

MANDATORILY TIED PROJECTS

THE FOLLOWING FOUR (4) PROJECTS ARE MANDATORILY TIED:

1. STATE JOB NO. 28865(04), BRIDGE REHABILITATION - 2ND STREET OVER I-444 AND 2ND STREET W-N RAMP, TULSA COUNTY.
2. STATE JOB NO. 28868(04), BRIDGE REHABILITATION - 4TH STREET OVER I-444, TULSA COUNTY.
3. STATE JOB NO. 28879(04), BRIDGE REHABILITATION - US 75 RAMP NORTH TO WEST OVER I-444 SOUTHBOUND, TULSA COUNTY.
4. STATE JOB NO. 28880(04), BRIDGE REHABILITATION - US 75 RAMP NORTH TO EAST OVER 2ND STREET, TULSA COUNTY.

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
BRIDGE REHABILITATION PROJECT
STATE AID PROJECT NO. ACNHPPI-4440-(003)SS
4TH ST. OVER INTERSTATE NO. 444
TULSA COUNTY

STATE JOB NO. 28868(04)
CONTROL SECTION NO. 444-72-92
EXISTING NBI NO. 18055
STRUCTURE NO. 7292 0086 X

CEC // TRANSPORTATION

DESCRIPTION	REVISIONS	DATE

INDEX OF SHEETS

1. TITLE SHEET
2. SUMMARY OF ROADWAY & TRAFFIC PAY ITEMS & NOTES
3. BRIDGE GENERAL NOTES
4. BRIDGE PAY ITEMS AND NOTES
5. SUMMARIES AND DETAILS ROADWAY
6. PLAN AND PROFILE
- 7A-7H. TRAFFIC CONTROL PLANS
8. DETOUR ROUTE ASSEMBLIES
9. GENERAL PLAN AND ELEVATION
10. SUMMARY OF BRIDGE PAY QUANTITIES
11. ABUTMENT NO. 1 REPAIR DETAILS
12. ABUTMENT NO. 2 REPAIR DETAILS
13. PIER NO. 1 REPAIR DETAILS
14. PIER NO. 1 NEW CONSTRUCTION DETAILS
15. TYPICAL CROSS SECTION
16. LONGITUDINAL SECTION
17. BEAM FRAMING PLAN
18. PLATE GIRDER DETAILS
19. DIAPHRAGM DETAILS
20. BEARING DETAILS
21. SLAB REINFORCING PLAN
22. ADDITIONAL SLAB REINFORCING DETAILS
23. PARAPET DETAILS
24. EXPANSION JOINT DETAILS
25. APPROACH SLAB NO. 1 PLAN
26. APPROACH SLAB NO. 2 PLAN
27. APPROACH SLAB DETAILS (SHEET 1 OF 2)
28. APPROACH SLAB DETAILS (SHEET 2 OF 2)
29. APPROACH SLAB PARAPET DETAILS (SHEET 1 OF 3)
30. APPROACH SLAB PARAPET DETAILS (SHEET 2 OF 3)
31. APPROACH SLAB PARAPET DETAILS (SHEET 3 OF 3)
32. BEAM BRACING DETAILS

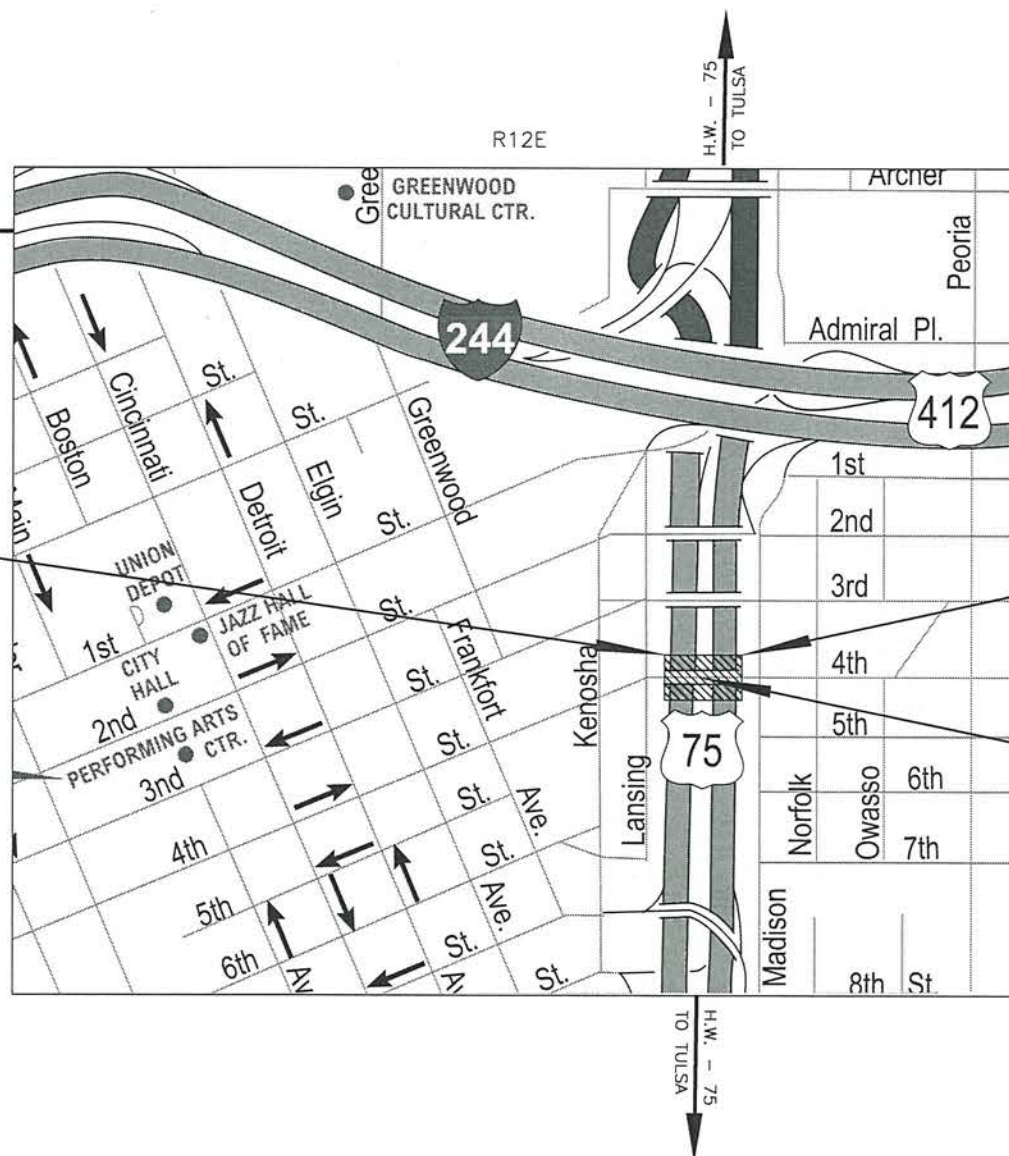
4TH ST. BRIDGE
LOCATION NO. 7292 0086 X
NBI NO. 18055
BEGIN BRIDGE STA. 14+46.88
BRIDGE LENGTH = 148.00'
END BRIDGE STA. 15+94.88

CONVENTIONAL SYMBOLS

- PROPOSED ROADS
- SECTION LINES
- QUARTER SECTION LINES
- * — * — FENCES
- EXISTING GRADE
- EXISTING ROADS
- BASE LINE
- PROPOSED GRADE
- TUG — COMMUNICATION LINES (EXISTING)
- AA — POWER LINES (EXISTING)
- OHE — OVERHEAD POWER LINES (EXISTING)
- PUG — POWER UNDER GROUND LINES (EXISTING)
- G — GAS LINE (EXISTING)
- SS — SANITARY SEWER LINES (EXISTING)
- ST — STORM SEWER LINES (EXISTING)
- W — WATER LINES (EXISTING)
- TUG — COMMUNICATION LINES (PROPOSED)
- OHE — POWER LINES (PROPOSED)
- PUG — POWER LINES (PROPOSED)
- G — GAS LINE (PROPOSED)
- SS — SANITARY SEWER LINES (PROPOSED)
- ST — STORM SEWER LINES (PROPOSED)
- W — WATER LINES (PROPOSED)
- BUILDINGS
- DRAINAGE STRUCTURES (EXISTING)
- DRAINAGE STRUCTURES (PROPOSED)
- RIGHT-OF-WAY LINES (EXISTING)
- RIGHT-OF-WAY LINES (PROPOSED)
- RIGHT-OF-WAY FENCE
- FLOWLINE (EXISTING)
- FLOWLINE (PROPOSED)
- TOE OF SLOPE (EXISTING)
- TOE OF SLOPE (PROPOSED)
- CITY LIMITS
- LANDSCAPE
- RAILROAD

STA. 14+06.88 C SURVEY
BEGIN 4TH ST. PROJECT

STA. 16+54.80 C SURVEY
END 4TH ST. PROJECT



THE FOLLOWING ODOT STANDARDS ARE REQUIRED FOR THIS PROJECT:

ROADWAY	BRIDGE	TRAFFIC
LECS-4-1	EJ-DTL-01E	TCS1-1-01
SSS-1-1		TCS2-1-00
ASCD-5-2		TCS3-1-01
		TCS4-1-01
		TCS5-1-00
		TCS6-1-02
		TCS7-1-02
		TCS8-1-00
		TCS9-1-01
		TCS10-1-00
		TCS11-1-01
		TCS13-1-00
		TCS14-1-00
		TCS17-1-00
		TCS18-1-01
		TCS19-1-01
		TCS20-1-00
		PM1-1-02
		SPA1-1-00

ROADWAY LENGTH _____ 99.92 FT _____ 0.019 MI
 BRIDGE LENGTH _____ 148.00 FT _____ 0.028 MI
 TOTAL PROJECT LENGTH _____ 0.047 MI
 EXCEPTIONS _____ NONE
 EQUATIONS _____ NONE

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION—ENGLISH GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. JANUARY 04, 2010

PREPARED BY:
COBB ENGINEERING COMPANY
CA32 6/30/18
OKLAHOMA CITY, OKLAHOMA

TRAVIS A. COLLINS
22794
7-11-16
DATE

OKLAHOMA DEPARTMENT OF TRANSPORTATION
DATE APPROVED _____
BY _____
CHIEF ENGINEER

FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED _____
BY _____
DIVISION ADMINISTRATOR

PROJ. NO. ACNHPPI-4440-(003)SS SHEET NO. 1

ROADWAY PAY ITEM NOTES

- (R-7) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 POUNDS PER 1000 SQ. YDS.
- (R-8) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 80 GALLONS PER SQ. YD.
- (R-30) PRICE BID TO INCLUDE COST OF TACK COAT, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.
- (R-32) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.
- (R-34) PRICE BID TO INCLUDE COST OF FOG SEAL, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.
- (R-48) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.
- (R-49) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- (R-50) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.
- (1) INCLUDES 75 SQ. YDS. TO BE USED AT THE DISCRETION OF THE ENGINEER.
- (2) PRICE BID INCLUDES SAW CUTTING WHERE CALLED FOR ON PLANS OR AS NECESSARY FOR NEAT EDGE.

TEMPORARY TRAFFIC PAY ITEM NOTES

- (TC-22) AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT ⚠ (5)
- (TC-26) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES, WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.
- (TC-28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION)

THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH O.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 06.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.
- (TC-70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.
- (TC-84) 120 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.
- (TC-85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT: [HTTP://WWW.OKLADOT.STATE.OK.US/TRAFFIC/QPL/INDEX.PHP](http://www.okladot.state.ok.us/traffic/qpl/index.php)

PERMANENT TRAFFIC PAY ITEM NOTES

- (TS-24) QUANTITY SHOWN INCLUDES 84 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND 570 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF SIX INCH (4") WIDE TRAFFIC STRIPE.
- (TS-39) OVERHEAD SIGN STRUCTURES AND SIGNS THAT ARE TO BE REMOVED, RESET, AND/OR RELOCATED SHALL BE CAREFULLY REMOVED BY THE CONTRACTOR AND STORED AT A SITE SELECTED BY THE ENGINEER. ANY DAMAGE TO THE STRUCTURES OR SIGNS DURING THE REMOVAL, TRANSPORTATION, STORAGE, RESETTING AND/OR RELOCATION OF THE STRUCTURE OR SIGN SHALL BE REPAIRED BY, AND AT THE EXPENSE OF THE CONTRACTOR.
- (3) QUANTITY INCLUDES:
 - TWO (2) PORTABLE MESSAGE SIGNS TO BE INITIALLY PLACED 7 DAYS PRIOR TO CONSTRUCTION ACTIVITIES FOR ADVANCE INFORMATION. SIGNS SHALL BE POSITIONED AT THE DISCRETION OF THE ENGINEER.
 - THREE (3) PORTABLE MESSAGE SIGNS FOR LANE CLOSURE FOR BRIDGE DEMOLITION, INSTALLATION OF BEAMS AND INCIDENTAL WORK AS SCHEDULED BY THE CONTRACTOR OR REQUESTED BY THE ENGINEER.
- (4) PRICE BID INCLUDES THE REMOVAL OF THE SIGNS FROM THE EXISTING BRIDGE AND RESETTING THE SIGNS ON THE NEW BRIDGE. COST TO INCLUDE THE REPLACEMENT OF ATTACHED LIGHT FIXTURES, INSTALLATION, HARDWARE, LABOR AND ANY OTHER MISCELLANEOUS ITEMS NECESSARY TO INSTALL THE SIGNS. THE FOLLOWING SIGNS TO BE REMOVED AND RESET INCLUDE:

NORTHBOUND I-444: TWO (2) PANEL SIGNS
ONE (1) STREET SIGN (E. 4TH ST.)
SOUTHBOUND I-444 TWO (2) PANEL SIGNS
ONE (1) STREET SIGN (E. 4TH ST.)

QUANTITY INCLUDES THE NECESSARY TEMPORARY TRAFFIC CONTROL TO MAINTAIN TRAFFIC ON I-444 DURING THE REMOVAL OF THE EXISTING SUPERSTRUCTURE, INSTALLATION AND REMOVAL OF THE FORMWORK AND BEAM PLACEMENT. TEN (10) CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS FOR THIS OPERATION.

PAY QUANTITIES				
ROADWAY				
ITEM	DESCRIPTION	UNIT	QUANTITY	
230(A)	2806 SOLID SLAB SODDING	(1)(R-7)(R-8)	S.Y.	75
411(C)	5955 SUPERPAVE, TYPE S4(PG 70-28 OK)	(R-30)(R-32)	TON	23
412	5267 COLD MILLING PAVEMENT	(R-34)	S.Y.	179
609(B)	1526 2'-8" COMB. CURB & GUTTER (8" BARRIER)		L.F.	44
610(A)	0602 4" CONCRETE SIDEWALK		S.Y.	31
619(A)	0920 REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R-48)(R-49)	L.SUM	1
619(B)	4726 REMOVAL OF CURB AND GUTTER	(2)(R-49)(R-50)	L.F.	73
619(B)	4728 REMOVAL OF ASPHALT PAVEMENT	(2)(R-49)(R-50)	S.Y.	93
619(B)	4792 REMOVAL OF SIDEWALK	(2)(R-49)(R-50)	S.Y.	57

SUMMARY OF QUANTITIES			
TRAFFIC			
DESCRIPTION	UNIT	QUANTITY	
(PL) REMOVE & RESET EXISTING SIGNS	(4)(TS-39)	EA.	6
TRAFFIC STRIPE (MULTI-POLYMER) (4" WIDE)	(TS-24)	L.F.	654
PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	(5)(TC-22)(TC-70)	L.F.	174
CONSTRUCTION SIGNS 0.00 TO 6.25 S.F.	(5)(TC-26)(TC-28)(TC-33)(TC-84)	S.D.	3410
CONSTRUCTION SIGNS 6.26 TO 15.99 S.F.	(5)(TC-26)(TC-29)(TC-33)(TC-84)	S.D.	670
CONSTRUCTION SIGNS 16.00 TO 32.99 S.F.	(5)(TC-26)(TC-30)(TC-33)(TC-84)	S.D.	1185
CONSTRUCTION BARRICADES (TYPE III)	(5)(TC-26)(TC-33)(TC-84)	S.D.	1020
WING BARRICADES	(5)(TC-26)(TC-33)(TC-84)	S.D.	20
WARNING LIGHTS (TYPE A)	(5)(TC-26)(TC-84)	S.D.	2280
DRUMS	(5)(TC-26)(TC-33)(TC-84)	S.D.	1380
CHANNELIZER CONES	(5)(TC-26)(TC-33)(TC-84)	S.D.	1540
PORT. CHANGEABLE MESSAGE SIGN	(3)(5)(TC-26)(TC-84)(TC-85)	S.D.	270

⚠ TRAFFIC FOR THIS PROJECT WILL BE INCLUDED IN THE BID PRICE ON THE MANDATORY TIED PROJECT, STATE JOB NO. 28865(04).

MANDATORILY TIED PROJECTS

THE FOLLOWING FOUR (4) PROJECTS ARE MANDATORILY TIED. THE PROJECTS INCLUDE THIS PROJECT AND ARE IDENTIFIED BY STATE JOB NO. AS FOLLOWS:

1. STATE JOB NO. 28865(04), BRIDGE REHABILITATION - 2ND STREET OVER I-444 AND 2ND STREET W-N RAMP, TULSA COUNTY.
2. STATE JOB NO. 28868(04), BRIDGE REHABILITATION - 4TH STREET OVER I-444, TULSA COUNTY
3. STATE JOB NO. 28879(04), BRIDGE REHABILITATION - US 75 RAMP NORTH TO WEST OVER I-444 SOUTHBOUND, TULSA COUNTY.
4. STATE JOB NO. 28880(04), BRIDGE REHABILITATION - US 75 RAMP NORTH TO EAST OVER 2ND STREET, TULSA COUNTY.

DESIGN	E.R.A		4TH OVER I-444	TULSA COUNTY
DRAWN	R.E.E			
CHECKED	E.R.A			
APPROV.	T.A.C			
SQUAD	CEC			

SUMMARY OF ROADWAY & TRAFFIC PAY ITEMS & NOTES

JOB PIECE NO. 28868(04) SHEET NO. 2

DESCRIPTION	REVISIONS	DATE

BRIDGE GENERAL NOTES

SPECIFICATIONS -
COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

VERIFICATION OF EXISTING CONDITIONS -
THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY UNDERSTANDING THE NATURE OF THE WORK AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED. ALL DIMENSIONS OF THE EXISTING BRIDGE COMPONENTS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS NECESSARY TO CONNECT THE NEW MATERIAL AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICE AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE EXISTING BRIDGE AND ATTACHMENTS. ANY DAMAGE TO THE EXISTING BRIDGE STRUCTURE OR ROADWAY DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

EXISTING PLANS -
THE EXISTING STRUCTURE WAS ORIGINALLY CONSTRUCTED AS PART OF FEDERAL AID PROJECT NO. I-444-2(254)096. PLANS OF THIS PROJECT ARE AVAILABLE FROM THE OKLAHOMA DEPARTMENT OF TRANSPORTATION TECHNOLOGY SERVICES PLANS SECTION, 200 N.E. 21ST STREET, OKLAHOMA CITY, OKLAHOMA, 73105.

DEBRIS REMOVAL -
REMOVE ALL DEBRIS FROM THE EXISTING ABUTMENT SEATS. INCLUDE ALL COSTS TO REMOVE AND DISPOSE OF THE DEBRIS IN OTHER ITEMS OF WORK.

CONCRETE -
ALL PEDESTAL CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER. ALL OTHER EXPOSED CONCRETE EDGES OF THE SUBSTRUCTURE SHALL HAVE A 1 1/2" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL EXPOSED CONCRETE EDGES OF THE SUPERSTRUCTURE SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.
EQUIP CONCRETE VIBRATORS WITH A SHEATH DESIGNED TO PREVENT DAMAGE TO EPOXY COATINGS WHEN VIBRATING CONCRETE CONTAINING EPOXY COATED REINFORCING STEEL.

STRUCTURAL STEEL -
PROVIDE STRUCTURAL STEEL FOR PLATE GIRDER AND ALL STIFFENER PLATES IN ACCORDANCE WITH AASHTO M270 (ASTM A709), GRADE 50WT2 (WEATHERING STEEL, NON FRACTURE CRITICAL CHARPY V-NOTCH TESTED FOR ZONE 2). USE SHEAR CONNECTORS CONFORMING TO AASHTO M169 (ASTM A108), GRADE 1015, 1018 OR 1020. PROVIDE WELDING WITH WEATHERING CHARACTERISTICS.
CAMBER BEAMS TO ACCOUNT FOR VERTICAL CURVE AND DEAD LOAD DEFLECTION.
PROVIDE STRUCTURAL STEEL FOR CHANNEL DIAPHRAGMS AND GUSSET PLATES IN CONFORMANCE WITH AASHTO M270 (ASTM A709), GRADE 50W (WEATHERING STEEL, CHARPY V-NOTCH TESTING NOT REQUIRED). USE BOLTS CONFORMING TO AASHTO M164 (ASTM A325). PROVIDE ALL BOLTS, NUTS, WASHERS AND WELDING WITH WEATHERING CHARACTERISTICS.
STRUCTURAL STEEL FOR ANCHOR PLATES, BUILT-UP CONTACT ANGLES, AND CONTINUOUSLY THREADED ANCHOR BOLTS SHALL CONFORM TO AASHTO M270 (ASTM A709), GRADE 50W (WEATHERING STEEL, CHARPY V-NOTCH TESTING NOT REQUIRED). HEX NUTS SHALL CONFORM TO AASHTO M291 (ASTM A563). WASHERS SHALL CONFORM TO AASHTO M293 (ASTM F436), TYPE 3. ANCHOR BOLT ASSEMBLIES SHALL BE GALVANIZED, AND ALL OTHER STEEL PARTS COMPRISING THE BEARING ASSEMBLIES SHALL BE PAINTED WITH THE IZ-E-U PAINT SYSTEM.

DECK SLAB -
EPOXY COAT OR GALVANIZE STEEL ITEMS USED TO FACILITATE CONSTRUCTION, SUCH AS DECK FORM HANGERS, TY-BAR CLIPS, INSERT WELD ANCHORS, OR OTHER APPURTENANCES, THAT WILL REMAIN IN PLACE IN THE DECK SLAB. EPOXY-COAT IN ACCORDANCE WITH AASHTO M284 OR GALVANIZE IN ACCORDANCE WITH AASHTO M111.
THE DECK SLAB SHALL BE POURED IN ACCORDANCE WITH THE DECK SLAB POURING SEQUENCE DIAGRAM. IN THE EVENT OF AN EMERGENCY, HALT THE PLACEMENT OF CONCRETE BY FORMING A CONSTRUCTION JOINT MADE PERPENDICULAR TO THE DIRECTION OF TRAFFIC OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE ANY HEAVY EQUIPMENT ON THE FINISHED DECK SLAB WITHIN 5 FEET OF ANY CONSTRUCTION JOINT UNTIL CONCRETE IS IN PLACE ON BOTH SIDES OF THE RESPECTIVE JOINT, AND AT LEAST 48 HOURS HAS ELAPSED SINCE CONCRETE PLACEMENT.
SEAL ALL DECK SLAB CONSTRUCTION JOINTS WITH HIGH MOLECULAR WEIGHT METHACRYLATE IN ACCORDANCE WITH SECTION 523 OF THE SPECIFICATIONS. INCLUDE ALL COST OF THE EQUIPMENT AND LABOR FOR THE INSTALLATION OF THE HIGH MOLECULAR WEIGHT METHACRYLATE SEALER IN THE CONTRACT UNIT PRICE OF "SEALER CRACK PREPARATION". INCLUDE ALL COST OF HIGH MOLECULAR WEIGHT METHACRYLATE SEALER IN THE CONTRACT UNIT PRICE OF "SEALER RESIN". THE DEPARTMENT WILL NOT MEASURE THE PREPARATION AND SEALER OF EMERGENCY CONSTRUCTION JOINTS FOR PAYMENT.

BRIDGE GENERAL NOTES (CONT.)

STAY-IN-PLACE DECK FORMS -
STAY-IN-PLACE DECK FORMS ARE NOT ALLOWED.

BEAM BRACING FOR DECK SLAB PLACEMENT -
SUBMIT DRAWINGS OF THE BRACING SYSTEM TO THE BRIDGE ENGINEER FOR APPROVAL. BRACING SYSTEMS OTHER THAN SHOWN IN THE PLANS MAY BE USED IF WORKING DRAWINGS AND CALCULATIONS OF THE PROPOSED BRACING SYSTEM ARE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL. DRAWINGS AND CALCULATIONS OF THE PROPOSED BRACING SYSTEM SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA. NO DECK SLAB CONCRETE SHALL BE PLACED UNTIL BRACING SYSTEM IS APPROVED. ALL COST FOR BRACING AND FORMWORK SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
CANTILEVER FORMING BRACKETS SHALL BE USED AT EXTERIOR GIRDERS TO PREVENT GIRDER TWIST. ALL CANTILEVER FORMING BRACKETS SHALL BE ADJUSTABLE AND CAPABLE OF BEING ADJUSTED DURING THE PLACEMENT OF DECK SLAB CONCRETE IN ORDER TO MAINTAIN PROPER GRADES AT THE OVERHANG. PROVIDE A METHOD TO PREDICT THE CRUSH AND SETTLEMENT OF SHIMS, IF USED, FOR ADJUSTMENT OF THE FORMING BRACKETS TO THE BRIDGE ENGINEER. THE RESULTING FORCE OF THE LEG BRACE OF THE CANTILEVER BRACKETS SHALL BEAR ON THE WEB AND WITHIN 6 INCHES OF THE BOTTOM FLANGE OF THE GIRDERS.

WATER REPELLENT TREATMENT -
WATER REPELLENT TREATMENT SHALL BE APPLIED TO THE BRIDGE IN A MANNER CONSISTENT WITH THE DETAILS SHOWN IN THE PLANS.

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	J.F.R.		
CHECKED	J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		

BRIDGE GENERAL NOTES

JOB PIECE NO. 28868(04) SHEET NO. 3

BRIDGE PAY ITEM NOTES

BR1 PAYMENT TO THE CONTRACTOR WILL BE BASED ON PLAN QUANTITIES.

B1 THE APPROACH SLABS CONTAIN AN ESTIMATED TOTAL OF 174.4 C.Y. OF CLASS AA CONCRETE AND 33,320 LB. OF EPOXY COATED REINFORCING STEEL. INCLUDE ALL COSTS FOR CONSTRUCTING THE APPROACH SLABS, INCLUDING CONCRETE, REINFORCING STEEL, BACKER ROD, RAPID CURE JOINT SEALANT, POLYSTYRENE, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "APPROACH SLAB".

B2 INCLUDE ALL COSTS FOR CONSTRUCTING THE CONCRETE PARAPET, INCLUDING CONCRETE, REINFORCING STEEL, PREFORMED EXPANSION MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "CONCRETE PARAPET".

SUMMARY OF CONCRETE PARAPET QUANTITIES

ITEM	CLASS AA CONCRETE	EPOXY COATED REINFORCING STEEL
UNIT	C.Y.	LB.
1-A	16.6	3,010
2-A	19.1	3,850
3-A	11.8	1,530
1-B	5.7	2,680
2-B	2.2	540
3-B	4.7	1,030
1-C	7.4	2,240
2-C	2.8	590
3-C	6.1	1,350
TOTAL	76.4	16,820

B3 CLEAN AND PAINT EXTERIOR BEAMS USING THE CATEGORY "N" PAINT SYSTEM IN ACCORDANCE WITH SECTION 512 OF THE SPECIFICATIONS. ONLY THE FIRST COAT OR PRIME COAT WILL BE REQUIRED AT SURFACES TO BE IN CONTACT WITH THE NEW DECK SLAB, AND THE COATING MUST MEET OSHA SLIP REQUIREMENTS. THE COLOR OF THE TOPCOAT SHALL MATCH THE COLOR OF THE PAINT ON THE EXISTING BRIDGE. INCLUDE ALL COSTS, INCLUDING ALL CLEANING, PAINTING, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "STRUCTURAL STEEL".

B4 PROVIDE AND INSTALL WEATHERING STEEL FIXED BEARING ASSEMBLIES OF THE SIZE, SHAPE AND LOCATION AS DETAILED IN THE PLANS. THE FIXED BEARING ASSEMBLIES CONTAIN AN ESTIMATED TOTAL OF 2,270 LB. OF STRUCTURAL STEEL. INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE ELASTOMERIC PADS, ANCHOR PLATES, CONTACT ANGLES, ANCHOR BOLTS, NUTS AND WASHERS, INCLUDING ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "WEATHERING STEEL FIXED BEARING ASSEMBLIES".

B5 PROVIDE AND INSTALL WEATHERING STEEL EXPANSION BEARING ASSEMBLIES OF THE SIZE, SHAPE AND LOCATION AS DETAILED IN THE PLANS. THE EXPANSION BEARING ASSEMBLIES CONTAIN AN ESTIMATED TOTAL OF 4,510 LB. OF STRUCTURAL STEEL. INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE ELASTOMERIC PADS, ANCHOR PLATES, CONTACT ANGLES, ANCHOR BOLTS, NUTS AND WASHERS, INCLUDING ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "WEATHERING STEEL EXPANSION BEARING ASSEMBLIES".

B6 ITEM "(PL) SPECIAL CONCRETE FINISH" CONSISTS OF CLEANING AND FINISHING ALL EXPOSED SUBSTRUCTURE CONCRETE SURFACES TO GIVE A UNIFORM APPEARANCE AFTER ALL REPAIRS. CLEAN SURFACES BY SANDBLASTING FOLLOWED WITH A FILTERED AIR BLAST. FINISH TO COMPLY WITH SECTION 737 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. INCLUDE ALL COSTS ASSOCIATED WITH CLEANING AND FINISHING CONCRETE SURFACES, INCLUDING ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "(PL) SPECIAL CONCRETE FINISH".

B7 REPAIR AREAS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. LOCATIONS AND EXTENTS ARE APPROXIMATE AND NOT LIMITED TO THE AREAS SHOWN. THE ACTUAL LOCATIONS AND EXTENTS OF REPAIRS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

UN SOUND CONCRETE IN THE PIER AND ABUTMENTS OF THE EXISTING BRIDGE SHALL BE REPAIRED AS DESCRIBED HERE. PRIOR TO REMOVING ANY AREAS OF UNSOUND CONCRETE, A SAW OR CHIPPING TOOL SHALL BE USED TO CUT THE PERIMETER OF THE AREA TO A DEPTH OF 1/2 INCH. THE CUTS SHALL BE MADE APPROXIMATELY PERPENDICULAR TO THE EXISTING SURFACE AND PARALLEL TO THE LINES OF THE STRUCTURE. ALL UNSOUND CONCRETE SHALL BE REMOVED WITHIN THE CUT PERIMETER. AFTER REMOVAL OF ALL UNSOUND CONCRETE, THE NEWLY EXPOSED CONCRETE SURFACE SHALL BE SAND-BLASTED OR WATER-BLASTED TO REMOVE ALL CONCRETE RESIDUE AND LOOSE PARTICLES, AND ALL EXPOSED REINFORCING STEEL SHALL BE SAND-BLASTED TO REMOVE RUST. THE SURFACE SHALL BE KEPT WET FOR AT LEAST ONE (1) HOUR BUT ALLOWED TO DRY BEFORE PROCEEDING WITH THE REPAIRS. REPORT ANY DETERIORATED REINFORCING WITH A SECTION LOSS GREATER THAN 50% AS DETERMINED BY THE ENGINEER TO THE BRIDGE ENGINEER FOR REMEDIAL ACTION.

BRIDGE PAY ITEM NOTES (CONT.)

ALL CONCRETE REMOVALS SHALL BE ACCOMPLISHED WITH HAND TOOLS OR POWER-DRIVEN HAND TOOLS. NO VEHICLE MOUNTED TOOLS OR EQUIPMENT WILL BE ALLOWED TO MAKE ANY REMOVALS. ALL TOOLS USED TO MAKE THE REMOVALS SHALL SATISFY SECTION 513.03.C OF THE STANDARD SPECIFICATIONS. ALL JACK HAMMER TOOLS SHALL BE OPERATED AT ANGLES NO GREATER THAN 45° FROM THE REPAIR SURFACES. THE USE OF ANY TOOL THAT RESULTS IN EXCESSIVE REMOVAL OF OR DAMAGE TO THE SOUND CONCRETE AS DETERMINED BY THE ENGINEER WILL NOT BE ALLOWED. A LIST OF ALL TOOLS THAT WILL BE USED TO MAKE CONCRETE REMOVALS ON THE PROJECT AND A DESCRIPTION OF HOW THE TOOL WILL BE USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TOOL SHALL BE USED ON THE PROJECT TO MAKE CONCRETE REMOVALS UNTIL IT HAS BEEN APPROVED BY THE ENGINEER. ALL BLASTING EQUIPMENT SHALL BE HAND-HELD AND SATISFY SECTION 513.03.A OF THE STANDARD SPECIFICATIONS.

ALL MATERIALS REMOVED FROM THE EXISTING BRIDGE, INCLUDING EXISTING CONCRETE AND REINFORCING STEEL, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. ALL MATERIALS REMOVED FROM THE EXISTING BRIDGE SHALL BE PREVENTED FROM ENTERING ANY ROAD, STREET, SIDEWALK OR PEDESTRIAN PATHWAY BELOW THE BRIDGE.

THE REMOVED CONCRETE SHALL BE REPLACED WITH ONE OF THE FOLLOWING MATERIALS AS SPECIFIED IN SECTION 701 OF THE STANDARD SPECIFICATIONS:

1. HIGH DENSITY CONCRETE (HDC)
2. LATEX MODIFIED CONCRETE (LMC)
3. VERY EARLY STRENGTH TYPE I CONCRETE (VES I)
4. VERY EARLY STRENGTH TYPE III CONCRETE (VES III)
5. RAPID SETTING LATEX MODIFIED CONCRETE (RSLMC)

THE CONCRETE TEMPERATURE SHALL NOT EXCEED 85°F. COLD WEATHER PRACTICES SHALL BE IMPLEMENTED UNDER ANY OF THE FOLLOWING CONDITIONS:

THE AIR TEMPERATURE WAS LESS THAN 55°F WITHIN 24 HOURS BEFORE PLACEMENT OF CONCRETE, OR THE SUBSTRATE TEMPERATURE WAS LESS THAN 55°F DURING PLACEMENT OF CONCRETE, OR THE AIR TEMPERATURE WILL BE LESS THAN 55°F WITHIN 6 HOURS AFTER PLACEMENT OF CONCRETE.

COLD WEATHER PRACTICES SHALL BE AS FOLLOWS:

MAINTAIN A CONCRETE MIX TEMPERATURE OF 75°F DURING PLACEMENT, AND ENSURE THE AIR TEMPERATURE IS RISING DURING PLACEMENT, AND COMPLETE PLACEMENT DURING THE WARMEST PART OF THE DAY.

AIR TEMPERATURES SHALL BE GREATER THAN 45°F WHEN PLACING EARLY STRENGTH CONCRETE.

ALTERNATIVELY, THE REMOVED CONCRETE MAY BE REPLACED WITH ONE OF THE FOLLOWING COMMERCIALY AVAILABLE SHOTCRETE PRODUCTS USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS APPROVED BY THE ENGINEER:

6. QUIKRETE SHOTCRETE MS WITH POLYPROPYLENE FIBERS
7. SIKACEM 103F
8. SIKACEM 133
9. SIKACRETE 211 SCC PLUS
10. BASF MASTEREMACO S 210SP
11. BASF MASTEREMACO S 211SP
12. PROSPEC SHOTCRETE 300V
13. EUCOSHOT F

THE NEW CONCRETE SHALL BE PLACED TO THE ORIGINAL NEAT LINES OF THE STRUCTURAL COMPONENT UNDER REPAIR AND FINISHED TO PROVIDE A SURFACE TEXTURE MATCHING THAT OF THE ADJACENT EXISTING CONCRETE.

SUBMIT A PROPOSED WORK PLAN FOR THE CHOSEN REPAIR METHOD. THE WORK PLAN SHALL INCLUDE SURFACE PREPARATION METHODS, PATCHING MATERIAL, BONDING AGENTS, MATERIAL PLACING METHODS, AND FINISHING METHODS. REPAIR A TEST AREA TO VERIFY THE EFFECTIVENESS OF THE PROPOSED REPAIR METHOD PRIOR TO COMMENCING WORK. FAULTY REPAIRS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. INCLUDE ALL COSTS OF THE REPAIRS, INCLUDING PATCHING MATERIAL, SUPPLEMENTAL REINFORCING, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "PNEUMATICALLY PLACED MORTAR".

B8 PREPARE SURFACE AND INSTALL HIGH MOLECULAR WEIGHT METHACRYLATE SEALER FOR DECK SLAB CONSTRUCTION JOINTS AT LOCATIONS SHOWN IN THE PLANS IN ACCORDANCE WITH SECTION 523 OF THE SPECIFICATIONS. INCLUDE COSTS FOR LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT UNIT PRICE OF "(SP) SEALER CRACK PREPARATION".

B9 PROVIDE HIGH MOLECULAR WEIGHT METHACRYLATE SEALER FOR DECK SLAB CONSTRUCTION JOINTS AT LOCATIONS SHOWN IN THE PLANS IN ACCORDANCE WITH SECTION 523 OF THE SPECIFICATIONS. INCLUDE ALL COSTS OF THE SEALER RESIN MATERIAL IN THE CONTRACT UNIT PRICE OF "(SP) SEALER RESIN". SEALER RESIN QUANTITY ESTIMATED AT 0.011 GALLONS PER FOOT OF CONSTRUCTION JOINT.

B10 PREPARE SURFACE AND ENCASE REPAIRED AREAS WITH CARBON FIBER-REINFORCED POLYMER COMPOSITE WRAP AT LOCATIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. INCLUDE ALL COSTS FOR MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT UNIT PRICE OF "(SP) CARBON FIBER-REINFORCED POLYMER".

BRIDGE PAY ITEM NOTES (CONT.)

B11 APPLY CIM1000, OR APPROVED EQUAL, TO THE ABUTMENTS AS DIRECTED IN THE PLANS. INCLUDE ALL COSTS FOR MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT PRICE BID FOR "(PL)INSTALLATION OF BRIDGE ITEMS (TYPE A)".

B12 APPLY CIM1000, OR APPROVED EQUAL, TO THE PIER AS DIRECTED IN THE PLANS. INCLUDE ALL COSTS FOR MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT PRICE BID FOR "(PL)INSTALLATION OF BRIDGE ITEMS (TYPE B)".

B13 ITEM "REMOVAL OF BRIDGE ITEMS" INCLUDES REMOVAL AND DISPOSAL OF EXISTING SUPERSTRUCTURE, APPROACH SLABS, PIER CAP, AND PORTIONS OF THE ABUTMENT AND RETAINING WALLS, IN ACCORDANCE WITH SUBSECTION 619.04(B)-2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. THE EXISTING STEEL BRIDGE RAILS AND BEARINGS WILL BE SALVAGED FOR REUSE AND BECOME PROPERTY OF ODOT. THE CONTRACTOR WILL REMOVE EXISTING STEEL BEARINGS AND RAILS TAKING CARE TO NOT DAMAGE THE BEARINGS AND RAILS. REMOVED STEEL BRIDGE RAILS AND BEARINGS WILL BE DELIVERED TO THE ODOT DIVISION 8 MAINTENANCE YARD. THE REMAINING STRUCTURE AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. INCLUDE ALL COSTS FOR LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT UNIT PRICE OF "REMOVAL OF BRIDGE ITEMS".

J.P. NO. 28868(04) 0200 BRIDGE A			
4TH STREET OVER I-444 NBI NO. 18055 74' - 74' CONT. Ɔ GIRDER SPANS, 49' CLR. RDWY, 0' SKEW, WITH CONCRETE PARAPETS, Ɔ STA. 15+20.88			
ITEM NO.	ITEM	UNIT	TOTAL
501(G) 6309	CLSM BACKFILL	C.Y.	170
504(A) 1304	APPROACH SLAB	BR1,B1 S.Y.	482.9
504(B) 1305	SAW-CUT GROOVING	BR1 S.Y.	1,178
504(C) 6250	SEALED EXPANSION JOINT	BR1 L.F.	125.2
504(E) 1381	CONCRETE PARAPET	BR1,B2 L.F.	662.0
506(A) 1322	STRUCTURAL STEEL	BR1,B3 LB.	208,740
507(A) 6172	WEATHERING STEEL FIXED BEARING ASSEMBLY	BR1,B4 EA.	8
507(B) 6176	WEATHERING STEEL EXPANSION BEARING ASSEMBLY	BR1,B5 EA.	16
509 6152	SPECIAL CONCRETE FINISH	BR1,B6 S.Y.	362
509(A) 1326	CLASS AA CONCRETE	BR1 C.Y.	318.8
509(B) 1328	CLASS A CONCRETE	C.Y.	40.7
511 6306	MECHANICAL SPLICES	BR1 EA.	12
511(B) 6010	EPOXY COATED REINFORCING STEEL	BR1 LB.	83,990
515(A) 6013	WATER REPELLENT (VISUALLY INSPECTED)	BR1 S.Y.	1,202
521(A) 6210	PNEUMATICALLY PLACED MORTAR	B7 S.Y.	99.5
523(A) 6550	SEALER CRACK PREPARATION	BR1,B8 L.F.	151
523(B) 6560	SEALER RESIN	BR1,B9 GAL.	2
524(A) 6610	(SP) CARBON FIBER-REINFORCED POLYMER	B10 S.F.	146.6
535 6130	(SP) CORROSION INHIBITOR (SURFACE APPLIED)	S.Y.	16.3
542 4610	(PL) INSTALLATION OF BRIDGE ITEMS (TYPE A)	B11 LSUM.	1
542 4620	(PL) INSTALLATION OF BRIDGE ITEMS (TYPE B)	B12 LSUM.	1
619(B) 2500	REMOVAL OF BRIDGE ITEMS	B13 LSUM.	1

STAKING AND MOBILIZATION FOR THIS PROJECT WILL BE INCLUDED IN THE BID PRICE ON THE MANDATORY TIED PROJECT, STATE JOB NO. 28865(04).

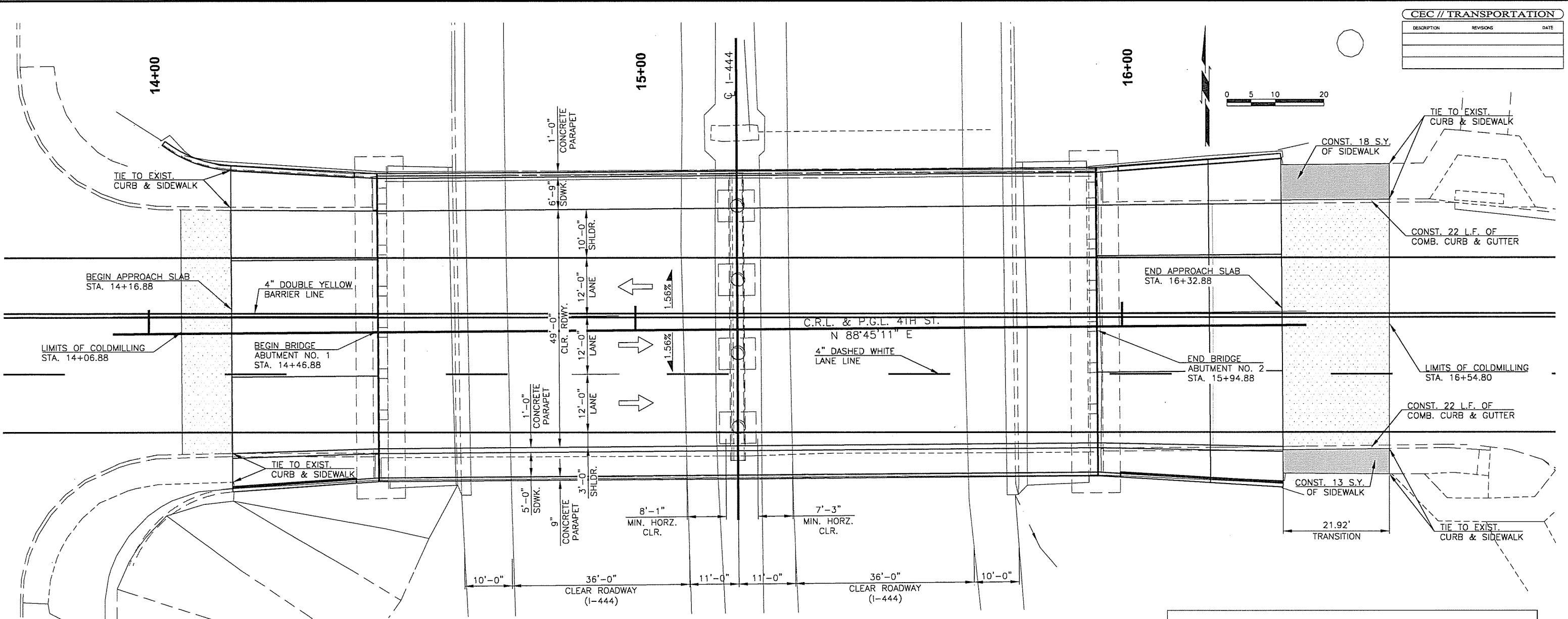
MANDATORILY TIED PROJECTS

THE FOLLOWING FOUR (4) PROJECTS ARE MANDATORILY TIED. THE PROJECTS INCLUDE THIS PROJECT AND ARE IDENTIFIED BY STATE JOB NO. AS FOLLOWS:

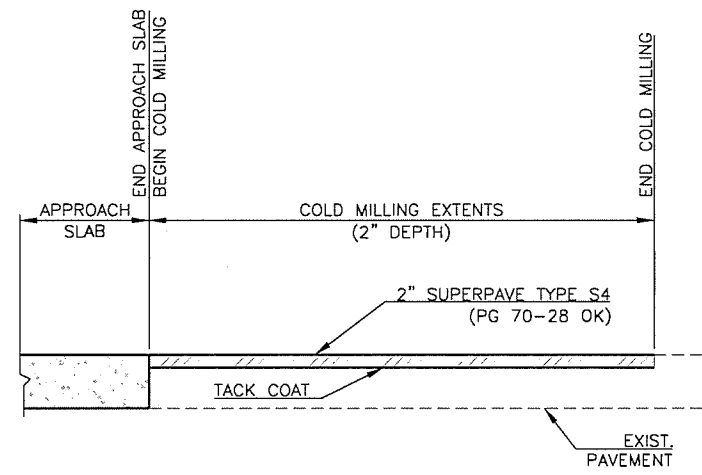
1. STATE JOB NO. 28865(04), BRIDGE REHABILITATION - 2ND STREET OVER I-444 AND 2ND STREET W-N RAMP, TULSA COUNTY.
2. STATE JOB NO. 28868(04), BRIDGE REHABILITATION - 4TH STREET OVER I-444, TULSA COUNTY
3. STATE JOB NO. 28879(04), BRIDGE REHABILITATION - US 75 RAMP NORTH TO WEST OVER I-444 SOUTHBOUND, TULSA COUNTY.
4. STATE JOB NO. 28880(04), BRIDGE REHABILITATION - US 75 RAMP NORTH TO EAST OVER 2ND STREET, TULSA COUNTY.

DESIGN	B.J.K.	4TH OVER I-444 TULSA COUNTY
DRAWN	J.F.R.	
CHECKED	J.W.H.	
APPROV.	T.A.C.	
SQUAD	CEC	
BRIDGE PAY ITEMS AND NOTES		JOB PIECE NO. 28868(04) SHEET NO. 4

DESCRIPTION	REVISIONS	DATE



PLAN



PAVMENT TRANSITION DETAIL (EAST)

NOT TO SCALE
 STA. 14+06.88 TO STA. 14+16.88
 STA. 16+32.88 TO STA. 16+54.80

SUMMARY OF SURFACING

P&P SHEET NO.	STATION TO STATION	TACK COAT	SUPERPAVE, TYPE S4 (PG 70-28 OK)	COLD MILLING PAVEMENT	2'-8" COMB. CURB & GUTTER (8" BARRIER)
		407(B) GAL	411(C) TON	412 SY	619(B) LF
6	14+06.88 TO 14+16.88	10	7	56	0
6	16+32.88 TO 16+54.80	21	16	123	44
TOTALS		31	23	179	44

SUMMARY OF PAVEMENT MARKING

STATION TO STATION	TRAFFIC STRIPE (MULTI-POLYMER) (4" WIDE) 856(A)	TRAFFIC STRIPE (MULTI-POLYMER) (4" WIDE) 856(A)	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE) 857(F)
	WHITE L.F.	YELLOW L.F.	YELLOW L.F.
13+80 TO 16+65	84	570	174
TOTAL	84	570	174

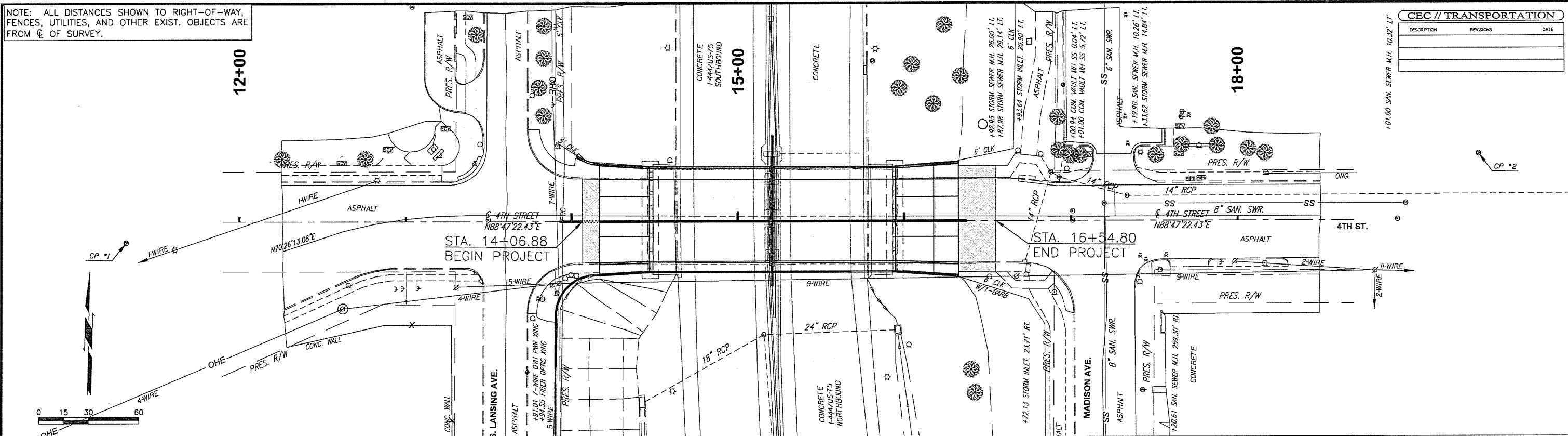
DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.E.E.		
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		

SUMMARIES AND DETAILS ROADWAY

JOB PIECE NO. 28868(04) SHEET NO. 5

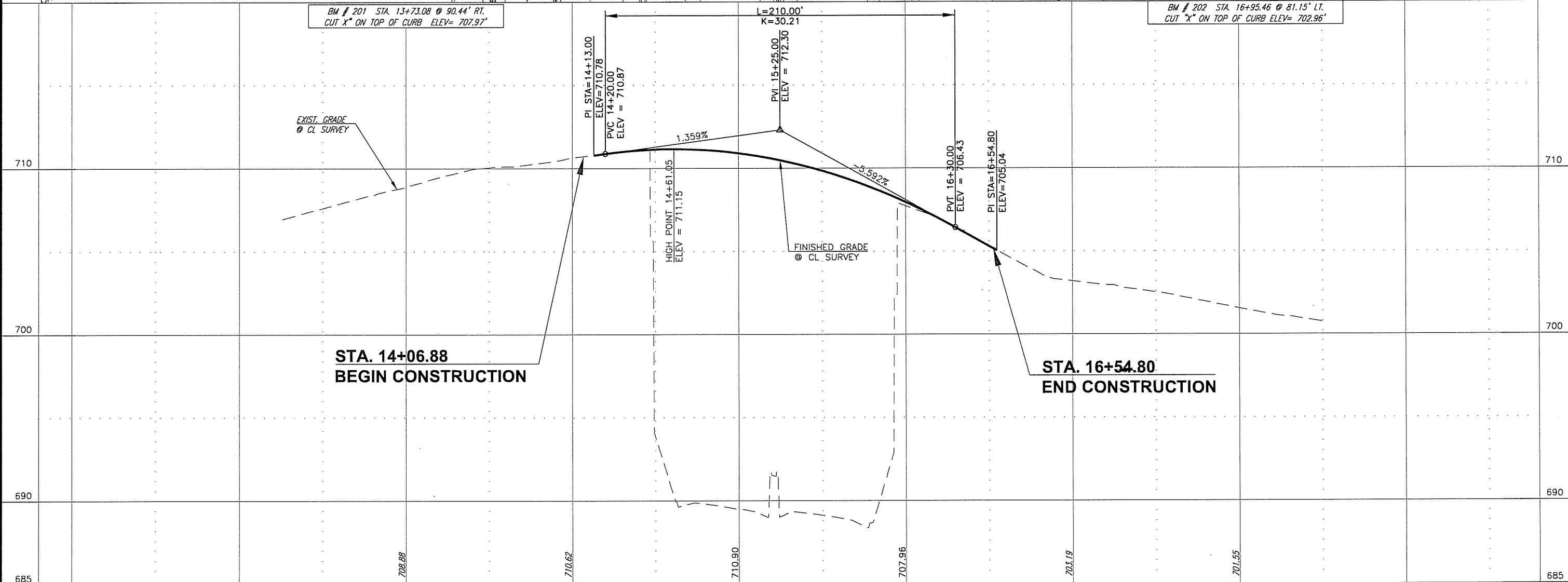
NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM C OF SURVEY.

DESCRIPTION	REVISIONS	DATE



BM # 201 STA. 13+73.08 @ 90.44' RT.
CUT "X" ON TOP OF CURB ELEV= 707.97'

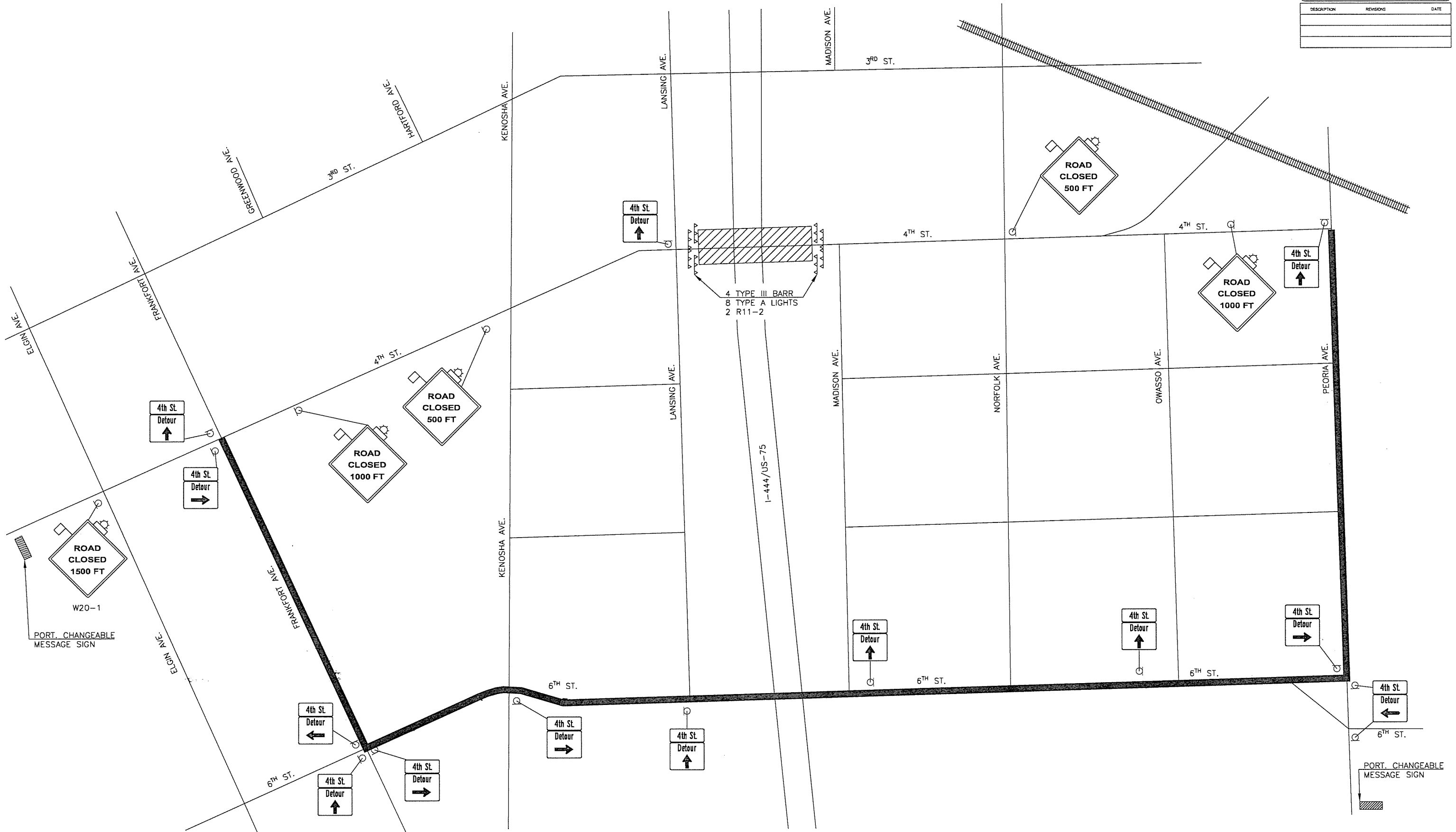
BM # 202 STA. 16+95.46 @ 81.15' LT.
CUT "X" ON TOP OF CURB ELEV= 702.96'



**STA. 14+06.88
BEGIN CONSTRUCTION**

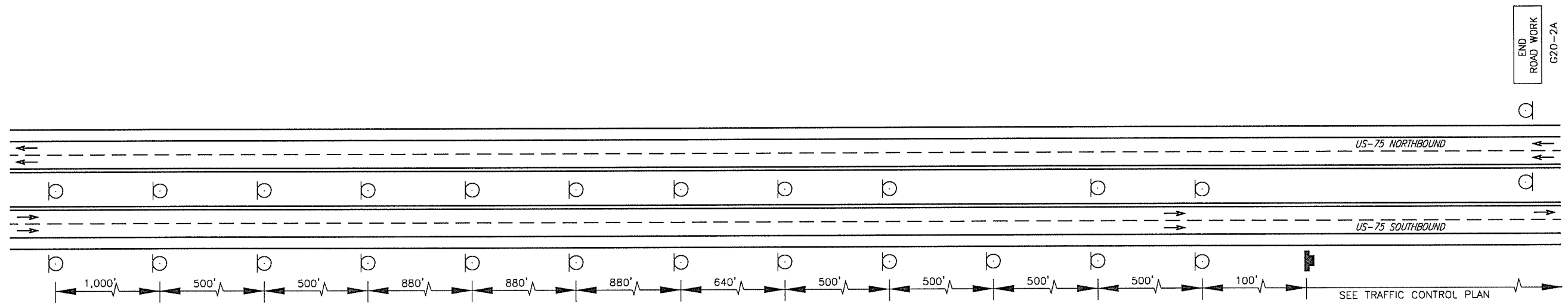
**STA. 16+54.80
END CONSTRUCTION**

DESCRIPTION	REVISIONS	DATE



DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.E.E. B.M.S.	TRAFFIC CONTROL PLAN	
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		
JOB PIECE NO. 28868(04)		SHEET NO. 7A	

DESCRIPTION	REVISIONS	DATE



END ROAD WORK
G20-2A

G20-1A
ROAD WORK NEXT 1 MILE
WING BARRICADE

WORK-ZONE FINES DOUBLE WHEN WORKERS ARE PRESENT
CS-16E CS-17E CS-18E

STAY ALERT PLEASE IN WORK ZONE

W20-1 (1 MILE)

DO NOT FOLLOW CONSTRUCTION VEHICLES

STATE LAW MERGE NOW
CS-11

DO NOT PASS
R4-1E

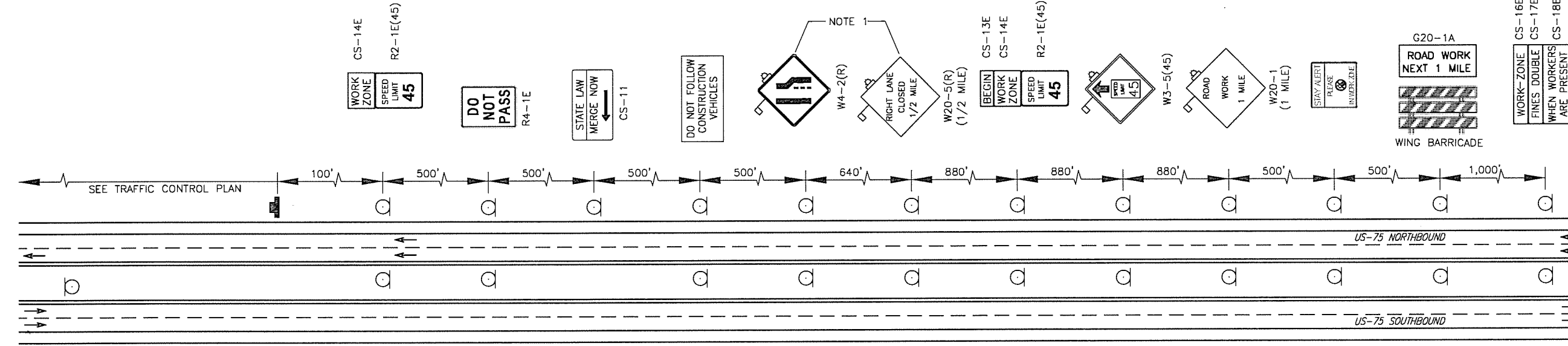
WORK ZONE SPEED LIMIT 45
CS-14E R2-1E(45)

W20-5(R) (1/2 MILE)

RIGHT LANE CLOSED 1/2 MILE
W4-2(R)

NOTE 1

CS-13E CS-14E R2-1E(45)



END ROAD WORK
G20-2A

DO NOT PASS
R4-1E

STATE LAW MERGE NOW
CS-11

DO NOT FOLLOW CONSTRUCTION VEHICLES

RIGHT LANE CLOSED 1/2 MILE
W4-2(R)

NOTE 1

CS-13E CS-14E R2-1E(45)

END ROAD WORK
G20-2A

NOTE 1
SIGNS ARE INTERCHANGEABLE (LEFT AND RIGHT) BASED ON CONSTRUCTION PHASE.



- COLOR:
LEGEND, SYMBOL AND BORDER:
BLACK (NON-REFLECTORIZED)
RED (TRANSPARENT REFLECTORIZED)
BACKGROUND:
▲ FLUORESCENT ORANGE (REFLECTORIZED)
* FLUORESCENT YELLOW (REFLECTORIZED)
● WHITE (REFLECTORIZED)

LEGEND

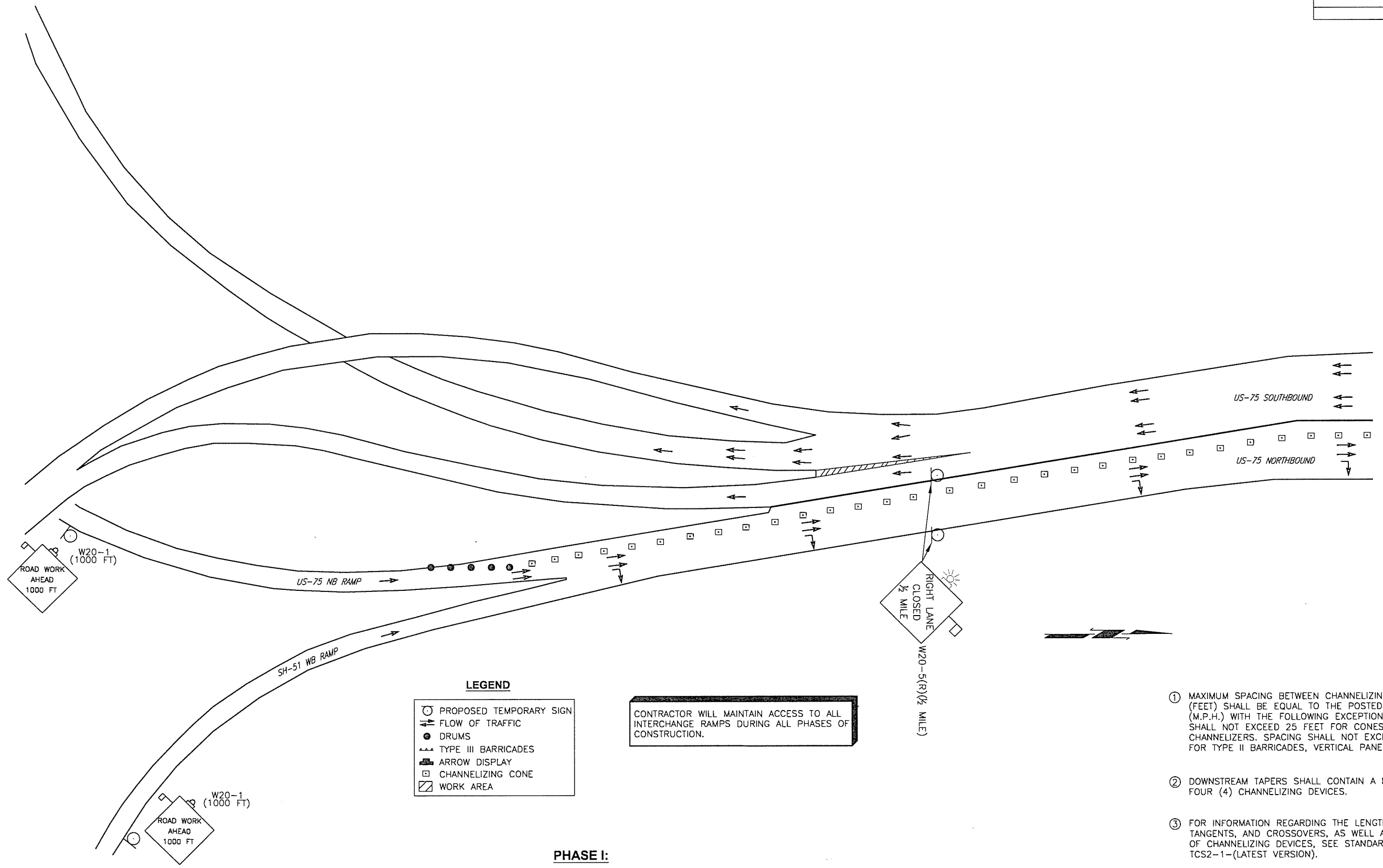
	PROPOSED TEMPORARY SIGN
	FLOW OF TRAFFIC
	DRUMS
	TYPE III BARRICADES
	ARROW DISPLAY

DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.		
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		

**TRAFFIC CONTROL
ADVANCED WARNING**

JOB PIECE NO. 28868(04) SHEET NO. 7B

DESCRIPTION	REVISIONS	DATE



LEGEND

	PROPOSED TEMPORARY SIGN
	FLOW OF TRAFFIC
	DRUMS
	TYPE III BARRICADES
	ARROW DISPLAY
	CHANNELIZING CONE
	WORK AREA

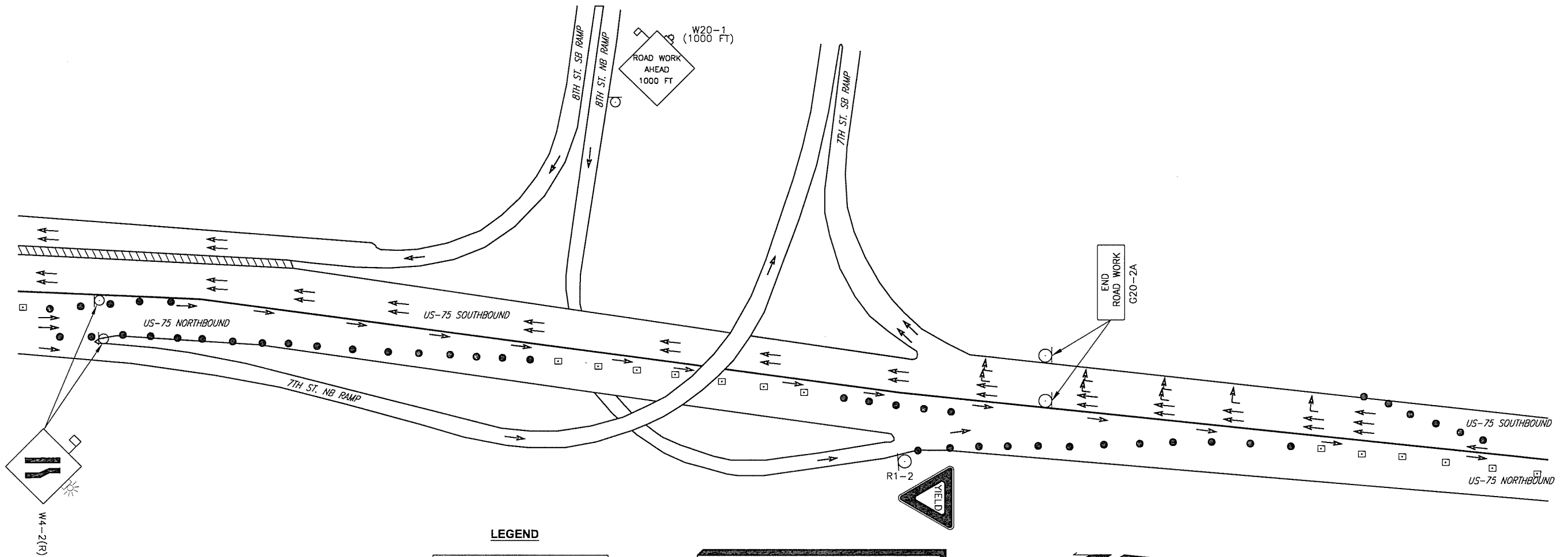
CONTRACTOR WILL MAINTAIN ACCESS TO ALL INTERCHANGE RAMPS DURING ALL PHASES OF CONSTRUCTION.

- ① MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.
- ② DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES.
- ③ FOR INFORMATION REGARDING THE LENGTH OF TAPERS, TANGENTS, AND CROSSOVERS, AS WELL AS THE SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST VERSION).

PHASE I:

DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.	TRAFFIC CONTROL PLAN PHASE 1 (SHEET 1 OF 3)	
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		
		JOB PIECE NO. 28868(04)	SHEET NO. 7C

DESCRIPTION	REVISIONS	DATE



LEGEND

	PROPOSED TEMPORARY SIGN
	FLOW OF TRAFFIC
	DRUMS
	TYPE III BARRICADES
	ARROW DISPLAY
	CHANNELIZING CONE
	WORK AREA

CONTRACTOR WILL MAINTAIN ACCESS TO ALL INTERCHANGE RAMPS DURING ALL PHASES OF CONSTRUCTION.

PHASE I:

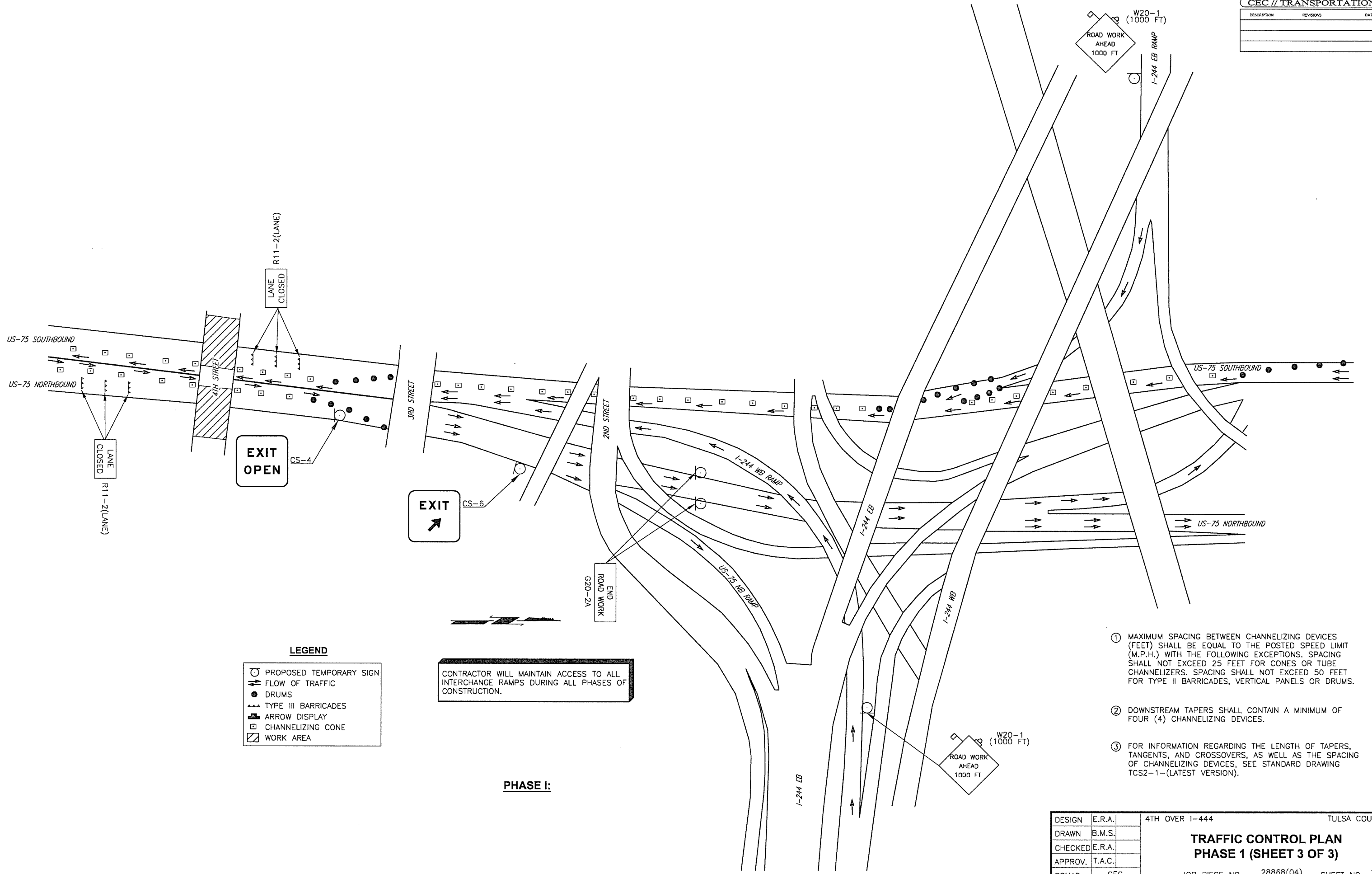
- ① MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.
- ② DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES.
- ③ FOR INFORMATION REGARDING THE LENGTH OF TAPERS, TANGENTS, AND CROSSOVERS, AS WELL AS THE SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST VERSION).

DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.		
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		

**TRAFFIC CONTROL PLAN
PHASE 1 (SHEET 2 OF 3)**

JOB PIECE NO. 28868(04) SHEET NO. 7D

DESCRIPTION	REVISIONS	DATE



LEGEND

- PROPOSED TEMPORARY SIGN
- FLOW OF TRAFFIC
- DRUMS
- TYPE III BARRICADES
- ARROW DISPLAY
- CHANNELIZING CONE
- WORK AREA

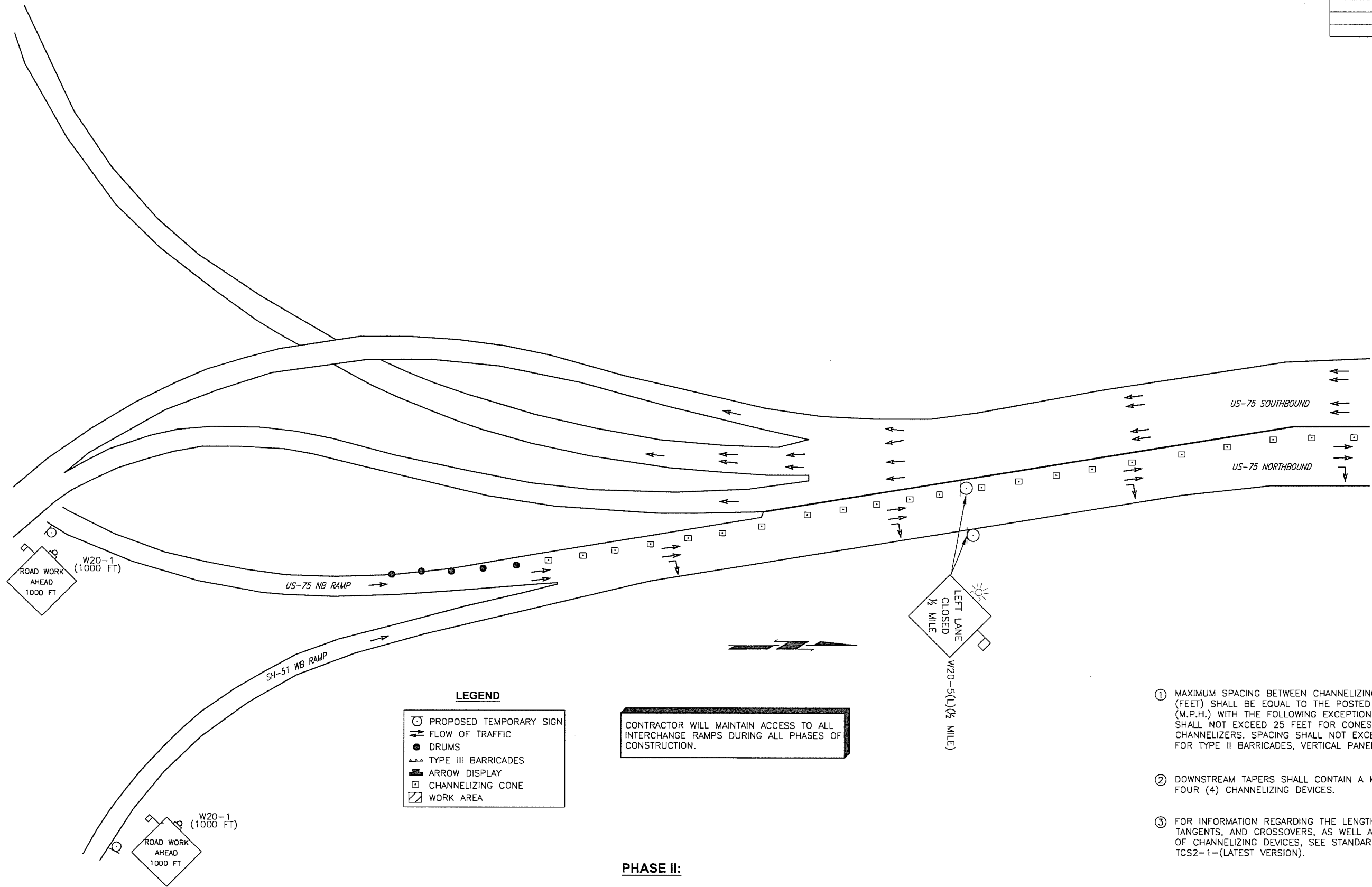
CONTRACTOR WILL MAINTAIN ACCESS TO ALL INTERCHANGE RAMP DURING ALL PHASES OF CONSTRUCTION.

PHASE I:

- ① MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.
- ② DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES.
- ③ FOR INFORMATION REGARDING THE LENGTH OF TAPERS, TANGENTS, AND CROSSOVERS, AS WELL AS THE SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST VERSION).

DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.	TRAFFIC CONTROL PLAN PHASE 1 (SHEET 3 OF 3)	
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 7E

CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE



LEGEND

	PROPOSED TEMPORARY SIGN
	FLOW OF TRAFFIC
	DRUMS
	TYPE III BARRICADES
	ARROW DISPLAY
	CHANNELIZING CONE
	WORK AREA

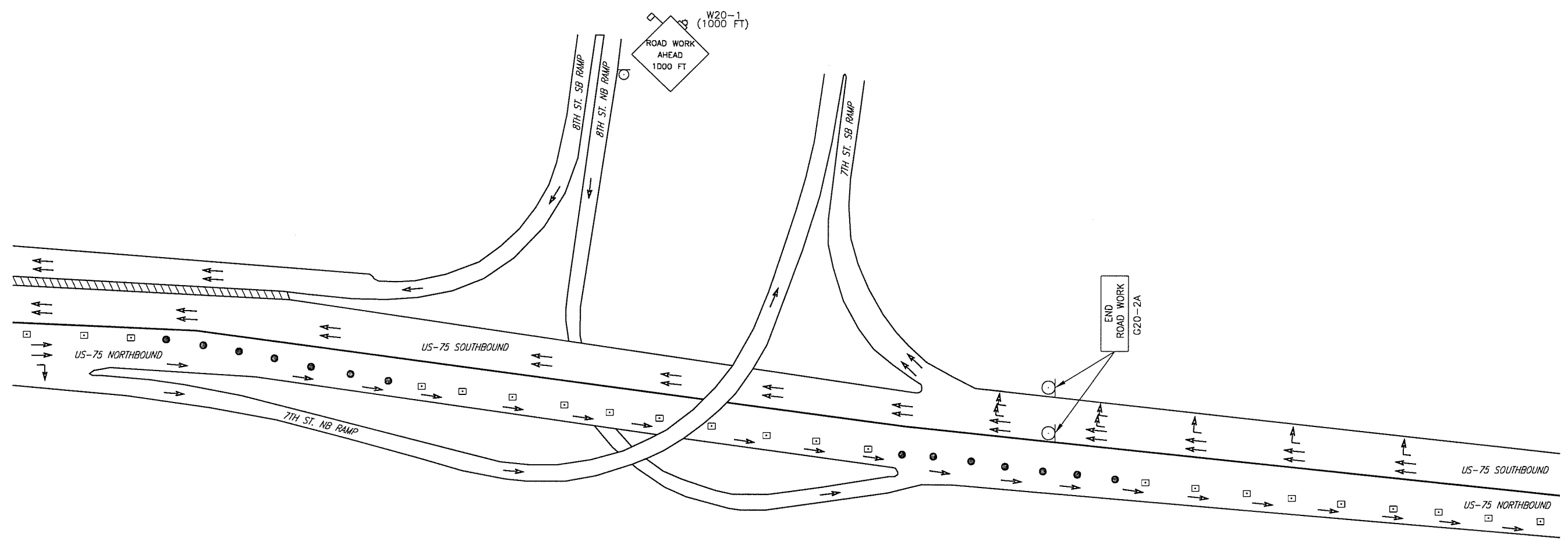
CONTRACTOR WILL MAINTAIN ACCESS TO ALL INTERCHANGE RAMPS DURING ALL PHASES OF CONSTRUCTION.

PHASE II:

- ① MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.
- ② DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES.
- ③ FOR INFORMATION REGARDING THE LENGTH OF TAPERS, TANGENTS, AND CROSSOVERS, AS WELL AS THE SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST VERSION).

DESIGN	E.R.A.	4TH OVER 1-444	TULSA COUNTY
DRAWN	B.M.S.	TRAFFIC CONTROL PLAN PHASE 2 (SHEET 1 OF 3)	
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 7F

DESCRIPTION	REVISIONS	DATE



LEGEND

	PROPOSED TEMPORARY SIGN
	FLOW OF TRAFFIC
	DRUMS
	TYPE III BARRICADES
	ARROW DISPLAY
	CHANNELIZING CONE
	WORK AREA

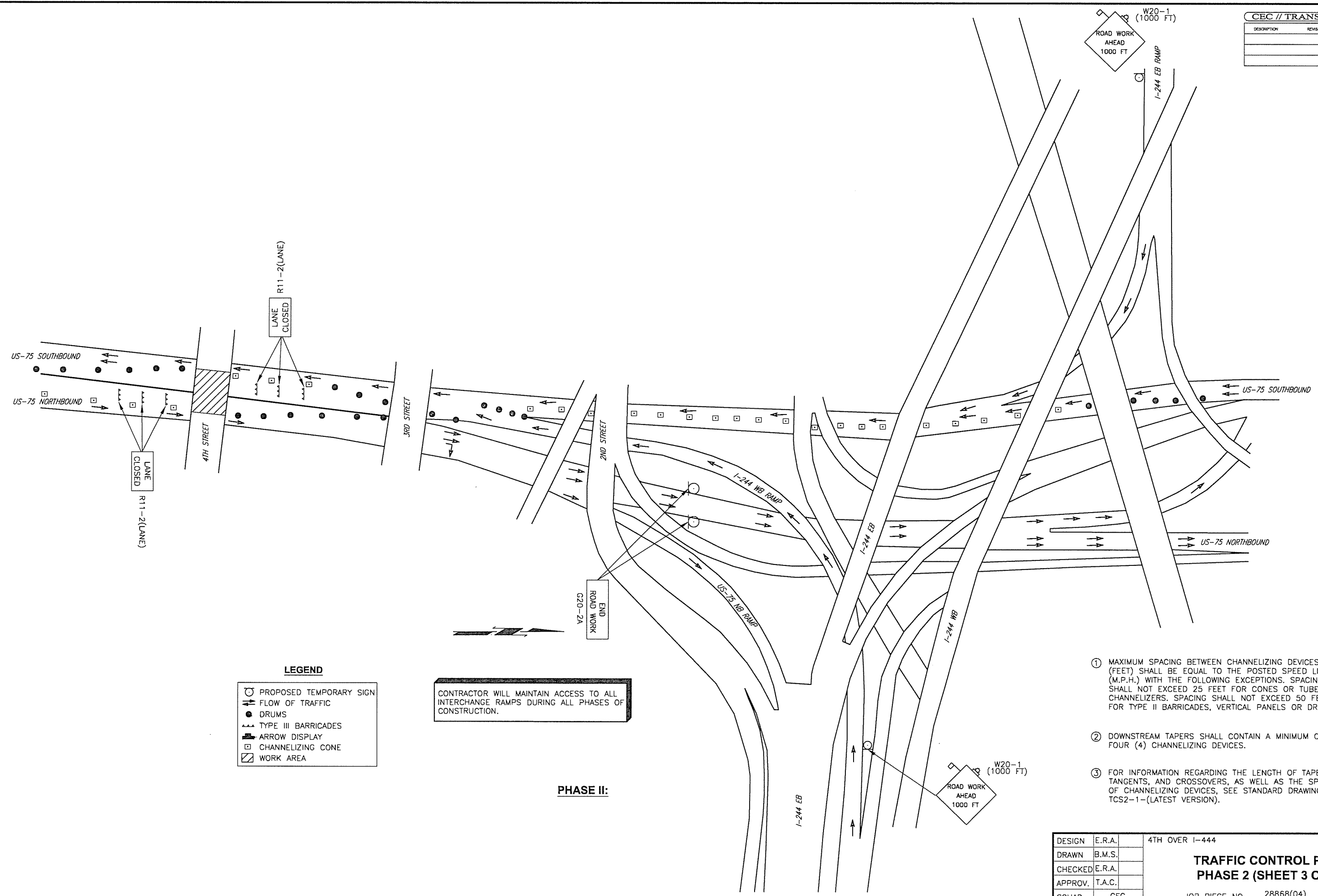
CONTRACTOR WILL MAINTAIN ACCESS TO ALL INTERCHANGE RAMP DURING ALL PHASES OF CONSTRUCTION.

PHASE II:

- ① MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.
- ② DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES.
- ③ FOR INFORMATION REGARDING THE LENGTH OF TAPERS, TANGENTS, AND CROSSOVERS, AS WELL AS THE SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST VERSION).

DESIGN	E.R.A.	4TH OVER I-444 TRAFFIC CONTROL PLAN PHASE 2 (SHEET 2 OF 3) JOB PIECE NO. 28868(04) SHEET NO. 76	TULSA COUNTY
DRAWN	B.M.S.		
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		

DESCRIPTION	REVISIONS	DATE



R11-2(LANE)
LANE CLOSED

R11-2(LANE)
LANE CLOSED

G20-2A
END ROAD WORK

LEGEND

- PROPOSED TEMPORARY SIGN
- FLOW OF TRAFFIC
- DRUMS
- ⊥ TYPE III BARRICADES
- ⇄ ARROW DISPLAY
- ▣ CHANNELIZING CONE
- ▨ WORK AREA

CONTRACTOR WILL MAINTAIN ACCESS TO ALL INTERCHANGE RAMPS DURING ALL PHASES OF CONSTRUCTION.

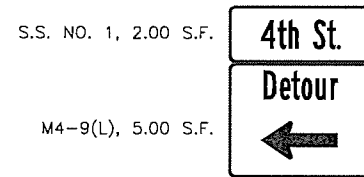
PHASE II:

- ① MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.
- ② DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES.
- ③ FOR INFORMATION REGARDING THE LENGTH OF TAPERS, TANGENTS, AND CROSSOVERS, AS WELL AS THE SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST VERSION).

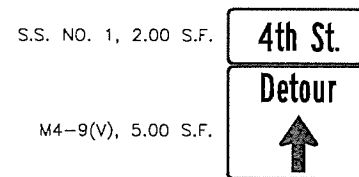
DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.		
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 7H

**TRAFFIC CONTROL PLAN
PHASE 2 (SHEET 3 OF 3)**

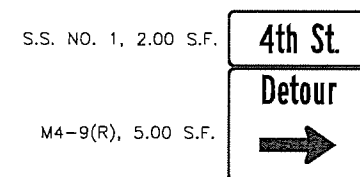
DESCRIPTION	REVISIONS	DATE



ROUTE ASSEMBLY NO. 1

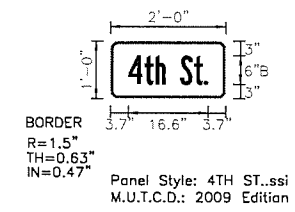


ROUTE ASSEMBLY NO. 2



ROUTE ASSEMBLY NO. 3

SIGN DETAIL
NOT TO SCALE



SIGN NUMBER	Special Sign
WIDTH x HGHT.	2'-0" x 1'-0"
BORDER WIDTH	0.63"
CORNER RADIUS	0"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: Orange
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

LETTER POSITION, X)	LENGTH	SERIES/SIZE
4 t h . S t .		B 2000
3.7 7.1 9.4 11.5 14.5 17.4 19.5	16.6	6/4.5

DESIGN	E.R.A.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.E.E.	DETOUR ROUTE ASSEMBLIES	
CHECKED	E.R.A.		
APPROV.	T.A.C.		
SQUAD	CEC		
		JOB PIECE NO. 28868(04)	SHEET NO. 8

DESCRIPTION	REVISION	DATE

NEW CONSTRUCTION DESIGN DATA

CONCRETE CLASS A $f'_c = 3$ K.S.I.
 CONCRETE CLASS AA $f'_c = 4$ K.S.I.
 REINFORCING STEEL,
 AASHTO M31 (GRADE 60) $f_y = 60$ K.S.I.
 STRUCTURAL STEEL
 M270 (GRADE 50W) $F_y = 50$ K.S.I.

LOADING:
 HL-93 OR OKLAHOMA OVERLOAD TRUCK
 20 P.S.F. FUTURE WEARING SURFACE

DESIGN:
 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION.
 ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE

LFD OPERATING RATINGS:
 H 35.6 TONS
 HS 51.1 TONS
 3-3 72.8 TONS

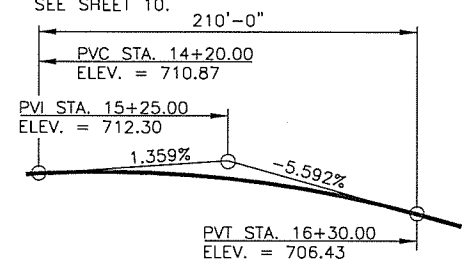
SHEET INDEX

3. BRIDGE GENERAL NOTES
4. BRIDGE PAY ITEMS AND NOTES
9. GENERAL PLAN AND ELEVATION
10. SUMMARY OF BRIDGE PAY QUANTITIES
11. ABUTMENT NO. 1 REPAIR DETAILS
12. ABUTMENT NO. 2 REPAIR DETAILS
13. PIER NO. 1 REPAIR DETAILS
14. PIER NO. 1 NEW CONSTRUCTION DETAILS
15. TYPICAL CROSS SECTION
16. LONGITUDINAL SECTION
17. BEAM FRAMING PLAN
18. PLATE GIRDER DETAILS
19. DIAPHRAGM DETAILS
20. BEARING DETAILS
21. SLAB REINFORCING PLAN
22. ADDITIONAL SLAB REINFORCING DETAILS
23. PARAPET DETAILS
24. EXPANSION JOINT DETAILS
25. APPROACH SLAB NO. 1 PLAN
26. APPROACH SLAB NO. 2 PLAN
27. APPROACH SLAB DETAILS (SHEET 1 OF 2)
28. APPROACH SLAB DETAILS (SHEET 1 OF 2)
29. APPROACH SLAB PARAPET DETAILS (SHEET 1 OF 3)
30. APPROACH SLAB PARAPET DETAILS (SHEET 2 OF 3)
31. APPROACH SLAB PARAPET DETAILS (SHEET 3 OF 3)
32. BEAM BRACING DETAILS

STANDARDS

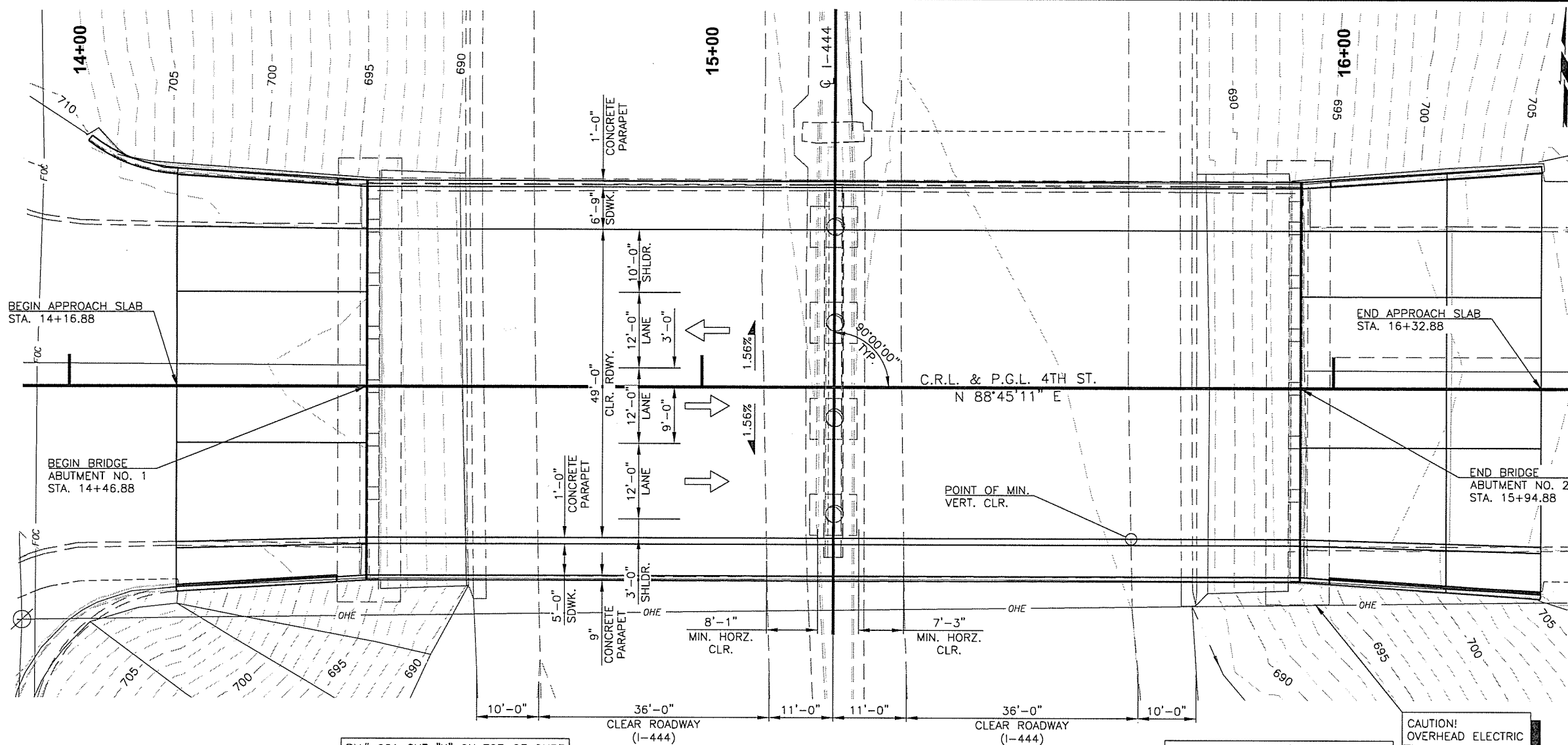
EJ-DTL-01E
 LECS-4-1

FOR SUMMARY OF BRIDGE PAY QUANTITIES,
 SEE SHEET 10.



PROFILE DATA

P.G.L. 4TH ST.

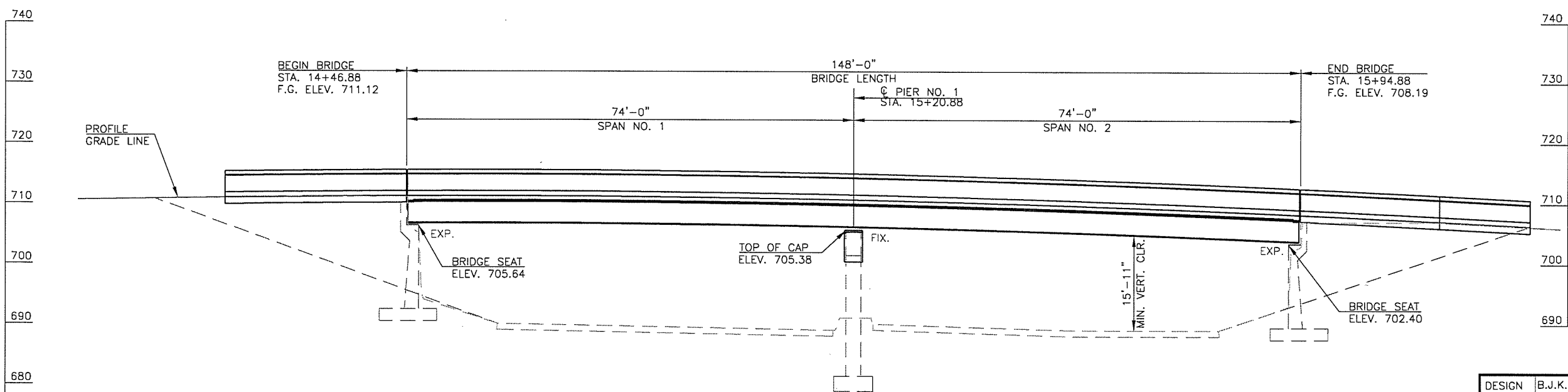


BM# 201 CUT "X" ON TOP OF CURB
 STA. 13+73.08 90.44' RT.
 ELEV. 707.97'

PLAN

1" = 10'

BM# 202 CUT "X" ON TOP OF CURB
 STA. 16+95.46 81.15' LT.
 ELEV. 702.96'



ELEVATION

1" = 10'

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	J.F.R.	GENERAL PLAN AND ELEVATION	
CHECKED	J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		
		74' - 74' CONT. P. GIRDER SPANS, 49' CLR. RDWY, 0' SKEW, WITH CONCRETE PARAPETS, C STA. 15+20.88	
		JOB PIECE NO. 28868(04)	SHEET NO. 9

DESCRIPTION	REVISIONS	DATE

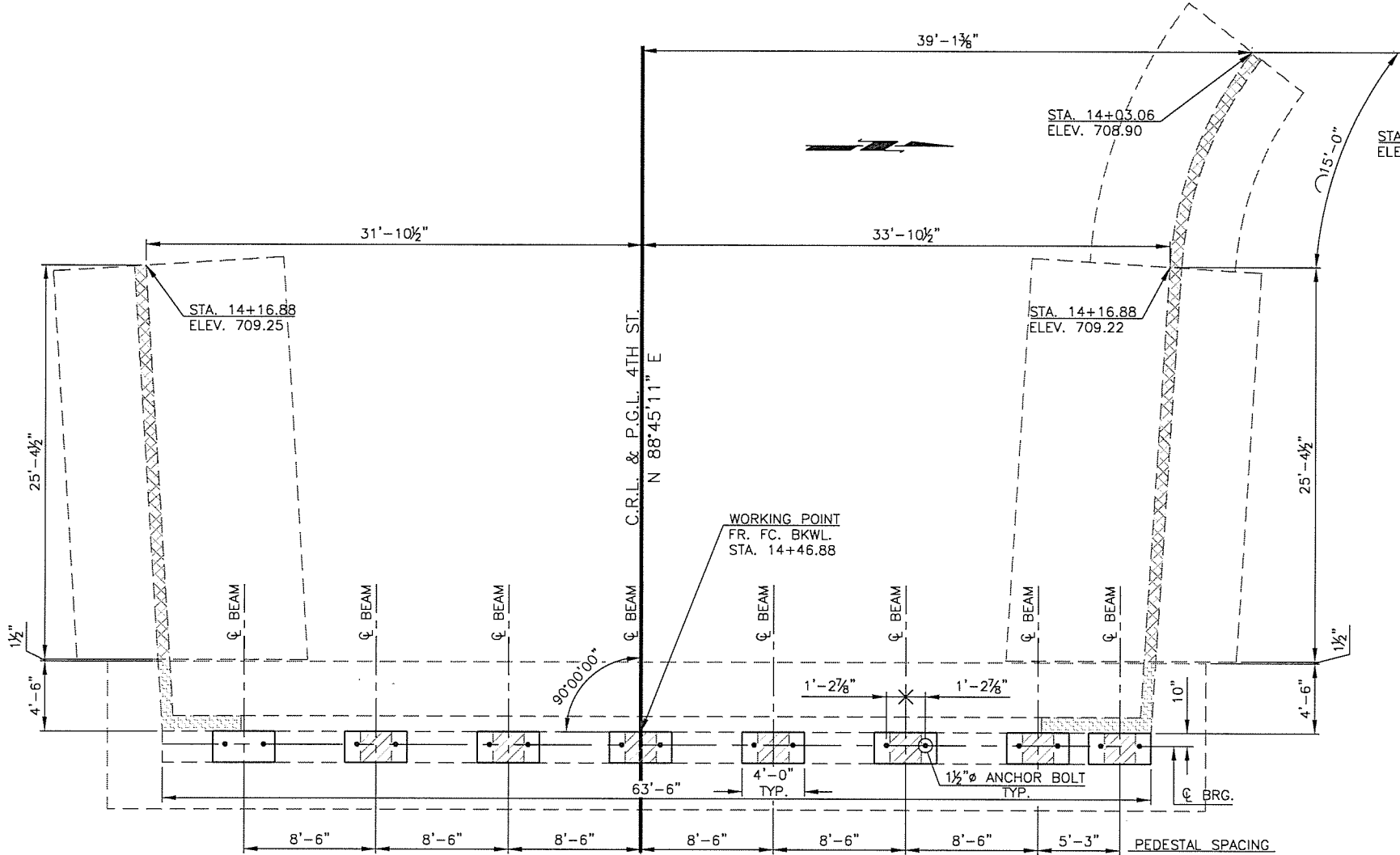
SUMMARY OF BRIDGE PAY QUANTITIES

ITEM	UNIT	ABUTMENTS	PIER	SUPER- STRUCTURE	APPROACH SLABS	TOTAL
CLSM BACKFILL	C.Y.				170	170
APPROACH SLAB	S.Y.				482.9	482.9
SAW-CUT GROOVING	S.Y.			804	374	1,178
SEALED EXPANSION JOINT	L.F.			125.2		125.2
CONCRETE PARAPET	L.F.			443.0	219.0	662.0
STRUCTURAL STEEL	LB.			208,740		208,740
WEATHERING STEEL FIXED BEARING ASSEMBLY	EA.			8		8
WEATHERING STEEL EXPANSION BEARING ASSEMBLY	EA.			16		16
SPECIAL CONCRETE FINISH	S.Y.	329	33			362
CLASS AA CONCRETE	C.Y.			292.5	26.3	318.8
CLASS A CONCRETE	C.Y.	5.6	35.1			40.7
MECHANICAL SPLICES	EA.		12			12
EPOXY COATED REINFORCING STEEL	LB.	670	6,290	75,230	1,800	83,990
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	220	96	649	237	1,202
PNEUMATICALLY PLACED MORTAR	S.Y.	93.5	6			99.5
SEALER CRACK PREPARATION	L.F.			151		151
SEALER RESIN	GAL.			2		2
(SP) CARBON FIBER-REINFORCED POLYMER	S.F.		146.6			146.6
(SP) CORROSION INHIBITOR (SURFACE APPLIED)	S.Y.		16.3			16.3
(PL) INSTALLATION OF BRIDGE ITEMS (TYPE A)	LSUM.	1				1
(PL) INSTALLATION OF BRIDGE ITEMS (TYPE B)	LSUM.		1			1
REMOVAL OF BRIDGE ITEMS	LSUM.			1		1

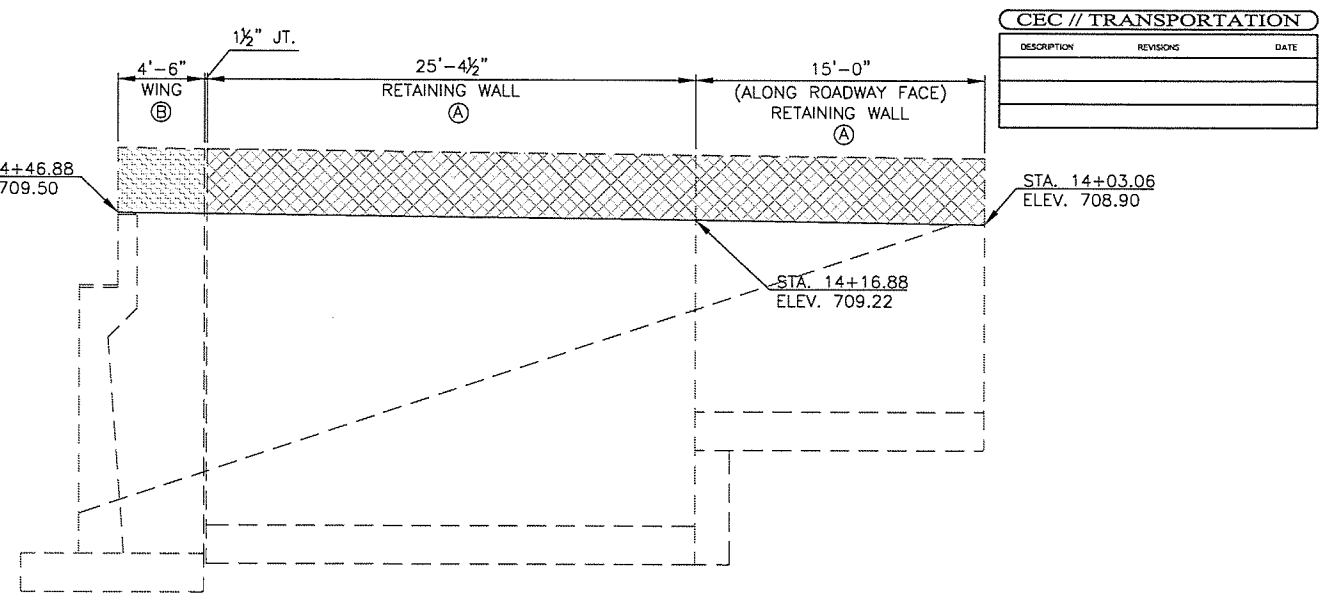
DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 10

**SUMMARY OF BRIDGE
PAY QUANTITIES**

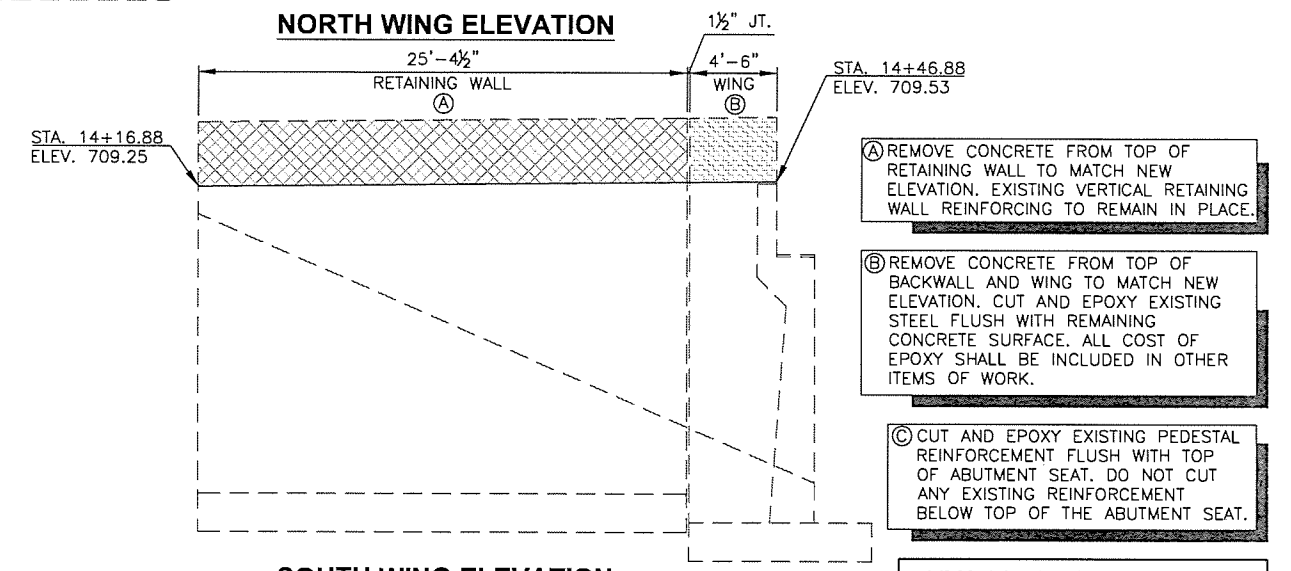
DESCRIPTION	REVISIONS	DATE



PLAN



NORTH WING ELEVATION



SOUTH WING ELEVATION

(A) REMOVE CONCRETE FROM TOP OF RETAINING WALL TO MATCH NEW ELEVATION. EXISTING VERTICAL RETAINING WALL REINFORCING TO REMAIN IN PLACE.

(B) REMOVE CONCRETE FROM TOP OF BACKWALL AND WING TO MATCH NEW ELEVATION. CUT AND EPOXY EXISTING STEEL FLUSH WITH REMAINING CONCRETE SURFACE. ALL COST OF EPOXY SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

(C) CUT AND EPOXY EXISTING PEDESTAL REINFORCEMENT FLUSH WITH TOP OF ABUTMENT SEAT. DO NOT CUT ANY EXISTING REINFORCEMENT BELOW TOP OF THE ABUTMENT SEAT.

ABUTMENT NO. 1 BAR LIST

EPOXY COATED REINFORCING				
MARK	SIZE	NO.	FORM	LENGTH
P1	#4	40	STR.	1'-8"
P2	#4	24	STR.	3'-8"
PL1	#4	96	BNT.	2'-6"
PS1	#4	5	BNT.	11'-5"

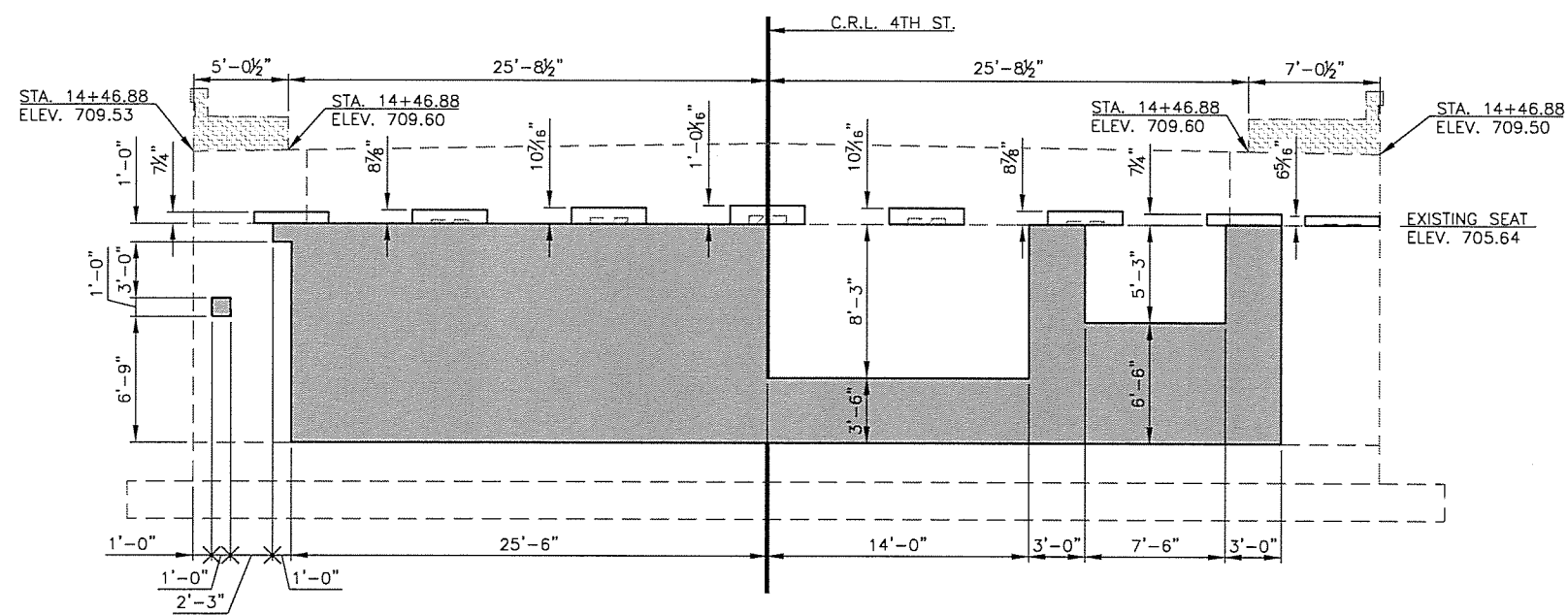
PEDESTAL SCHEDULE

PEDESTAL HEIGHT	# OF PS1 BARS
6 5/8" - 7 1/4"	0
8 7/8" - 1'-0 1/8"	1

ABUTMENT QUANTITIES

ITEM	UNIT	ABUT. NO. 1	ABUT. NO. 2	TOTAL
(1) SPECIAL CONCRETE FINISH	S.Y.	184	145	329
(2) CLASS A CONCRETE	C.Y.	2.4	3.2	5.6
EPOXY COATED REINFORCING STEEL	LB.	300	370	670
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	119	101	220
(3) PNEUMATICALLY PLACED MORTAR	S.Y.	52.2	41.3	93.5
(4) (PL) INSTALLATION OF BRIDGE ITEMS (TYPE A)	LSUM.			1

- (1) REMOVAL OF BRIDGE ITEMS INCLUDED IN SUPERSTRUCTURE QUANTITIES, SEE SHEET 16.
- (2) ASSUMED 3" REPLACEMENT DEPTH INTO ABUTMENT SEAT FOR PEDESTAL RECONSTRUCTION QUANTITY, FOR ESTIMATING PURPOSES ONLY. ACTUAL QUANTITY TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- (3) QUANTITY INCLUDED FOR ESTIMATING PURPOSES ONLY. ACTUAL QUANTITY TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- (4) QUANTITY INCLUDES 46.2 S.Y. OF CIM 1000 OR APPROVED EQUAL.



ELEVATION

LEGEND

- (A) EXISTING WING AND BACKWALL REMOVAL
- (B) EXISTING RETAINING WALL REMOVAL
- (C) EXISTING PEDESTAL REMOVAL
- PNEUMATICALLY PLACED MORTAR

NOTE: FOR PNEUMATICALLY PLACED MORTAR DETAIL, SEE SHEET 13.

NOTE: FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 12.

NOTE: TREAT FRONT FACE OF ABUTMENT SEAT, FRONT FACE OF BACKWALL, AND EXPOSED SURFACE OF THE REMAINING EXISTING WINGS AND RETAINING WALLS WITH SPECIAL CONCRETE FINISH.

NOTE: PEDESTAL HEIGHT DOES NOT INCLUDE REPLACEMENT DEPTH INTO ABUTMENT SEAT.

NOTE: FOR DETAIL OF WATER REPELLENT AND CIM 1000 TREATMENT, SEE SHEET 15.

NOTE: FOR BAR BENDS, SEE SHEET 12.

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	M.R.S./J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		

ABUTMENT NO. 1 REPAIR DETAILS

CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE

- LEGEND**
- EXISTING WING AND BACKWALL REMOVAL (A)
 - EXISTING RETAINING WALL REMOVAL (B)
 - EXISTING PEDESTAL REMOVAL (C)
 - PNEUMATICALLY PLACED MORTAR

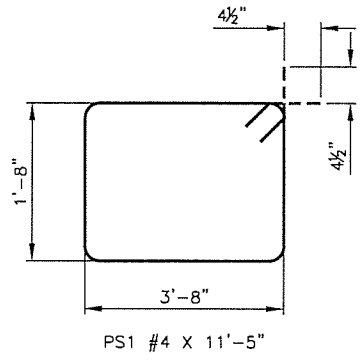
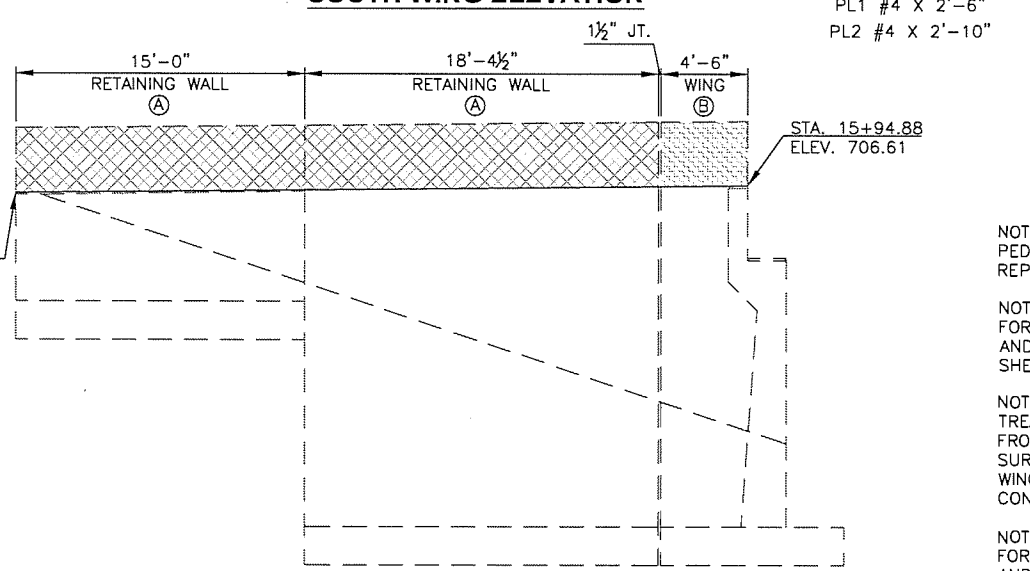
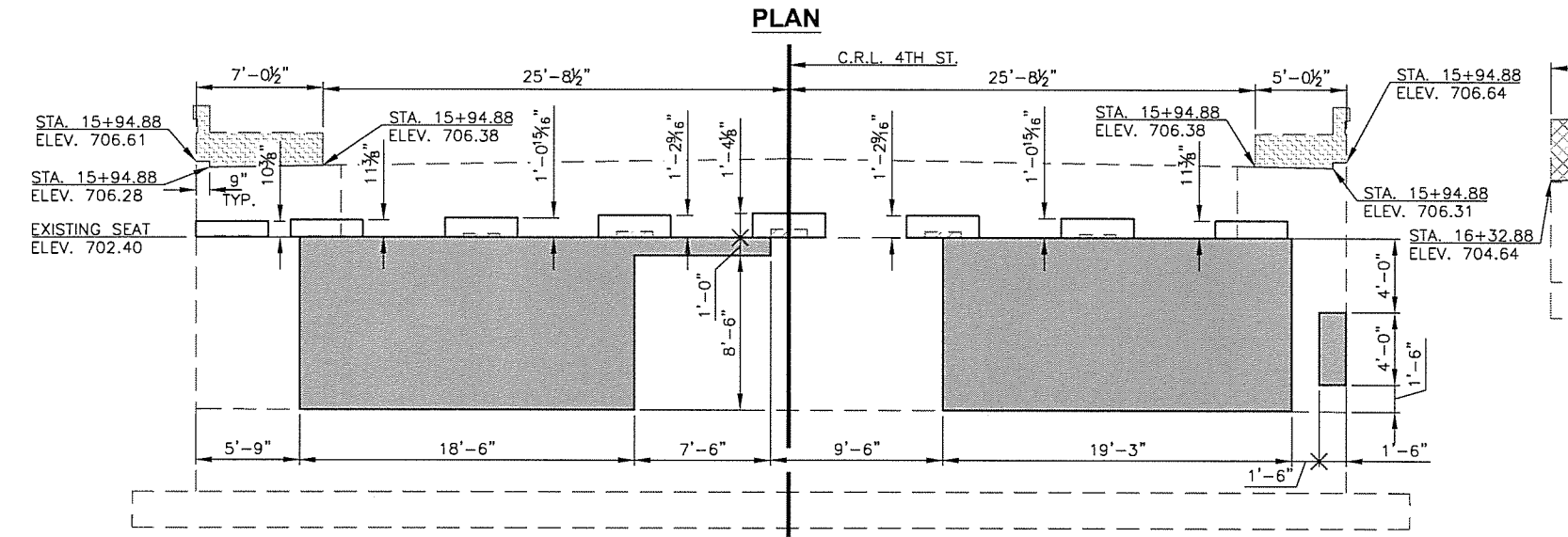
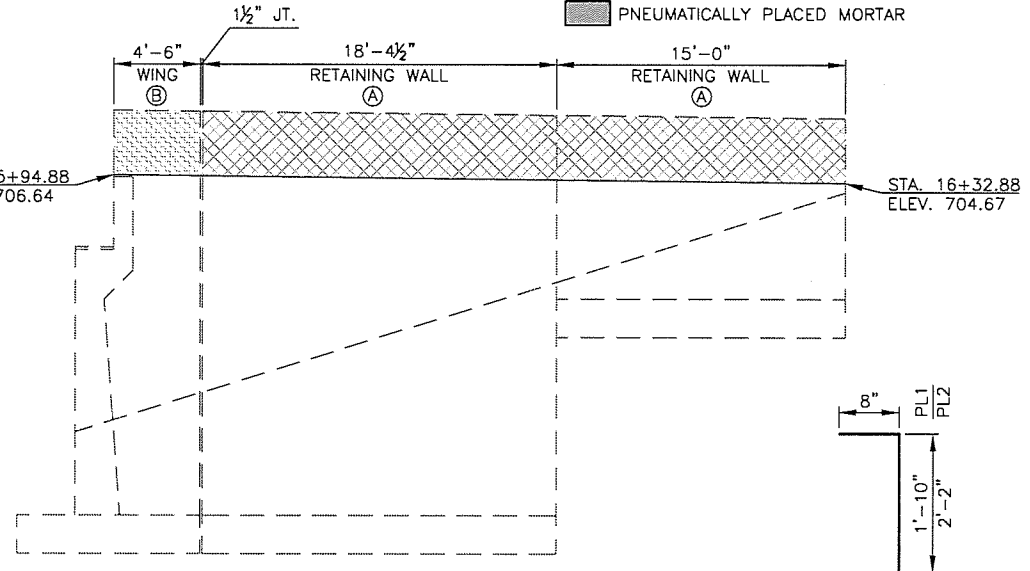
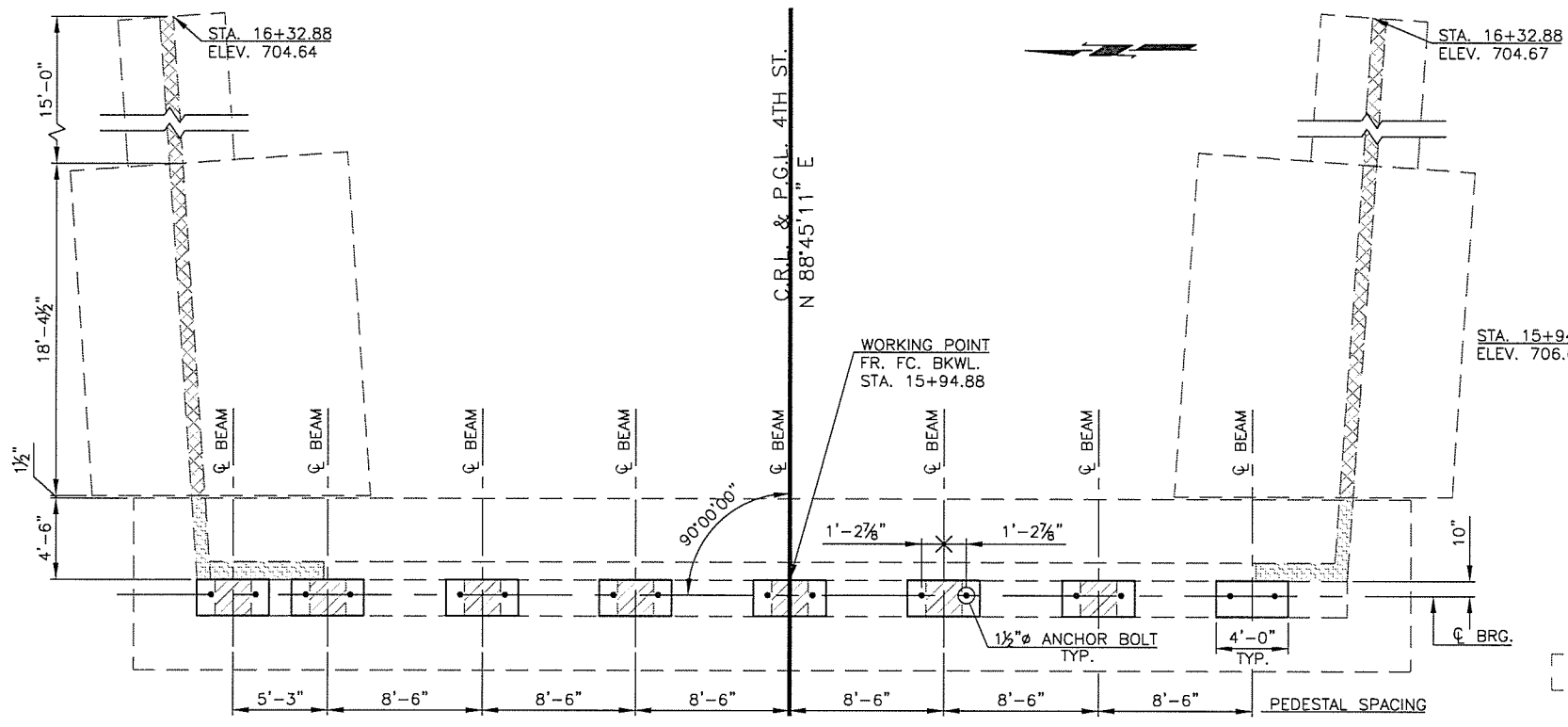
ABUTMENT NO. 2 BAR LIST

EPOXY COATED REINFORCING

MARK	SIZE	NO.	FORM	LENGTH
P1	#4	40	STR.	1'-8"
P2	#4	24	STR.	3'-8"
PL2	#4	96	BNT.	2'-10"
PS1	#4	11	BNT.	11'-5"

PEDESTAL SCHEDULE

PEDESTAL HEIGHT	# OF PS1 BARS
10 $\frac{3}{8}$ " - 1'-0 $\frac{3}{8}$ "	1
1'-2 $\frac{3}{8}$ " - 1'-4 $\frac{3}{8}$ "	2



NOTE: PEDESTAL HEIGHT DOES NOT INCLUDE REPLACEMENT DEPTH INTO ABUTMENT SEAT.

NOTE: FOR DETAIL OF WATER REPELLENT AND CIM 1000 TREATMENT, SEE SHEET 15.

NOTE: TREAT FRONT FACE OF ABUTMENT SEAT, FRONT FACE OF BACKWALL, AND EXPOSED SURFACE OF THE REMAINING EXISTING WINGS AND RETAINING WALLS WITH SPECIAL CONCRETE FINISH.

NOTE: FOR ANCHOR BOLT EMBEDMENT AND DETAILS, SEE SHEET 20.

NOTE: FOR PNEUMATICALLY PLACED MORTAR DETAIL, SEE SHEET 13.

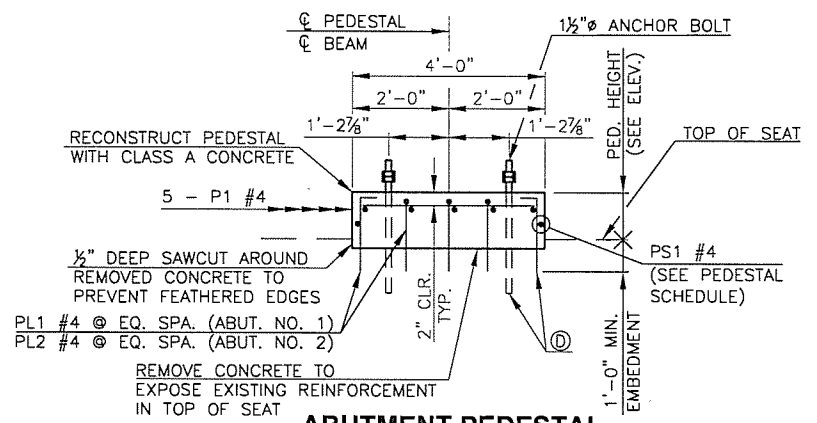
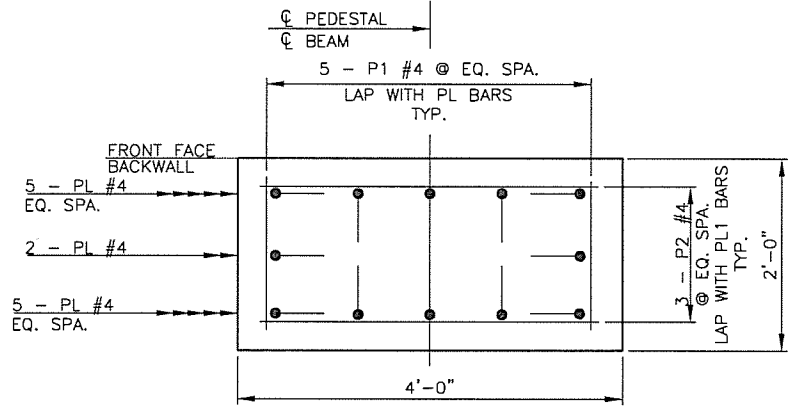
(D) DRILL AND EPOXY PL BARS, AND ANCHOR BOLTS INTO EXISTING ABUTMENT SEAT ACCORDING TO SECTION 509.04(D) OF THE STANDARD SPECIFICATIONS. ALL COST OF INSTALLING PL BARS, INCLUDING LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO DO THE WORK, SHALL BE INCLUDED IN THE UNIT PRICE OF "EPOXY COATED REINFORCING STEEL".

ALL COST OF INSTALLING ANCHOR BOLTS, INCLUDING LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO DO THE WORK, SHALL BE INCLUDED IN THE UNIT PRICE OF THE SUPERSTRUCTURE PAY ITEM "WEATHERING STEEL FIXED BEARING ASSEMBLY".

(A) REMOVE CONCRETE FROM TOP OF RETAINING WALL TO MATCH NEW ELEVATION. EXISTING VERTICAL RETAINING WALL REINFORCING TO REMAIN IN PLACE.

(B) REMOVE CONCRETE FROM TOP OF BACKWALL AND WING TO MATCH NEW ELEVATION. CUT AND EPOXY EXISTING STEEL FLUSH WITH REMAINING CONCRETE SURFACE. ALL COST OF EPOXY SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

(C) CUT AND EPOXY EXISTING PEDESTAL REINFORCEMENT FLUSH WITH TOP OF ABUTMENT SEAT. DO NOT CUT ANY EXISTING REINFORCEMENT BELOW TOP OF THE ABUTMENT SEAT.



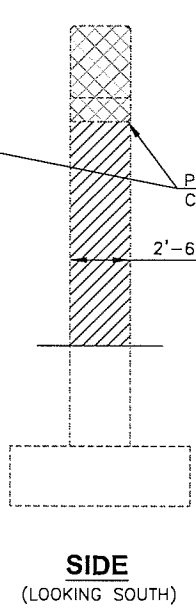
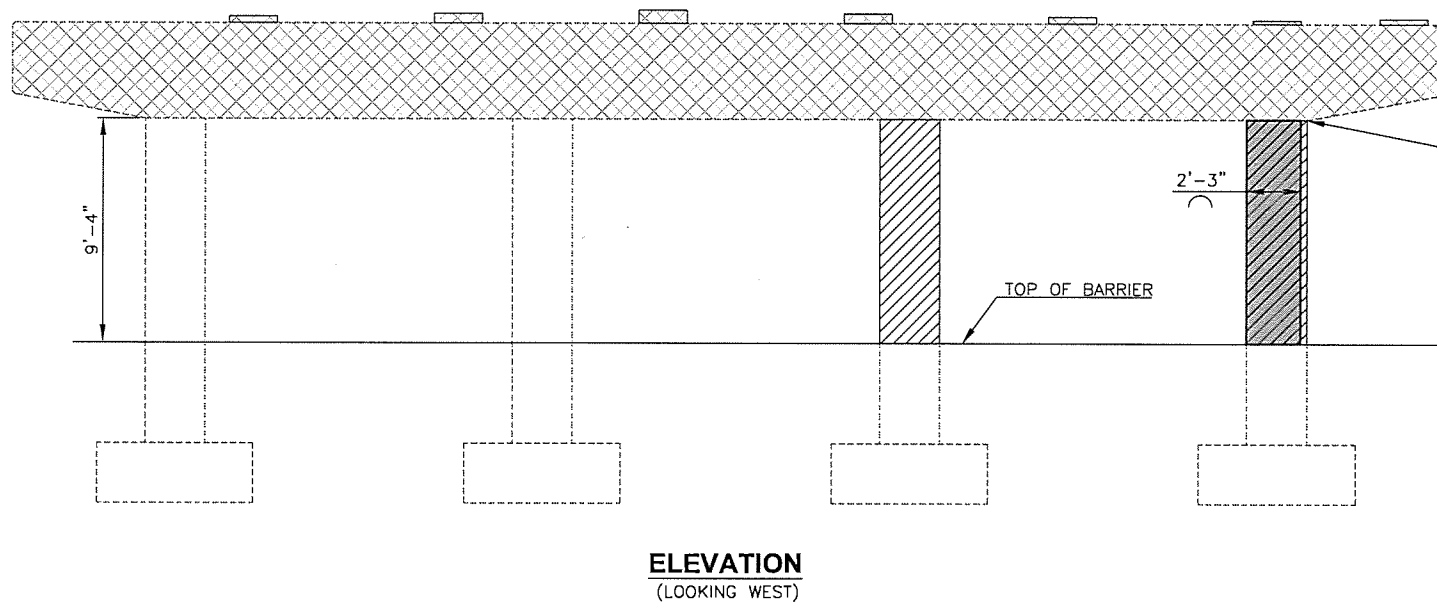
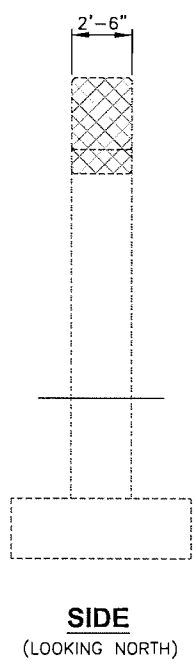
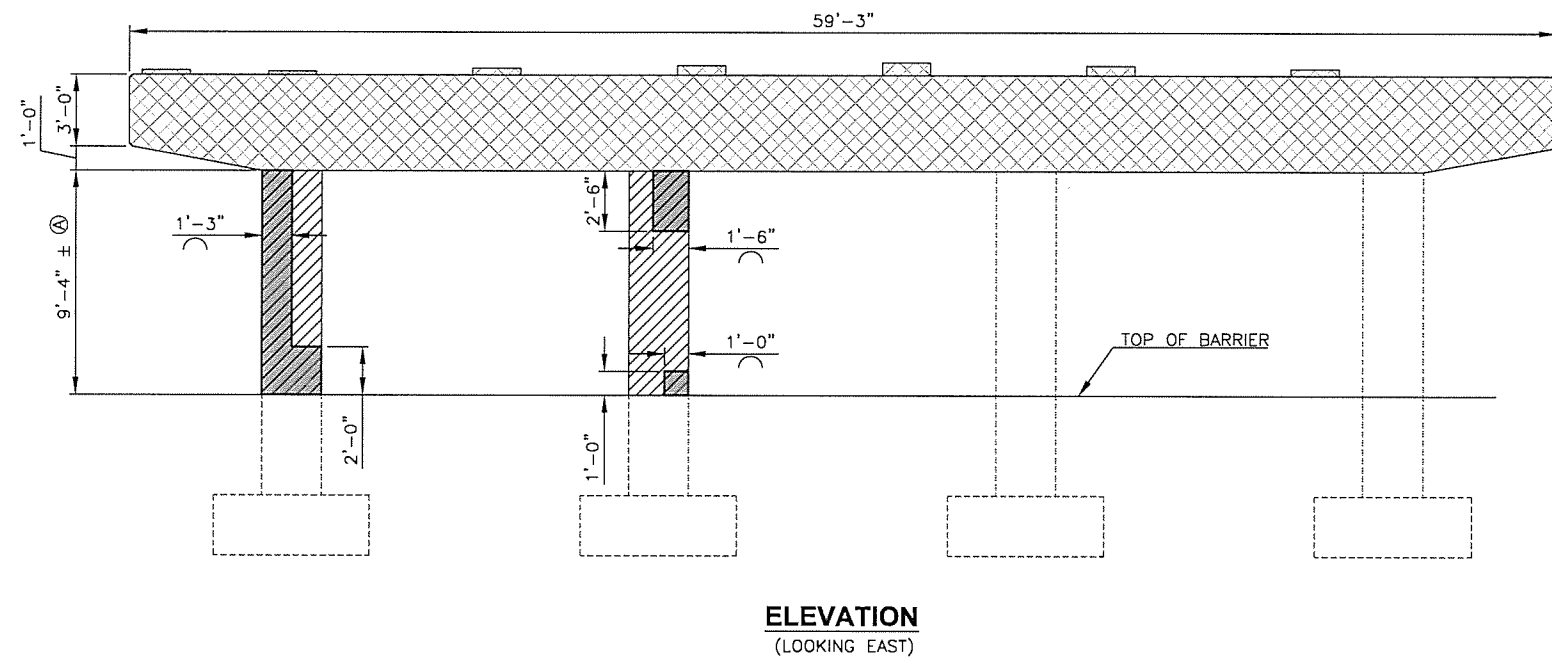
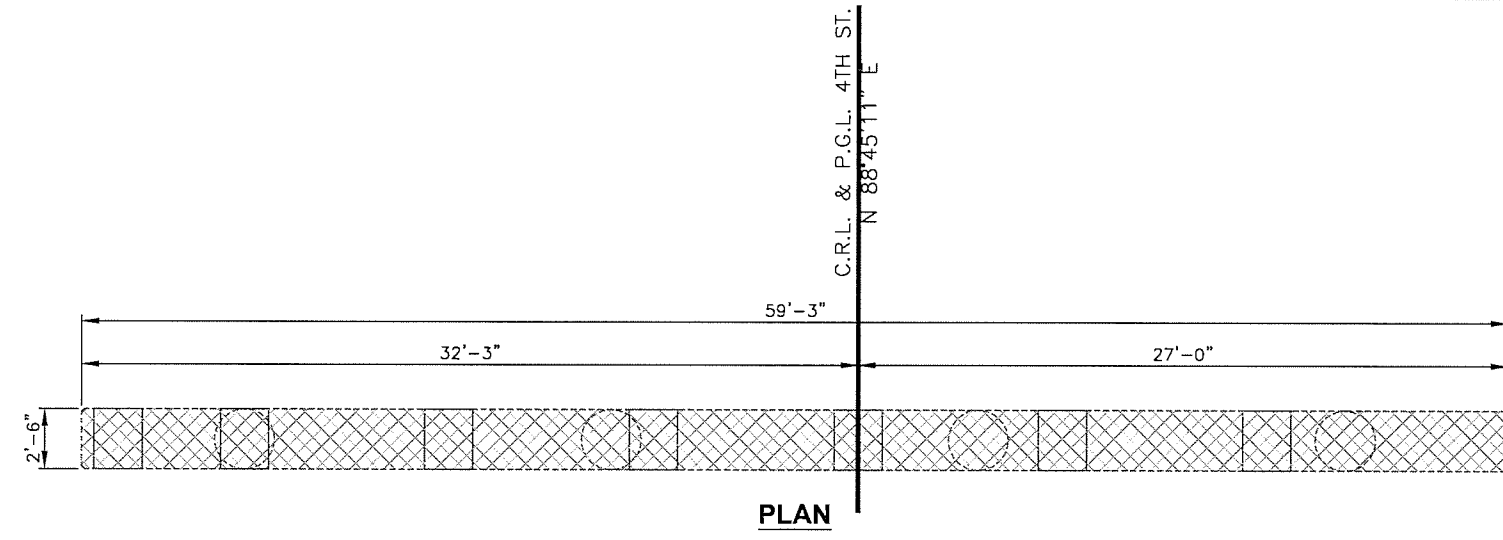
PEDESTAL RECONSTRUCTION PLAN

ABUTMENT PEDESTAL RECONSTRUCTION DETAIL

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	M.R.S. J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		

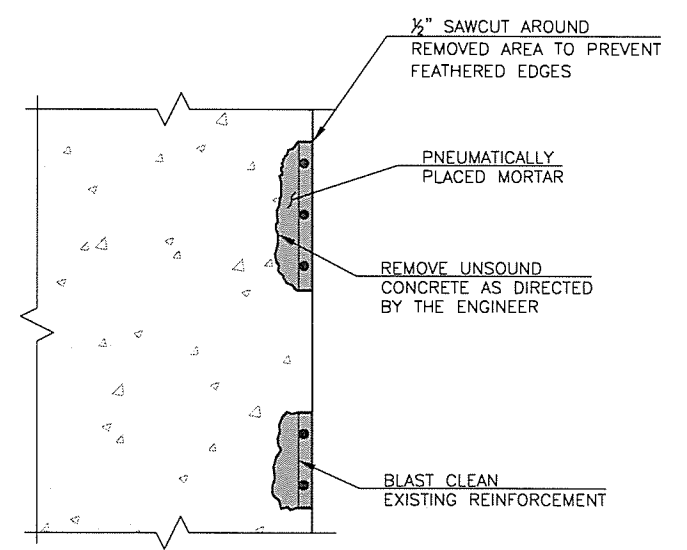
ABUTMENT NO. 2 REPAIR DETAILS
JOB PIECE NO. 28868(04) SHEET NO. 12

DESCRIPTION	REVISIONS	DATE



REPAIR LEGEND

- EXISTING PIER CAP AND COLUMN REMOVAL
- CORROSION INHIBITOR AND CARBON FIBER-REINFORCED POLYMER WRAP
- PNEUMATICALLY PLACED MORTAR



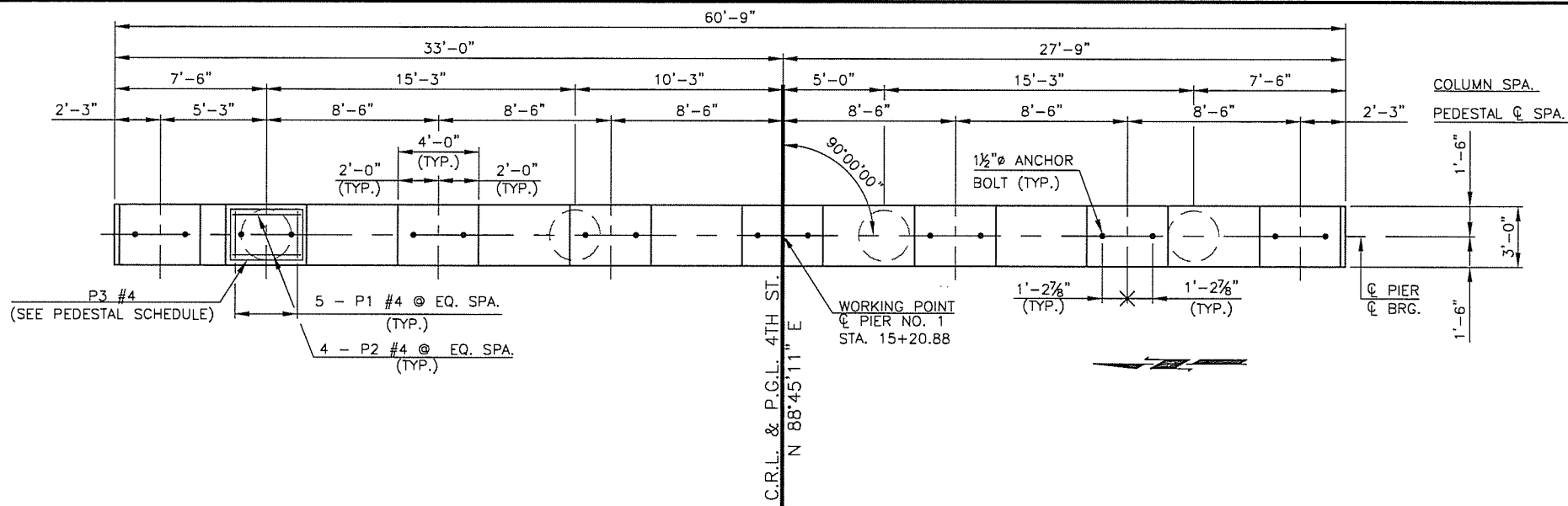
PNEUMATICALLY PLACED MORTAR DETAIL

CLASS AA CONCRETE MUST BE USED TO REPLACE REMOVED CONCRETE, IF THE REMOVAL OF UNSOUND CONCRETE IS DEEPER THAN THE PRIMARY REINFORCEMENT.

REMOVE CONCRETE FROM TOP OF COLUMN TO MATCH NEW ELEVATION. COLUMN REINFORCING TO REMAIN IN PLACE AND CUT DOWN TO 2" BELOW TOP OF NEW PIER CAP ELEVATION.

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	J.F.R.		
CHECKED	M.R.S. J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		

PIER NO. 1 REPAIR DETAILS



PEDESTAL SCHEDULE

PEDESTAL HEIGHT	# OF P3 BARS
2' - 6 3/8"	0
7 3/4"	1

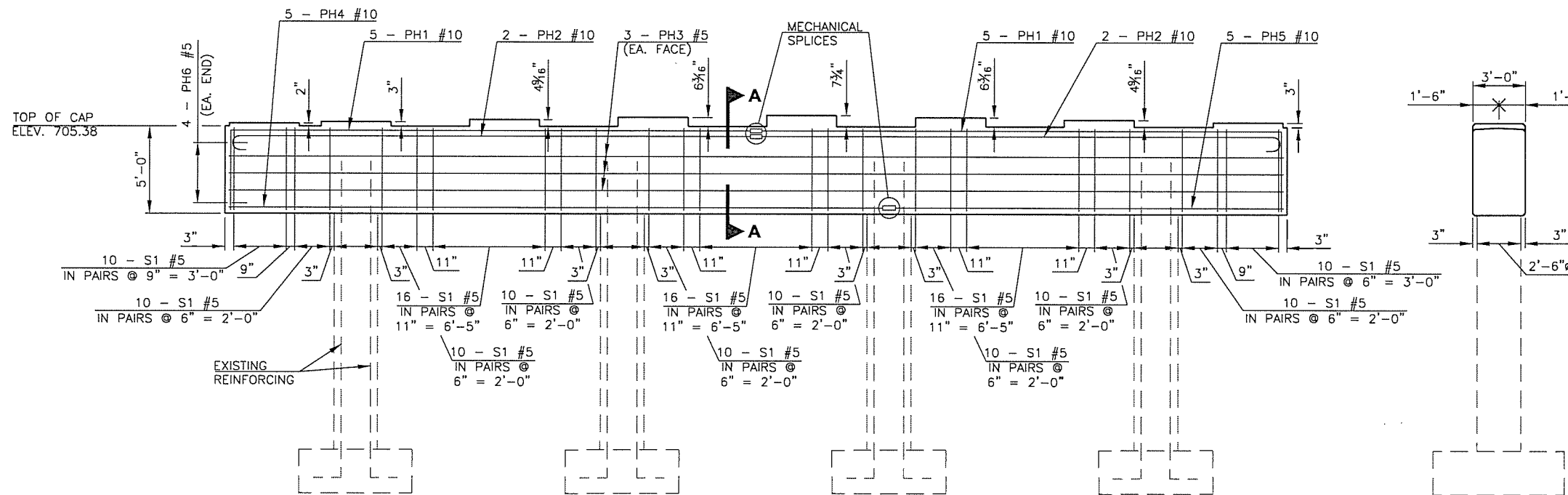
PIER NO. 1 BAR LIST

EPOXY COATED REINFORCING

MARK	SIZE	NO.	FORM	LENGTH
P1	#4	40	BNT.	6'-0"
P2	#4	32	BNT.	7'-0"
P3	#4	1	BNT.	13'-5"
PH1	#10	10	BNT.	34'-10"
PH2	#10	4	BNT.	31'-3"
PH3	#5	6	STR.	62'-11"
PH4	#10	5	STR.	37'-10"
PH5	#10	5	STR.	22'-7"
PH6	#5	8	BNT.	4'-4"
S1	#5	148	BNT.	14'-3"

① LENGTH INCLUDES 1 LAP AT 2'-6"

PLAN

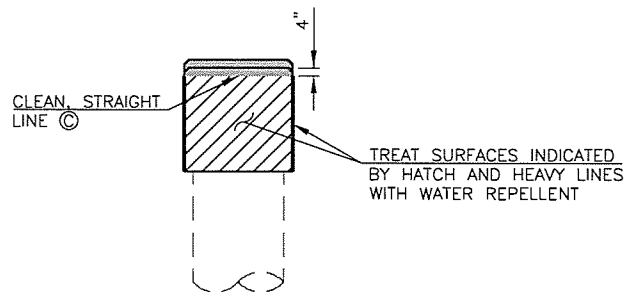


ELEVATION

SIDE

NOTE:
TREAT EXISTING COLUMNS WITH
SPECIAL CONCRETE FINISH.

EXISTING COLUMN REINFORCING
MUST EXTEND 3'-0" MINIMUM
INTO NEW PIER CAP.

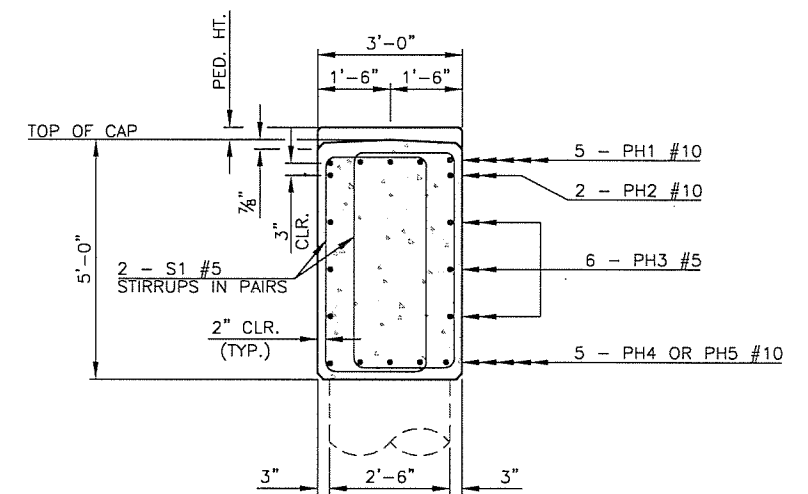
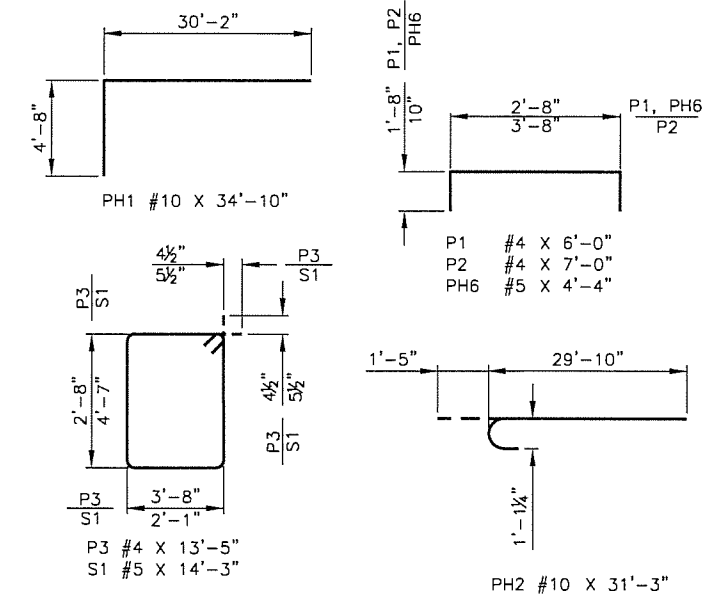


**WATER REPELLENT AND
CIM 1000 TREATMENT DETAIL**

PIER NO. 1 QUANTITIES

ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	S.Y.	33
CLASS A CONCRETE	C.Y.	35.1
MECHANICAL SPLICES	EA.	12
EPOXY COATED REINFORCING STEEL	LB.	6,290
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	96
PNEUMATICALLY PLACED MORTAR	S.Y.	6
(SP) CARBON FIBER-REINFORCED POLYMER	S.F.	146.6
(SP) CORROSION INHIBITOR (SURFACE APPLIED)	S.Y.	16.3
(PL) INSTALLATION OF BRIDGE ITEMS (TYPE B)	LSUM.	1

- ① REMOVAL OF BRIDGE ITEMS INCLUDED IN SUPERSTRUCTURE QUANTITIES, SEE SHEET 16.
- ② QUANTITY INCLUDES 29.8 S.Y. OF CIM 1000 OR APPROVED EQUAL.
- ③ APPLY CIM 1000, OR APPROVED EQUAL, TO TOP AND SIDES OF PEDESTALS, TOP OF PIER CAP, AND TO AN ELEVATION 4" DOWN FROM THE TOP OF PIER CAP. EDGES OF THE COATING SHALL BE MASKED WITH TAPE PRIOR TO APPLICATION TO ENSURE CLEAN, STRAIGHT LINES ARE OBTAINED. REMOVE COATING FROM ANY SURFACE OUTSIDE OF THE AREAS INDICATED IN THE PLANS. DO NOT APPLY WATER REPELLENT ON SURFACES PRIOR TO APPLICATION OF CIM 1000. THE DEPARTMENT WILL NOT PAY FOR WATER REPELLENT ON SURFACES TREATED WITH CIM 1000. INCLUDE ALL COSTS FOR MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT PRICE BID FOR "(PL) INSTALLATION OF BRIDGE ITEMS (TYPE B)".

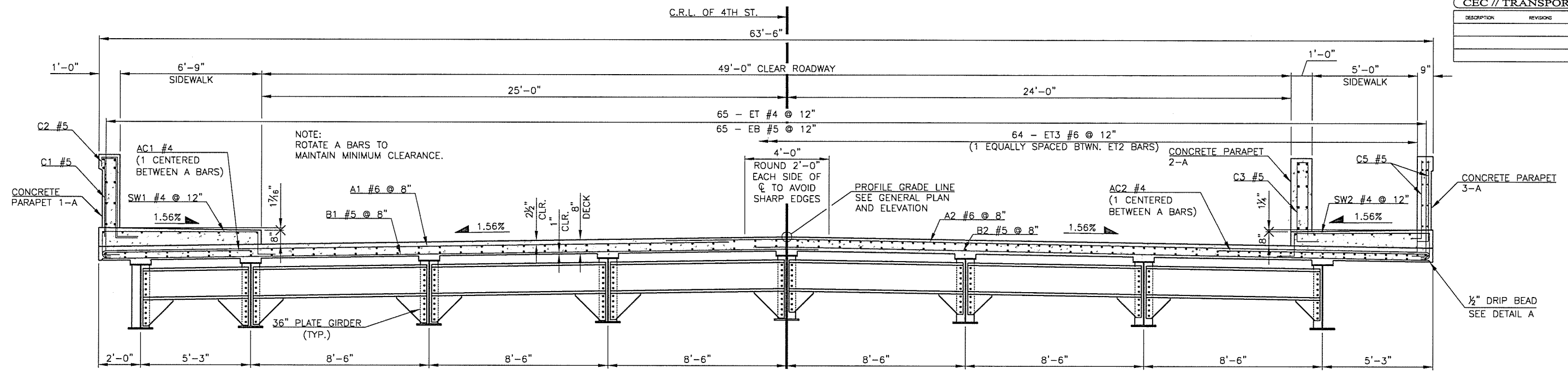


SECTION A-A

DESIGN	J.W.H.	4TH OVER 1-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		

**PIER NO. 1 NEW
CONSTRUCTION DETAILS**

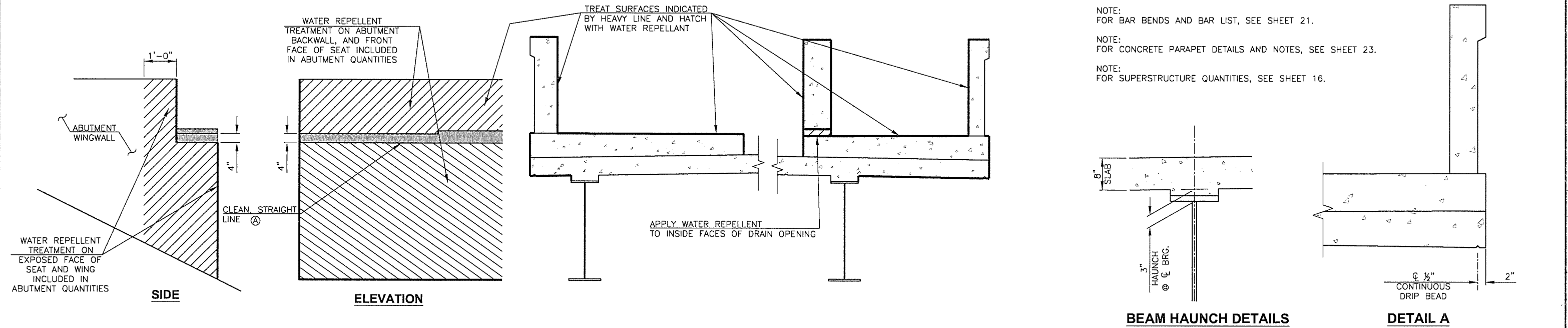
JOB PIECE NO. 28868(04) SHEET NO. 14



HALF SECTION AT END DIAPHRAGM

HALF SECTION AT INTERMEDIATE DIAPHRAGM

TYPICAL CROSS SECTION



ABUTMENT

PARAPET AND SIDEWALK

BEAM HAUNCH DETAILS

DETAIL A

WATER REPELLENT AND CIM 1000 TREATMENT DETAILS

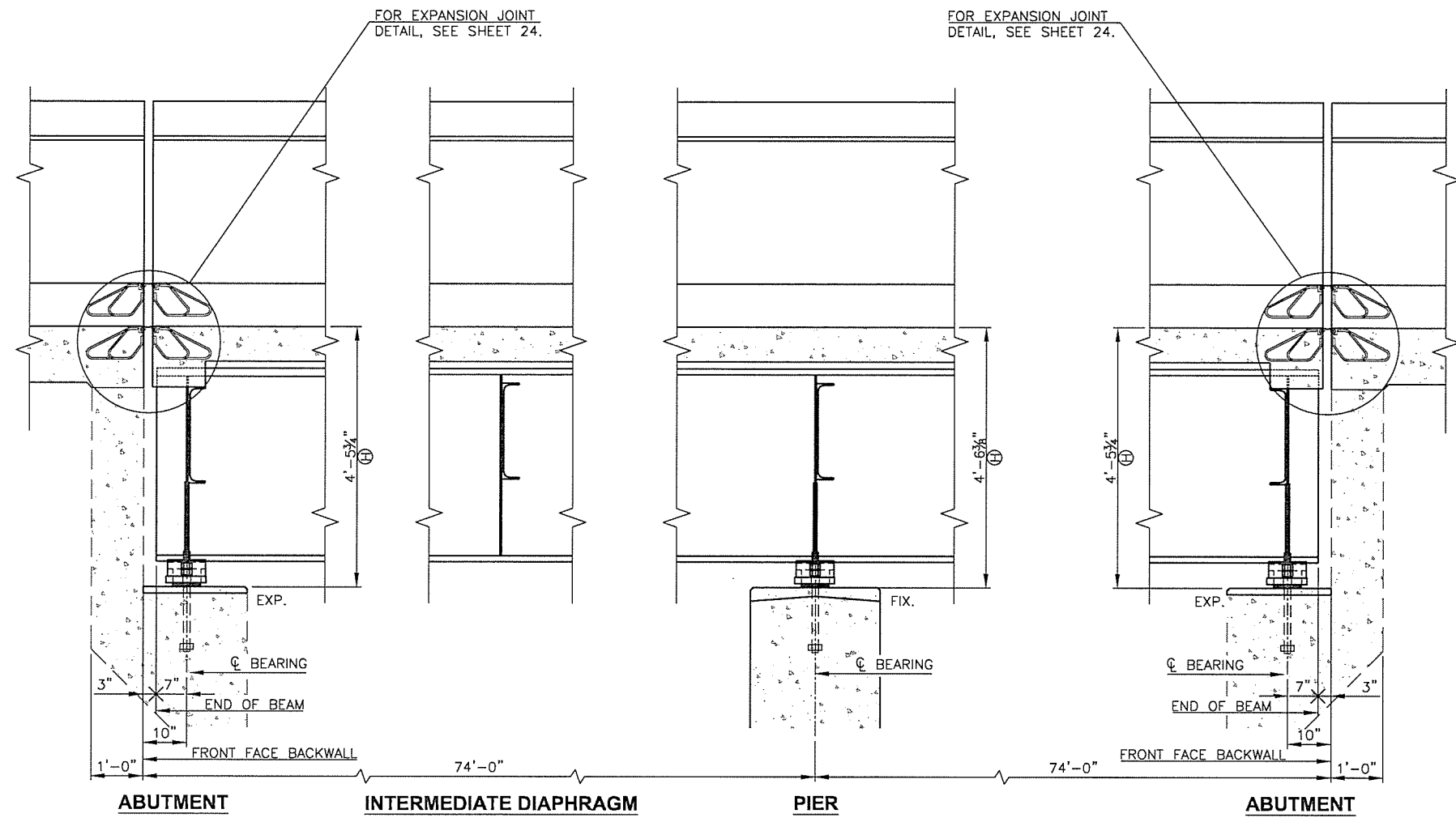
Ⓐ APPLY CIM 1000, OR APPROVED EQUAL, TO TOP AND SIDES OF PEDESTALS, TOP OF ABUTMENT SEAT, AND TO AN ELEVATION OF 4" DOWN FROM THE TOP OF ABUTMENT SEAT. EDGES OF THE COATING SHALL BE MASKED WITH TAPE PRIOR TO APPLICATION TO ENSURE CLEAN, STRAIGHT LINES ARE OBTAINED. REMOVE COATING FROM ANY SURFACE OUTSIDE OF THE AREAS INDICATED IN THE PLANS. DO NOT APPLY WATER REPELLENT ON SURFACES PRIOR TO APPLICATION OF CIM 1000. THE DEPARTMENT WILL NOT PAY FOR WATER REPELLENT ON SURFACES TREATED WITH CIM 1000. INCLUDE ALL COSTS FOR MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT PRICE BID FOR "(PL) INSTALLATION OF BRIDGE ITEMS (TYPE A)" INCLUDED IN THE ABUTMENT QUANTITIES.

NOTE:
FOR BAR BENDS AND BAR LIST, SEE SHEET 21.
NOTE:
FOR CONCRETE PARAPET DETAILS AND NOTES, SEE SHEET 23.
NOTE:
FOR SUPERSTRUCTURE QUANTITIES, SEE SHEET 16.
NOTE:
PLAN QUANTITIES FOR CLASS AA CONCRETE INCLUDE 6.6 C.Y. IN FOR BEAM HAUNCHES. THE HAUNCH HEIGHT SHOWN IS THE THEORETICAL HAUNCH HEIGHT AT THE CENTERLINE BEARING ONLY, MEASURED FROM THE BOTTOM OF THE DECK SLAB TO THE BOTTOM OF TOP FLANGE PLATE, AND VARIES ACROSS THE SPAN. DETERMINE THE ACTUAL HAUNCH HEIGHT (ACCOUNTING FOR BEAM CAMBER, DEAD LOAD DEFLECTION AND ROADWAY GRADE) AFTER ERECTION OF THE BEAMS AND SUBMIT TO THE ENGINEER FOR APPROVAL. THE ENGINEER WILL NOT MEASURE DIFFERENCES BETWEEN THE THEORETICAL AND THE ACTUAL HAUNCH HEIGHTS FOR PAYMENT.

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	B.J.K./J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 15

TYPICAL CROSS SECTION

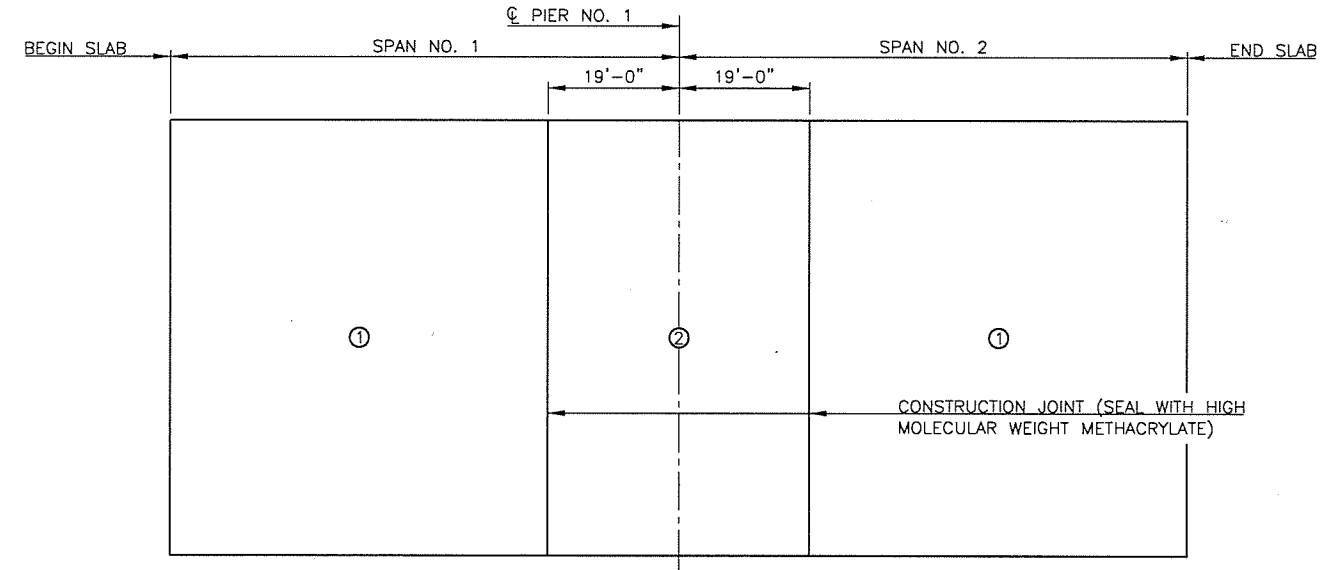
DESCRIPTION	REVISIONS	DATE



⊕ DIMENSION IS FROM TOP OF DECK SLAB TO BOTTOM OF BEARING ASSEMBLY AT ⊕ BEARING.

LONGITUDINAL SECTION

DO NOT PLACE THE CONCRETE FOR THE DECK SLAB OR APPLY OTHER MASSIVE LOADS TO THE BEAMS UNTIL THE DIAPHRAGMS ARE IN PLACE AND ALL BOLTS HAVE BEEN TIGHTENED.



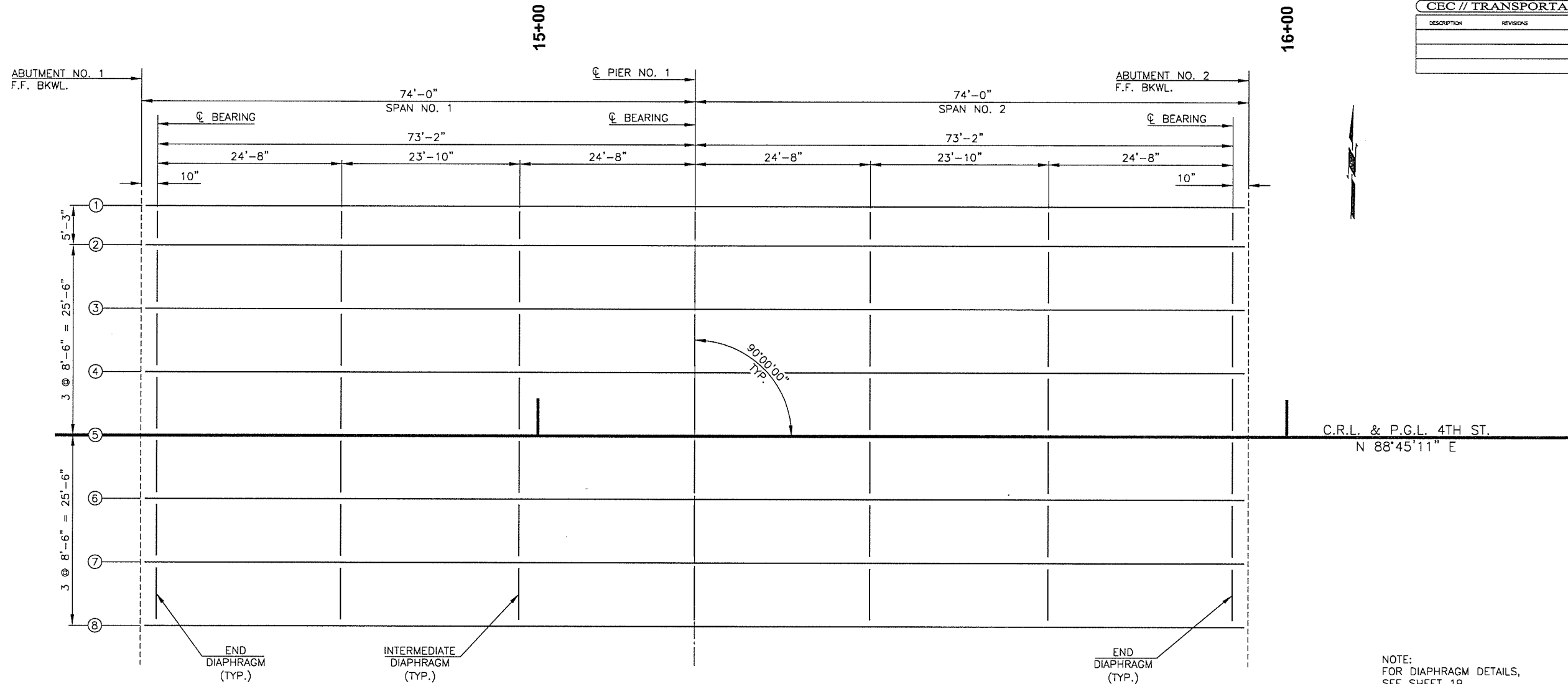
DECK SLAB POURING SEQUENCE DIAGRAM

NOTE:
THE DECK SLAB IS DIVIDED INTO SECTIONS BETWEEN CONSTRUCTION JOINTS AS SHOWN. THE CONCRETE SHALL BE POURED IN EACH SECTION OF THE DECK SLAB IN THE NUMERICAL SEQUENCE INDICATED. SECTIONS OF THE DECK SLAB WITH THE SAME NUMBER MAY BE POURED IN ANY ORDER. UNDER NO CIRCUMSTANCES WILL THE SECTION IN SEQUENCE 2 BE POURED BEFORE THE ADJACENT SECTIONS HAVE BEEN IN PLACE FOR AT LEAST 48 HOURS.

SUPERSTRUCTURE QUANTITIES		
ITEM	UNIT	TOTAL
SAW-CUT GROOVING	S.Y.	804
SEALED EXPANSION JOINT	L.F.	125.2
CONCRETE PARAPET	L.F.	443.0
STRUCTURAL STEEL	LB.	208,740
WEATHERING STEEL FIXED BEARING ASSEMBLY	EA.	8
WEATHERING STEEL EXPANSION BEARING ASSEMBLY	EA.	16
CLASS AA CONCRETE	C.Y.	292.5
EPOXY COATED REINFORCING STEEL	LB.	75,230
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	649
SEALER CRACK PREPARATION	L.F.	151
SEALER RESIN	GAL.	2
REMOVAL OF BRIDGE ITEMS	LSUM.	1

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	R.A.P., Z.M.B.	LONGITUDINAL SECTION	
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 2886B(04)	SHEET NO. 16

DESCRIPTION	REVISIONS	DATE



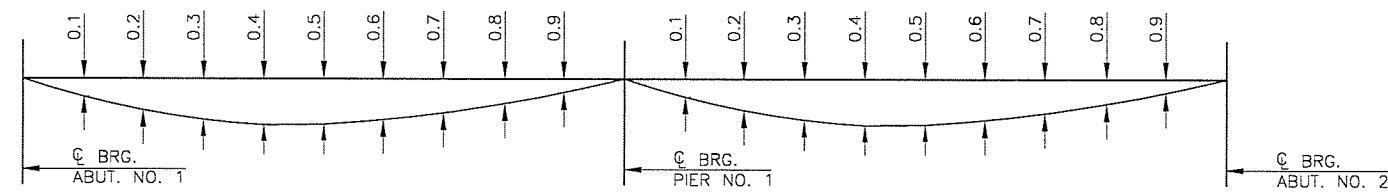
BEAM FRAMING PLAN

NOTE:
FOR DIAPHRAGM DETAILS,
SEE SHEET 19.

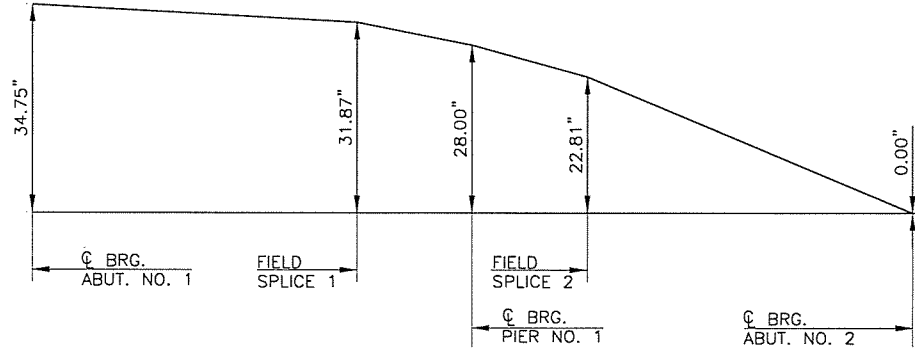
DEAD LOAD DEFLECTION SCHEDULE

BEAM LINES	LOAD	LOCATION																				
		ABUT. NO. 1	SPAN NO. 1									PIER NO. 1	SPAN NO. 2									ABUT. NO. 2
1	①	0.00"	-0.05"	-0.09"	-0.11"	-0.12"	-0.12"	-0.10"	-0.07"	-0.04"	-0.01"	0.00"	-0.01"	-0.04"	-0.07"	-0.10"	-0.12"	-0.12"	-0.11"	-0.09"	-0.05"	0.00"
	②	0.00"	-0.24"	-0.44"	-0.58"	-0.64"	-0.62"	-0.52"	-0.37"	-0.20"	-0.05"	0.00"	-0.05"	-0.20"	-0.37"	-0.52"	-0.62"	-0.64"	-0.58"	-0.44"	-0.24"	0.00"
2	①	0.00"	-0.05"	-0.09"	-0.12"	-0.13"	-0.12"	-0.10"	-0.07"	-0.04"	-0.01"	0.00"	-0.01"	-0.04"	-0.07"	-0.10"	-0.12"	-0.13"	-0.12"	-0.09"	-0.05"	0.00"
	②	0.00"	-0.27"	-0.49"	-0.64"	-0.70"	-0.67"	-0.57"	-0.40"	-0.21"	-0.06"	0.00"	-0.06"	-0.21"	-0.40"	-0.57"	-0.67"	-0.70"	-0.64"	-0.49"	-0.27"	0.00"
3-6	①	0.00"	-0.05"	-0.09"	-0.12"	-0.13"	-0.13"	-0.10"	-0.07"	-0.04"	-0.01"	0.00"	-0.01"	-0.04"	-0.07"	-0.10"	-0.13"	-0.13"	-0.12"	-0.09"	-0.05"	0.00"
	②	0.00"	-0.30"	-0.55"	-0.72"	-0.79"	-0.76"	-0.64"	-0.45"	-0.24"	-0.07"	0.00"	-0.07"	-0.24"	-0.45"	-0.64"	-0.76"	-0.79"	-0.72"	-0.55"	-0.30"	0.00"
7	①	0.00"	-0.05"	-0.09"	-0.12"	-0.13"	-0.13"	-0.10"	-0.07"	-0.04"	-0.01"	0.00"	-0.01"	-0.04"	-0.07"	-0.10"	-0.13"	-0.13"	-0.12"	-0.09"	-0.05"	0.00"
	②	0.00"	-0.33"	-0.61"	-0.79"	-0.87"	-0.84"	-0.70"	-0.49"	-0.26"	-0.07"	0.00"	-0.07"	-0.26"	-0.49"	-0.70"	-0.84"	-0.87"	-0.79"	-0.61"	-0.33"	0.00"
8	①	0.00"	-0.05"	-0.09"	-0.11"	-0.13"	-0.12"	-0.10"	-0.07"	-0.04"	-0.01"	0.00"	-0.01"	-0.04"	-0.07"	-0.10"	-0.12"	-0.13"	-0.11"	-0.09"	-0.05"	0.00"
	②	0.00"	-0.39"	-0.71"	-0.93"	-1.02"	-0.98"	-0.82"	-0.58"	-0.31"	-0.09"	0.00"	-0.09"	-0.31"	-0.58"	-0.82"	-0.98"	-1.02"	-0.93"	-0.71"	-0.39"	0.00"

- ① GIRDER, STIFFENERS, AND DIAPHRAGMS
- ② DECK SLAB, HAUNCH, AND PARAPET. DOES NOT INCLUDE FUTURE WEARING SURFACE.



DEAD LOAD DEFLECTION DIAGRAM.



BLOCKING DIAGRAM

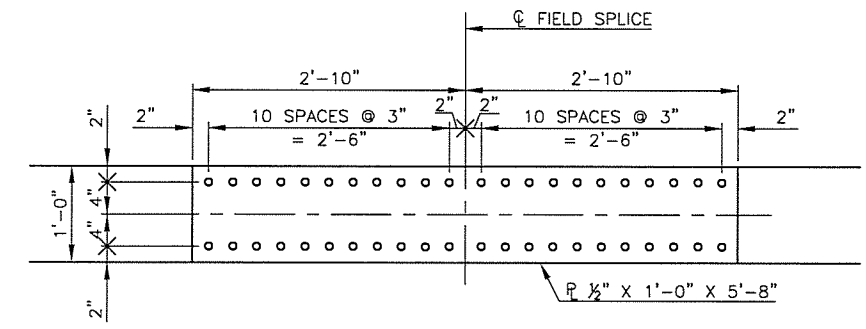
NOTE:
THE BLOCKING DIAGRAM SHOWN INCLUDES ALLOWANCES FOR GRADE AND DEAD LOAD DEFLECTION DUE TO GIRDER, STIFFENERS, AND DIAPHRAGMS.

BLOCKING DIAGRAM DIMENSIONS MEASURED FROM BOTTOM OF WEB.

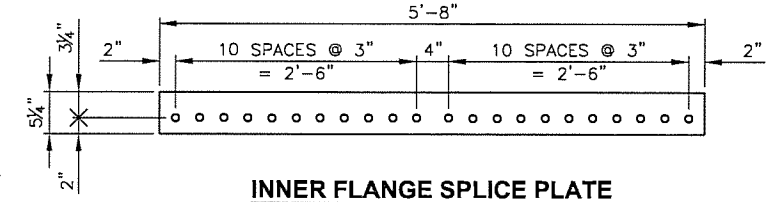
DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 17

BEAM FRAMING PLAN

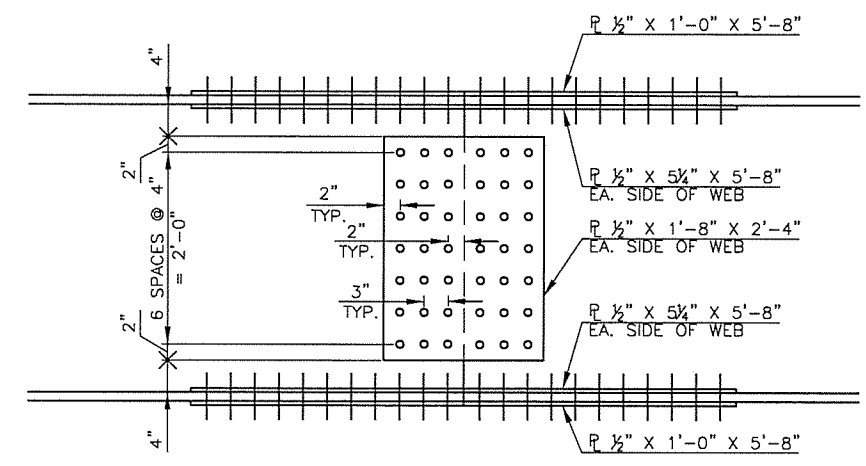
DESCRIPTION	REVISIONS	DATE



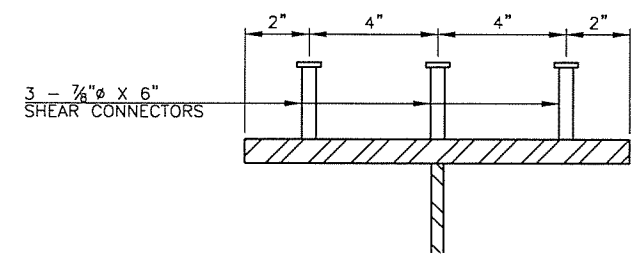
PLAN VIEW



INNER FLANGE SPLICE PLATE
(P 1/2" X 5 1/4" X 5'-8")



ELEVATION VIEW



SHEAR CONNECTOR DETAIL

BOLTED FIELD SPLICE DETAILS

ALL BOLTS 7/8" Ø A325
ALL HOLES 1 5/16" Ø

PLATE GIRDER NOTES:

1. DETAILS ARE DRAWN, AND DIMENSIONS SHOWN, AS IF THE TOP FLANGE OF PLATE GIRDERS WERE IN A TRULY HORIZONTAL POSITION. NO ACCOUNTING HAS BEEN MADE IN THE DRAWING FOR GRADE OR CAMBER. SHOP DRAWINGS WILL INCLUDE SUCH ADJUSTMENTS AS ARE NECESSARY TO PROVIDE FOR VERTICAL CURVATURE AND DEAD LOAD DEFLECTION. SEE BLOCKING DIAGRAM ON SHEET 17.
2. FABRICATE THE GIRDERS AND DIAPHRAGMS SUCH THAT ALL GIRDER WEBS ARE PLUMB VERTICAL WHEN GIRDERS ARE IN THEIR FINAL POSITION (I.E. AFTER THE DECK AND PARAPET HAVE BEEN PLACED).
3. ALL PLATES SHALL CONFORM TO THE CHARPY V-NOTCH REQUIREMENTS.
4. BEARING STIFFENER PLATES: PLACE IN PAIRS, WELD TO TOP AND BOTTOM FLANGES.
5. DIAPHRAGM STIFFENER PLATES: ON EXTERIOR GIRDERS, PLACE ON INSIDE OF WEB. WELD TO TOP AND BOTTOM FLANGES. ON INTERIOR GIRDERS, PLACE IN PAIRS. WELD TO TOP AND BOTTOM FLANGES.
6. WEB TO FLANGE 5/16" FILLET WELD.

NOTE:
FOR ADDITIONAL DETAIL OF BEARING AND DIAPHRAGM STIFFENERS, SEE SHEET 19.

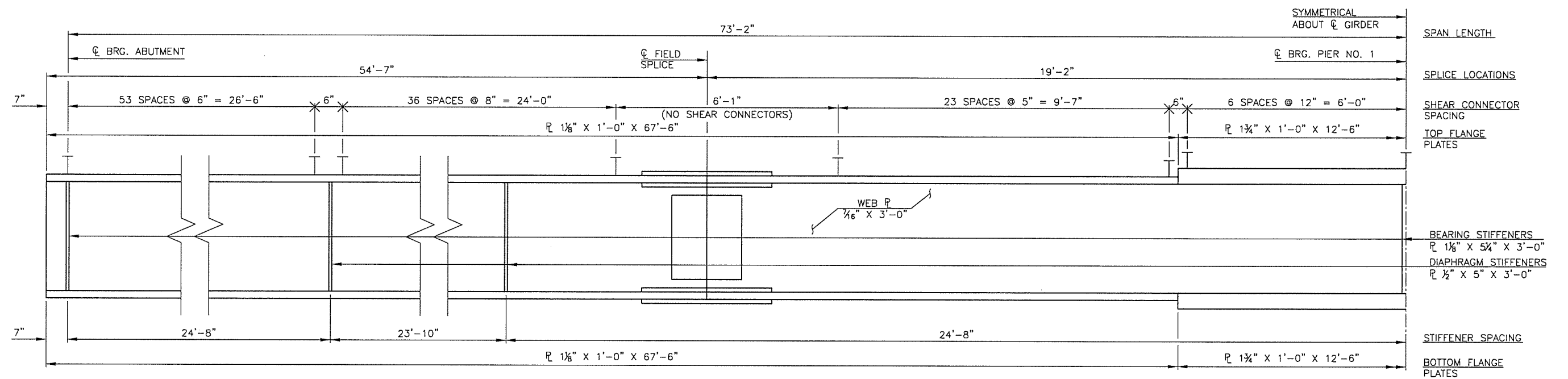
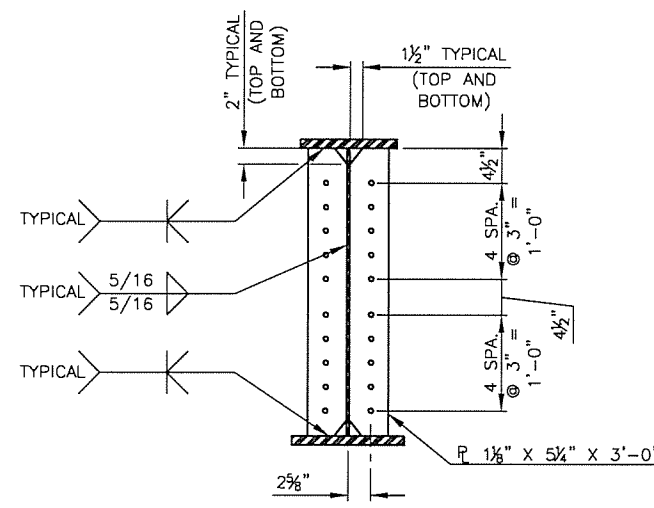


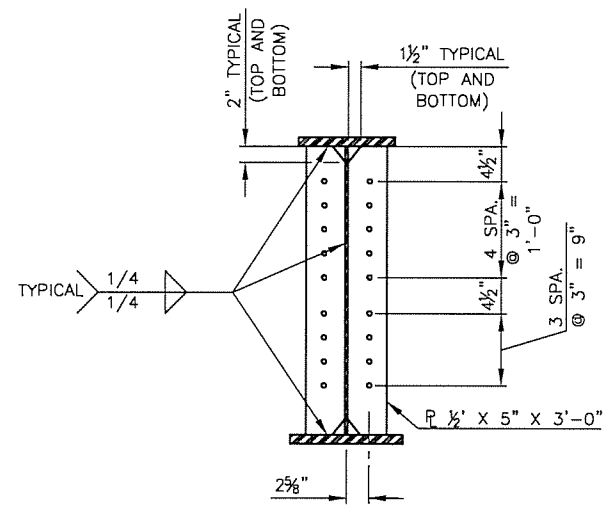
PLATE GIRDER ELEVATION

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.A.P. J.F.R.	PLATE GIRDER DETAILS	
CHECKED	B.J.K. J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		
		JOB PIECE NO. 28868(04)	SHEET NO. 18

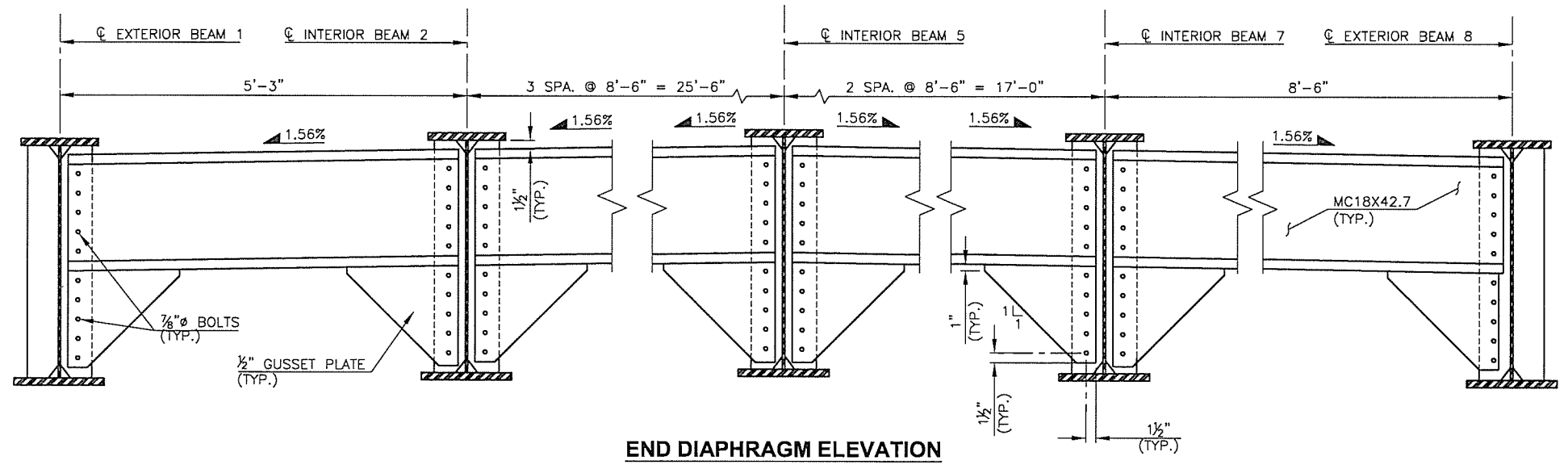
DESCRIPTION	REVISIONS	DATE



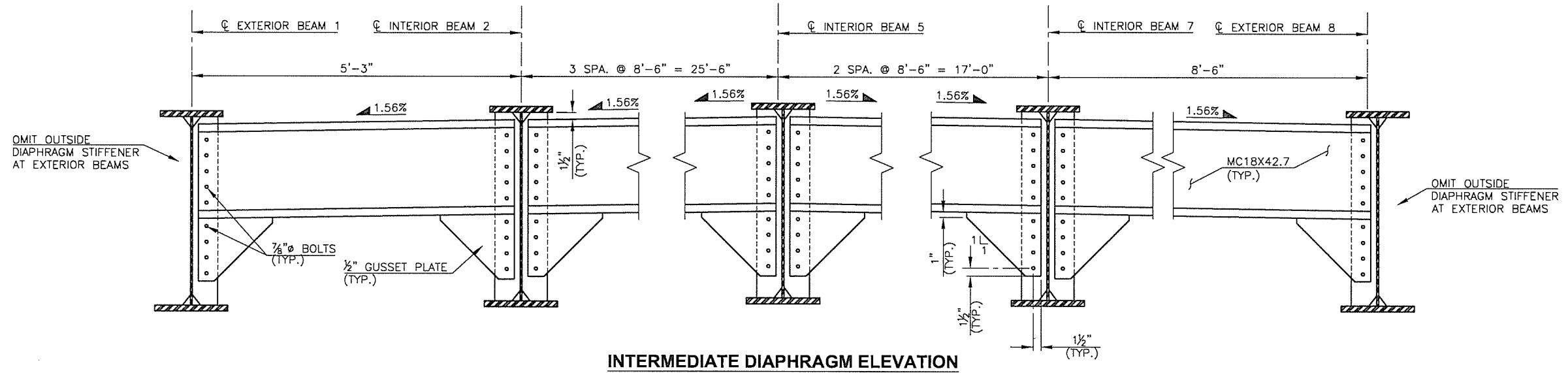
BEARING STIFFENER DETAILS



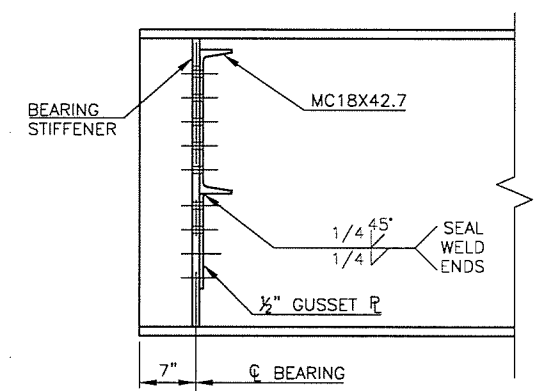
INTERMEDIATE DIAPHRAGM STIFFENER DETAILS



END DIAPHRAGM ELEVATION



INTERMEDIATE DIAPHRAGM ELEVATION



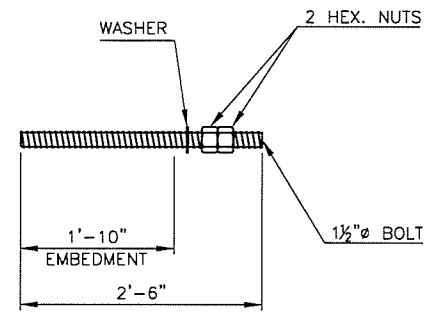
END DIAPHRAGM SECTION

NOTE:
OMIT BOLT HOLES AT OUTSIDE STIFFENERS OF EXTERIOR BEAMS.

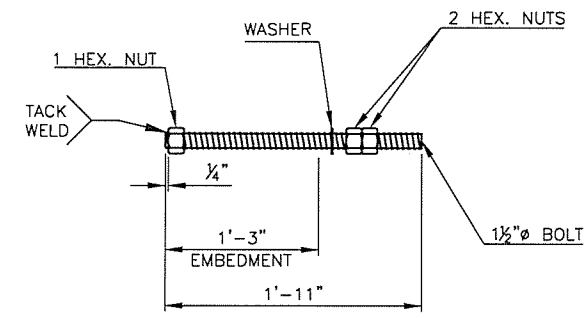
NOTE:
TERMINATE FILLET WELDS 3/8 inch FROM THE EDGE OF CLIPPED CORNERS OF ALL STIFFENER PLATES AND NON-CLIPPED CORNERS OF INTERMEDIATE DIAPHRAGM STIFFENERS. WRAP FILLET WELD AROUND NON-CLIPPED CORNERS OF BEARING STIFFENERS.

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	R.A.P. J.F.R.		
CHECKED	B.J.K. J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 19

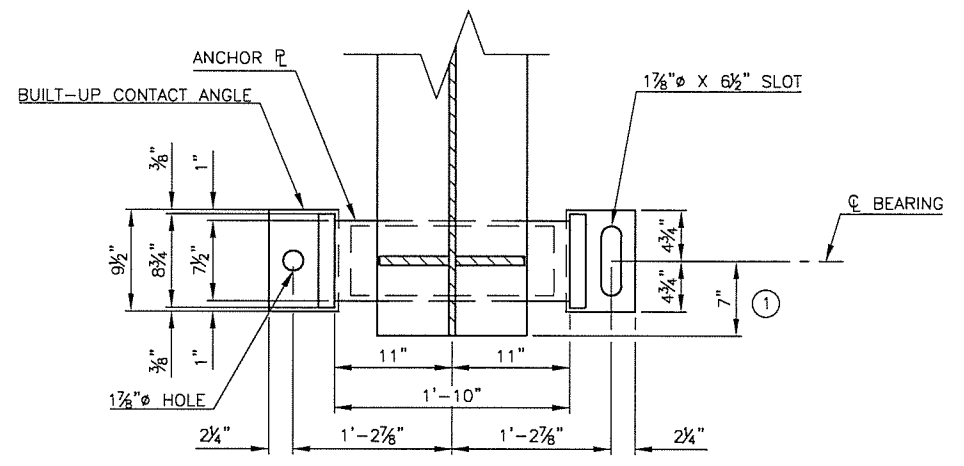
DIAPHRAGM DETAILS



ABUTMENT NO. 1 ANCHOR BOLT DETAIL

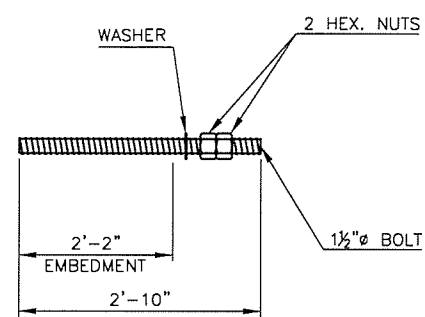


PIER ANCHOR BOLT DETAIL

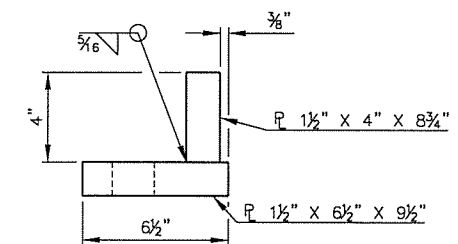


FIXED BEARING PLAN

① CENTER ANCHOR BOLTS IN SLOTS DURING SETTING OF BEAMS. DIMENSION MAY VARY AT EXPANSION BEARINGS DEPENDING ON TEMPERATURE AT TIME OF BEAM SETTING.

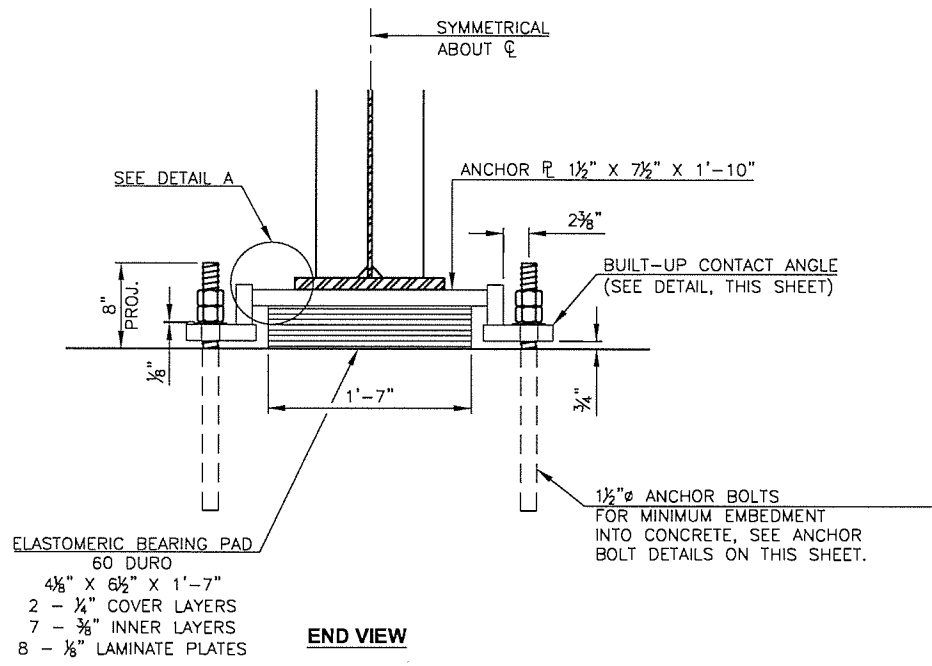


ABUTMENT NO. 2 ANCHOR BOLT DETAIL

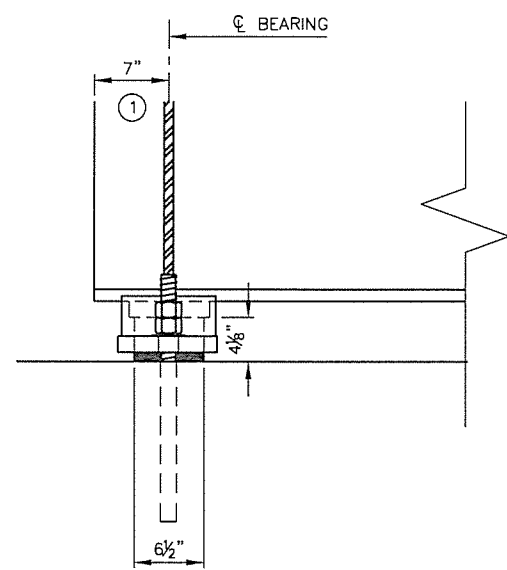


BUILT-UP CONTACT ANGLE DETAIL

DO NOT BOND BEARING PAD TO THE ANCHOR PLATE.



END VIEW



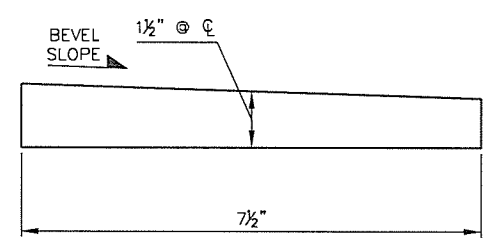
SIDE VIEW

ELASTOMERIC BEARING PAD
60 DURO
4 1/8" X 6 1/2" X 1'-7"
2 - 1/4" COVER LAYERS
7 - 3/8" INNER LAYERS
8 - 1/8" LAMINATE PLATES

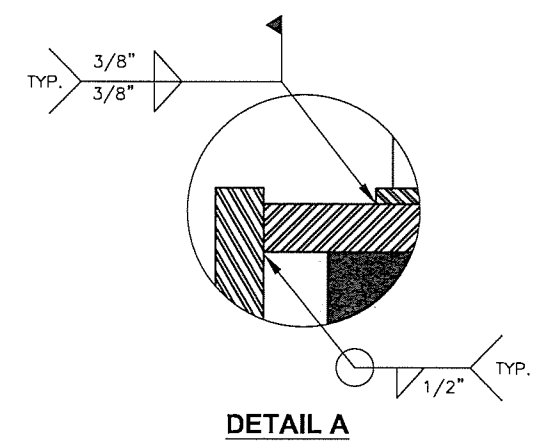
BEARING DETAILS
(ABUTMENT BEARING SHOWN, PIER BEARING SIM.)

NOTE:
PAINT THICKEST
EDGE RED. RED EDGE FACES
ABUTMENT NO. 1.

BEVEL SLOPE TABLE	
LOCATION	BEVEL SLOPE
ABUT. NO. 1	0%
PIER	1.98%
ABUT. NO. 2	4.40%



BEVELED ANCHOR PLATE DETAIL



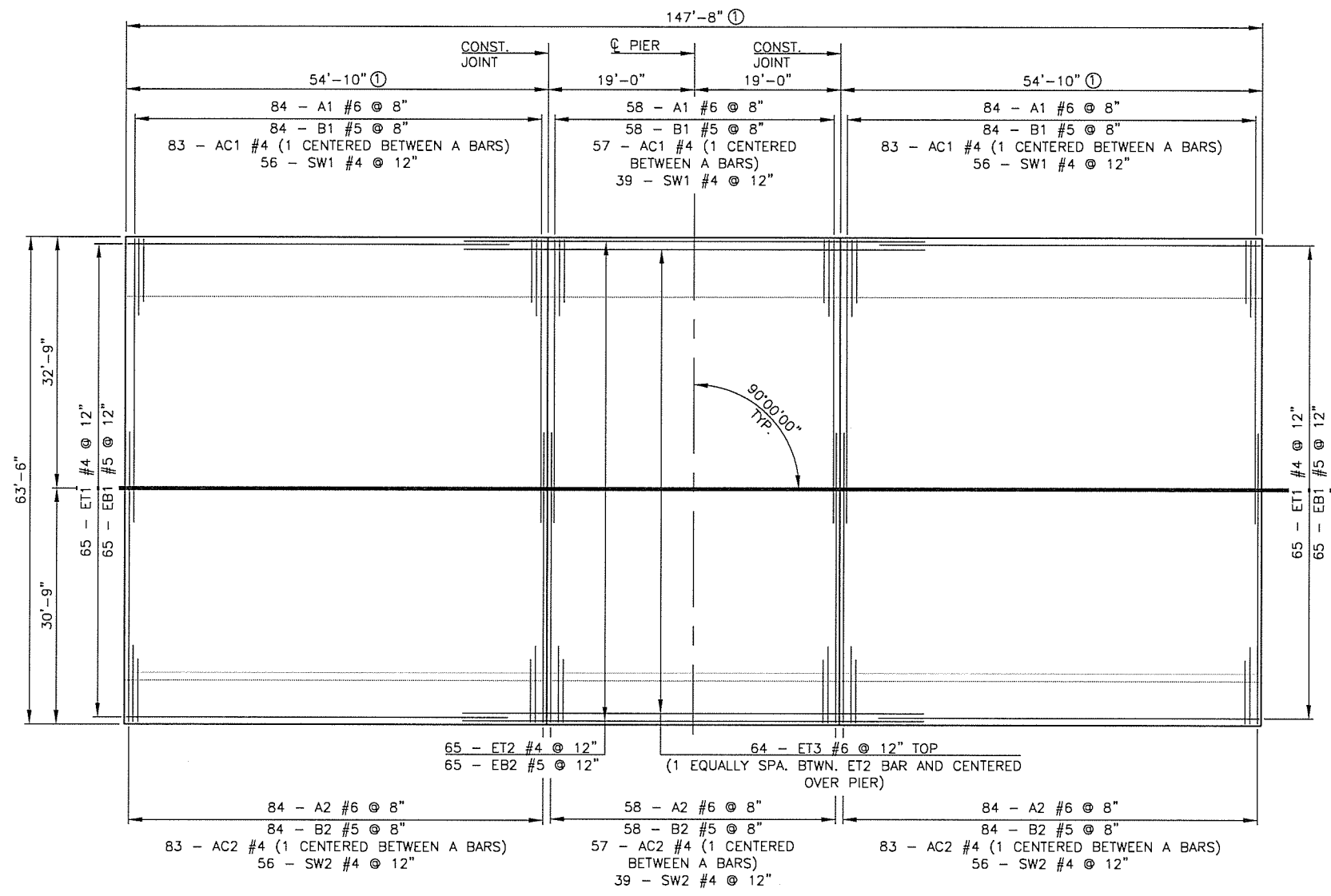
DETAIL A

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	R.A.P. J.F.R.		
CHECKED	B.J.K. J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 20

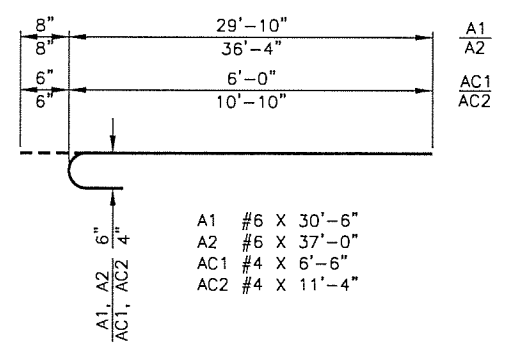
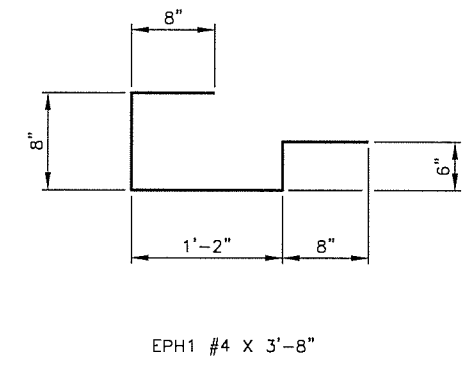
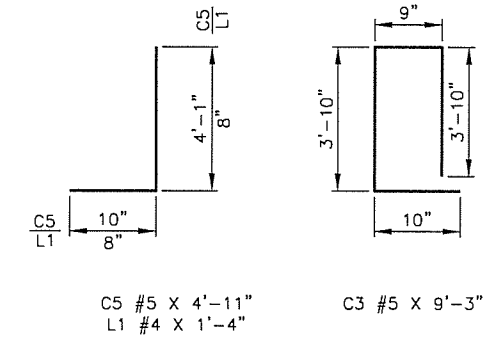
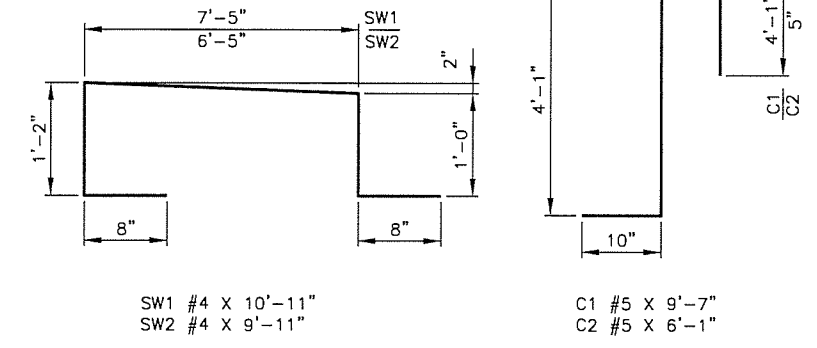
BEARING DETAILS

DESCRIPTION	REVISIONS	DATE

SUPERSTRUCTURE BAR LIST				
EPOXY COATED REINFORCING				
MARK	SIZE	NO.	FORM	LENGTH
A1	#6	226	BNT.	30'-6"
A2	#6	226	BNT.	37'-0"
AC1	#4	223	BNT.	6'-6"
AC2	#4	223	BNT.	11'-4"
AT1	#4	6	STR.	1'-2"
AT2	#4	6	STR.	3'-11"
AT3	#4	36	STR.	7'-2"
AT4	#4	6	STR.	4'-5"
B1	#5	228	STR.	34'-2"
B2	#5	228	STR.	32'-4"
C1	#5	151	BNT.	9'-7"
C2	#5	148	BNT.	6'-1"
C3	#5	209	BNT.	9'-3"
C5	#5	450	BNT.	4'-11"
EB1	#5	130	STR.	46'-4"
EB2	#5	65	STR.	60'-0"
EPH1	#4	124	BNT.	3'-8"
ET1	#4	130	STR.	45'-10"
ET2	#4	65	STR.	60'-0"
ET3	#6	64	STR.	60'-0"
L1	#4	40	BNT.	1'-4"
SL1	#4	34	STR.	45'-10"
SL2	#4	17	STR.	60'-0"
SW1	#4	151	BNT.	10'-11"
SW2	#4	151	BNT.	9'-11"



① DIMENSION BASED ON 2" NOMINAL EXPANSION JOINT. ACTUAL DIMENSION BASED ON EXPANSION JOINT SETTINGS, SEE SHEET 24.



NOTE:
FOR ADDITIONAL SLAB REINFORCING DETAILS, SEE SHEET 22.

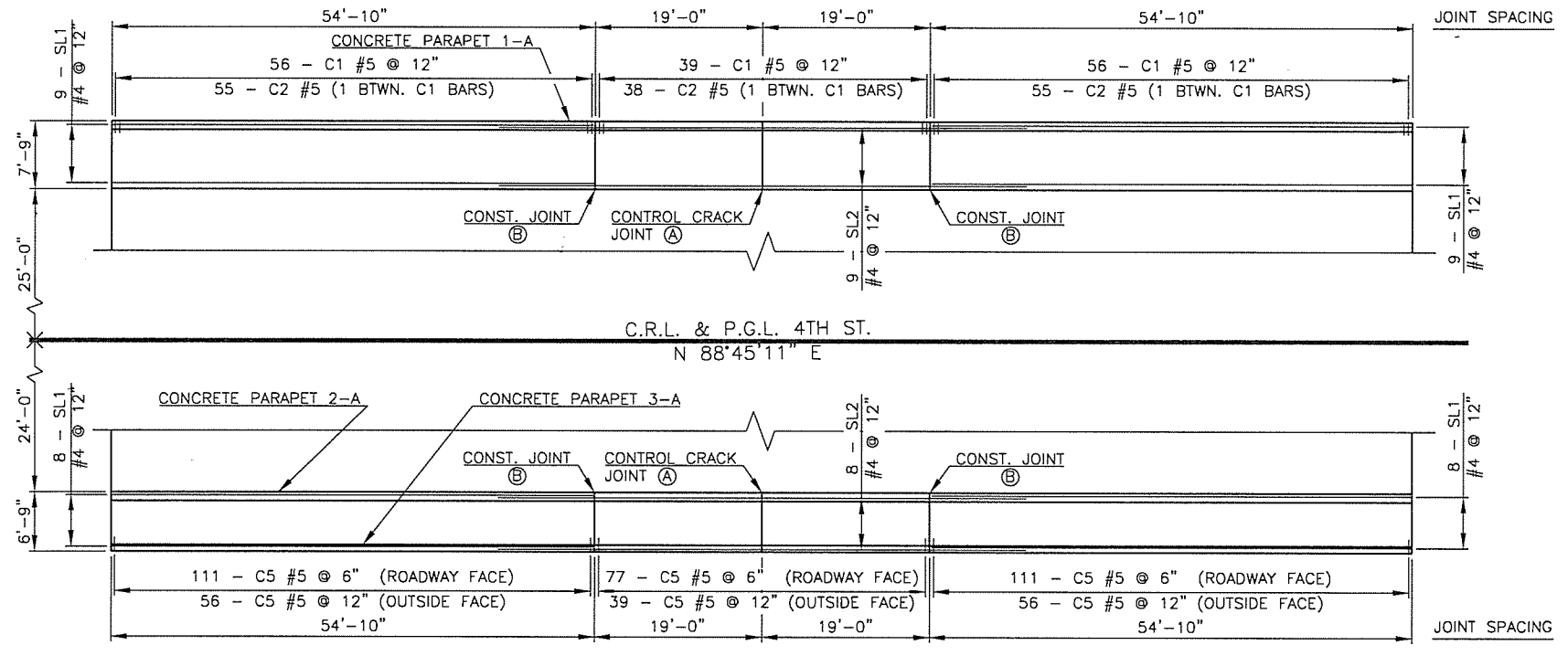
NOTE:
FOR ADDITIONAL DETAIL OF CONCRETE PARAPET, SEE SHEET 23.

Ⓐ PROVIDE 3/4" DEEP SAWCUT. ALL BARS SHALL BE CONTINUOUS THROUGH CONTROL CRACK JOINTS.

Ⓑ SEAL WITH HIGH MOLECULAR WEIGHT METHACRYLATE.

FOR C3 AND L1 BARS CAST INTO SIDEWALK, SEE CONCRETE PARAPET 2-A ELEVATION ON SEE SHEET 23.

SLAB REINFORCING PLAN

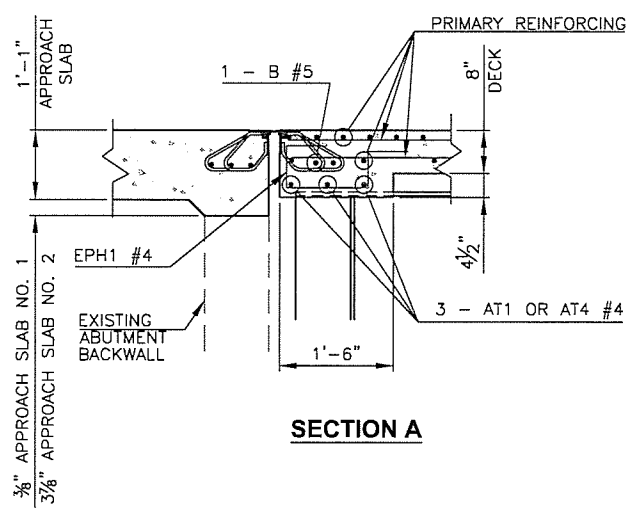


SIDEWALK REINFORCING PLAN

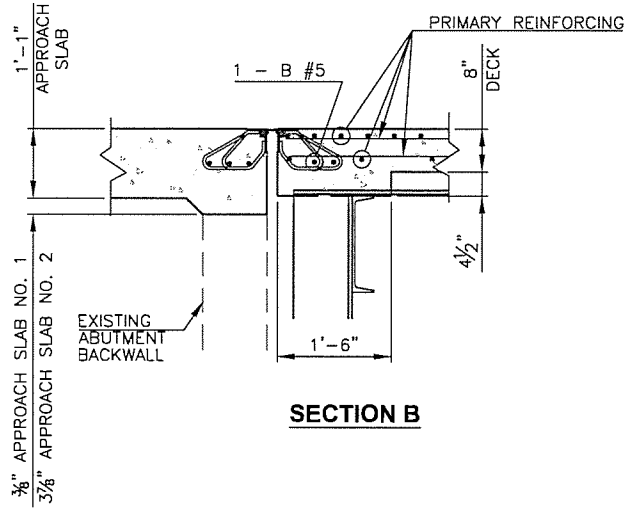
DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	Z.M.B.		
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC		

SLAB REINFORCING PLAN

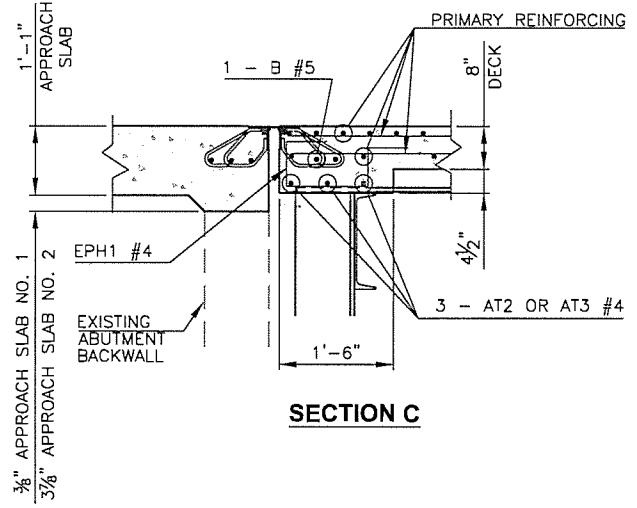
CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE



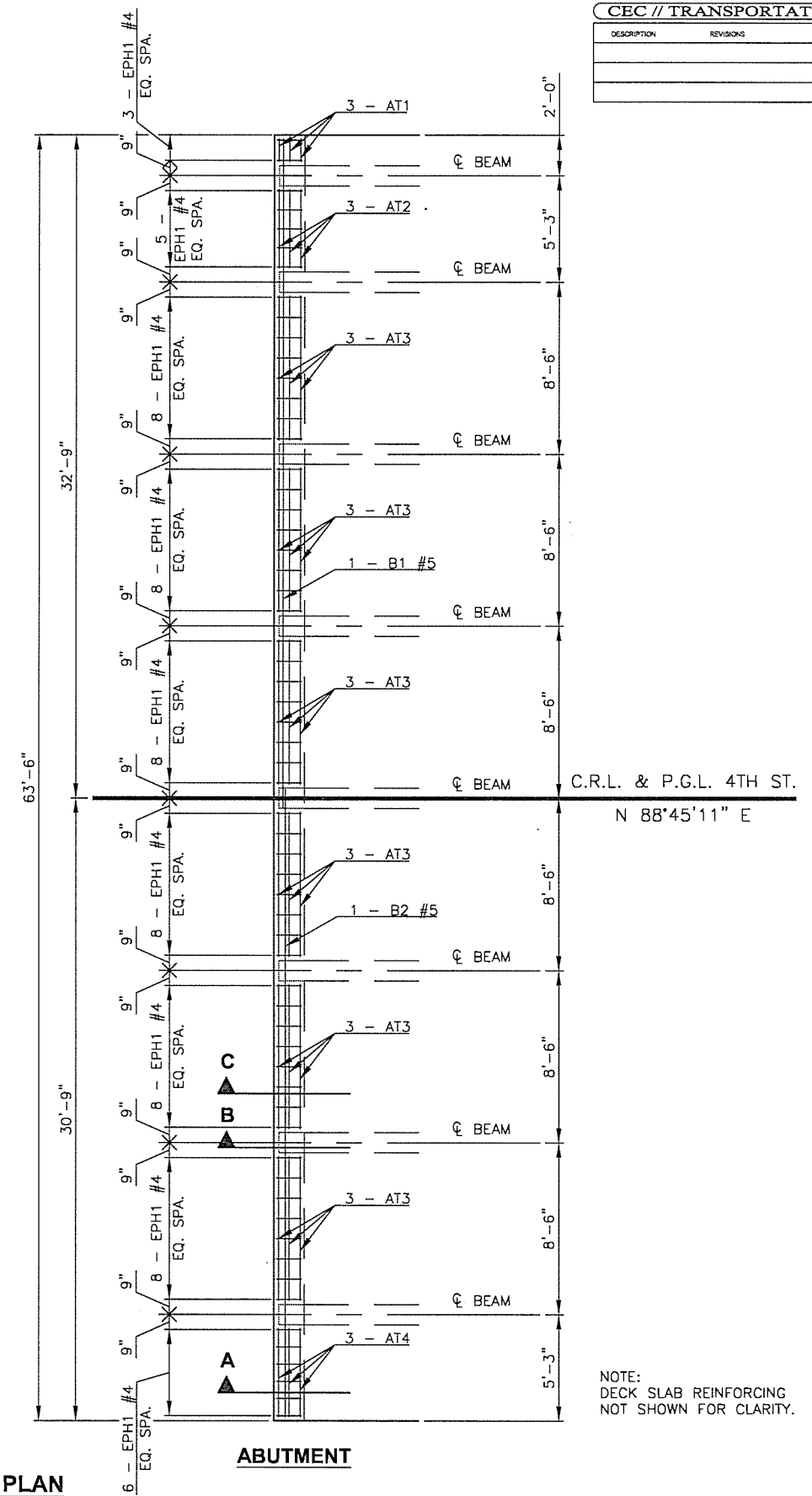
SECTION A



SECTION B



SECTION C



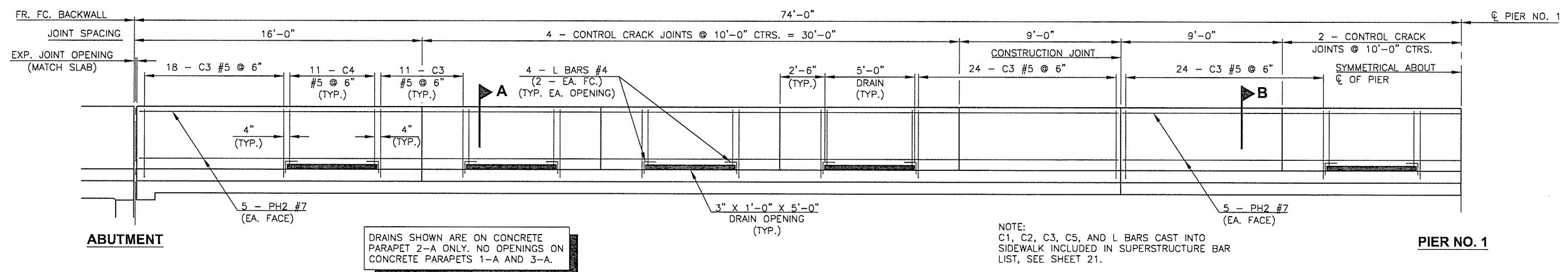
ABUTMENT

NOTE:
DECK SLAB REINFORCING
NOT SHOWN FOR CLARITY.

SLAB REINFORCING PLAN

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	J.F.R.		
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 22

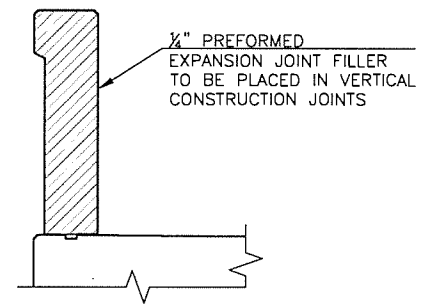
**ADDITIONAL SLAB
REINFORCING DETAILS**



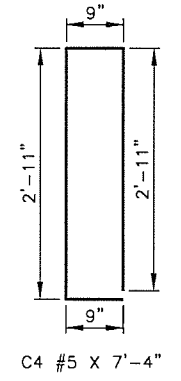
CONCRETE PARAPET 2-A ELEVATION

DRAINS SHOWN ARE ON CONCRETE PARAPET 2-A ONLY. NO OPENINGS ON CONCRETE PARAPETS 1-A AND 3-A.

NOTE:
C1, C2, C3, C5, AND L BARS CAST INTO SIDEWALK INCLUDED IN SUPERSTRUCTURE BAR LIST, SEE SHEET 21.



CONCRETE PARAPET CONSTRUCTION JOINT
(CONCRETE PARAPET 1-A SHOWN, ALL OTHER CONCRETE PARAPETS SIMILAR.)



CONCRETE PARAPET 1-A				
EPOXY COATED REINFORCING				
MARK	SIZE	NO.	FORM	LENGTH
PH1	#7	20	STR.	54'-8"
PH2	#7	10	STR.	37'-10"

CONCRETE PARAPET 2-A				
EPOXY COATED REINFORCING				
MARK	SIZE	NO.	FORM	LENGTH
C4	#5	110	BNT.	7'-4"
PH1	#7	20	STR.	54'-8"
PH2	#7	10	STR.	37'-10"

CONCRETE PARAPET 3-A				
EPOXY COATED REINFORCING				
MARK	SIZE	NO.	FORM	LENGTH
PH3	#5	20	STR.	54'-8"
PH4	#5	10	STR.	37'-10"

CONCRETE PARAPET NOTES

CONSTRUCT THE CONCRETE PARAPET TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (ENGLISH), AS WELL AS THE FOLLOWING REQUIREMENTS.

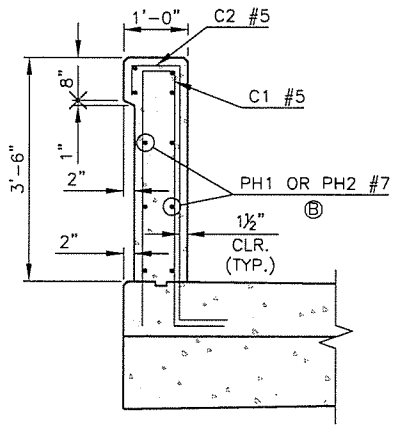
CLASS AA CONCRETE:
CLASS AA CONCRETE SHALL BE USED IN THE CONCRETE PARAPET. ALL COSTS OF THE CONCRETE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".

REINFORCING STEEL:
ALL REINFORCING STEEL USED IN THE CONCRETE PARAPET SHALL BE EPOXY COATED. PLACE AND TIE ALL C1, C2, C3, C5, AND L1 BARS IN THE DECK SIDEWALKS AND C1, C2, C3, C5, C7, C8, C9, C11, C13, C14, AND L1 BARS IN THE APPROACH SIDEWALKS BEFORE CONCRETE IS PLACED FOR THE SIDEWALKS. THE WEIGHT OF THE C1, C2, C3, C5, AND L1 BARS IN THE DECK SIDEWALKS AND C1, C2, C3, C5, C7, C8, C9, C11, C13, C14, AND L1 BARS IN THE APPROACH SIDEWALKS WILL BE MEASURED AND PAID FOR AS "EPOXY COATED REINFORCING STEEL". ALL OTHER REINFORCING STEEL IN THE PARAPET SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".

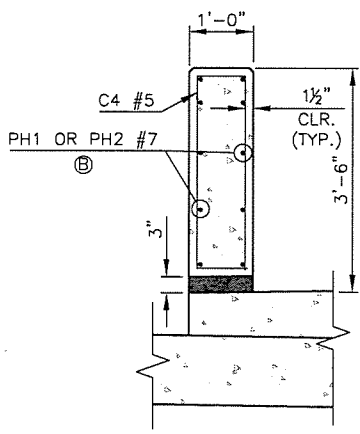
CONSTRUCTION JOINTS:
PLACE A CONSTRUCTION JOINT AT LOCATIONS SHOWN IN THE PLANS. PLACE 1/4" THICK PREFORMED EXPANSION MATERIAL IN THE CONSTRUCTION JOINT IN ACCORDANCE WITH THE DETAILS SHOWN. DO NOT PLACE PH BARS THROUGH A CONSTRUCTION JOINT.

EXPANSION JOINTS:
AT EXPANSION JOINTS IN THE DECK SLAB OR APPROACH SLAB, MATCH THE WIDTH OF THE OPENING BETWEEN THE ENDS OF THE PARAPET WITH THE OPENING OF THE EXPANSION JOINT.

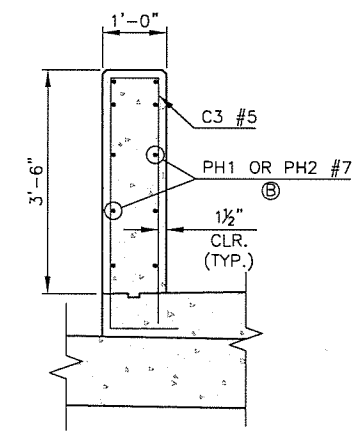
CONTROL CRACK JOINTS:
PROVIDE DOUBLE 3/4" CHAMFERS OR 3/4" DEEP SAWCUT IN ACCORDANCE WITH THE DETAILS SHOWN. ALL BARS SHALL BE CONTINUOUS THROUGH CONTROL CRACK JOINTS. PLACE CONTROL CRACK JOINTS AT LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



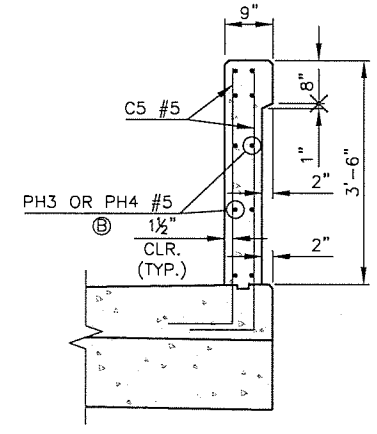
CONCRETE PARAPET 1-A DETAIL



CONCRETE PARAPET 2-A DETAILS



SECTION B



CONCRETE PARAPET 3-A DETAIL

CONCRETE PARAPET QUANTITIES				
ITEM	UNIT	1-A	2-A	3-A
CLASS AA CONCRETE	C.Y.	16.6	19.1	11.8
EPOXY COATED REINFORCING STEEL	LB.	3,010	3,850	1,530

① INCLUDE ALL COST OF CLASS AA CONCRETE AND EPOXY COATED REINFORCING STEEL ACCOUNTED FOR IN THE CONCRETE PARAPET QUANTITIES TABLE, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE CONSTRUCTION OF PARAPETS 1-A, 2-A, AND 3-A IN THE CONTRACT UNIT PRICE OF "CONCRETE PARAPET".

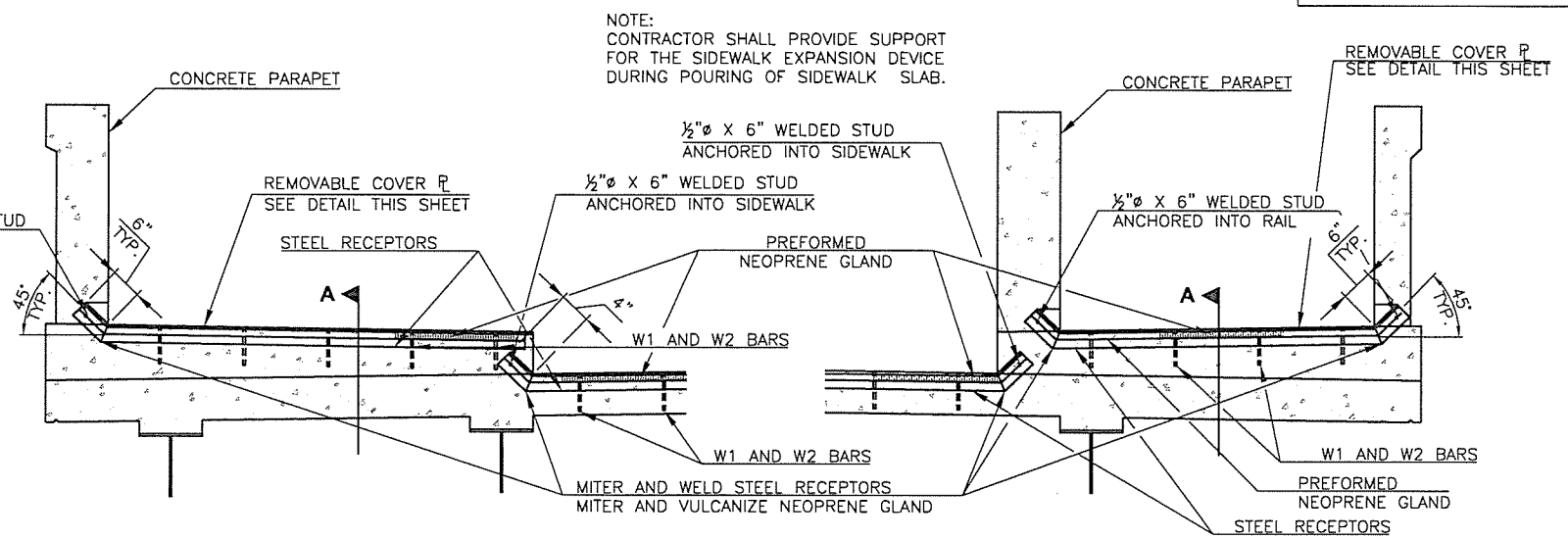
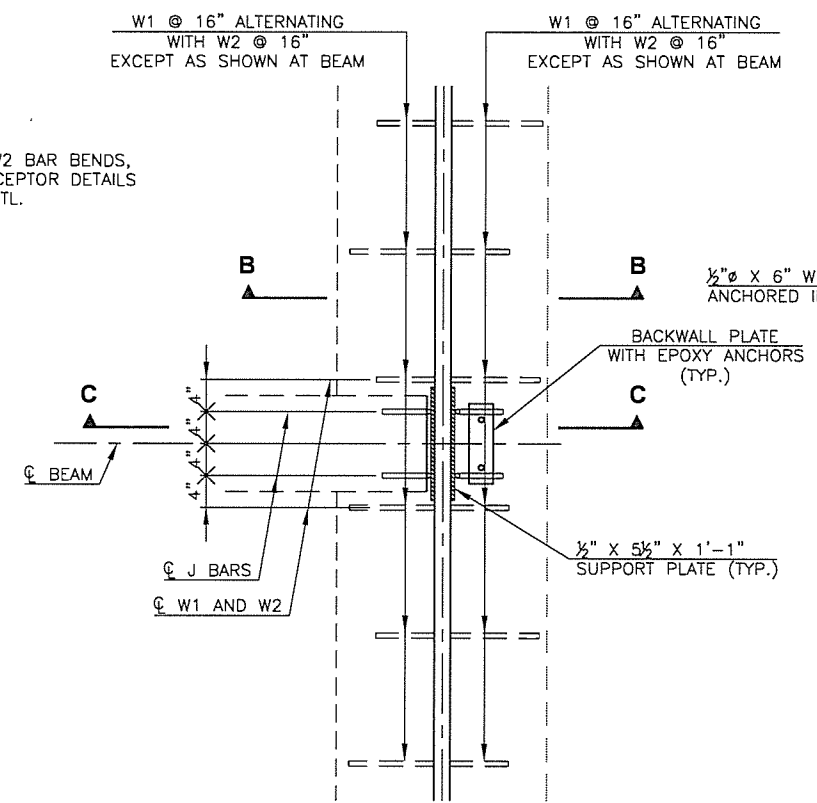
Ⓐ FOR CONTROL CRACK JOINT AND CONSTRUCTION JOINT LOCATIONS, SEE CONCRETE PARAPET 2-A ELEVATION ON THIS SHEET.
Ⓑ 1'-0" MAXIMUM VERTICAL C/C SPACING BETWEEN PH BARS.

NOTE:
SIDEWALK AND DECK REINFORCING OMITTED FOR CLARITY.

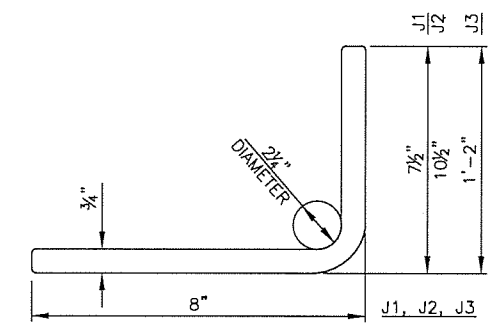
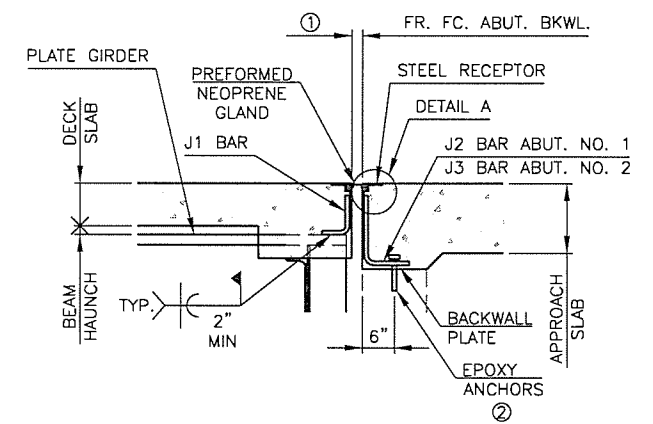
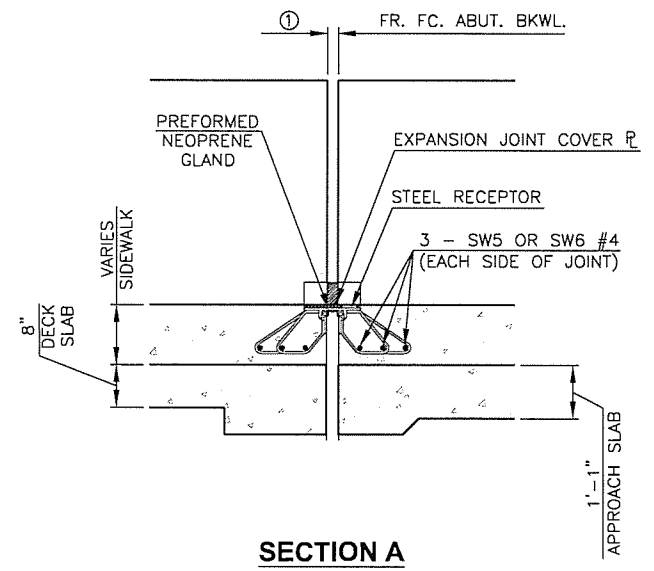
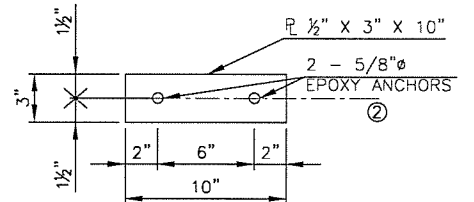
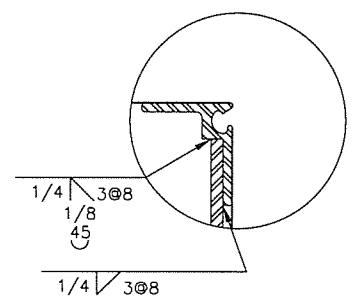
W1 @ 16" ALTERNATING WITH W2 @ 16" EXCEPT AS SHOWN AT BEAM

W1 @ 16" ALTERNATING WITH W2 @ 16" EXCEPT AS SHOWN AT BEAM

NOTE: FOR W1 AND W2 BAR BENDS, AND STEEL RECEPTOR DETAILS SEE STD. EJ-DTL.

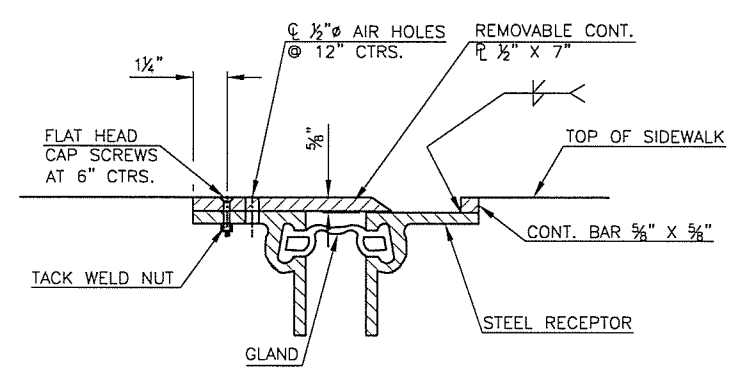
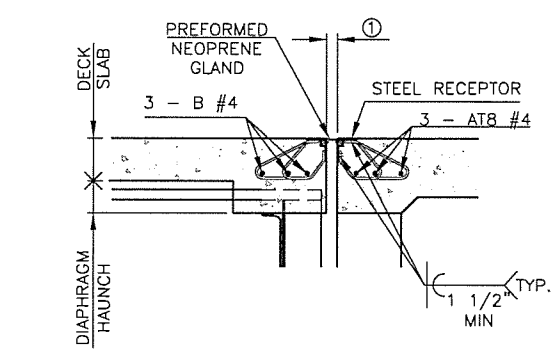


NOTE: CONTRACTOR SHALL PROVIDE SUPPORT FOR THE SIDEWALK EXPANSION DEVICE DURING POURING OF SIDEWALK SLAB.



① EXPANSION JOINT SETTING SCHEDULE

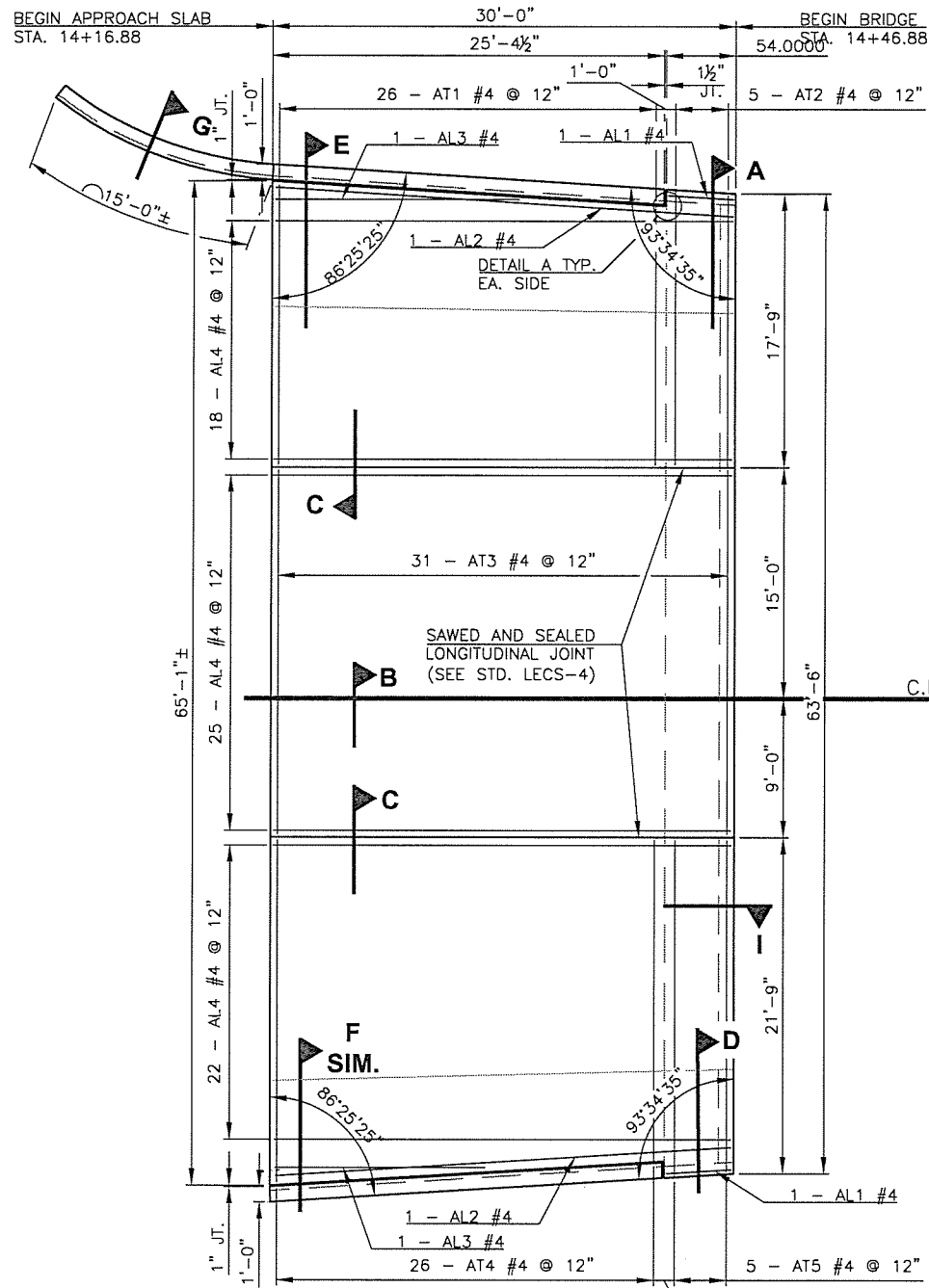
EXP. JOINT OPENING	TEMPERATURE	
	ABUTMENT	
2 3/8"	0'	
2 1/4"	17'	
2 1/2"	38'	
2"	60'	
1 7/8"	82'	
1 3/4"	103'	
1 5/8"	120'	



② USE HILTI HAS THREADED RODS WITH HIT-HY 200 SAFE SET SYSTEM, OR APPROVED EQUALS. ALL COSTS OF THREADED RODS, EPOXY, MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO ATTACH THE BACKWALL PLATE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "SEALED EXPANSION JOINT".

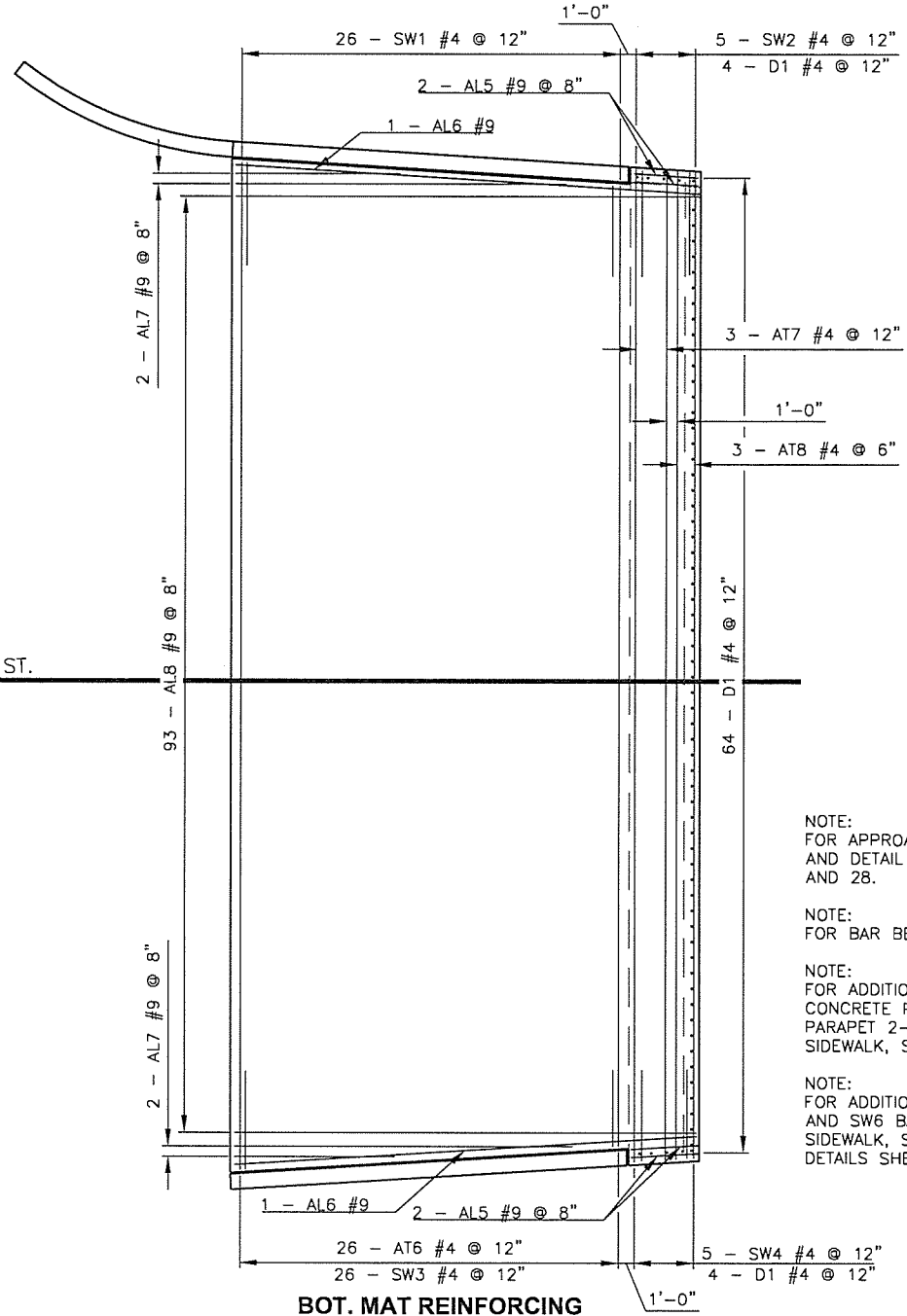
NOTE: FOR SEALED EXPANSION JOINT NOTES SEE ODOT BRIDGE STANDARD EJ-DTL.

NOTE: ALL COST OF NEOPRENE GLAND, SUPPORT PLATES, BACKWALL PLATES, STEEL RECEPTORS, J1, J2, AND J3 SUPPORT BARS, W1 AND W2 ANCHOR BARS, WELDING EQUIPMENT, LABOR AND ANY OTHER INCIDENTALS TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF "SEALED EXPANSION JOINT".



TOP MAT REINFORCING

APPROACH SLAB NO. 1 PLAN



BOT. MAT REINFORCING

NOTE:
FOR APPROACH SLAB SECTIONS AND DETAIL A, SEE SHEETS 27 AND 28.

NOTE:
FOR BAR BENDS, SEE SHEET 29.

NOTE:
FOR ADDITIONAL DETAILS OF CONCRETE PARAPET, INCLUDING PARAPET 2-B BARS CAST INTO SIDEWALK, SEE SHEETS 29-31.

NOTE:
FOR ADDITIONAL DETAIL OF SW5 AND SW6 BARS CAST INTO SIDEWALK, SEE EXPANSION JOINT DETAILS SHEET 24.

① **APPROACH SLAB NO. 1 BAR LIST**

EPOXY COATED REINFORCING

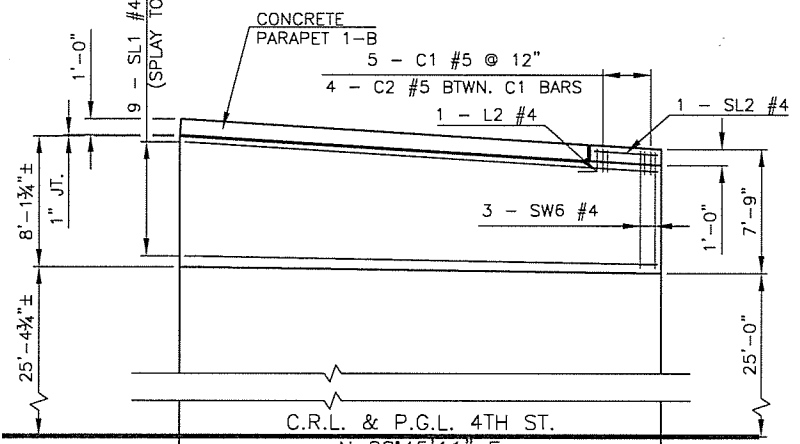
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
AL1	#4	2	STR.	4'-3"	
AL2	#4	2	STR.	29'-9"	
AL3	#4	2	STR.	16'-0"	
AL4	#4	65	STR.	29'-10"	
AL5	#9	4	STR.	4'-3"	
AL6	#9	2	STR.	29'-9"	
AL7	#9	4	STR.	16'-0" AVG.	10'-8" TO 21'-4"
AL8	#9	93	STR.	29'-10"	
AT1	#4	26	STR.	17'-4" AVG.	16'-7" TO 18'-1"
AT2	#4	5	STR.	17'-6" AVG.	17'-5" TO 17'-7"
AT3	#4	31	STR.	23'-8"	
AT4	#4	26	STR.	21'-5" AVG.	20'-8" TO 22'-2"
AT5	#4	5	STR.	21'-6" AVG.	21'-5" TO 21'-7"
AT6	#4	26	STR.	65'-1" AVG.	63'-7" TO 66'-7"
AT7	#4	3	STR.	65'-6" AVG.	65'-5" TO 65'-7"
AT8	#4	3	STR.	65'-2"	
D1	#4	72	BNT.	3'-6"	
L2	#4	4	BNT.	2'-2"	
SW1	#4	26	BNT.	10'-7" AVG.	10'-0" TO 11'-2"
SW2	#4	5	BNT.	11'-0" AVG.	10'-11" TO 11'-1"
SW3	#4	26	BNT.	9'-5" AVG.	9'-0" TO 9'-10"
SW4	#4	5	BNT.	10'-0" AVG.	9'-11" TO 10'-1"

④ **APPROACH SLAB NO. 1 SIDEWALK BAR LIST**

EPOXY COATED REINFORCING

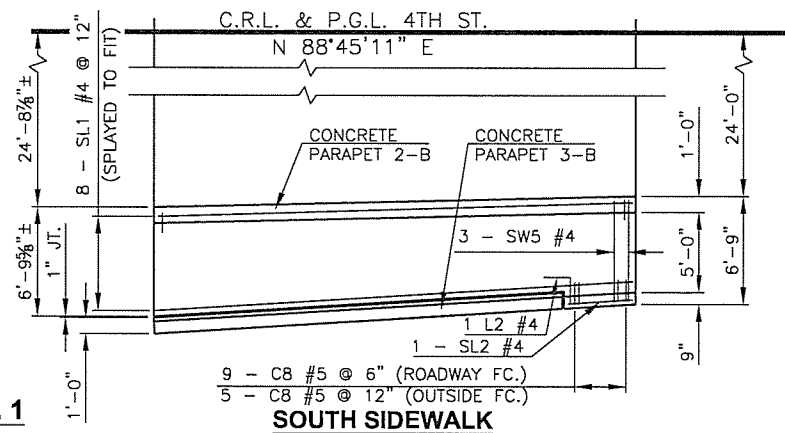
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
C1	#5	5	BNT.	9'-3"	
C2	#5	4	BNT.	5'-11"	
C3	#5	11	BNT.	8'-10" AVG.	8'-5" TO 9'-3"
C5	#5	11	BNT.	6'-10" AVG.	6'-5" TO 7'-3"
C7	#5	21	BNT.	4'-4" AVG.	3'-5" TO 5'-3"
C8	#5	14	BNT.	4'-9"	
L1	#4	8	BNT.	1'-4"	
L2	#4	2	BNT.	2'-2"	
SL1	#4	17	STR.	29'-10"	
SL2	#4	2	STR.	4'-3"	
SW5	#4	3	STR.	6'-4"	
SW6	#4	3	STR.	7'-4"	

- ① REINFORCEMENT INCLUDED IN THE CONTRACT UNIT PRICE OF "APPROACH SLAB".
- ② TWO SETS OF 2.
- ③ INCLUDES ONE LAP AT 2'-0".
- ④ REINFORCEMENT INCLUDED IN THE CONTRACT UNIT PRICE OF "EPOXY COATED REINFORCING STEEL".



NORTH SIDEWALK

APPROACH SLAB NO. 1 SIDEWALK PLAN



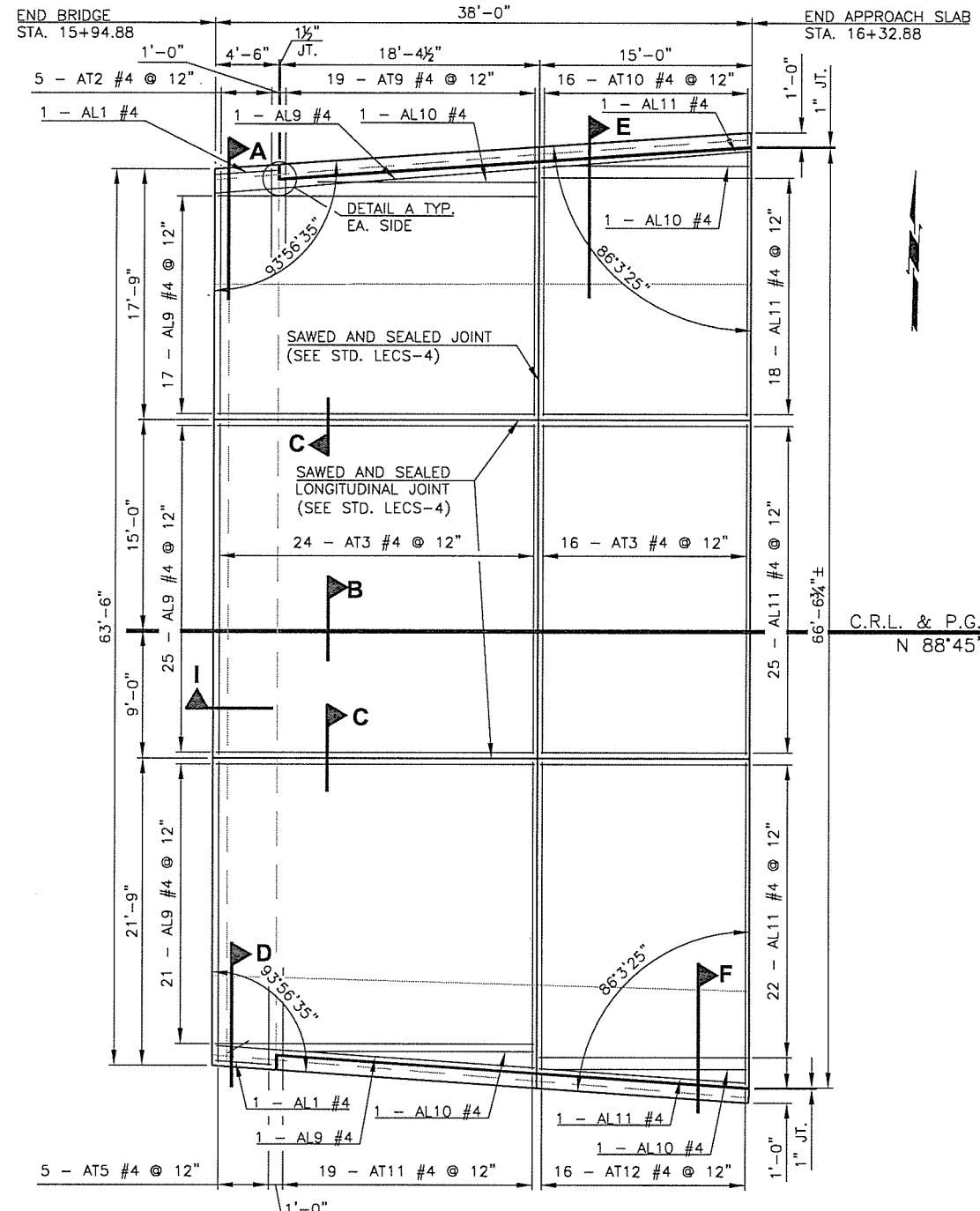
SOUTH SIDEWALK

APPROACH SLAB QUANTITIES

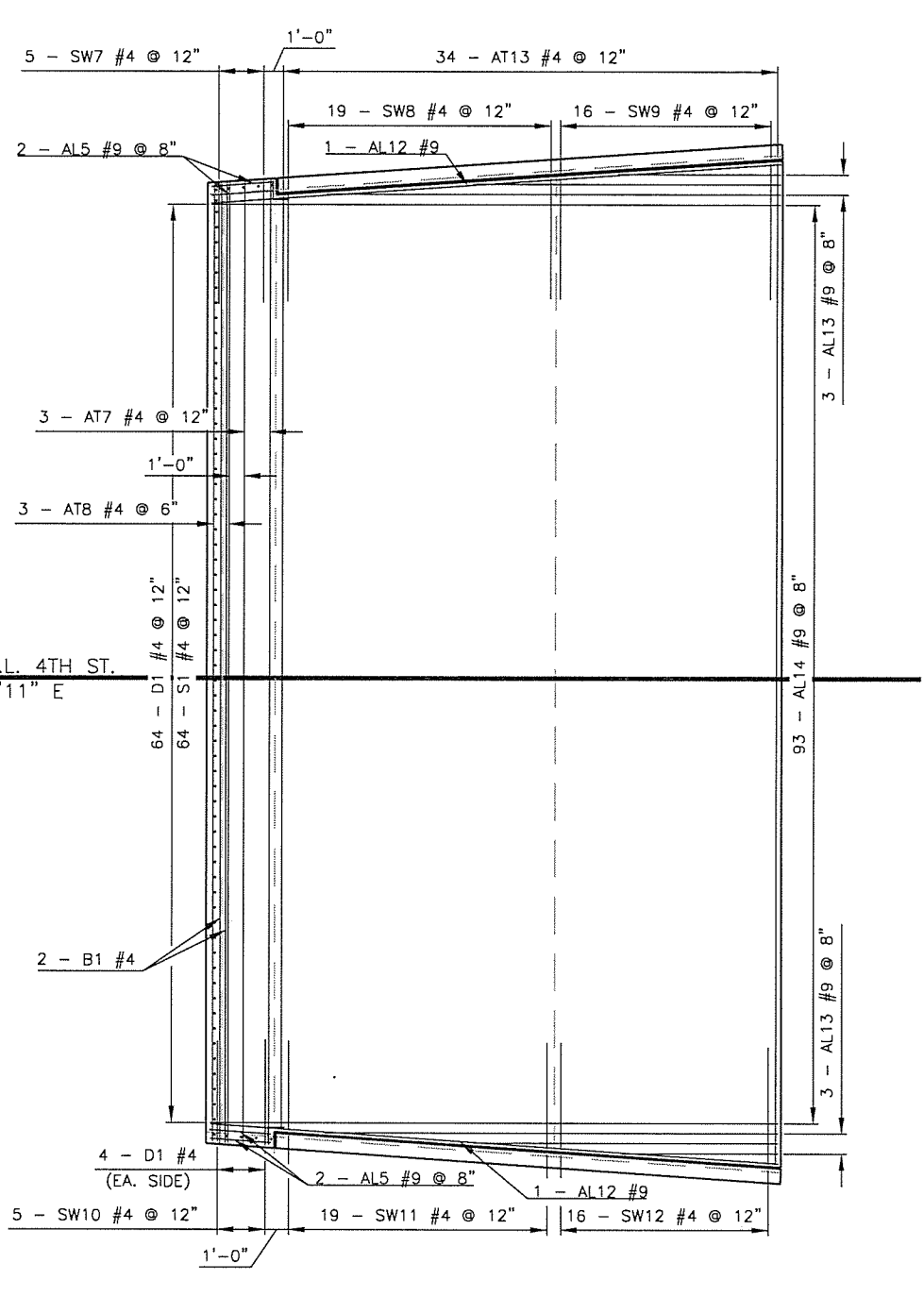
ITEM	UNIT	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	TOTAL
CLSM BACKFILL	C.Y.	75	95	170
APPROACH SLAB	S.Y.	211.8	271.1	482.9
SAW-CUT GROOVING	S.Y.	165	209	374
CONCRETE PARAPET	L.F.	105.0	114.0	219.0
CLASS AA CONCRETE	C.Y.	11.1	15.2	26.3
EPOXY COATED REINFORCING STEEL	LB.	800	1000	1,800
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	105	132	237

Ⓐ ASSUMED 1'-0" DEPTH BELOW EXTENTS OF APPROACH SLABS FOR COMPUTING CLSM BACKFILL QUANTITY, FOR ESTIMATING PURPOSES ONLY. ACTUAL QUANTITY TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

DESCRIPTION	REVISIONS	DATE

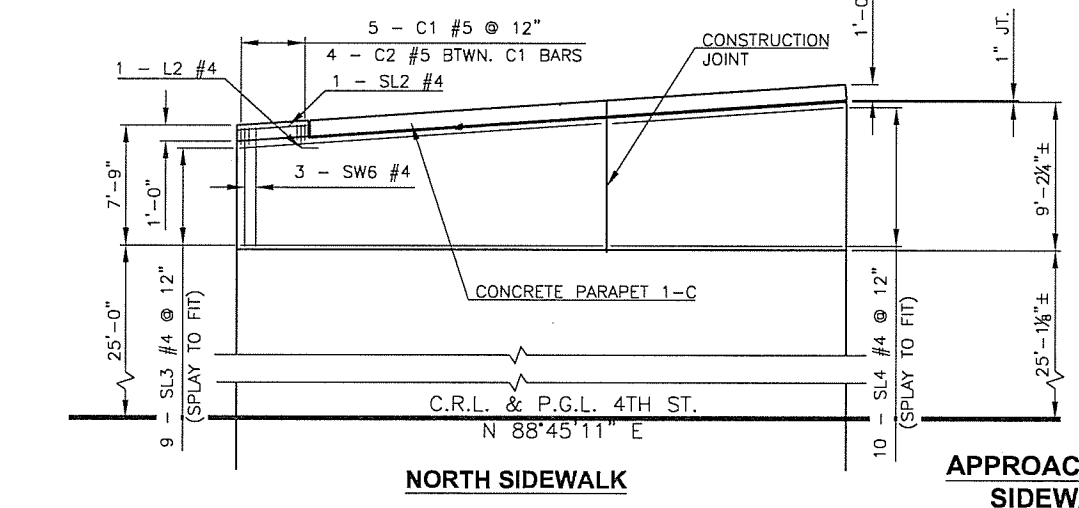


TOP MAT REINFORCING

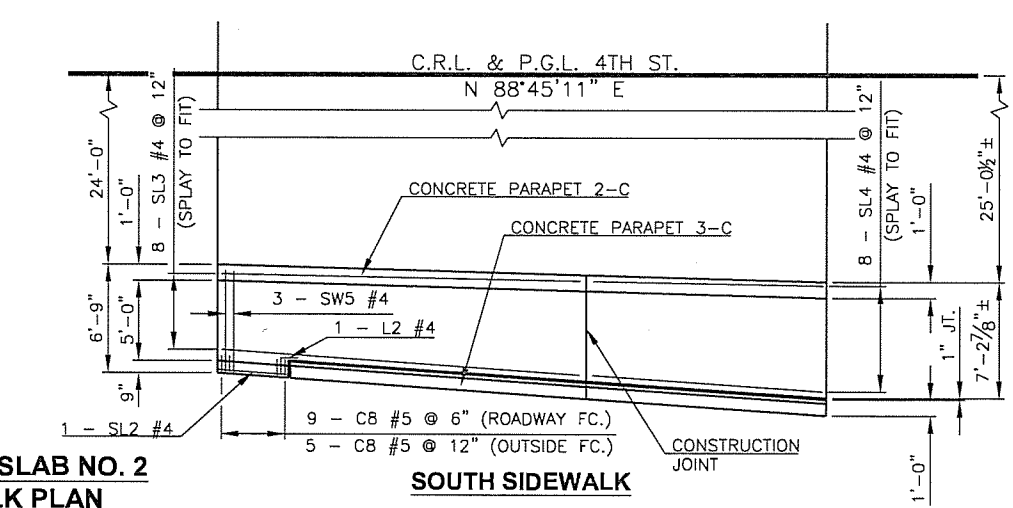


BOT. MAT REINFORCING

APPROACH SLAB NO. 2 PLAN



NORTH SIDEWALK



SOUTH SIDEWALK

APPROACH SLAB NO. 2 SIDEWALK PLAN

① **APPROACH SLAB NO. 2 BAR LIST**
EPOXY COATED REINFORCING

MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
AL1	#4	2	STR.	4'-3"	
AL5	#9	4	STR.	4'-3"	
AL9	#4	65	STR.	22'-9"	
AL10	#4	4	STR.	14'-6"	
AL11	#4	67	STR.	14'-9"	
AL12	#9	2	STR.	37'-11"	
AL13	#9	6	STR.	19'-4" AVG.	9'-8" TO 29'-0"
AL14	#9	93	STR.	37'-10"	
AT2	#4	5	STR.	17'-6" AVG.	17'-5" TO 17'-7"
AT3	#4	40	STR.	23'-8"	
AT5	#4	5	STR.	21'-6" AVG.	21'-5" TO 21'-7"
AT7	#4	3	STR.	65'-6" AVG.	65'-5" TO 65'-7"
AT8	#4	3	STR.	65'-2"	
AT9	#4	19	STR.	17'-3" AVG.	16'-8" TO 17'-10"
AT10	#4	16	STR.	18'-5" AVG.	17'-11" TO 18'-11"
AT11	#4	19	STR.	21'-3" AVG.	20'-8" TO 21'-10"
AT12	#4	16	STR.	22'-5" AVG.	21'-11" TO 22'-11"
AT13	#4	34	STR.	65'-11" AVG.	63'-8" TO 68'-2"
B1	#4	2	STR.	65'-2"	
D1	#4	72	BNT.	3'-6"	
L2	#4	4	BNT.	2'-2"	
S1	#4	64	BNT.	3'-4"	
SW7	#4	5	BNT.	11'-0" AVG.	10'-11" TO 11'-1"
SW8	#4	19	BNT.	10'-9" AVG.	10'-2" TO 11'-4"
SW9	#4	16	BNT.	11'-10" AVG.	11'-4" TO 12'-4"
SW10	#4	5	BNT.	10'-0" AVG.	9'-11" TO 10'-1"
SW11	#4	19	BNT.	9'-4" AVG.	9'-0" TO 9'-8"
SW12	#4	16	BNT.	10'-1" AVG.	9'-9" TO 10'-5"

④ **APPROACH SLAB NO. 2 SIDEWALK BAR LIST**
EPOXY COATED REINFORCING

MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
C1	#5	5	BNT.	9'-3"	
C2	#5	4	BNT.	5'-11"	
C8	#5	14	BNT.	4'-9"	
C9	#5	9	BNT.	9'-0" AVG.	8'-9" TO 9'-3"
C11	#5	11	BNT.	7'-6" AVG.	7'-1" TO 7'-11"
C13	#5	9	BNT.	6'-0" AVG.	5'-9" TO 6'-3"
C14	#5	31	BNT.	4'-7" AVG.	3'-5" TO 5'-9"
L1	#4	8	BNT.	1'-4"	
L2	#4	2	BNT.	2'-2"	
SL2	#4	2	STR.	4'-3"	
SL3	#4	17	STR.	22'-9"	
SL4	#4	18	STR.	14'-9"	
SW5	#4	3	STR.	6'-4"	
SW6	#4	3	STR.	7'-4"	

- ① REINFORCEMENT INCLUDED IN THE CONTRACT UNIT PRICE OF "APPROACH SLAB".
- ② TWO SETS OF 3
- ③ LENGTHS INCLUDE ONE LAP AT 2'-0"
- ④ REINFORCEMENT INCLUDED IN THE CONTRACT UNIT PRICE OF "EPOXY COATED REINFORCING STEEL".

NOTE:
FOR ADDITIONAL DETAIL OF SW5 AND SW6 BARS CAST INTO SIDEWALK, SEE EXPANSION JOINT DETAIL SHEET 24.

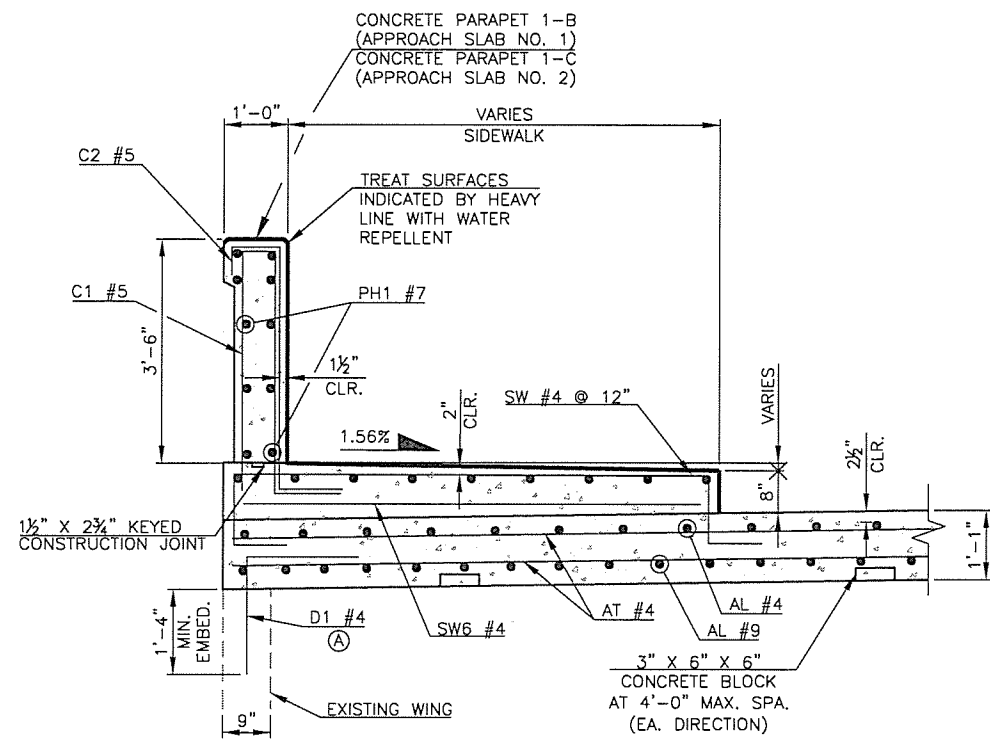
NOTE:
FOR APPROACH SLAB SECTIONS AND DETAIL A, SEE SHEETS 27 AND 28.

NOTE:
FOR BAR BENDS, SEE SHEET 29.

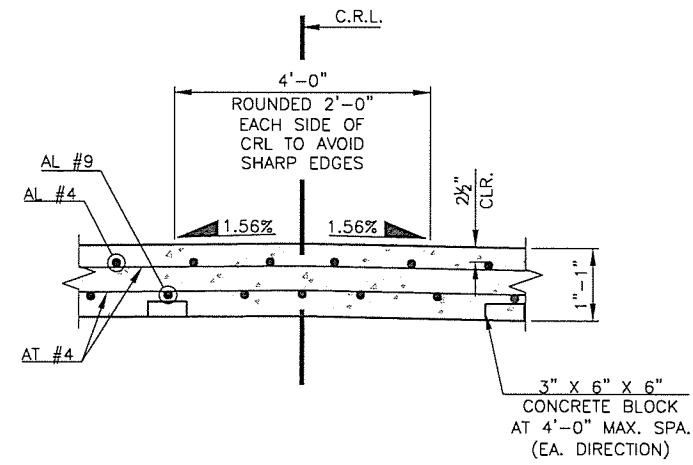
NOTE:
FOR ADDITIONAL DETAILS OF CONCRETE PARAPET, INCLUDING PARAPET 2-C BARS CAST INTO SIDEWALK, SEE SHEETS 29-31.

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	J.F.R.		
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28668(04)	SHEET NO. 26

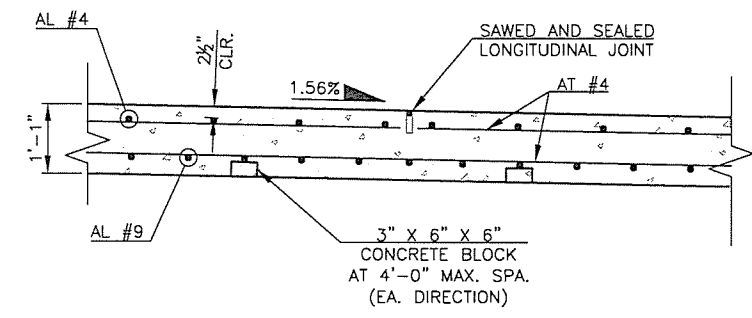
APPROACH SLAB NO. 2 PLAN



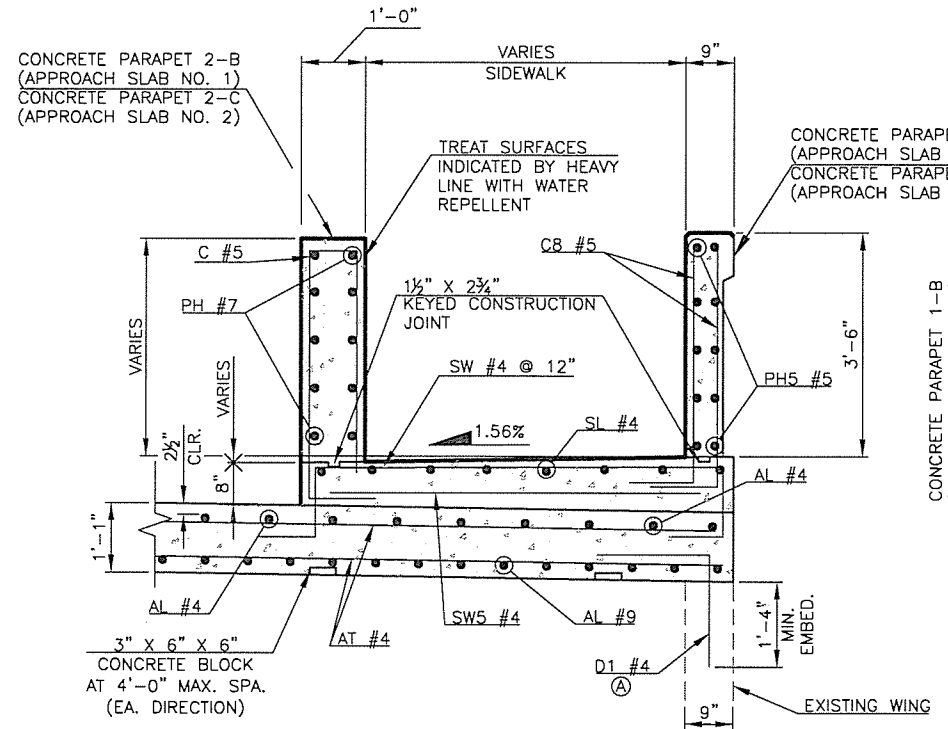
SECTION A



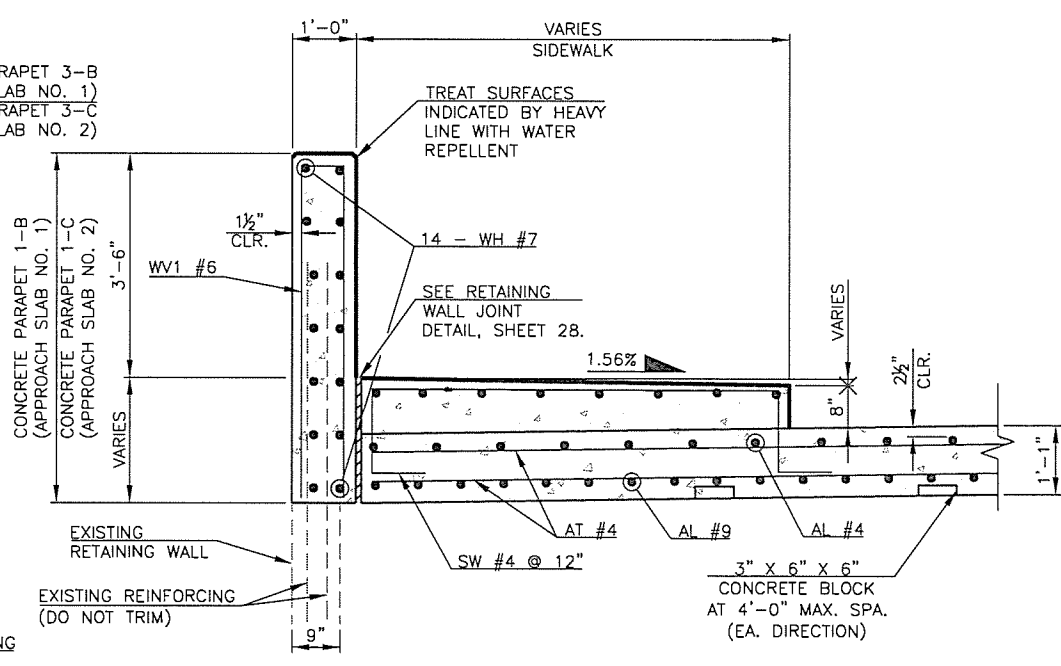
SECTION B



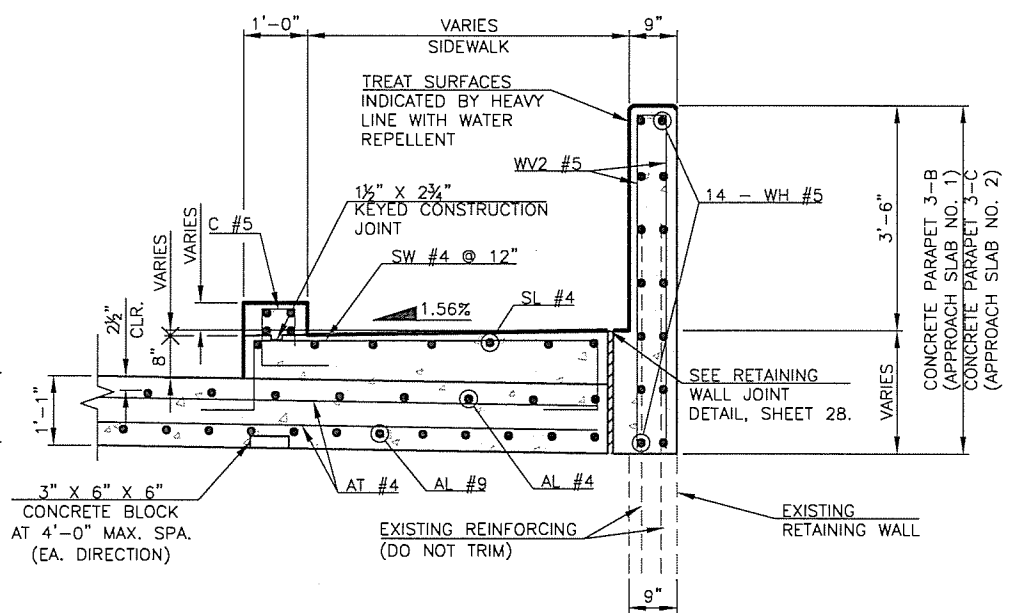
SECTION C



SECTION D



SECTION E



SECTION F

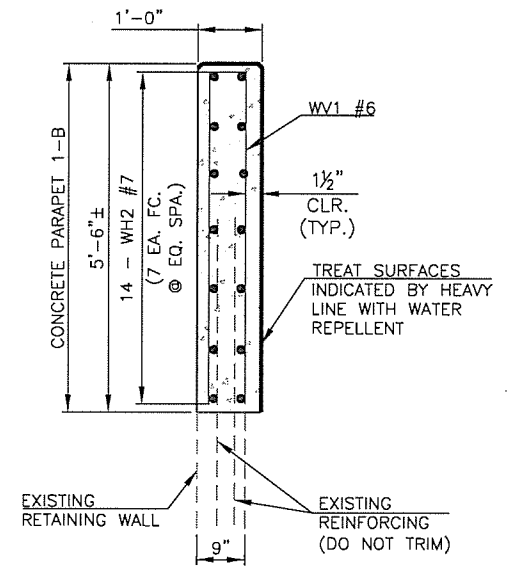
NOTE:
SIDEWALK CLEAR COVER = 2"
CONCRETE PARAPET CLEAR COVER = 1 1/2"

(A) DRILL AND EPOXY D1 BARS INTO EXISTING ABUTMENT BACKWALL AND WING ACCORDING TO SECTION 509.04(D) OF THE STANDARD SPECIFICATIONS. ALL COST OF INSTALLING DOWELS, INCLUDING LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO DO THE WORK, SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

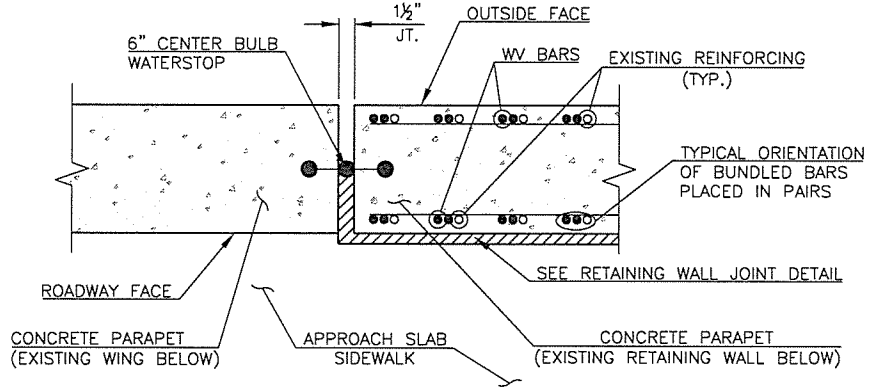
NOTE:
FOR ADDITIONAL DETAILS OF EXPANSION JOINT AT ABUTMENT, INCLUDING W AND SW BARS CAST INTO APPROACH SLAB, SEE SHEET 24.

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	M.R.S.	APPROACH SLAB DETAILS (SHEET 1 OF 2)	
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.	JOB PIECE NO. 28868(04)	SHEET NO. 27
SQUAD	CEC		

DESCRIPTION	REVISIONS	DATE

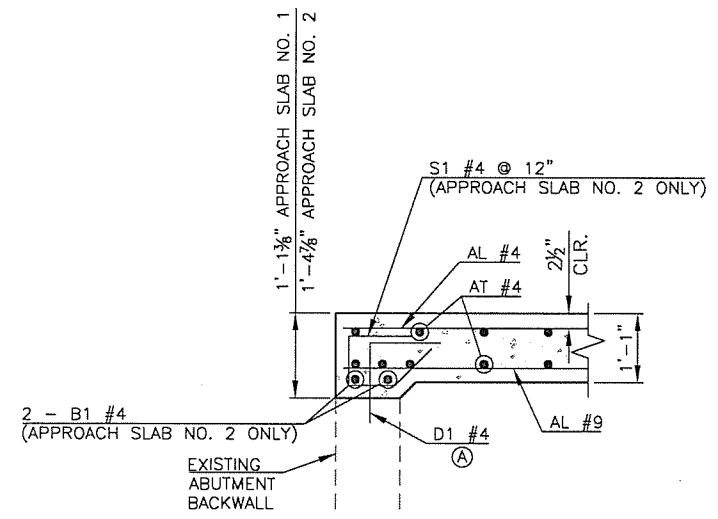


SECTION G



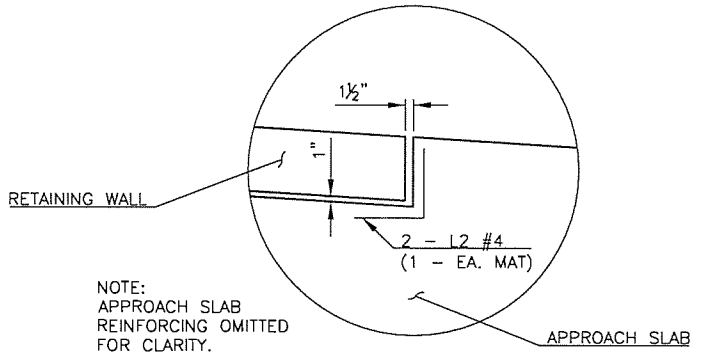
NOTE:
WATERSTOP SHALL BE PLACED FROM TOP OF REMAINING EXISTING RETAINING WALL TO 3" BELOW TOP OF NEW CONCRETE PARAPET. ALL COST FOR 6" CENTERBULB WATERSTOP TO BE INCLUDED IN OTHER ITEMS OF WORK

SECTION H



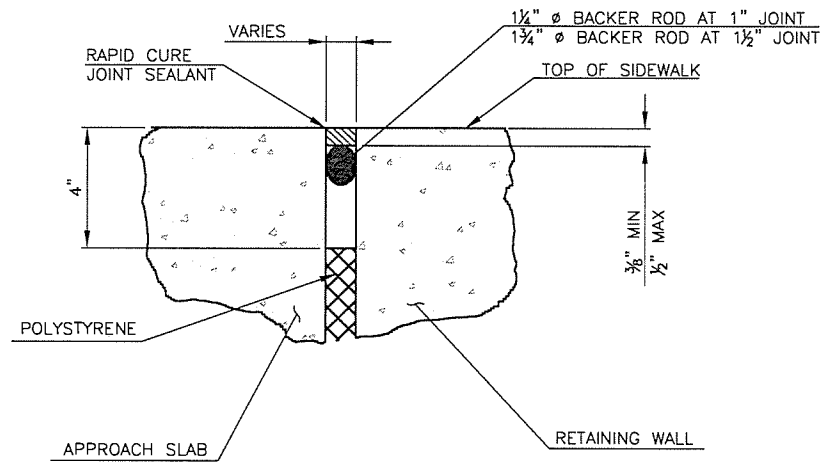
SECTION I

NOTE:
STEEL RECEPTOR AND J1, W1 AND W2 BARS OMITTED FOR CLARITY. FOR ADDITIONAL DETAILS OF EXPANSION JOINT AT ABUTMENT, SEE SHEET 24.



NOTE:
APPROACH SLAB REINFORCING OMITTED FOR CLARITY.

DETAIL A



RETAINING WALL JOINT DETAIL

Ⓐ DRILL AND EPOXY D1 BARS INTO EXISTING ABUTMENT BACKWALL AND WING ACCORDING TO SECTION 509.04(D) OF THE STANDARD SPECIFICATIONS. ALL COST OF INSTALLING DOWELS, INCLUDING LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO DO THE WORK, SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

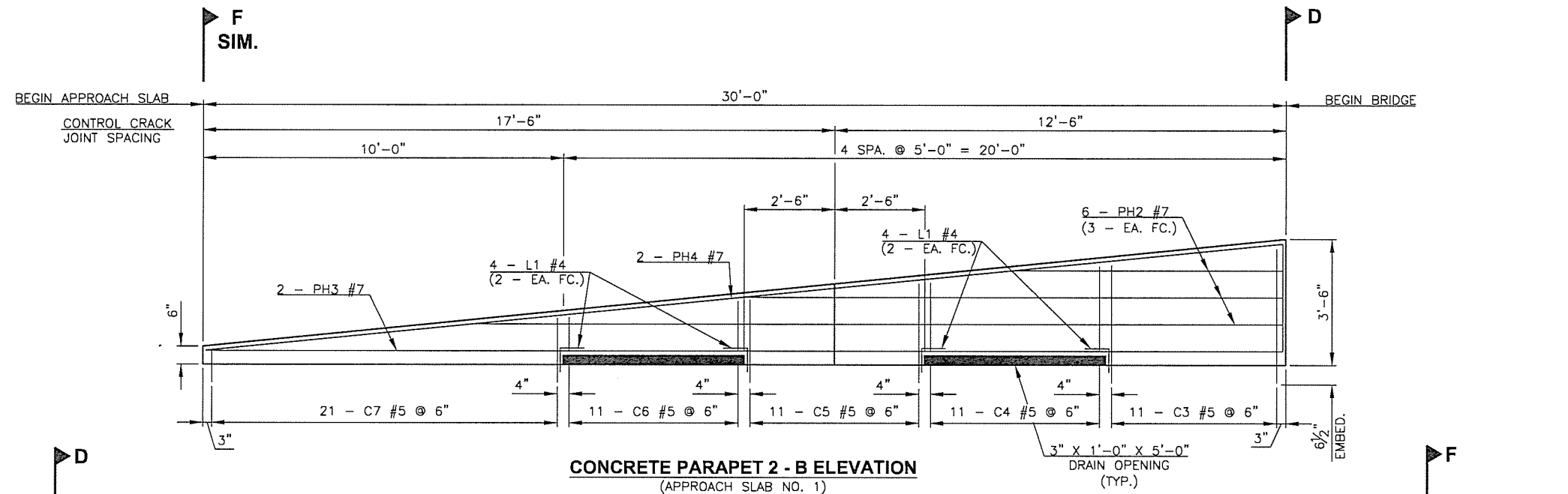
NOTE:
PLACE REINFORCING IN THE TOP OF THE APPROACH SLAB 2" FROM EITHER SIDE OF THE SAWED AND SEALED JOINTS. FOR ADDITIONAL DETAILS OF SAWED AND SEALED JOINTS, SEE STD. LECS-4. FOR ADDITIONAL DETAIL OF APPROACH SLAB AT ABUTMENT, SEE SHEET 22.

NOTE:
FOR ADDITIONAL DETAILS OF CONCRETE PARAPET, SEE SHEETS 29-31.

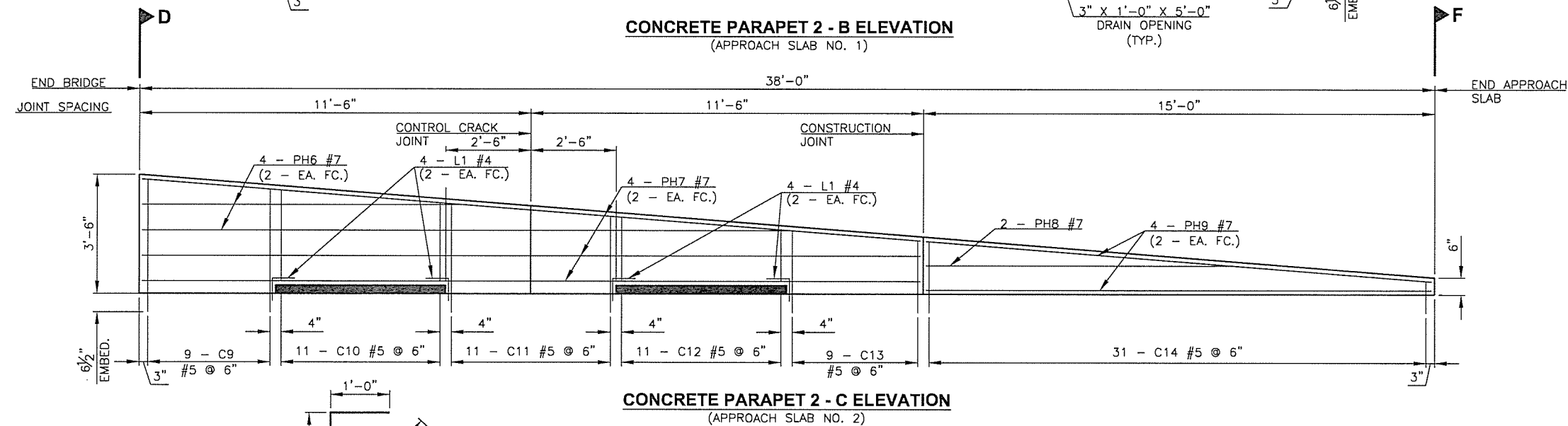
NOTE:
FOR CONCRETE PARAPET NOTES, SEE SHEET 23.

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	M.R.S.	APPROACH SLAB DETAILS (SHEET 2 OF 2)	
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 28

DESCRIPTION	REVISIONS	DATE



CONCRETE PARAPET 2 - B ELEVATION
(APPROACH SLAB NO. 1)

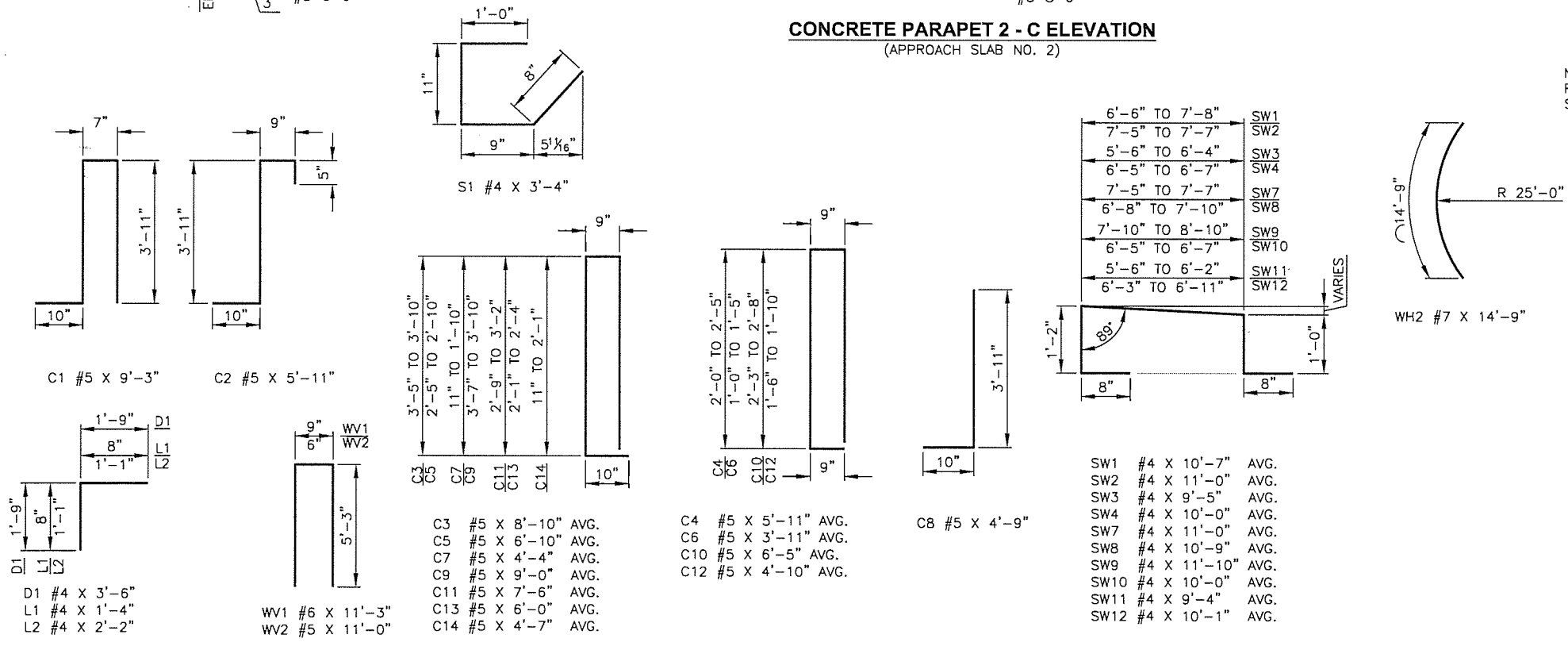


CONCRETE PARAPET 2 - C ELEVATION
(APPROACH SLAB NO. 2)

CONCRETE PARAPET BAR LIST					
CONCRETE PARAPET 1-B					
EPOXY COATED REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
PH1	#7	10	STR.	4'-2"	
WH1	#7	14	STR.	25'-0"	
WH2	#7	14	STR.	14'-9"	
WV1	#6	86	BNT.	11'-3"	
CONCRETE PARAPET 2-B					
EPOXY COATED REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
C4	#5	11	BNT.	5'-11" AVG.	5'-6" TO 6'-4"
C6	#5	11	BNT.	3'-11" AVG.	3'-6" TO 4'-4"
PH2	#7	6	STR.	14'-11" AVG.	7'-5" TO 22'-5"
PH3	#7	2	STR.	29'-10"	
PH4	#7	2	STR.	29'-11"	
CONCRETE PARAPET 3-B					
EPOXY COATED REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
PH5	#5	10	STR.	4'-2"	
WH3	#5	14	STR.	25'-0"	
WV2	#5	54	BNT.	11'-0"	
CONCRETE PARAPET 1-C					
EPOXY COATED REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
PH1	#7	10	STR.	4'-2"	
WH4	#7	14	STR.	14'-8"	
WH5	#7	14	STR.	18'-0"	
WV1	#6	72	BNT.	11'-3"	
CONCRETE PARAPET 2-C					
EPOXY COATED REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
C10	#5	11	BNT.	6'-5" AVG.	6'-0" TO 6'-10"
C12	#5	11	BNT.	4'-10" AVG.	4'-6" TO 5'-2"
PH6	#7	4	STR.	14'-2" AVG.	9'-5" TO 18'-11"
PH7	#7	4	STR.	22'-10"	
PH8	#7	2	STR.	9'-0"	
PH9	#7	4	STR.	14'-10"	
CONCRETE PARAPET 3-C					
EPOXY COATED REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
PH5	#5	10	STR.	4'-2"	
WH6	#5	14	STR.	18'-0"	
WH7	#5	14	STR.	14'-8"	
WV2	#5	72	BNT.	11'-0"	

① TWO SETS OF 3
② TWO SETS OF 2

NOTE:
FOR SECTIONS D AND F,
SEE SHEET 27.

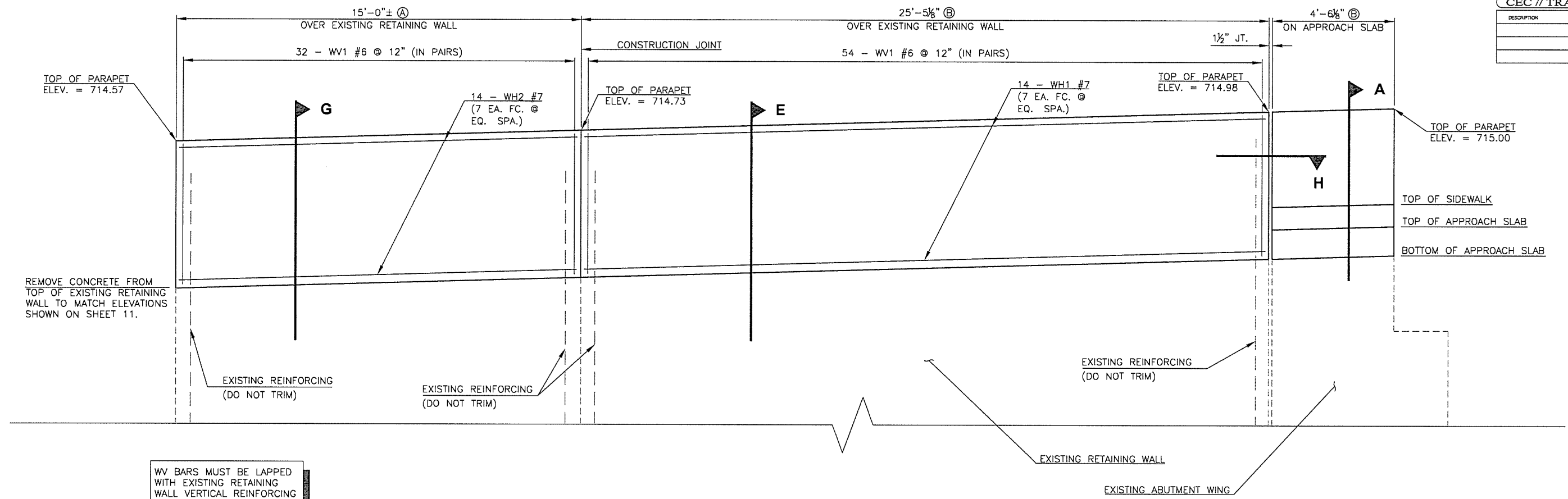


CONCRETE PARAPET QUANTITIES							
ITEM	UNIT	1-B	2-B	3-B	1-C	2-C	3-C
CLASS AA CONCRETE	C.Y.	5.7	2.2	4.7	7.4	2.8	6.1
EPOXY COATED REINFORCING STEEL	LB.	2,680	540	1,030	2,240	590	1,350

Ⓐ INCLUDE ALL COST OF CLASS AA CONCRETE AND EPOXY COATED REINFORCING STEEL ACCOUNTED FOR IN THE CONCRETE PARAPET QUANTITIES TABLE, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE CONSTRUCTION OF PARAPETS 1-B, 2-B, 3-B, 1-C, 2-C, AND 3-C IN THE CONTRACT UNIT PRICE OF "CONCRETE PARAPET".

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	M.R.S.	APPROACH SLAB PARAPET DETAILS (SHEET 1 OF 3)	
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 29

CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE



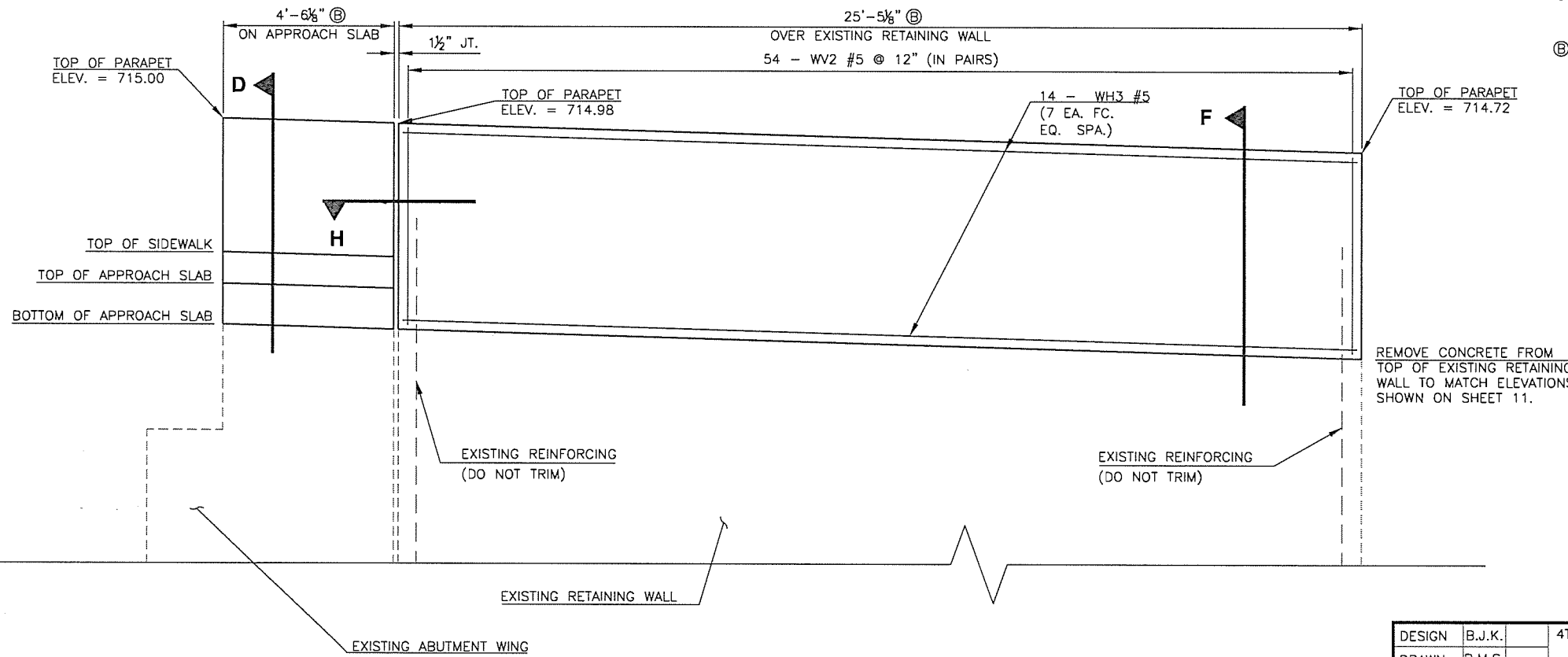
CONCRETE PARAPET 1 - B ELEVATION
(APPROACH SLAB NO. 1)

WV BARS MUST BE LAPPED WITH EXISTING RETAINING WALL VERTICAL REINFORCING

NOTE:
FOR SECTIONS A, D, E, F, G, AND H, SEE SHEETS 27 AND 28.

(A) PARAPET CURVED TO MATCH EXISTING RETAINING WALL. DISTANCE MEASURED ALONG ROADWAY FACE OF PARAPET.

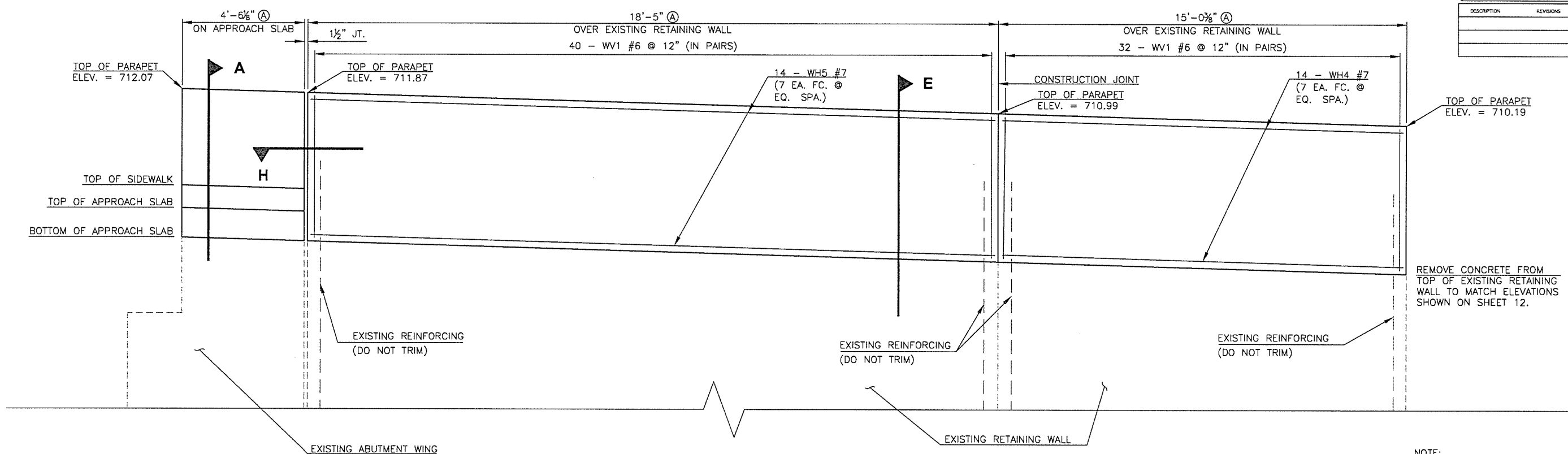
(B) MEASURED ALONG ROADWAY FACE OF PARAPET.



CONCRETE PARAPET 3 - B ELEVATION
(APPROACH SLAB NO. 1)

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.	APPROACH SLAB PARAPET DETAILS (SHEET 2 OF 3)	
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 30

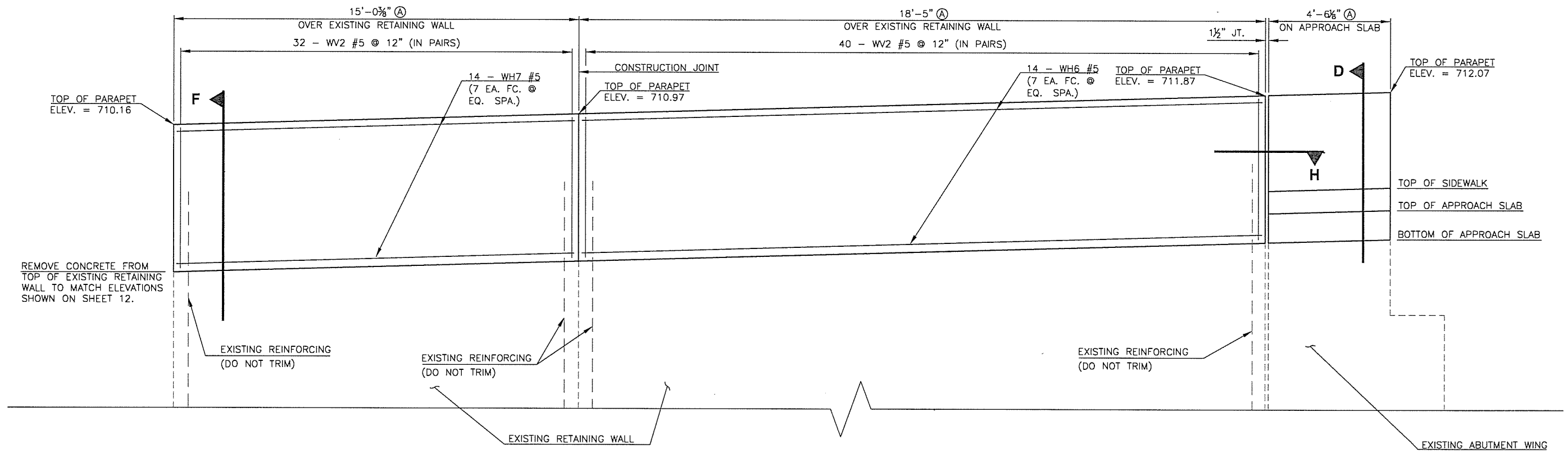
CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE



CONCRETE PARAPET 1 - C ELEVATION
(APPROACH SLAB NO. 2)

WV BARS MUST BE LAPPED WITH EXISTING RETAINING WALL VERTICAL REINFORCING

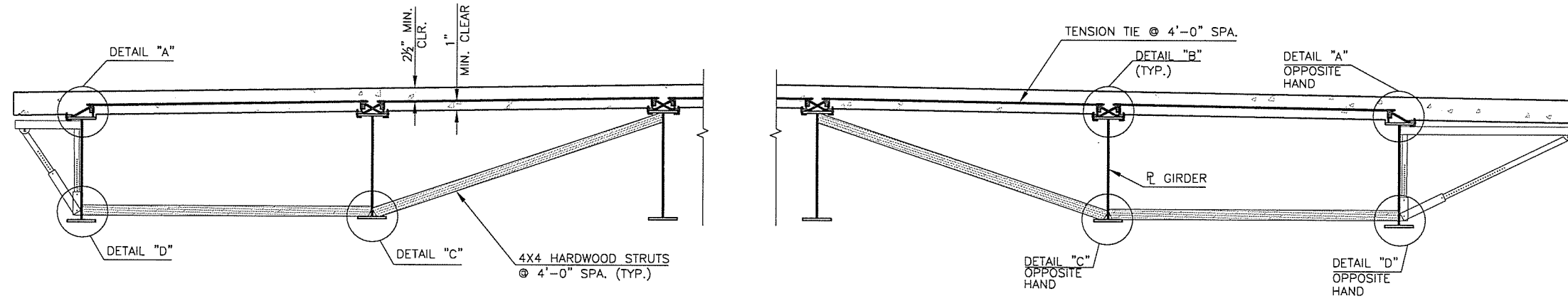
NOTE:
FOR SECTIONS A, D, E, F,
AND H, SEE SHEETS 27 AND 28.
Ⓐ MEASURED ALONG ROADWAY FACE OF PARAPET.



CONCRETE PARAPET 3 - C ELEVATION
(APPROACH SLAB NO. 2)

DESIGN	B.J.K.	4TH OVER I-444	TULSA COUNTY
DRAWN	B.M.S.	APPROACH SLAB PARAPET DETAILS (SHEET 3 OF 3)	
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 31

DESCRIPTION	REVISIONS	DATE



BEAM BRACING FOR DECK SLAB PLACEMENT

BRACING NOTES:

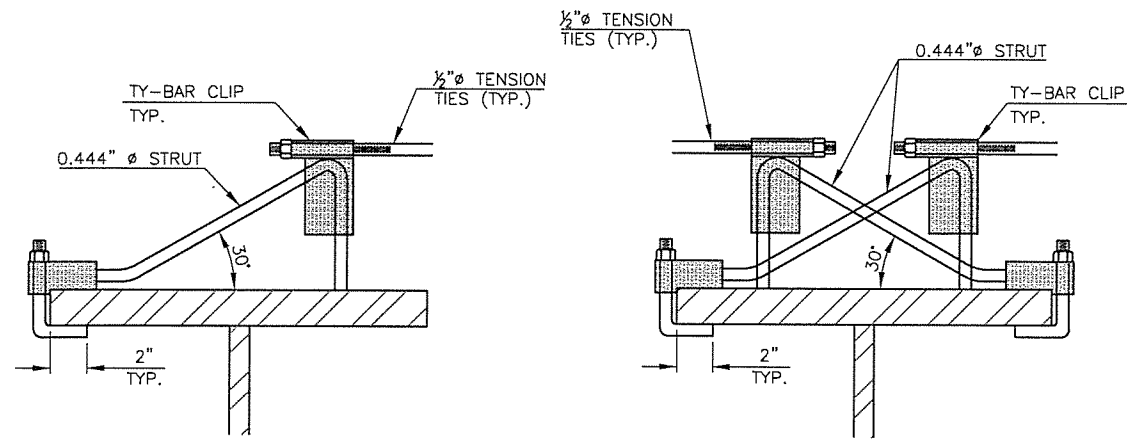
SUBMIT DRAWINGS OF THE BRACING SYSTEM TO THE BRIDGE ENGINEER FOR APPROVAL. BRACING SYSTEMS OTHER THAN THAT SHOWN MAY BE USED IF DESIGN CALCULATIONS AND DRAWINGS OF THE PROPOSED BRACING SYSTEM ARE SUBMITTED TO AND APPROVED BY THE BRIDGE ENGINEER. DRAWINGS AND CALCULATIONS OF THE PROPOSED SYSTEM SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA. DO NOT PLACE DECK SLAB CONCRETE UNTIL BRACING SYSTEM IS APPROVED. THE DEPARTMENT CONSIDERS ALL COST FOR BRACING TO BE INCLUDED IN OTHER ITEMS OF WORK.

USE ADJUSTABLE CANTILEVER FORMING BRACKETS AT EXTERIOR BEAMS CAPABLE OF BEING ADJUSTED DURING THE PLACEMENT OF DECK SLAB CONCRETE IN ORDER TO MAINTAIN PROPER GRADES AT THE DECK SLAB OVERHANG. IF SHIMS ARE TO BE USED TO ADJUST THE FORMING BRACKETS, PROVIDE THE BRIDGE ENGINEER A METHOD TO PREDICT CRUSH AND SETTLEMENT OF SHIMS. BEAR THE LEG BRACE OF THE BRACKETS ON THE BEAM WEB WITHIN 6 INCHES OF THE BOTTOM FLANGE.

THE BEAMS SHALL BE TIED TOGETHER AT 4'-0" INTERVALS AS SHOWN IN THE DETAILS.

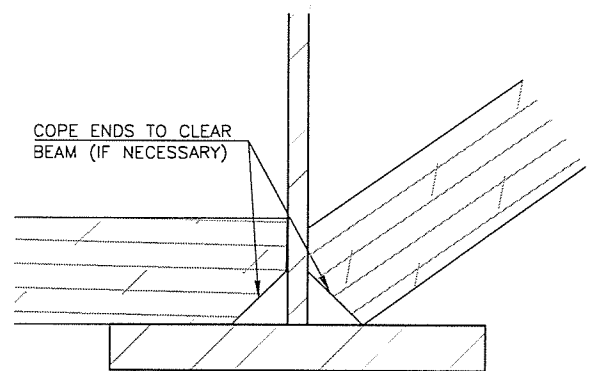
WOOD STRUTS SHALL BE HARDWOOD OR OF AN EQUIVALENT STRENGTH MATERIAL. WEDGE STRUTS BETWEEN GIRDER WEBS WITHIN 6" OF THE BOTTOM FLANGE OF EACH BEAM. LOCATE WOOD STRUTS WHERE THE TOP OF THE BEAMS ARE TIED TOGETHER WITH TENSION TIES.

TENSION TIES SHALL BE A MINIMUM #4 EPOXY-COATED REINFORCING STEEL BARS WITH THREADED ENDS ON 0.5" GALVANIZED ALL-THREAD, FURNISHED BY THE CONTRACTOR. THE TENSION TIES SHALL BE PLACED PERPENDICULAR TO THE BEAMS. TENSION TIES SHALL BE ATTACHED TO THE TOP FLANGE OF BEAMS BY MEANS OF TY-BAR CLIPS AS SHOWN ON THE DETAILS. TY-BAR CLIPS SHALL BE EPOXY COATED. WELDING OF CLIPS TO THE TOP FLANGE OF BEAMS WILL NOT BE PERMITTED.

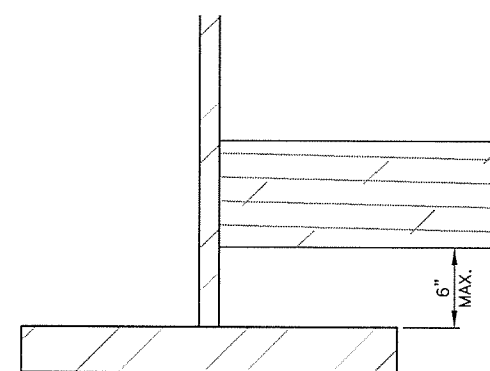


DETAIL "A"

DETAIL "B"



DETAIL "C"



DETAIL "D"

DESIGN	B.J.K.	4TH OVER 1-444	TULSA COUNTY
DRAWN	R.A.P.		
CHECKED	B.J.K., J.W.H.		
APPROV.	T.A.C.		
SQUAD	CEC	JOB PIECE NO. 28868(04)	SHEET NO. 32

BEAM BRACING DETAILS