

STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED  
**STATE HIGHWAY**  
FEDERAL AID PROJECT NO. STP-XXXX(000)EC  
BRIDGE AND APPROACH PLANS  
SH-9 OVER FLAT ROCK CREEK & WALLACE CREEK  
**MCINTOSH COUNTY**

CONTROL SECTION NO. 09-46-10  
STATE JOB NO. 33793(04)

BRIDGE "A" LOCATION NO. 4610 1166X EXISTING NBI NO. 05447 NEW NBI NO. XXXXX  
BRIDGE "B" LOCATION NO. 4610 1187X EXISTING NBI NO. 05448 NEW NBI NO. XXXXX

OKLAHOMA DEPARTMENT OF TRANSPORTATION

THIS DOCUMENT IS PRELIMINARY  
IN NATURE AND IS NOT A FINAL,  
SIGNED AND SEALED DOCUMENT.  
MAY 1, 2024


OKLAHOMA DEPARTMENT OF TRANSPORTATION

**FINAL FIELD  
REVIEW**  
MAY 1, 2024

FOR SURVEY CONTROL DATA,  
SEE SURVEY DATA SHEETS

SEE SHEET 0002  
FOR INDEX OF SHEETS  
AND STANDARDS

DESIGN DATA	
ADT 2022	= 1,200
ADT 2042	= 1,700
DHV (2-WAY)	= 210
K (DHV/ADT)	= 12%
D	= 57%
T (% DHV)	= 6%
T (% ADT)	= 8%
T <sup>2</sup> (% ADT)	= 5%
V	65MPH
20 YR FLEX ESALS	= 1.56M

SCALES   
PLAN 1" = 50'  
PROFILE HOR. 1" = 50'  
VER. 1" = 5'  
LAYOUT MAP 1" = 2,640'

- CONVENTIONAL SYMBOLS
- PROPOSED ROAD
  - RAILROADS
  - RANGE & TOWNSHIP SECTION LINES
  - QUARTER SECTION LINES
  - EXISTING FENCE
  - PROPOSED FENCE
  - GROUND LINE
  - EXISTING ROADS
  - BASE LINE
  - GRADE LINES
  - TELEPHONE & TELEGRAPH
  - POWER LINES
  - BUILDINGS
  - OILWELL
  - DRAINAGE STRUCTURES - IN PLACE
  - DRAINAGE STRUCTURES - NEW
  - RIGHT-OF-WAY LINES - EXISTING
  - RIGHT-OF-WAY LINES - NEW
  - CONTROLLED ACCESS
  - RIGHT-OF-WAY FENCE

STA. 1504+65.00  
END INCIDENTAL CONST.

STA. 1500+40.33  
END PROJECT  
BEGIN INCIDENTAL CONST.

BEGIN STA. 1483+54.90  
LENGTH = 74.48' BRIDGE "B"

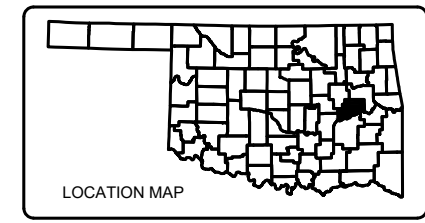
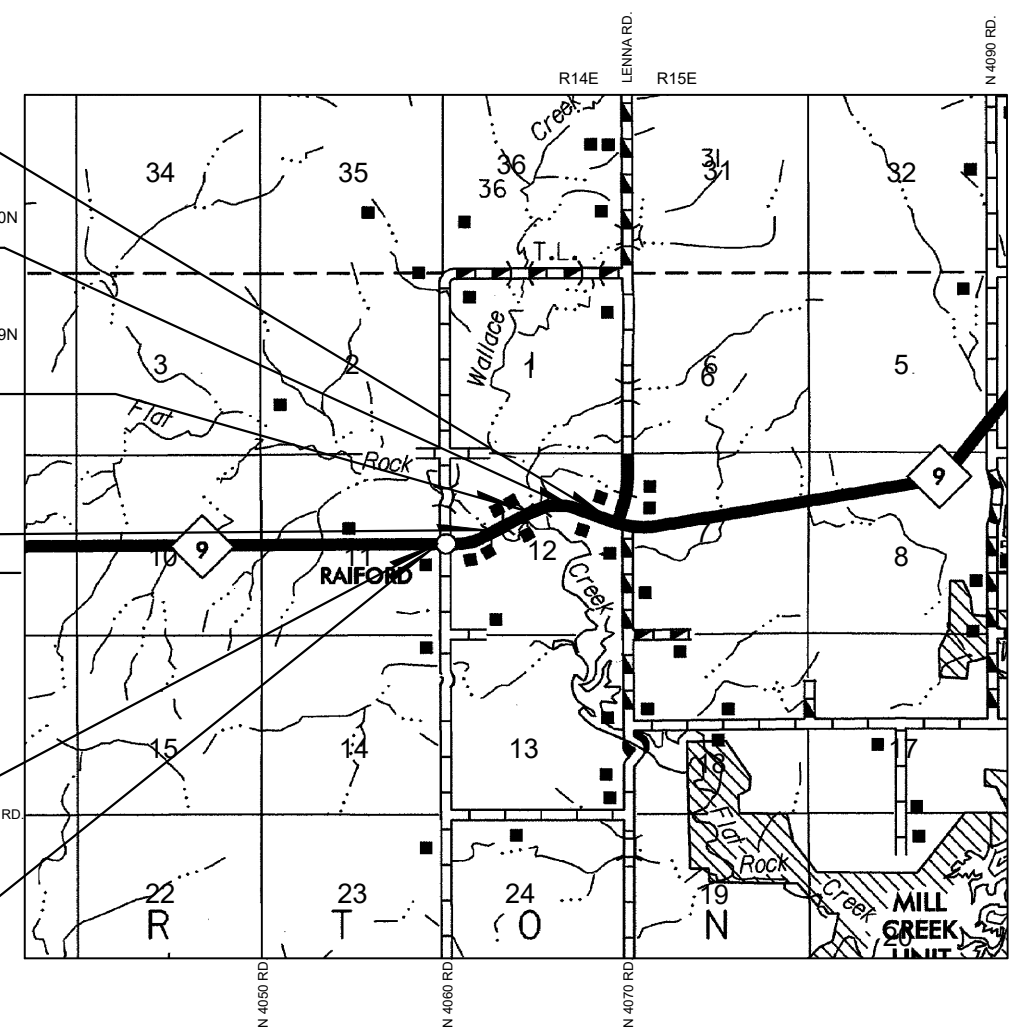
END STA. 1484+29.38

BEGIN STA. 1471+14.75  
LENGTH = 178.50' BRIDGE "A"

END STA. 1472+93.25

STA. 1456+00.00  
END INCIDENTAL CONST.  
BEGIN PROJECT


STA. 1452+00.00  
BEGIN INCIDENTAL CONST.



ROADWAY LENGTH	4187.19	FT.	0.793	MI.
BRIDGE "A" LENGTH	178.50	FT.	0.034	MI.
BRIDGE "B" LENGTH	74.48	FT.	0.014	MI.
PROJECT LENGTH			0.841	MI.

EQUATIONS : NONE  
EXCEPTIONS : NONE

PREPARED AND SUBMITTED BY:




**HOLLOWAY, UPDIKE & BELLEN, Inc.**  
818 East Side Boulevard  
Post Office Box 1543  
Mustoge, Oklahoma 74402  
(918) 682-7811

NO. CA 219  
EXPIRES 06/23


00/00/2022  
DATE


WESLEY M. STEWART  
P.E. NO. 24031



00/00/2022  
DATE

RYAN FRANCKA  
P.E. NO. 26497





OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED _____ BY _____ CHIEF ENGINEER	DATE APPROVED _____ BY _____ DIVISION ADMINISTRATOR
SWO SWO 5445(1) COUNTY MCINTOSH	PROJECT NO. 33793(04) HIGHWAY SH-9 SHEET NO. 0001



P.E. NO. : 28989(01)

2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION DECEMBER 18, 2019.

**FINAL FIELD REVIEW**

MAY 1, 2024

THE FOLLOWING STANDARD DRAWINGS WILL BE REQUIRED TO CONSTRUCT THIS JOB

<u>2019 ROADWAY</u>	<u>2009 TRAFFIC CONTROL</u>	<u>2009 TRAFFIC SIGNING</u>	<u>2009 TRAFFIC SAFETY</u>	<u>2009 BRIDGE</u>
BMPR-0	TCS1-1-01	DU1-1-00	GA31-1-00	TR4-2-00E
TESCA-0	TCS2-1-00	DU2-1-00	GHW1-1-00	EJ-SK-04E
IPD-0	TCS3-1-01	GMS1-1-00	GHW2-1-00	EJ-DTL-02E
RSF-0	TCS4-1-01	GMS2-1-00	RS1-2-00	HP1-2-01E
TSD-0	TCS5-1-00	PM3-1-00	SKT-1-00	RCB-C1-10(2-14)-01E
SCE-0	TCS6-1-02	SBS1-1-00	THRI-1-02	RCB-CW1-D4-30
SSS-2-1	TCS7-1-02	SBS2-1-00		RCB-CW3-D4-01E
ASCD-6-2	TCS8-1-00	SBS3-1-00		RCB-E1-H4-30-1-01E
LECS-5-2	TCS9-1-01	SBS4-1-00		RCB-E1-H4-30-2-01E
SMD-4-2	TCS10-1-00	SBS5-1-00		RCB-E1-H4-30-3-01E
CET4S-4-2	TCS11-1-01	SSA1-1-00		
SPI-5-2	TCS13-1-00	SSP1-1-02		
PBB-1-2	TCS14-1-00	SZSD1-1-00		
FHTMPP-2-1	TCS19-1-01	WSD1-1-00		
FHTCD-4-1	TCS20-1-00	WSD2-1-00		
SBI-5-2	TCS21-1-02	WSD3-1-00		
PUD-4-1	TCS22-1-00			
PDT-2-2	TCS23-1-00			
RWF2-3-1	TCS24-1-02			
SUEL1-4-1	TCS25-1-00			
SUEL3-4-1				

THE FOLLOWING SHEETS WILL BE REQUIRED TO COMPLETE THIS JOB

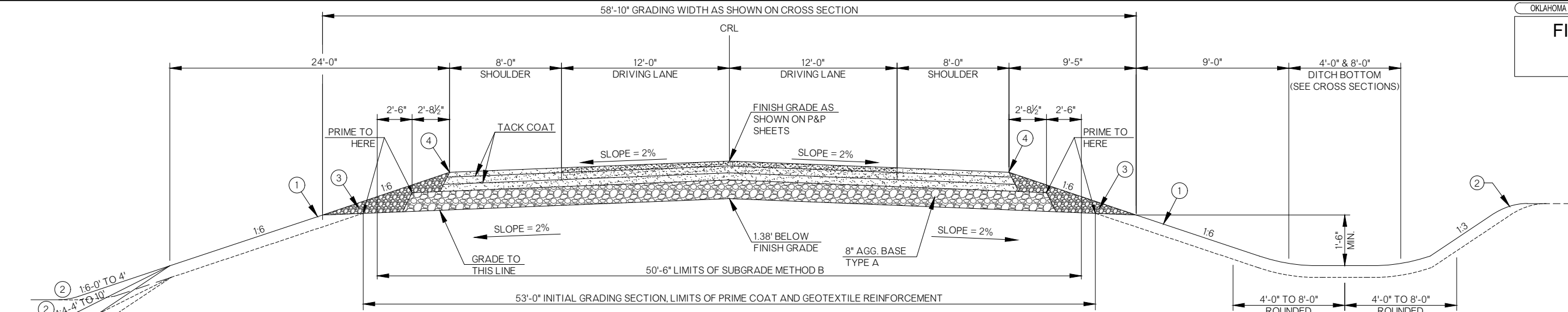
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
0001	TITLE SHEET
0002	INDEX OF SHEETS
0003-0004	TYPICAL SECTIONS
AB01-AB02	GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)
AE01	ENVIRONMENTAL NOTES
AR01	SUMMARY OF PAY QUANTITIES AND NOTES (ROADWAY)
AT01	SUMMARY OF PAY QUANTITIES AND NOTES (TRAFFIC)
AT02	SUMMARY OF PAY QUANTITIES AND NOTES (SIGNING & STRIPING)
AX01-AX03	SUMMARY SHEETS
B001-B002	GENERAL PLAN AND ELEVATION - BRIDGE "A"
B003-B005	SUBSURFACE PROFILE
B006	SUBSTRUCTURE LAYOUT
B007-B010	ABUTMENT DETAILS
B011-B012	PIER DETAILS
B013-B023	SUPERSTRUCTURE DETAILS
B024	APPROACH SLAB DETAILS
B025-B026	GENERAL PLAN AND ELEVATION - BRIDGE "B"
B027-B030	R.C.B. DETAILS
R001	DRAINAGE MAP
R002	STORMWATER MANAGEMENT PLAN
R003-R006	PLAN AND PROFILES
R007-R008	EROSION CONTROL
R009-R010	GEOMETRIC LAYOUT
R011-R012	MASS HAUL
R013-R014	REMOVAL DETAILS
R015-R018	SUGGESTED CONSTRUCTION SEQUENCE
S001-S011	SURVEY DATA SHEETS
T001	ADVANCED WARNING (SH-9)
T002	ADVANCED WARNING (N. 4060 RD.)
T003	ADVANCED WARNING (N. 4070 RD.)
T004-T006	TRAFFIC CONTROL (PHASE 1)
T007-T009	TRAFFIC CONTROL (PHASE 2)
T010-T012	TRAFFIC CONTROL (PHASE 3)
T013-T015	TRAFFIC CONTROL (PHASE 4)
T016-T017	SIGNING AND STRIPING
X001-X031	CROSS SECTIONS

HUB ENGINEERS  
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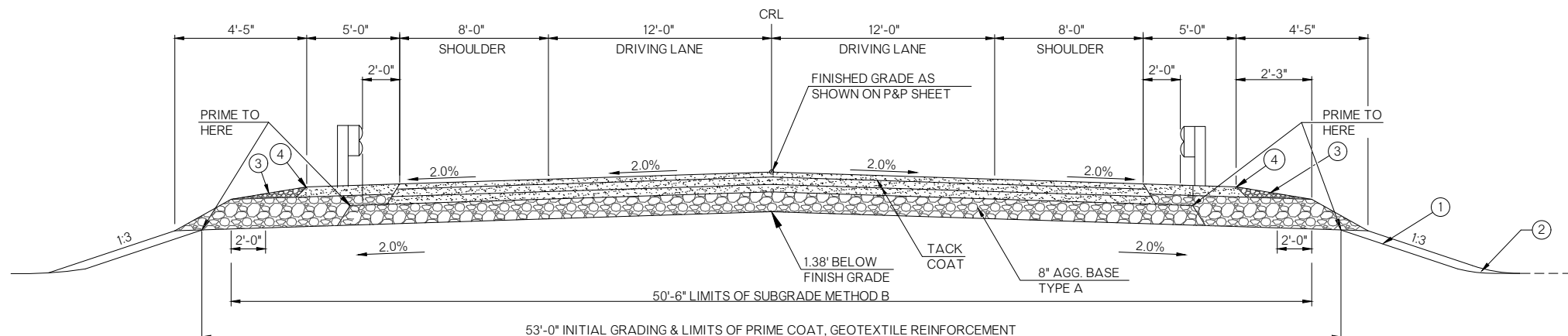
DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION  <b>INDEX OF SHEETS</b>
DRAWN			
CHECKED			
APPROVED			
SQUAD		ENGINEERS	
COUNTY	MCINTOSH	HIGHWAY SH-9	STATE JOB NO. 33793(04) SHEET NO. 0002



**TYPICAL SECTION 1**  
STA. 1456+00 TO STA. 1500+40.33  
EXCEPT BRIDGE "A"

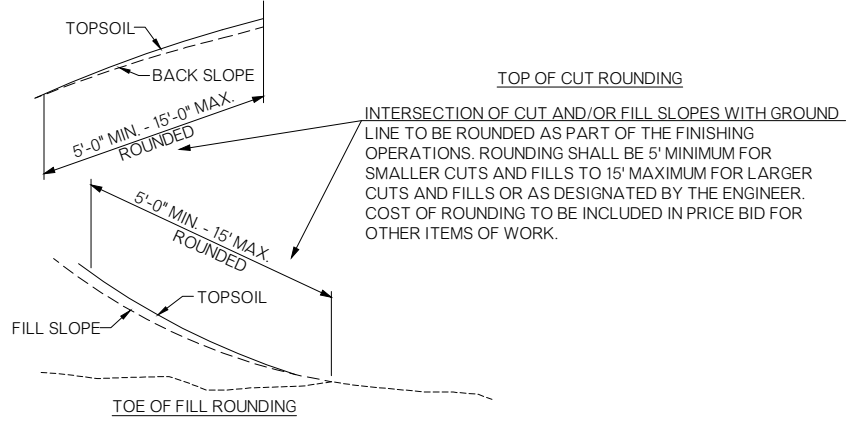
ASPHALT CONCRETE REQUIREMENTS		
MAINLINE TYPICAL	12' DRIVING LANES	8' PAVED SHOULDERS
8.5" PAVT. STRUCTURE	2" SUPERPAVE TYPE S4 PG 64-22 OK	2" SUPERPAVE TYPE S4 PG 64-22 OK
SURFACE COURSE	3" SUPERPAVE TYPE S3 PG 64-22 OK	3" SUPERPAVE TYPE S3 PG 64-22 OK
INTERMEDIATE COURSE	3.5" SUPERPAVE TYPE S3 PG 64-22 OK	3.5" SUPERPAVE TYPE S3 PG 64-22 OK
BASE COURSE		

- \* UNLESS OTHERWISE SHOWN ON CROSS SECTIONS.
- ① THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL WITHIN THE LIMITS OF CONSTRUCTION, APPROXIMATELY 5" DEEP, STOCKPILE THE MATERIAL AND REPLACE THE TOPSOIL ON THE FINISHED SLOPES OF THE GRADING SECTION. ALL ADDITIONAL COSTS NOT COVERED IN OTHER ITEMS SHALL BE INCLUDED IN THE LUMP SUM TOPSOIL ITEM AS FOLLOWS:  
THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE MASSLINE BALANCE.
  - ② SEE ROUNDING DETAIL.
  - ③ TO BE BACKFILLED AND COMPACTED AS PART OF FINISHING OPERATIONS. QUANTITY IS MEASURED IN TBSC TYPE E.
  - ④ CONSTRUCT ASPHALT SAFETY EDGE AS SHOWN IN SPECIAL PROVISION 411-14 AND STANDARD PSE-1.
  - ⑤ TO BE BACKFILLED AND COMPACTED AS PART OF FINISHING OPERATIONS. QUANTITY IS MEASURED IN UNCLASSIFIED BORROW.



**TYPICAL SECTION 2**  
STA. 1468+82.50 TO STA. 1475+20.00  
STA. 1481+69.82 TO STA. 1486+15.00

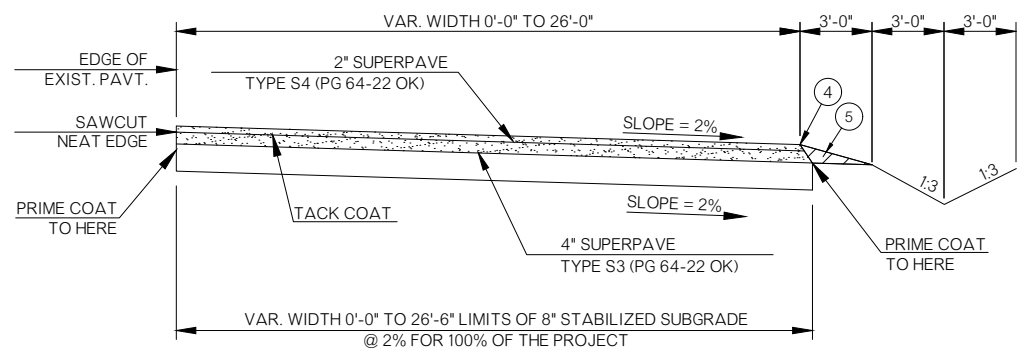
ASPHALT CONCRETE REQUIREMENTS			
MAINLINE TYPICAL	12' DRIVING LANES	8' PAVED SHOULDERS	5' GUARDRAIL WIDENING
8.5" PAVT. STRUCTURE	2" SUPERPAVE TYPE S4 PG 64-22 OK	2" SUPERPAVE TYPE S4 PG 64-22 OK	4" SUPERPAVE TYPE S4 PG 64-22 OK
SURFACE COURSE	3" SUPERPAVE TYPE S3 PG 64-22 OK	3" SUPERPAVE TYPE S3 PG 64-22 OK	
INTERMEDIATE COURSE	3.5" SUPERPAVE TYPE S3 PG 64-22 OK	3.5" SUPERPAVE TYPE S3 PG 64-22 OK	
BASE COURSE			



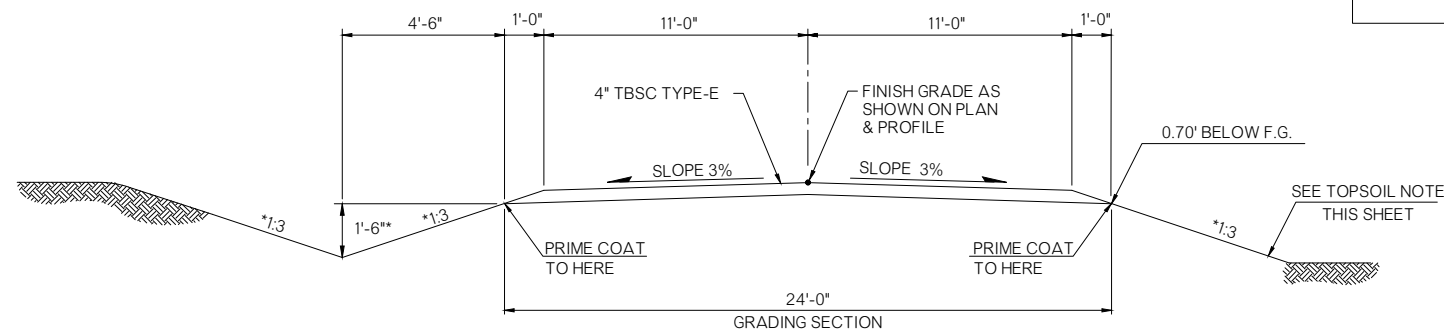
**ROUNDING DETAIL**

DESIGN	WS	11/21	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	FLK	11/21	
CHECKED	WS	11/21	
APPROVED			
SQUAD	ENGINEERS		
<b>TYPICAL SECTIONS (1 OF 2)</b>			
COUNTY	MCINTOSH	HIGHWAY	SH-9 STATE JOB NO. 33793(04) SHEET NO. 0003

MUB E n g i n e e r s  
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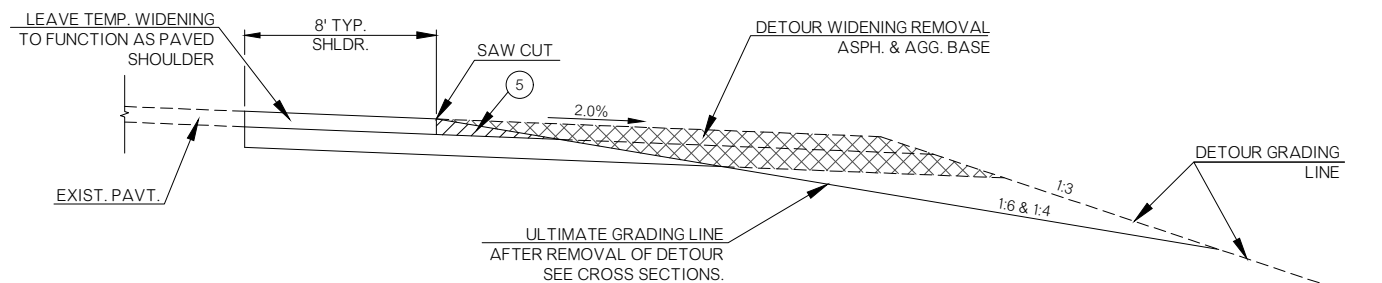


**TEMPORARY WIDENING TYPICAL SECTION**



**COUNTY RD. TYPICAL SECTION**

STA. 0+00 TO 10+00



**DETOUR WIDENING REMOVAL DETAIL**

MUB Engineering  
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DESIGN	WS	11/21	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	FLK	11/21	
CHECKED	WS	11/21	
APPROVED			
SQUAD		ENGINEERS	
COUNTY	MCINTOSH	HIGHWAY	SH-9 STATE JOB NO. 33793(04) SHEET NO. 0004

**TYPICAL SECTIONS  
(2 OF 2)**

**GENERAL NOTES**

**SPECIFICATIONS -**

COMPLY WITH THE REQUIREMENTS OF THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

**EXISTING PLANS -**

THE EXISTING STRUCTURE WAS ORIGINALLY CONSTRUCTED AS PART OF FEDERAL AID PROJECT NO. F-236 (96). CONSTRUCTION PLANS FOR THE EXISTING STRUCTURE(S) MAY BE OBTAINED FROM THE OFFICE SERVICES DIVISION OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION.

PHYSICAL ADDRESS: OKLAHOMA DEPARTMENT OF TRANSPORTATION  
200 NE 21ST STREET  
OKLAHOMA CITY, OKLAHOMA 73105  
405-521-2586

FOR QUESTIONS AND CONCERNS REGARDING AS-BUILT PLANS, PLEASE EMAIL: ODOT-PlansLibrary@odot.org

**PILE DRIVING -**

USE A PILE DRIVING HAMMER OF THE SIZE AND TYPE CAPABLE OF CONSISTENTLY DELIVERING THE EFFECTIVE DYNAMIC ENERGY TO DRIVE THE PILES TO THE REQUIRED TIP ELEVATION AND TO ACHIEVE AN AXIAL LOAD RESISTANCE EQUAL TO OR GREATER THAN THE FACTORED PILE REACTION WITHOUT EXCEEDING THE LIMITATIONS SET ON THE ALLOWABLE DRIVING STRESSES IN ACCORDANCE WITH SUBSECTION 514.03.A.(2) OF THE SPECIFICATIONS.

**PILE CAPACITY -**

THE REQUIRED PILE SIZE AND THE FACTORED PILE REACTION ARE SHOWN IN THE PLANS WITH THE FOUNDATION DATA. THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES:

$$\text{AXIAL LOAD RESISTANCE} = \text{PHI} * [\text{SQRT} (E) * 0.875 * \text{LG} (10 * N) - 50] \text{ (TONS)}$$

WHERE: PHI = RESISTANCE FACTOR OF 0.4  
E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.  
N = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.  
SQRT = SQUARE ROOT  
LG = LOGARITHM TO THE BASE 10

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN CERTAIN CONDITIONS APPLY: THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY & SINGLE ACTING HAMMERS ONLY); THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED; THE PENETRATION IS QUICK AND UNIFORM; THERE IS NO APPRECIABLE REBOUND OF THE HAMMER; AND A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD, AS DETERMINED BY THE ENGINEER.

IF WATER JETS ARE USED IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

**CONCRETE -**

PROVIDE ALL PEDESTAL CONCRETE EDGES WITH A 3/4" CHAMFER. PROVIDE ALL OTHER EXPOSED CONCRETE EDGES OF THE SUBSTRUCTURE WITH A 1 1/2" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. PROVIDE ALL EXPOSED CONCRETE EDGES OF THE SUPERSTRUCTURE WITH A 3/4" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. USE SIZED LUMBER FOR ALL CHAMFER STRIPS.

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 ROLLED BEAMS 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 DEAD LOAD DEFLECTION AND VERTICAL CURVE.

THE CONTRACTOR MAY SUBSTITUTE PLATE GIRDERS USING EQUIVALENT PLATE SIZES IN LIEU OF THE ROLLED BEAM SHAPES SHOWN IN THE PLANS AT NO ADDITIONAL COST TO THE DEPARTMENT. PROVIDE 5/16" MINIMUM FILLET WELDS BETWEEN WEB AND FLANGES. NON-DESTRUCTIVE TESTING WILL BE REQUIRED AS APPROPRIATE.

THE CONTRACTOR MAY SUBSTITUTE A W40x183 ROLLED BEAM IN LIEU OF THE SPAN NO. 2 PLATE GIRDER SHOWN IN THE PLANS AT NO ADDITIONAL COST TO THE DEPARTMENT. PROVIDE SIMILAR BEARING STIFFENERS AND CONNECTION PLATES. NON-DESTRUCTIVE TESTING WILL BE REQUIRED AS APPROPRIATE. PROVIDE STRUCTURAL STEEL FOR CHANNEL DIAPHRAGMS AND GUSSET PLATES IN ACCORDANCE 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.

THE CONTRACTOR MAY SUBSTITUTE A BENT PLATE DIAPHRAGM IN LIEU OF THE CHANNEL AND GUSSET PLATES SHOWN IN THE PLANS AT NO ADDITIONAL COST TO THE DEPARTMENT. PROVIDE 1/2" MINIMUM PLATE THICKNESS FORMED IN THE SHAPE OF THE CHANNEL WITH 4" MINIMUM FLANGES. FABRICATE BENT PLATE DIAPHRAGM TO A DEPTH EQUAL TO OR GREATER THAN SHOWN FOR THE COMBINED CHANNEL AND GUSSET PLATE. ALL COST TO CONSTRUCT BENT PLATE DIAPHRAGM SHALL BE AT CONTRACTOR'S EXPENSE.

PROVIDE STRUCTURAL STEEL FOR ANCHOR PLATES, CONTACT PLATES, AND BUILT-UP CONTACT ANGLES IN ACCORDANCE WITH ASTM A240 (AUSTENITIC STAINLESS STEEL, TYPE 316, CHARPY V-NOTCH TESTING NOT REQUIRED). FOR ANCHOR BOLTS, PROVIDE CONTINUOUSLY THREADED BARS IN ACCORDANCE WITH ASTM A320, CLASS 2, GRADE 8M (AUSTENITIC STAINLESS STEEL, TYPE 316, CHARPY V-NOTCH TESTING NOT REQUIRED). USE AUSTENITIC STAINLESS STEEL NUTS AND WASHERS CONFORMING TO ASTM A194, GRADE 8M AND ASTM A320, RESPECTIVELY. PERFORM ALL WELDING CONSISTENT WITH PROCEDURES FOR STAINLESS STEEL.

**STAY-IN-PLACE DECK FORMS -**

THE CONTRACTOR MAY USE STAY-IN-PLACE STEEL DECK FORMS IF THE MINIMUM DECK SLAB THICKNESS SHOWN IN THE PLANS IS OBTAINED BY MEASURING FROM THE TOP OF THE DECK SLAB TO THE TOP PORTION OF THE STEEL CORRUGATION. PREFORMED CORRUGATION FILLER, COMPOSED OF POLYSTYRENE OR OTHER MATERIAL, MAY BE USED IF BONDED TO THE DECK FORMS. NO ADDITIONAL CONCRETE WEIGHT OF THE DECK SLAB IS PERMITTED. THE TOTAL ADDITIONAL WEIGHT OF THE DECK FORM AND FILLER SHALL NOT EXCEED 5 P.S.F. THE DEPARTMENT CONSIDERS ALL COSTS OF STAY-IN-PLACE STEEL DECK FORMS TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF CLASS AA CONCRETE.

THE CONTRACTOR MAY SUBSTITUTE STAY-IN-PLACE PRESTRESSED CONCRETE DECK FORMS, AT NO ADDITIONAL COST TO THE DEPARTMENT, IF THE FOLLOWING CONDITIONS ARE MET:

- (1) THE BRIDGE ENGINEER APPROVES SHOP DRAWINGS AND STRUCTURAL CALCULATIONS FOR THE FORMS SUBMITTED BY THE CONTRACTOR.
- (2) THE BRIDGE ENGINEER APPROVES A NEW STRUCTURAL DESIGN, STRUCTURAL CALCULATIONS, AND NEW REINFORCING SCHEDULE FOR THE DECK SLAB SUBMITTED BY THE CONTRACTOR.
- (3) SHOP DRAWINGS, NEW DECK SLAB REINFORCING SCHEDULE, STRUCTURAL DESIGNS, AND CALCULATIONS ARE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA.

**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.

PLACE THE DECK SLAB CONCRETE ONE SPAN AT A TIME IN ACCORDANCE WITH SECTION 504.04.B OF THE SPECIFICATIONS. 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 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 THE 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.

**STEEL BEAM BRACING FOR DECK SLAB PLACEMENT -**

SUBMIT DRAWINGS OF THE BRACING SYSTEM TO THE BRIDGE ENGINEER FOR APPROVAL. BRACING SYSTEMS OTHER THAN THAT SHOWN IN THE PLANS 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 THE 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 AND WITHIN 6 INCHES OF THE BOTTOM FLANGE.

USE #4 EPOXY COATED REINFORCING STEEL WITH THREADED ENDS OR GALVANIZED ALL THREAD FOR TENSIONS TIES. PLACE TENSION TIES PERPENDICULAR TO THE BEAMS. ATTACH TENSION TIES TO THE TOP FLANGE OF THE BEAMS WITH TY-BAR CLIPS AS SHOWN IN THE PLANS. DO NOT WELD TY-BAR CLIPS TO THE TOP FLANGE OF THE BEAMS.

WEDGE HARDWOOD STRUTS, OR ANOTHER MATERIAL OF AN EQUIVALENT STRENGTH, BETWEEN THE BEAM WEBS WITHIN 6" OF THE BOTTOM FLANGE AT EACH TENSION TIE LOCATION.

**WATER REPELLENT TREATMENT -**

APPLY WATER REPELLENT TREATMENT TO THE BRIDGE IN MANNER CONSISTENT WITH THE DETAILS SHOWN IN THE PLANS.

**SOFTWARE -**

- (1) WHITE ENGINEERING ASSOCIATES, INC. DECK SLAB DESIGN (VERSION 2.06, 10-12-07)
- (2) WHITE ENGINEERING ASSOCIATES, INC. BRIDGE LOAD DISTRIBUTION (VERSION 1.10, 12-23-04)
- (3) MDX STEEL LINE GIRDER DESIGN AND RATING (VERSION 6.5.655, 10-16-09)
- (4) WHITE ENGINEERING ASSOCIATES, INC. ELASTOMERIC BEARING PAD DESIGN (VERSION 3.00, 12-30-09)
- (5) WHITE ENGINEERING ASSOCIATES, INC. PIER DESIGN (VERSION 2.02, 09-24-07)
- (6) IES VISUALANALYSIS (VERSION 4.01.013, 02-01-02)
- (7) STRUCTUREPOINT SPCOLUMN (VERSION 7.00, 12-19)
- (8) WHITE ENGINEERING ASSOCIATES, INC. ABUTMENT/RETAINING WALL DESIGN (VERSION 2.00, 10-19-07)

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT

S.H.9 OVER FLAT ROCK & WALLACE CREEK BRIDGES "A" & "B" McINTOSH COUNTY

**GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)**

Design	RMF	
Detail	DRB	
Check	RMF	



**PAY ITEM NOTES**

- (BR-1) PAYMENT TO THE CONTRACTOR WILL BE BASED ON PLAN QUANTITIES.
- (BR-2) THE CONTRACTOR MAY PLACE CONCRETE AGAINST THE LIMITS OF EXCAVATION IF THE MATERIAL IS EXCAVATED TO THE NEAT LINES OF THE SUBSTRUCTURE AND APPROVED BY THE ENGINEER. IF NECESSARY, USE FORMS AT VERTICAL FACES AND REMOVE THE FORMS AFTER CONCRETE HARDENS. IF THE CONTRACTOR CHOOSES TO PLACE CONCRETE AGAINST THE SOIL, THE DEPARTMENT WILL PAY FOR SUBSTRUCTURE EXCAVATION COMMON IN ACCORDANCE WITH THE DIAGRAMS SHOWN IN THE PLANS.
- (BR-3) THE APPROACH SLABS CONTAIN AN ESTIMATED TOTAL OF 107.5 C.Y. OF CLASS AA CONCRETE AND 21,520 LB. OF EPOXY COATED REINFORCING STEEL.
- (BR-4) THE FIXED BEARING ASSEMBLIES CONTAIN AN ESTIMATED TOTAL OF 1,185 LB. OF STAINLESS STEEL.
- (BR-5) THE EXPANSION BEARING ASSEMBLIES CONTAIN AN ESTIMATED TOTAL OF 2,365 LB. OF STAINLESS STEEL.
- (BR-6) THE QUANTITY SHOWN FOR CLASS AA CONCRETE INCLUDES AN ESTIMATED 5.4 C.Y. FOR BEAM HAUNCHES.
- (BR-7) PAYMENT TO THE CONTRACTOR WILL BE BASED ON PLAN QUANTITIES UNLESS ADDITIONAL PILING LENGTH IS REQUIRED. ADDITIONAL PILES, FURNISHED, AS AUTHORIZED BY THE ENGINEER, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE.
- (BR-8) QUANTITY SHOWN INCLUDES TESTING AT EACH DRILLED SHAFT LOCATION.
- (BR-9) QUANTITY SHOWN FOR SEALER RESIN ESTIMATED AT 0.011 GALLONS PER FOOT OF CONSTRUCTION JOINT.
- (BR-10) QUANTITY SHOWN FOR RIPRAP ESTIMATED AT 120 LB. PER CUBIC FOOT.
- (BR-11) QUANTITY SHOWN FOR FILTER BLANKET ESTIMATED AT 105 LB. PER CUBIC FOOT.
- (BR-12) INCLUDE THE COST OF PIPE UNDERDRAIN COVER MATERIAL (BOTH FILTER SAND AND COARSE) AND FILTER FABRIC IN THE CONTRACT UNIT PRICE OF "6" PERFORATED PIPE UNDERDRAIN ROUND". INSTALL AS SHOWN IN THE ON PLANS AND ON STD. PUD-4.
- (BR-13) THE ENGINEER MAY ADJUST THE EXTENT, LOCATION AND DEPTH OF NON-PERFORATED PIPE UNDERDRAIN DURING CONSTRUCTION. INCLUDE THE COST OF TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL IN THE CONTRACT UNIT PRICE OF "6" NON-PERF. PIPE UNDERDRAIN RND". INSTALL AS SHOWN IN THE PLANS AND ON STD. PUD-4.
- (BR-14) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVING AND DISPOSING OF THE EXISTING BRIDGE IN ACCORDANCE WITH SUBSECTION 619.04.B OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE EXISTING BRIDGE IS DESCRIBED AS (5) 10'x9'x37' R.C.B.
- (BR-15) ITEM "TEMPORARY EARTH RETAINAGE" CONSISTS OF THE INSTALLATION AND REMOVAL OF THE TEMPORARY RETAINING STRUCTURES OR GEOGRID REINFORCED SOILS NECESSARY TO FACILITATE THE PROPOSED SEQUENCE OF CONSTRUCTION SHOWN IN THE PLANS. LOCATIONS OF POTENTIAL TEMPORARY RETAINAGE ARE FOR INFORMATIONAL PURPOSES ONLY AND HAVE NOT BEEN DESIGNED OR DETAILED. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL LIMITS NEEDED BASED ON THE CHOSEN MEANS AND METHODS AND SUBMITTING DESIGN CALCULATIONS AND DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA, IN ACCORDANCE WITH SUBSECTION 502.04D OF THE SPECIFICATIONS. DO NOT BEGIN INSTALLATION UNTIL BRIDGE ENGINEER APPROVAL HAS BEEN RECEIVED. INCLUDE ALL COST ASSOCIATED WITH PROFESSIONAL SERVICES, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT UNIT PRICE.
- (BR-16) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVING AND DISPOSING OF THE EXISTING BRIDGE IN ACCORDANCE WITH SUBSECTION 619.04.B OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE EXISTING BRIDGE IS DESCRIBED AS 60' STEEL I-BEAM SPAN BRIDGE WITH 26' CLEAR ROADWAY.

J.P. NO. 33793(04) 0200 BRIDGE "A" NBI NO. xxxxx			
PAY QUANTITIES			
S.H.9 OVER FLAT ROCK CREEK 50'-75'-50' STEEL I - BEAM SPANS 40'-0" CLR. RDWY. WITH TR4 TRAFFIC RAILS @ STA. 1472+04.00, 30° RT. FWD. SKEW			
ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
501(B) 1300	SUBSTRUCTURE EXCAVATION COMMON (BR-1, 2)	C.Y.	210
501(G) 1800	CLSM BACKFILL (BR-1)	C.Y.	251.8
504(A) 5200	APPROACH SLAB (BR-1, 3)	S.Y.	297.8
504(B) 5300	SAW-CUT GROOVING (BR-1)	S.Y.	1,075.8
504(D) 5420	CONCRETE RAIL (TR4) (BR-1)	L.F.	484.0
506(A) 7225	STRUCTURAL STEEL M270 GRADE 50W (BR-1)	LB.	156,400
507(A) 8200	STAINLESS STEEL FIXED BEARING ASSEMBLY (BR-1, 4)	EA.	10
507(B) 8300	STAINLESS STEEL EXP. BEARING ASSEMBLY (BR-1, 5)	EA.	20
509(A) 0210	CLASS AA CONCRETE (BR-1, 6)	C.Y.	200.1
509(B) 0320	CLASS A CONCRETE (BR-1)	C.Y.	178.5
511(B) 2310	EPOXY COATED REINFORCING STEEL (BR-1)	LB.	81,960
514(A) 5220	PILES, FURNISHED (HP 12x53) (BR-7)	L.F.	346
514(B) 5320	PILES, DRIVEN (HP 12x53)	L.F.	346
514(K) 6200	(PL) PILOT HOLES	L.F.	270
514(L) 6300	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.	1
515(A) 7200	WATER REPELLENT (VISUALLY INSPECTED) (BR-1)	S.Y.	596
516(A) 8230	DRILLED SHAFTS 48" DIAMETER	L.F.	102
516(C) 8400	CROSSHOLE SONIC LOGGING (BR-8)	EA.	1
517 9110	ELASTOMERIC COATING (BR-1)	S.F.	1,334
518(B) 0300	SEALED EXPANSION JOINTS (BR-1)	L.F.	49.2
523(A) 3200	SEALER CRACK PREPARATION (BR-1)	L.F.	47
523(B) 3300	SEALER RESIN (BR-1, 9)	GAL.	0.6
601(B) 1230	TYPE I-A PLAIN RIPRAP (BR-10)	TON	1,200
601(C) 1310	TYPE I-A FILTER BLANKET (BR-11)	TON	185
613(H) 6205	6" PERFORATED PIPE UNDERDRAIN ROUND (BR-12)	L.F.	96
613(I) 6310	6" NON-PERF. PIPE UNDERDRAIN RND. (BR-13)	L.F.	40
619(D) 6700	REMOVAL OF EXISTING BRIDGE STRUCTURE (BR-14)	L.SUM	1

J.P. NO. 33793(04) 0600 STAKING			
ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
642(B) 3300	CONSTRUCTION STAKING LEVEL II	L.SUM	1

J.P. NO. 33793(04) 0640 CONSTRUCTION			
ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
220 1100	SWPPP DOCUMENTATION AND MANAGEMENT	L.SUM	1
641 2100	MOBILIZATION	L.SUM	1

J.P. NO. 33793(04) 0201 BRIDGE "B" NBI NO. xxxxx			
PAY QUANTITIES			
S.H.9 OVER WALLACE CREEK (3) 20' x 12' x 97' LONG R.C.B. @ STA. 1483+92.00, 30°SKEW			
ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
202(A) 2210	UNCLASSIFIED EXCAVATION (BR-1)	C.Y.	3,990
501(A) 1210	STRUCTURAL EXCAVATION UNCLASSIFIED (BR-1)	C.Y.	730
502 3100	TEMPORARY EARTH RETAINAGE (BR-15)	L.SUM	1
509(A) 0210	CLASS AA CONCRETE (BR-1)	C.Y.	1,427.1
511(A) 2210	REINFORCING STEEL (BR-1)	LB.	268,790
619(D) 6700	REMOVAL OF EXISTING BRIDGE STRUCTURE (BR-16)	L.SUM	1

PRELIMINARY

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S.H.9 OVER FLAT ROCK & WALLACE CREEK McINTOSH COUNTY BRIDGES "A" & "B"		Design	RMF
		Detail	DRB
GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)		Check	RMF
<b>CEC</b>			
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION	
JOB PIECE NO. 33793(04)		SHEET NO. AB02	

**ENVIRONMENTAL MITIGATION NOTES**

**ENVIRONMENTAL MITIGATION NOTES**

REVISIONS		
REV. NO.	DESCRIPTION	DATE

**EARTHWORK NOTE:**

THE CONTRACTOR MUST ENSURE THAT ANY MATERIAL INCORPORATED INTO THE PROJECT IS FREE OF ANY HAZARDOUS, INDUSTRIAL OR CONTAMINATED WASTE, REFER TO SUB-SECTIONS 106.01 AND 202.02 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

IMPORTED MATERIAL (EG. BORROW) - IF MATERIAL IS IMPORTED TO THE PROJECT AND AT ANY POINT THE MATERIAL IS DETERMINED BY THE ENGINEER TO INCLUDE ANY TYPE OF UNACCEPTABLE CONTAMINATION, THE MATERIAL MAY REQUIRE REMOVAL, IN WHOLE, OR IN PART. IF REMOVAL IS REQUIRED, THEN THE INITIAL PLACEMENT, REMOVAL AND PROPER DISPOSAL OF THIS MATERIAL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL OF THE UNACCEPTABLE MATERIAL SHALL BE APPROVED BY THE ENGINEER, REFER TO SUB-SECTION 107.15 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

TO ASSIST THE CONTRACTOR, THE "OFF PROJECT FACILITY/BORROW SITE HAZARDOUS MATERIALS QUESTIONNAIRE" IS PROVIDED ON THE DEPARTMENT'S WEB SITE:

[HTTPS://OKLAHOMA.GOV/CONTENT/DAM/OK/EN/ODOT/DOCUMENTS/OK-GOV-DOCS/PROGRAMS-AND-PROJECTS/ENVIRONMENTAL/HAZARD-QUESTIONNAIRE-2016.PDF](https://oklahoma.gov/content/dam/ok/en/odot/documents/ok-gov-docs/programs-and-projects/environmental/hazard-questionnaire-2016.pdf)

THIS QUESTIONNAIRE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR SO THAT A CLEARER UNDERSTANDING OF THE CHARACTERISTICS OF THE PROPOSED SITE/ MATERIAL IS ACHIEVED. COMPLETION AND SUBMITTAL OF THIS FORM TO THE ENGINEER DOES NOT EXCUSE THE CONTRACTOR FROM PROVIDING MATERIALS THAT ARE FREE OF HAZARDOUS AND INDUSTRIAL COMPOSITION IN ACCORDANCE WITH SUB-SECTIONS 106.01 AND 202.02 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

**NON-COMPLIANCE NOTE:**

FAILURE TO IMPLEMENT THE COMMITMENTS SPECIFIED IN THE PLAN NOTES CAN RESULT IN NON-COMPLIANCE ISSUES ON THE PROJECT. WORK ACTIVITIES MAY BE SUSPENDED ON THE PROJECT, FOR AN UNDETERMINED DURATION, WHILE WORKING WITH REGULATORS TO BRING THE PROJECT BACK INTO COMPLIANCE. THE CONTRACTOR WILL NOT BE COMPENSATED FOR TIME LOST.

**WATER QUALITY CONSERVATION NOTE:**

APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS FROM STORM WATER DISCHARGES AND SEDIMENTATION IN STREAMS, AS ESTABLISHED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, SHALL BE CONSCIENTIOUSLY IMPLEMENTED THROUGHOUT THE PROPOSED CONSTRUCTION PERIODS, IN ORDER TO MINIMIZE ANY POTENTIAL IMPACTS TO ANY LISTED SPECIES. THE EFFECTIVENESS OF EROSION CONTROLS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS, AND OTHER SUCH SUBSTANCES SHALL BE STORED AT LEAST 100 FEET FROM THE ORDINARY HIGH WATER MARK (OHWM). REFUELING OF CONSTRUCTION EQUIPMENT SHALL ALSO BE CONDUCTED AT LEAST 100 FEET FROM THE OHWMS. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED AROUND STAGING AREAS TO PROHIBIT DISCHARGE OF MATERIALS FROM THESE SITES. CONSTRUCTION WASTE MATERIALS AND DEBRIS SHALL BE STOCKPILED AT LEAST 25 FEET OUTSIDE OF THE OHWMS, AND THESE MATERIALS SHALL BE REMOVED AND DISPOSED OF PROPERLY FOLLOWING COMPLETION OF THE PROJECT. PREVENTATIVE MEASURES MUST BE TAKEN TO PROHIBIT THE DISCHARGE OF CONTAMINANTS INTO ANY SURFACE WATERS.

**AMERICAN BURYING BEETLE NOTE:**

THE AMERICAN BURYING BEETLE IS A LARGE CARRION BURYING BEETLE THAT OCCURS WITHIN THE PROJECT LIMITS. ARTIFICIAL LIGHTING MAY BE USED DURING CONSTRUCTION FOR NIGHT ACTIVITIES IF THE EQUIPMENT SPECIFICATIONS OUTLINED IN SPECIAL PROVISION 656-5(A-B)19 FOR ABB ARE ADHERED TO AND MEASURES TO MINIMIZE USE OF ARTIFICIAL LIGHTING HAVE BEEN IMPLEMENTED. CARCASSES AND ALL FOOD TRASH SHALL CONTINUOUSLY BE REMOVED FROM THE PERMANENT AND TEMPORARY RIGHT-OF-WAY THROUGHOUT THE DURATION OF PROJECT ACTIVITIES. POLLUTION PREVENTION REQUIREMENTS AS SPECIFIED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY GENERAL PERMIT OKRLO FOR STORM WATER DISCHARGES SHALL BE IMPLEMENTED WHEN APPROPRIATE. ADDITIONALLY, ALL EQUIPMENT WILL BE FUELED, AND ALL FUEL AND MOTOR VEHICLE OIL WILL NOT BE STORED WITHIN AREAS OF NATIVE VEGETATION (IE. OUTSIDE OF ABB HABITAT).

**BAT LIGHTING NOTE:**

ALL TEMPORARY LIGHTING, IF USED, WILL BE DIRECTED AWAY FROM SUITABLE BAT HABITAT DURING THE ACTIVE SEASON FOR BATS (APRIL 1- NOVEMBER 15). IF ANY PERMANENT LIGHTING IS INSTALLED OR REPLACED, DOWNWARD-FACING FULL CUT-OFF LENS LIGHTS SHALL BE INSTALLED AND DIRECTED AWAY FROM WOODED AREAS AND STREAMS.

**BALD EAGLE NOTE:**

SUITABLE NESTING, ROOSTING OR FORAGING HABITAT FOR THE BALD EAGLE OCCURS WITHIN THE PROJECT'S ACTION AREA. THE BALD EAGLE NESTING SEASON IN OKLAHOMA EXTENDS FROM SEPTEMBER 16, THROUGH MAY 31. THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST TO SCHEDULE A NEST SURVEY. NEST SEARCH SURVEYS CAN ONLY BE CONDUCTED WHEN LEAVES ARE NOT ON THE TREES TYPICALLY BETWEEN DECEMBER 1ST AND FEBRUARY 28TH. NO WORK MAY OCCUR WITHIN SUITABLE BALD EAGLE HABITAT, LOCATED THE FULL EXTENT OF THE PROJECT AREA, DURING THE NESTING SEASON (SEPTEMBER 16, THROUGH MAY 31) UNTIL THE COMPLETION OF THE SURVEY BY THE ODOT BIOLOGIST. IF NESTS ARE OBSERVED, A NO-WORK BUFFER UP TO A DISTANCE OF 660 FEET SHALL BE PLACED AROUND THE NEST. THE EXACT DISTANCE OF THE BUFFER ZONE SHALL BE ESTABLISHED BY THE ODOT BIOLOGIST IN CONSULTATION WITH US FISH AND WILDLIFE SERVICES. IF THE BUFFER CANNOT BE MAINTAINED, ALL CLEARING, EXTERNAL CONSTRUCTION AND LANDSCAPING ACTIVITIES, WITHIN THE BUFFER, SHALL BE CONDUCTED BETWEEN JUNE 1 AND SEPTEMBER 15 (OUTSIDE THE NESTING SEASON).

**MIGRATORY BIRD NOTE:**

MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST MIGRATORY BIRD SPECIES EXTENDS FROM MARCH 1 TO AUGUST 31. MIGRATORY BIRD NESTING USE OF THE SH-9 BRIDGES OVER WALLACE CREEK (NBI:05448) AND FLAT ROCK CREEK (NBI:05447) AND AN RCB (STA. 1464+25) WAS OBSERVED. PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGES AND CULVERT SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED. IF PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION CANNOT BE COMPLETED BETWEEN SEPTEMBER 1 AND FEBRUARY 28, THE BRIDGES AND CULVERT SHALL BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO MARCH 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER-RESISTANT POLYPROPYLENE NETTING WITH 0.25-INCH OR SMALLER OPENINGS, PRIOR TO MARCH 1. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

SPECIES	SEASONAL RESTRICTION PERIOD
BALD EAGLE	SEPTEMBER 16 – MAY 31
MIGRATORY BIRDS: SWALLOWS AND PHOEBES (NESTS PRESENT)	MARCH 1 – AUGUST 31

<b>ENVIRONMENTAL NOTES</b>		DETAIL	
		REVIEW	
		APPROVED	
		ENVIRONMENTAL DIVISION	
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	JOB/PIECE NO. 33793(04)	SHEET NO. AE01

**ROADWAY GENERAL CONSTRUCTION NOTES:**

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE" 1-800-522-6543 OR 811.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

MAINTENANCE OF THROUGH TRAFFIC INCLUDES THE MAINTENANCE OF THE EXISTING ROAD IN CLOSE PROXIMITY TO THE NEW CONSTRUCTION AS SHOWN ON THE PLANS.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING SECTION LINE ROADS TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

FOR PROJECTS THAT INCLUDE WIDENING AND/OR RESURFACING, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE POTENTIAL DROP-OFF HAZARDS AND SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE OPERATIONS BEGIN. ANY PORTION OF THE CONSTRUCTION OPERATIONS, SUCH AS SUPERPAVE LAYING OPERATIONS, EXCAVATION FOR PAVEMENT WIDENING, OR EXTENSION OF ROADWAY STRUCTURES, SHALL BE LIMITED TO ONE SIDE AT A TIME, AND THE PROCEDURES OUTLINED IN THE PAVEMENT DROP-OFF TREATMENT STANDARD PDT-2 (LATEST REVISION) SHALL BE IMPLEMENTED. ONLY THAT AMOUNT OF OPEN TRENCH WILL BE ALLOWED THAT CAN BE SURFACED IN 1 (ONE) DAY'S TIME WITHOUT APPROVAL BY THE ENGINEER. LIGHTS, SIGNS AND BARRICADES SHALL BE MOVED AS WORK PROGRESSES.

ALL TREES, BRUSH, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT-OF-WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED, AND PERMANENT RIGHT-OF-WAY FENCING SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST OF TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

PRIME COAT SHALL BE APPLIED TO THE SUBGRADE IMMEDIATELY AFTER FINAL COMPACTION AND SHAPING TO RETAIN MOISTURE FOR PROPER CHEMICAL REACTION OF THE SOIL ADDITIVE.

THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

TEMPORARY SEEDING MIX SHALL BE AS FOLLOWS:  
KINDS OF SEED TO BE FURNISHED QUANTITY PER ACRE  
PERENNIAL RYE GRASS (LODIUM PERENNE) 20 LBS. OF SEED  
CRIMSON CLOVER (TRIFOLIUM INCARNATUM) 12 LBS. OF SEED

VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "ADHESIVE SPRAY METHOD", AS SPECIFIED IN 233.04B(1) OF THE STANDARD SPECIFICATIONS.

THE PLANTING OF TEMPORARY SEEDS SHALL BE RESTRICTED TO THE PERIOD FROM SEPTEMBER 1ST TO NOVEMBER 1ST OR MARCH 1ST TO JUNE 1ST.

AREAS ON WHICH SALVAGED TOPSOIL IS TO BE REPLACED SHALL HAVE 18-46-0 FERTILIZER APPLIED, AT THE RATE OF 150 POUNDS PER ACRE, JUST PRIOR TO THE REPLACEMENT OF SALVAGED TOPSOIL.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER, SHALL BE FERTILIZED AND WATERED AS CALLED FOR ON THE PLANS, BUT SHALL NOT BE SEEDED, SODDED, OR SPRIGGED.

PIPE UNDERDRAIN QUANTITIES ESTIMATED ONLY. LOCATION, IF AND WHERE REQUIRED, TO BE DETERMINED BY THE ENGINEER.

SURFACING OF RETURNS, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE OF THE SAME MATERIAL (BASE AND SURFACE) AS THAT OF THE ABUTTING SHOULDER OF THE MAINLINE. BASE AND SURFACE THICKNESS SHALL BE THE THICKNESS SHOWN ON PLANS.

T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER IN A MANNER APPROVED BY THE ENGINEER.

EXCESS ASPHALT AT JOINTS AND CRACKS IN EXISTING PAVEMENT SHALL BE REMOVED FLUSH TO TOP OF PAVING IN A MANNER APPROVED BY THE ENGINEER.

**ROADWAY PAY QUANTITY NOTES:**

R-1 PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.

R-3 INCLUDES 2500 CU. YDS. FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS EARTHWORK.

R-4 AN ESTIMATED QUANTITY OF 8000 C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5' ON COMPLETED FORESLOPES, DITCHES, AND BACKSLOPES. THIS QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE. ANY ADDITIONAL EXCAVATION REQUIRED IN CUT SECTIONS TO ALLOW FOR PLACEMENT OF TOPSOIL TO FINAL GRADE, SHALL BE INCLUDED IN THE PRICE BID.

R-6 FOR TYPE A SALVAGE TOPSOIL PRICE BID TO INCLUDE COST OF 18-46-0 FERTILIZER, ESTIMATED AT 150 POUNDS PER ACRE OF AREA ON WHICH TOPSOIL IS TO BE REPLACED. FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER ESTIMATED AT 200 POUNDS PER 1,000 SQ. YD.

R-8 PRICE BID TO INCLUDE COST OF ALL NECESSARY MAINTENANCE, MAINTAINING DEVICE IN PROPER UPRIGHT POSITION, REMOVAL OF DEVICE, AND REMOVAL OF SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE DEVICE.

R-11 THE QUANTITIES ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 12.0 ACRES.

R-15 QUANTITY BASED ON TWO APPLICATIONS.

R-18 ESTIMATED AT 165 POUNDS PER CU. FT.

R-21 PRIME COAT SHALL BE APPLIED AT AN ESTIMATED RATE OF 0.35 GAL. PER SQ. YD. WHEN APPLIED TO SUBGRADE, AND 0.25 GAL. PER SQ. YD. WHEN APPLIED TO AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR, AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.

R-25 ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.

R-35 ANY DRAINAGE STRUCTURE DESCRIBED AS TEMPORARY, SHALL AFTER COMPLETION OF THE PROJECT, BE REMOVED BY AND BECOME THE PROPERTY OF THE CONTRACTOR.

R-37 INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.

R-38 TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.

R-39 MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.

R-41 INCLUDES 2% FOR GROUND MEASUREMENT.

R-42 ALL GATES AND GATE END POSTS FOR STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- THE LIMITS OF CLEARING AND GRUBBING SHALL BE THE MINIMUM AMOUNT REQUIRED FOR CONSTRUCTION AND INSTALLATION OF NEW FENCE.
- INCLUDES 100 TONS TO BE USED AS DIRECTED BY THE ENGINEER.
- QUANTITY INCLUDES 3614 CY FOR USE IF ON-SITE MATERIAL IS UNSUITABLE, AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR MUST PROVIDE TESTING RESULTS FROM A CERTIFIED LAB THAT THE BORROW SITE IS FREE FROM DISPERSIVE CLAYS AS REQUIRED IN SECTION 202.02(A) IN THE 2009 SPEC BOOK BEFORE ANY MATERIAL CAN BE PLACED ON THE PROJECT. COST TO BE INCLUDED IN PAY ITEM FOR UNCLASSIFIED BORROW.
- THE REMOVAL OF EXISTING PAVEMENT SHALL BE PERFORMED IN A MANNER THAT WOULD MINIMIZE DAMAGE TO THE ADJACENT PAVEMENT. NO COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR REPAIRING DAMAGE SUSTAINED DURING THE REMOVAL PROCESS. PAYMENT OF THIS ITEM SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS TO COMPLETE THE WORK AS SPECIFIED, INCLUDING ANY BASE REPAIR, LEVELING OR BACKFILL.
- PRICE BID TO INCLUDE COST OF STANDARD BEDDING MATERIAL, COVER MATERIAL, AND TRENCH EXCAVATION.
- ESTIMATED QUANTITY ONLY, TO BE USED AT THE DISCRETION OF THE ENGINEER.
- INCLUDES ALL COSTS ASSOCIATED WITH REMOVING, STORING, AND RESETTING CATTLE GUARD AT STATION 1498+79 RT.
- INCLUDES COST OF 22 GUARDRAIL DELINEATORS (TYPE 2, CODE 1).

0300 ROADWAY		PAY QUANTITIES (ROADWAY)			33793(04)
SPEC. NO.	BAMS NO.	DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
201(A)	1200	CLEARING AND GRUBBING	1	LSUM	1.00
202(A)	2200	UNCLASSIFIED EXCAVATION	(R-1)	CY	11,608.00
202(D)	2500	UNCLASSIFIED BORROW	(R-3),3,4	CY	53,000.00
205(A)	6200	TYPE-A SALVAGED TOPSOIL	(R-4)	LSUM	1.00
221(B)	2300	TEMPORARY SILT FENCE	(R-8)	LF	5157.00
221(E)	2600	TEMPORARY SILT DIKE	(R-8)	LF	184.00
230(A)	7200	SOLID SLAB SODDING	(R-6),(R-7)	LF	46,408.00
233(A)	0200	VEGETATIVE MULCHING	(R-11)	AC	12.00
241	3100	MOWING	(R-15)	AC	24.00
303(A)	1200	AGGREGATE BASE TYPE A		CY	5,410.00
307(K)	4200	STABILIZED SUBGRADE		SY	7,693.00
310(B)	5300	SUBGRADE, METHOD B		SY	23,349.00
326(A)	1200	GEOTEXTILE REINFORCEMENT		SY	24,514.00
402(E)	2600	TRAFFIC BOUND SURFACE COURSE TYPE E	(R-18),2	TON	8,410.00
407(B)	7300	TACK COAT		GAL	6,868.00
408	8100	PRIME COAT	(R-21)	GAL	16,742.00
411(B)	1330	SUPERPAVE, TYPE S3(PG 64-22 OK)	(R-25)	TON	10,056.00
411(C)	1430	SUPERPAVE, TYPE S4(PG 64-22 OK)	(R-25)	TON	2,103.00
501(A)	1200	STRUCTURAL EXCAVATION UNCLASSIFIED		CY	40.00
509(A)	0200	CLASS AA CONCRETE		CY	106.00
509(D)	0500	CLASS C CONCRETE		CY	15.00
511(A)	2200	REINFORCING STEEL		LB	18,482.00
611(G)	0362	INLET (SMD-TYPE 2B)		EA	1.00
613(A)	5216	24" R.C. PIPE CLASS III	6	LF	90.00
613(B)	5508	18" CORR. GALV. STEEL PIPE	(R-35),6	LF	450.00
613(B)	5528	36" CORR. GALV. STEEL PIPE	(R-35),6	LF	26.00
613(B)	5532	42" CORR. GALV. STEEL PIPE	(R-35),6	LF	120.00
613(H)	6200	6" PERFORATED PIPE UNDERDRAIN ROUND	6,7	LF	1,000.00
613(I)	6305	6" NON-PERF PIPE UNDERDRAIN RND.	6,7	LF	500.00
613(M)	6960	TYPE A4 CULVERT END TREATMENT		EA	8.00
613(M)	6964	TYPE B4 CULVERT END TREATMENT		EA	1.00
613(Q)	7500	OUTLET LATERAL HEADWALL	7	EA	2.00
619(A)	6200	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R-37),(R-38),(R-39)	LSUM	1.00
619(B)	6364	REMOVAL OF ASPHALT PAVEMENT	(R-38),5	SY	22,927.00
619(B)	6396	REMOVAL OF GUARDRAIL	(R-38)	LF	1,320.00
619(B)	6508	REMOVE AND RESET CATTLE GUARD	-	EA	1.00
619(C)	6600	SAWING PAVEMENT	6	LF	3,661.00
623	1100	(PL)GUARDRAIL CURBING		EA	4.00
623(A)	1200	BEAM GUARDRAIL W-BEAM SINGLE	9	LF	800.00
623(G)	1820	GUARDRAIL END TREATMENT (31")		EA	8.00
623(I)	2050	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")		EA	4.00
629(A)	7200	MAILBOX INSTALLATION-SINGLE		EA	3.00
629(E)	7600	MAILBOX		EA	3.00
624(C)	3405	FENCE-STYLE SWF (5 BARBED WIRE)	(R-41),(R-42)	LF	4453.00

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 C:\V2021\210007C2303\_SH\_9\_Bridges\DESIGN\Production Plans\AR01-3379304-SUMMARY OF PAY QUANTITIES & NOTES (ROADWAY).dwg



DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION	
DRAWN			<p align="center"><b>SUMMARY OF PAY QUANTITIES &amp; NOTES (ROADWAY)</b></p>	
CHECKED				
APPROVED				
SQUAD		ENGINEERS		
COUNTY	MCINTOSH	HIGHWAY	SH-9	STATE JOB NO. 33793(04) SHEET NO. AR01

**FINAL FIELD MEETING**

5/3/2024

**TRAFFIC OPERATIONS GENERAL CONSTRUCTION NOTES**

- (C-2) EXISTING ROADWAY SHALL REMAIN OPEN DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, AND SIGNING WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS. CONSTRUCTION TRAFFIC CONTROL WILL BE 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.
- (C-3) THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING TRAFFIC ON CROSS STREETS. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES.

**TRAFFIC CONSTRUCTION PAY QUANTITY NOTES**

- (TC-1) THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH LIGHTS, SIGNS, BARRICADES, AND PROVIDE FLAGGERS NECESSARY FOR THE CONTROL, SAFETY, AND MAINTENANCE OF TRAFFIC WHEN INSTALLING, RELOCATING OR DELIVERING PORTABLE LONGITUDINAL BARRIER.
- (TC-2) QUANTITY INCLUDES SUFFICIENT LENGTH OF PORTABLE LONGITUDINAL BARRIER TO PROVIDE FOR THE LONGEST SECTION SHOWN ON THE PLANS. THIS SAME BARRIER WILL BE USED ON OTHER DETOUR PHASES.
- (TC-13) A PART, OR ALL, OF THIS ITEM IS INTENDED FOR REPLACEMENT OF REMOVED EXISTING CONFLICTING STRIPING.
- (TC-16) PAINT SHALL CONFORM TO SECTION 711 "TRAFFIC STRIPE", OF THE O.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION). IF CONSTRUCTION TRAFFIC STRIPE PAINT IS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND FAILS DURING THE FIRST SIX MONTHS OF SERVICE, REPLACEMENT WILL BE MADE AT THE CONTRACTOR'S EXPENSE AND SHALL BE ACCOMPLISHED IN A TIMELY MANNER UPON NOTIFICATION BY THE ENGINEER OF SUCH FAILURE. (NOTE FOR CONSULTANT OR DESIGNER: THIS NOTE SHALL BE USED ON ROADWAY PROJECTS WITH ADT GREATER THAN 10,000)
- (TC-19) THIS ITEM INCLUDES AN ESTIMATED 12840 L.F. (4" WIDE) WHITE AND 12840 L.F. (4" WIDE) YELLOW STRIPE. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN O.D.O.T. APPROVED REMOVABLE PAVEMENT MARKING TAPE. COST FOR REMOVAL OF THIS TAPE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NON-REMOVABLE MARKING TAPE (FOIL BACK) SHALL NOT BE CONSIDERED AN APPROVED EQUAL FOR THIS ITEM.
- (TC-21) INCLUDED IN THE COST OF THIS ITEM SHALL BE INSTALLATION, MAINTENANCE, AND REMOVAL. THIS ITEM SHALL BE BID ACCORDINGLY.
- (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. LIGHT 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.

**TRAFFIC CONSTRUCTION PAY QUANTITY NOTES (CONT.)**

- (TC-31) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE 33.0 S.F. AND OVER. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-32) SPECIAL CONSTRUCTION SIGNS 33.0 S.F. AND OVER SHALL BE CONSTRUCTED OF EXTRUDED ALUMINUM TO THE DIMENSIONS SHOWN ON THE PLANS. THE SIGNS SHALL BE INSTALLED EITHER ON WIDE FLANGE BEAM POSTS OR OVERHEAD SIGN STRUCTURES IN A MANNER APPROVED BY THE ENGINEER.
- (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 TYPE 'D' CERTIFICATION IN ACCORDANCE WITH Q.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.
- (TC-39) THE CONTRACTOR SHALL PROVIDE A PERSON, 24 HOURS A DAY, SEVEN DAYS A WEEK, AT THE CONSTRUCTION SITE TO MAINTAIN AND KEEP ALL TRAFFIC CONTROL DEVICES IN POSITION ANYTIME TRAFFIC IS DIRECTED AWAY FROM THE NORMAL TRAFFIC LANES OR ANYTIME THE ENGINEER DEEMS IT NECESSARY. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.
- (TC-44) PRICE BID FOR THIS ITEM SHALL INCLUDE ATTENUATOR MODULES, SAND, WOODEN PALLETS (IF REQUIRED), RELOCATION, AND MAINTENANCE
- (TC-52) ANY USED \* TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.  
CHANGEABLE MESSAGE SIGN  
CONSTRUCTION ZONE IMPACT ATTENUATOR
- (TC-58) INCLUDED IN THIS ITEM IS THE COST OF PROVIDING TWO (2) FLAGGERS FOR A 24 HOUR PERIOD OF TIME. DURING NON-DAYLIGHT HOURS THE FLAGGER STATIONS SHALL BE ADEQUATELY LIGHTED TO PROVIDE A SAFE WORK AREA FOR FLAGGERS. COST OF THIS LIGHTING WILL BE INCLUDED IN THE PRICE BID FOR FLAGGER.
- (TC-61) ANY DAMAGE TO A FINISHED OR EXISTING SURFACE RESULTING FROM THE CONTRACTORS NEGLIGENCE IN THE REMOVAL OF CONSTRUCTION ZONE PAVEMENT MARKERS OR CHANNELIZING DEVICES AND THE BITUMINOUS ADHESIVE USED IN THEIR INSTALLATION, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.
- (TC-70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.
- (TC-75) TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE THE SAME DAY THAT EXISTING PAVEMENT MARKINGS ARE REMOVED FROM ANY ROADWAY OPEN TO TRAFFIC. ALSO, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF FINAL STRIPING.
- (TC-80) INCLUDED IN THIS ITEM SHALL BE ONE (1) ADDITIONAL UNIT TO BE USED AS A STAND-BY OR REPLACEMENT. THIS STAND-BY UNIT SHALL BE IMMEDIATELY ACCESSIBLE TO REPLACE A DAMAGED, STOLEN OR MALFUNCTIONING UNIT. THE AMOUNT OF TIME BETWEEN THE REMOVAL OF THE DAMAGED UNIT AND THE INSTALLATION OF THE STAND-BY UNIT SHALL BE NO MORE THAN TWENTY-FOUR (24) HOURS.
- (TC-84) 360 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPARE 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.
- (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>
- (SP-2) PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE LOCATED ON WHERE DEEMED NECESSARY BY THE ENGINEER. CHANGEABLE MESSAGE SIGN SHALL BE PLACED ON THE PROJECT 14 DAYS IN ADVANCE OF THE START OF CONSTRUCTION.

300 TRAFFIC CONTROL			PAY QUANTITIES (TRAFFIC)		J/P NO. 33793(04 )	
Item No.	Spec. No.	Code No.	Description	Pay Item Notes	Bid Unit	Quantity
1	857(C)	9400	REMOVABLE PAVEMENT MARKING TAPE (4" WIDE)	(TC-13,16,19,21,26,61,75)	LF	25681
2	857(F)	9700	PAVEMENT MRKNG. REMOVAL (TRAF. STRP)	(TC-13,26,61,75)	LF	25681
3	871(B)	2300	CONST.ZONE IMPACT ATTEN.	(TC-1,21,26,39,44,52,80) (TS-36,37)	SD	330
4	877(B)	4300	DELIVER PORTABLE LONGITUDINAL BARRIER	(TC-1,2,21,26,27,39,68)	LF	1020
5	880(A)	6220	ARROW DISPLAY(TYPE C)	(TC-1,21,26,39,84,85)	SD	396
6	880(B)	6300	CONSTRUCTION SIGNS 0 TO 6.25 SF	(TC-1,21,26,28,33,39,84,85)	SD	11880
7	880(B)	6310	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	(TC-1,21,26,29,33,39,84,85)	SD	2376
8	880(B)	6320	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	(TC-1,21,26,30,31,32,33,39,84,85)	SD	13992
9	880(C)	6405	CONSTRUCTION BARRICADES(TYPE II)	(TC-1,21,26,39,84,85)	SD	132
10	880(C)	6410	CONSTRUCTION BARRICADES(TYPE III)	(TC-1,21,26,39,84,85)	SD	264
11	880(E)	6600	WARNING LIGHTS(TYPE A)	(TC-1,21,26,39,84)	SD	28644
12	880(E)	6610	WARNING LIGHTS(TYPE C)	(TC-1,21,26,39,84)	SD	40887
13	880(F)	6700	DRUMS	(TC-1,21,26,39,61,84)	SD	40887
14	880(I)	7000	FLAGGER	(TC-1,26,58,70,84)	SD	264
16	882(A)	8210	PORT.CHANGEABLE MESSAGE SIGN	(SP-2),(TC-1,21,26,39,44,52,84,85)	SD	792

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DESIGN	JWH	4/24	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION <b>SUMMARY OF PAY QUANTITIES &amp; NOTES (TRAFFIC)</b>
DRAWN	JWH	4/24	
CHECKED			
APPROVED			
SQUAD			
COUNTY	CUSTER	HIGHWAY	SH-9 STATE JOB NO 337903 SHEET NO AT01

**FINAL FIELD MEETING**

5/3/2024

**SIGNING & STRIPING GENERAL CONSTRUCTION NOTES:**

- (C-51) REMOVED MATERIAL TO BECOME PROPERTY OF CONSTRUCTOR AND IT SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.
- (C-52) THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC, SEE O.D.O.T. STANDARDS AND DETAIL DRAWINGS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.
- (C-53) ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.
- (C-54) THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING TRAFFIC ON CROSS STREETS. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. SEE O.D.O.T. STANDARDS AND DETAIL DRAWINGS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.
- (C-56) ALL REGULATORY SIGNS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) FOR TYPE III SHEETING.  
  
ALL WARNING SIGNS SHALL HAVE FLUORESCENT YELLOW SHEETING. THE FLUORESCENT YELLOW SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) REQUIREMENTS FOR TYPE VIII SHEETING.  
  
ALL GREEN AND BLUE SIGNS ON CONVENTIONAL HIGHWAYS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) FOR TYPE III SHEETING.  
  
ALL PANEL AND OVERHEAD SIGNS SHALL HAVE TYPE III HIGH INTENSITY BACKGROUND WITH TYPE VIII LEGENDS AND BORDERS. THE TYPE III BACKGROUND AND THE TYPE VIII LEGENDS AND BORDERS SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION).  
  
THE MANUFACTURER SHALL FURNISH A TYPE 'A' CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS, LATEST EDITION, SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON THE MATERIAL SUBMITTED FOR APPROVAL.
- (C-57) ALL BROKEN CONCRETE INCLUDING OLD SIGN FOOTINGS WITH STUBS, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THE DISPOSAL OF THIS MATERIAL. ANY PIPE POST OR WIDE FLANGE POST ABOVE THE OLD SIGN FOOTING SHALL BE CUT AND HANDLED AS PROPERTY OF THE STATE AND SHALL BE NEATLY STACKED ON THE JOB SITE, AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.
- (C-59) ALL ANCHOR BOLTS SHALL BE GRADE A-36 STEEL.
- (C-61) POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.
- (C-65) ALL REMOVED SIGNS, SIGN POSTS, BOLTS, MISCELLANEOUS HARDWARE, AND DELINEATORS SHALL REMAIN THE PROPERTY OF THE STATE. THE CONTRACTOR SHALL NEATLY STACK SUCH REMOVED MATERIAL AT A LOCATION ON THE JOB SITE AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.
- (C-66) ALL SIGNS SHALL BE REMOVED FROM THE POSTS IN A SALVAGEABLE MANNER FOR REUSE. CARE SHALL BE TAKEN DURING REMOVAL AND TRANSPORTING TO ALLEVIATE DAMAGE OF MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED DURING REMOVAL OF SIGNS AND SIGN POSTS.
- (C-68) AFTER REMOVAL OF ANY SIGN FOOTINGS, THE HOLES SHALL BE FILLED WITH SOIL AND TAMPED AND SHAPED IN A MANNER APPROVED BY THE ENGINEER.
- (C-69) FOR NEW OR EXISTING GROUND MOUNTED SIGNS, MAXIMUM STUB POST PROJECTION ABOVE FOOTING/GROUND LINE SHALL BE 1-3/4" + /- 1/4". MAXIMUM FOOTING PROJECTION ABOVE GROUND LINE SHALL BE NO MORE THAN 2". SHOULD ADDITIONAL SOIL BE REQUIRED, THE ENGINEER WILL DESIGNATE AN AREA TO OBTAIN ADDITIONAL SOIL. ALL ASSOCIATED COSTS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

**SIGNING & STRIPING PAY QUANTITY NOTES:**

- (TS-1) "REMOVAL OF SIGN FOOTINGS" SHALL MEAN THE REMOVAL OF AN EXISTING FOOTING WITH OR WITHOUT STUBS AND SHALL BE DISPOSED OF AS NOTED IN GENERAL CONSTRUCTION NOTES.
- (TS-24) QUANTITY SHOWN INCLUDES 10,682 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND 10,530 L.F. TRAFFIC STRIPE(MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE.
- (TS-34) INCLUDED IN THIS PAY ITEM IS THE REMOVAL OF ANY EXISTING SIGNS TO BE REPLACED BY NEW ASSEMBLIES AND THE REMOVAL OF ANY EXISTING SIGNS THAT WILL BE IN CONFLICT WITH THE NEW ROADWAY OR NEW SIGNAGE.

301 TRAFFIC		PAY QUANTITIES			J/P NO 33793(04)	
SPEC NO.	BAMS NO.	DESCRIPTION	PAY ITEM NOTES	BID UNIT	QUANTITY	
413(B)	4310	RUMBLE STRIP-METHCD HMA-CYC		LF	9725	
850(A)	1200	SHEET ALUMINUM SIGNS	(TS-1,34)	SF	50	
851(C)	2420	2 1/4" SQUARE TUBE POST	(TS-1)	LF	88	
856(A)	8200	TRAFFIC STRIPE (MULTI-POLY.)(4" WIDE)	(TS-24)	LF	21212	

SIGNING SUMMARY TABLE						
ITEM NO.	LOCATION	TYPE OF SIGN	POST SPACE L.F.	POST LENGTHS (L.F.)		SIGN AREA (S.F.)
				2 1/4"X12 Ga.		
				A	B	SHEET ALUM.
1	1451+54.03 CRL RT	W1-2		11.00		6.25
2	1464+70.88 CRL RT	S3-1		11.00		6.25
3	1466+68.44 CRL RT	W8-13		11.00		6.25
4	1470+79.35 CRL LT	W1-2		11.00		6.25
5	1473+39.30 CRL RT	W1-2		11.00		6.25
6	1488+03.82 CRL LT	W8-13		11.00		6.25
7	1500+26.30 CRL RT	W1-2		11.00		6.25
8	1503+30.61 CRL LT	W1-2		11.00		6.25
<b>TOTALS</b>				<b>88.00</b>		<b>50.00</b>

STRIPING SUMMARY TABLE			
LOCATION	4" YELLOW	4" WHITE	
STA 1455+00 TO STA 1460+00	1610	1611	
STA 1460+00 TO STA 1475+00	3000	3071	
STA 1475+00 TO STA 1490+00	3000	3080	
STA 1490+00 TO STA 1505+00	2920	2920	
<b>SUBTOTALS</b>	<b>10530</b>	<b>10682</b>	
<b>TOTAL</b>	<b>21212</b>		

RUMBLE STRIP SUMMARY TABLE	
LOCATION	RUMBLE STRIP
STA 1455+00 TO STA 1460+00	809
STA 1460+00 TO STA 1475+00	2999
STA 1475+00 TO STA 1490+00	2998
STA 1490+00 TO STA 1505+00	2919
<b>TOTALS</b>	<b>9725</b>

G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\AT02-3379304-SUMMARY OF PAY QUANTITIES & NOTES (SIGNING & STRIPING).JGN 5/3/2024

DESIGN	JWH	4/24	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION <b>SUMMARY OF PAY QUANTITIES &amp; NOTES (SIGNING &amp; STRIPING)</b>
DRAWN	JWH	4/24	
CHECKED			
APPROVED			
SQUAD			
COUNTY	CUSTER	HIGHWAY	SH-9 STATE JOB NO 337903 SHEET NO AT02



SUMMARY OF SURFACING QUANTITIES

STATION TO STATION	LENGTH ①	OBLITERATE ABANDONED RDY	AGGREGATE BASE TYPE A	STABILIZED SUBGRADE	SUBGRADE METHOD B	GEOTEXTILE REINFORCEMENT	T.B.S.C. TYPE E	TACK COAT	PRIME COAT	SUPERPAVE TYPE S3 (PG 64-22 OK)	SUPERPAVE TYPE S4 (PG 64-22 OK)	REMOVAL OF ASPHALT PAVEMENT	SAWING PAVEMENT
		210	303(A)	307(K)	310(B)	326(A)	402(E)	407(B)	408	411(B)	411(C)	619(B)	619(C)
	FT	LF	CY	SY	SY	SY	TON	GAL	GAL	TON	TON	SY	LF
<b>MAINLINE</b>													
1456+00 TO 1462+00	600		673		3314	3481	416	798	1963	953.3	287.8	2052	30
1462+00 TO 1477+00	1500	1475	1426		7032	7380	597	1697	4167	2071.9	626.2	5182	
1477+00 TO 1492+00	1500	1066	1707		8418	8834	799	2030	4987	2480.0	749.4	4996	
1492+00 TO 1500+55	855	579	928		4585	4819	586	1093	2714	1230.0	370.8	3014	30
<b>SUB-TOTALS</b>		3120	4734		23349	24514	2398	5618	13831	6735.2	2034.2	15244	60
<b>TEMPORARY WIDENING</b>													
1452+00 TO 1466+33.10 RT	1433.10			3065				461	1074	1016.2		3055	1434
1474+75 TO 1481+93.2 LT	718.20			1456				220	511	481.6		1437	719
1490+15.3 TO 1504+64.68 RT	1449.39			3172				476	1111	1052.0		3191	1450
<b>SUB-TOTALS</b>				7693				1157	2696	2549.8		7683	3601
<b>GUARDRAIL WIDENING</b>													
1469+37.35 TO 1470+81.10 LT & RT			96				22			50.0			
1473+26.90 TO 1474+70.65 LT & RT			92				22			48.0			
347+51.15 TO 349+69.90 LT & RT			230				39			86.0			
<b>SUB-TOTALS</b>			418				82			184.0			
<b>MISCELLANEOUS</b>													
			258				250			481.1			
<b>TOTALS</b>		3,120	5,410	7,693	23,349	24,514	2,730	6,775	16,527	9,950	2,035	22,927	3,661

SUMMARY OF EARTHWORK

LOCATION	202(A) UNCLASSIFIED EXCAVATION	EMBANKMENT (+20%)	UNCLASSIFIED BORROW 202(D)	EXCESS EXCAVATION	WASTE
STATION (CTR. LINE OR REF. LINE)					
<b>PHASE - 1</b>					
MAINLINE - STA. 1467+00 TO 1478+00	959	15,028	14,069		
<b>SUB-TOTAL</b>	959	15,028	14,069		
<b>PHASE - 2</b>					
2A DETOUR 1 - STA. 1454+00 TO STA. 1463+00	60	1		59	
2B MAINLINE - STA. 1456+00 TO STA. 1467+00	1,952	3,596	1,644		
2C DETOUR 2 - STA. 1478+00 TO STA. 1482+00		355	355		
<b>SUB-TOTAL</b>	2,012	3,952	1,999		
<b>PHASE - 3</b>					
3A MAINLINE - STA. 1477+00 TO STA. 1494+00	4,497	32,273	27,776		
3B DETOUR 3 - STA. 1490+00 TO STA. 1504+65	147	3,114	2,967		
<b>SUB-TOTAL</b>	4,644	35,387	30,743		
<b>PHASE - 4</b>					
4A MAINLINE - STA. 1493+00 TO STA. 1500+45	1,795	1077		718	
4B MAINLINE - STA. 1477+00 TO STA. 1481+00	347	422	75		
<b>SUB-TOTAL</b>	2,142	1,499	75		
<b>SUB-TOTALS</b>	9,757	55,866	46,886	777	
<b>TOTALS</b>	9,757	55,866	46,886	-	777

SUMMARY OF DRIVES

STATION	TYPE	LOCATION		WIDTH FT.	LENGTH FT.	RADIUS		T.B.S.C. TYPE E	TACK COAT	PRIME COAT	3" SUPERPAVE TYPE S3 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
		LT	RT			BK.	AHD.					
<b>PERMANENT</b>												
145+xx	SEC. RET.		■	22	40	25	25		20	47	23	15
1459+14	PVT. DRIVE		■	16	53	15	15		17	39	19	12
1467+14	FIELD ENT.		■	16	70	15	15	19				
1476+71	PVT. DRIVE	■		16	70	15	15		22	50	25	16
1479+83	PVT. DRIVE		■	30	62	15	15		34	79	39	25
1498+79	FIELD ENT.		■	16	67	15	15	18				
1501+58	FIELD ENT.		■	16	64	15	15	17				
<b>TEMPORARY</b>												
1459+14	TEMP. DRIVE		■	16	22	15	15	7				
1476+71	TEMP. DRIVE	■		16	123	15	15	31				
1498+79	TEMP. DRIVE		■	16	33	15	15	10				
1501+58	TEMP. DRIVE		■	16	42	15	15	12				
<b>MISCELLANEOUS</b>												
								56				
<b>TOTAL</b>								170	93	215	106	68

SUMMARY OF MAILBOX

STATION	LOCATION	MAILBOX INSTALLATION	
		MAILBOX SINGLE	MAILBOX
		629(A) EA	629(E) EA
STA. 1459+00	LT	1	1
STA. 1477+00	LT	1	1
STA. 1479+50	LT	1	1
<b>TOTAL</b>		3	3

SUMMARY OF FENCE

STATION TO STATION	FENCE-STYLE SWF (5 BARBED WIRE)
	624(C) LF
1454+09.00 to 1458+09.00 RT.	400
1460+43.00 to 1462+00.00 RT.	169
1462+00.00 to 1465+50.00 RT.	374
1472+09.00 to 1477+00.00 LT.	515
1477+00.00 to 1482+64.00 LT.	612
1479+50.00 to 1483+81.00 RT.	451
1485+29.00 to 1492+00.00 RT.	667
1492+00.00 to 1504+65.00 LT.	1265
<b>TOTAL</b>	4453

SCHEDULE OF GUARD RAIL

LOCATION	ANCHOR UNITS		TOTAL PANEL LENGTH INCLUDING ANCHOR UNITS	BEAM GUARDRAIL (W-BEAM) SINGLE 623(A)	GUARDRAIL DELINEATORS (TYPE 2, CODE 1) 853	GUARDRAIL CURBING 623	REMOVAL OF GUARDRAIL 619(B)	
	GET 623(G)	BRIDGE CON. THRIE BEAM (31") 623(I)						
								EA
1469+37.35 TO 1470+81.10	■	■	287.5	150	6	2		
1473+26.90 TO 1474+70.65	■	■	287.5	150	6	2		
347+51.15 TO 349+69.90	■	■	700	500	10			
1470+30.00 TO 1472+04.00	■	■					328	
1472+50.00 TO 1474+35.00	■	■					330	
1481+69.00 TO 1483+32.00	■	■					332	
1483+86.00 TO 1485+52.00	■	■					330	
<b>TOTAL</b>			8	4	800	22	4	1320

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	ENGINEERS

# FINAL FIELD MEETING

5/3/2024

TEMPORARY TRAFFIC CONTROL CONSTRUCTION PHASES SUMMARY TABLE

PHASE	REMOVABLE PAVEMENT MARKING TAPE (4" WIDE) 857 (C)	PAVEMENT MARKING REMOVAL (TRAF-STRIP) 857 (F)	CONST. ZONE IMPACT ATTEN 871 (B)	DELIVER PORTABLE LONGITUDINAL BARRIER 877 (B)	ARROW DISPLAY (TYPE C) 880 (A)	CONSTRUCTION SIGNS 0 TO 6.25 SF 880 (B)	CONSTRUCTION SIGNS 6.25 TO 15.99 SF 880 (B)	CONSTRUCTION SIGNS 16.00 TO 32.99 SF 880 (B)	CONSTRUCTION BARRICADES (TYPE III) 880 (C)	CONSTRUCTION BARRICADES (TYPE II) 880 (C)	WARNING LIGHTS (TYPE A) 880 (E)	WARNING LIGHTS (TYPE C) 880 (E)	DRUMS 880 (F)	FLAGGER 880 (I)	PORT. CHANGEABLE MESSAGE SIGN 882 (A)
	(LF)	(LF)	(SD)	(LF)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(FD)	(SD)
PHASE 1	2781	2781	0	0	0	1680	720	1560	0	0	3960	3960	3960	80	240
PHASE 1	3032	3032	0	0	0	960	0	1560	0	0	2520	7560	7560		0
PHASE 1	152	152	0	0	120	960	0	1200	0	120	2280	0	0		0
PHASE 2	2311	2311	0	0	120	840	360	660	60	1980	3780	3780	3780	40	120
PHASE 2	3032	3032	0	0	0	480	0	660	0	0	1140	2400	2400		0
PHASE 2	152	152	0	0	0	480	0	600	0	0	1080	0	0		0
PHASE 3	2772	2772	0	0	0	1470	630	1365	0	0	3465	2100	2100	70	210
PHASE 3	3039	3039	0	0	105	840	0	1050	105	0	1995	10920	10920		0
PHASE 3	152	152	0	0	0	840	0	1365	0	0	2205	0	0		0
PHASE 4	2772	2772	0	0	0	1050	450	975	0	0	2475	1500	1500	50	150
PHASE 4	3000	3000	300	927	75	600	0	750	75	0	1425	4950	4950		0
PHASE 4	152	152	0	0	0	600	0	975	0	0	1575	0	0		0
*MISCELLANEOUS	2335	2335	30	93	42	1080	216	1272	24	18	2610	3717	3717	24	72
<b>GRAND TOTAL</b>	<b>25681</b>	<b>25681</b>	<b>330</b>	<b>1020</b>	<b>462</b>	<b>11880</b>	<b>2376</b>	<b>13992</b>	<b>264</b>	<b>198</b>	<b>28710</b>	<b>40887</b>	<b>40887</b>	<b>264</b>	<b>792</b>

\*10% INCREASE REQUESTED FOR MISCELLANEOUS PURPOSES TO BE USED AT THE DISCRETION OF DIVISION ONE FIELD ENGINEER

DRUMS MAY BE SUBSTITUTED FOR VERTICAL PANELS AT THE DISCRETION OF THE ENGINEER AS APPROVED BY DIVISION ONE TRAFFIC ENGINEER

TOTAL SIGN DAYS = CALENDAR DAYS  
 ADVANCE WARNING = 360  
 PHASE 1 : 120 CALENDAR DAYS  
 PHASE 2 : 60 CALENDAR DAYS  
 PHASE 3 : 105 CALENDAR DAYS  
 PHASE 4 : 75 CALENDAR DAYS

TRAFFIC CONTROL SUMMARY TABLE

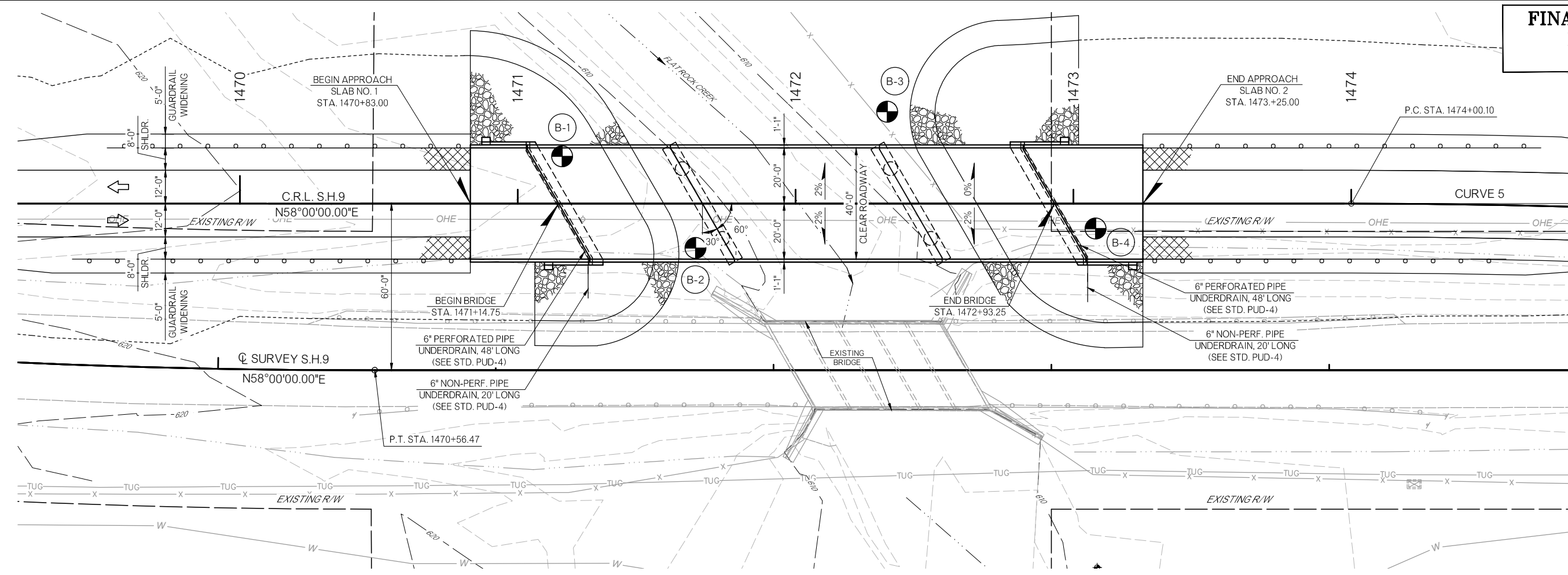
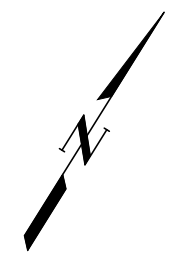
PHASE	TIME	CONSTRUCTION SIGNS 16.00 TO 32.99 SF 880 (B)	CONSTRUCTION BARRICADES (TYPE III) 880 (C)	CONSTRUCTION BARRICADES (TYPE II) 880 (C)	DRUMS 880 (F)	ARROW DISPLAY (TYPE C) 880 (A)	CONST. ZONE IMPACT ATTEN 871 (B)
		EA	EA	EA	EA	EA	EA
PHASE 1	120	3	0	0	33	0	0
PHASE 1	120	3	0	0	63	0	0
PHASE 1	120	0	0	1	0	1	0
PHASE 2	60	1	1	1	63	2	0
PHASE 2	60	1	0	0	40	0	0
PHASE 2	60	0	0	0	0	0	0
PHASE 3	105	3	0	0	20	0	0
PHASE 3	105	0	1	0	104	1	0
PHASE 3	105	3	0	0	0	0	0
PHASE 4	75	3	0	0	20	0	0
PHASE 4	75	0	1	0	66	1	4
PHASE 4	75	3	0	0	0	0	0

ADVANCED WARNING SUMMARY TABLE

PHASE	TIME	CONST. SIGN 0 TO 6.25 SF 880 (B)	CONSTRUCTION SIGNS 6.25 TO 15.99 SF 880 (B)	CONSTRUCTION SIGNS 16.00 TO 32.99 SF 880 (B)	PORT. CHANGEABLE MESSAGE SIGN 882 (A)
		EA	EA	EA	EA
SH-9	120	14	6	10	2
N. 4060 RD.	120	8	0	10	0
N. 4070 RD.	120	8	0	10	0
SH-9	60	14	6	10	2
N. 4060 RD.	60	8	0	10	0
N. 4070 RD.	60	8	0	10	0
SH-9	105	14	6	10	2
N. 4060 RD.	105	8	0	10	0
N. 4070 RD.	105	8	0	10	0
SH-9	75	14	6	10	2
N. 4060 RD.	75	8	0	10	0
N. 4070 RD.	75	8	0	10	0

G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\AX03-3379304-SUMMARY SHEET (TRAFFIC).JGN 5/3/2024

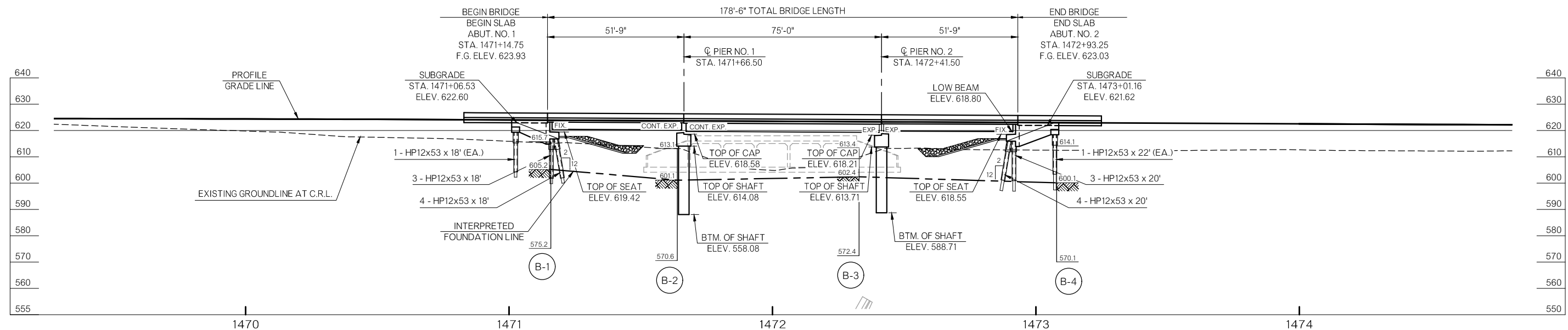
DESIGN	JWH	4/24	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	JWH	4/24	
CHECKED			
APPROVED			
SQUAD			
SUMMARY SHEET (3 OF 3)			
COUNTY	CUSTER	HIGHWAY	SH-9 STATE JOB NO 337903 SHEET NO AX03



**PLAN**  
1"=20'

BM #2 60D NAIL IN 18" OAK TREE  
STA. 1462+83.65, 43' RT. ELEV.=626.04

BM #3 60D NAIL IN 50" OAK TREE  
STA. 1437+20, 71.8' RT. ELEV. = 614.18



**ELEVATION**  
1"=20'

**NOTE:**  
FOR DESIGN DATA, SUPER ELEVATION TRANSITION, INDEX OF SHEETS, VERTICAL PROFILE DATA, CURVE DATA, FOUNDATION DATA, HYDRAULIC SUMMARY AND SUMMARY OF BRIDGE QUANTITIES, SEE SHEET B002.

**THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT**

S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY	
Design	RMF	Detail	DRB
Check	RMF		
<b>STATE OF OKLAHOMA</b>			
JOB PIECE NO. 33793(04)		SHEET NO. B001	

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SUMMARY OF BRIDGE QUANTITIES						
ITEM DESCRIPTION	UNIT	ABUTMENTS	PIERS	SUPERSTR.	APPR. SLABS	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	C.Y.	210				210
CLSM BACKFILL	C.Y.	251.8				251.8
APPROACH SLAB	S.Y.				297.8	297.8
SAW-CUT GROOVING	S.Y.			793.4	282.4	1,075.8
CONCRETE RAIL (TR4)	L.F.			357.0	127.0	484.0
STRUCTURAL STEEL	LB.			156,400		156,400
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA.			10		10
STAINLESS STEEL EXP. BEARING ASSEMBLY	EA.			20		20
CLASS AA CONCRETE	C.Y.			200.1		200.1
CLASS A CONCRETE	C.Y.	85.5	93.0			178.5
EPOXY COATED REINFORCING STEEL	LB.	10,930	14,560	56,470		81,960
PILES, FURNISHED (HP 12x53)	L.F.	346				346
PILES, DRIVEN (HP 12x53)	L.F.	346				346
(PL) PILOT HOLES	L.F.	270				270
PILE SPLICE (NON-BIDDABLE)	EA.	1				1
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	50	92	394	60	596
DRILLED SHAFTS 48" DIAMETER	L.F.		102			102
CROSSHOLE SONIC LOGGING	EA.		1			1
ELASTOMERIC COATING	S.F.	464	870			1,334
SEALED EXPANSION JOINTS	L.F.			49.2		49.2
SEALER CRACK PREPARATION	L.F.			47		47
SEALER RESIN	GAL.			0.6		0.6
TYPE I-A PLAIN RIPRAP	TON	1,200				1,200
TYPE I-A FILTER BLANKET	TON	185				185
6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.	96				96
6" NON-PERF. PIPE UNDERDRAIN RND.	L.F.	40				40
REMOVAL OF EXISTING BRIDGE STRUCTURE	L.SUM					1

HYDRAULIC SUMMARY						
TOTAL DRAINAGE AREA		= 8.92 SQ. MILES				
CONTROLLED DRAINAGE AREA		= 0.00 SQ. MILES				
EFFECTIVE DRAINAGE AREA		= 8.92 SQ. MILES				
FREQUENCY (YEARS)	DISCHARGE (CFS)	WATER SURFACE ELEVATION (FT)	VELOCITY (FPS)	CONTR. SCOUR (FT)	PIER SCOUR (FT)	TOTAL SCOUR (FT)
2	1,060	611.52	4.27			
5	1,980	613.62	5.10			
10	2,770	615.10	5.38			
25	3,950	617.01	5.90			
50	5,180	618.12	6.89			
100	6,090	618.79	7.64	5.09	7.63	12.72
OT = 500	9,710	621.23	10.15	11.03	7.87	18.90
LOW BEAM ELEVATION = 618.80						

**DESIGN DATA**

CONCRETE CLASS A                    f'c = 3 K.S.I.  
 CONCRETE CLASS AA                f'c = 4 K.S.I.  
 REINFORCING STEEL (GRADE 60)    fy = 60 K.S.I.  
 STRUCTURAL STEEL M270 (GRADE 50w)    Fy = 50 K.S.I.  
 STAINLESS STEEL A240 (TYPE 316)    Fy = 30 K.S.I.

**LOADING:**

HL-93 OR OKLAHOMA OVERLOAD TRUCK  
 20 PSF FUTURE WEARING SURFACE  
 5 PSF STAY-IN-PLACE DECK FORM ALLOWANCE

**DESIGN:**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION  
 ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE  
 ANSI/AWS D1.6 STRUCTURAL WELDING CODE - STAINLESS STEEL

HL-93 INVENTORY RATING FACTOR:    1.51  
 HL-93 OPERATING RATING FACTOR:    1.96

**INDEX OF SHEETS**

AB01 - AB02    GENERAL NOTES & SUMMARY OF PAY QUANTITIES (BRIDGE)  
 B001 - B002    GENERAL PLAN AND ELEVATION - BRIDGE "A"  
 B003 - B005    SUBSURFACE PROFILE  
 B006            SUBSTRUCTURE LAYOUT  
 B007 - B010    ABUTMENT DETAILS  
 B011 - B012    PIER DETAILS  
 B013 - B023    SUPERSTRUCTURE DETAILS  
 B024            APPROACH SLAB DETAILS

**2009 STANDARDS**

TR4-2-00E  
 EJ-SK-04E  
 EJ-DTL-02E  
 HP1-2-01E

**2019 STANDARDS**

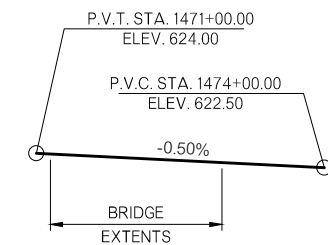
LECS-5-2  
 PUD-4-1

FOUNDATION DATA		
HP 12x53 PILING		
DESIGN CRITERIA	ABUTMENT 1	ABUTMENT 2
FACTORED PILE REACTION	60.0 TONS	60.0 TONS
PILE LENGTH	18.0 FT.	22.0 FT.
48" DIAMETER DRILLED SHAFTS		
DESIGN CRITERIA	PIER NO. 1	PIER NO. 2
MINIMUM DEPTH INTO ROCK	13.0 FT	13.0 FT
DEPTH OF ROCK NEGLECTED FOR FRICTION	10.0 FT	10.0 FT
UNIT BEARING RESISTANCE	60.0 TSF	60.0 TSF
BEARING RESISTANCE FACTOR	0.7	0.7
FACTORED BEARING RESISTANCE	527.8 TONS	527.8 TONS
UNIT FRICTION RESISTANCE	9.0 TSF	9.0 TSF
FRICTION RESISTANCE FACTOR	0.45	0.45
FACTORED FRICTION RESISTANCE	152.7 TONS	152.7 TONS
TOTAL FACTORED RESISTANCE	680.5 TONS	680.5 TONS
TOTAL FACTORED REACTION	421 TONS	421 TONS

FACTORED PILE RESISTANCE:  
 DRIVE PILING THROUGH THE COMPACTED FILL AND TO A POINT BEARING ON SOLID FOUNDATION MATERIAL AT THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF A FACTORED AXIAL LOAD RESISTANCE EQUAL TO OR GREATER THAN THE FACTORED PILE REACTION IS NOT OBTAINED AT THIS ELEVATION, CONTINUE DRIVING UNTIL SUCH IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.

**CURVE 5 DATA**

P.I. STA. = 1487+40.49  
 $\Delta = 51^{\circ}09'42''$   
 R = 2,800.0000'  
 D = 02^{\circ}02'46.6"  
 T = 1,340.39'  
 L = 2,500.23'



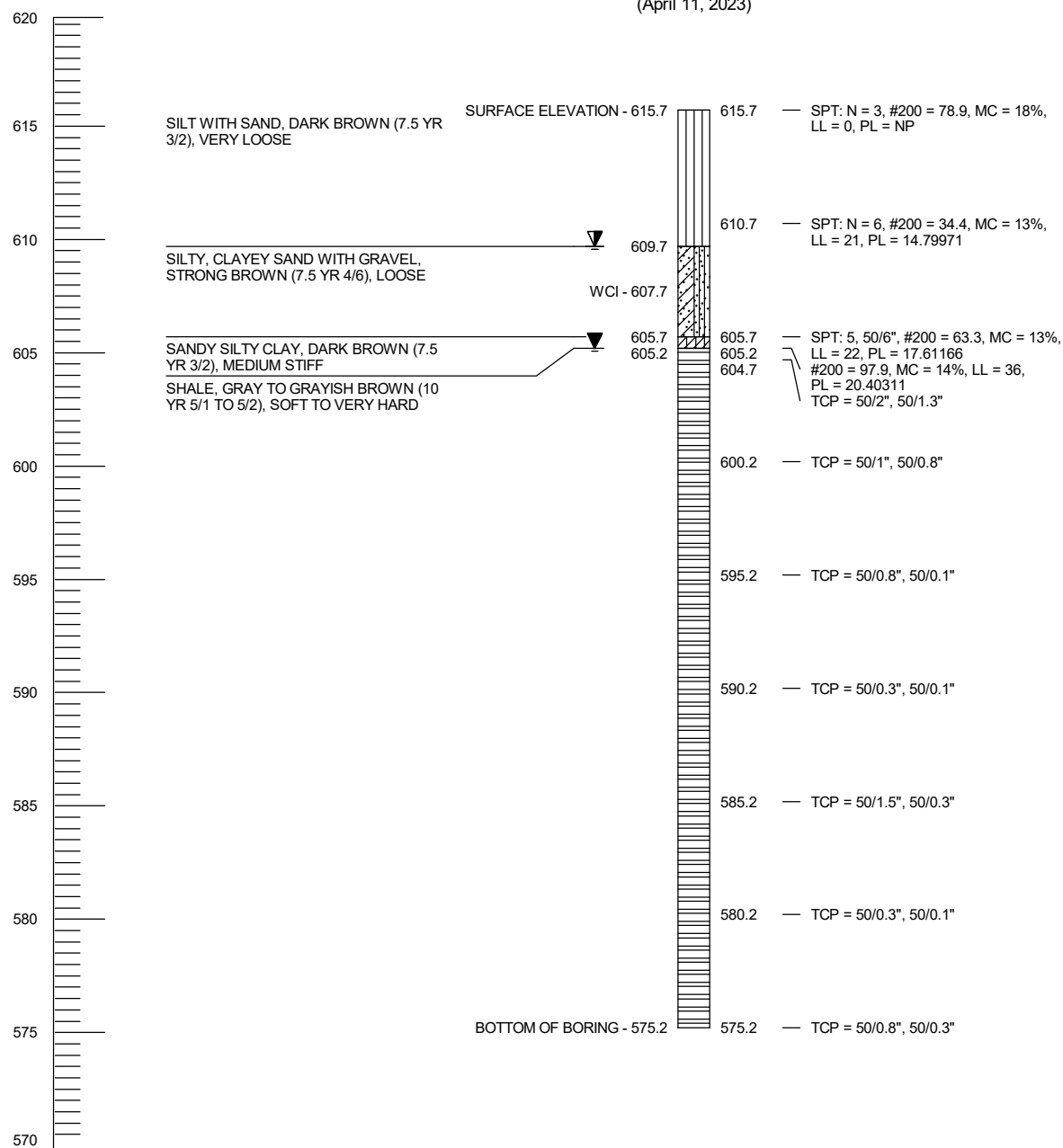
**VERTICAL PROFILE DATA**

PREPARED BY:		<p align="center"><b>THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT</b></p>
DATE	RYAN FRANCKA OKLAHOMA LICENSE NO. 26497	
S.H.9 OVER FLAT ROCK CREEK                    McINTOSH COUNTY		Design    RMF
BRIDGE "A"		Detail     DRB
GENERAL PLAN AND ELEVATION (2 OF 2)		Check     RMF
50'-75'-50' STEEL I - BEAM SPANS		
40'-0" CLR. RDWY. WITH TR4 TRAFFIC RAILS		
@ STA. 1472+04.00, 30° RT. FWD. SKEW		<p><b>STATE OF OKLAHOMA</b>    DEPARTMENT OF TRANSPORTATION</p>
JOB PIECE NO. 33793(04)		SHEET NO. B002

REVISIONS		
REV. NO.	DESCRIPTION	DATE

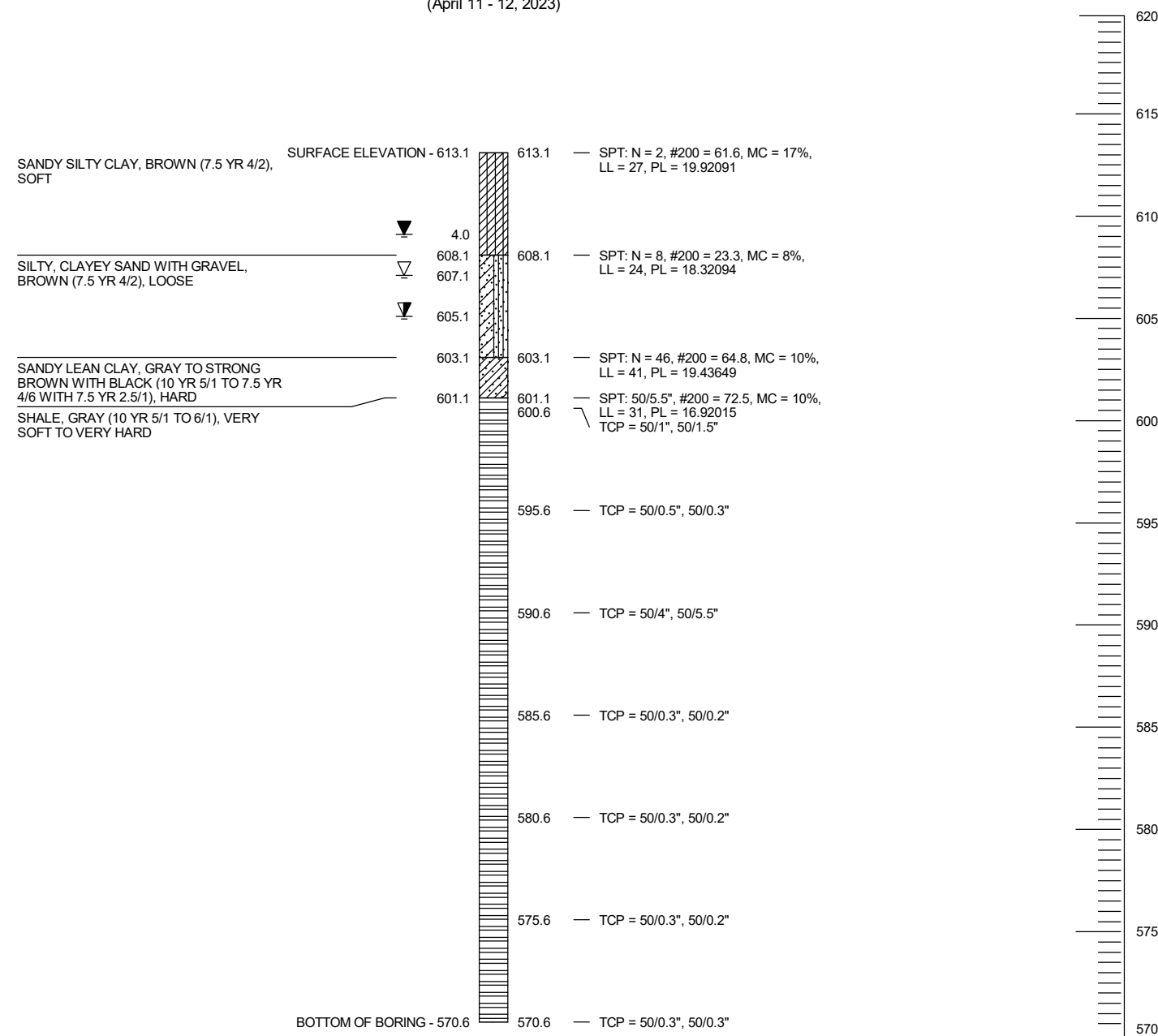
### BORING NO. B-01

STATION 1471+16, 17' left of I SURVEY  
(April 11, 2023)



### BORING NO. B-02

STATION 1471+64, 16' right of I SURVEY  
(April 11 - 12, 2023)



#### SITE GEOLOGY

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STUART SHALE CONSISTS OF SHALE AND MINOR SANDSTONES. PROBABLY WILL YIELD ONLY LIMITED AMOUNTS OF WATER OF POOR QUALITY.

#### LEGEND

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- SPT = STANDARD PENETRATION TEST, ASTM D1586
- SS = SPLIT SPOON SAMPLER
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- #200 = PERCENT PASSING #200 SIEVE
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NOTE: WATER LEVEL ELEVATIONS SHOWN WERE OBTAINED AT THE TIME THE BORINGS WERE DRILLED AND MAY FLUCTUATE THROUGHOUT THE YEAR.

NOTE: "SS" DENOTES STANDARD PENETRATION TEST, AASHTO D1586-84. "TCP" DENOTES TEXAS CONE PENETRATION TEST.

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Design	EDC	8/23
Detail	EDC	8/23
Check	JWB	8/23
Squad:		
Engr.:		

SH 9 BRIDGE OVER FLAT ROCK CREEK MCINTOSH COUNTY, OKLAHOMA

SUBSURFACE PROFILE (SHEET 1 OF 3)

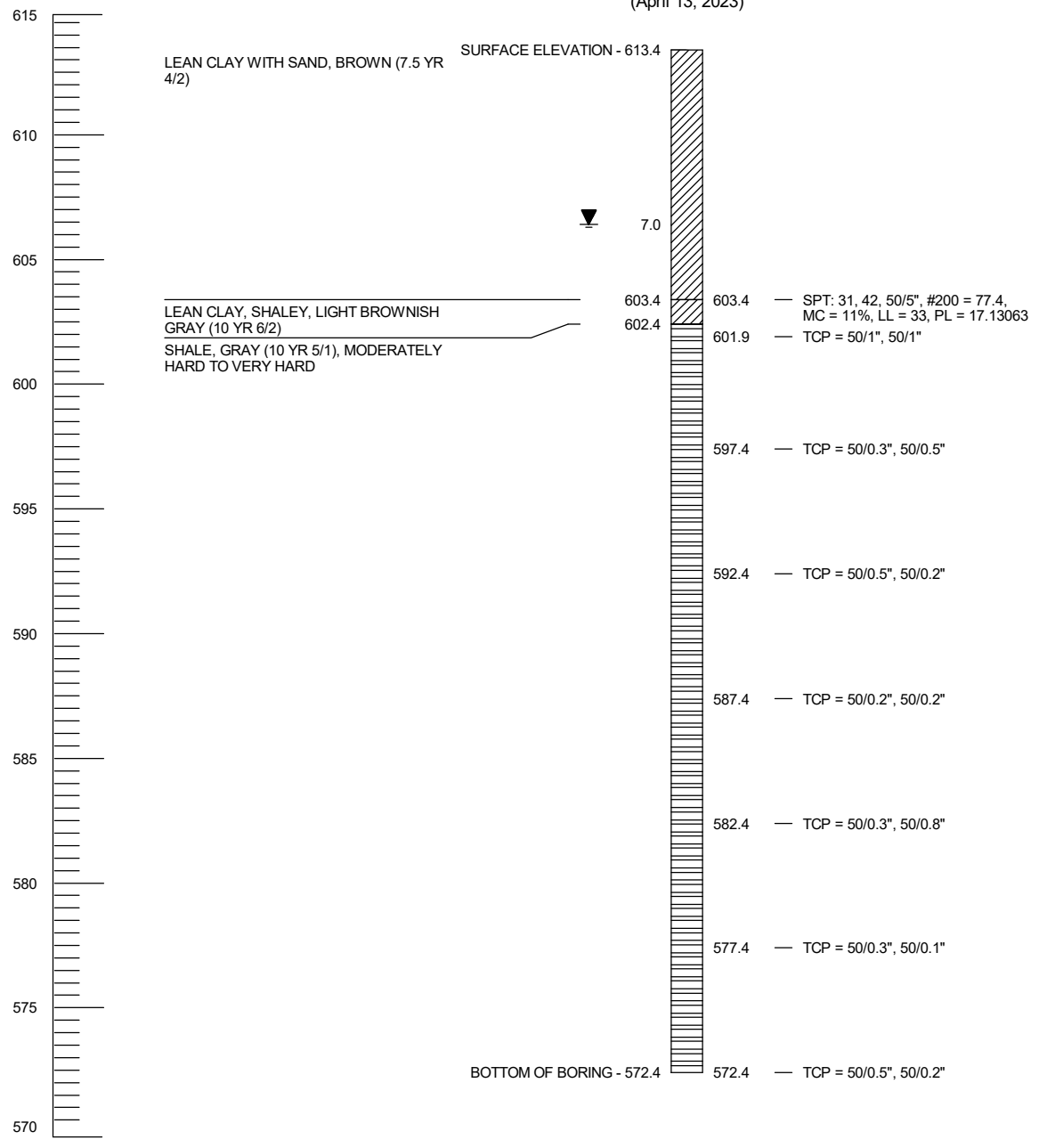
STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION

JOB PIECE NO. 33793(04) SHEET NO. B003

REVISIONS		
REV. NO.	DESCRIPTION	DATE

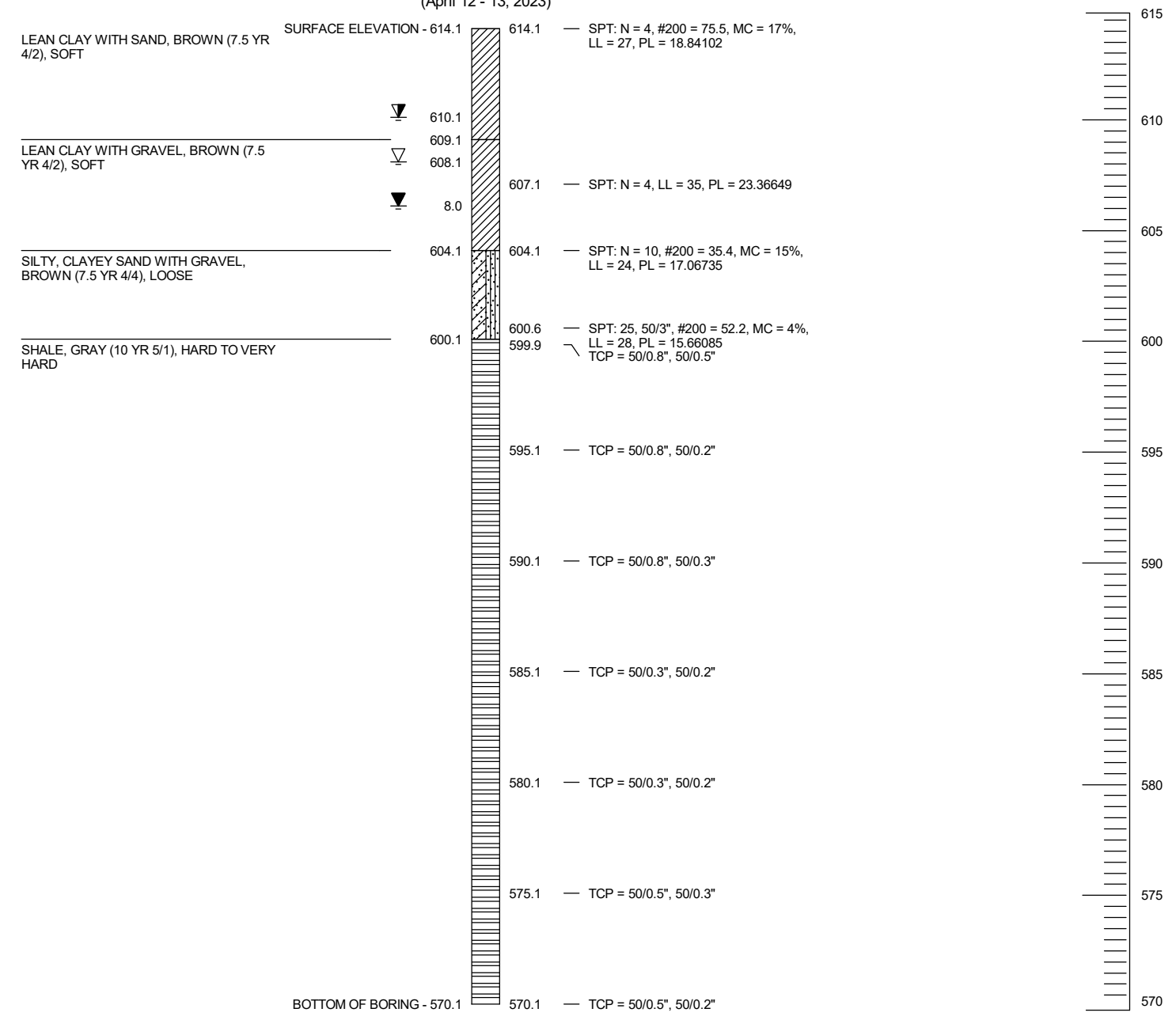
### BORING NO. B-03

STATION 1472+33, 33' left OF I SURVEY  
(April 13, 2023)



### BORING NO. B-04

STATION 1473+08, 9' right OF I SURVEY  
(April 12 - 13, 2023)



### SITE GEOLOGY

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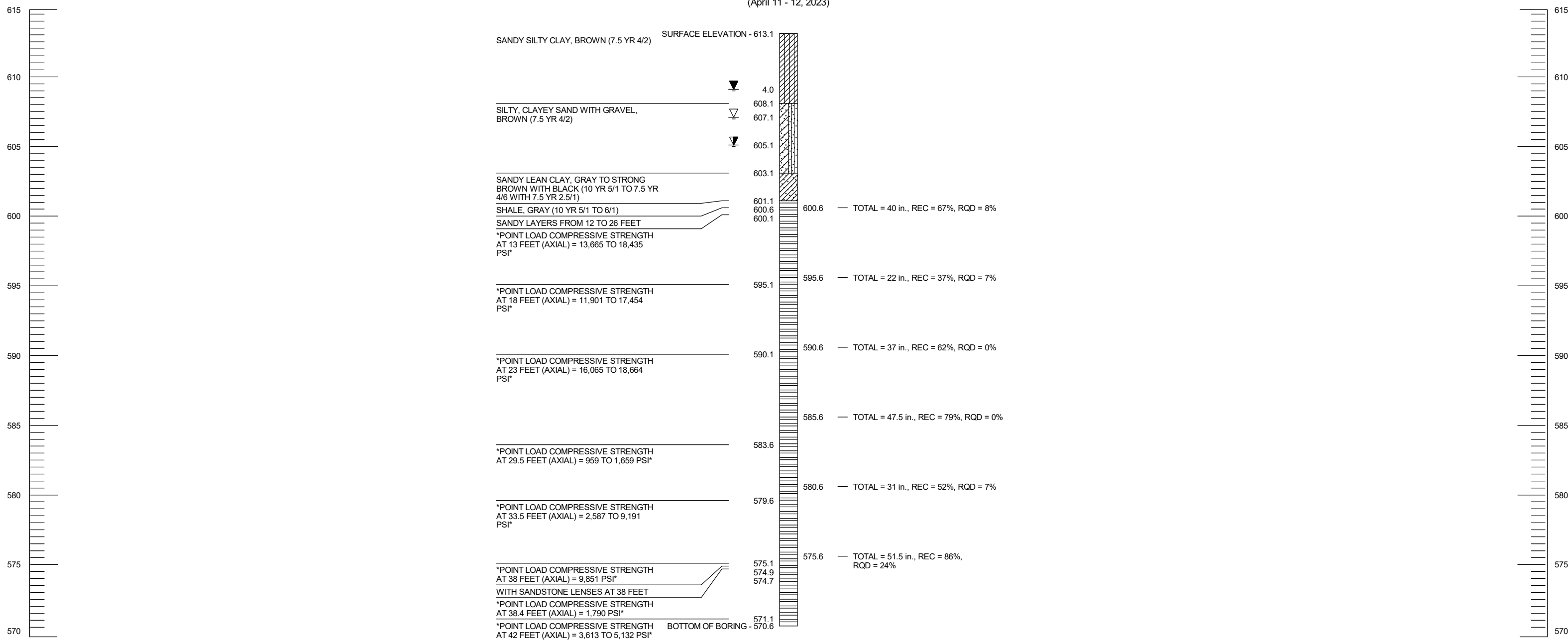


SH 9 BRIDGE OVER FLAT ROCK CREEK	MCINTOSH COUNTY, OKLAHOMA	Design	EDC	8/23
SUBSURFACE PROFILE (SHEET 2 OF 3)		Detail	EDC	8/23
		Check	JWB	8/23
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION		
JOB PIECE NO. 33793(04)		SHEET NO. B004		

REVISIONS		
REV. NO.	DESCRIPTION	DATE

### BORING NO. B-02A

STATION 1471+64, 16' right OF ! SURVEY  
(April 11 - 12, 2023)



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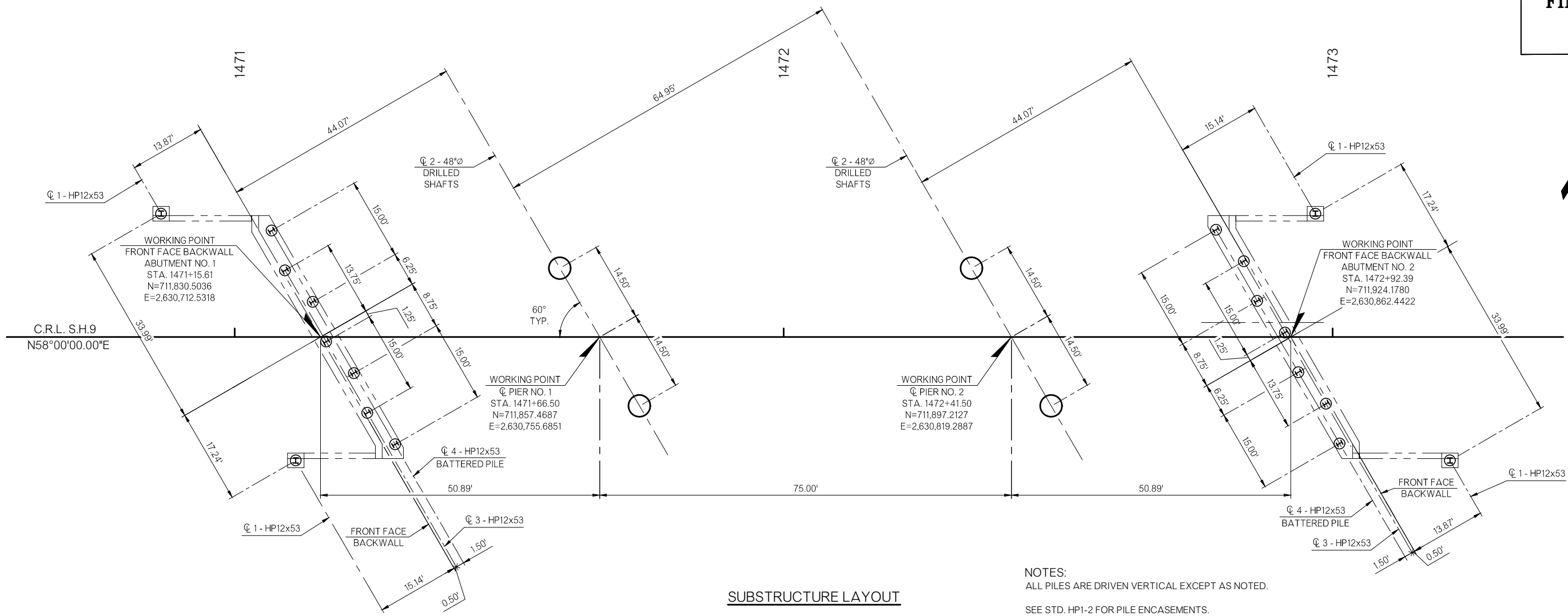
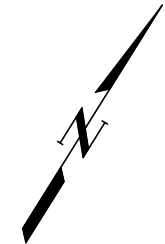
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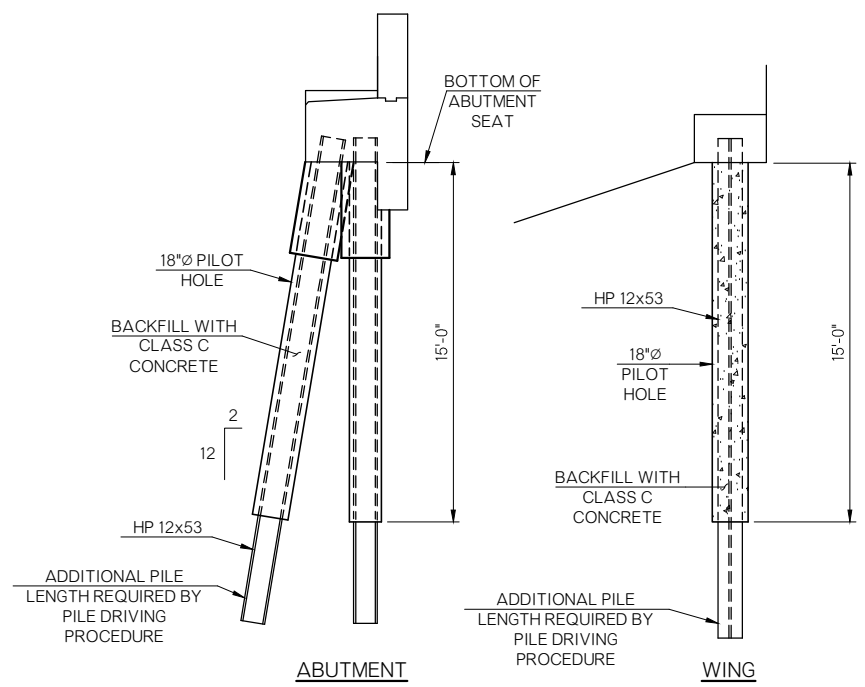


SH 9 BRIDGE OVER FLAT ROCK CREEK	MCINTOSH COUNTY, OKLAHOMA	Design	EDC	8/23
SUBSURFACE PROFILE (SHEET 3 OF 3)		Detail	EDC	8/23
		Check	JWB	8/23
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION		
JOB PIECE NO. 33793(04)		SHEET NO. B005		

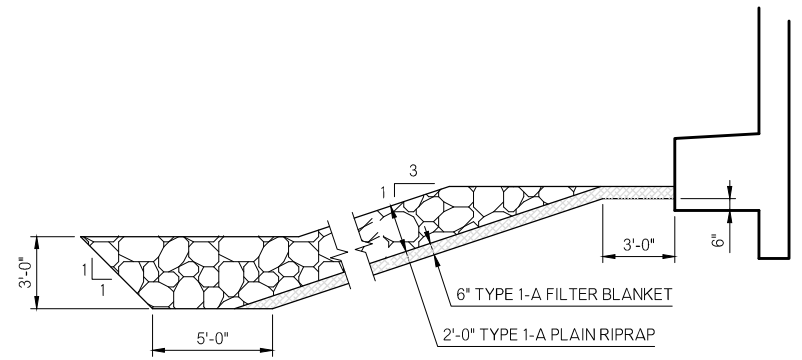


**SUBSTRUCTURE LAYOUT**

**NOTES:**  
 ALL PILES ARE DRIVEN VERTICAL EXCEPT AS NOTED.  
 SEE STD. HP1-2 FOR PILE ENCASEMENTS.  
 ORIENT WEB FACE OF SEAT FOOTING PILES TO BE PERPENDICULAR TO THE FACE OF THE SEAT.  
 ORIENT WEB FACE OF WING PILES TO BE PERPENDICULAR TO THE FACE OF THE WING.



**DETAIL OF PILOT HOLE**



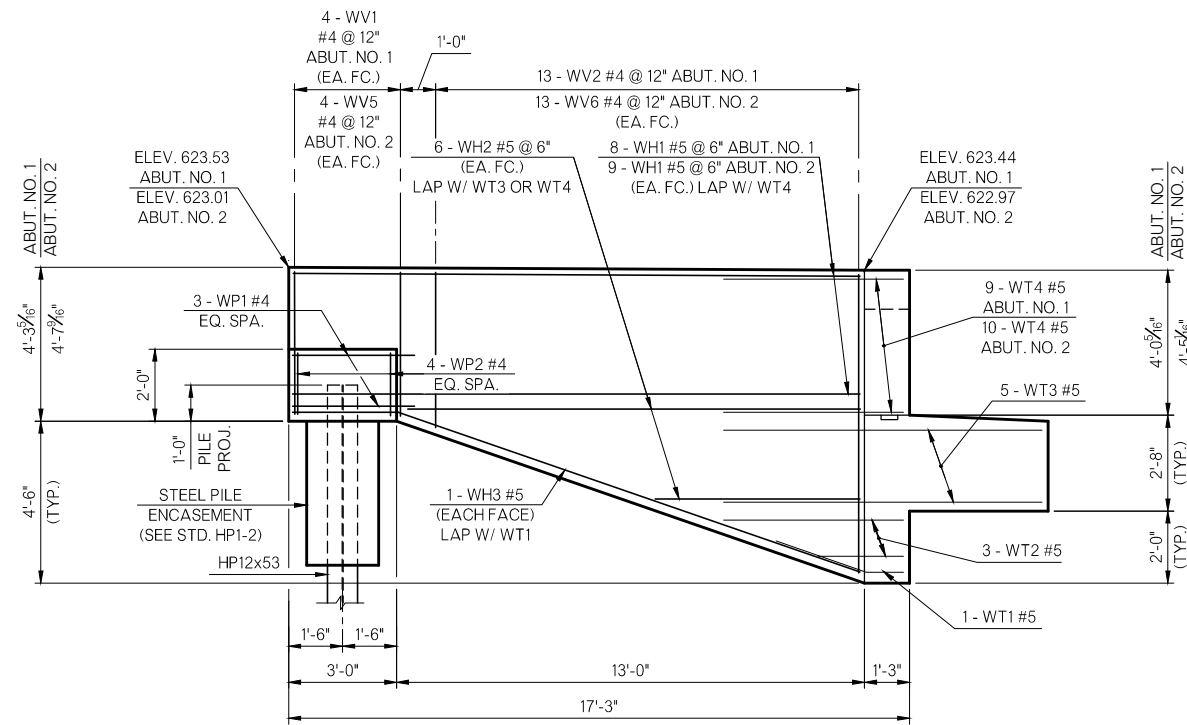
**SECTION THRU RIPRAP  
AT BRIDGE SEAT**

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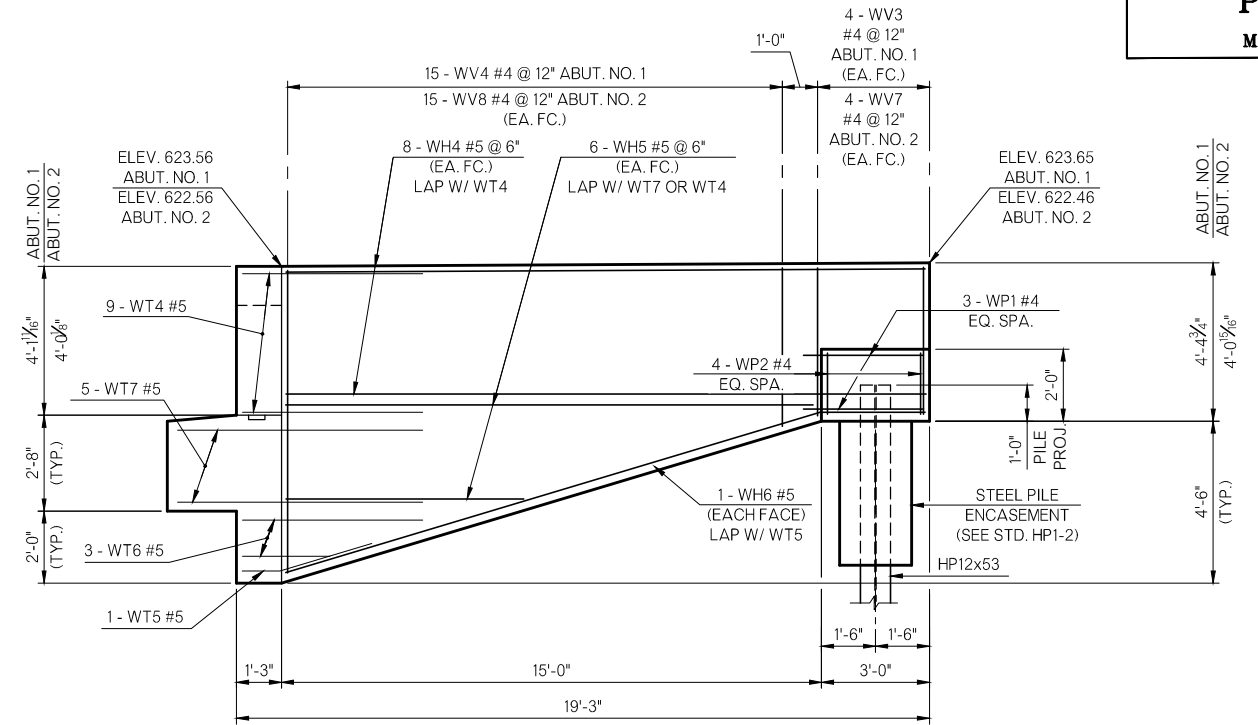
S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY	Design	RMF
			Detail	DRB
			Check	RMF
<b>STATE OF OKLAHOMA</b>		<b>DEPARTMENT OF TRANSPORTATION</b>		<b>CEC</b>
		JOB PIECE NO. 33793(04)	SHEET NO. B006	

L:\Active\21014\Drawings\flat rock\B006 Substruc layout.dwg, 4/16/2024 10:41:25 AM, Deanne Brittan



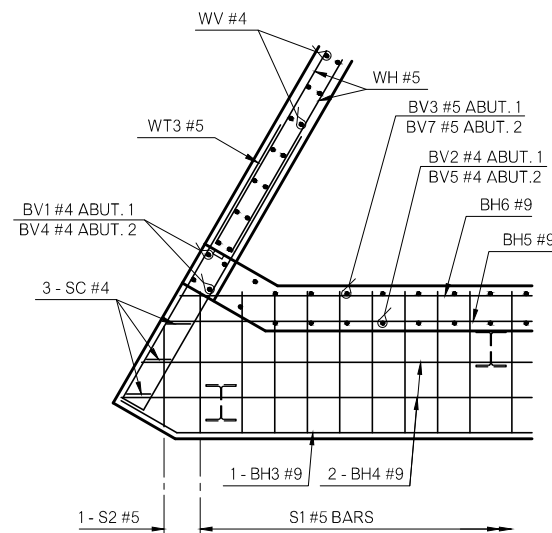


ABUTMENT NO. 1 SOUTH WING  
ABUTMENT NO. 2 NORTH WING

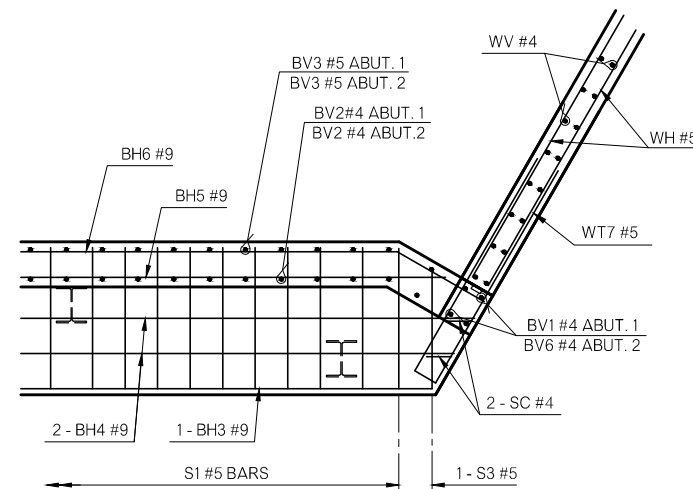


ABUTMENT NO. 1 NORTH WING  
ABUTMENT NO. 2 SOUTH WING

**WING ELEVATIONS**

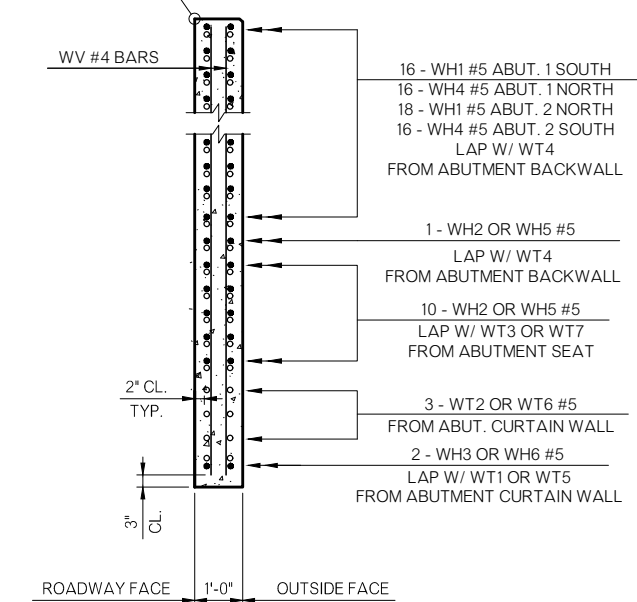


**DETAIL A**  
(REINFORCING AT TOP OF SEAT)



**DETAIL B**  
(REINFORCING AT TOP OF SEAT)

DO NOT CHAMFER TOP CORNER  
OF ROADWAY FACE  
OF ABUTMENT WING



**SECTION THRU WING AT  
BACK FACE OF ABUTMENT SEAT**

NOTE:  
FOR BAR BENDS, BAR LIST, AND  
QUANTITIES, SEE SHEET B009.

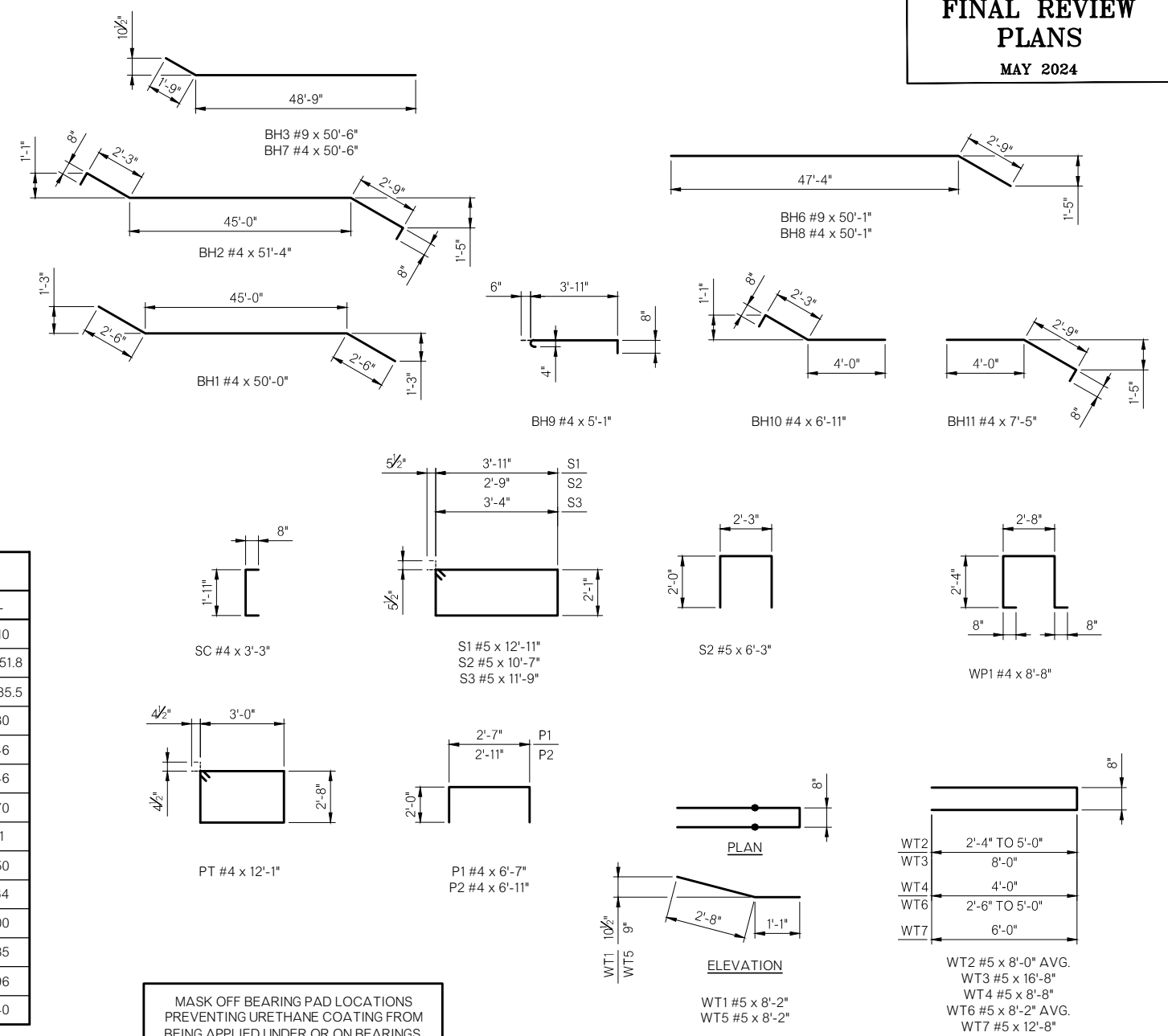
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AND SEALED  
DOCUMENT

S.H.9 OVER FLAT ROCK CREEK		McINTOSH COUNTY	
BRIDGE "A"		Design	RMF
ABUTMENT DETAILS SHEET 2 OF 4 ABUTMENT WING DETAILS		Detail	DRB
		Check	AFW
<b>STATE OF OKLAHOMA</b> DEPARTMENT OF TRANSPORTATION JOB PIECE NO. 33793(04)			
		SHEET NO. B008	

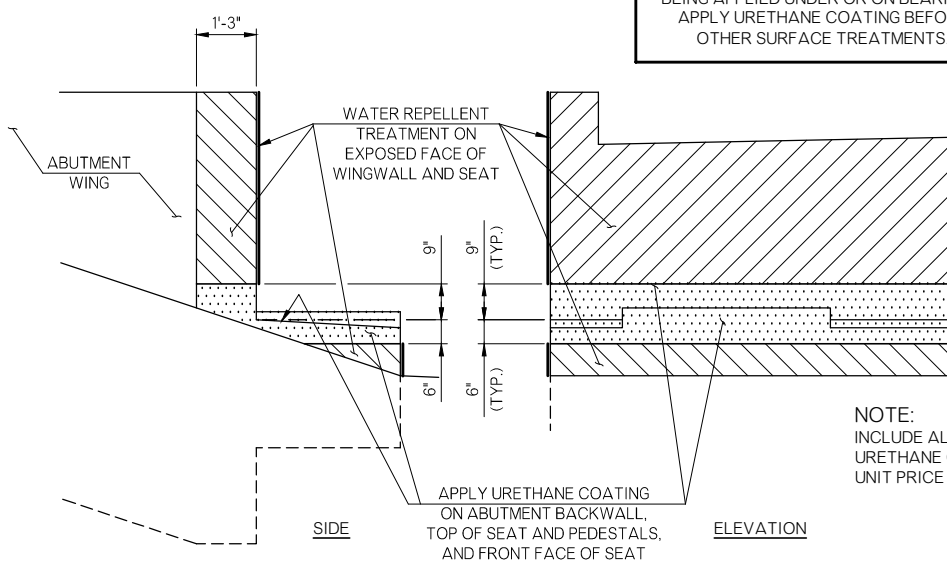
ABUTMENT BAR LIST					
COMMON (ONE SHOWN, TWO REQUIRED)					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED REINFORCING BARS					
BH1	#4	6	BNT.	50'-0"	
BH2	#4	6	BNT.	51'-4"	
BH3	#9	2	BNT.	50'-6"	
BH4	#9	4	STR.	50'-10"	
BH5	#9	2	STR.	49'-8"	
BH6	#9	2	BNT.	50'-1"	
BH7	#4	1	BNT.	50'-6"	
BH8	#4	1	BNT.	50'-1"	
BH9	#4	21	BNT.	5'-1"	
BH10	#4	3	BNT.	6'-11"	
BH11	#4	3	BNT.	7'-5"	
P1	#4	25	BNT.	6'-7"	
P2	#4	20	BNT.	6'-11"	
SC	#4	5	BNT.	3'-3"	
S1	#5	51	BNT.	12'-11"	
S2	#5	1	BNT.	10'-7"	
S3	#5	1	BNT.	11'-9"	
WH2	#5	12	STR.	9'-0" AVG.	5'-5" TO 12'-7"
WH3	#5	2	BNT.	16'-4"	
WH4	#5	16	STR.	17'-8"	
WH5	#5	12	STR.	10'-5" AVG.	6'-3" TO 14'-7"
WH6	#5	2	BNT.	18'-3"	
WT1	#5	1	BNT.	8'-2"	
WT2	#5	3	BNT.	8'-0" AVG.	5'-4" TO 10'-8"
WT3	#5	5	BNT.	16'-8"	
WT5	#5	1	BNT.	8'-2"	
WT6	#5	3	BNT.	8'-2" AVG.	5'-8" TO 10'-8"
WT7	#5	5	BNT.	12'-8"	
WP1	#4	6	BNT.	8'-8"	
WP2	#4	8	STR.	1'-7"	
ABUTMENT NO. 1 ONLY					
BV1	#4	8	STR.	8'-4"	
BV2	#4	46	STR.	7'-5" AVG.	7'-2" TO 7'-8"
BV3	#5	46	STR.	7'-5" AVG.	7'-2" TO 7'-8"
PT	#4	2	BNT.	12'-1"	
WH1	#5	16	STR.	15'-8"	
WT4	#5	18	BNT.	8'-8"	
WV1	#4	8	STR.	3'-10"	
WV2	#4	26	STR.	6'-2" AVG.	4'-2" TO 8'-2"
WV3	#4	8	STR.	4'-0"	
WV4	#4	30	STR.	6'-4" AVG.	4'-3" TO 8'-5"

ABUTMENT BAR LIST (CONT'D)					
ABUTMENT NO. 2 ONLY					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED REINFORCING BARS					
BV2	#4	23	STR.	7'-5" AVG.	7'-2" TO 7'-8"
BV3	#5	23	STR.	7'-5" AVG.	7'-2" TO 7'-8"
BV4	#4	4	STR.	8'-8"	
BV5	#4	23	STR.	7'-8"	
BV6	#4	4	STR.	8'-3"	
BV7	#5	23	STR.	7'-8"	
WH1	#5	18	STR.	15'-8"	
WT4	#5	19	BNT.	8'-8"	
WV5	#4	8	STR.	4'-2"	
WV6	#4	26	STR.	6'-7" AVG.	4'-7" TO 8'-7"
WV7	#4	8	STR.	3'-9"	
WV8	#4	30	STR.	6'-1" AVG.	4'-0" TO 8'-2"

ABUTMENT QUANTITIES				
ITEM	UNIT	ABUT. NO. 1	ABUT. NO. 2	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	C.Y.	95	95	210
CLSM BACKFILL	C.Y.	125.6	126.2	251.8
CLASS A CONCRETE	C.Y.	42.6	42.9	85.5
EPOXY COATED REINFORCING STEEL	LB.	5,430	5,500	10,930
PILES, FURNISHED (HP 12x53)	L.F.	162	184	346
PILES, DRIVEN (HP 12x53)	L.F.	162	184	346
(PL) PILOT HOLES	L.F.	135	135	270
PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.			1
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	25	25	50
ELASTOMERIC COATING	S.F.	231	233	464
TYPE I-A PLAIN RIPRAP	TON	540	660	1,200
TYPE I-A FILTER BLANKET	TON	85	100	185
6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.	48	48	96
6" NON-PERF. PIPE UNDERDRAIN RND.	L.F.	20	20	40

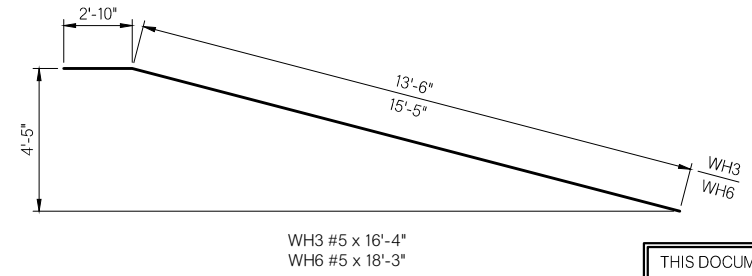


MASK OFF BEARING PAD LOCATIONS PREVENTING URETHANE COATING FROM BEING APPLIED UNDER OR ON BEARINGS. APPLY URETHANE COATING BEFORE OTHER SURFACE TREATMENTS.



NOTE: INCLUDE ALL COSTS ASSOCIATED WITH URETHANE COATING IN THE CONTRACT UNIT PRICE OF "ELASTOMERIC COATING".

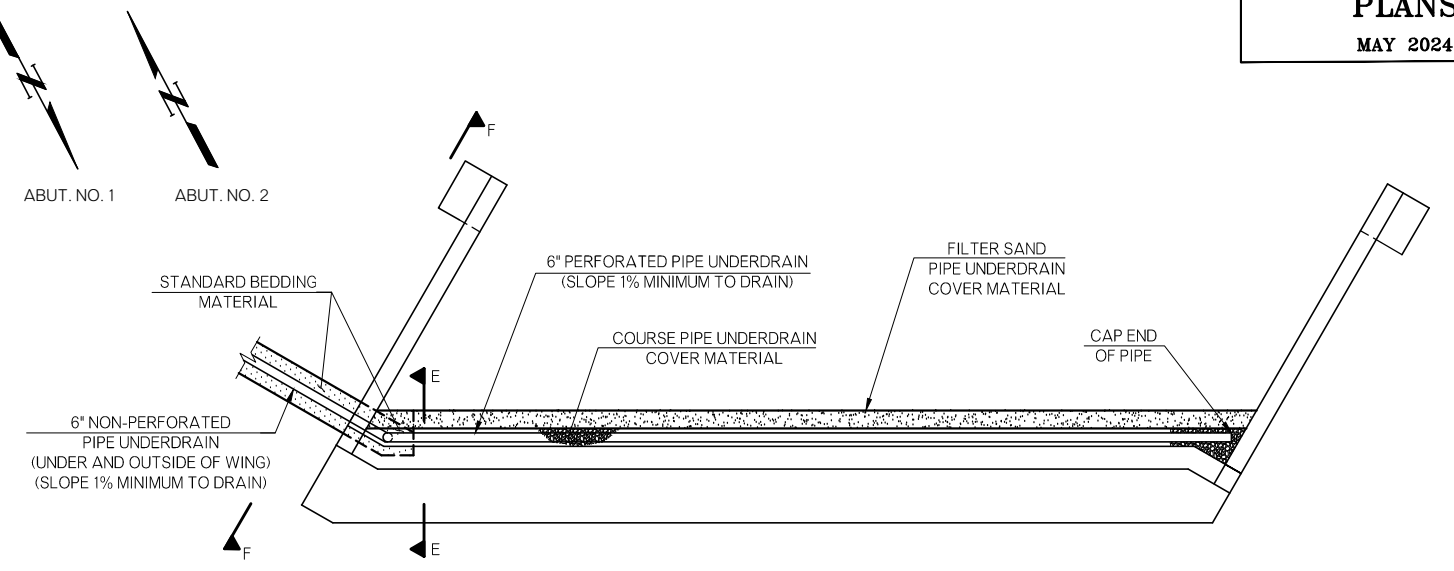
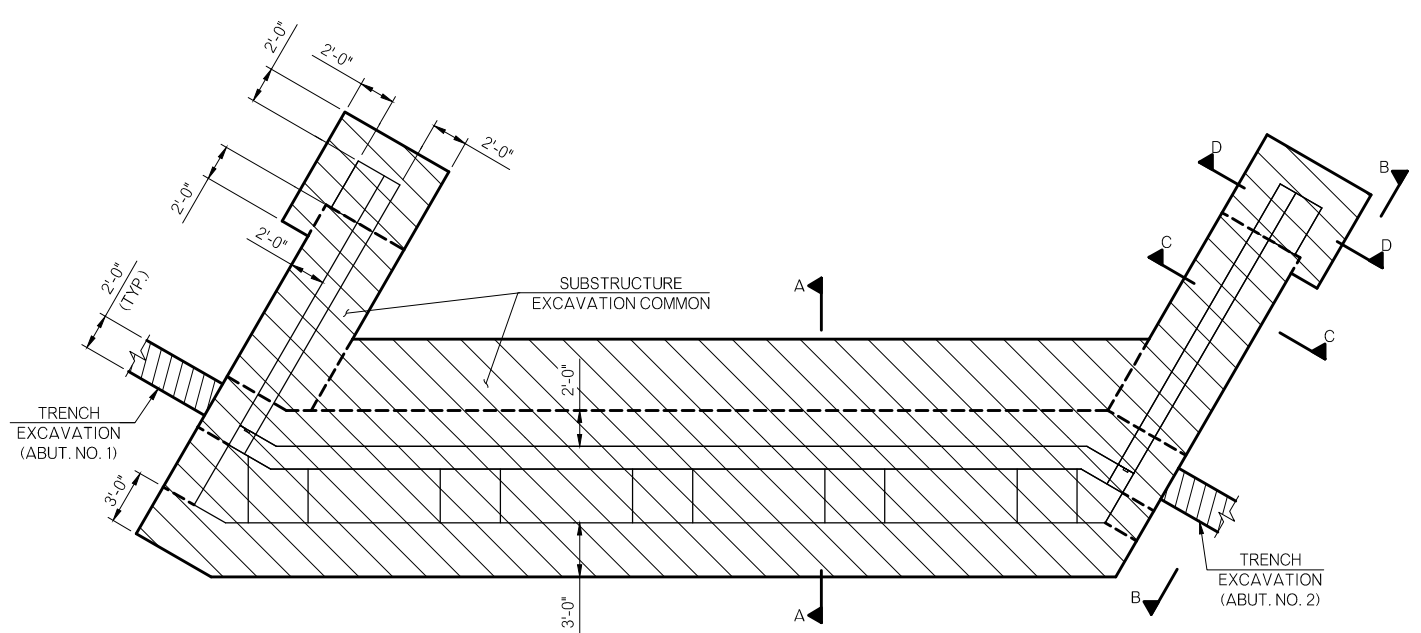
- ① 2 SETS OF 6
- ② 2 SETS OF 23
- ③ 2 SETS OF 13
- ④ 2 SETS OF 15



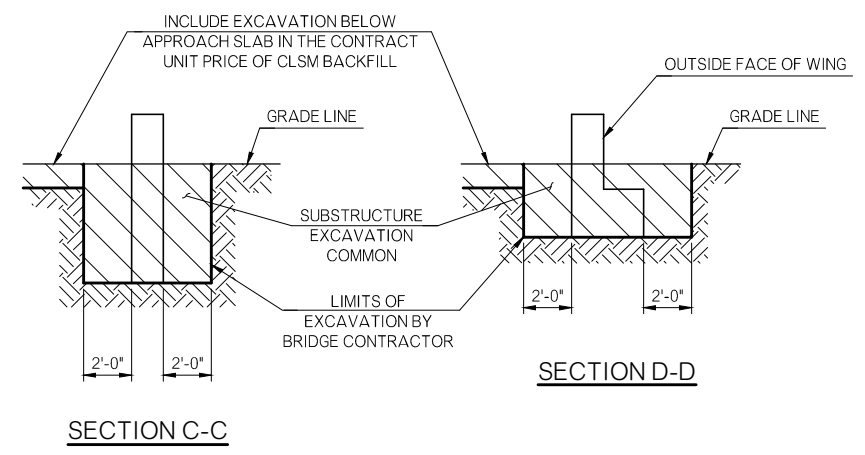
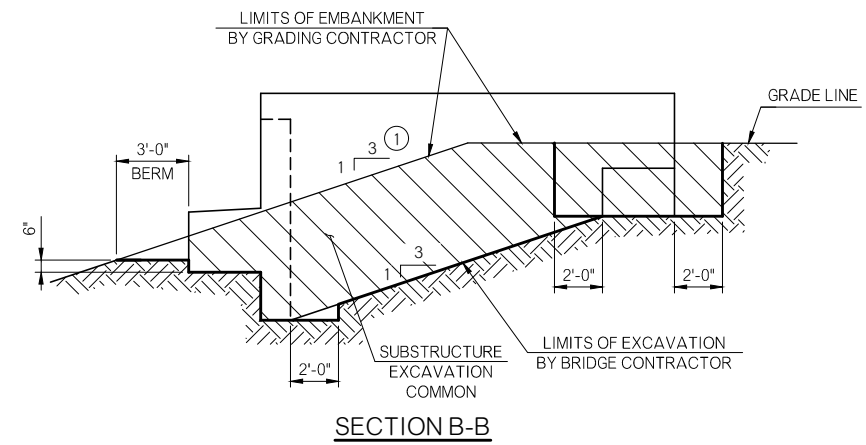
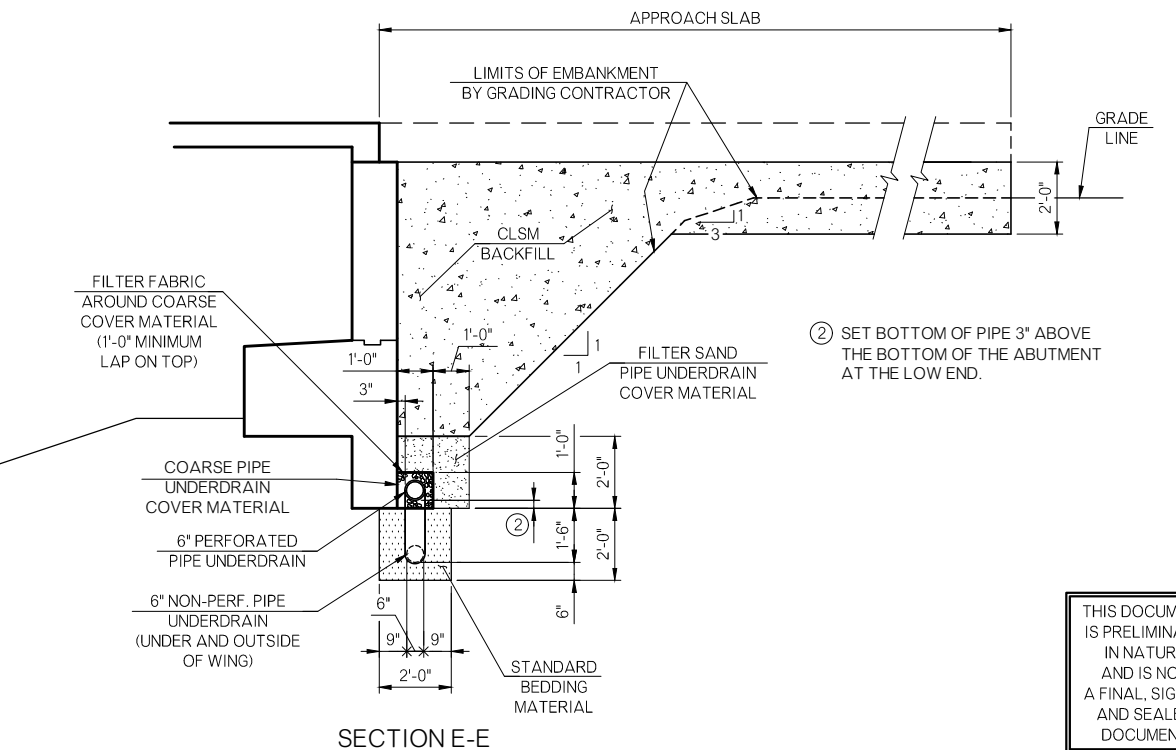
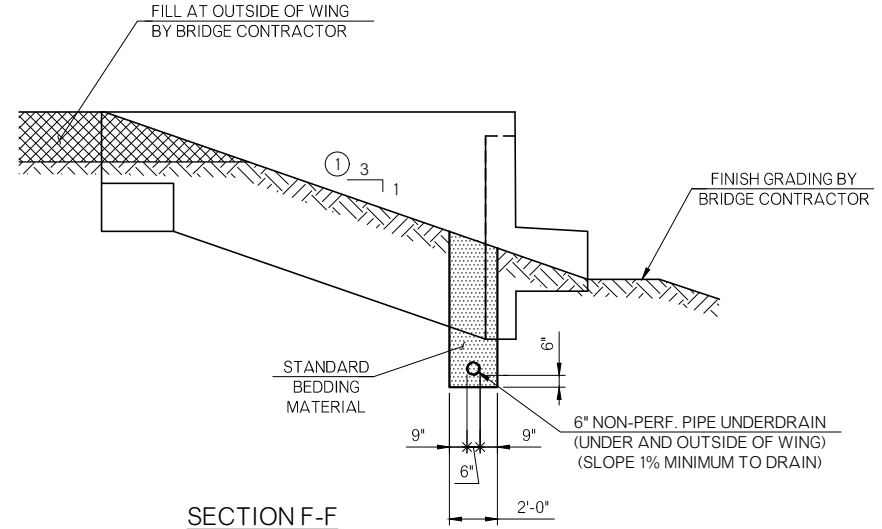
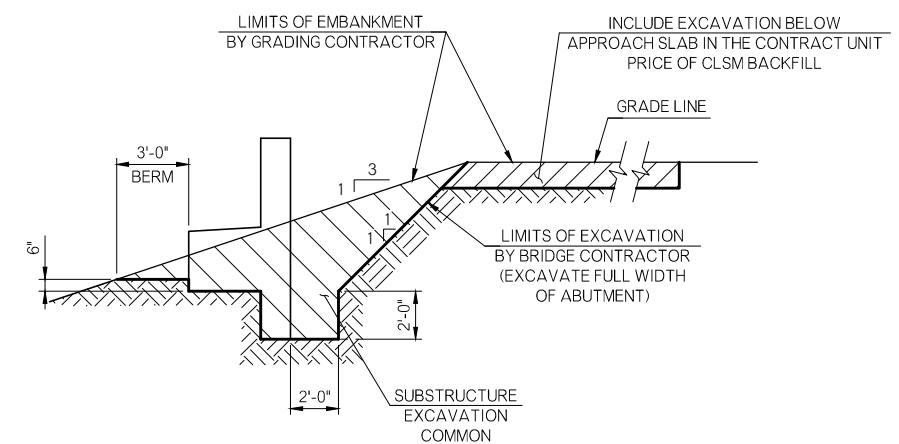
WH3 #5 x 16'-4"  
WH6 #5 x 18'-3"

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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY	
Design	RMF	Detail	DRB
Check	AFW	<b>CEC</b>	
<b>STATE OF OKLAHOMA</b> DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 33793(04)		SHEET NO. B009	



PLACE CLSM BACKFILL IN 2'-0" MAXIMUM LIFTS. DO NOT PLACE SUBSEQUENT LIFTS UNTIL PREVIOUS LIFT AS ATTAINED A STRENGTH OF 100 P.S.I. DO NOT PLACE CLSM BACKFILL UNTIL THE ABUTMENT WING CONCRETE HAS ATTAINED A STRENGTH OF 3000 P.S.I.

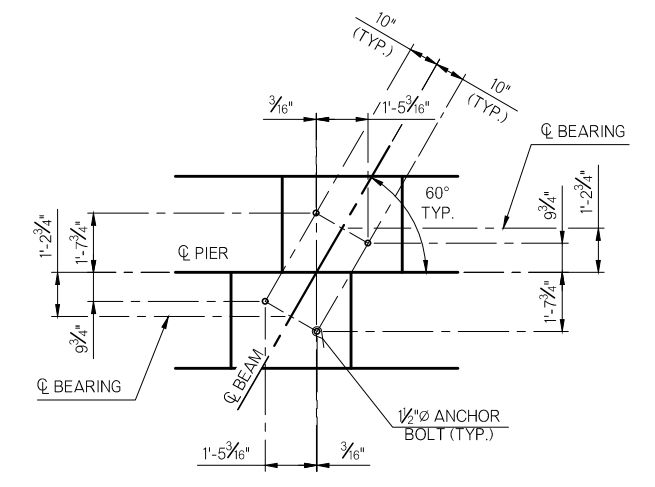
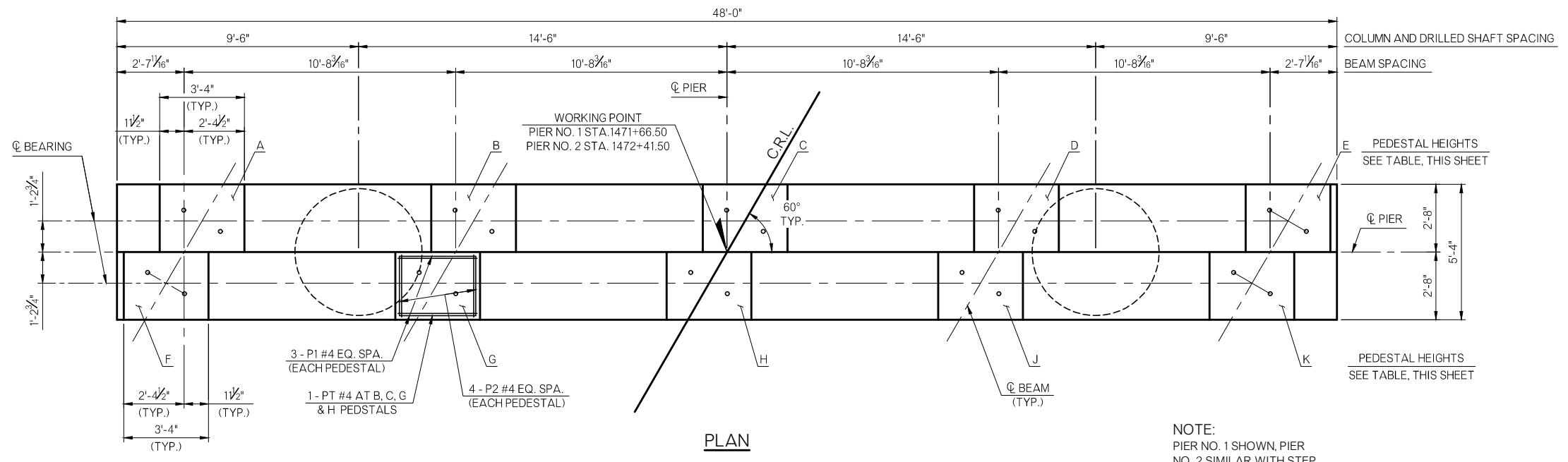


SECTION D-D

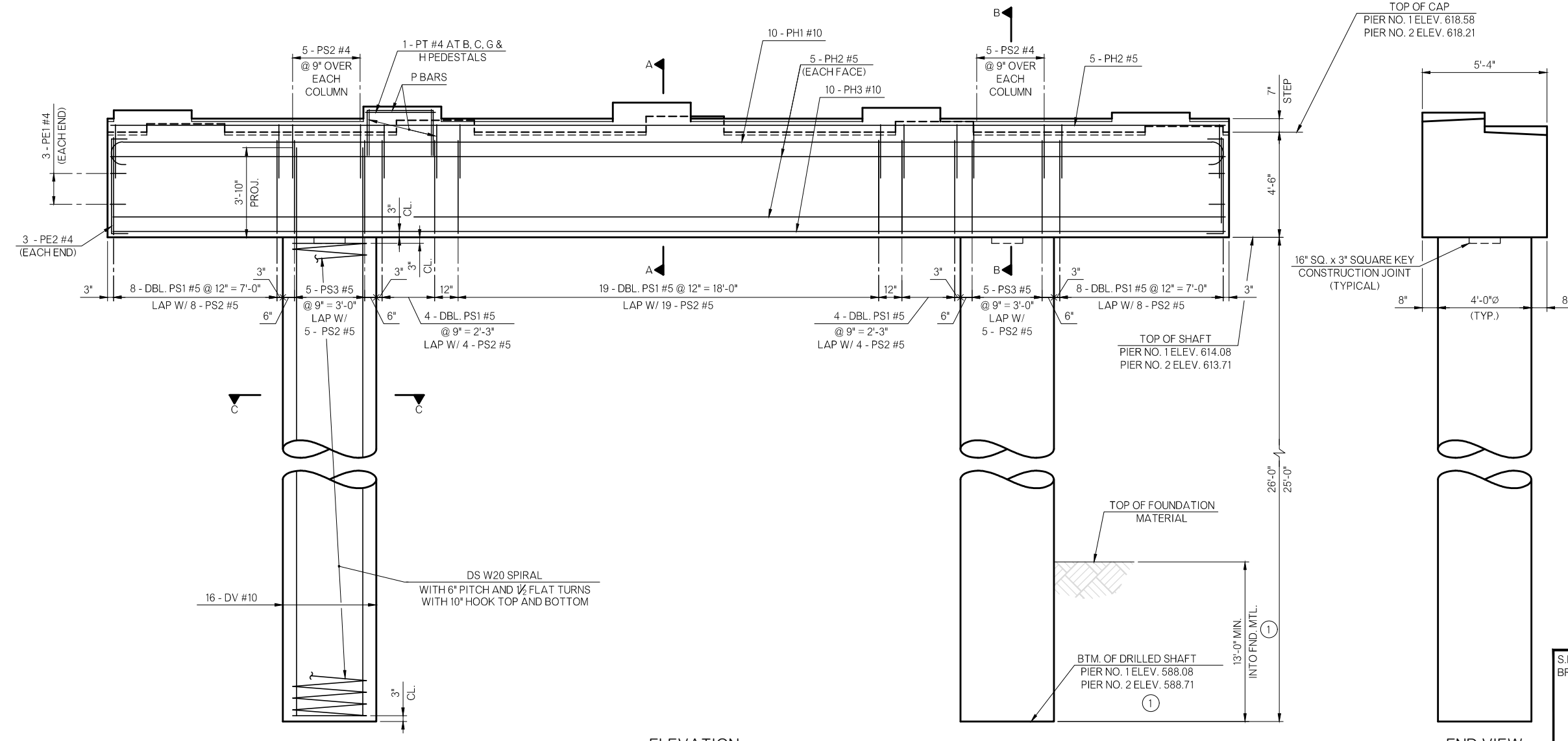
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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY	
Design	RMF	Detail	DRB
Check	AFW		
<b>STATE OF OKLAHOMA</b>			
JOB PIECE NO. 33793(04)		SHEET NO. B010	

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**ANCHOR BOLT LAYOUT**  
FOR BOLT DETAILS, SEE SHEET B019



PEDESTAL HEIGHTS				
LOCATION	PIER NO. 1		PIER NO. 2	
	DIMENSION	ELEVATION	DIMENSION	ELEVATION
A	4 1/4"	618.93	4 1/4"	619.15
B	6 1/8"	619.09	6 1/8"	619.30
C	8 1/8"	619.26	8 1/8"	619.47
D	5 1/2"	619.04	5 1/2"	619.25
E	3"	618.83	3"	619.04
F	4 1/2"	619.54	4 1/2"	618.57
G	6 3/8"	619.69	6 3/8"	618.74
H	8 1/4"	619.85	8 1/4"	618.90
J	5 3/4"	619.64	5 3/4"	618.68
K	3 3/4"	619.43	3 3/8"	618.47

① INSTALL DRILLED SHAFTS THE SPECIFIED MINIMUM DISTANCE INTO ROCK, BUT IN NO CASE HIGHER THAN THE BOTTOM OF DRILLED SHAFT ELEVATION SHOWN.

NOTE:  
FOR BAR LIST AND BAR BENDS, QUANTITY BLOCK, WATER REPELLENT TREATMENT DETAILS AND SECTIONS A-A AND B-B, SEE SHEET B012.

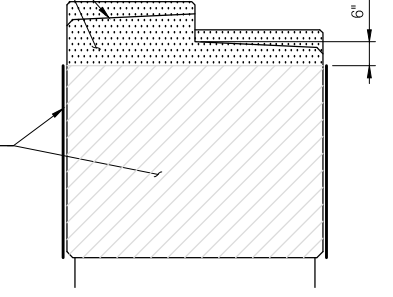
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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY	
PIER DETAILS		Design	RMF
SHEET 1 OF 2		Detail	DRB
PIER NOS. 1 & 2 DETAILS		Check	RMF
<b>STATE OF OKLAHOMA</b> DEPARTMENT OF TRANSPORTATION JOB PIECE NO. 33793(04)		CEC SHEET NO. B011	

APPLY URETHANE COATING TO TOP OF CAP AND PEDESTALS, AND TOP FACES OF CAP.

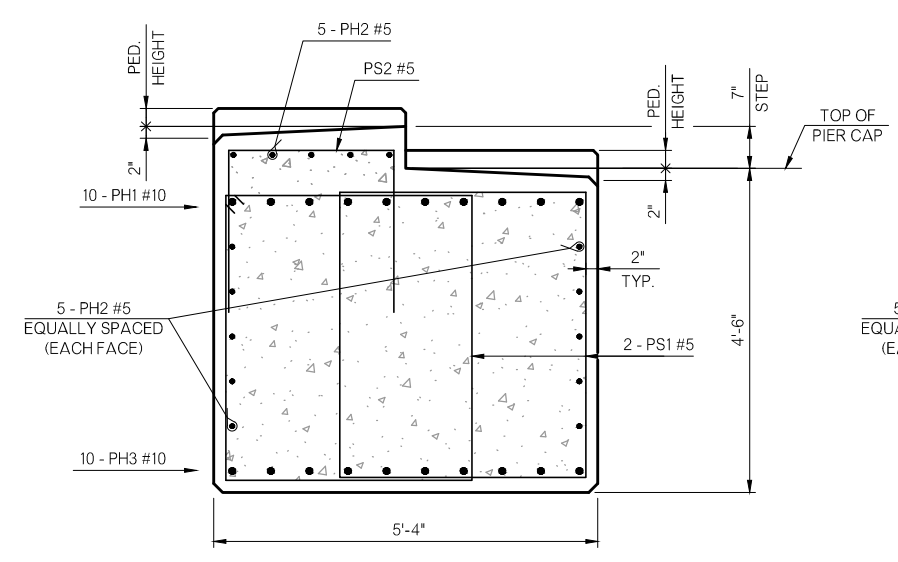
MASK OFF BEARING PAD LOCATIONS TO PREVENT URETHANE COATING FROM BEING APPLIED UNDER BEARINGS. APPLY URETHANE COATING BEFORE OTHER SURFACE TREATMENTS.

TREAT SURFACES INDICATED BY HEAVY LINE AND HATCH WITH WATER REPELLENT



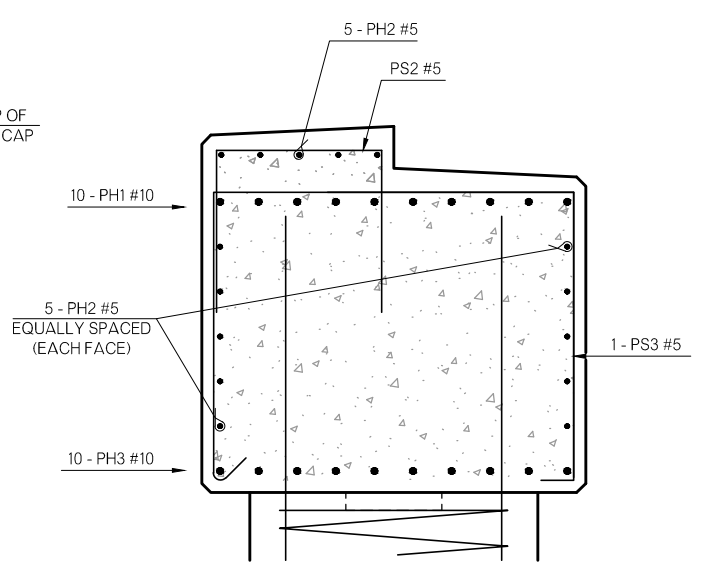
**SURFACE TREATMENT DETAIL**

NOTE:  
INCLUDE ALL COSTS ASSOCIATED WITH URETHANE COATING IN THE CONTRACT UNIT PRICE OF "ELASTOMERIC COATING".



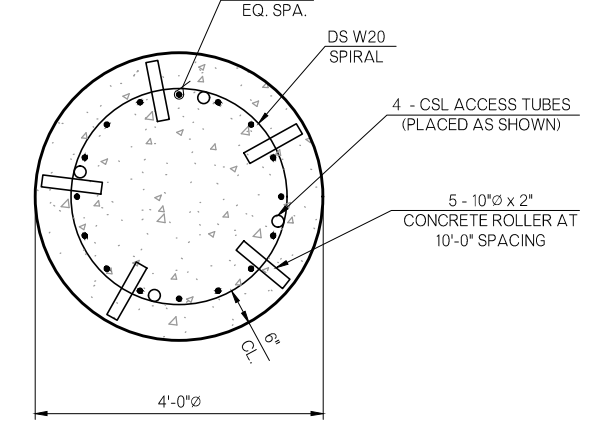
**SECTION A-A**

NOTE:  
PIER NO. 1 SHOWN,  
PIER NO. 2 OPP. HAND.

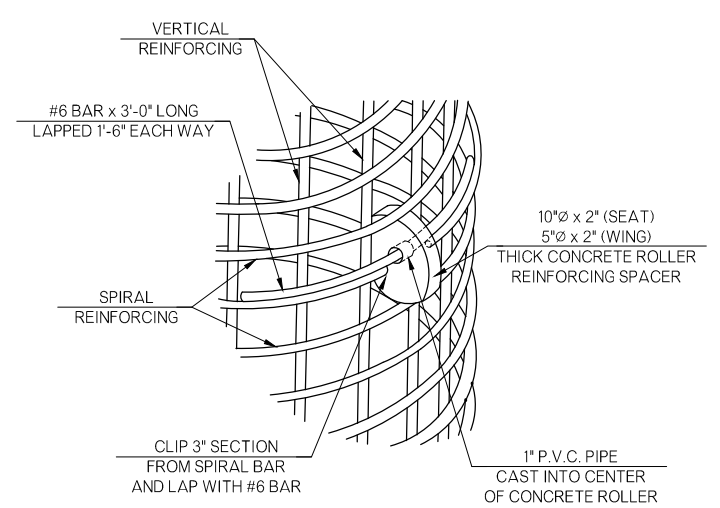


**SECTION B-B**

DIMENSIONS NOT SHOWN ARE SIMILAR TO SECTION A-A

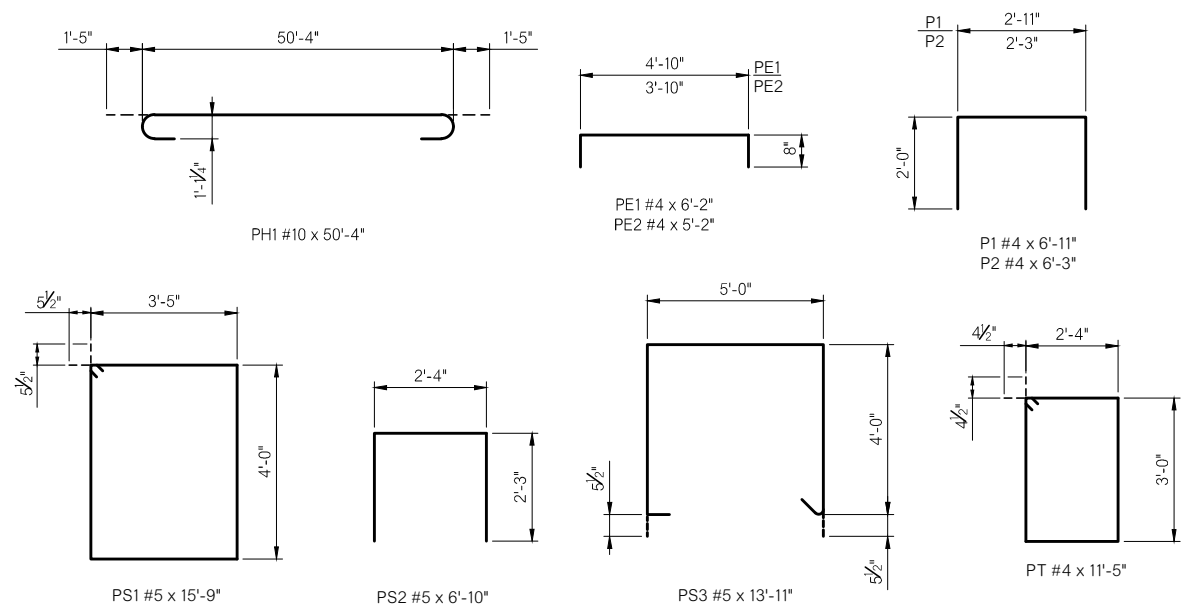


**SECTION C-C**



**DRILLED SHAFT REINFORCING SPACER DETAIL**

NOTE:  
PROVIDE CONCRETE ROLLERS WITH A MINIMUM 28-DAY CONCRETE COMPRESSIVE STRENGTH OF 4,000 PSI. PLASTIC SPACERS AND/OR CONCRETE SLEDS MAY BE SUBSTITUTED IN ACCORDANCE WITH SECTION 516.04.C(4)(g) OF THE SPECIFICATIONS. SUBSTITUTION OF SLAB BOLSTERS OR HIGH CHAIRS WILL NOT BE ALLOWED.

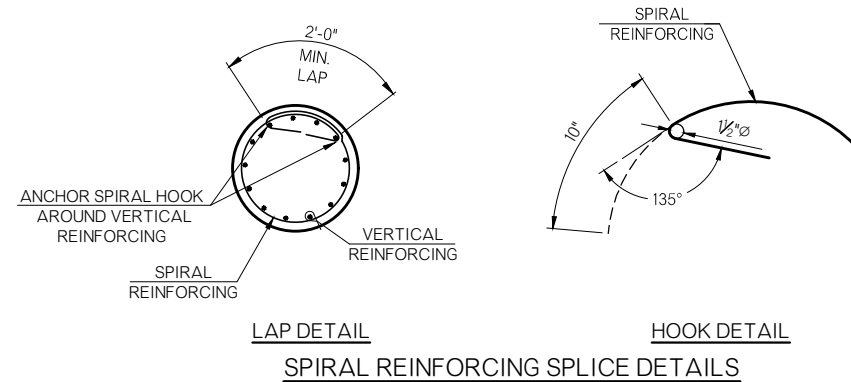


PIER BAR LIST ONE SHOWN, TWO REQUIRED				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING				
P1	#4	30	BNT.	6'-11"
P2	#4	40	BNT.	6'-3"
PE1	#4	6	BNT.	6'-2"
PE2	#4	6	BNT.	5'-2"
PH1	#10	10	BNT.	50'-4"
PH2	#5	15	STR.	47'-6"
PH3	#10	10	STR.	47'-6"
PS1	#5	86	BNT.	15'-9"
PS2	#5	53	BNT.	6'-10"
PS3	#5	10	BNT.	13'-11"
PT	#4	4	BNT.	11'-5"

DRILLED SHAFT BAR LIST PIER NO. 1				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING				
DV1	#10	32	STR.	29'-7"
PLAIN REINFORCING				
DS1	W20	2	BNT.	505'-2"

DRILLED SHAFT BAR LIST PIER NO. 2				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING				
DV2	#10	32	STR.	28'-7"
PLAIN REINFORCING				
DS2	W20	2	BNT.	486'-7"

- ① INCLUDED IN CONTRACT UNIT PRICE OF "DRILLED SHAFTS 48" DIAMETER".
- ② LENGTH SHOWN DOES NOT ACCOUNT FOR SPLICES. CONTRACTOR MAY ADD SPLICES AS NECESSARY, BUT PAYMENT WILL NOT BE MADE FOR EXTRA LENGTH REQUIRED FOR SPLICES. SEE SPLICE DETAIL THIS SHEET.



**SPIRAL REINFORCING SPLICE DETAILS**

PIER QUANTITIES				
ITEM DESCRIPTION	UNIT	PIER NO. 1	PIER NO. 2	TOTAL
CLASS A CONCRETE	C.Y.	46.5	46.5	93.0
EPOXY COATED REINFORCING STEEL	LB.	7,280	7,280	14,560
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	46	46	92
DRILLED SHAFTS (48" DIAMETER)	L.F.	52	50	102
CROSSHOLE SONIC LOGGING	EA.			1
ELASTOMERIC COATING	S.F.	435	435	870

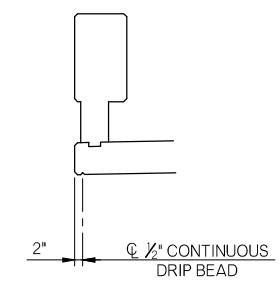
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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A" McINTOSH COUNTY

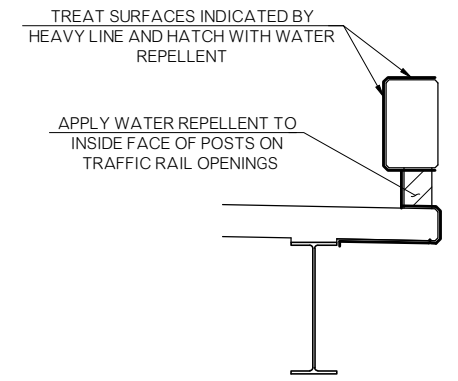
Design RMF  
Detail DRB  
Check RMF

PIER DETAILS  
SHEET 2 OF 2  
PIER NOS. 1 & 2 DETAILS

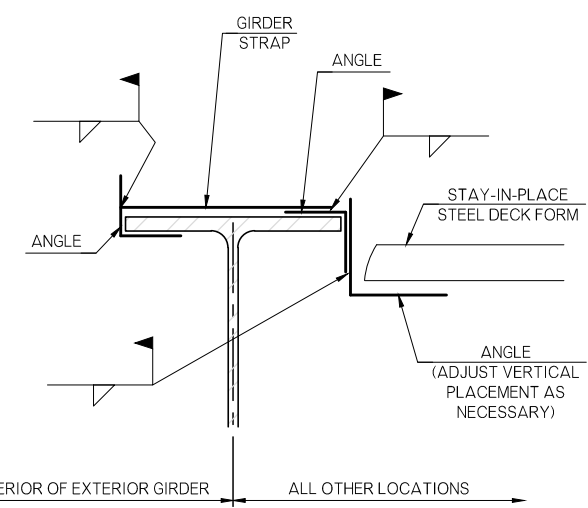
**STATE OF OKLAHOMA** DEPARTMENT OF TRANSPORTATION  
JOB PIECE NO. 33793(04) SHEET NO. B012



**DETAIL A**

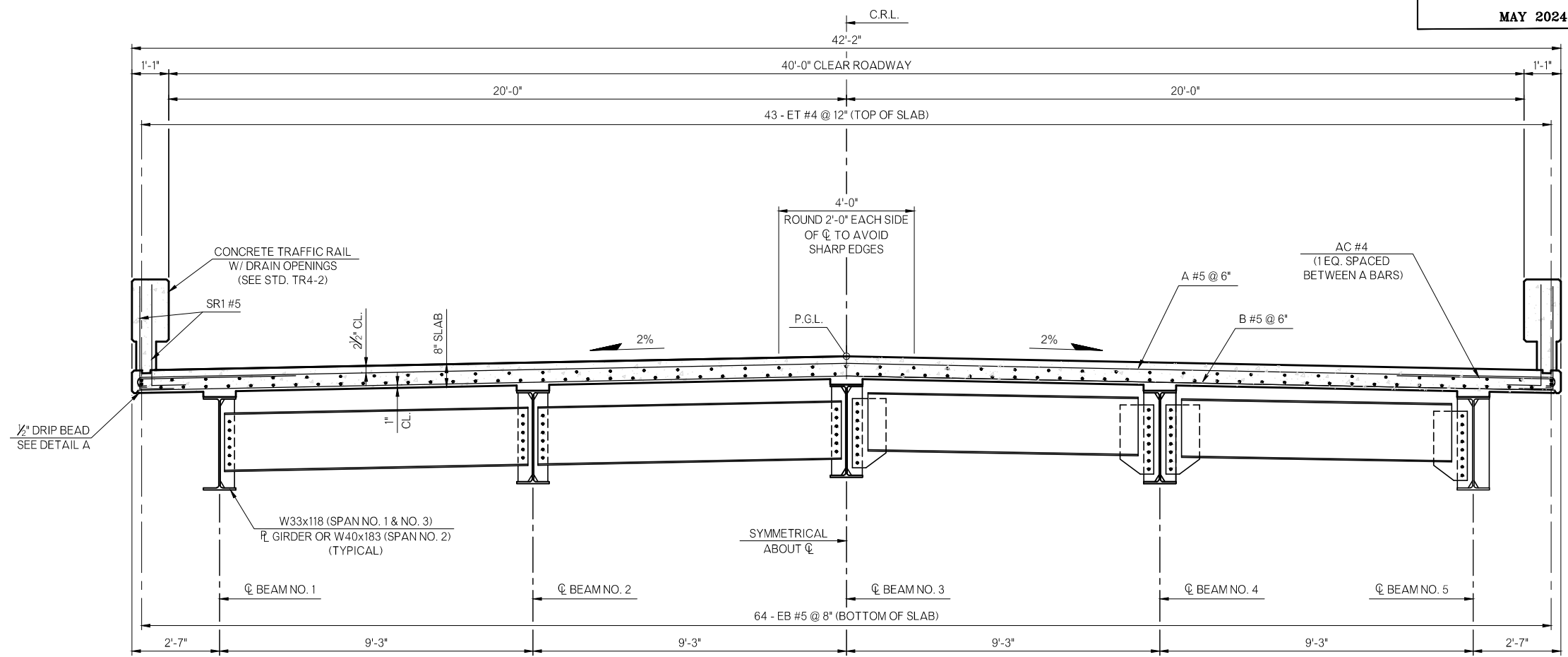


**WATER REPELLENT TREATMENT DETAILS**



**STAY-IN-PLACE STEEL DECK FORM  
FLANGE CONNECTION DETAIL**

NOTE:  
DO NOT WELD TO THE TOP FLANGE OR STUDS. REPORT ANY ARC STRIKE, WELD SPLATTER OR WELDING ON TOP FLANGE TO BRIDGE ENGINEER IMMEDIATELY.

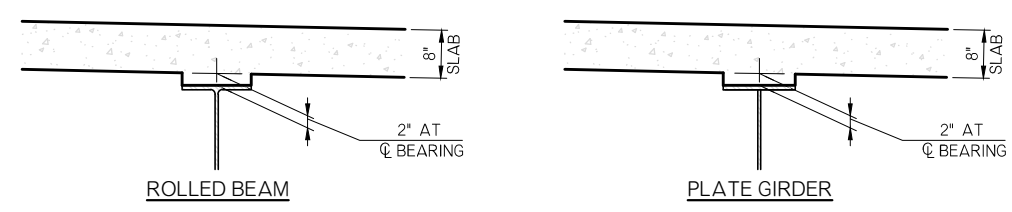


**HALF SECTION AT INTERMEDIATE DIAPHRAGM**

**TYPICAL CROSS SECTION  
(SPAN NO. 1 & 3 SHOWN, SPAN 2 SIMILAR)**

**HALF SECTION AT END DIAPHRAGM**

NOTES:  
FOR TRAFFIC RAIL LAYOUT, SEE SHEET B014.  
FOR BAR BENDS AND BAR LIST, SEE SHEET B022.  
ROTATE HOOKS ON AC BARS TO MAINTAIN MINIMUM CLEARANCE.



**BEAM HAUNCH DETAILS**

NOTE:  
PLAN QUANTITIES FOR CLASS AA CONCRETE INCLUDE 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 TOP OF THE BEAM, AND VARIES ACROSS THE SPAN. DETERMINE THE ACTUAL HAUNCH HEIGHT (ACCOUNTING FOR BEAM CAMBER, DEAD LOAD DEFLECTION AND ROADWAY GRADE) AFTER ERECTION OF THE GIRDERS AND SUBMIT TO THE ENGINEER FOR APPROVAL. THE ENGINEER WILL NOT MEASURE DIFFERENCES BETWEEN THE THEORETICAL AND THE ACTUAL HAUNCH HEIGHTS FOR PAYMENT.

SUPERSTRUCTURE QUANTITIES		
ITEM	UNIT	TOTAL
SAW-CUT GROOVING	S.Y.	793.4
CONCRETE RAIL (TR4)	L.F.	357.0
STRUCTURAL STEEL M270 GRADE 50W	LB.	156,400
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA.	10
STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA.	20
CLASS AA CONCRETE	C.Y.	200.1
EPOXY COATED REINFORCING STEEL	LB.	56,470
WATER REPELLENT (VISUALLY INSPECTED)	LB.	394
SEALED EXPANSION JOINTS	L.F.	49.2
SEALER CRACK PREPARATION	L.F.	47
SEALER RESIN	GAL.	0.6

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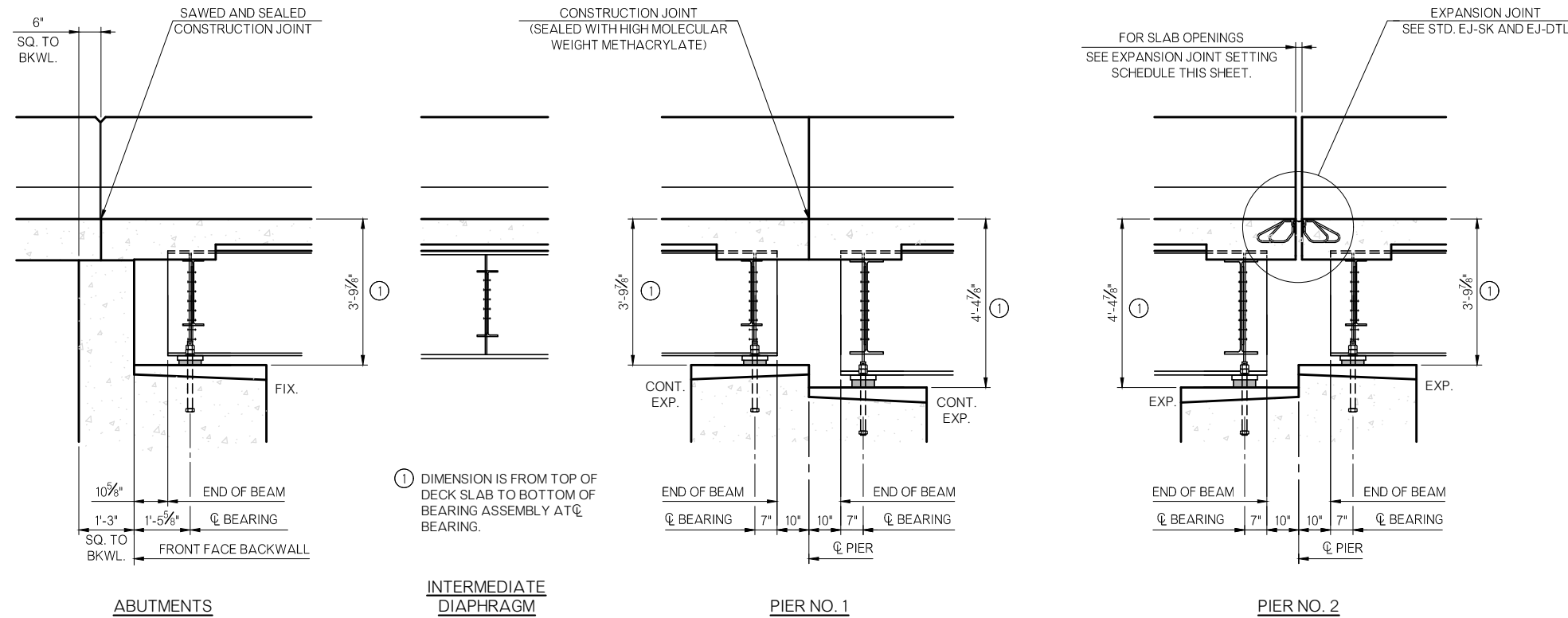
S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"      McINTOSH COUNTY

Design: RMF  
Detail: DRB  
Check: RMF DLW

**STATE OF OKLAHOMA** DEPARTMENT OF TRANSPORTATION  
SHEET 1 OF 11  
TYPICAL CROSS SECTION

JOB PIECE NO. 33793(04)      SHEET NO. B013

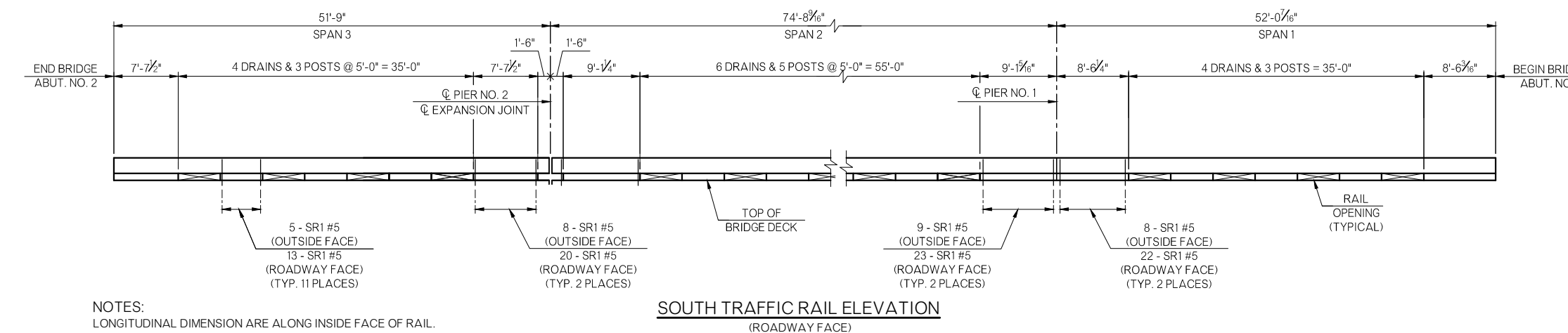
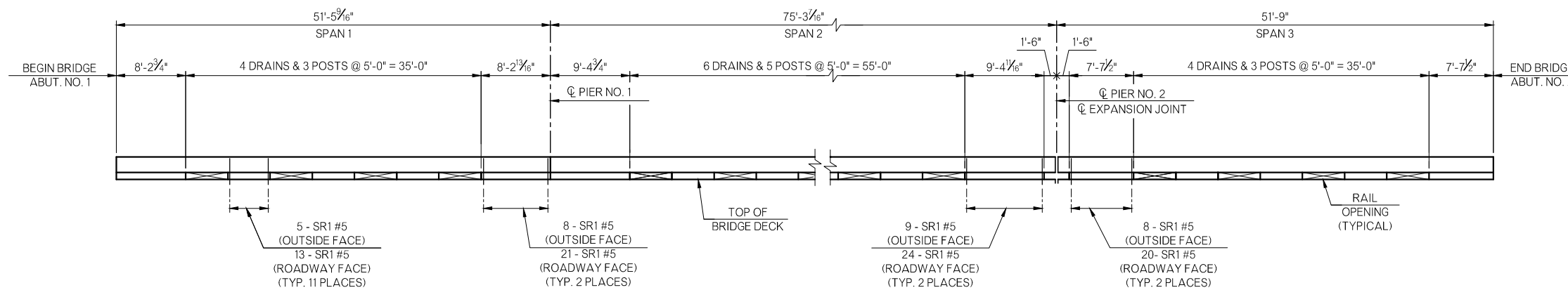
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EXPANSION JOINT SETTING SCHEDULE	
EXP. JOINT OPENING	TEMPERATURE (°F)
	PIER NO. 2
2 5/8"	7
2 1/2"	17
2 3/8"	28
2 1/4"	39
2 1/8"	49
2"	60
1 7/8"	71
1 3/4"	81
1 5/8"	92
1 1/2"	103
1 3/8"	113

INSTALL ALL DIAPHRAGMS AND TIGHTEN ALL BOLTS BEFORE PLACING CONCRETE FOR THE DECK SLAB OR APPLYING OTHER MASSIVE LOADS TO THE BEAMS.

**LONGITUDINAL SECTION**  
DIMENSIONS ALONG Q OF BEAM

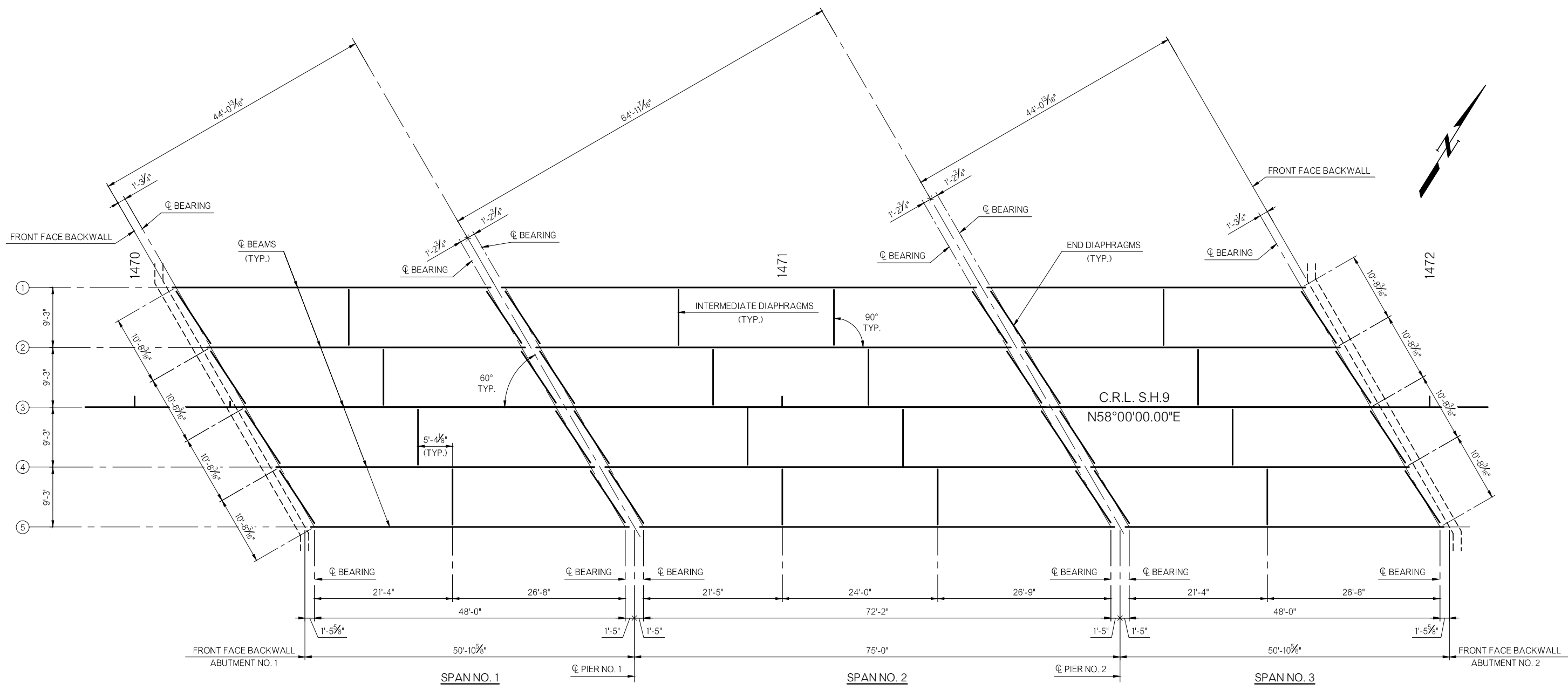


NOTES:  
LONGITUDINAL DIMENSION ARE ALONG INSIDE FACE OF RAIL.  
FOR ADDITIONAL DETAIL, SEE STD. TR4-2.

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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"	McINTOSH COUNTY	Design	RMF
SUPERSTRUCTURE DETAILS SHEET 2 OF 11 LONGITUDINAL SECTION AND TRAFFIC RAIL ELEVATIONS		Detail	DRB
		Check	RMF DLW
STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION			
		JOB PIECE NO. 33793(04)	SHEET NO. B014

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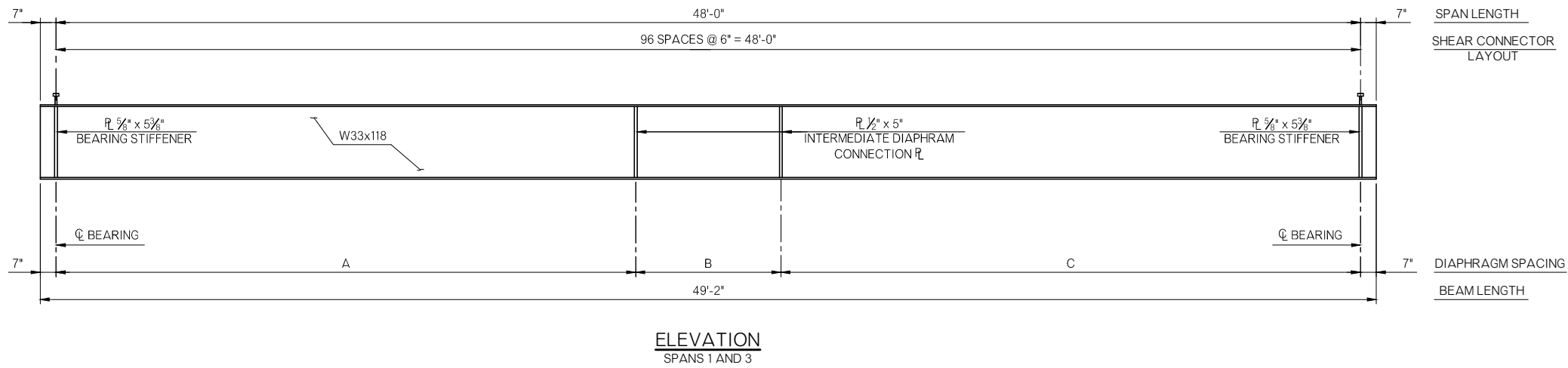


**BEAM FRAMING PLAN**

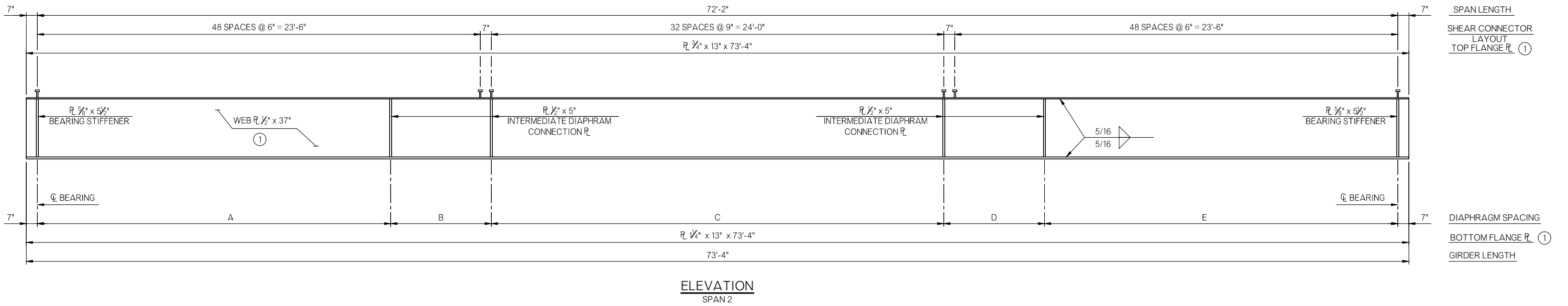
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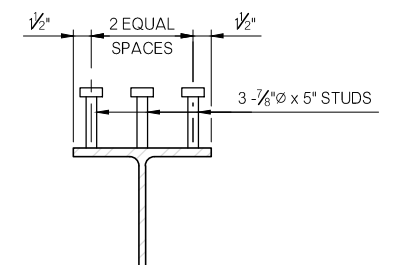
S.H.9 OVER FLAT ROCK CREEK		McINTOSH COUNTY	
BRIDGE "A"		Design	RMF
SUPERSTRUCTURE DETAILS		Detail	DRB
		Check	RMF DLW
SHEET 3 OF 11			
FRAMING PLAN			
<b>STATE OF OKLAHOMA</b>		<b>DEPARTMENT OF TRANSPORTATION</b>	
JOB PIECE NO. 33793(04)		SHEET NO. B015	



**NOTES:**  
 ① PROVIDE STRUCTURAL STEEL TESTED FOR NON-FRACTURE CRITICAL V-NOTCH REQUIREMENTS FOR ZONE 2. SEE SHEET AB01.  
 FOR DIAPHRAGM STIFFENER CONNECTION PLATES, SEE SHEETS B017 & B018.



LOCATION	BEAM DIMENSION TABLE							
	SPAN NO. 1 & NO. 3			SPAN NO. 2				
	A	B	C	A	B	C	D	E
BEAM 1	26'-8"	-	21'-4"	26'-9"	-	24'-0"	-	21'-5"
BEAM 2	21'-3 1/16"	5'-4 1/8"	21'-4"	21'-4 15/16"	5'-4 1/8"	18'-7 1/8"	5'-4 1/8"	21'-5"
BEAM 3	21'-3 1/16"	5'-4 1/8"	21'-3 15/16"	21'-4 15/16"	5'-4 1/8"	18'-7 1/8"	5'-4 1/8"	21'-4 15/16"
BEAM 4	21'-4"	5'-4 1/8"	21'-3 15/16"	21'-5"	5'-4 1/8"	18'-7 1/8"	5'-4 1/8"	21'-4 15/16"
BEAM 5	21'-4"	-	26'-8"	21'-5"	-	24'-0"	-	26'-9"



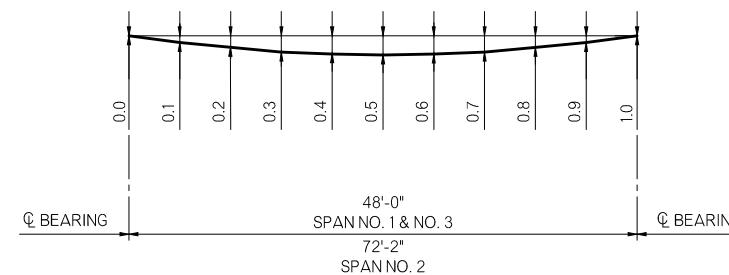
**SHEAR CONNECTOR DETAIL**  
SPAN NO. 1 & NO. 3 SHOWN, SPAN 2 SIMILAR

**NOTES:**  
THE STEEL DEFLECTIONS SHOWN AT THE TENTH POINTS ARE DUE TO THE STEEL WEIGHT OF THE BEAM AND DIAPHRAGMS.

THE CONCRETE DEFLECTIONS SHOWN AT THE TENTH POINTS ARE DEFLECTIONS DUE TO DECK SLAB + HAUNCH + S.I.P. DECK FORMS + TRAFFIC RAIL. IT DOES NOT INCLUDE THE BEAM/GIRDER WEIGHT, DIAPHRAGMS, OR FUTURE WEARING SURFACE.

DEAD LOAD DEFLECTION SCHEDULE - SPAN NO. 1 & NO. 3											
LOCATION	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
STEEL	0.00"	0.04"	0.07"	0.09"	0.11"	0.11"	0.11"	0.09"	0.07"	0.04"	0.00"
CONCRETE	0.00"	0.21"	0.40"	0.54"	0.64"	0.67"	0.64"	0.54"	0.40"	0.21"	0.00"

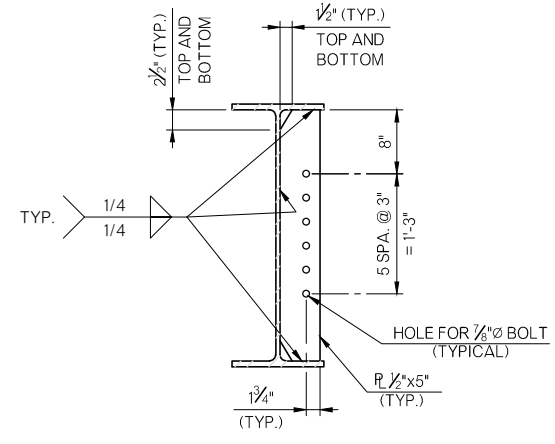
DEAD LOAD DEFLECTION SCHEDULE - SPAN NO. 2											
LOCATION	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
STEEL	0.00"	0.12"	0.23"	0.31"	0.36"	0.38"	0.36"	0.31"	0.23"	0.12"	0.00"
CONCRETE	0.00"	0.58"	1.11"	1.52"	1.77"	1.86"	1.77"	1.52"	1.11"	0.58"	0.00"



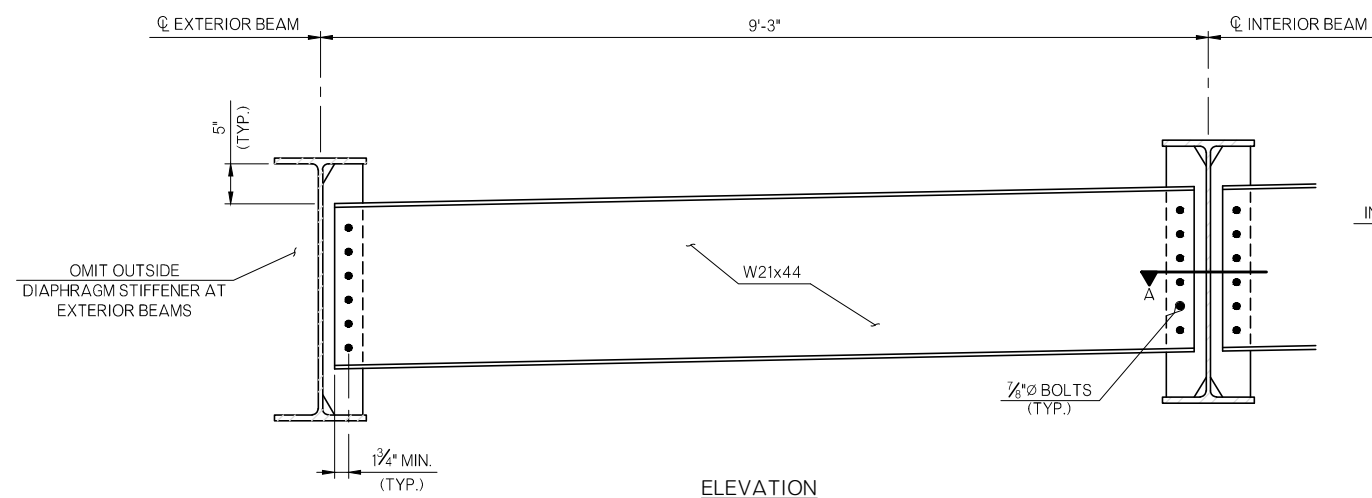
**DEAD LOAD DEFLECTION DIAGRAM**

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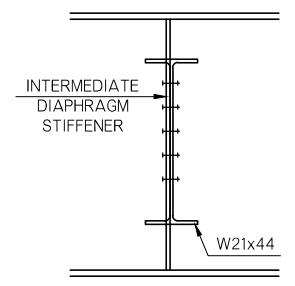
S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY		Design	RMF
<b>SUPERSTRUCTURE DETAILS</b> SHEET 4 OF 11 BEAM DETAILS				Detail	DRB
				Check	RMF DLW
<b>STATE OF OKLAHOMA</b>		DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 33793(04)		SHEET NO. B016			



**INTERMEDIATE STIFFENER DETAILS**  
SPAN NO. 1 & NO. 3

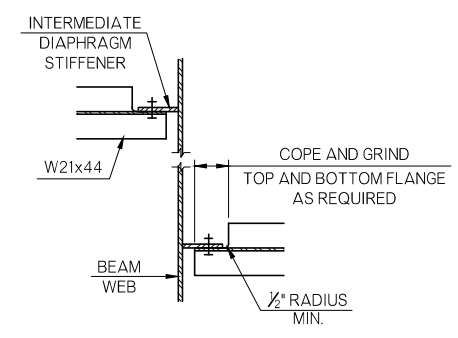


**ELEVATION**

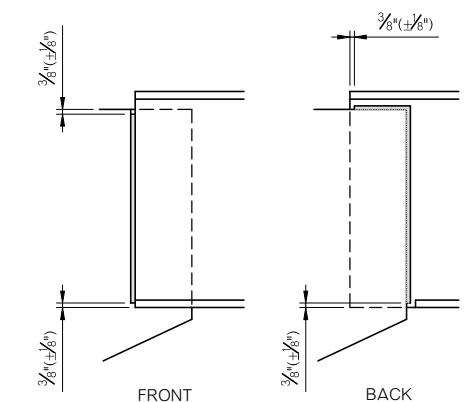


**SECTION**

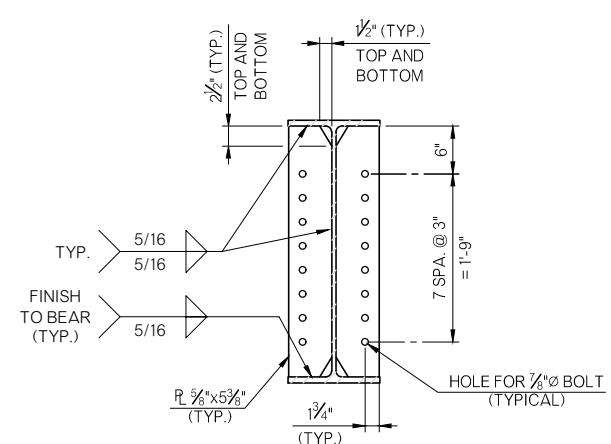
**INTERMEDIATE DIAPHRAGM**  
SPAN NO. 1 & NO. 3



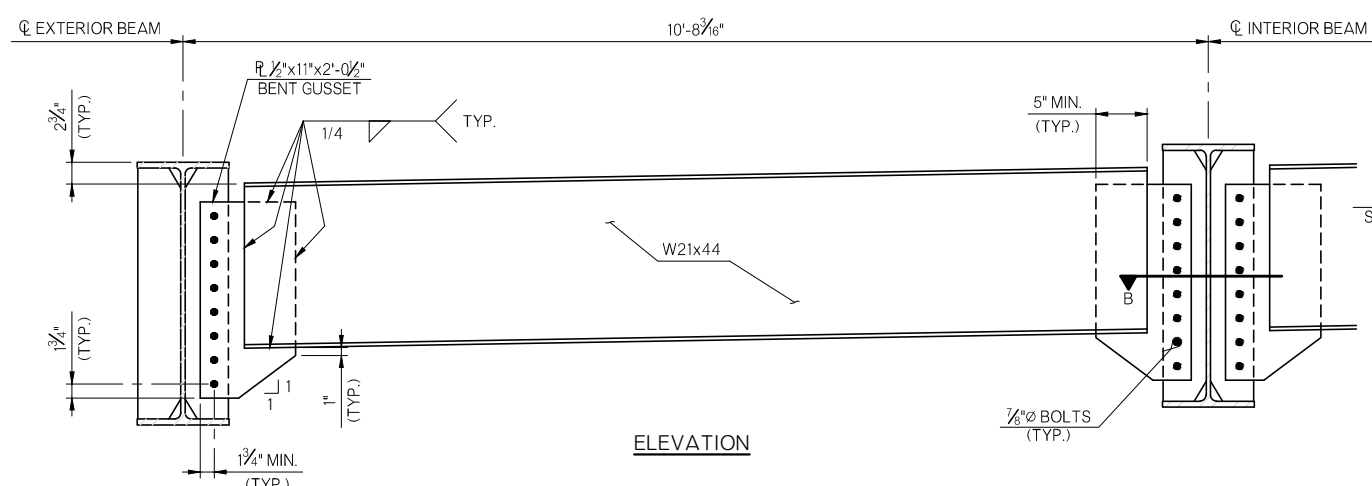
**SECTION A**



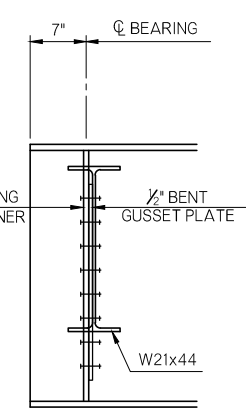
**END DIAPHRAGM**



**BEARING STIFFENER DETAILS**  
SPAN NO. 1 & NO. 3

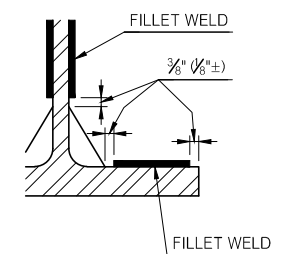


**ELEVATION**



**SECTION**

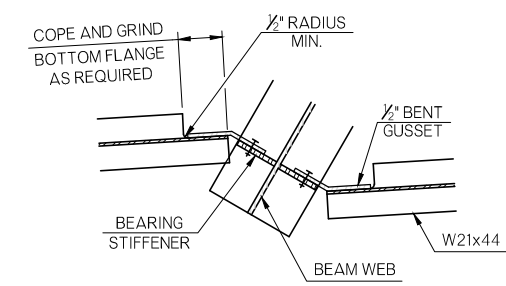
**END DIAPHRAGM**  
SPAN NO. 1 & NO. 3



**BEARING STIFFENER AND  
INTERMEDIATE DIAPHRAGM STIFFENER**

**WELD TERMINATIONS**

NOTE:  
OMIT HOLES AT OUTSIDE  
FACE OF EXTERIOR BEAMS

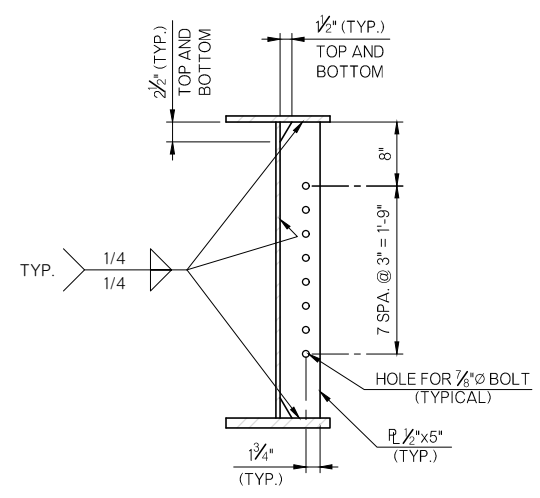


**SECTION B**

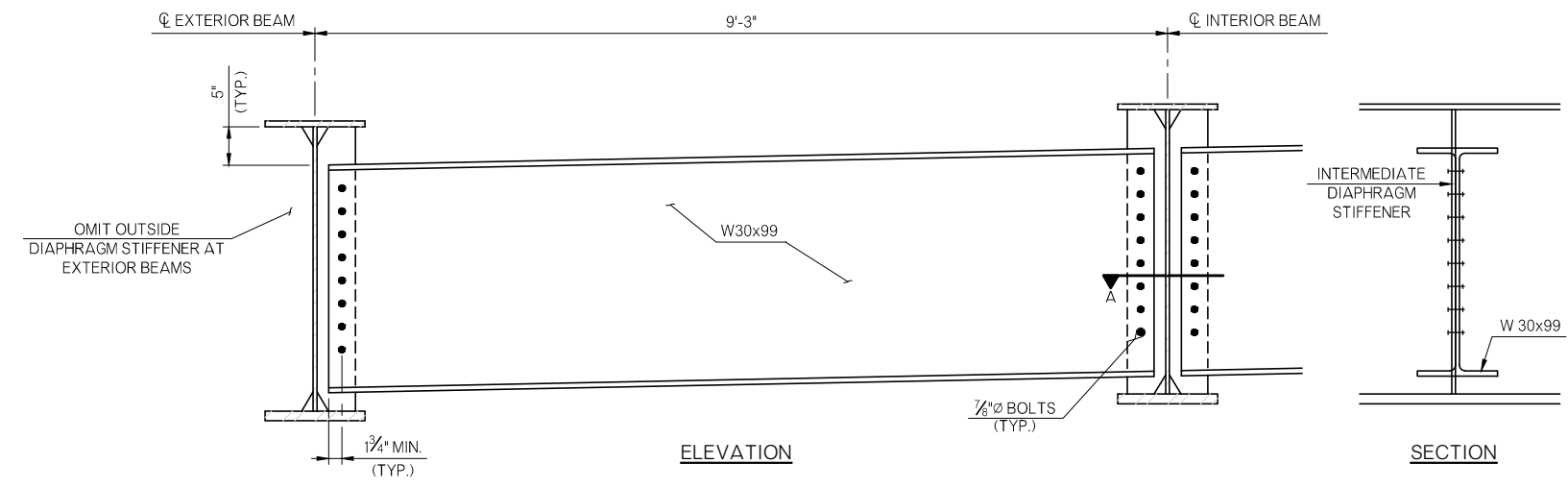
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AND SEALED  
DOCUMENT

S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"	McINTOSH COUNTY	Design	RMF
SUPERSTRUCTURE DETAILS SHEET 5 OF 11 SPAN NO. 1 & NO. 3 DIAPHRAGM DETAILS		Detail	DRB
		Check	RMF DLW
STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION			
		JOB PIECE NO. 33793(04)	SHEET NO. B017

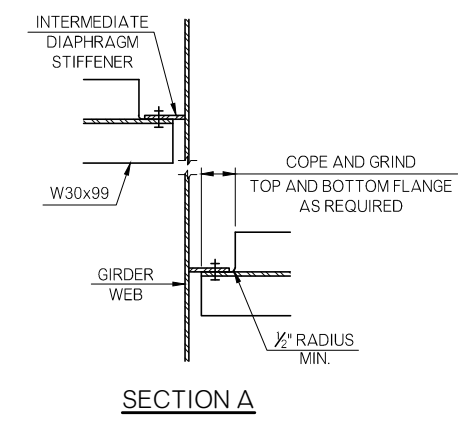
L:\Active\21014\Drawings\flat rock\B017 SS5 Diaphragms 1\_3.dwg, 4/15/2024 1:28:04 PM, Deanne Brittan



**INTERMEDIATE STIFFENER DETAILS**  
SPAN NO. 2

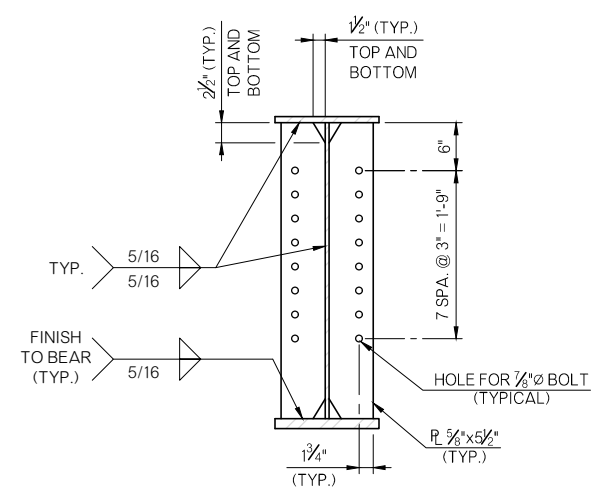


**INTERMEDIATE DIAPHRAGM**  
SPAN NO. 2



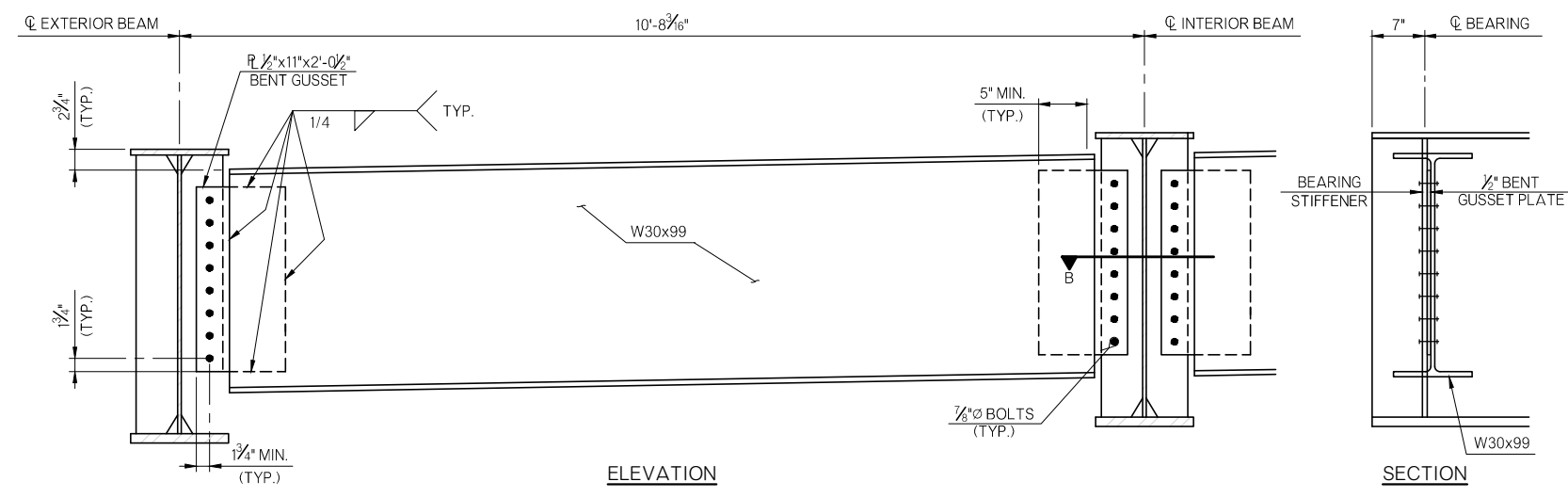
**SECTION A**

NOTE:  
SEE SHEET B017, FOR  
WELD TERMINATION  
DETAILS.

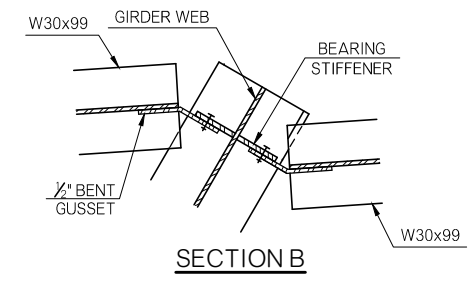


**BEARING STIFFENER DETAILS**  
SPAN NO. 2

NOTE:  
OMIT HOLES AT OUTSIDE  
FACE OF EXTERIOR BEAMS



**END DIAPHRAGM**  
SPAN NO. 2

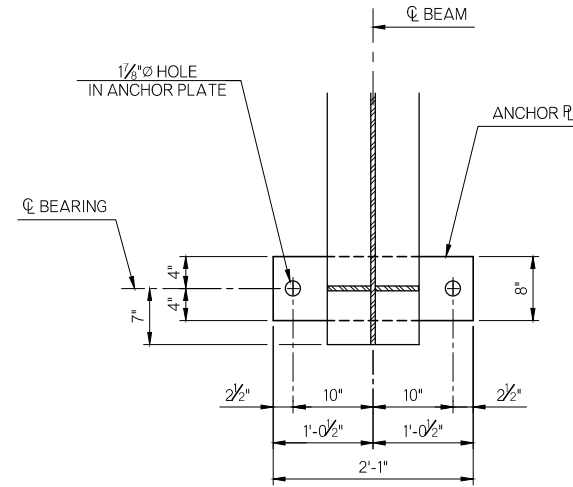


**SECTION B**

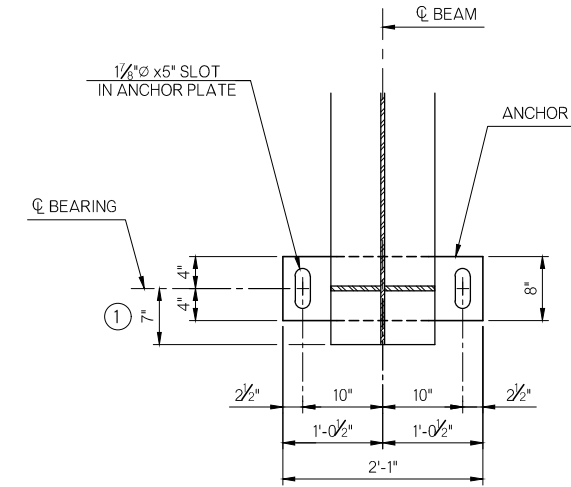
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AND SEALED  
DOCUMENT

S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"	McINTOSH COUNTY	Design	RMF
SUPERSTRUCTURE DETAILS SHEET 6 OF 11 SPAN NO. 2 DIAPHRAGM DETAILS		Detail	DRB
		Check	RMF DLW
STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION			
		JOB PIECE NO. 33793(04)	SHEET NO. B018

L:\Active\21014\Drawings\flat rock\B018 556 Diaphragms 2.dwg, 4/15/2024 1:33:55 PM, Deanne Brittan

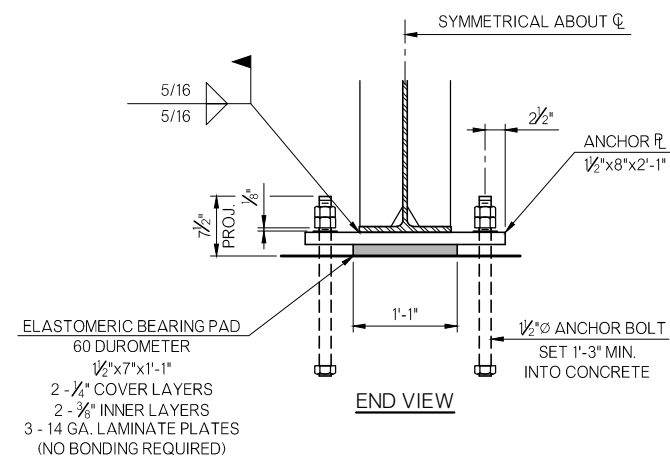


**FIXED BEARING PLAN**  
SPAN NO. 1 & NO. 3

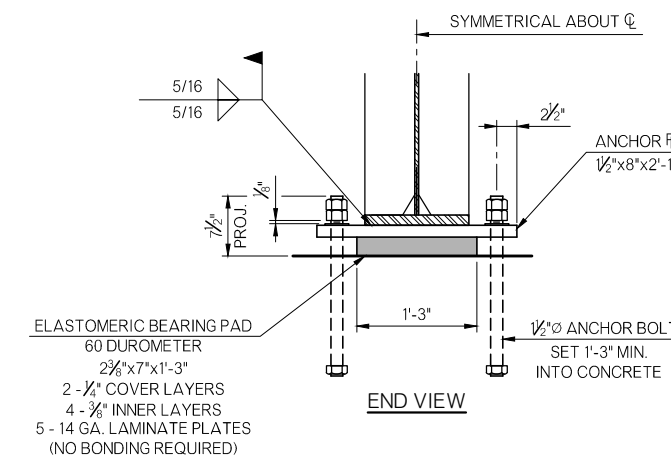
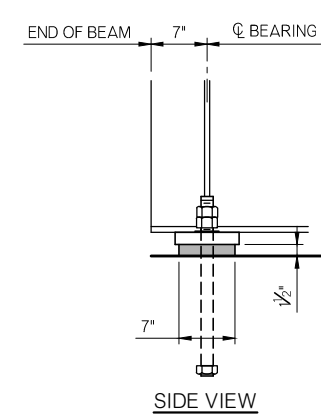


**EXPANSION BEARING PLAN**  
SPAN NO. 2

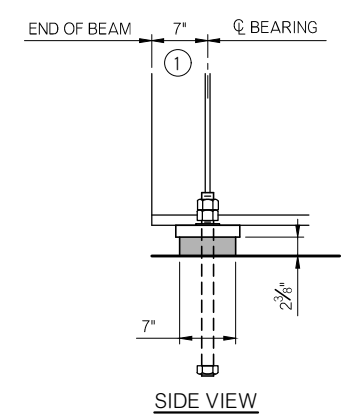
① CENTER ANCHOR BOLTS IN SLOTS DURING SETTING OF BEAMS. DIMENSIONS MAY VARY DEPENDING ON TEMPERATURE AT THE TIME OF BEAM SETTING.



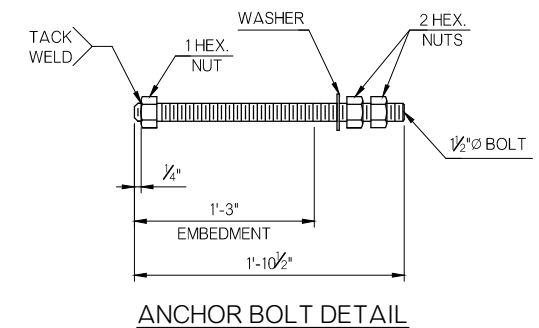
ELASTOMERIC BEARING PAD  
60 DUROMETER  
1/2" x 7" x 1'-1"  
2 - 1/4" COVER LAYERS  
2 - 3/8" INNER LAYERS  
3 - 14 GA. LAMINATE PLATES  
(NO BONDING REQUIRED)



ELASTOMERIC BEARING PAD  
60 DUROMETER  
2 3/8" x 7" x 1'-3"  
2 - 1/4" COVER LAYERS  
4 - 3/8" INNER LAYERS  
5 - 14 GA. LAMINATE PLATES  
(NO BONDING REQUIRED)



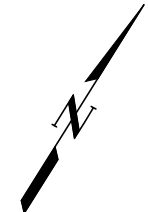
**BEARING DETAILS**



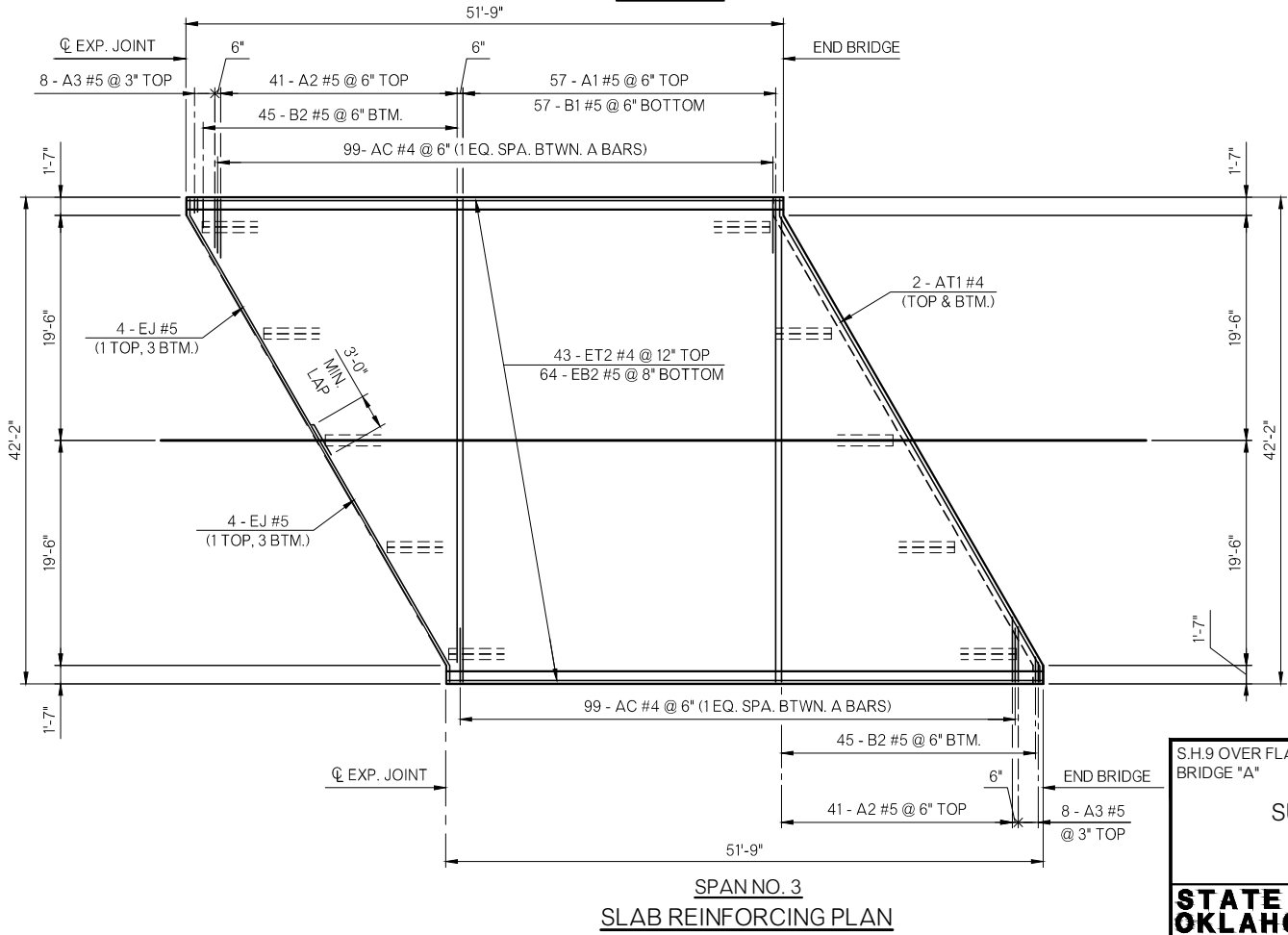
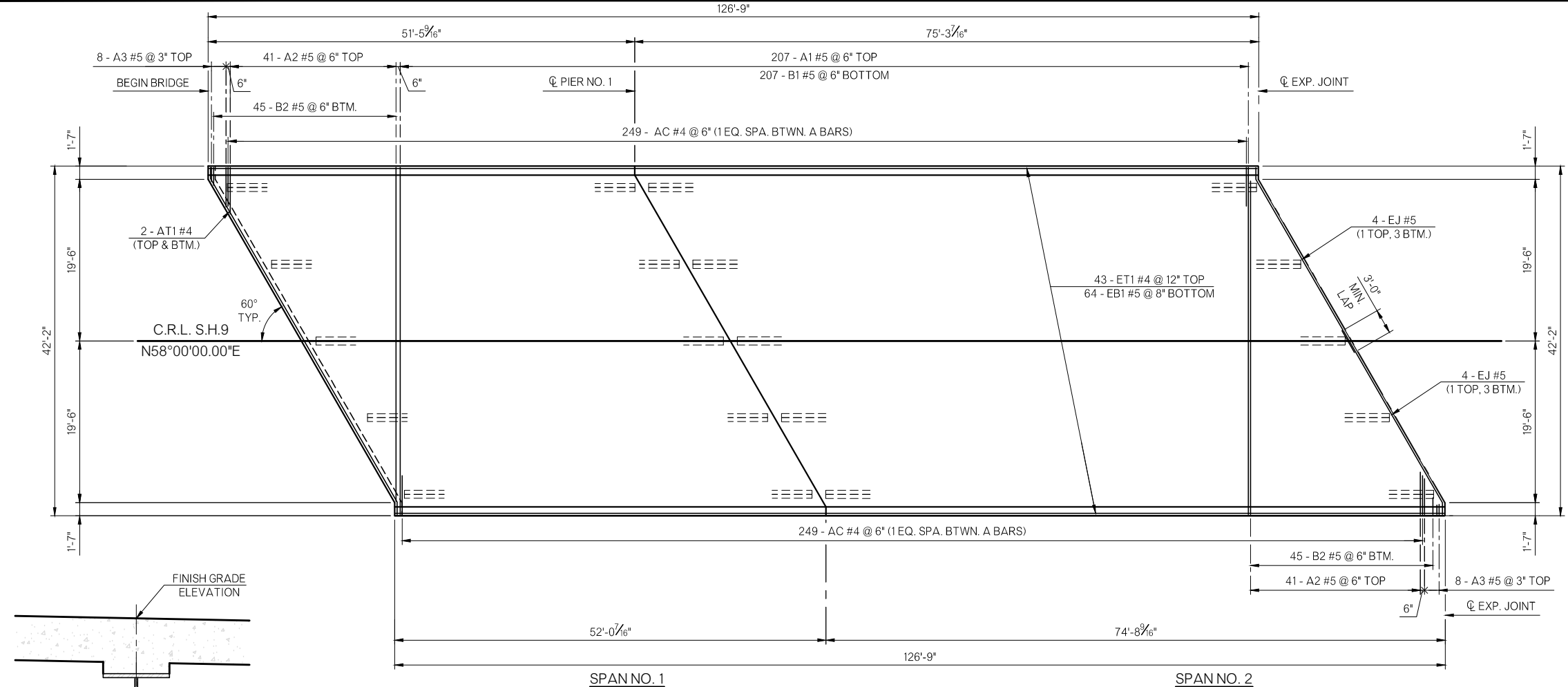
**ANCHOR BOLT DETAIL**

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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"	McINTOSH COUNTY	Design	RMF
SUPERSTRUCTURE DETAILS SHEET 7 OF 11 BEARING DETAILS		Detail	DRB
		Check	RMF DLW
STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION			
		JOB PIECE NO. 33793(04)	SHEET NO. B019



NOTES:  
ALL LONGITUDINAL DIMENSIONS ARE ALONG INSIDE FACE OF RAIL.  
FOR TRAFFIC RAIL REINFORCING, SEE SHEET B014.  
FOR DIMENSION OF DECK BREAK AT THE  $\text{C}$  OF JOINTS AND ADDITIONAL REINFORCING DETAILS AT END DIAPHRAGMS, SEE SHEET B021.  
FOR BAR LIST AND BAR BENDS, SEE SHEET B022.

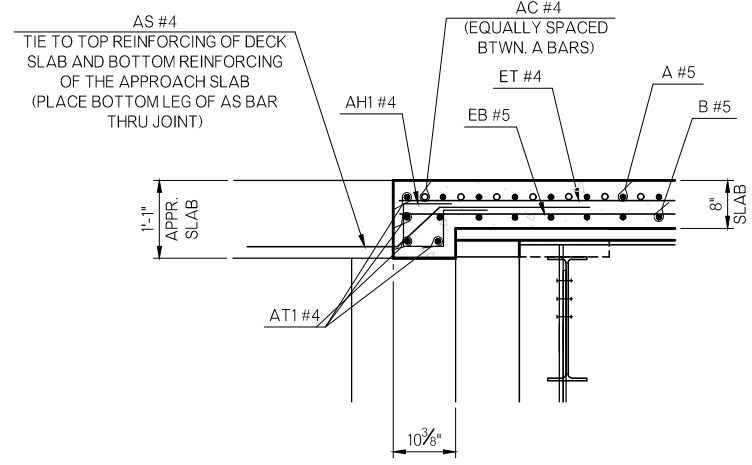


FINISH GRADE ELEVATION SCHEDULE											
LOCATION	$\text{C}$ BRG.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	$\text{C}$ BRG.
SPAN NO. 1											
BEAM 1	623.60	623.57	623.55	623.53	623.50	623.48	623.45	623.43	623.41	623.38	623.36
BEAM 2	623.76	623.73	623.71	623.68	623.66	623.64	623.61	623.59	623.56	623.54	623.52
BEAM 3	623.91	623.89	623.87	623.84	623.82	623.79	623.77	623.75	623.72	623.70	623.67
BEAM 4	623.70	623.68	623.65	623.63	623.61	623.58	623.56	623.53	623.51	623.49	623.46
BEAM 5	623.49	623.47	623.44	623.42	623.40	623.37	623.35	623.32	623.30	623.28	623.25
SPAN NO. 2											
GIRDER 1	623.34	623.31	623.27	623.24	623.20	623.16	623.13	623.09	623.06	623.02	622.98
GIRDER 2	623.50	623.47	623.43	623.39	623.36	623.32	623.29	623.25	623.21	623.18	623.14
GIRDER 3	623.66	623.62	623.59	623.55	623.52	623.48	623.44	623.41	623.37	623.34	623.30
GIRDER 4	623.45	623.41	623.38	623.34	623.30	623.27	623.23	623.20	623.16	623.12	623.09
GIRDER 5	623.24	623.20	623.16	623.13	623.09	623.06	623.02	622.98	622.95	622.91	622.88
SPAN NO. 3											
BEAM 1	622.97	622.94	622.92	622.93	622.94	622.95	622.95	622.96	622.97	622.98	622.98
BEAM 2	623.13	623.11	623.10	623.09	623.08	623.07	623.07	623.06	623.05	623.04	623.03
BEAM 3	623.29	623.26	623.24	623.21	623.19	623.17	623.14	623.12	623.09	623.07	623.05
BEAM 4	623.07	623.05	623.03	623.00	622.98	622.95	622.93	622.91	622.88	622.86	622.83
BEAM 5	622.86	622.84	622.81	622.79	622.77	622.74	622.72	622.69	622.67	622.65	622.62

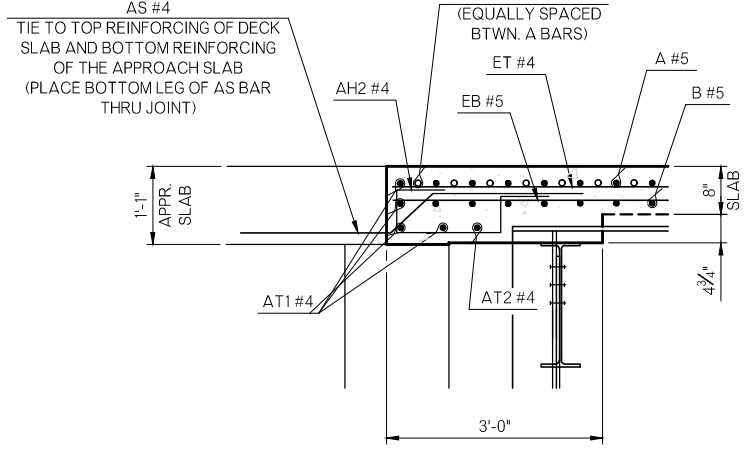
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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY		Design	RMF
SUPERSTRUCTURE DETAILS		SHEET 8 OF 11		Detail	DRB
				Check	DLW DLW
SLAB REINFORCING PLAN		CEC		STATE OF OKLAHOMA	
				DEPARTMENT OF TRANSPORTATION	
JOB PIECE NO. 33793(04)		SHEET NO. B020			

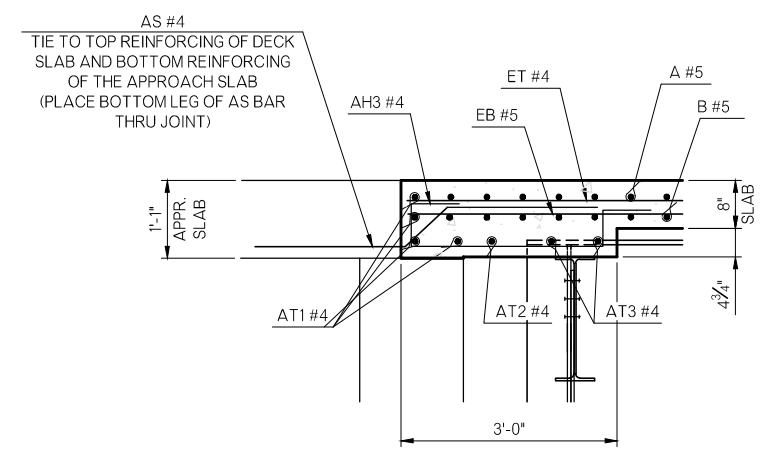
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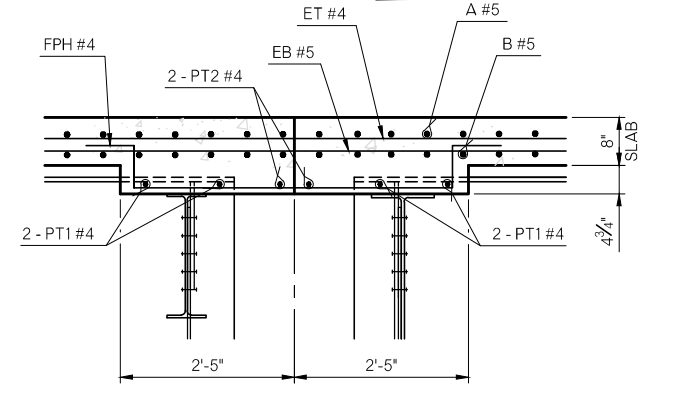
**SECTION A**



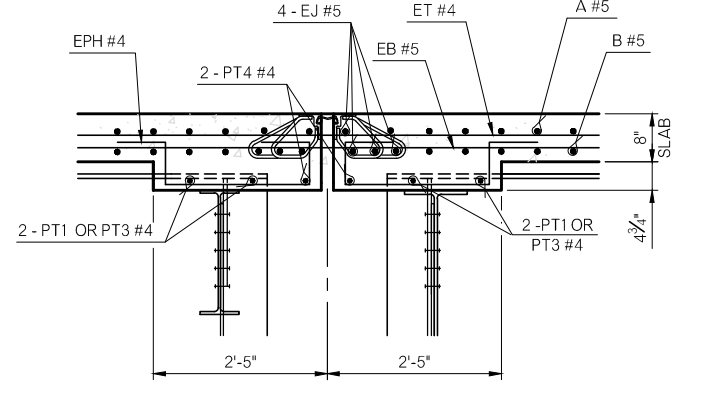
**SECTION B**



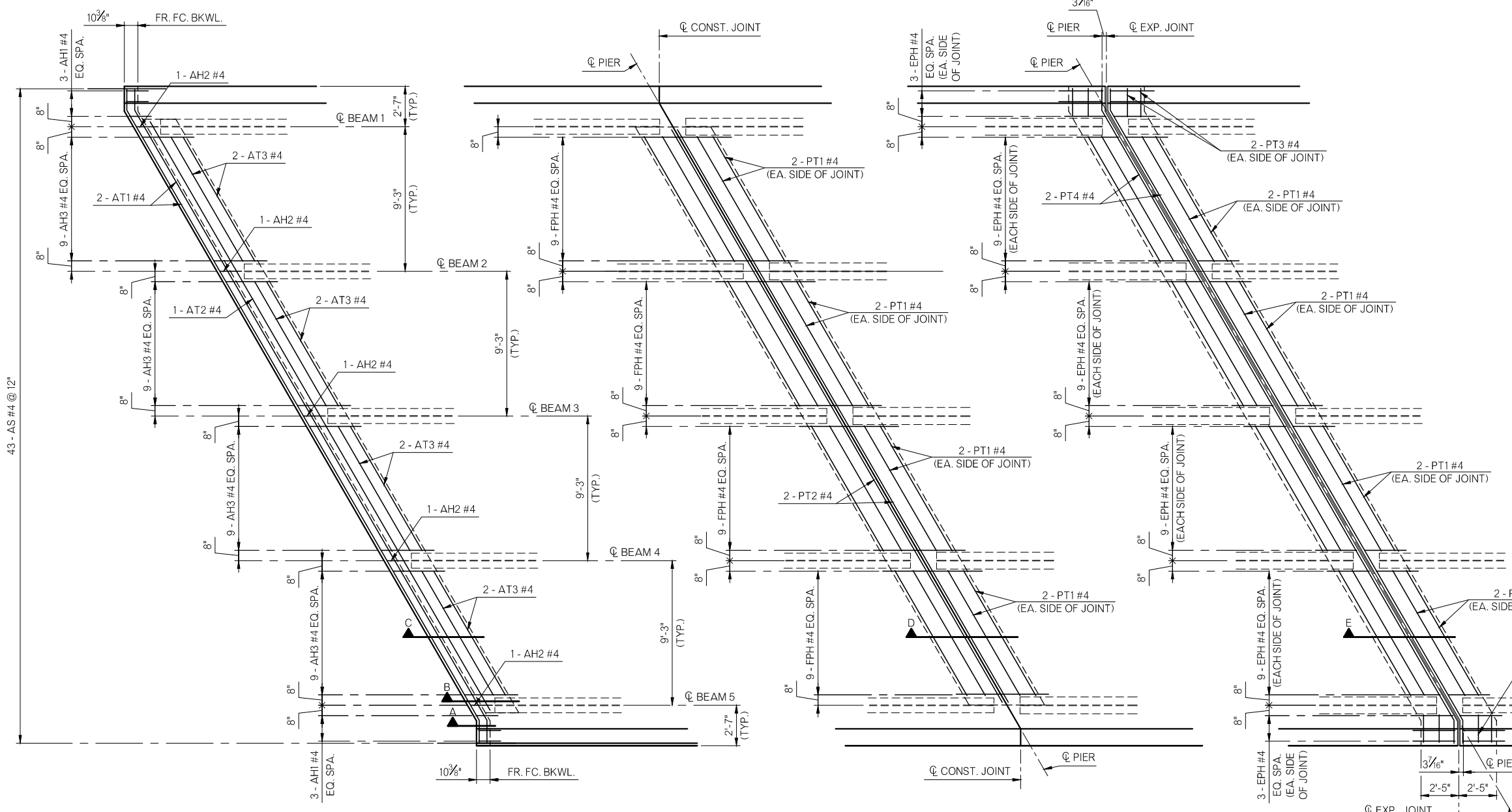
**SECTION C**



**SECTION D**



**SECTION E**



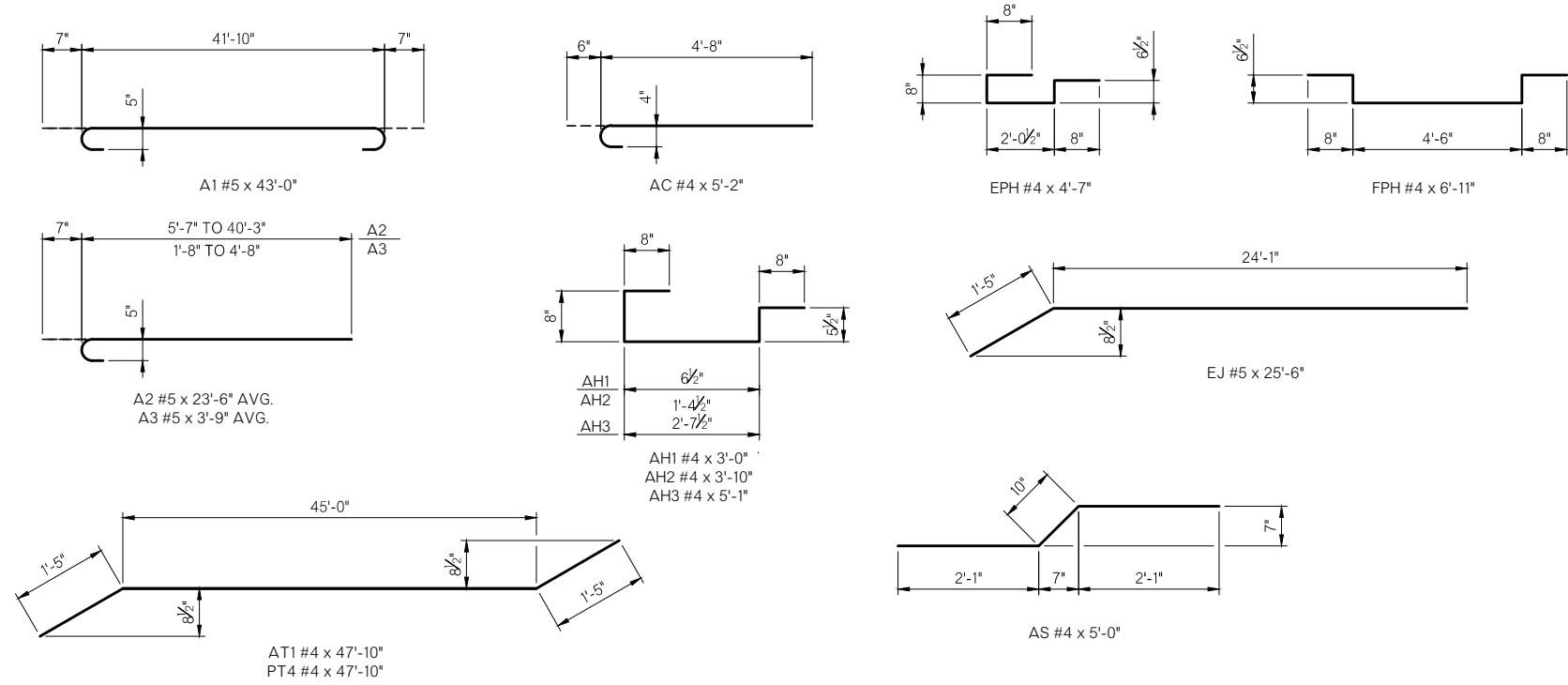
**ABUTMENTS**  
ABUTMENT NO. 1 SHOWN  
ABUTMENT NO. 2 OPPOSITE HAND

**PIER NO. 1**  
ADDITIONAL SLAB REINFORCING AT END DIAPHRAGMS

**NOTES:**  
DECK SLAB REINFORCING NOT SHOWN FOR CLARITY.  
FOR BAR BENDS AND BAR LIST, SEE SHEET B022.

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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A"		McINTOSH COUNTY	
Design	RMF	Detail	DRB
Check	RMF	DLW	
<b>STATE OF OKLAHOMA</b> DEPARTMENT OF TRANSPORTATION SHEET 9 OF 11 SLAB REINFORCING DETAILS		JOB PIECE NO. 33793(04)	
		SHEET NO. B021	



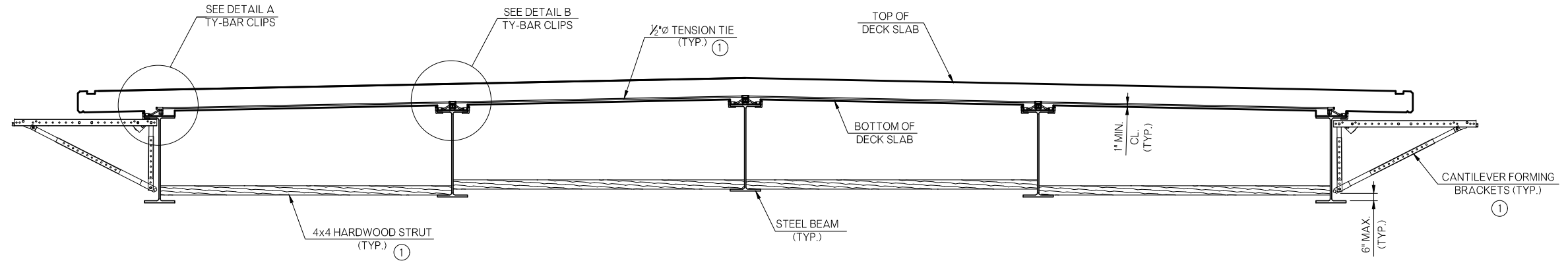
SUPERSTRUCTURE BAR LIST					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED REINFORCING BARS					
A1	#5	264	BNT.	43'-0"	
① A2	#5	164	BNT.	23'-6" AVG.	6'-2" TO 40'-10"
② A3	#5	32	BNT.	3'-9" AVG.	2'-3" TO 5'-3"
AC	#4	696	BNT.	5'-2"	
AH1	#4	12	BNT.	3'-0"	
AH2	#4	10	BNT.	3'-10"	
AH3	#4	72	BNT.	5'-1"	
AS	#4	86	BNT.	5'-0"	
AT1	#4	8	BNT.	47'-10"	
AT2	#4	2	STR.	43'-5"	
AT3	#4	16	STR.	9'-2"	
B1	#5	264	STR.	41'-10"	
③ B2	#5	180	STR.	21'-2" AVG.	2'-1" TO 40'-3"
④ EB1	#5	64	STR.	132'-6"	
EB2	#5	64	STR.	51'-6"	
EJ	#5	8	BNT.	25'-6"	
⑤ ET1	#4	43	STR.	131'-6"	
ET2	#4	43	STR.	51'-6"	
EPH	#4	84	BNT.	4'-7"	
FPH	#4	36	BNT.	6'-11"	
PT1	#4	32	STR.	9'-2"	
PT2	#4	2	STR.	42'-3"	
PT3	#4	8	STR.	1'-8"	
PT4	#4	2	BNT.	47'-10"	
⑦ SR1	#5	756	BNT.	4'-1"	

- ① 4 SETS OF 41 BARS
- ② 4 SETS OF 8 BARS
- ③ 4 SETS OF 45 BARS
- ④ INCLUDES 2 - 3'-0" MINIMUM LAP LENGTH
- ⑤ INCLUDES 2 - 2'-6" MINIMUM LAP LENGTH
- ⑥ DO NOT LAP WITHIN 10' OF CENTERLINE OF PIER
- ⑦ SEE STD. TR4-2 FOR BAR BEND

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S.H.9 OVER FLAT ROCK CREEK		McINTOSH COUNTY	
BRIDGE "A"		Design	RMF
SUPERSTRUCTURE DETAILS		Detail	DRB
		Check	RMF DLW
SHEET 10 OF 11			
BAR BENDS AND BAR LIST			
<b>STATE OF OKLAHOMA</b>		DEPARTMENT OF TRANSPORTATION	
JOB PIECE NO. 33793(04)		SHEET NO. B022	

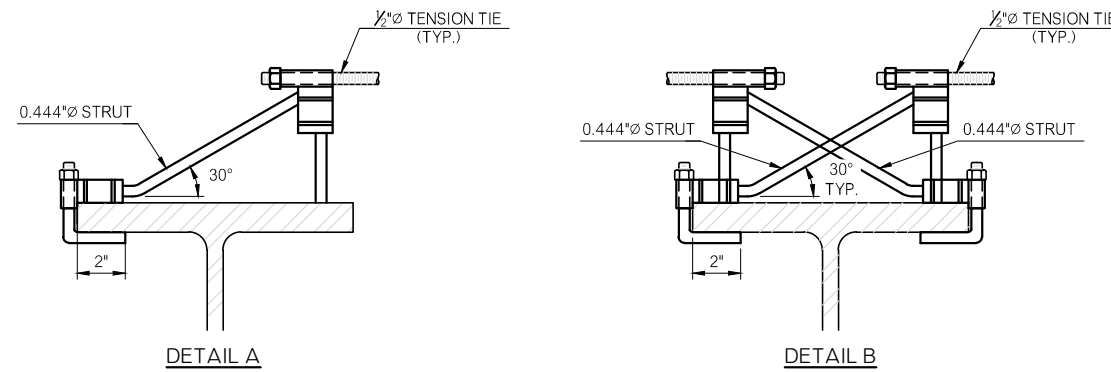
L:\Active\21014\Drawings\flat rock\B022 SS10 Slab 3.dwg, 4/15/2024 2:05:08 PM, Deanne Brittan



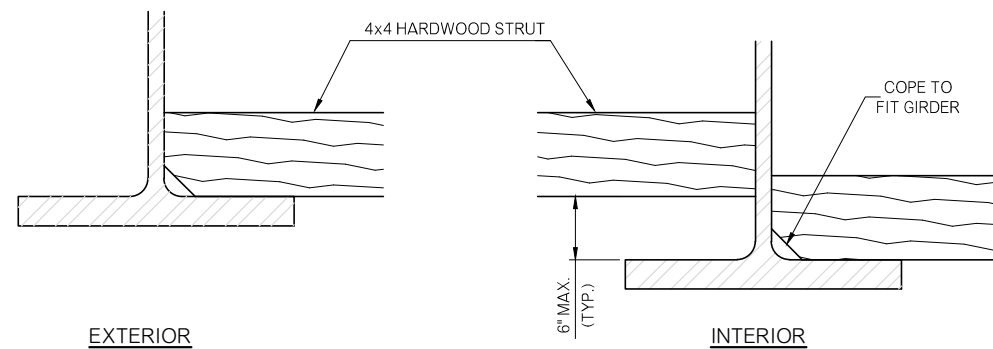
**BEAM BRACING FOR DECK SLAB PLACEMENT**  
SPAN NO. 1 & NO. 3 SHOWN, SPAN 2 SIMILAR

BRACING SYSTEM SHOWN FOR ILLUSTRATION PURPOSES ONLY. ALTERNATIVE SYSTEMS MAY BE CONSIDERED. SEE GENERAL NOTES FOR DESIGN REQUIREMENTS AND LIMITATIONS.

① SPACING OF FORMING BRACKETS, TENSION TIES, AND HARDWOOD STRUTS TO BE DETERMINED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA FOR THE LOADS ANTICIPATED DURING CONSTRUCTION. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.



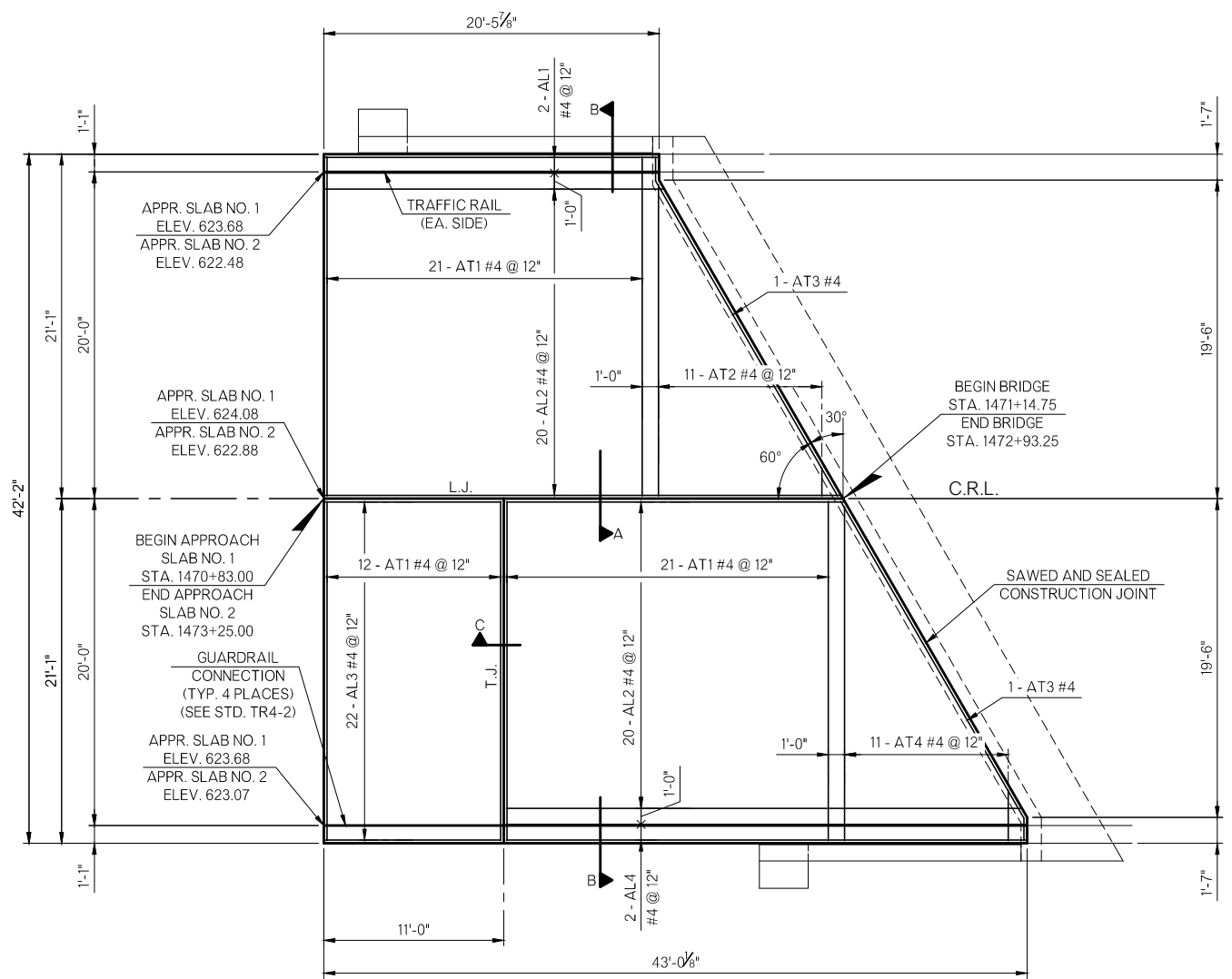
**TY-BAR CLIP DETAILS**



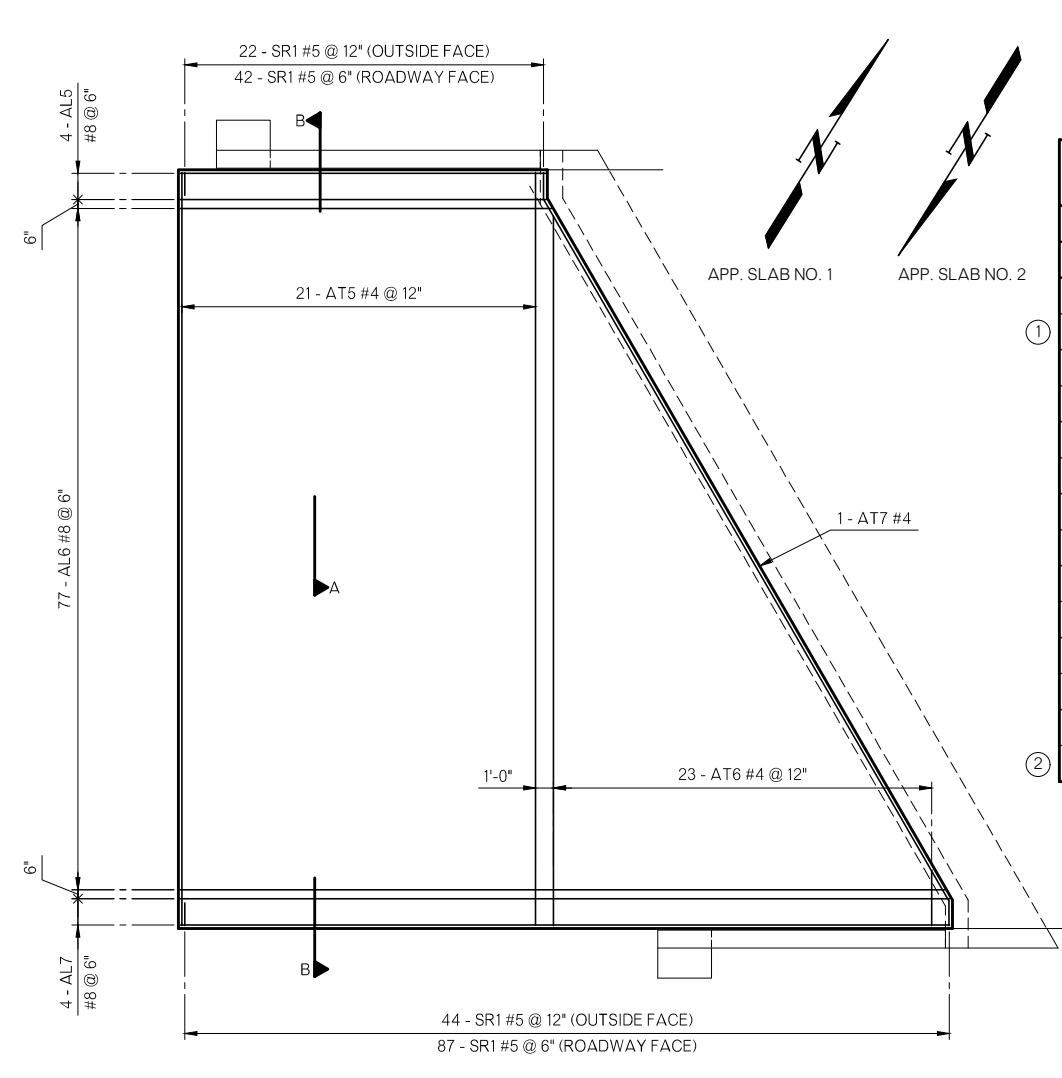
**HARDWOOD STRUT DETAIL**

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S.H.9 OVER FLAT ROCK CREEK		McINTOSH COUNTY	
BRIDGE "A"		Design	RMF
SUPERSTRUCTURE DETAILS		Detail	DRB
		Check	RMF DLW
SHEET 11 OF 11			
BEAM BRACING DETAILS			
<b>STATE OF OKLAHOMA</b>		DEPARTMENT OF TRANSPORTATION	
JOB PIECE NO. 33793(04)		SHEET NO. B023	



**TOP REINFORCING MAT DETAIL**



**BOTTOM REINFORCING MAT DETAIL**

APPROACH SLAB BAR LIST					
ONE SHOWN, TWO REQUIRED					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED REINFORCING BARS					
AL1	#4	2	STR.	20'-3"	
AL2	#4	40	STR.	26'-0" AVG.	20'-7" TO 31'-5"
AL3	#4	22	STR.	10'-9"	
AL4	#4	2	STR.	31'-9"	
AL5	#8	4	STR.	20'-3"	
AL6	#8	77	STR.	31'-6" AVG.	20'-7" TO 42'-5"
AL7	#8	4	STR.	42'-10"	
AT1	#4	54	STR.	20'-9"	
AT2	#4	11	STR.	10'-4" AVG.	1'-8" TO 19'-0"
AT3	#4	2	BNT.	23'-9"	
AT4	#4	11	STR.	11'-8" AVG.	3'-0" TO 20'-4"
AT5	#4	21	STR.	41'-10"	
AT6	#4	23	STR.	21'-2" AVG.	3'-0" TO 39'-4"
SR1	#5	195	BNT.	4'-1"	

① 2 SETS OF 20 BARS  
② FOR BAR BEND, SEE STD. TR4-2

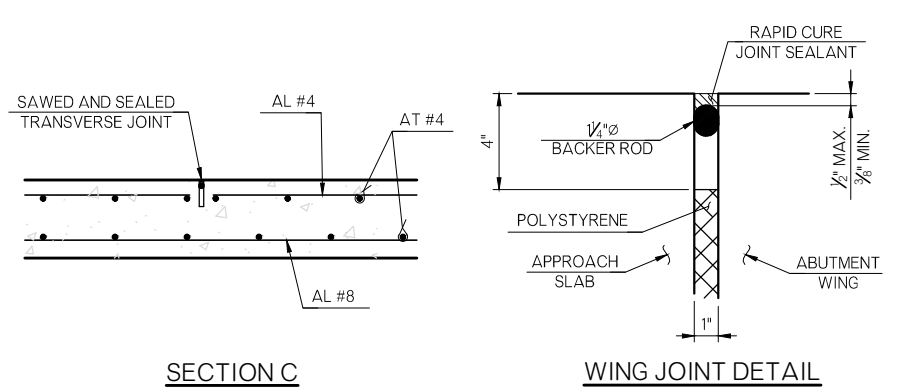
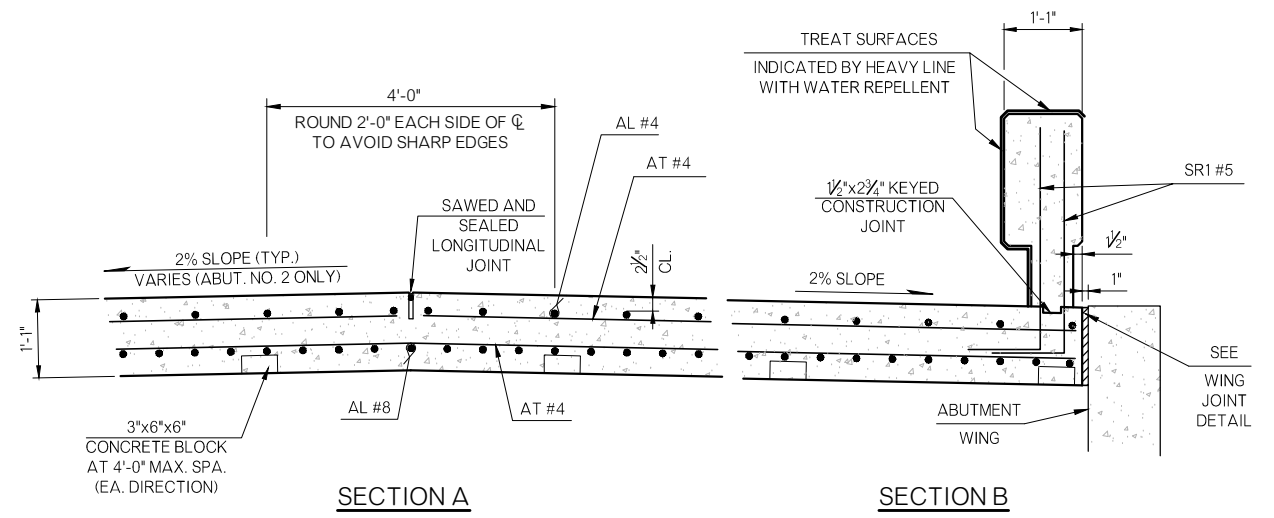
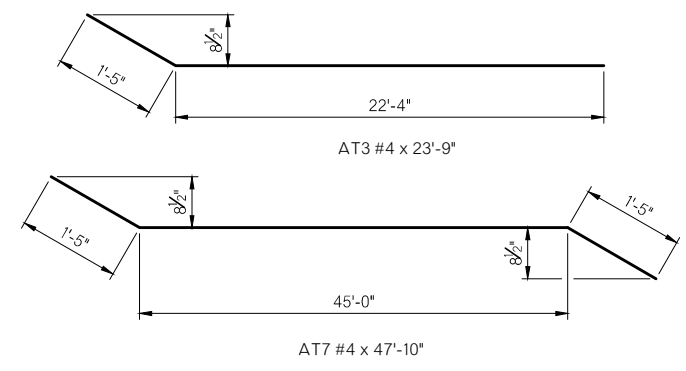
**NOTES:**  
APPROACH SLAB NO. 1 SHOWN,  
APPROACH SLAB NO. 2 ROTATE 180°

L.J. = SAWED AND SEALED LONGITUDINAL JOINT (SEE STD. LECS-5)  
T.J. = SAWED AND SEALED TRANSVERSE JOINT (SEE STD. LECS-5)

PLACE REINFORCING IN TOP OF THE APPROACH SLAB 2" FROM EITHER SIDE OF THE SAWED AND SEALED LONGITUDINAL JOINT. FOR ADDITIONAL DETAILS OF LONGITUDINAL JOINT, SEE STD. LECS-5.

FOR ADDITIONAL DETAIL OF CONCRETE TRAFFIC RAIL, SEE STD. TR4-2.

FOR ADDITIONAL DETAIL OF APPROACH SLAB AT ABUTMENT, SEE SHEET B014 AND B021.



APPROACH SLAB QUANTITIES				
ITEM DESCRIPTION	UNIT	APP. SLAB NO. 1	APP. SLAB NO. 2	TOTAL
APPROACH SLAB	S.Y.	148.8	148.8	297.6
SAW-CUT GROOVING	S.Y.	141.2	141.2	282.4
CONCRETE RAIL (TR4)	L.F.	63.5	63.5	127.0
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	30	30	60

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S.H.9 OVER FLAT ROCK CREEK BRIDGE "A" McINTOSH COUNTY

DESIGN: RMF  
DETAIL: DRB  
CHECK: AFW

**STATE OF OKLAHOMA** DEPARTMENT OF TRANSPORTATION

JOB/PIECE NO. 33793(04) SHEET NO. B024


L:\Active\21014\Drawings\flat rock\B024 App slab.dwg, 4/15/2024 8:33:15 AM, Deanne Brittan



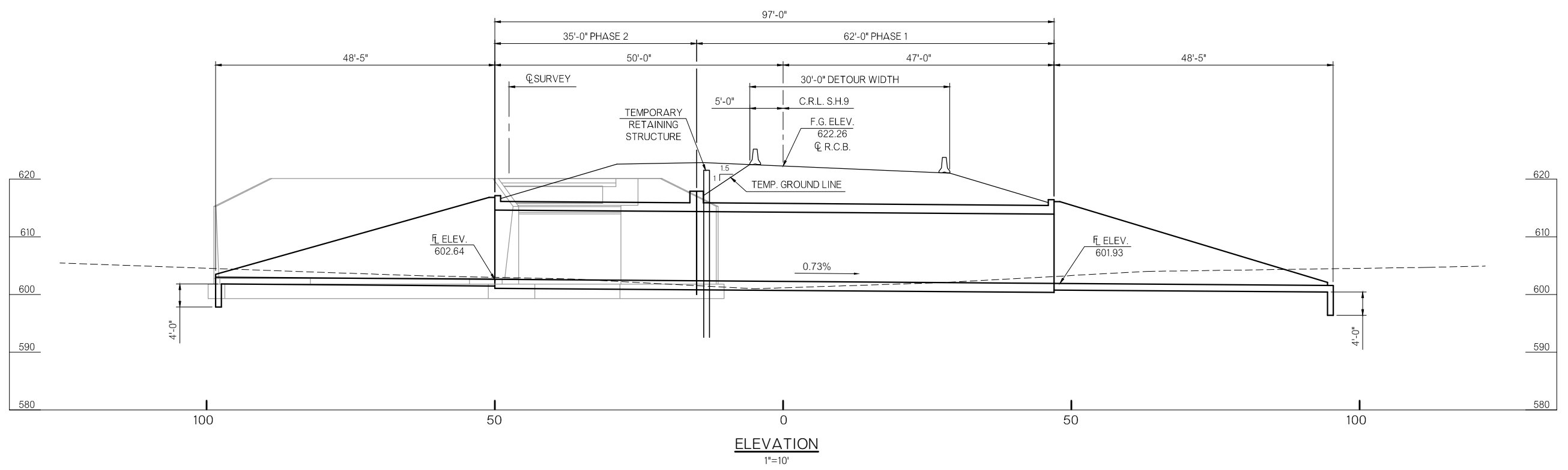
**PLAN**  
1"=10'

BM #4 60D NAIL IN TREE  
STA. 1482+07.66' RT. ELEV. = 621.86  
  
BM #5 60D NAIL IN 10" OAK TREE  
STA. 1492+59.55' LT. ELEV. = 625.09

**THIS DOCUMENT  
IS PRELIMINARY  
IN NATURE AND  
IS NOT A FINAL,  
SIGNED AND  
SEALED  
DOCUMENT**

S.H.9 OVER WALLACE CREEK BRIDGE "B"		McINTOSH COUNTY		Design	RMF
GENERAL PLAN AND ELEVATION (1 OF 2) (3) 20' x 12' x 97" LONG R.C.B. CL STA. 1483+92.00, 30° SKEW		Detail	DRB		
		Check	RMF		
<b>STATE OF OKLAHOMA</b>		DEPARTMENT OF TRANSPORTATION		 SHEET NO. B025	
JOB PIECE NO. 33793(04)					

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HYDRAULIC SUMMARY			
TOTAL DRAINAGE AREA	=	5.76 SQ. MILES	
CONTROLLED DRAINAGE AREA	=	0.00 SQ. MILES	
EFFECTIVE DRAINAGE AREA	=	5.76 SQ. MILES	
FREQUENCY (YEARS)	DISCHARGE (CFS)	WATER SURFACE ELEVATION (FT)	VELOCITY (FPS)
2	939	609.60	2.09
5	1,780	611.22	3.20
10	2,500	612.41	4.17
25	3,580	614.28	5.97
50	4,740	616.34	7.90
100	5,580	617.42	9.30
500	8,900	621.89	14.67

SUMMARY OF QUANTITIES				
ITEM DESCRIPTION	UNIT	PHASE 1	PHASE 2	TOTAL
UNCLASSIFIED EXCAVATION	C.Y.	2,640	1,350	3,990
STRUCTURAL EXCAVATION UNCLASSIFIED	C.Y.	510	220	730
TEMPORARY EARTH RETAINAGE	L.SUM			1
CLASS AA CONCRETE	C.Y.	840.0	587.1	1,427.1
REINFORCING STEEL	LB	162,770	106,020	268,790

**DESIGN DATA**

LOAD AND RESISTANCE FACTOR DESIGN  
 CONCRETE CLASS AA  $f'_c = 4$  K.S.I.  
 REINFORCING STEEL (GRADE 60)  $f_y = 60$  K.S.I.  
 LOADING:  
 HL-93 OR OKLAHOMA OVERLOAD TRUCK  
 DESIGN:  
 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION WITH 2008 INTERIMS  
 HL-93 INVENTORY RATING FACTOR: 1.33  
 HL-93 OPERATING RATING FACTOR: 1.72

**HORIZONTAL CURVE DATA**

P.I. STA. 1487+40.48  
 X = 2632090.4994  
 Y = 712691.5533  
 $\Delta = 051^\circ 09' 42.16''$   
 $D = 002^\circ 02' 46.60''$   
 T = 1340.39  
 L = 2500.23  
 R = 2800.00  
 E = 0.054  
 V = 65 mph

**INDEX OF SHEETS**

AB01 - AB02 GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)  
 B025 - B026 GENERAL PLAN AND ELEVATION  
 B027 - B030 R.C.B. BARREL DETAILS

**2009 STANDARDS**

RCB-CW3-D4-30-01E  
 SBI-5-2

**2019 STANDARDS**

SBI-5-2



**VERTICAL PROFILE DATA**

PREPARED BY: \_\_\_\_\_

DATE: \_\_\_\_\_ RYAN FRANCKA  
 OKLAHOMA LICENSE NO. 26497

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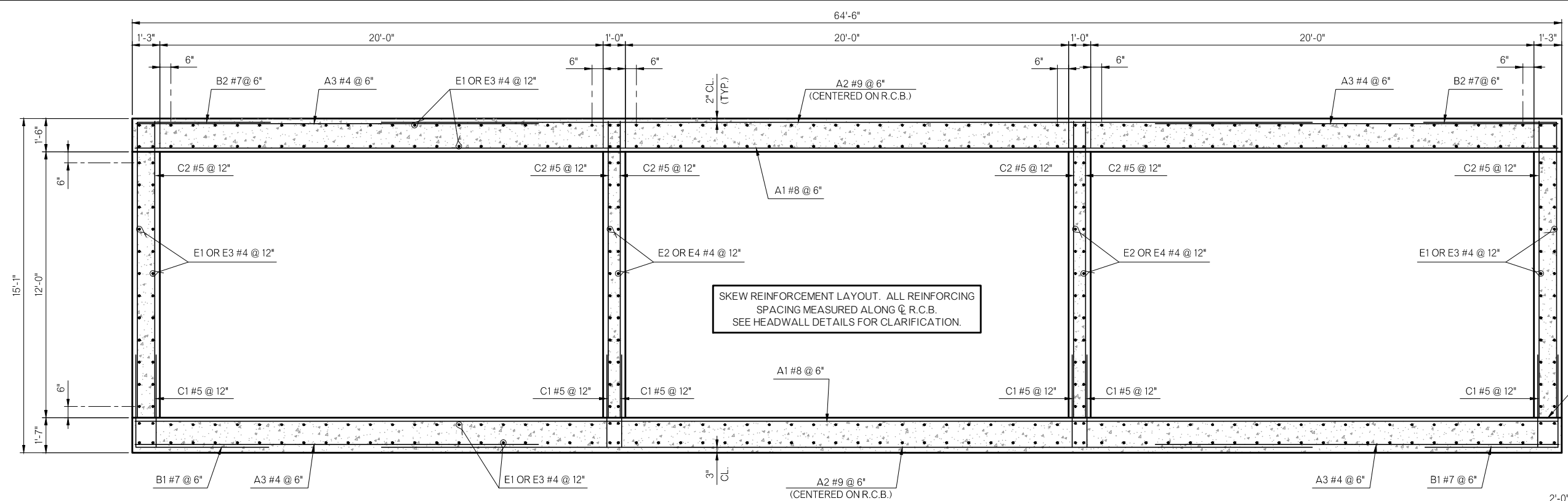
Design	RMF
Detail	DRB
Check	RMF

S.H.9 OVER WALLACE CREEK McINTOSH COUNTY  
 BRIDGE "B"  
 GENERAL PLAN AND ELEVATION (2 OF 2)  
 (3) 20' x 12' x 97' LONG R.C.B.  
 @ STA. 1483+92.00, 30° SKEW

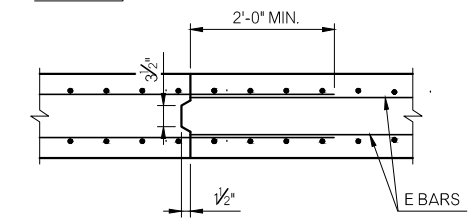
**STATE OF OKLAHOMA** DEPARTMENT OF TRANSPORTATION  
 JOB PIECE NO. 33793(04) SHEET NO. B026

L:\Active\21014\Drawings\PE5 dgn.dwg, 5/2/2024 1:19:49 PM, Deanne Brittan

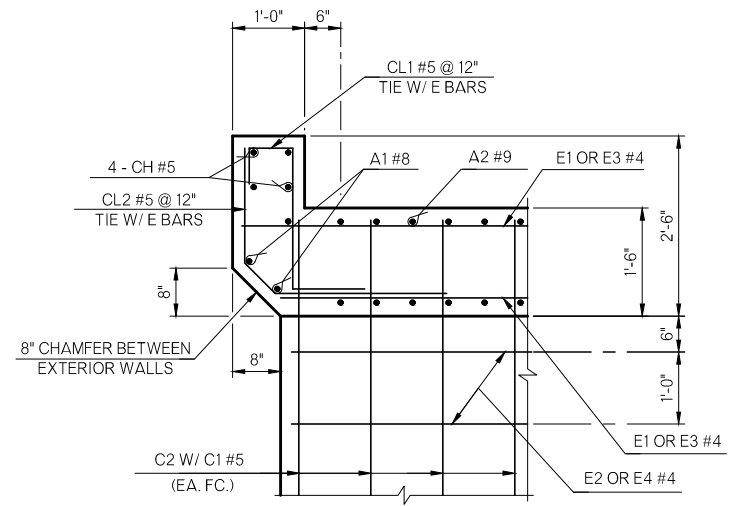
PLACE WD AND AL BARS FROM APRON AND WINGS TIED TO BARREL REINFORCING BEFORE PLACING BARREL CONCRETE. SEE APRON AND WING DETAILS ON SHEET B029-B030.



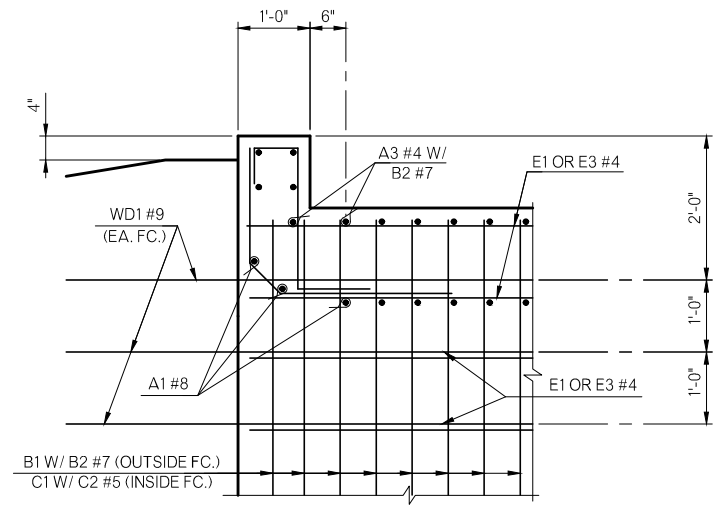
**TYPICAL CROSS SECTION**



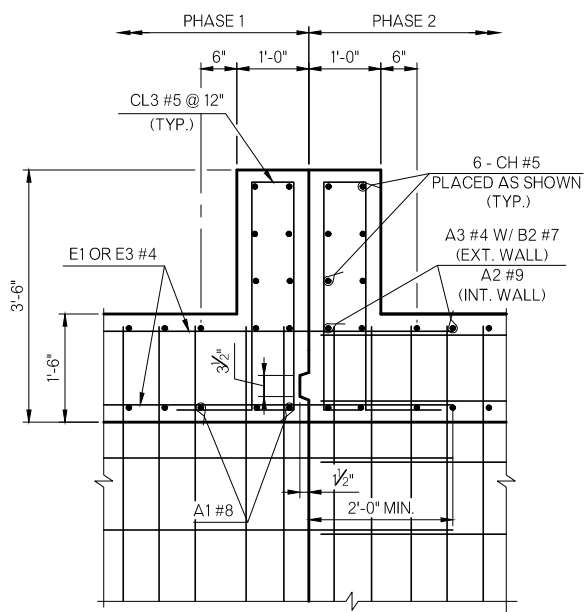
**TRANSVERSE CONSTRUCTION JOINT**



**HEADWALL DETAIL AT INTERIOR WALL**



**HEADWALL DETAIL AT EXTERIOR WALL**

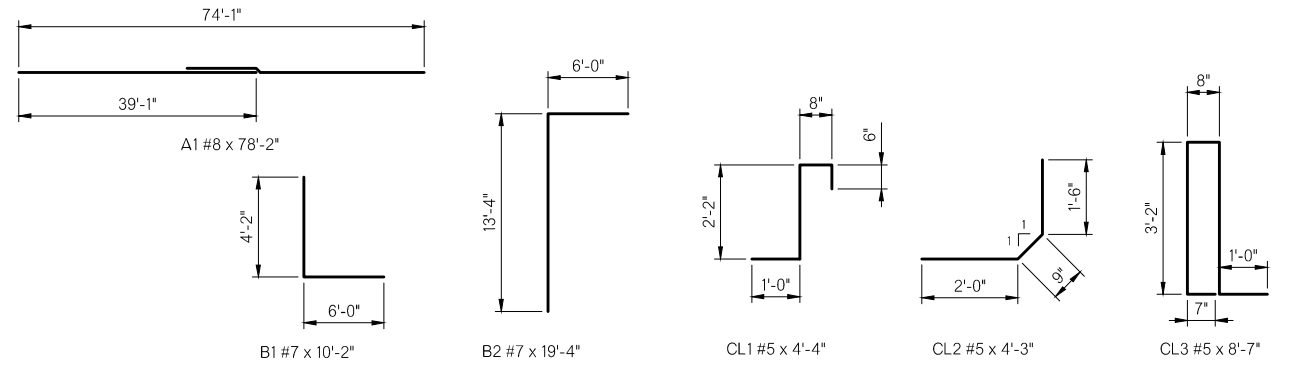


**HEADWALL DETAIL AT PHASE LINE  
(EXT. WALL SHOWN, INT. WALL SIM.)**

BARREL AND HEADWALL BAR LIST				
PHASE 1				
MARK	SIZE	NO.	FORM	LENGTH
PLAIN REINFORCING				
① A1	#8	246	STR.	78'-2"
A2	#9	246	STR.	42'-0"
A3	#4	492	STR.	18'-2"
B1	#7	246	BNT.	10'-2"
B2	#7	246	BNT.	19'-4"
C1	#5	738	STR.	4'-2"
C2	#5	738	STR.	13'-4"
② CH	#5	10	STR.	77'-4"
CL1	#5	75	BNT.	4'-4"
CL2	#5	75	BNT.	4'-3"
CL3	#5	75	BNT.	8'-7"
③ E1	#4	320	STR.	64'-0"
③ E2	#4	48	STR.	64'-0"

BARREL AND HEADWALL BAR LIST				
PHASE 2				
MARK	SIZE	NO.	FORM	LENGTH
PLAIN REINFORCING				
① A1	#8	140	STR.	78'-2"
A2	#9	140	STR.	42'-0"
A3	#4	280	STR.	18'-2"
B1	#7	140	BNT.	10'-2"
B2	#7	140	BNT.	19'-4"
C1	#5	420	STR.	4'-2"
C2	#5	420	STR.	13'-4"
② CH	#5	10	STR.	77'-4"
CL1	#5	75	BNT.	4'-4"
CL2	#5	75	BNT.	4'-3"
CL3	#5	75	BNT.	8'-7"
E3	#4	320	STR.	36'-10"
E4	#4	48	STR.	36'-10"

- ① INCLUDES 1 - 4'-1" LAP. SEE BAR BENDS.
- ② INCLUDES 1 - 2'-7" LAP
- ③ INCLUDES 1 - 2'-2" LAP



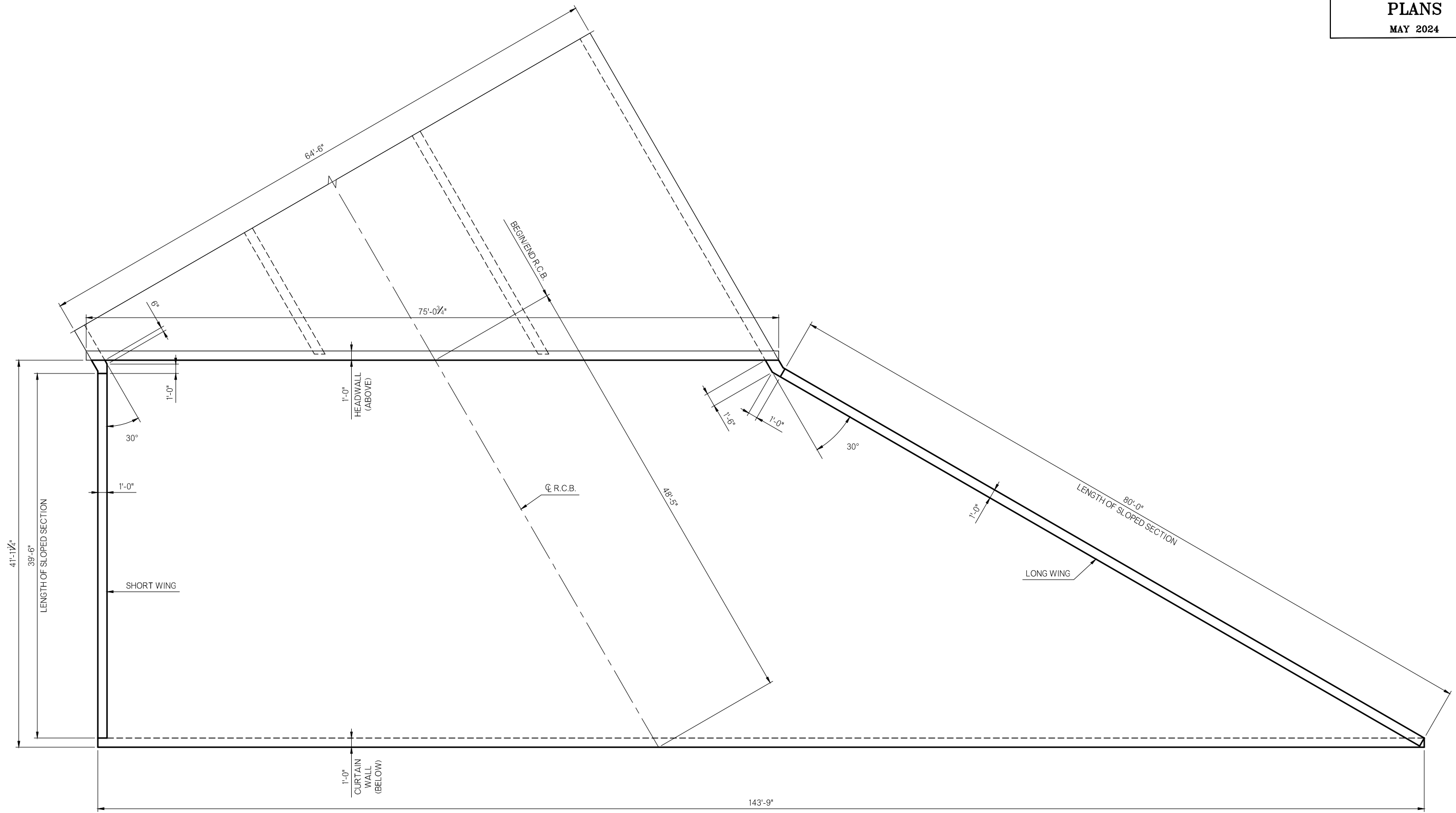
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S.H.9 OVER WALLACE CREEK BRIDGE "B" McINTOSH COUNTY

R.C.B. DETAILS  
SHEET 1 OF 4  
BARREL DETAILS

Design	RMF
Detail	DRB
Check	RMF

**STATE OF OKLAHOMA** DEPARTMENT OF TRANSPORTATION  
JOB PIECE NO. 33793(04) SHEET NO. B027

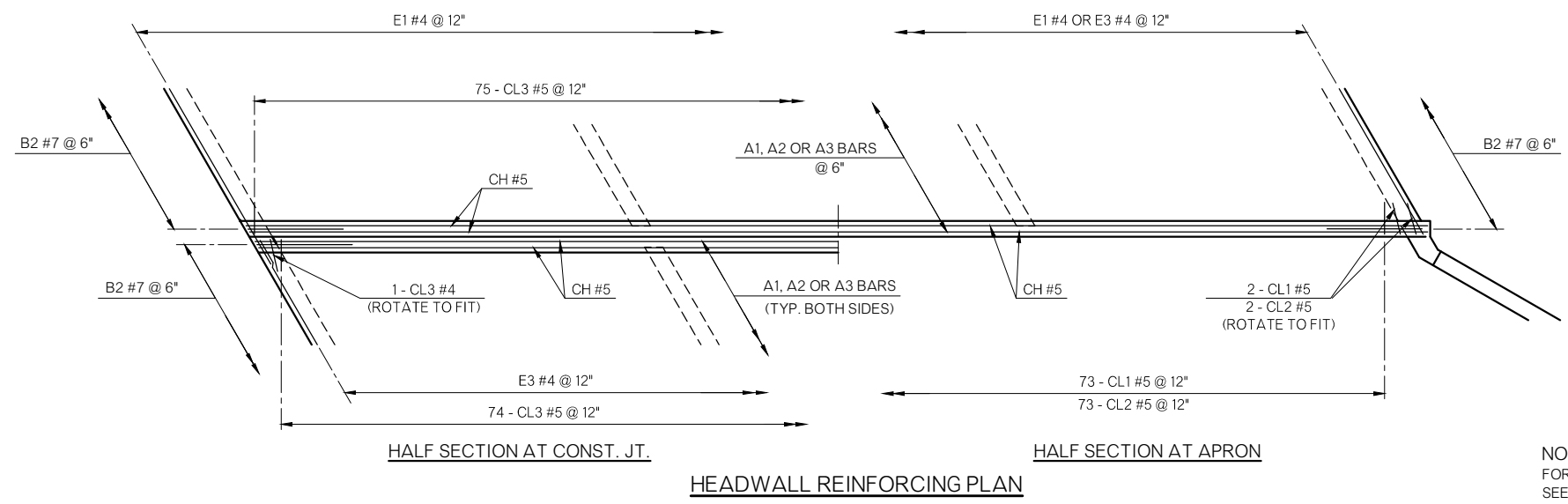


**APRON & CURTAIN WALL PLAN**

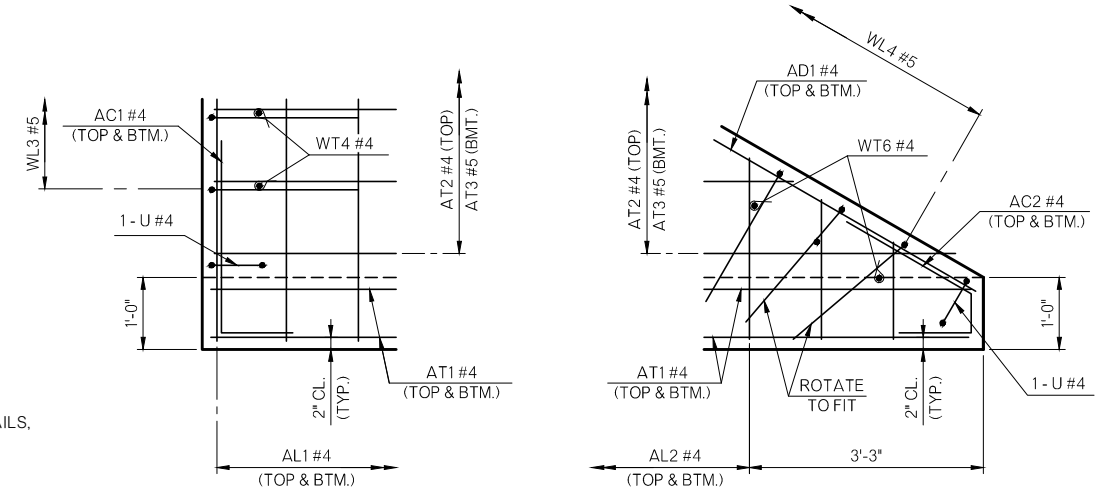
L:\Active\21014\Drawings\Wallace\B028 2 NEW ZA Apron details.dwg, 4/16/2024 9:36:23 AM, Deanne Brittan

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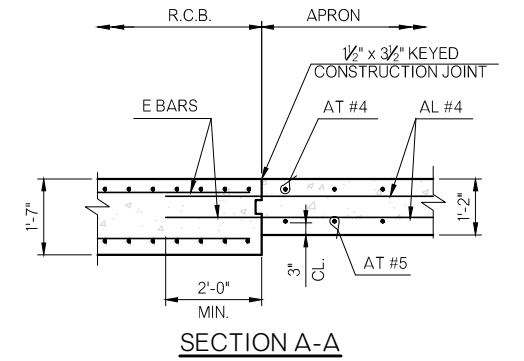
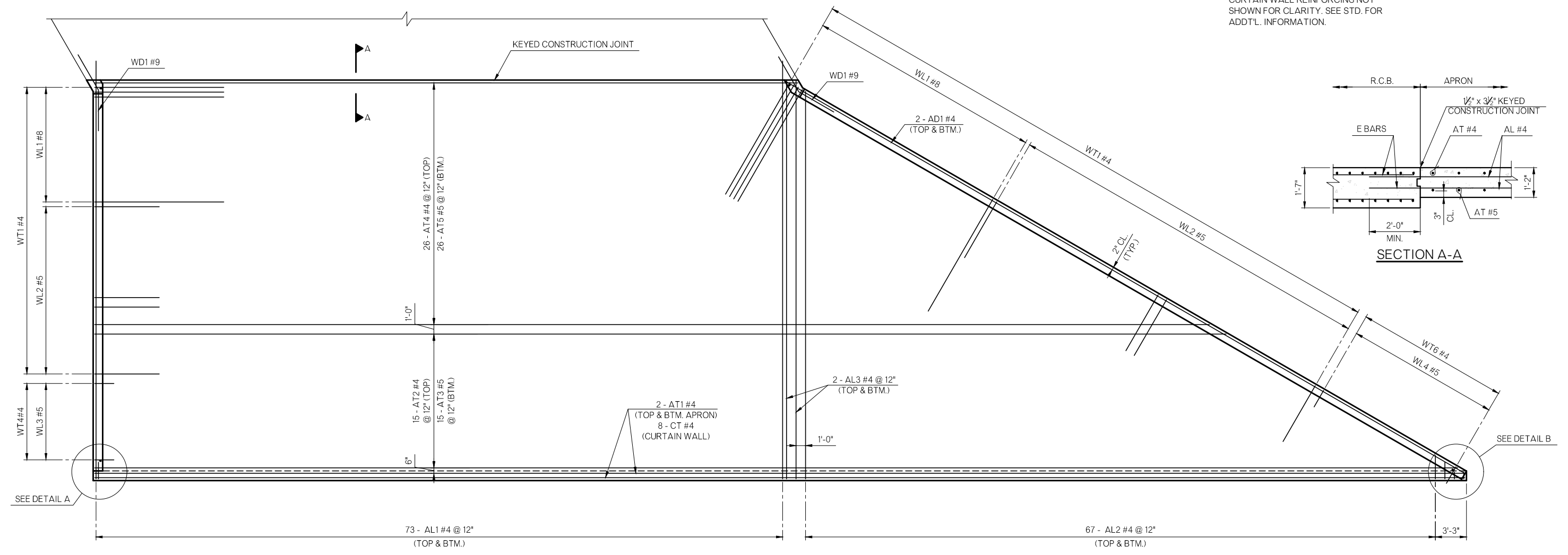
S.H.9 OVER WALLACE CREEK		McINTOSH COUNTY		Design	RMF
BRIDGE "B"				Detail	DRB
R.C.B. DETAILS SHEET 2 OF 4 APRON DETAILS				Check	RMF
				CEC	
<b>STATE OF OKLAHOMA</b>		DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 33793(04)		SHEET NO. B028			



NOTE:  
FOR CURTAIN WALL DETAILS,  
SEE STD. RCB-CW3-D4-30



NOTE:  
CURTAIN WALL REINFORCING NOT  
SHOWN FOR CLARITY. SEE STD. FOR  
ADD'TL. INFORMATION.

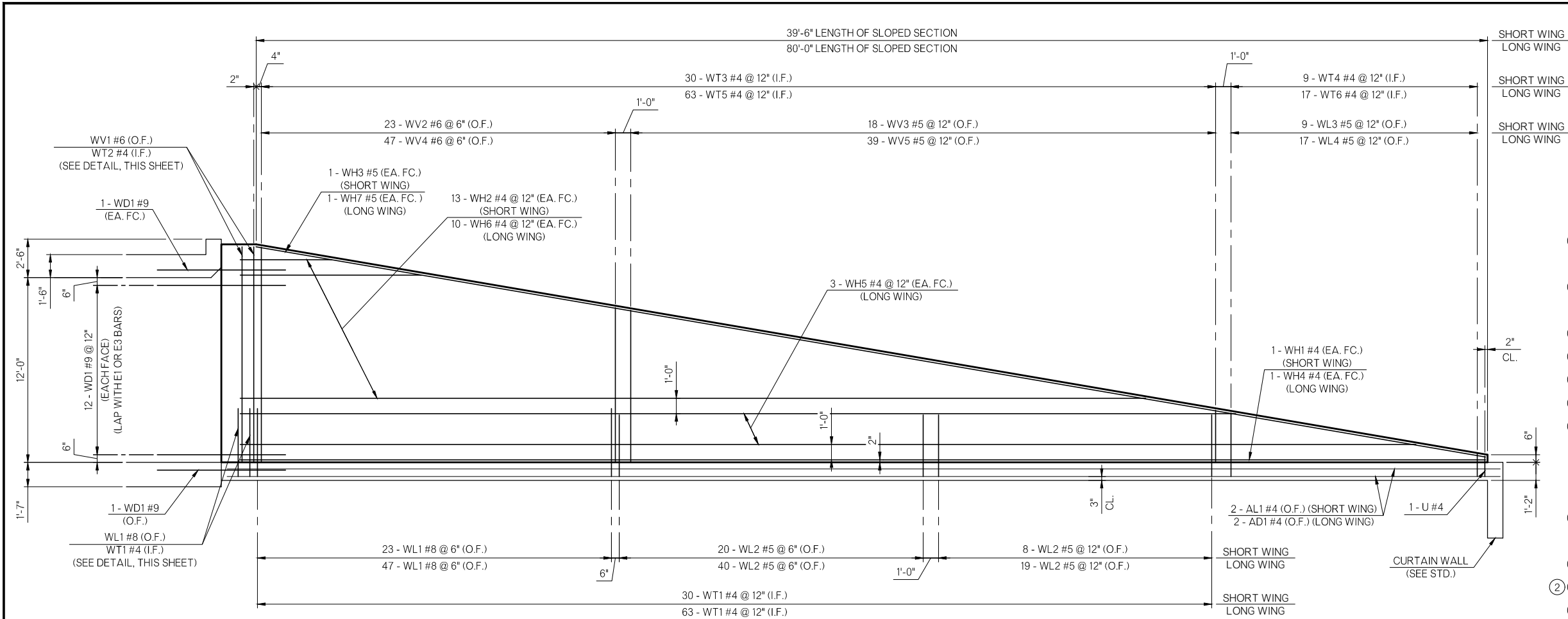


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S.H.9 OVER WALLACE CREEK BRIDGE "B"		McINTOSH COUNTY	
Design	RMF	Detail	DRB
Check	RMF		
<b>STATE OF OKLAHOMA</b>			
JOB PIECE NO. 33793(04)		SHEET NO. B029	

R.C.B. DETAILS  
SHEET 3 OF 4  
APRON DETAILS

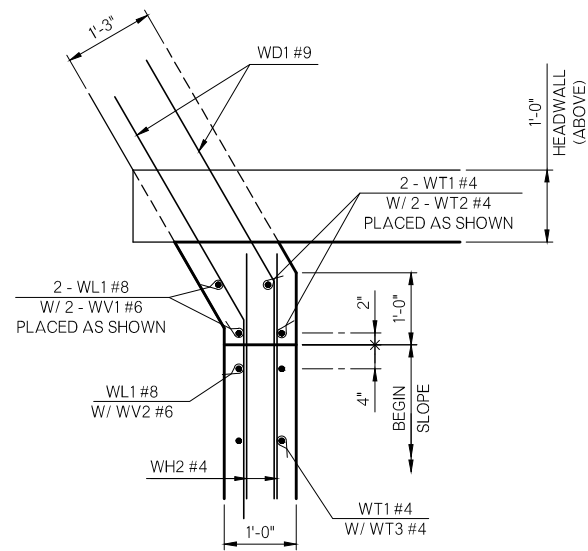


**WING ELEVATION**

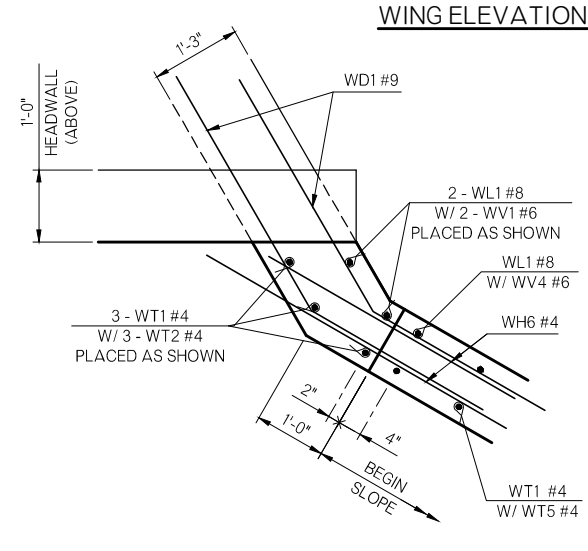
NOTE:  
I.F. INDICATES INSIDE FACE OF WING.  
O.F. INDICATES OUTSIDE FACE OF WING.

① END SECTION BAR LIST					
ONE SHOWN, TWO REQUIRED					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
PLAIN REINFORCING					
AC1	#4	2	BNT.	3'-8"	
AC2	#4	2	BNT.	3'-8"	
② AD1	#4	2	STR.	84'-0"	
AL1	#4	146	STR.	43'-9"	
③ AL2	#4	134	STR.	21'-6" AVG.	2'-6" TO 40'-6"
AL3	#4	4	STR.	41'-9"	
④ AT1	#4	4	STR.	148'-4"	
④ AT2	#4	15	STR.	135'-5" AVG.	123'-4" TO 147'-6"
④ AT3	#5	15	STR.	135'-5" AVG.	123'-4" TO 147'-6"
② AT4	#4	26	STR.	97'-6" AVG.	75'-10" TO 119'-2"
② AT5	#5	26	STR.	97'-6" AVG.	75'-10" TO 119'-2"
U1	#4	2	BNT.	3'-2"	
WD1	#9	54	BNT.	8'-4"	
WH1	#4	2	STR.	40'-4"	
⑤ WH2	#4	26	STR.	20'-7" AVG.	3'-3" TO 38'-0"
WH3	#5	2	STR.	41'-7"	
② WH4	#4	2	STR.	83'-4"	
②⑥ WH5	#4	6	STR.	72'-8" AVG.	66'-10" TO 78'-6"
⑦ WH6	#4	20	STR.	32'-2" AVG.	5'-10" TO 58'-6"
② WH7	#5	2	STR.	83'-5"	
WL1	#8	74	BNT.	17'-11"	
WL2	#5	87	BNT.	10'-9"	
WL3	#5	9	BNT.	5'-0" AVG.	3'-7" TO 6'-5"
WL4	#5	17	BNT.	4'-8" AVG.	3'-4" TO 6'-0"
WT1	#4	98	STR.	2'-10"	
WT2	#4	5	STR.	14'-0"	
WT3	#4	30	STR.	8'-10" AVG.	3'-10" TO 13'-10"
WT4	#4	9	STR.	3'-0" AVG.	1'-7" TO 4'-5"
WT5	#4	63	STR.	8'-7" AVG.	3'-4" TO 13'-10"
WT6	#4	17	STR.	2'-8" AVG.	1'-4" TO 4'-0"
WV1	#6	4	STR.	14'-0"	
WV2	#6	23	STR.	11'-11" AVG.	10'-0" TO 13'-10"
WV3	#5	18	STR.	6'-9" AVG.	3'-10" TO 9'-8"
WV4	#6	47	STR.	12'-0" AVG.	10'-1" TO 13'-11"
WV5	#5	39	STR.	6'-7" AVG.	3'-4" TO 9'-10"

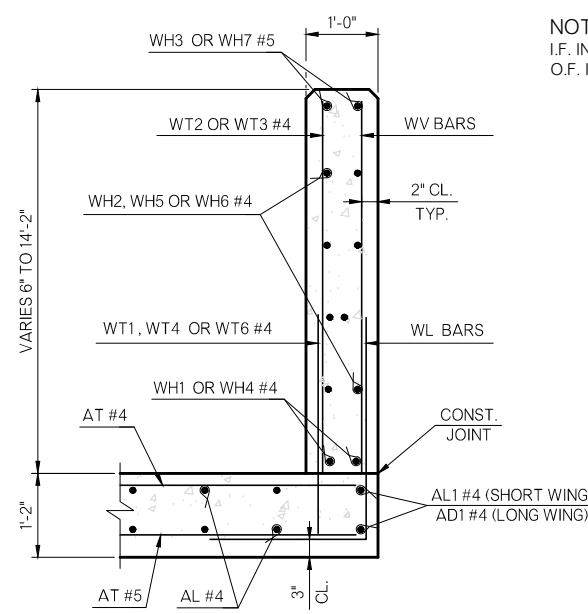
- ① FOR CURTAIN WALL REINFORCING, SEE STD. RCB-CW3-D4-30
- ② INCLUDES 1 - 2'-6" LAP
- ③ 2 SETS OF 67 BARS
- ④ INCLUDES 2 - 2'-6" LAPS
- ⑤ 2 SETS OF 13 BARS
- ⑥ 2 SETS OF 3 BARS
- ⑦ 2 SETS OF 10 BARS



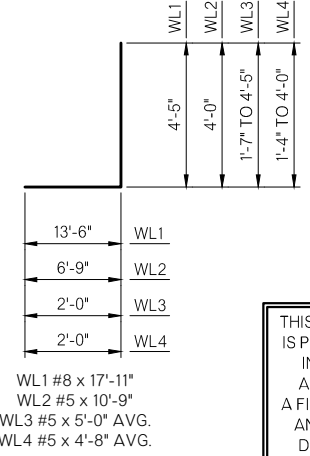
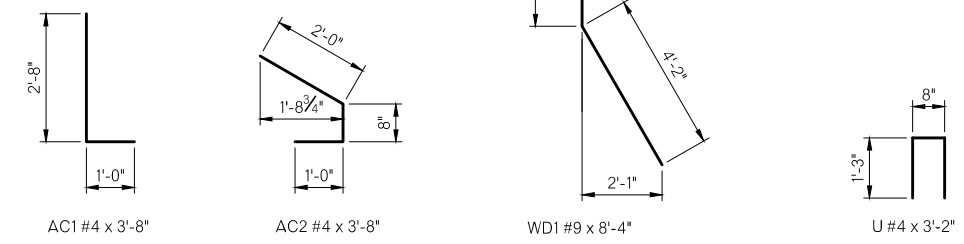
**SHORT WING DETAIL AT BARREL**



**LONG WING DETAIL AT BARREL**



**TYPICAL SECTION THRU WING**



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S.H.9 OVER WALLACE CREEK BRIDGE "B" McINTOSH COUNTY

R.C.B. DETAILS  
SHEET 4 OF 4  
WING DETAILS

Design: RMF  
Detail: DRB  
Check: RMF

STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION  
JOB/PIECE NO. 33793(04) SHEET NO. B030

DRAINAGE STRUCTURE DESIGN RECORD																									
STR. NO.	DESIGN YEAR	CL STATION	STRUCTURE SIZE & TYPE	DRAINAGE AREA	ANTICIPATED LAND USE	AVG. SLOPE OF WATERSHED		RUNOFF CURVE NUMBER (ANTICIPATED)	LENGTH OF OVERLAND FLOW		SLOPE OF CHANNEL	Tc TIME OF CONCENTRATION	INTENSITY OF DESIGN YEAR RAINFALL		DESIGN YEAR DISCHARGE		TW. DESIGN TAILWATER	ELEVATION	STRUCTURE LENGTH	STRUCTURE SLOPE	MAX. ALLOWABLE HEADWATER	FLOW VELOCITY		TYPE OF HYDRAULIC CONTROL	
						ACRE	%		FT.	%			FT.	%	MIN.	125						150	Q25		Q50
C1	50		EXTEND EXIST. 10'x4' RCB 70 LF LT	192.4	100% PASTURE	1.9	79	1200	4.0	4250	1.4	47.0	6.6	7.2	427.0	482.0	3.69	619.80	619.20	118.0	0.0095	627.5	5.96	6.17	INLET
C2	50		CONST. SMD W/ 24"x90' LG RCP	6.1	TIMBER	8.2	83	380	21.0	450	0.8	13.0	6.6	7.2	25.0	28.0	1.57	613.83	612.19	90.0	0.0033	618.5	8.53	9.30	OUTLET

TOTAL D.A. = 5.76 SQ. MI.  
 CONTROLLED D.A. = 0.00 SQ. MI.  
 EFFECTIVE D.A. = 5.76 SQ. MI.

TOTAL D.A. = 8.92 SQ. MI.  
 CONTROLLED D.A. = 0.00 SQ. MI.  
 EFFECTIVE D.A. = 8.92 SQ. MI.

STR. NO. C2  
 DA = 6.1 AC.

STR. NO. C1  
 DA = 192.4 AC.

RECEIVING WATERS = FLAT ROCK CREEK

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION	
DRAWN		DRAINAGE MAP	
CHECKED			
APPROVED			
SQUAD	ENGINEERS		
COUNTY	MCINTOSH	HIGHWAY	SH-9
		STATE JOB NO.	33793(04)
		SHEET NO.	R001

MJB, E. P. G. I. N. G. S.  
 Title of Plot: 5/3/2024 1:22 PM Plot Size: MONOCHROME STR  
 C: V021\21000702303\_SH\_9\_Bridges\DESIGN\Production\Plans\33793\03-C1\_DRAIN\_MAP.dwg

# STORM WATER MANAGEMENT PLAN

## SITE DESCRIPTION

## EROSION AND SEDIMENT CONTROLS

PROJECT LIMITS: S.H. 9 OVER FLAT ROCK CREEK AND WALLACE CREEK  
APPROXIMATELY 4400 FEET

PROJECT DESCRIPTION: 2 BRIDGE REPLACEMENTS, RCB EXTENSION, APPROX. 4220 FEET  
NEW ROADWAY CONSTRUCTION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: \_\_\_\_\_  
1. PLACE TEMPORARY EROSION CONTROL DEVICES PRIOR TO ALL CONSTRUCTION ACTIVITY.  
2. PERFORM CLEARING AND GRUBBING, PRESERVING ANY VEGETATION NOT IMPEDING  
CONSTRUCTION.  
3. REMOVE AND STOCKPILE TOPSOIL. PROVIDE EROSION CONTROL DEVICES AS NEEDED TO  
PROTECT STOCKPILE.  
4. AS GRADING IS COMPLETED, PLACE TEMPORARY MULCHING AND/OR SEEDING.  
5. AS PERMANENT VEGETATION IS ESTABLISHED (70% COVER), TEMPORARY SEDIMENT  
6. AS CONDITIONS WARRANT, THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, MAY  
MODIFY THE TYPE OR ARRANGEMENT OF THE SPECIFIC PRACTICE OR CONTROLS TO  
IMPROVE THEIR EFFECTIVENESS.

SOIL TYPE: CLAYEY SILT LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 23.79 ACRES

ESTIMATED AREA TO BE DISTURBED: 14.9 ACRES

OFFSITE AREA TO BE DISTURBED: \_\_\_\_\_  
 (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 3.2 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 4.7 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.65

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 35°16'11" N, 95°46'47" W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: FLAT ROCK CREEK & WALLACE CREEK

SENSITIVE WATERS OR WATERSHEDS: YES  NO

303(d) IMPAIRED WATERS: YES  NO

IF YES, LIST IMPAIRMENT: \_\_\_\_\_

LOCATED IN A TMDL: YES  NO

LAKE THUNDERBIRD TMDL: YES  NO

MS4 ENTITY YES  NO

IF YES, LOCATION: \_\_\_\_\_

NOTE:  
 THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

**SOIL STABILIZATION PRACTICES:**

- \_\_\_\_\_ TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION
- \_\_\_\_\_ HYDROMULCH / HYDROSEED

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

**STRUCTURAL PRACTICES:**

- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- \_\_\_\_\_ TEMPORARY FIBER LOG
- \_\_\_\_\_ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- \_\_\_\_\_ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- \_\_\_\_\_ ROCK FILTER DAMS
- \_\_\_\_\_ TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- \_\_\_\_\_ TEMPORARY DIVERSION CHANNELS
- \_\_\_\_\_ TEMPORARY SEDIMENT BASINS
- \_\_\_\_\_ TEMPORARY SEDIMENT TRAPS
- \_\_\_\_\_ TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- \_\_\_\_\_ INLET PROTECTION
- \_\_\_\_\_ TEMPORARY BRUSH SEDIMENT BARRIERS
- \_\_\_\_\_ SANDBAG BERMS
- \_\_\_\_\_ TEMPORARY STREAM CROSSINGS
- \_\_\_\_\_ FLEXAMAT / ARTICULATED CONCRETE BLOCK
- \_\_\_\_\_ COMPOST FILTER SOCKS
- \_\_\_\_\_ EROSION CONTROL MATS AND BLANKETS

**OFFSITE VEHICLE TRACKING:**

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

**NOTES:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:**

**MAINTENANCE AND INSPECTION:**  
 ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

**WASTE MATERIALS:**  
 PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

**HAZARDOUS MATERIALS:**  
 PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

**GENERAL NOTES:**  
 A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

**THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:**

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
  - 220 MANAGEMENT OF EROSION, SEDIMENTATION, AND STORM WATER POLLUTION PREVENTION
  - 221 TEMPORARY SEDIMENT CONTROL

**IN ADDITION:**  
 \*ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA.\* ODEQ, WATER QUALITY DIVISION, OCTOBER 18, 2022.

ADDITIONAL PERMITS REQUIRED FROM OKLAHOMA WATER RESOURCES BOARD AND/OR MUNICIPALITY FOR USE OF SURFACE, GROUND OR CITY WATER SOURCES FOR ACTIVITIES SUCH AS WATERING.

DESIGN	WS	11/21	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION  <h2 style="margin: 0;">STORM WATER MANAGEMENT PLAN</h2>	
DRAWN	AJ	11/21		
CHECKED	WS	11/21		
APPROVED				
SQUAD		ENGINEERS		
COUNTY	MCINTOSH	HIGHWAY SH-9	STATE JOB NO. 33793(04)	SHEET NO. R002

M:\E\_n\_g\_i\_n\_e\_e\_r\_s\Time of Plot: 5/13/2024 1:22 PM Plot Size: MONOCHROME.STB  
 C:\2021\21000\T02203\_SH\_9\_Bridges\_DESIGN\Production Plans\R002-33793(04)-STORM WATER MANAGEMENT PLAN.dwg



OKLAHOMA DEPARTMENT OF TRANSPORTATION  
**FINAL FIELD REVIEW**  
 MAY 1, 2024

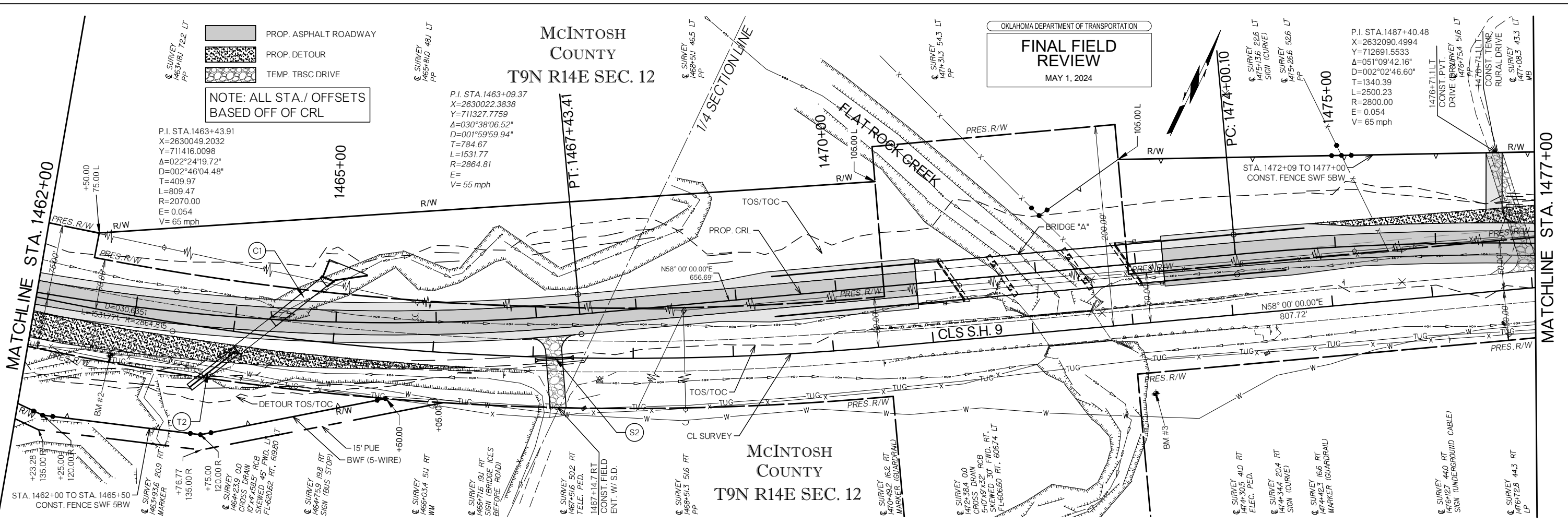
McINTOSH COUNTY  
 T9N R14E SEC. 12

NOTE: ALL STA./ OFFSETS BASED OFF OF CRL

P.I. STA. 1463+43.91  
 X=2630049.2032  
 Y=711416.0098  
 $\Delta=022^{\circ}24'19.72"$   
 $D=002^{\circ}46'04.48"$   
 T=409.97  
 L=809.47  
 R=2070.00  
 E=0.054  
 V=65 mph

P.I. STA. 1463+09.37  
 X=2630022.3838  
 Y=711327.7759  
 $\Delta=030^{\circ}38'06.52"$   
 $D=001^{\circ}59'59.94"$   
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 L=1531.77  
 R=2864.81  
 E=0.054  
 V=55 mph

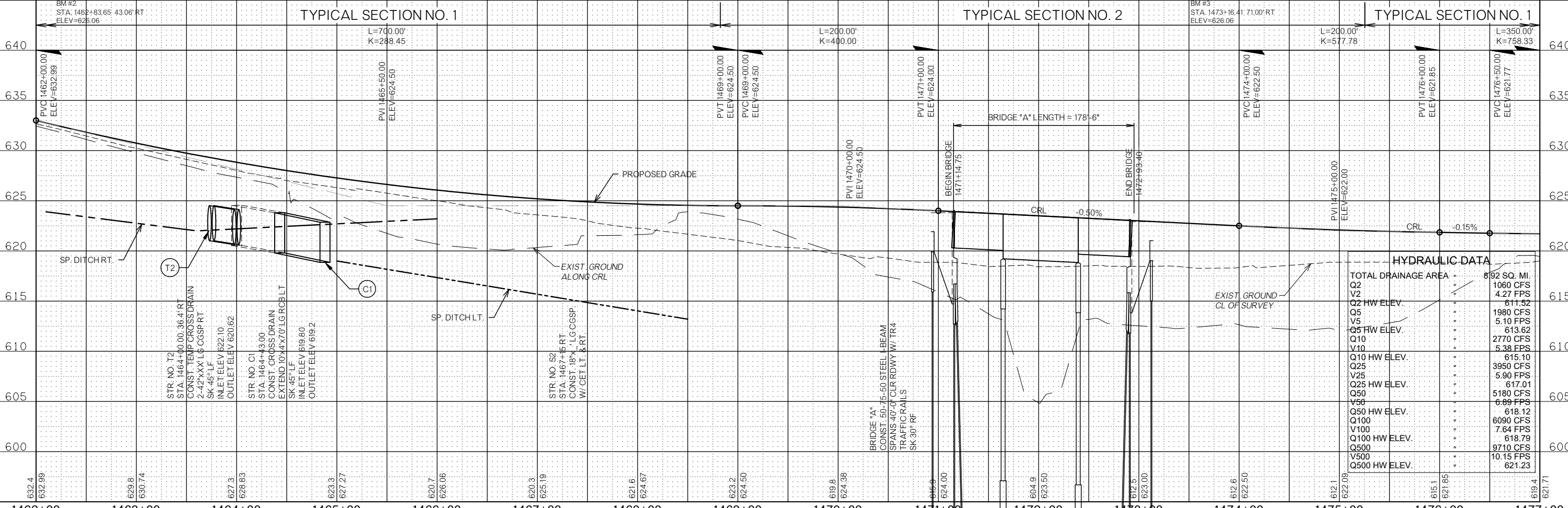
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 E=0.054  
 V=65 mph



TYPICAL SECTION NO. 1

TYPICAL SECTION NO. 2

TYPICAL SECTION NO. 1



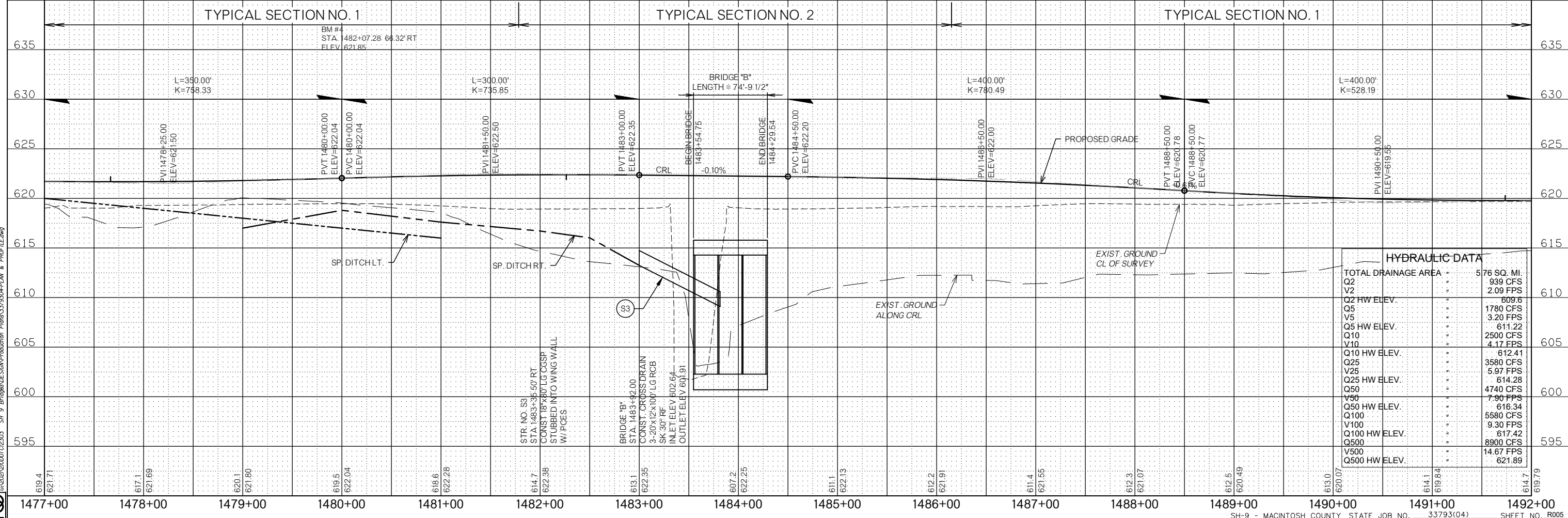
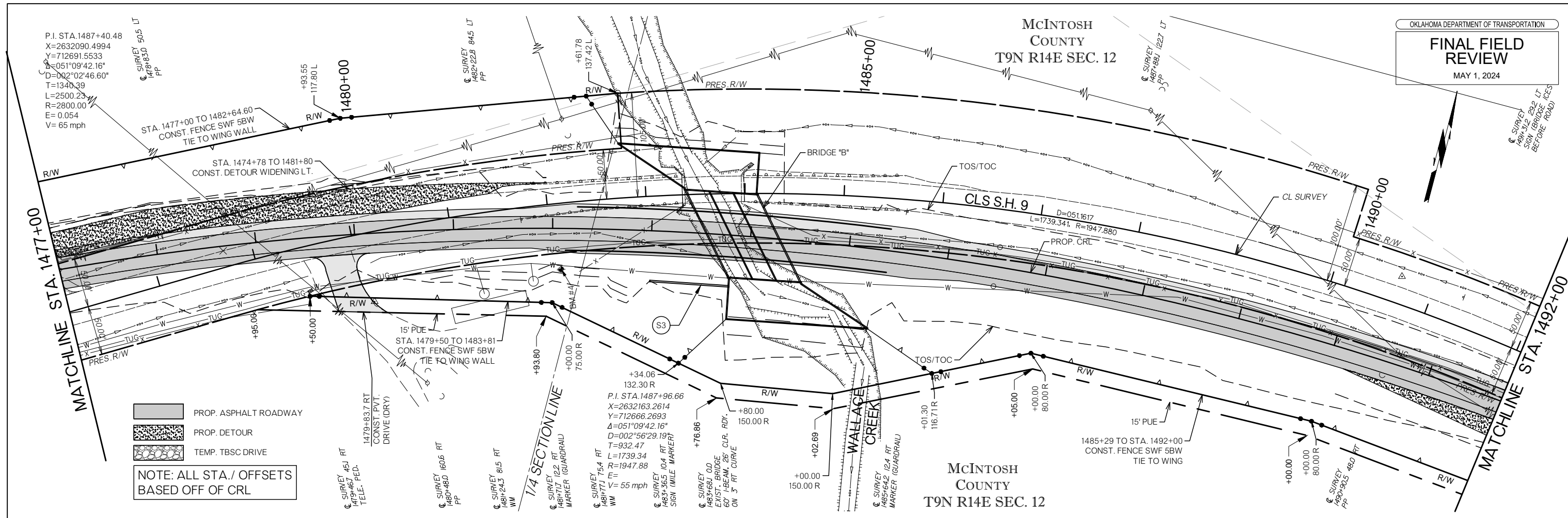
**HYDRAULIC DATA**

TOTAL DRAINAGE AREA	892 SQ. MI.
Q2	1060 CFS
V2	4.27 FPS
Q2 HW ELEV.	611.52
Q5	1980 CFS
V5	5.10 FPS
Q5 HW ELEV.	613.62
Q10	2770 CFS
V10	5.38 FPS
Q10 HW ELEV.	615.10
Q25	3950 CFS
V25	5.90 FPS
Q25 HW ELEV.	617.01
Q50	5180 CFS
V50	6.89 FPS
Q50 HW ELEV.	618.12
Q100	6090 CFS
V100	7.64 FPS
Q100 HW ELEV.	618.79
Q500	9710 CFS
V500	10.15 FPS
Q500 HW ELEV.	621.23

HUB E.P. 11/16/2023 1422 BY: RMD, SHM, MONOCHROME/STB  
 6/20/2023/2023/02/23/03\_SH\_9\_Bridges/DESIGN/Production Plans/3379304-PUN & PROFILE.dwg

McINTOSH COUNTY  
 T9N R14E SEC. 12

McINTOSH COUNTY  
 T9N R14E SEC. 12



HYDRAULIC DATA	
TOTAL DRAINAGE AREA	576 SQ. MI.
Q2	939 CFS
V2	2.09 FPS
Q5	609.6
V5	3.20 FPS
Q10	611.22
V10	4.17 FPS
Q10 HW ELEV.	612.41
Q25	3580 CFS
V25	5.97 FPS
Q25 HW ELEV.	614.28
Q50	4740 CFS
V50	7.90 FPS
Q50 HW ELEV.	616.34
Q100	5580 CFS
V100	9.30 FPS
Q100 HW ELEV.	617.42
Q500	8900 CFS
V500	14.67 FPS
Q500 HW ELEV.	621.89

HUB E.P. & SONS, INC. 1422 NW 10th St., Muskogee, MO. 64401  
 618-202-2020 FAX 618-202-2023 SH-9 Bridges/DESIGN/Production Plans/3379304-PLAN & PROFILE.dwg

P.I. STA. 1511+94.60  
X=2634546.9850  
Y=711837.9547  
Δ=029°52'48.00"  
D=001°59'59.65"  
T=764.44  
L=1494.07  
R=2864.93  
E= 0.054  
V= 55 mph

P.I. STA. 1511+60.51  
X=2634546.9850  
Y=711837.9547  
Δ=029°52'48.00"  
D=001°59'59.65"  
T=764.44  
L=1494.07  
R=2864.93  
E= 0.054  
V= 55 mph

- PROP. ASPHALT ROADWAY
- PROP. DETOUR
- TEMP. TBSC DRIVE

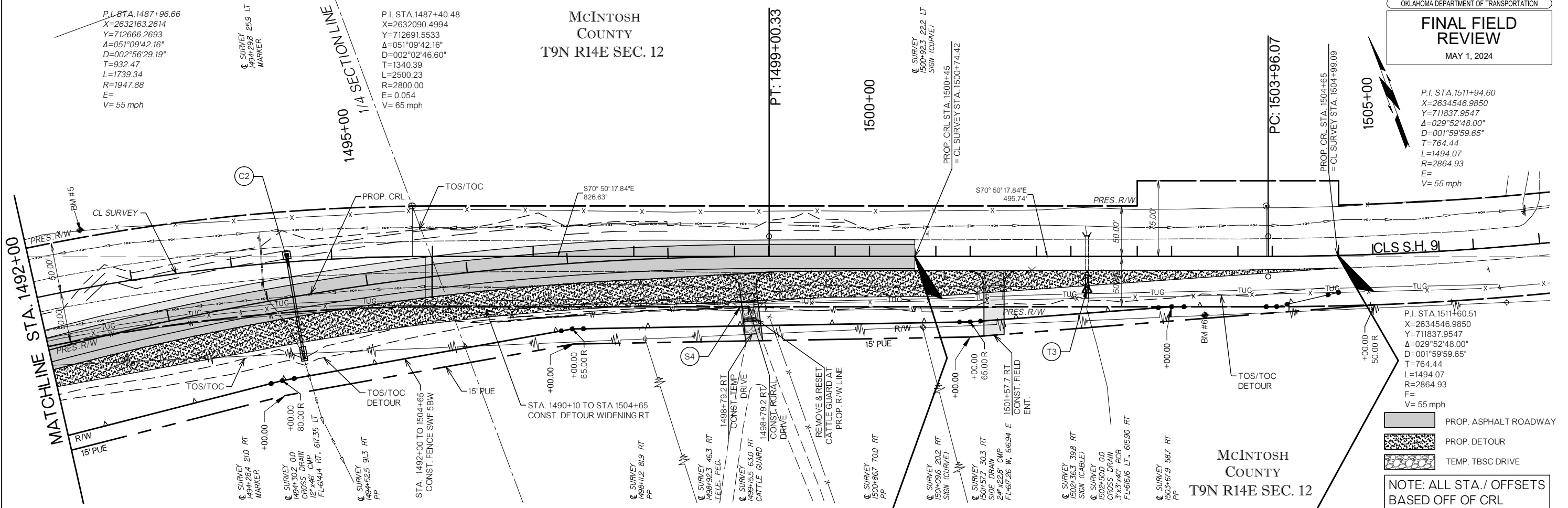
NOTE: ALL STA./ OFFSETS BASED OFF OF CRL

McINTOSH COUNTY  
T9N R14E SEC. 12

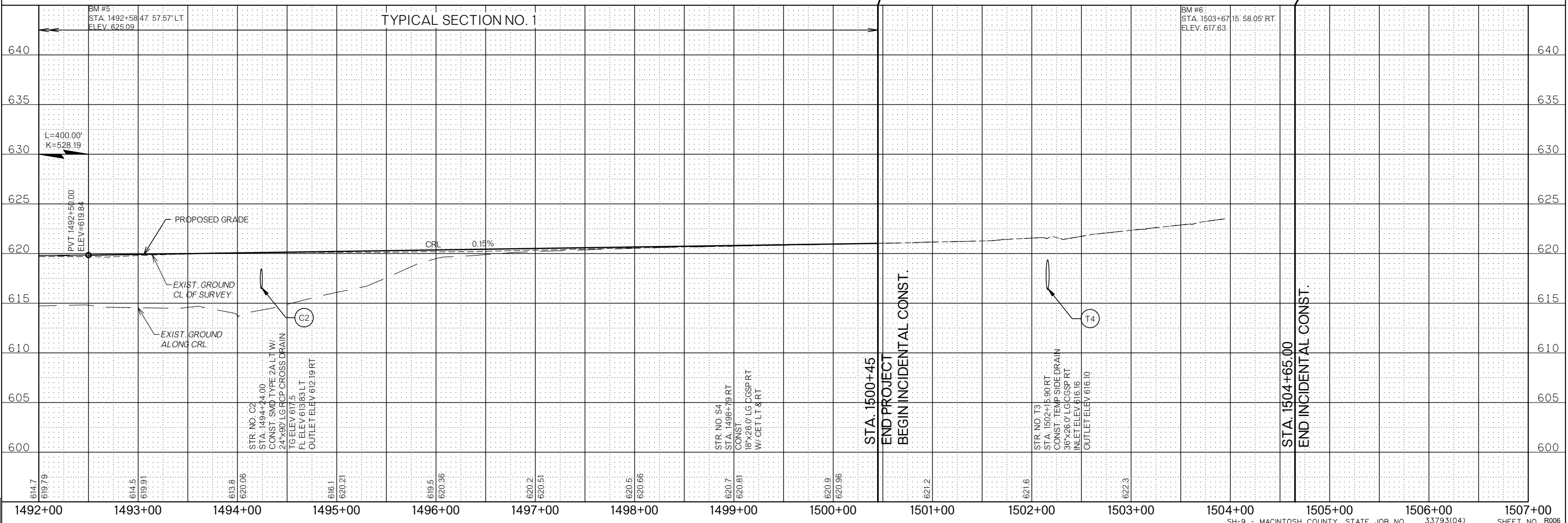
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Y=712666.2693  
Δ=051°09'42.16"  
D=002°56'29.19"  
T=932.47  
L=1739.34  
R=1947.88  
E= 0.054  
V= 55 mph

P.I. STA. 1487+40.48  
X=2632090.4994  
Y=712691.5533  
Δ=051°09'42.16"  
D=002°56'29.19"  
T=932.47  
L=1739.34  
R=1947.88  
E= 0.054  
V= 55 mph

MATCHLINE STA. 1492+00



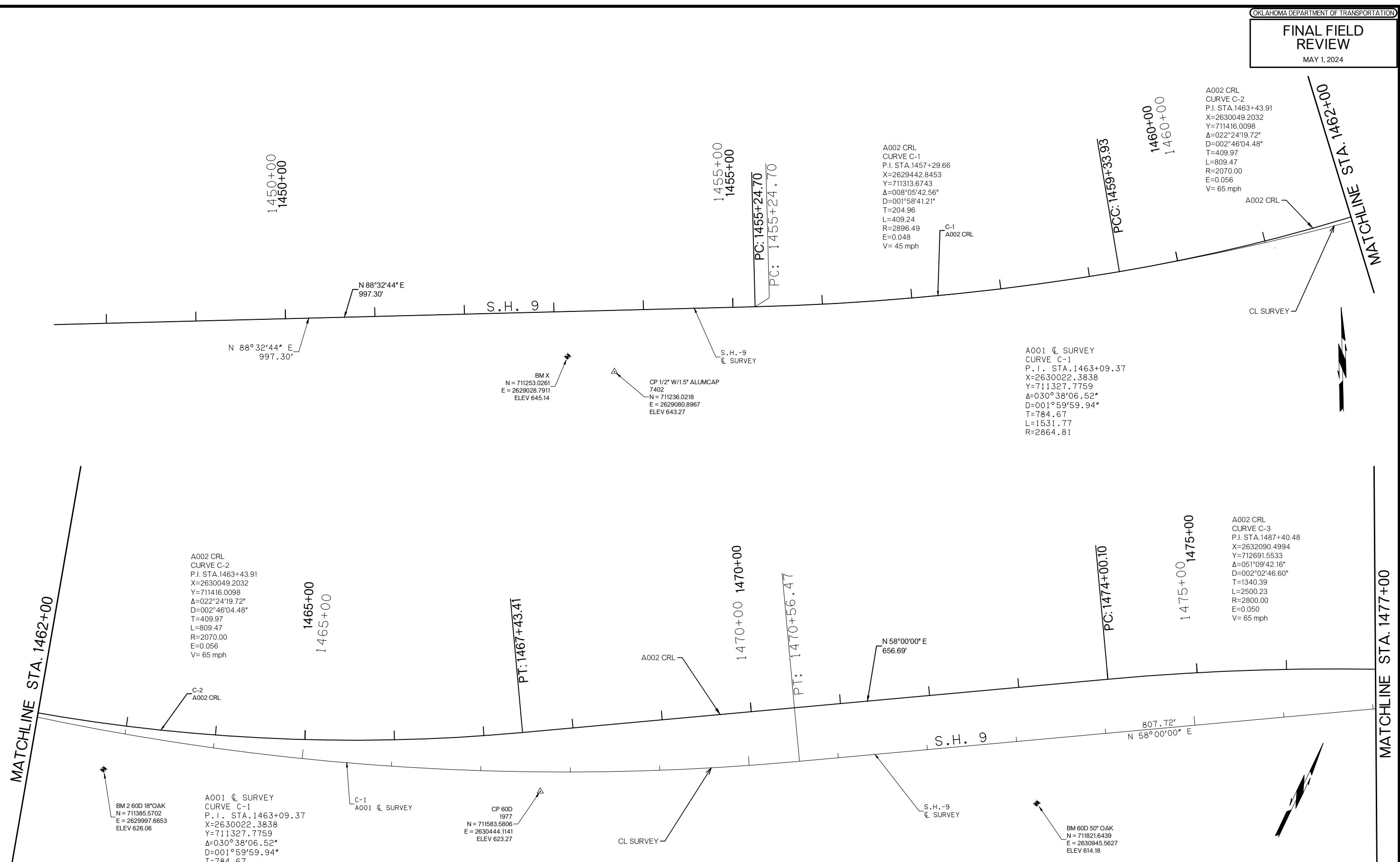
TYPICAL SECTION NO. 1



1492 E 1492+50.00  
ELEV. 619.84  
PVT 1492+50.00  
ELEV. 619.84  
L=400.00'  
K=528.19  
BM #5  
STA. 1492+58.47  
57.57' LT  
ELEV. 625.09  
BM #6  
STA. 1503+67.15  
58.05' RT  
ELEV. 617.63  
SH-9 - MACINTOSH COUNTY STATE JOB NO. 33793(04) SHEET NO. R006



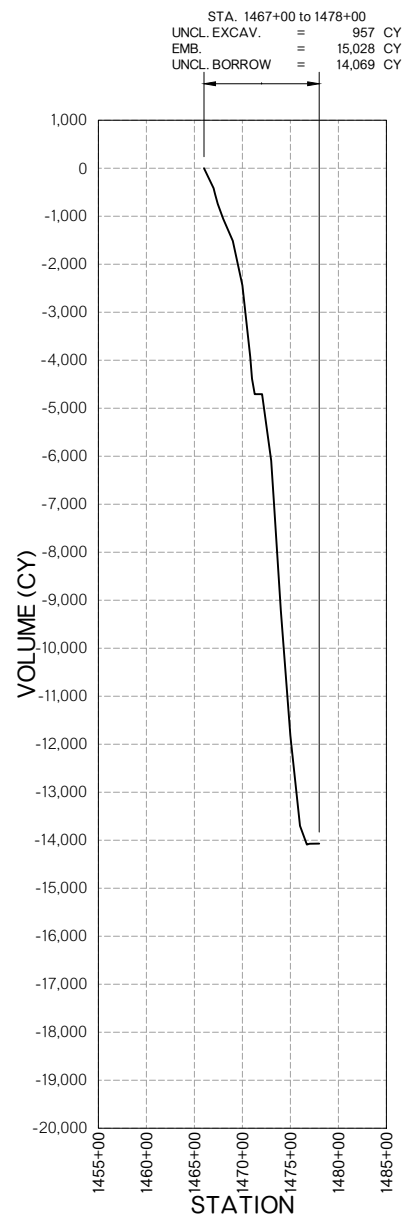




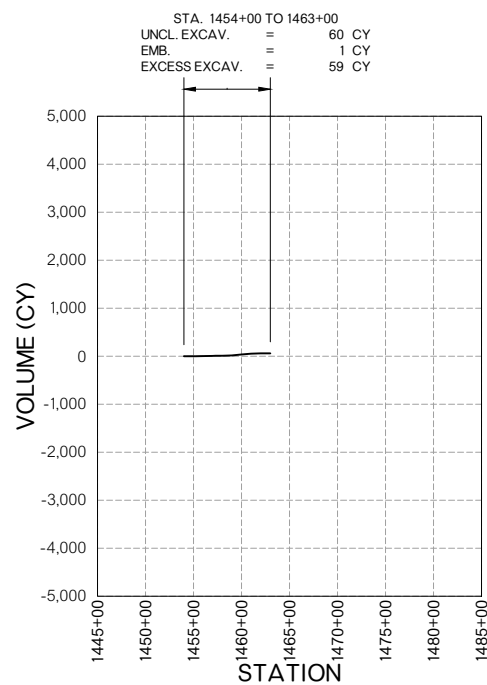
1450+00  
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1462+00  
1465+00  
1465+00  
1470+00  
1470+00  
1475+00  
1475+00  
1477+00  
1477+00

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION  <b>GEOMETRIC LAYOUT</b> (1 OF 2)
DRAWN		
CHECKED		
APPROVED		
SQUAD	ENGINEERS	
COUNTY MCINTOSH HIGHWAY SH-9 STATE JOB NO. 33793(04) SHEET NO. R009		

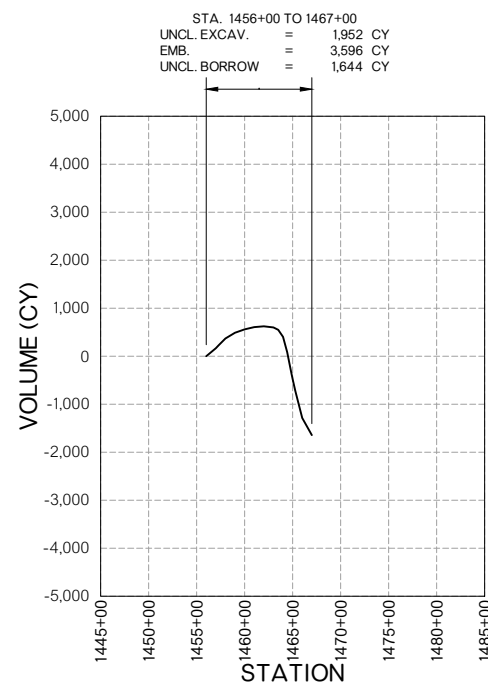




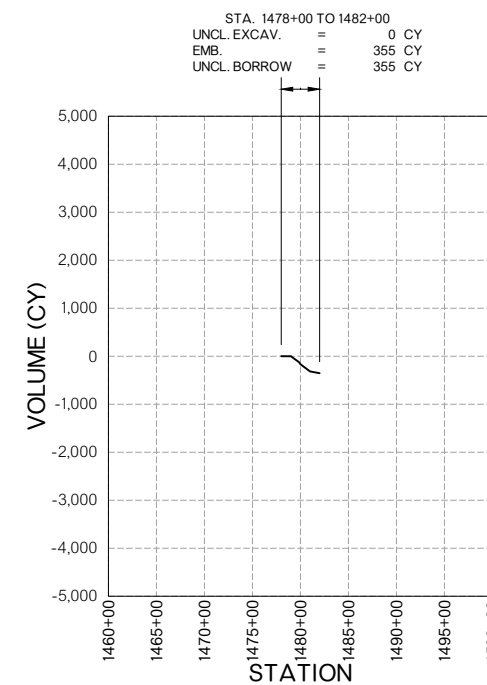
**PHASE - 1**  
**MAINLINE**



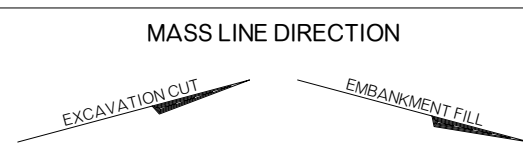
**PHASE - 2A**  
**DETOUR 1**



**PHASE - 2B**  
**MAINLINE**



**PHASE - 2C**  
**DETOUR 2**



THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS ARE COMPLETED. IF CONTRACTOR OPERATIONS REQUIRE HIM TO STOCKPILE THE EXCESS EXCAVATION, THE COST OF THE SECOND HAULING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

MASS HAUL DIAGRAM PROVIDES FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CHARACTER OF MATERIAL ENCOUNTERED DURING CONSTRUCTION. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

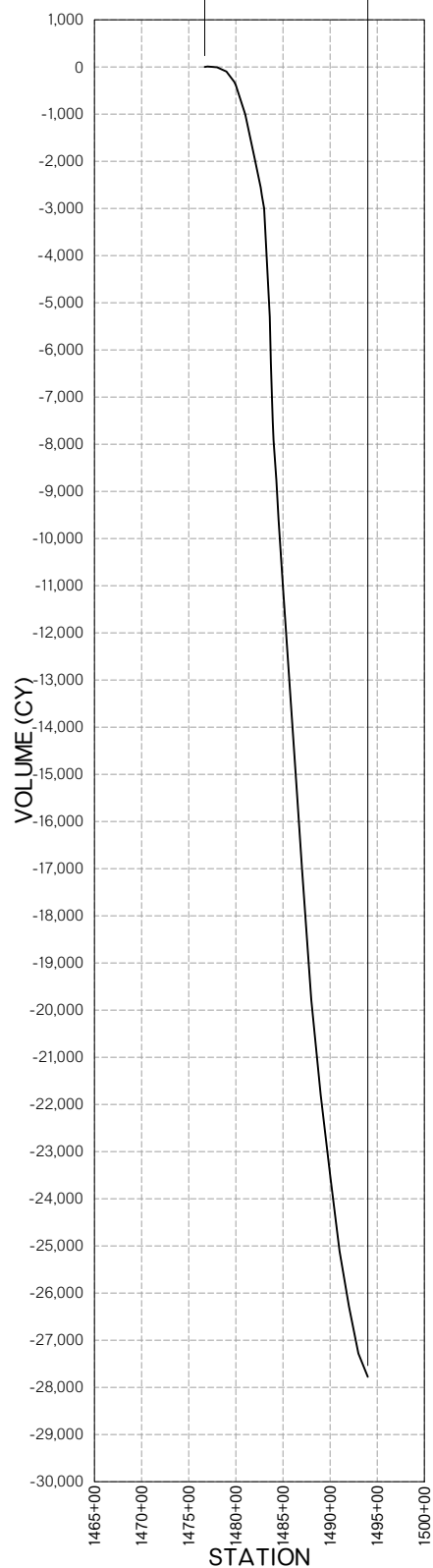
DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	
COUNTY	MCINTOSH

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

**MASS DIAGRAM**  
**(1 OF 2)**

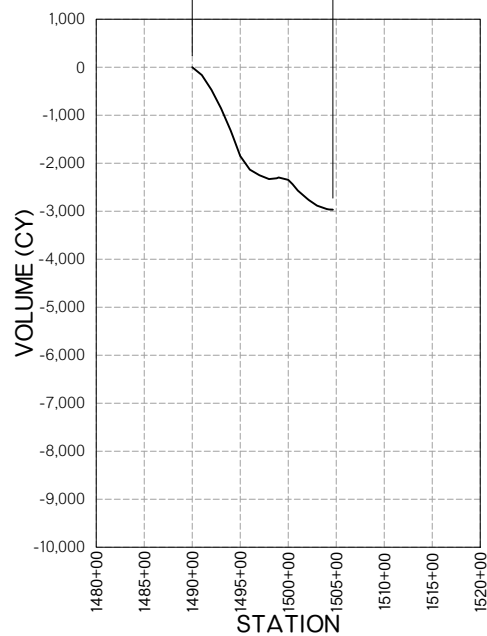
MUB Engineering  
 Time of Plot: 5/3/2024 1:23 PM Plot Size: MONOCHROME.STB  
 (C:\2021\21000\T22203\_SH\_9\_Bridges\DESIGN\Production\_Plans\3379304-MASS\_DIAGRAM.dwg)

STA. 1477+00 TO 1494+00  
 UNCL. EXCAV. = 4,497 CY  
 EMB. = 32,273 CY  
 UNCL. BORROW = 27,776 CY



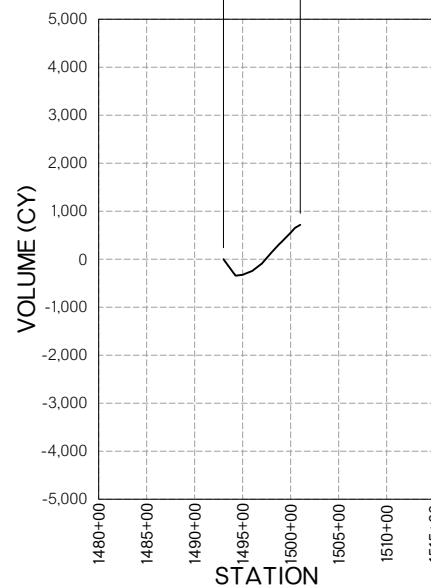
**PHASE - 3A  
 MAINLINE**

STA. 1490+00 TO 1504+65  
 UNCL. EXCAV. = 147 CY  
 EMB. = 3,114 CY  
 UNCL. BORROW = 2,967 CY



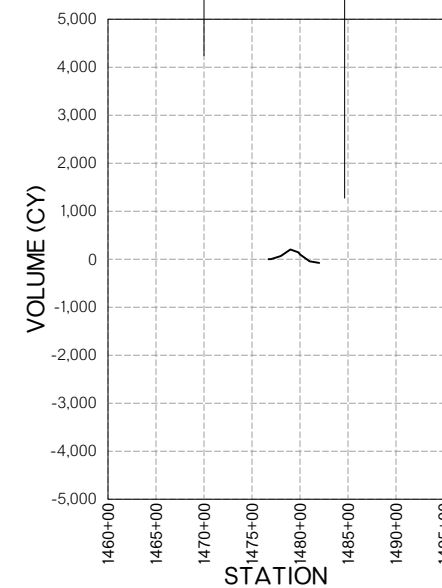
**PHASE - 3B  
 DETOUR 3**

STA. 1493+00 TO 1500+45  
 UNCL. EXCAV. = 1,795 CY  
 EMB. = 1,077 CY  
 EXCESS EXCAV. = 718 CY

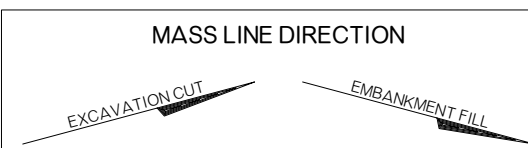


**PHASE - 4A  
 MAINLINE**

STA. 1477+00 TO 1481+00  
 UNCL. EXCAV. = 347 CY  
 EMB. = 422 CY  
 UNCL. BORROW = 75 CY



**PHASE - 4B  
 MAINLINE**



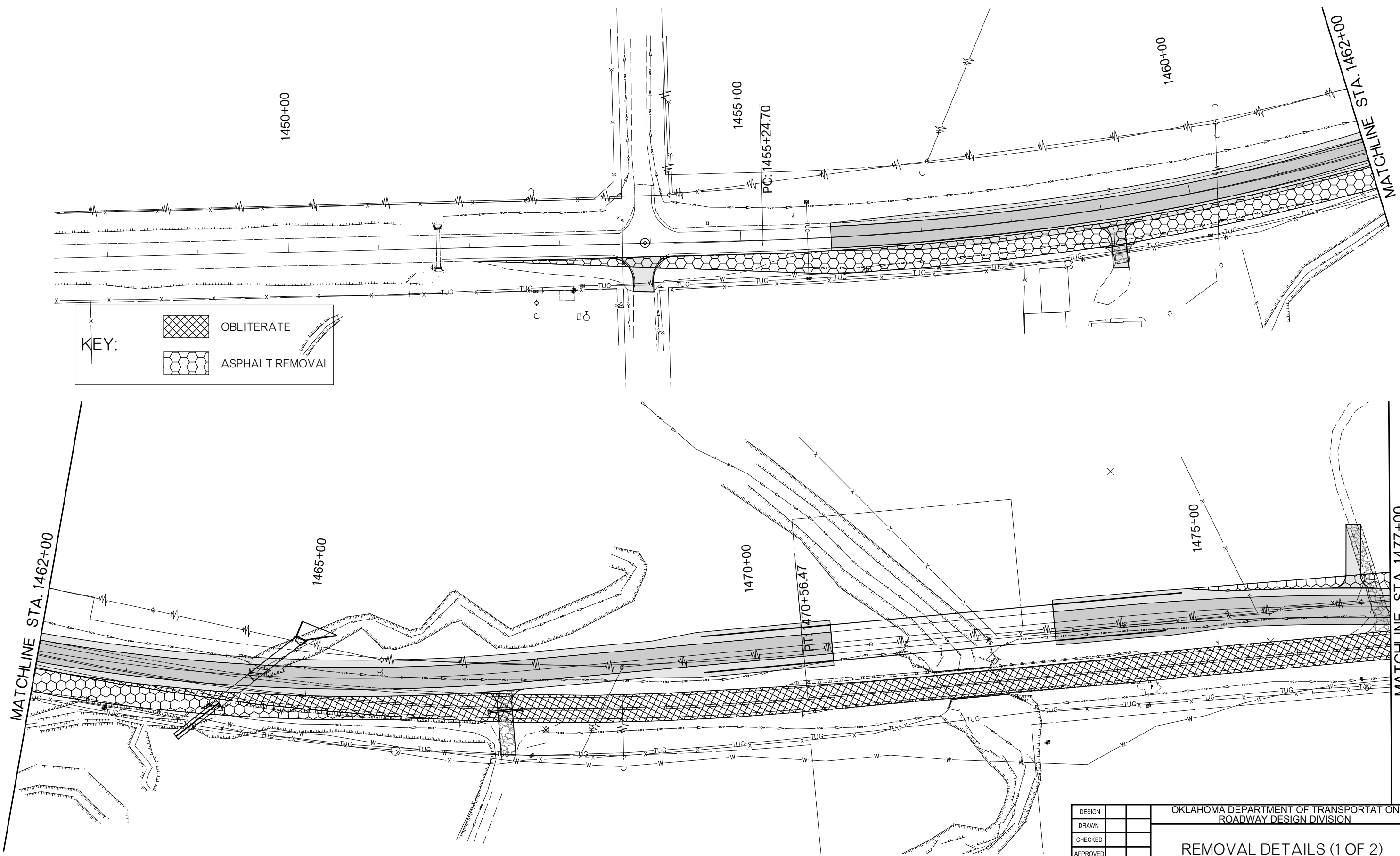
THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS ARE COMPLETED. IF CONTRACTOR OPERATIONS REQUIRE HIM TO STOCKPILE THE EXCESS EXCAVATION, THE COST OF THE SECOND HAULING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

MASS HAUL DIAGRAM PROVIDES FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CHARACTER OF MATERIAL ENCOUNTERED DURING CONSTRUCTION. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.



DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	ENGINEERS


OKLAHOMA DEPARTMENT OF TRANSPORTATION  
 ROADWAY DESIGN DIVISION

**MASS DIAGRAM  
 (2 OF 2)**



**KEY:**

	OBLITERATE
	ASPHALT REMOVAL

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	 ENGINEERS
COUNTY	MCINTOSH

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

**REMOVAL DETAILS (1 OF 2)**

STATE JOB NO. 33793(04) SHEET NO. R013

148 E. P. O. Box 999  
 Tulsa, Okla. 74101-0999  
 (918) 492-1234  
 FAX (918) 492-1235  
 www.okdps.com



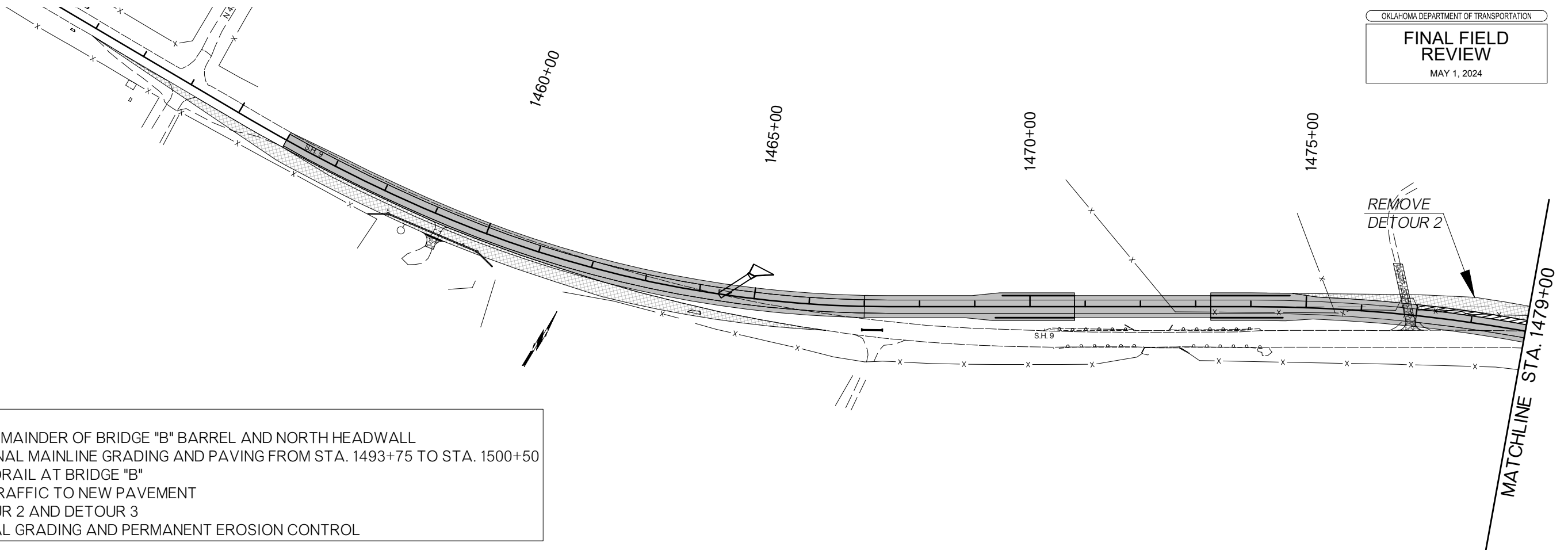




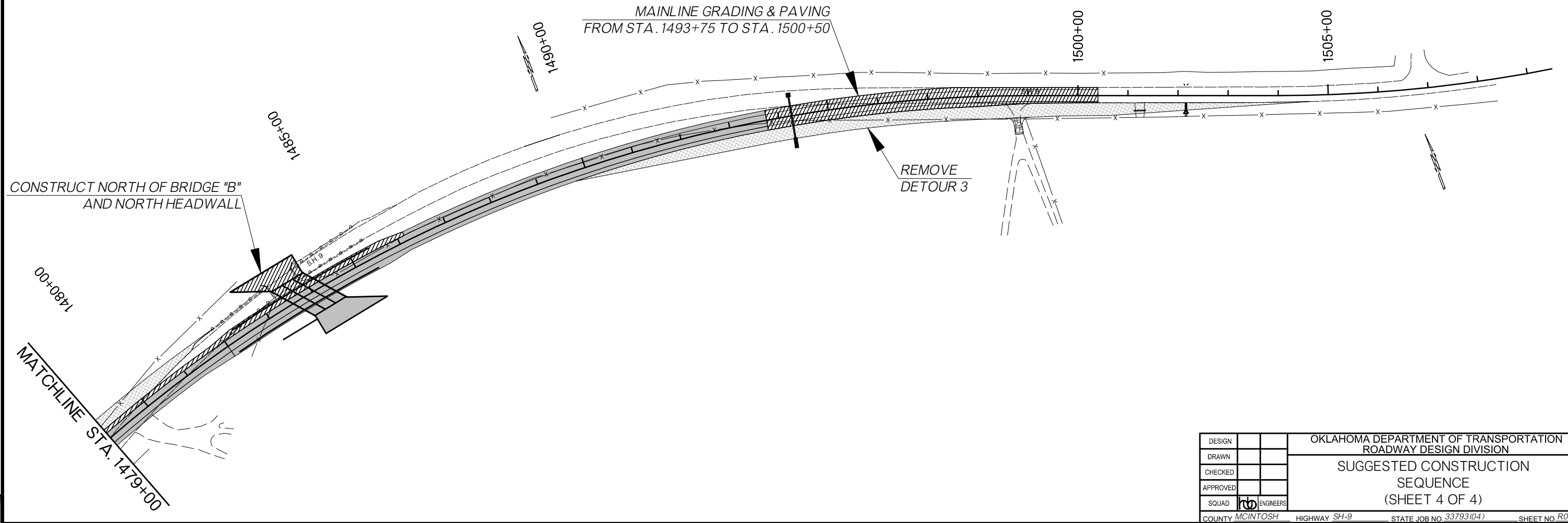


**LEGEND**

- UNDER CONST.
- TEMP. CONST.
- COMPLETED CONST.



**PHASE 4**  
 CONSTRUCT REMAINDER OF BRIDGE "B" BARREL AND NORTH HEADWALL  
 CONSTRUCT FINAL MAINLINE GRADING AND PAVING FROM STA. 1493+75 TO STA. 1500+50  
 INSTALL GUARDRAIL AT BRIDGE "B"  
 SHIFT 2-WAY TRAFFIC TO NEW PAVEMENT  
 REMOVE DETOUR 2 AND DETOUR 3  
 COMPLETE FINAL GRADING AND PERMANENT EROSION CONTROL



AUG 11 10 49 AM '24  
 Time of Plot: 5/12/2024 2:20 PM Plot Style: 00012021.ctb  
 (S:\2024\00012021.ctb) S:\9 Bridges\DESIGN\Production Plots\3379304-CONSTRUCTION PHASING.dwg

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION <b>SUGGESTED CONSTRUCTION SEQUENCE</b> (SHEET 4 OF 4)
DRAWN		
CHECKED		
APPROVED		
SQUAD		
COUNTY	MCINTOSH	HIGHWAY SH-9 STATE JOB NO. 33793(04) SHEET NO. R018

# SURVEY DATA SHEETS

## SURVEY CONTROL DATA

### 1. POSITIONAL CONTROL:

A. POSITIONAL CONTROL FOR THIS SURVEY IS THE NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM, NAD83 (1997), LAMBERT PROJECTION (SOUTH ZONE).

B. ACCURACY – THE POSITIONAL CONTROLS FOR THIS SURVEY MEETS OR EXCEEDS THE FOLLOWING ACCURACY CRITERIA:

1. NETWORK ACCURACY: 0.10 FOOT
2. LOCAL ACCURACY: 0.05 FOOT

### 2. BEARINGS:

THE BEARINGS SHOWN HEREIN OR HEREON ARE GRID BEARINGS DERIVED FROM THE NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL. THE ANGLE OF VARIANCE BETWEEN GRID NORTH (GN) AND THE ASTRONOMICAL TRUE NORTH (TN) IS DEPICTED DIAGRAMMATICALLY.

### 3. VERTICAL CONTROLS:

A. LEVEL DATUM IS NAVD 88 FROM DIFFERENTIAL LEVELING

B. ACCURACY – VERTICAL CONTROL FOR THIS SURVEY MEETS OR EXCEEDS THE FOLLOWING ACCURACY CRITERIA:

1. NETWORK ACCURACY (FROM GPS OR LEVELING): 0.10 FOOT
2. LOCAL ACCURACY (CONFIRMED BY LEVELING): 0.02 FOOT

SURVEY BEGAN: July, 2021  
SURVEY COMPLETED: October, 2021

#### SURVEY CREW MEMBERS:

Charles Chastain, Professional Land Surveyor  
Sean Johnsey, Transportation Specialist Level III  
Byron Rogers,, Transportation Specialist Level I  
Duncan Rae, Transportation Specialist Level II

#### EQUIPMENT:

GPS EQUIPMENT Geomax 35 pro  
SOKKIA BC02 AUTO LEVEL  
SOKKIA IM-50S

SCALES 

SURVEY DATA SHEETS 1" = 50' TOWN

SURVEY DATA SHEETS 1" = 100'

GEOMETRIC DATA SHEETS 1" = 500'

## McINTOSH COUNTY

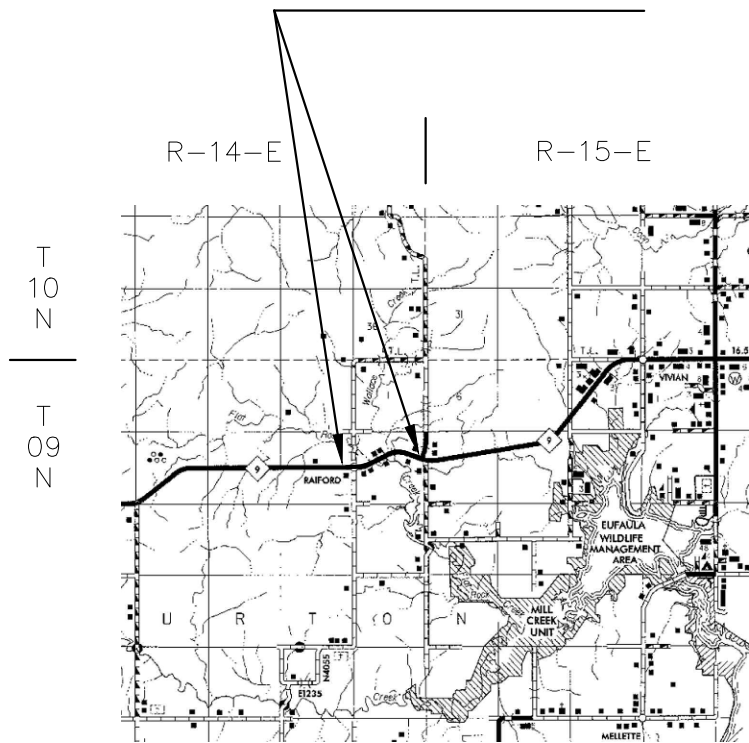
S.H. 9

SWO 5445(1)

STATE JOB NO. 33793(04)

PROJECT LOCATION

SURVEY EXTENTS



McINTOSH CO

PROJECT LENGTH 5901.09 Ft. 1.12 MI.

BEGINNING STATION : 1445+27.00  
ENDING STATION : 1504+28.09

#### INDEX OF SURVEY SHEETS

S001.	TITLE SHEET
S002-S008.	SURVEY REPORTS
S009-S010.	SURVEY DATA SHEETS
S011	LAND TIE DATA SHEETS

"CALL BEFORE YOU DIG"  
THE NEW NATIONAL LOCATE NUMBER  
\*\*811\*\*

utility company owner's list  
CANADIAN VALLEY ELECTRIC CO-OP 405-230-1423  
AT&T COMMUNICATION 918-684-7479  
VIVIAN RWD NO. 6 918-617-1136

STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

SWO No. 5445(1) Job/Piece 33793(04) Engr. Contract No. \_\_\_\_\_

#### LAND SURVEYOR'S CERTIFICATION


I hereby certify that all land and property sub-division distances, angles, corners, and monumentation made or used in conjunction with this survey and depicted or recorded herein or hereon were recovered, established or re-established in substantial conformity with:

- applicable instructions contained in the U.S. Government Bureau of Land Management publication "Manual of Survey Instruction";
- its supplement, "Restoration of Lost or Obliterated Corners and Sub-division of Sections";
- "Oklahoma Minimum Standards for the Practice of Land Surveying" as adopted by the State Board of Licensure for Professional Engineers and Land Surveyors; and
- sound land surveying practices;

including a thorough search, study, analysis and consideration of all existing records and field evidence.

I further certify that all survey monuments depicted exist and that all land survey work was done by me or under my direct supervision.

Dated this 28th day of October, 2021.

Land Surveyor   
Signature

CHARLES W. CHASTAIN  
Printed Name

Oklahoma Licensed Land Surveyor No. 1352

Certificate of Authorization No. 219 Exp. Date 6/30/23

PLS	CWC	OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DWC	
CHECKED	CWC	
APPROVED		
CREW		
SURVEY DATA SHEET		
SWO <u>5445(1)</u>		
COUNTY	McINTOSH	HIGHWAY SH <u>9</u> STATE JOB NO. <u>33793(04)</u> SHEET NO <u>S001</u>

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYING AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS, JULY 25, 2013.

SPECIFICATIONS FOR SURVEYS FOR PRIMARY AND SECONDARY HIGHWAYS DATED JANUARY, 2011 GOVERN.

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To: Chief of Surveys

From: Charles W. Chastain, Professional Land Surveyor

Subject: SWO 5445(1)-J/P 33793(04)-SH 9 McIntosh county  
 Bridges over unnamed creek and Wallace creek, 6.0 & 6.2 miles  
 East of Junction 52

Historical Letter & Written Report

1. General

Survey Began: July 2021  
 Survey Completed: October 2021

Personnel on this survey:

Charles W. Chastain, PLS  
 Sean Johnsey                      PART CHEIF  
 Byron Rogers                      Survey Tech  
 Conner Scott                      Survey Tech  
 Duncan Rae                        Survey Tech

2. Assignment

This survey was assigned to me by Mr. Wes Stewart of Holloway, Updike and Bellen Engineering July 1 2021

3. Purpose

The purpose of this survey is to obtain adequate information for the design and reconstruction of the Roadway and obtain data for the replacement of 2 bridges

Limit- 200 feet each side of the centerline of the present highway 9

This survey began on POT station 1445+27.4 to P.C Station 1504+32.3 as

shown on S. A. 885(3) plans ( extended back and ahead along the center of the present highway 9)

5 Alignment

The centerline of survey is along the Identical centerline SH 9 established by recovered reference points as shown in the SAP 885(3) plans. The alignment consist of a Tangent from POT Station 1445+27.40 then following along the existing center line and the alignment from the plans to station PC 1504+32.7

Stationing (A001) was established along SH 9 by following along the existing roadway center line of SH 9 back from station 1425+00 of the SAP 885(3) plans to set station POT 1445+27.40, then along the existing Roadway centerline from station 1445+27.40 from the plans to set station 1504+28.09 this survey

7 Horizontal Control:

Horizontal Control for this survey is NGS Oklahoma State Plane Coordinate System, Lambert Projection, North Zone, derived by static GPS submitted to and processes through OPUS Projects.

- a) Static GPS methods were used to establish the following Secondary Control
- b) A ground measurement was taken between the secondary control points to verify static GPS method distances.
- c) All data contained in this survey is Grid Data, No Transformation was made to correct to the surface. Coordinates on the state plane grid do not reflect actual ground distances.

8. Vertical Control:

- a) Vertical Control for this survey is NAVD88.
- b) Vertical Control Points:  
 Derived from STATIC GPS utilizing Monuments NGS Z-6, PID FHO658 and R-5 PID FHO668 and processed by NGS opus projects., secondary control pins were networked to the monuments listed above
- c) Differential leveling method was utilized to verify difference between all control points established by GPS methods and to set vertical Benchmark elevations for this Project.

PLS	CWC		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DWC		
CHECKED	CWC		
APPROVED			
CREW			
COUNTY <u>McINTOSH</u> HIGHWAY <u>SH 9</u> STATE JOB NO. <u>33793(04)</u> SHEET NO <u>S002</u>			SURVEY DATA SHEET SWO 5445(1)

d) All leveling was conducted with a Sokkia BC20. The project levels began at secondary CP 7402 as established from the primary control, differential leveling was run through the project benchmarks and secondary control forward and back to provide accurate vertical adjustment for the project

A benchmark list depicting newly established benchmarks, as well as results of the control leveling has been placed in the archived Microstation Design File.  
 (See: SUBMITTED DATA BELOW).

**9. Measurement Units:**

The distances, coordinates, and elevations shown on this survey are in US SURVEY FEET. All angles and bearings shown are in degrees, minutes, and seconds.

**10. Photo Controls:**

There are no photo control points on this project.

**11. Topography:**

All topography information was obtained during the course of this survey by GPS RTK along with field conventional methods as directed by the ODOT Survey Specifications for primary and secondary highways.

**12. Cross Section/DTM:**

All surface feature information was obtained during the course of this survey by field conventional methods. (See: SUBMITTED DATA BELOW).

**13. Underground Storage Tanks/Hazardous Waste Sites:**

There were no Underground storage tanks/ Hazardous Waste Sites encountered during this survey.

**14. Utilities:**

All utility companies servicing the project extents were contacted after first contacting OKIE which does not respond to survey locate request, a list of utility owners was provided and Were contacted to provide the location information.

**15. Land Ties:**

Section 12 Township 9 North, Range 14 East of the IM, was surveyed within this survey by first checking the recorded corner records and field locating and verifying the position of existing corners and checking accuracies by applying The Oklahoma minimum standards for land surveys

**16. Data Submitted:**

**A. Reports:**

- 1) Transmittal Letter.
- 2) ODOT Form SD-7, Public and Privately Owned Utility List.
- 3) ODOT Form SD-11, Control Point Form,
- 4) ODOT Form SD-20, Survey Control.
- 5) ODOT Form SD-41, Surveyor's Certification.
- 6) COGO Data (Coordinate List With Alignments).
- 7) Benchmark and Check Level List.

**B. Computer Files:= 1 DGN file of entire survey**

Respectfully Submitted,

Charles W. Chastain, PLS

Date 09/ 28/2021

PLS	CWC		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION	
DRAWN	DWC		<b>SURVEY DATA SHEET</b> SWO 5445(1) COUNTY <u>McINTOSH</u> HIGHWAY <u>SH 9</u> STATE JOB NO. <u>33793(04)</u> SHEET NO <u>S003</u>	
CHECKED	CWC			
APPROVED				
CREW				

PAGE 1 of 1		CHECK LEVELS SWO 5445(1) McINTOSH COUNTY,					BENCH MARK LIST NAVD 88 DATUM SH 9	
BM NO.	RUN 1	RUN 2	RUN 3	MEAN	UNADJ. ELEV.	ADJ. DIFF.	ELEV.	BM DESCRIPTION
M-46-342		+02					DATUM 643.27	1.5" ALUM. CAP IN 1/2" IRON PIN M-43-342 64.19 RT STA. 1453+34 HWY 9
TO								
BM 1	+1.87	+1.86		+1.865	645.135	+0010	645.14	CHISELED X ON CONCRETE SLAB 51.76 RT. STA 1453+14 HWY 9
TO								
BM 2	-17.21	-17.22		-17.225	626.045	-002	626.04	60d NAIL IN 18" OAK TREE 43' RT. STA 1462+84 HWY 9
TO								
BM 3	-29.09	-29.09		-29.090	614.18	-003	614.18	60d NAIL IN 50" OAK TREE 71.8 RT. STA. 1473+20 HWY 9
TO								
M-46-343	-24.35	-24.33		-24.34	618.92	-004	618.92	1.5" ALUMINUM CAP- SECONDARY PROJECT CONTROL 70.44 RT. STA 1480+10.75 SH 9
TO								
BM 4	-21.42	21.39		-21.405	621.865	-006	621.86	60d NAIL IN TREE 66' RT STA 1482+07
TO								
BM 5	-18.18	-18.16		-18.17	625.09	-007	625.09	60d NAIL IN 10" OAK TREE 55' LT STA 1492+59
TO								
BM 6	-25.64	-25.61		-25.625	617.66	-009	617.65	60d NAIL IN POWER POLE 58' RT STA 1503+67
TO								
M-46-343	+39.33	+39.33		+39.33	682.60	-010	682.59	1/2" IRON PIN WITH 1.5" ALUM. CAP 15.67' RT. STA. 892+38.22 SH 10

PLS	CWC		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DWC		
CHECKED	CWC		
APPROVED			
CREW			
<b>SURVEY DATA SHEET</b>			
SWO 5445(1)			
COUNTY	McINTOSH	HIGHWAY	SH 9 STATE JOB NO. 33793(04) SHEET NO S004

EXISTING ALIGNMENT REPORT

Project Name: SWO 5445(1),  
 Horizontal Alignment Name: A001  
 Description: CL Survey PRESENT HIGHWAY 9 from SAP No. 885(3), Style: Centerline  
 Element: Linear

STATION	EASTING	NORTHING
350 POT 1445+27.40	2628240.9761	7112831564
TANGENT DIRECTION N88° 32' 43.64"E TANGENT DISTANCE 997.30		
351 PC 1455+24.70	2629237.9522	711308.4716
DELTA 30° 38' 06" RADIUS 2,864.815 ARC LENGTH 1,531.77		
352 PT 1470+56.47	2630687.4951	7117441082
TANGENT DIRECTION N58° 00' 00.00"E TANGENT DISTANCE 807.72		
353 PC 1478+64.19	2631372.4841	7121721368
DELTA 51° 09' 42" RADIUS 1,947.88 ARC LENGTH 1,739.34		
354 PT 1496+03.53	2633044.0665	712360.2004
TANGENT DIRECTION S70° 50' 17.84"E TANGENT DISTANCE 824.56		
355 POT 1504+28.09	2633822.9427	712089.5505

1	882908791	71253081
2	88290978653	713855702
3	88300453827	718216439
4	8837028881	712855955
5	8832718338	712800938
6	88337463257	712054773
350	88282409761	712831964
351	88292379522	713084716
352	88306874951	7117441082
353	88313724841	7121721368
354	88330440665	712360.2004
355	88338229427	712089.5505
7400	8834228325	712597.810
7401	8835307900	712822800
7402	8829080865	712360.222
7600	88282387089	713331402
7601	88290815719	713545819
7602	88290805940	712825.8046
7603	8829003988	712825.3807
7604	88281302889	713807812
7605	88282380484	713831475
7606	88280329081	714885525
7607	88280383884	714855088
7608	88308808402	7117880357
7609	88308817743	712138883
7610	88307880377	7120427889
7611	88308875226	712155827
7612	8831459881	7129145382
7613	8831725400	712388887
7614	8837088878	712452.2736
7615	88384635367	712287.2786
7616	88384620363	71257.2981
7617	88330804783	712407.4302
7618	88337183580	712178.8251
7619	88337255639	712202.4400
7620	88339475804	71260.3882
7621	88282428453	712331725
7622	88290837884	712545405
7623	8828142487	70884.288
7624	882837335	70888.4040
7625	8828332535	712557970
7626	8828238224	71258.4878
7627	88307129132	7117010314
7628	8830889838	712314823
7629	8830885014	712811482
7630	8830880575	712307579
7631	8833888800	712297344
7632	88330278548	7123129708
7633	88338065310	712042.3807
8000	88290738244	712714141
8001	8830921439	712745788
8002	8830475885	712806386
8003	88304805871	712407186
8004	8830425885	713287807
8005	88304333822	712888.8041
8006	882815.2888	712875.2822
8007	883087.588	71337.8225
8008	883081.8884	71288.3287
8009	8830378886	713308.5744
8010	8831887.8878	713331.853
8011	88314303873	71248.8880
8012	883178.2787	712878.5848
8013	8831728.2882	71281.8289
8014	883308.8885	7133537.47
8015	88330017738	714031.139
8016	883083.8829	713888.5086
8000	88290440883	713846.8482
8001	8834438781	708763.1322
8002	88343809875	714035.4858
8003	88343803394	713888.8829
8004	883882.5886	7138807680
8005	8828107.3313	71305.3757
8006	8828108777	70884.2745
8007	883805.837	708713.8804
8008	8828145786	708857634
8009	8828145358	70882.247
8022	8828194781	70888.3880
8023	8828107.3075	71305.3481
8024	8830836.8880	7128105.48
8025	8831743.8718	71352.2154

PLS	CWC		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DWC		
CHECKED	CWC		
APPROVED			
CREW			
SURVEY DATA SHEET			
SWO 5445(1)			
COUNTY	McINTOSH	HIGHWAY	SH 9 STATE JOB NO. 33793(04) SHEET NO S005

NGS OPUS-Projects 4.0.1 NETWORK ADJUSTMENT REPORT

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All coordinate accuracies reported here are 1x the formal  
uncertainties from the solution. For additional information:  
[geodesy.noaa.gov/OPUS/Using\\_OPUS-Projects.html#accuracy](http://geodesy.noaa.gov/OPUS/Using_OPUS-Projects.html#accuracy)

These positions were computed without any knowledge by the National  
Geodetic Survey regarding the equipment or field operating procedures used.

SUBMITTED BY: cchastain  
SOLUTION FILE NAME: network-final 11-2.sum  
SOLUTION SOFTWARE: GPSCOM(2008.25)  
SOLUTION DATE: 2021-11-02T09:53:11 UTC  
STANDARD ERROR OF UNIT WEIGHT: 1.035  
TOTAL NUMBER OF OBSERVATIONS: 165529  
TOTAL NUMBER OF MARKS: 12  
CONSTRAINED MARKS: 4 HORIZONTAL, 2 VERTICAL  
eufa N35:15:33.49922 W095:36:12.72954 NAD\_83(2011) @ 2010.0000  
eufa 0.08cm 0.19cm NE SIGMAS  
fame N35:20:37.25880 W095:38:45.00767 NAD\_83(2011) @ 2010.0000  
fame 0.05cm 0.19cm NE SIGMAS  
okhv N34:54:47.37901 W094:37:05.09241 146.520m NAD\_83(2011) @ 2010.0000  
okhv 0.12cm 0.09cm 0.13cm NEU SIGMAS  
okmu N35:43:00.06246 W095:24:05.82032 161.446m NAD\_83(2011) @ 2010.0000  
okmu 0.09cm 0.15cm 0.09cm NEU SIGMAS  
tbm\_ 1 181.403m NAD\_83(2011) @ 2010.0000  
tbm\_ 0.20cm U SIGMA  
z6\_2 1 177.301m NAD\_83(2011) @ 2010.0000

z6\_2 0.20cm U SIGMA

START TIME: 2021-08-18T00:00:00 GPS  
STOP TIME: 2021-08-19T23:59:30 GPS  
FREQUENCY: L1-ONLY TO ION-FREE [BY BASELINE LENGTH]  
OBSERVATION INTERVAL: 30 s  
ELEVATION CUTOFF: 15 deg  
TROPO INTERVAL: 7200 s [PIECEWISE LINEAR PARAMETERIZATION]  
DD CORRELATIONS: ON

INCLUDED SOLUTION	RMS	SOFTWARE	RUN DATE
1) 2021-230 hwy9 horiz	1.6 cm	page5(2008.25)	2021-08-24T14:17 UTC
2) 2021-231 hwy9 vert	2.0 cm	page5(2008.25)	2021-08-24T14:38 UTC

BASELINE	LENGTH	RMS	OBS	OMITTED	FIXED IN SOLUTION(S)
tbm_-okmc	18.736 km	2.1 cm	1607	2.0%	95.5% 2
z6_2-okmc	27.069 km	2.0 cm	1621	5.6%	96.2% 2
7402-okmc	30.130 km	1.7 cm	4650	3.1%	93.9% 1, 2
7400-okmc	30.255 km	1.9 cm	4566	3.5%	92.0% 1, 2
eufa-okmc	30.758 km	2.9 cm	1644	19.7%	92.5% 1
fame-okmc	38.723 km	2.5 cm	1473	20.4%	87.5% 1
okmu-okmc	84.705 km	1.7 cm	34313	4.0%	94.8% 1, 2
okad-okmc	95.186 km	1.9 cm	29793	8.8%	97.5% 1, 2
okhv-okmc	101.631 km	1.5 cm	17230	4.3%	100.0% 1
okte-okmc	110.639 km	1.7 cm	34551	3.2%	98.2% 1, 2
oktu-okmc	134.727 km	1.8 cm	34081	4.3%	98.6% 1, 2

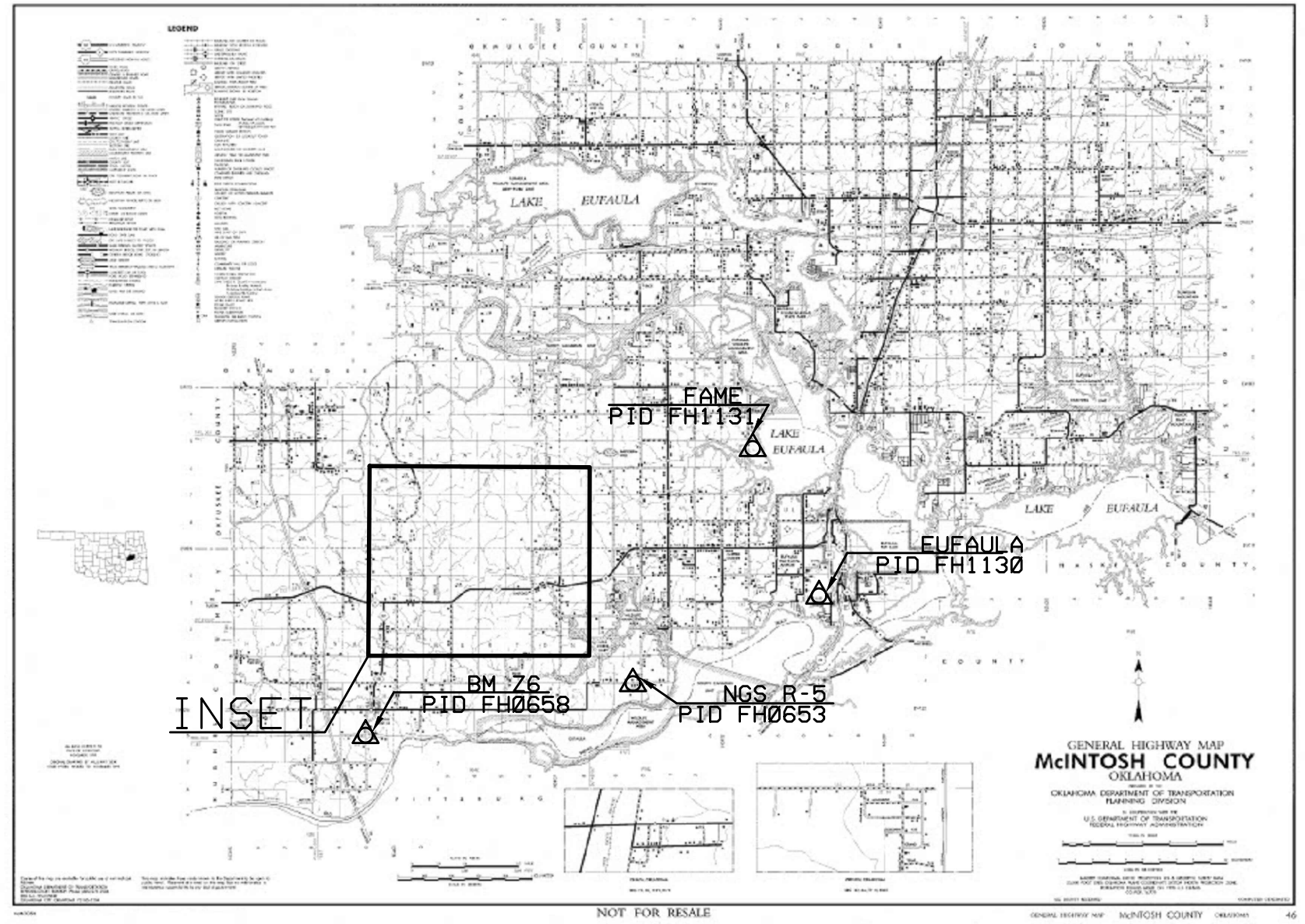
PLS	CWC		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION	
DRAWN	DWC		<b>SURVEY DATA SHEET</b> SWO 5445(1)	
CHECKED	CWC			
APPROVED				
CREW				
COUNTY	McINTOSH	HIGHWAY	SH 9	STATE JOB NO. 33793(04) SHEET NO S006

MARK ESTIMATED - A PRIORI COORDINATE SHIFTS

---

7400 N: -0.008 m (0.001 m) E: -0.006 m (0.001 m) H: 0.255 m (0.003 m)  
 7402 N: -0.010 m (0.001 m) E: -0.006 m (0.001 m) H: -0.065 m (0.003 m)  
 eufa N: 0.004 m (0.001 m) E: 0.034 m (0.001 m) H: 0.064 m (0.005 m)  
 fame N: 0.001 m (0.000 m) E: 0.005 m (0.001 m) H: -0.088 m (0.006 m)  
 okad N: -0.008 m (0.001 m) E: -0.009 m (0.001 m) H: 0.009 m (0.002 m)  
 okhv N: -0.006 m (0.001 m) E: -0.003 m (0.001 m) H: 0.003 m (0.001 m)  
 okmc N: -0.002 m (0.001 m) E: -0.006 m (0.001 m) H: -0.001 m (0.001 m)  
 okmu N: -0.004 m (0.001 m) E: -0.017 m (0.001 m) H: 0.006 m (0.001 m)  
 okte N: 0.008 m (0.001 m) E: -0.011 m (0.001 m) H: -0.040 m (0.001 m)  
 oktu N: -0.007 m (0.001 m) E: -0.006 m (0.001 m) H: -0.016 m (0.001 m)  
 r-5 N: -0.004 m (0.001 m) E: 0.001 m (0.001 m) H: -0.019 m (0.002 m)  
 z6\_2 N: -0.002 m (0.001 m) E: 0.004 m (0.001 m) H: -0.020 m (0.002 m)

PLS	CWC		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION  <b>SURVEY DATA SHEET</b> SWO 5445(1)
DRAWN	DWC		
CHECKED	CWC		
APPROVED			
CREW			
COUNTY <u>McINTOSH</u> HIGHWAY <u>SH 9</u> STATE JOB NO. <u>33793(04)</u> SHEET NO <u>S007</u>			



*INSET*

R-14-E				R-15-E				
NS404	NS405	NS406	NS407	NS408	NS409	NS410	EW117	
28	27	26	25	30	29	28	EW118	
33	34	35	36	31	32	33	EW119	
4	3	2	1	6	5	4	EW120	
9	10	11	12	7	8	9	EW121	
16	15	14	13	18	17	16	EW122	
Scale 0 MILES 1		22	23	24	19	20	21	EW123

T  
10  
N

T  
9  
N

BEGIN SWO 5445(1)  
ALIGNMENT A001  
STA. 3445+27.40

END SWO 5445(1)  
ALIGNMENT A001  
STA. 1504+28.09

PLS	CWC	OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DWC	
CHECKED	CWC	
APPROVED		
CREW		
<b>SURVEY DATA SHEET</b>		
SWO 5445(1)		
COUNTY	McINTOSH	HIGHWAY SH 9 STATE JOB NO. 33793(04) SHEET NO S008

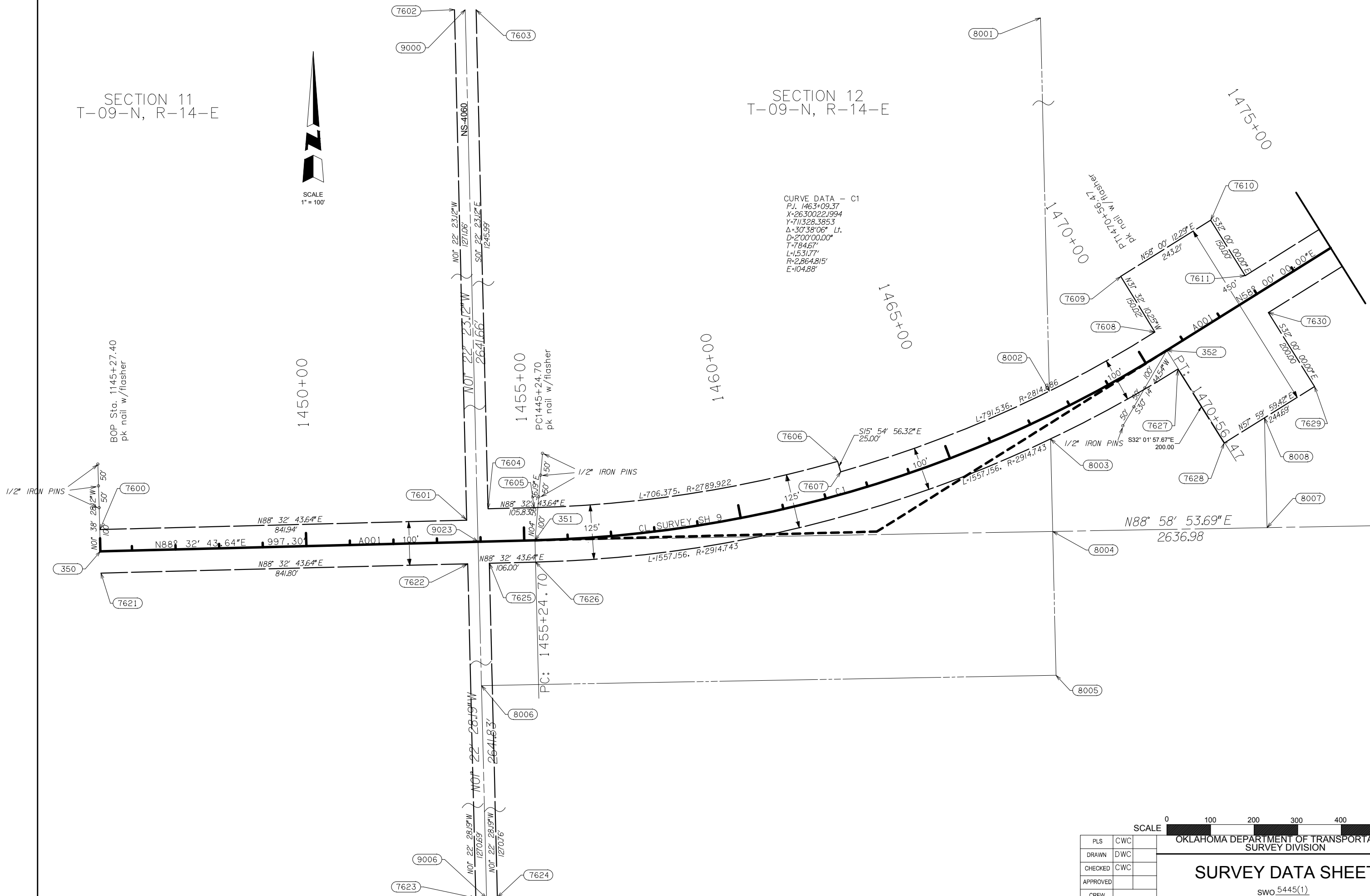
SECTION 11  
T-09-N, R-14-E

SECTION 12  
T-09-N, R-14-E



SCALE  
1" = 100'

CURVE DATA - C1  
P.I. 1463+09.37  
X=2630022.1994  
Y=711328.3853  
 $\Delta=30^{\circ}38'06"$  Lt.  
D=2'00"00.00"  
T=784.67'  
L=1531.77'  
R=2,864.815'  
E=104.88'



SCALE 0 100 200 300 400 500 Feet

PLS	CWC	
DRAWN	DWC	
CHECKED	CWC	
APPROVED		
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
SURVEY DIVISION

## SURVEY DATA SHEET

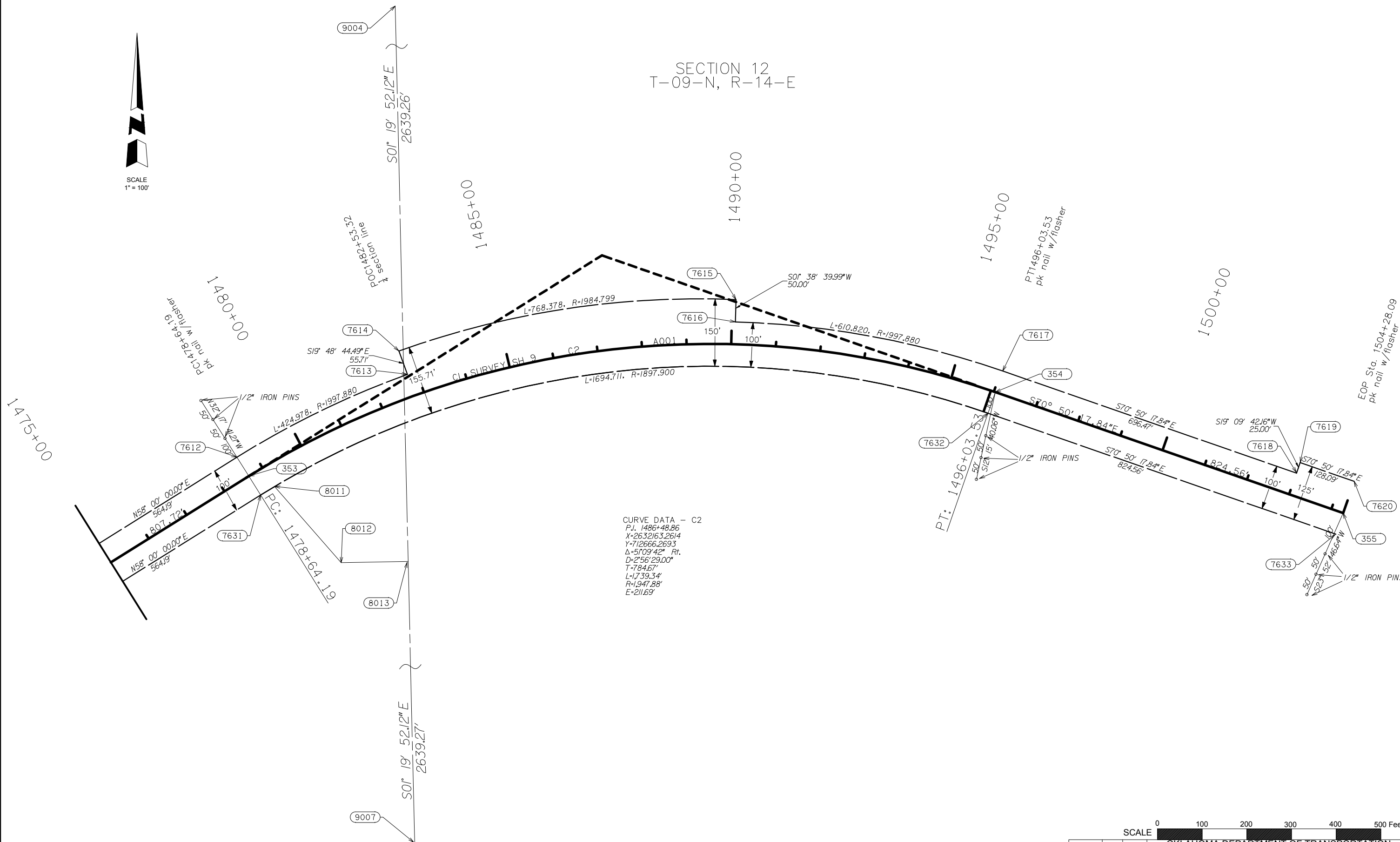
SWO 5445(1)

COUNTY McINTOSH HIGHWAY SH 9 STATE JOB NO. 33793(04) SHEET NO S009

SECTION 12  
T-09-N, R-14-E



SCALE  
1" = 100'



CURVE DATA - C2  
 P.I. 1486+48.86  
 X=2632163.2614  
 Y=712666.2693  
 Δ=51°09'42" Rt.  
 D=2°56'29.00"  
 T=784.67'  
 L=1739.34'  
 R=1947.88'  
 E=211.69'

SCALE 0 100 200 300 400 500 Feet

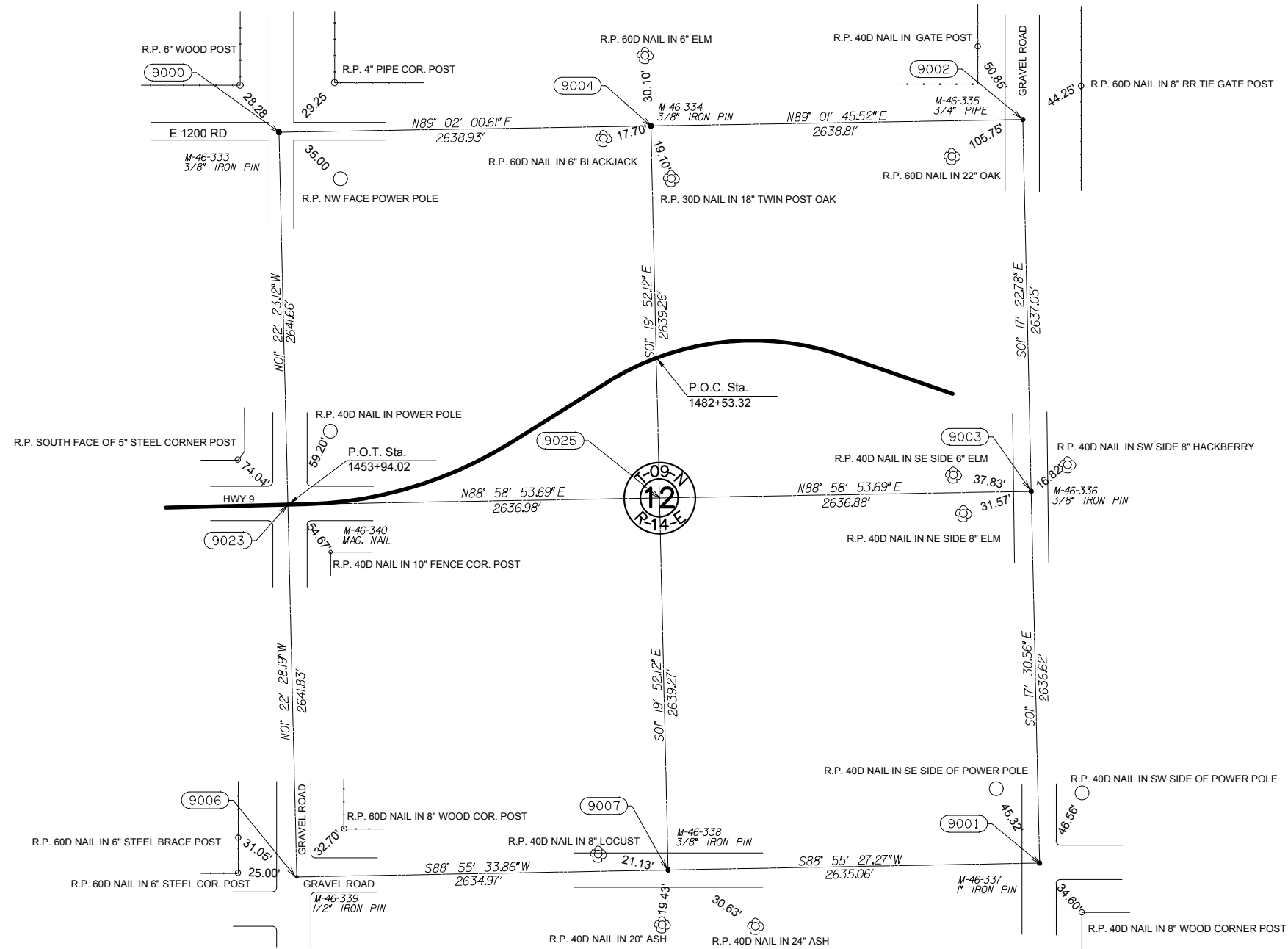
PLS	CWC	
DRAWN	DWC	
CHECKED	CWC	
APPROVED		
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
SURVEY DIVISION

## SURVEY DATA SHEET

SWO 5445(1)

COUNTY McINTOSH HIGHWAY SH 9 STATE JOB NO. 33793(04) SHEET NO S010



SCALE:  
1" = 500'



PLS	CWC	
DRAWN	DWC	
CHECKED	CWC	
APPROVED		
CREW		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
SURVEY DIVISION

**SURVEY DATA SHEET**

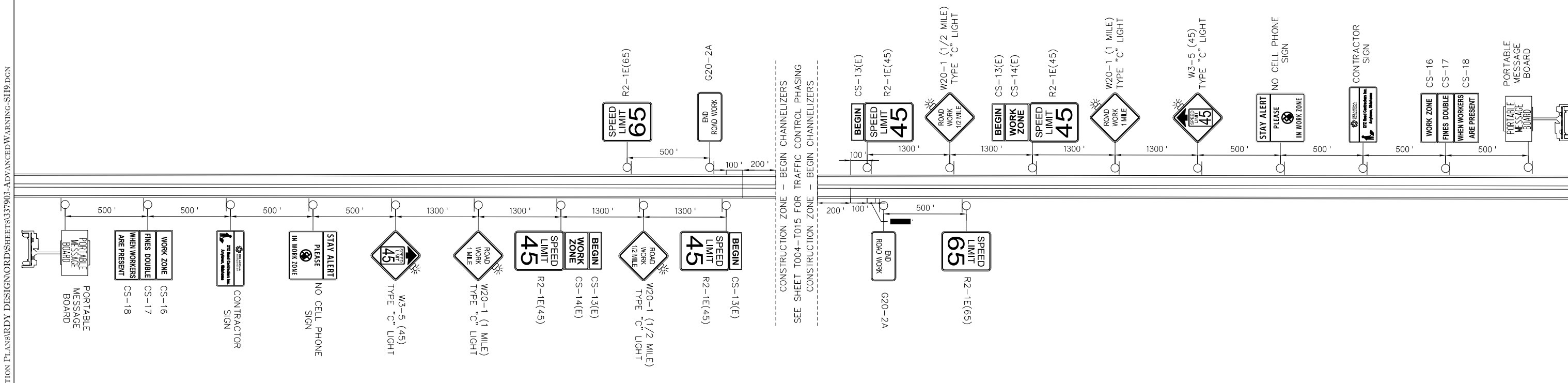
SWO 5445(1)

**NOTE 1**  
THESE SIGNS SHALL BE COVERED OR TAKEN DOWN WHEN THE ROADWAY IS OPENED UP TO BOTH DIRECTIONS OF TRAFFIC.

**NOTE 2**  
THE SPEED LIMIT SHALL BE SET TO 45 MPH ONLY WHILE WORKERS ARE PRESENT AND SHALL BE SET TO THE POSTED SPEED LIMIT WHEN NO WORKERS ARE PRESENT.

THERE IS NO SUGGESTED SEQUENCE OF CONSTRUCTION IN THIS DRAWING. THE DETAIL SHOWN IS FOR CLOSURE OF THE NORTH DIRECTION OF TRAVEL. THE TRAFFIC CONTROL FOR THE CLOSURE OF THE SOUTH DIRECTION OF TRAVEL SHALL BE THE SAME EXCEPT OPPOSITE.

G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\337903-ADVANCEDWARNING-SH9.DGN



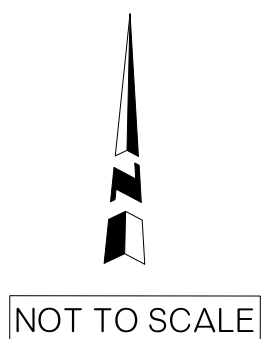
ALL DRIVES TO REMAIN OPEN.

WHEN NO WORK IS BEING PERFORMED AND TWO LANE TRAFFIC IS OPERATING FLAGGERS WILL NOT BE REQUIRED. WHENEVER FLAGGERS ARE NOT PRESENT, THE "FLAGGER" SIGNS SHALL BE REMOVED OR COVERED.

WHENEVER OR IF FLAGGERS ARE NEEDED, FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.

THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT CONTACT AT ALL TIMES AND SHALL BE POSITIONED TO PROTECT THE WORKERS.

IN INSTANCES WHERE SIGHT DISTANCE MAY BE RESTRICTED DUE TO A CREST VERTICAL CURVE, HORIZONTAL CURVE OR OTHER FACTORS, THE CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.



KEY	
	DRUM W/ WARNING LIGHT (TYPE B)
	CHANNELIZING CONE W/ WARNING LIGHT (TYPE C)
	SIGN
	TRAFFIC FLOW

DESIGN	JWH	4/24	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	JWH	4/24	
CHECKED			
APPROVED			
SQUAD			
<b>ADVANCED WARNING SH-9</b>			
COUNTY	CLUSTER	HIGHWAY	SH-9 STATE JOB NO. 337903 SHEET NO. I001

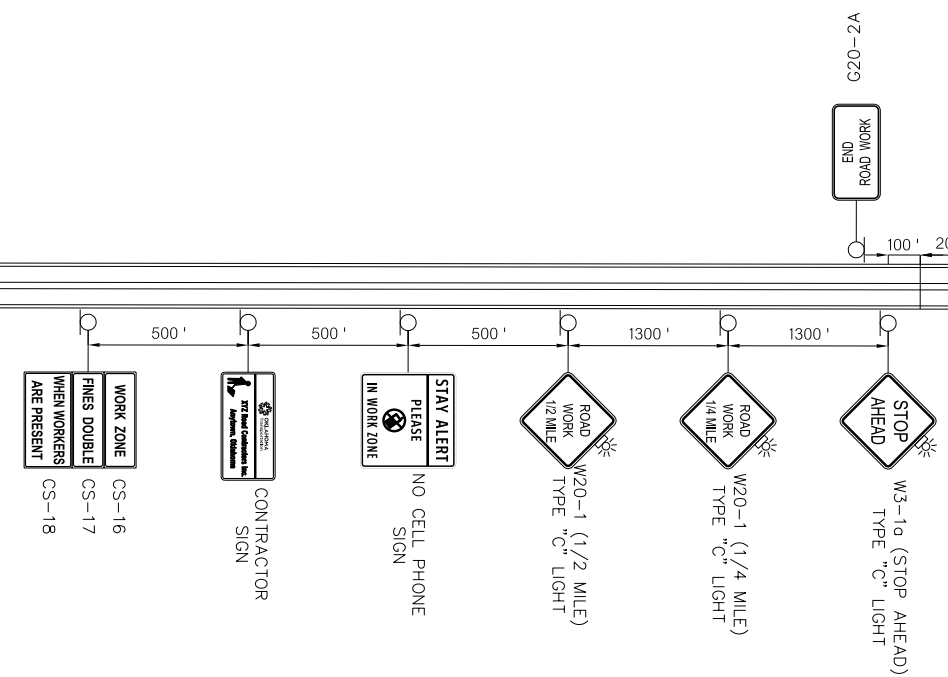
NOTE 1  
THESE SIGNS SHALL BE COVERED OR TAKEN DOWN WHEN THE ROADWAY IS OPENED UP TO BOTH DIRECTIONS OF TRAFFIC.

NOTE 2  
THE SPEED LIMIT SHALL BE SET TO 25 MPH ONLY WHILE WORKERS ARE PRESENT AND SHALL BE SET TO THE POSTED SPEED LIMIT WHEN NO WORKERS ARE PRESENT.

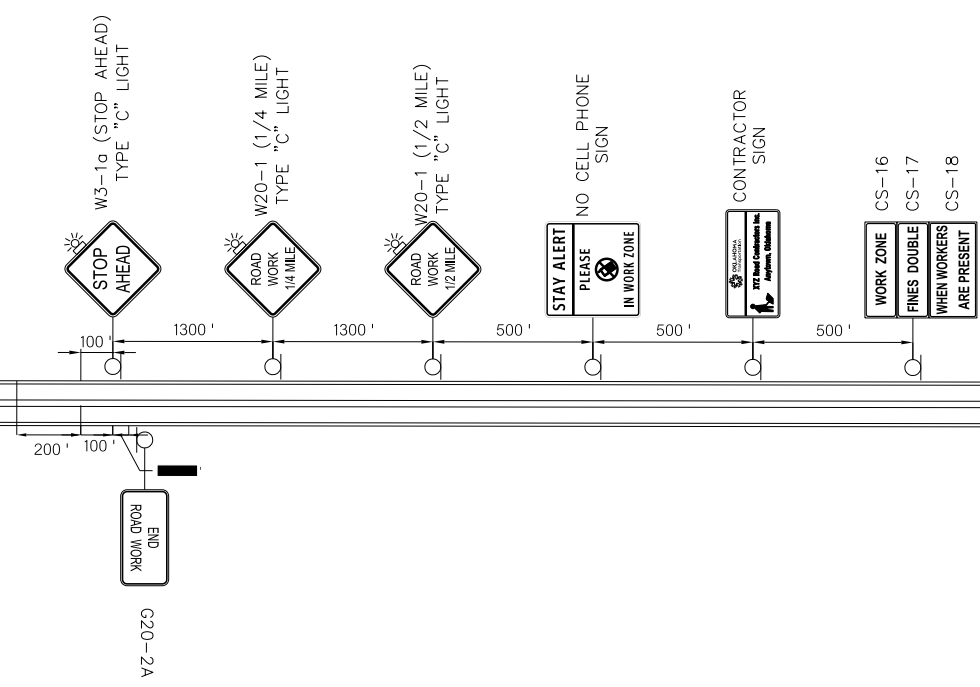
THERE IS NO SUGGESTED SEQUENCE OF CONSTRUCTION IN THIS DRAWING. THE DETAIL SHOWN IS FOR CLOSURE OF THE NORTH DIRECTION OF TRAVEL. THE TRAFFIC CONTROL FOR THE CLOSURE OF THE SOUTH DIRECTION OF TRAVEL SHALL BE THE SAME EXCEPT OPPOSITE.

G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLAN\RDY DESIGN\ORD\SHEETS\337903-ADVANCEDWARNING-N4060RD.DGN  
5/3/2024

ALL DRIVES TO REMAIN OPEN.



SEE SHEET T004-T015 FOR SH-9 TRAFFIC CONTROL PHASING



NOT TO SCALE

**KEY**

- DRUM W/ WARNING LIGHT (TYPE B)
- CHANNELIZING CONE W/ WARNING LIGHT (TYPE C)
- SIGN
- TRAFFIC FLOW

DESIGN	JWH	4/24	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION		
DRAWN	JWH	4/24	<b>ADVANCED WARNING</b> <b>N. 4060 RD.</b>		
CHECKED					
APPROVED					
SQUAD					
COUNTY	CUSTER	HIGHWAY	SH-9	STATE JOB NO. 337903	SHEET NO. T002

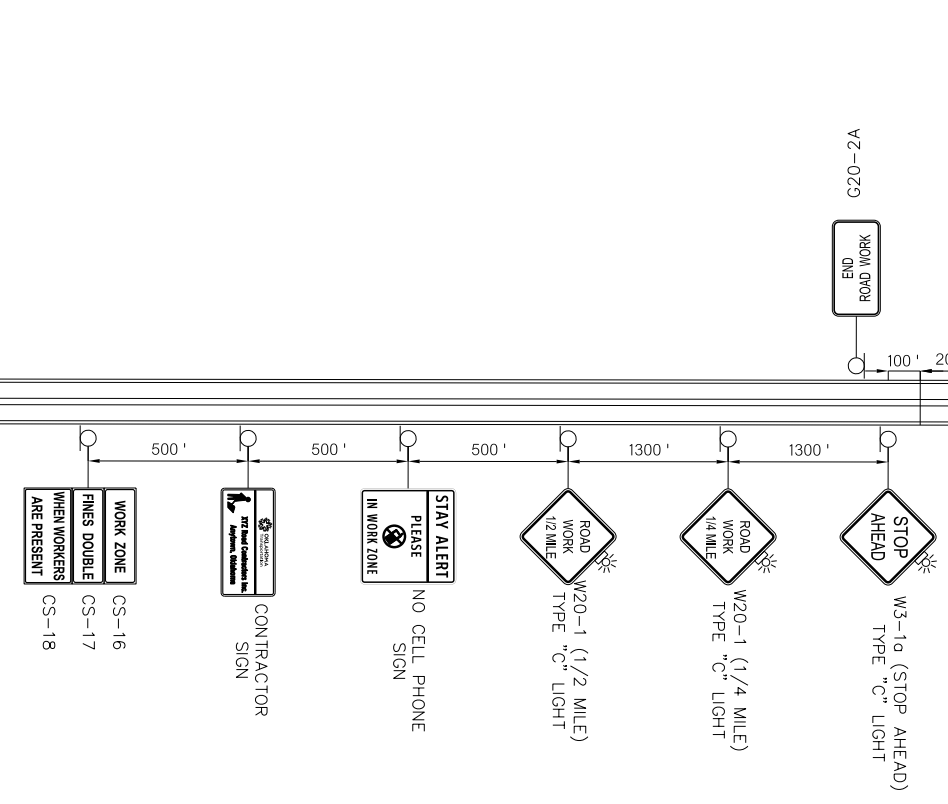
**NOTE 1**  
THESE SIGNS SHALL BE COVERED OR TAKEN DOWN WHEN THE ROADWAY IS OPENED UP TO BOTH DIRECTIONS OF TRAFFIC.

**NOTE 2**  
THE SPEED LIMIT SHALL BE SET TO 25 MPH ONLY WHILE WORKERS ARE PRESENT AND SHALL BE SET TO THE POSTED SPEED LIMIT WHEN NO WORKERS ARE PRESENT.

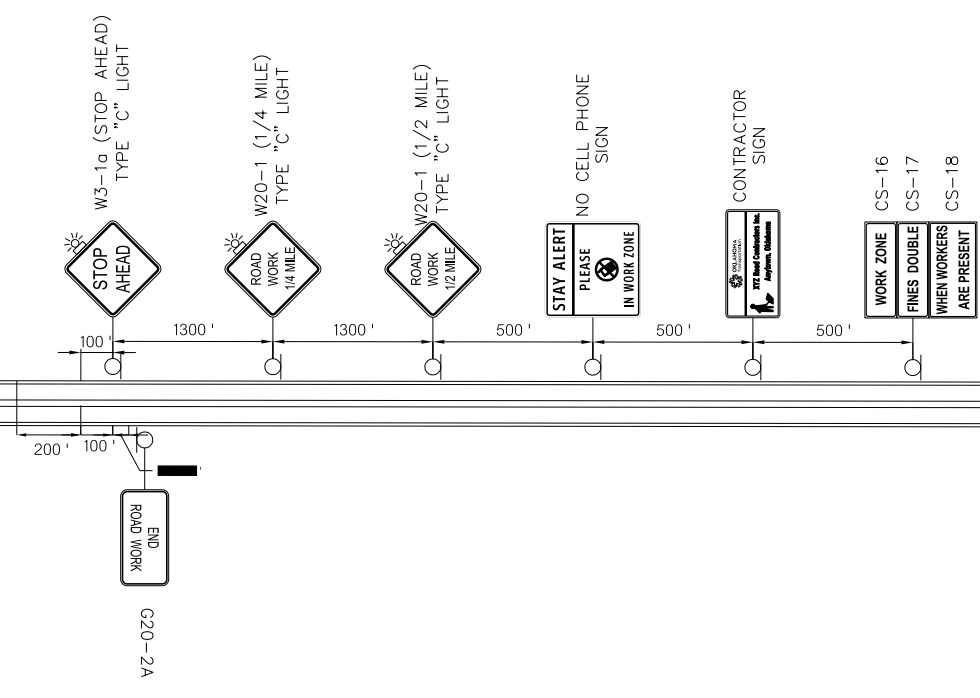
THERE IS NO SUGGESTED SEQUENCE OF CONSTRUCTION IN THIS DRAWING. THE DETAIL SHOWN IS FOR CLOSURE OF THE NORTH DIRECTION OF TRAVEL. THE TRAFFIC CONTROL FOR THE CLOSURE OF THE SOUTH DIRECTION OF TRAVEL SHALL BE THE SAME EXCEPT OPPOSITE.

G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLAN\RDY DESIGN\ORD\SHEETS\337903-ADVANCEDWARNING-N4070RD.DGN

ALL DRIVES TO REMAIN OPEN.



SEE SHEET T004-T015 FOR SH-9 TRAFFIC CONTROL PHASING



NOT TO SCALE

**KEY**

- DRUM W/ WARNING LIGHT (TYPE B)
- CHANNELIZING CONE W/ WARNING LIGHT (TYPE C)
- SIGN
- TRAFFIC FLOW

DESIGN	JWH	4/24	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	JWH	4/24	
CHECKED			
APPROVED			
SQUAD			
<p align="center"><b>ADVANCED WARNING</b> N. 4070 RD.</p>			
COUNTY	CUSTER	HIGHWAY	SH-9 STATE JOB NO. 337903 SHEET NO. T003

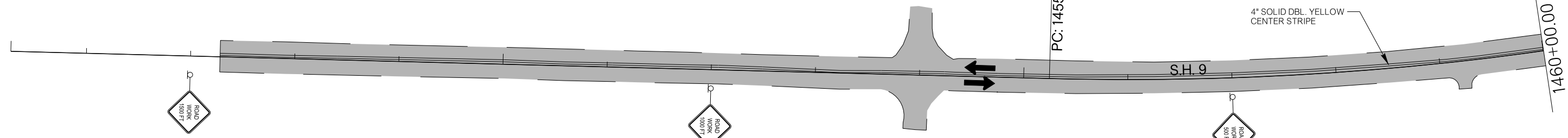


1445+27

1450+00

1455+00

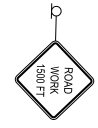
1460+00



4" SOLID DBL. YELLOW CENTER STRIPE

SH. 9

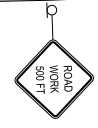
PC: 1455+24.70



STA. 1447+00.00  
W20-1 (ROAD WORK  
1500 FT)



STA. 1452+00.00  
W20-1 (ROAD WORK  
1000 FT)

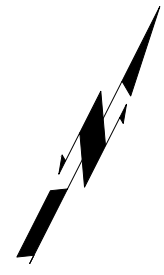


STA. 1457+00.00  
W20-1 (ROAD WORK  
500 FT)

KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE
	W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

G:\2021\2101\DOT\CI2303 SH 9 BRIDGE\DESIGN\PRODUCTION PLAN\RDY DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL\PHASE1.DGN

5/3/2024

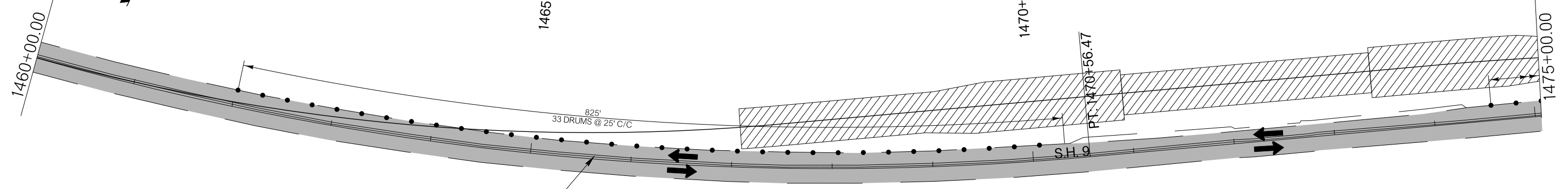


1460+00

1465+00

1470+00

1475+00



4" SOLID DBL. YELLOW CENTER STRIPE

SH. 9

PT. 1470+56.47

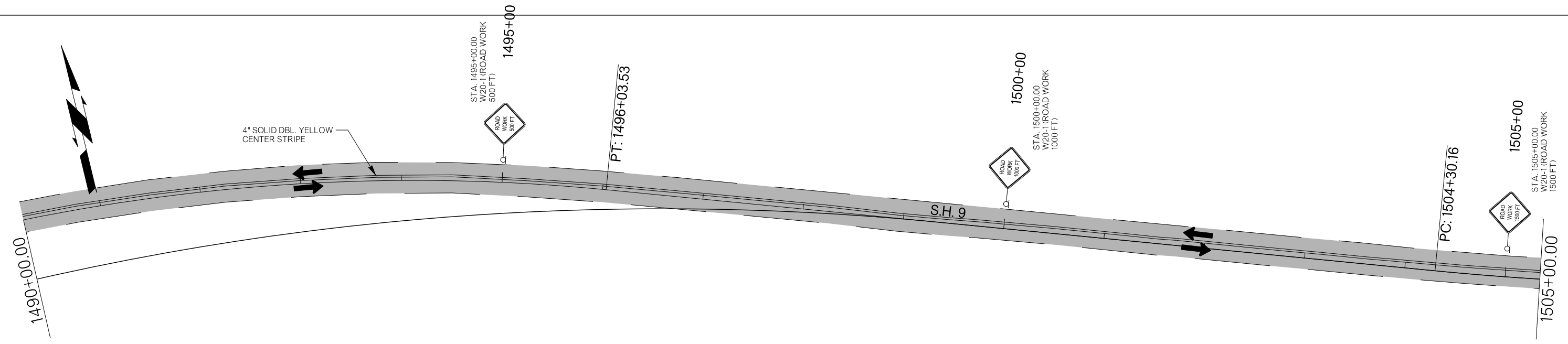
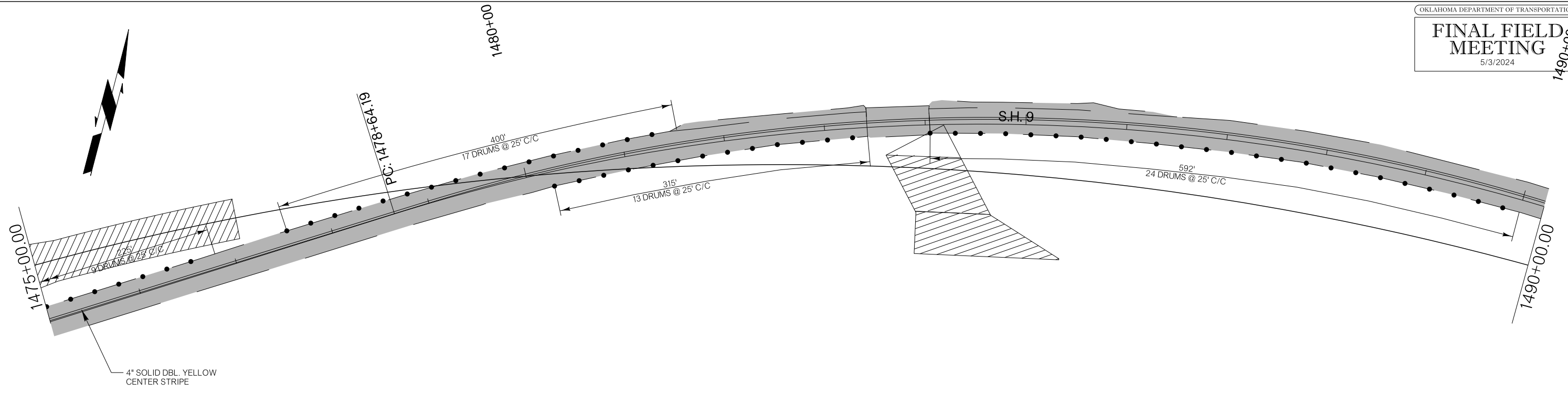
825'  
33 DRUMS @ 25' C/C

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

TRAFFIC CONTROL  
PHASE 1



KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT MINIMUM LANE WIDTHS AT ALL TIMES.

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

TRAFFIC CONTROL  
PHASE 1

1520+00  
1520+22

PT: 1519+24.24

1515+00

1510+00

1505+00:00

4" SOLID DBL. YELLOW CENTER STRIPE

D=029.8800  
L=1494.074, R=2864.930



5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLAN\AR\DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL\PHASE1.DGN

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE
	W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

### TRAFFIC CONTROL PHASE 1

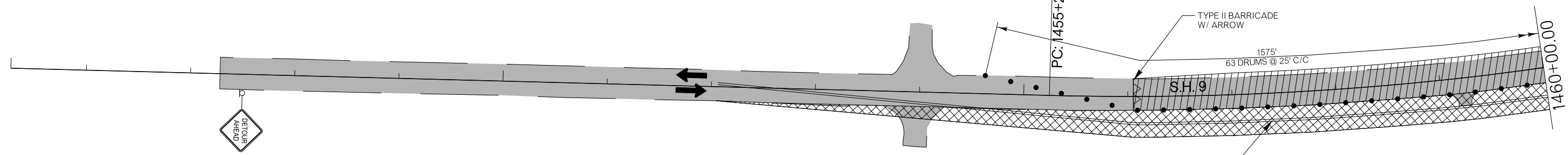


1445+27

1450+00

1455+00

1460+00



KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

DETOUR AHEAD

STA. 1447+50.00  
W20-2 (DETOUR AHEAD)

TYPE II BARRICADE W/ ARROW

1575'  
63 DRUMS @ 25' C/C

S.H. 9

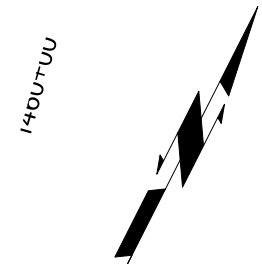
4" SOLID DBL. YELLOW CENTER STRIPE

1460+00.00

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5/3/2024

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT MINIMUM LANE WIDTHS AT ALL TIMES.

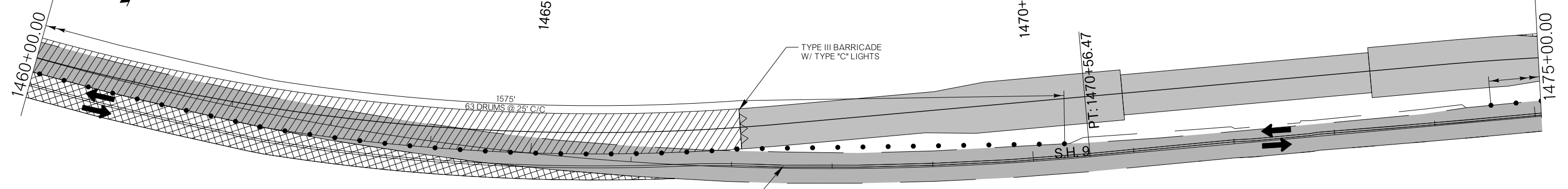


1460+00

1465+00

1470+00

1475+00



TYPE III BARRICADE W/ TYPE "C" LIGHTS

1575'  
63 DRUMS @ 25' C/C

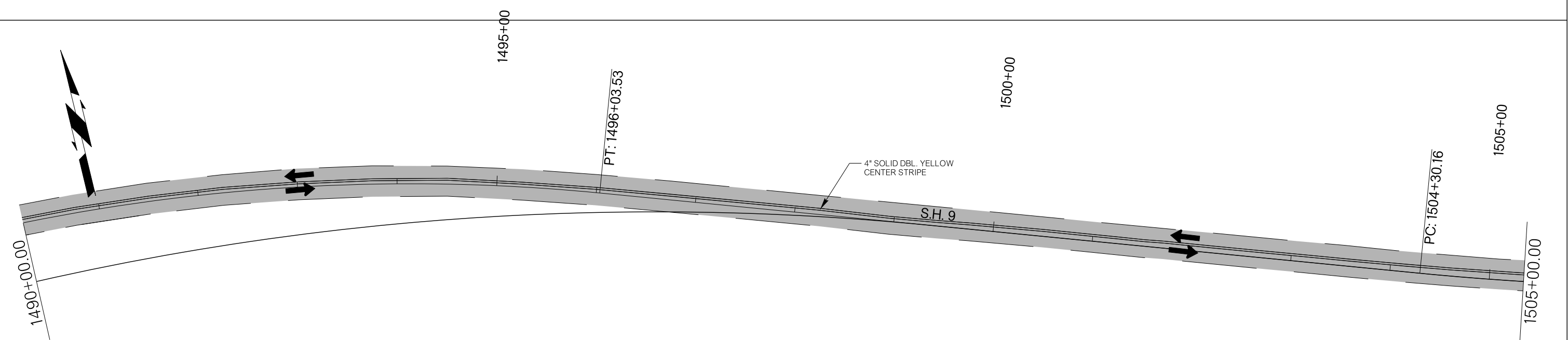
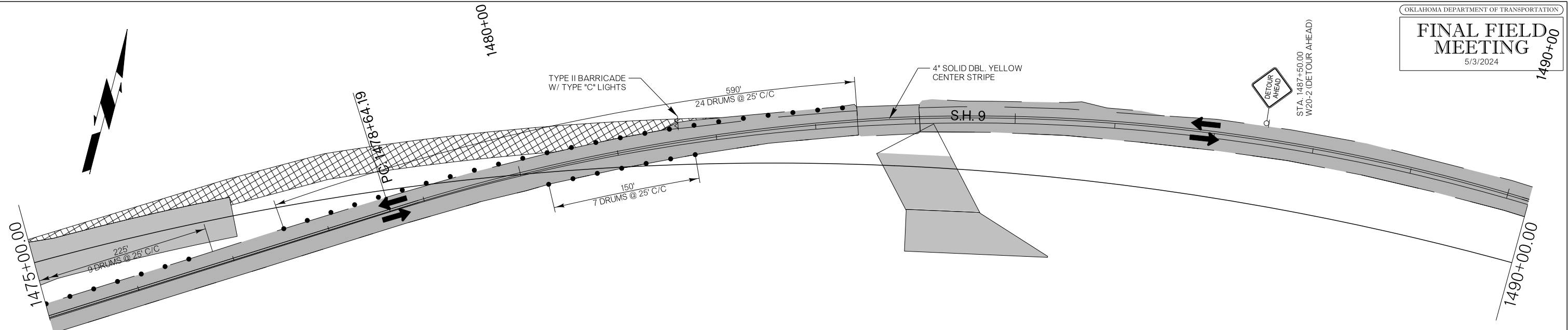
S.H. 9

4" SOLID DBL. YELLOW CENTER STRIPE

PT: 1470+56.47

1475+00.00

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION	
DRAWN		<b>TRAFFIC CONTROL PHASE 2</b>	
CHECKED			
APPROVED			
SQUAD			
COUNTY	CUSTER	HIGHWAY	SH-9 STATE JOB NO. 337903 SHEET NO. T007



KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE
	TYPE II BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION					
DRAWN		<p style="text-align: center;"><b>TRAFFIC CONTROL PHASE 2</b></p>					
CHECKED							
APPROVED							
SQUAD							
COUNTY	CUSTER	HIGHWAY	SH-9	STATE JOB NO.	337903	SHEET NO.	T008

5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL\PHASE2.DGN

1520+00  
1520+22

PT: 1519+24.24

1515+00

1510+00

1505+00:00

4" SOLID DBL. YELLOW CENTER STRIPE

D=029.8800  
L=1494.074, R=2864.930



5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLAN\AR\DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL PHASE 2.DGN

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

TRAFFIC CONTROL  
PHASE 2

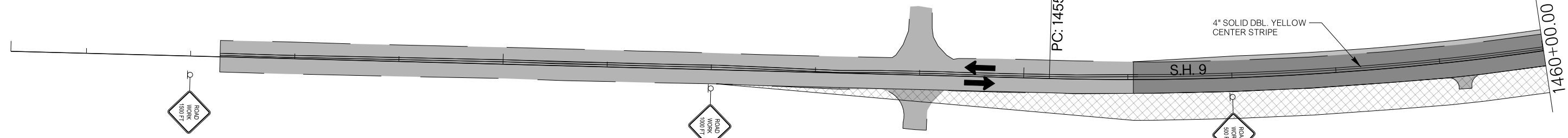


1445+27

1450+00

1455+00

1460+00



KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE
	TYPE II BARRICADE
	W/ ARROW
	PORTABLE MESSAGE BOARD

STA. 1447+00.00  
W20-1 (ROAD WORK  
1500 FT)

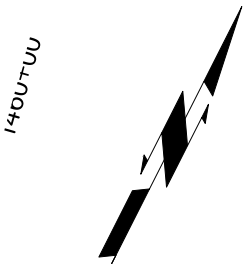
STA. 1452+00.00  
W20-1 (ROAD WORK  
1000 FT)

STA. 1457+00.00  
W20-1 (ROAD WORK  
500 FT)

G:\2021\2101\DOT\CI2303 SH 9 BRIDGE\DESIGN\PRODUCTION PLAN\RDY DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL PHASE 3.DGN

5/3/2024

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

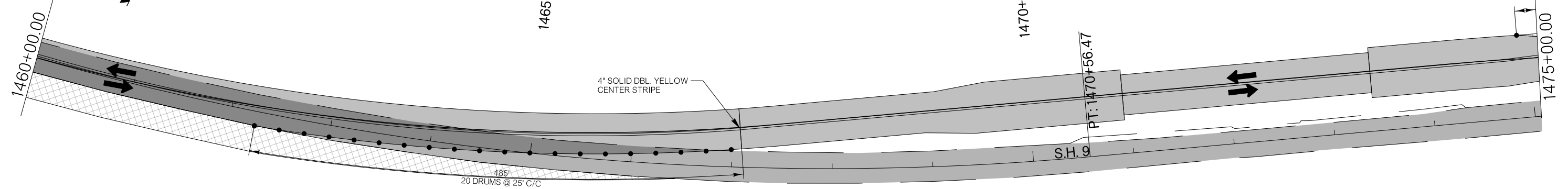


1460+00

1465+00

1470+00

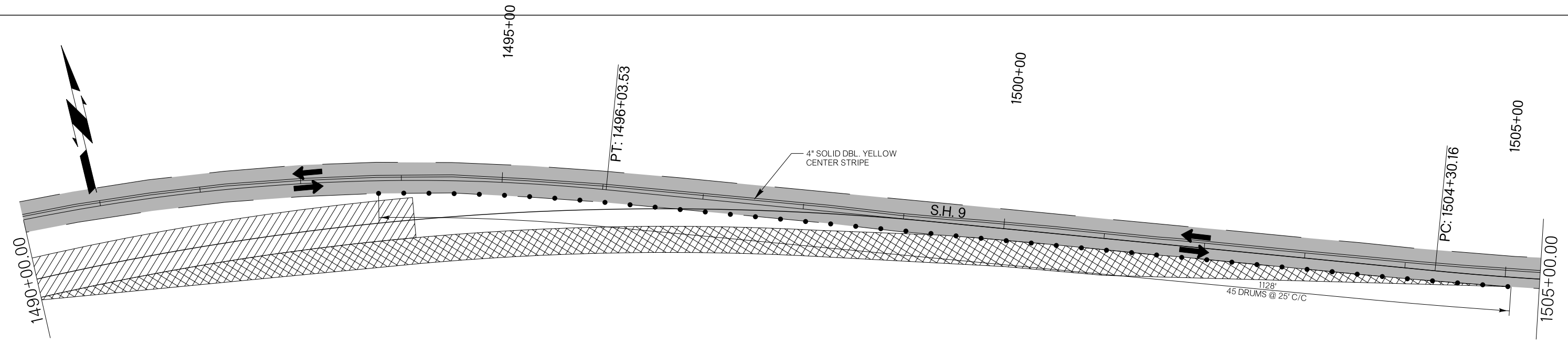
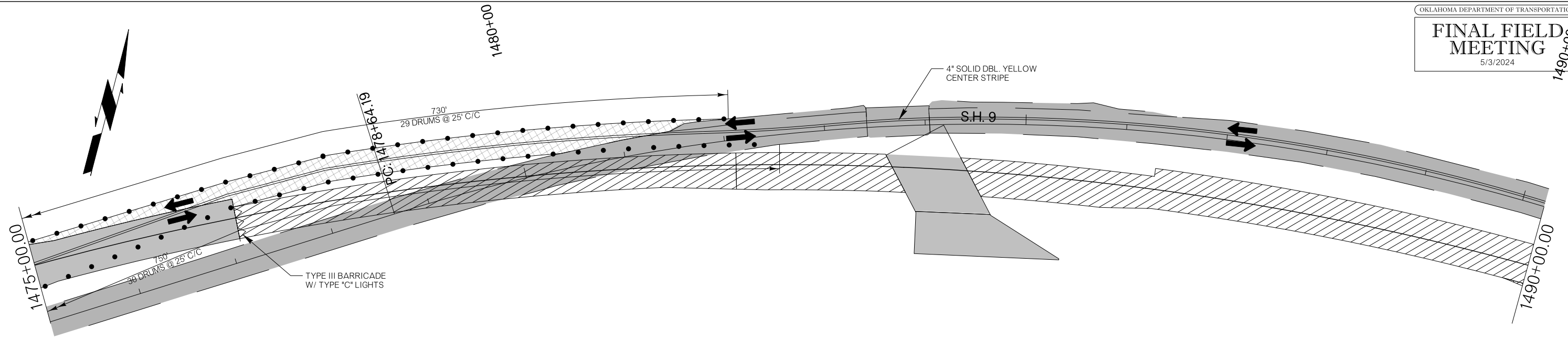
1475+00



DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

TRAFFIC CONTROL  
PHASE 3



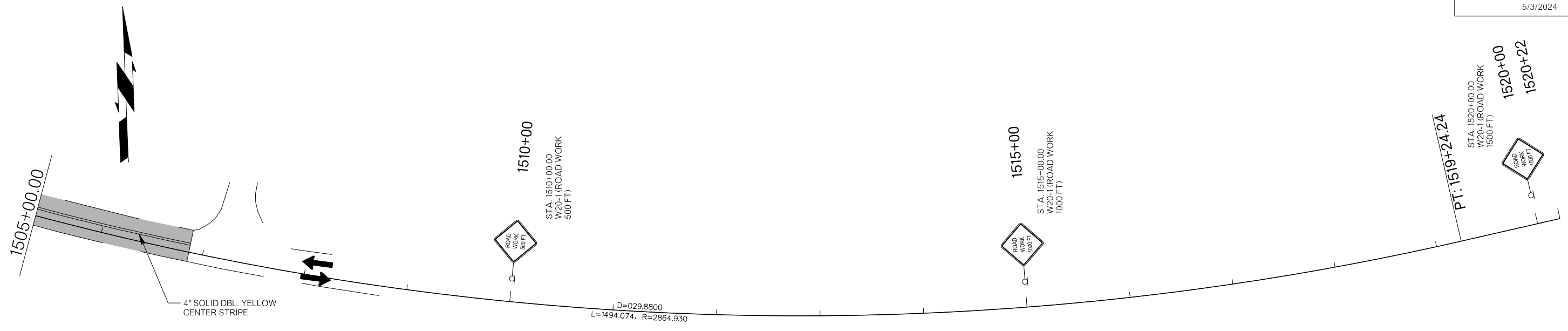
KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

TRAFFIC CONTROL  
PHASE 3



5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLAN\AR\DESIGN\ORD\SHEETS\337903-TRAFFICCONTROL\PHASE3.DGN

NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

### TRAFFIC CONTROL PHASE 3

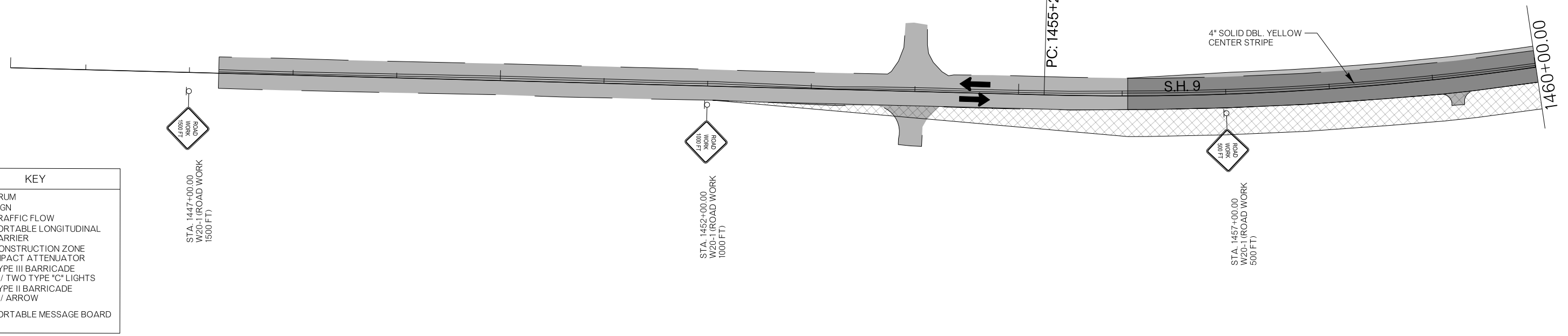


1445+27

1450+00

1455+00

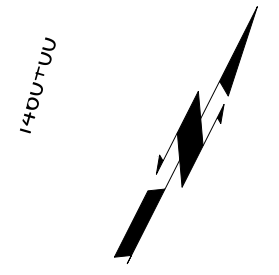
1460+00



KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE
	IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

G:\2021\2101\DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL\PHASE4.DGN

5/3/2024

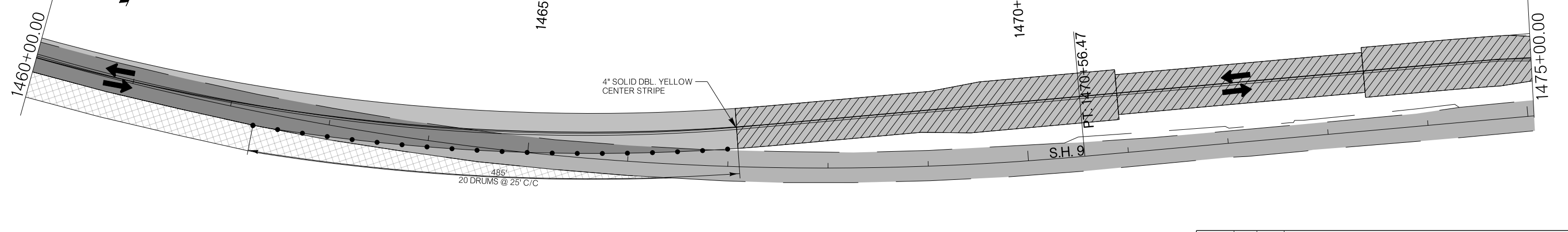


1460+00

1465+00

1470+00

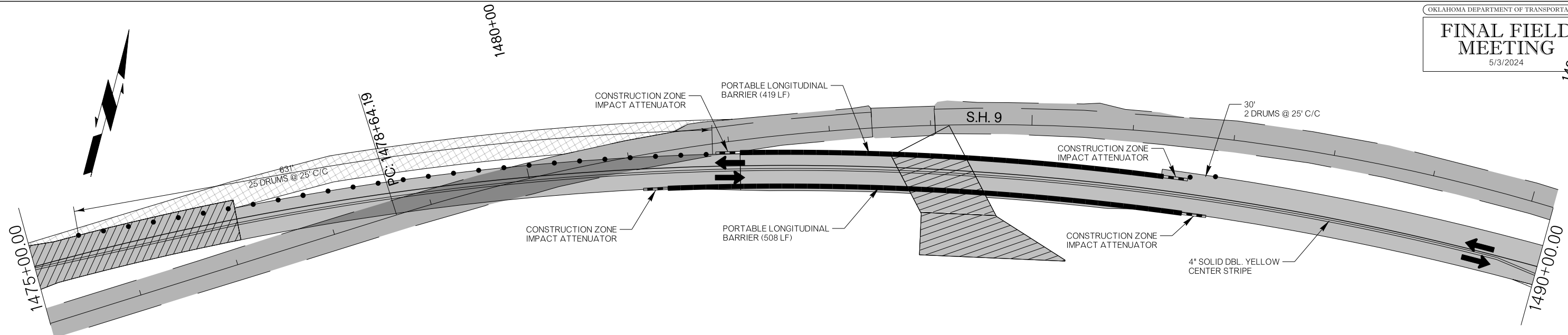
1475+00



NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION					
DRAWN							
CHECKED							
APPROVED							
SQUAD							
COUNTY	CUSTER	HIGHWAY	SH-9	STATE JOB NO.	337903	SHEET NO.	T013

148



1480+00

1475+00.00

1490+00.00

S.H. 9

4" SOLID DBL. YELLOW CENTER STRIPE

CONSTRUCTION ZONE IMPACT ATTENUATOR

PORTABLE LONGITUDINAL BARRIER (419 LF)

CONSTRUCTION ZONE IMPACT ATTENUATOR

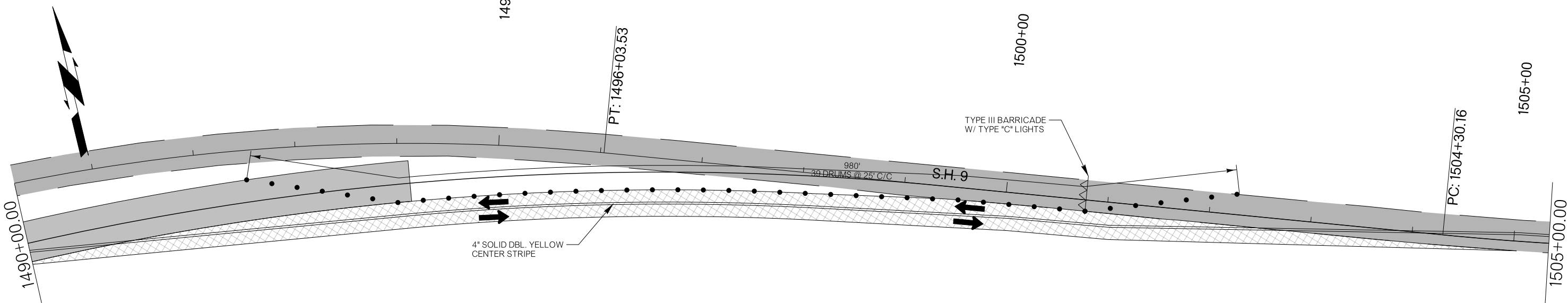
30' 2 DRUMS @ 25' C/C

CONSTRUCTION ZONE IMPACT ATTENUATOR

PORTABLE LONGITUDINAL BARRIER (508 LF)

CONSTRUCTION ZONE IMPACT ATTENUATOR

5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\337903-TRAFFICCONTROL\PHASE4.DGN



1495+00

1490+00.00

1505+00

1505+00.00

S.H. 9

4" SOLID DBL. YELLOW CENTER STRIPE

TYPE III BARRICADE W/ TYPE 'C' LIGHTS

980' 39 DRUMS @ 25' C/C

PT: 1496+03.53

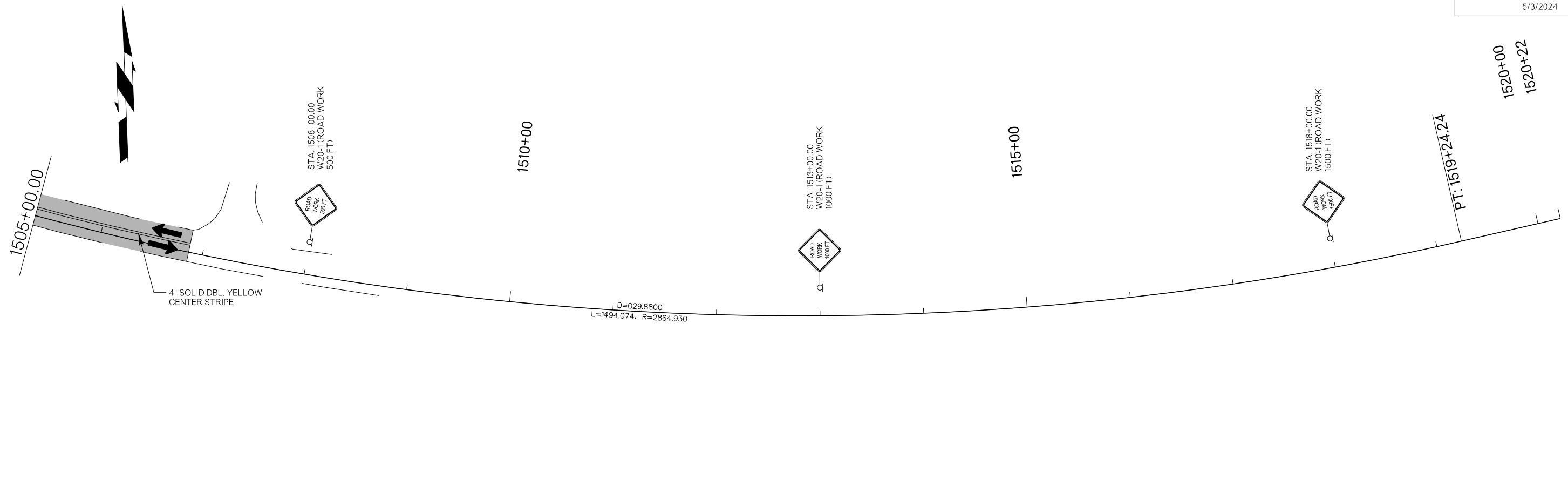
PC: 1504+30.16

KEY	
●	DRUM
□	SIGN
→	TRAFFIC FLOW
▭	PORTABLE LONGITUDINAL BARRIER
▨	CONSTRUCTION ZONE IMPACT ATTENUATOR
⚡	TYPE III BARRICADE W/ TWO TYPE 'C' LIGHTS
⚡	TYPE II BARRICADE W/ ARROW
☐	PORTABLE MESSAGE BOARD

NOTE:  
 CONTRACTOR SHALL MAINTAIN 11 FOOT MINIMUM LANE WIDTHS AT ALL TIMES.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION					
DRAWN		<b>TRAFFIC CONTROL PHASE 4</b>					
CHECKED							
APPROVED							
SQUAD							
COUNTY	CUSTER	HIGHWAY	SH-9	STATE JOB NO.	337903	SHEET NO.	T014

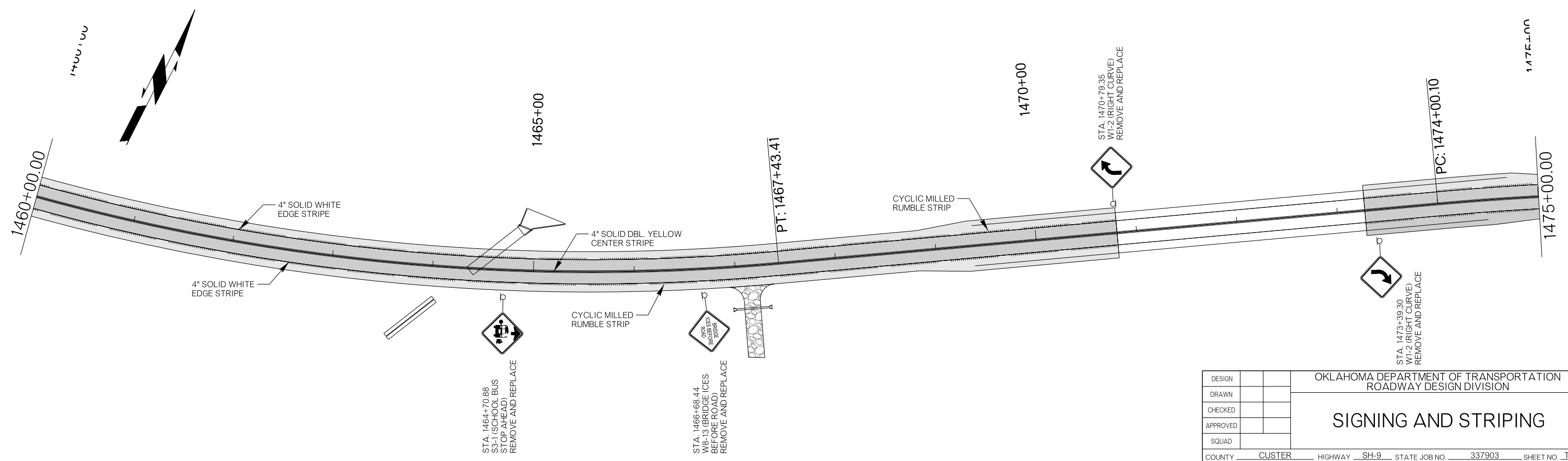
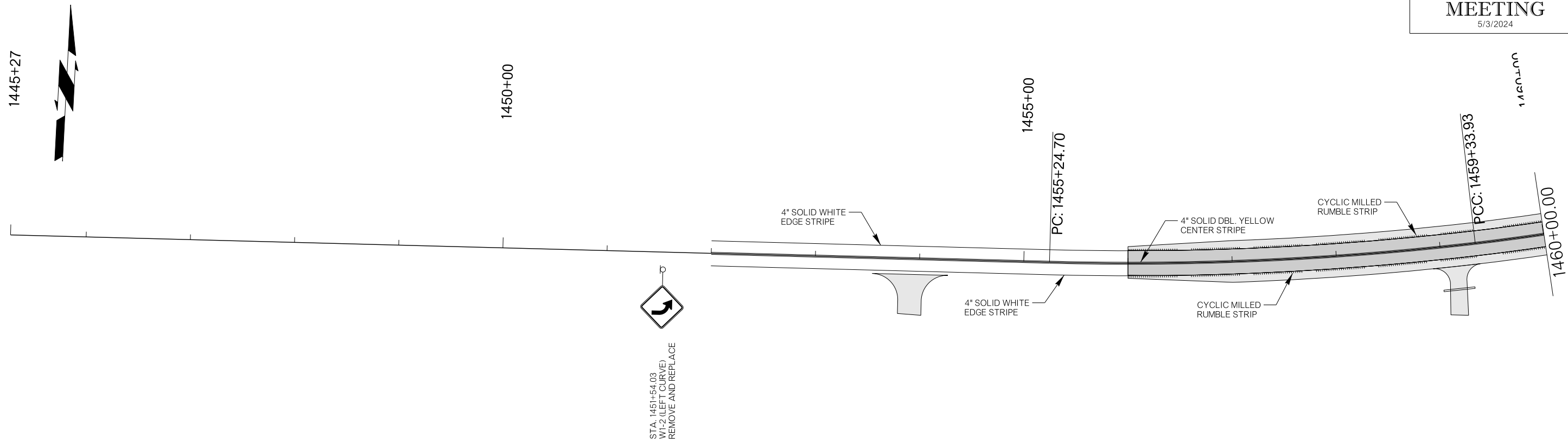
5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\337903-TRAFFIC CONTROL\PHASE4.DGN



NOTE:  
CONTRACTOR SHALL MAINTAIN 11 FOOT  
MINIMUM LANE WIDTHS AT ALL TIMES.

KEY	
	DRUM
	SIGN
	TRAFFIC FLOW
	PORTABLE LONGITUDINAL BARRIER
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TYPE III BARRICADE W/ TWO TYPE "C" LIGHTS
	TYPE II BARRICADE W/ ARROW
	PORTABLE MESSAGE BOARD

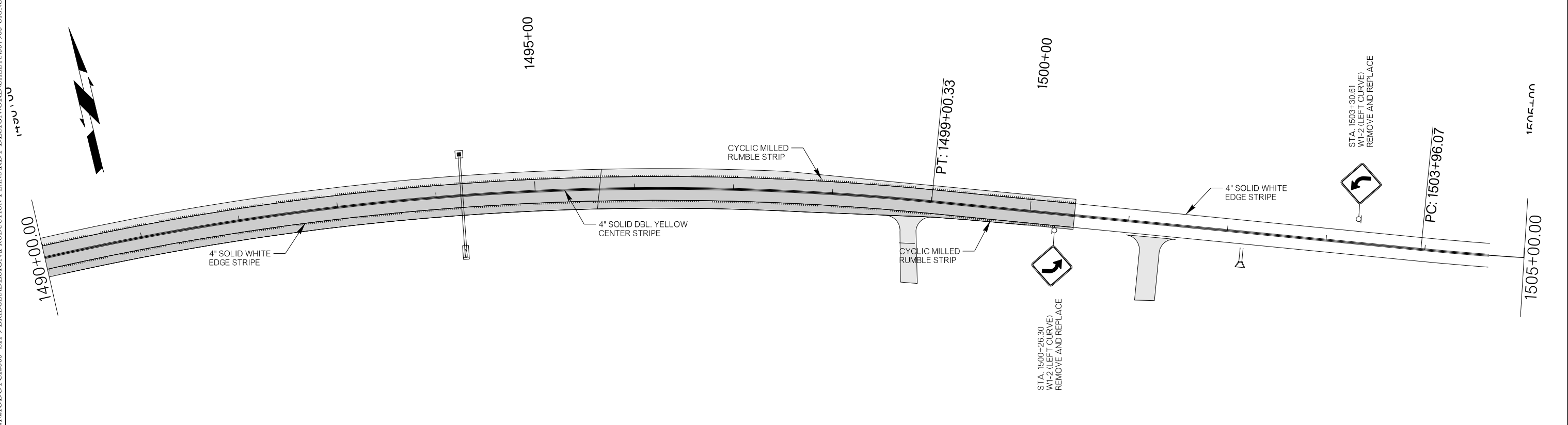
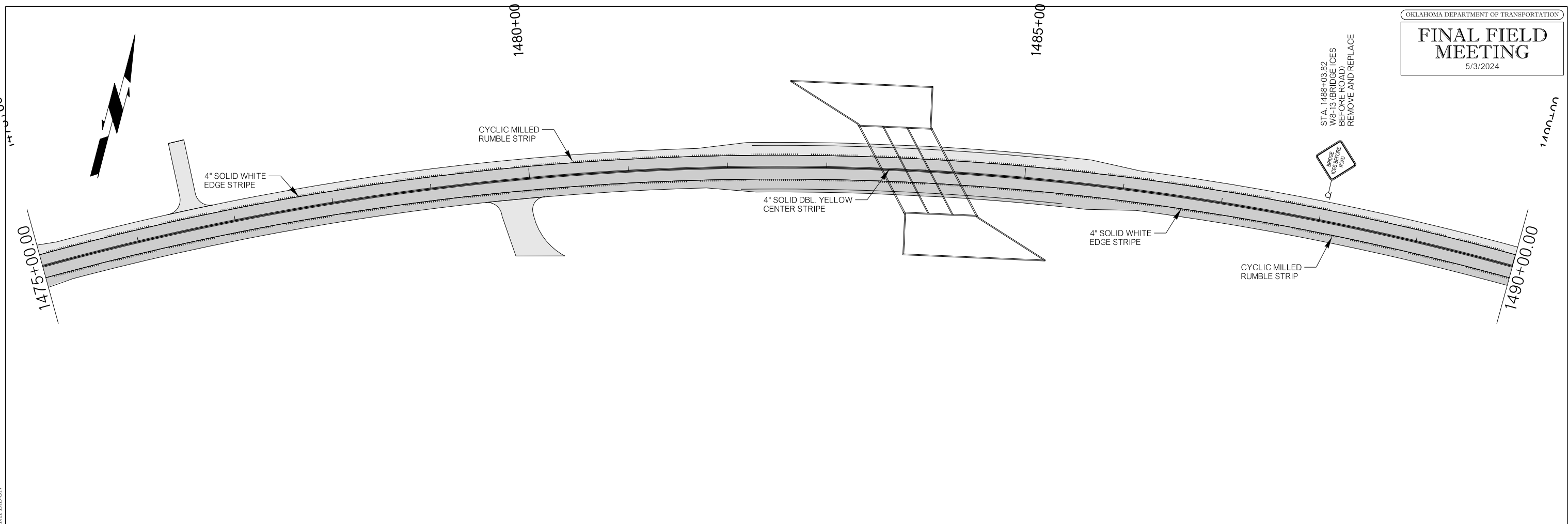
DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION				
DRAWN			<b>TRAFFIC CONTROL PHASE 4</b>				
CHECKED							
APPROVED							
SQUAD							
COUNTY	CUSTER	HIGHWAY	SH-9	STATE JOB NO.	337903	SHEET NO.	T015



5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLAN\RDY DESIGN\ORD\SHEETS\337903-SIG\STRIP.DGN

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SQUAD	

5/3/2024 G:\2021\210DOT\CI2303 SH 9 BRIDGES\DESIGN\PRODUCTION PLANS\RDY DESIGN\ORD\SHEETS\337903-SIGN\STRIP.DGN

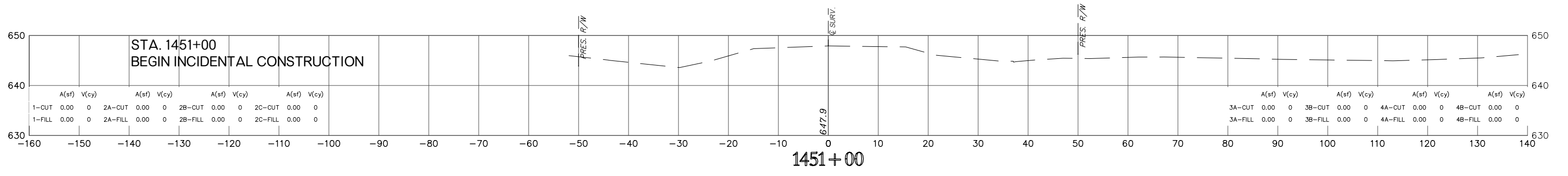
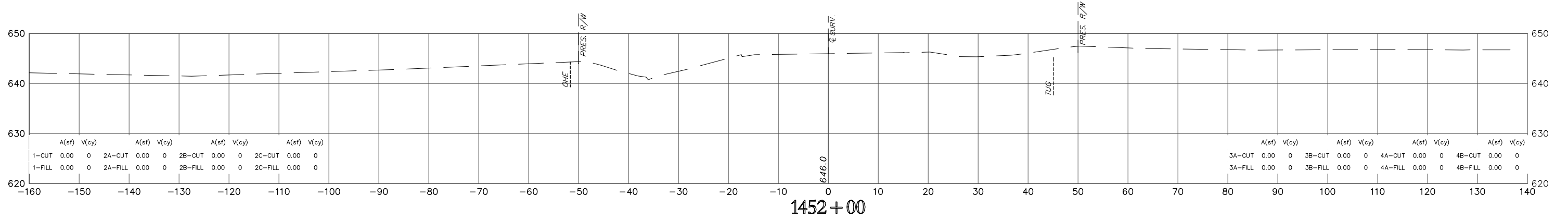
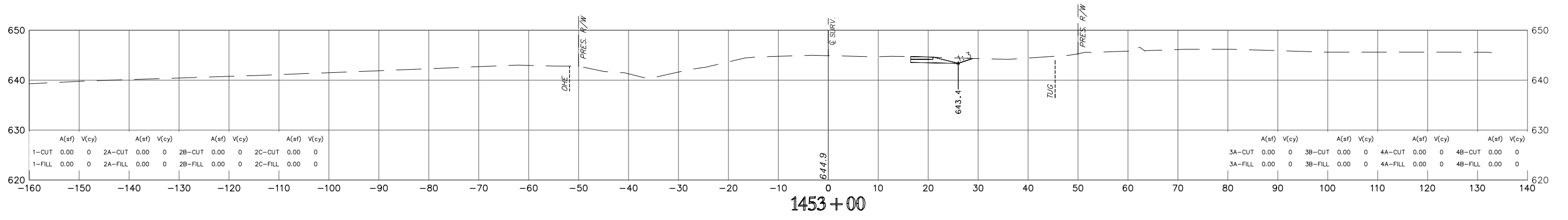
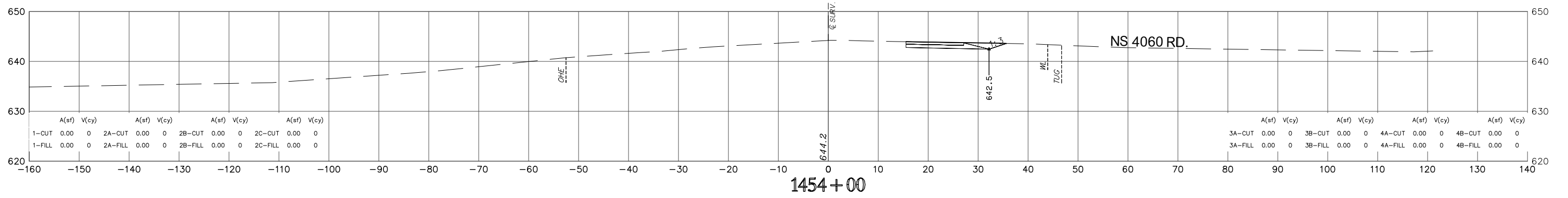


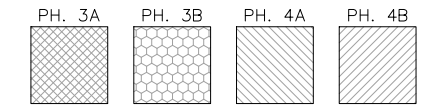
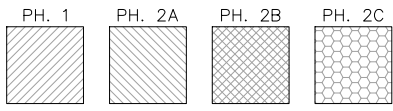
DESIGN				OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN				
CHECKED				
APPROVED				
SQUAD				
COUNTY	CUSTER	HIGHWAY	SH-9	STATE JOB NO. 337903
				SHEET NO. T017

SIGNING AND STRIPING

# FINAL FIELD REVIEW

MAY 1, 2024





STA. 1456+00  
 BEGIN PROJECT  
 END INCIDENTAL CONSTRUCTION

