	13,870	6	35' - 8"						
S804	66	34' - 9"	6,124	STR.							
S805	58	26' - 7"	4,117	STR.							
S806	29	28' - 10"	2,233	STR.							
S807	58	29' - 4"	4,543	STR.							
S808	29	35' - 4"	2,736	STR.							
S1101	8	34' - 10"	1,481	8							
S1102	8	37' - 4"	1,587	9							
		TOTAL	83,586								



BENDING DIAGRAMS

NOTES:

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