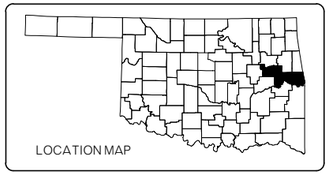
OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED
R/W
FEBRUARY 2021



FOR SURVEY CONTROL DATA,
SEE SURVEY DATA SHEETS S001-S007

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

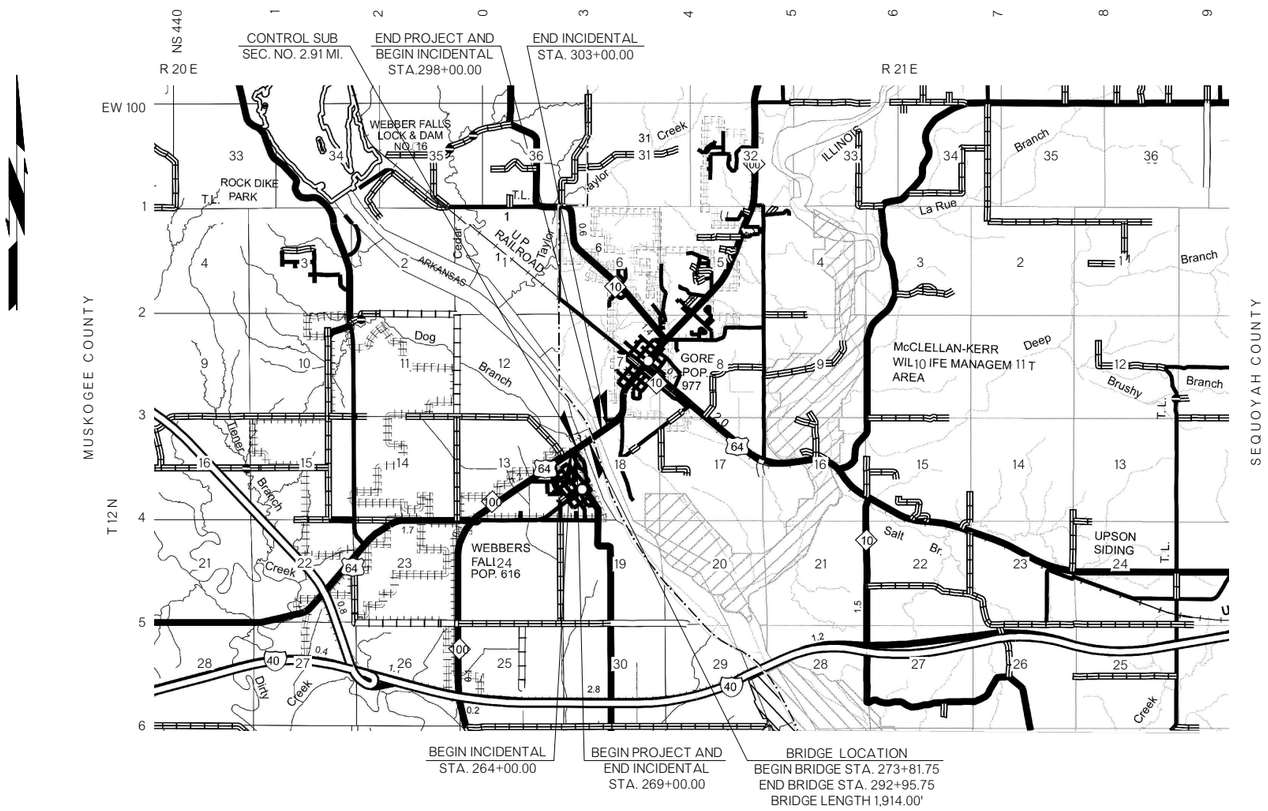
PLAN OF PROPOSED

STATE HIGHWAY

PROJECT NO. J3-2100(004)PM
BRIDGE & APPROACHES
S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY

MUSKOGEE COUNTY
SEQUOYAH COUNTY

CONTROL SECTION NO. 100-51-59
STATE JOB NO. 32100(04)
BRIDGE LOCATION NO. 5159 0300 X
EXISTING NBI NO. 17611, NEW NBI NO XXXXX



INDEX OF SHEETS

DESIGN DATA

AADT (2020)	= 3,700 VPD
AADT (2040)	= 5,000 VPD
V (POSTED)	= 55 MPH
K	= 10%
D	= 56%
T (AADT)	= 10%
T (DHV)	= 8%
T3	= 4%
20 YR. FLEX ESALS	= 1.7 M

SCALES 1"

PLAN	1" = 50'
PROFILE HOR.	1" = 50'
VER.	1" = 10'
LAYOUT MAP	1" = 4,000'

CONVENTIONAL SYMBOLS

- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- GROUND LINE
- EXISTING ROADS
- BASE LINE
- GRADE LINES
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- OILWELL
- DRAINAGE STRUCTURES - IN PLACE
- DRAINAGE STRUCTURES - NEW
- PRES. R/W — RIGHT-OF-WAY LINES - EXISTING
- R/W — RIGHT-OF-WAY LINES - NEW
- CONTROLLED ACCESS
- R/W — RIGHT-OF-WAY FENCE

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

ROADWAY LENGTH	986.00 FT.	0.186 MI.
BRIDGE LENGTH	1,914.00 FT.	0.362 MI.
PROJECT LENGTH		0.548 MI.
EQUATIONS	NONE	
EXCEPTIONS	NONE	

STANDARDS TO BE INCLUDED

TRAFFIC — BRIDGE — ROADWAY

PREPARED BY:
WHITE ENGINEERING ASSOCIATES, INC.
OKLAHOMA C.A. NO. 1832 (EXP. 6/30/21)
THIS SEAL APPLIES TO SHEET NOS: 0001, AB01, AB02, B001-B010

DATE

C. EDWARD GRINSTEINER
OKLAHOMA LICENSE NO. 19993

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

PREPARED BY:
HOLLOWAY, UPDIKE, & BELLEN, INC.
OKLAHOMA C.A. NO. 219 (EXP. 6/30/21)
THIS SEAL APPLIES TO SHEET NOS: 0002, AR01, AT01, AT02, AX01, R001-R004, T001, X001-X003

DATE

WESLEY M. STEWART
OKLAHOMA LICENSE NO. 24031

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR

SWO 5375(1) PROJECT NO. J3-2100(004(PM)
COUNTY MUSKOGEE-SEQUOYAH HIGHWAY SH100 SHEET NO. 0001

J.P. NO. 32100(04)

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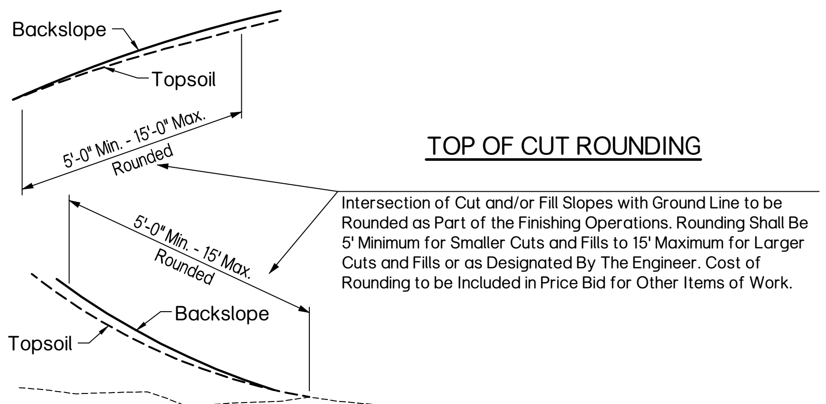
OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED
R/W

FEBRUARY 2021



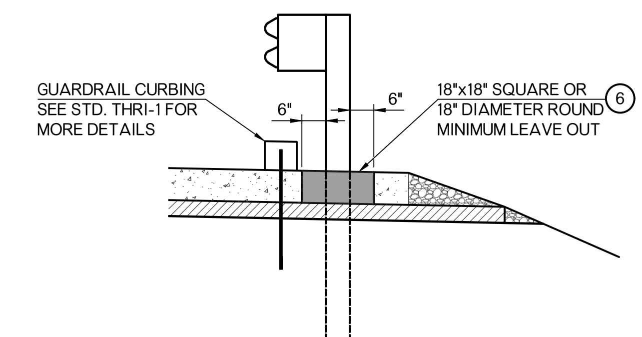
TOE OF FILL ROUNDING

TYPICAL DIKE SECTION
AND
ROUNDING DETAILS

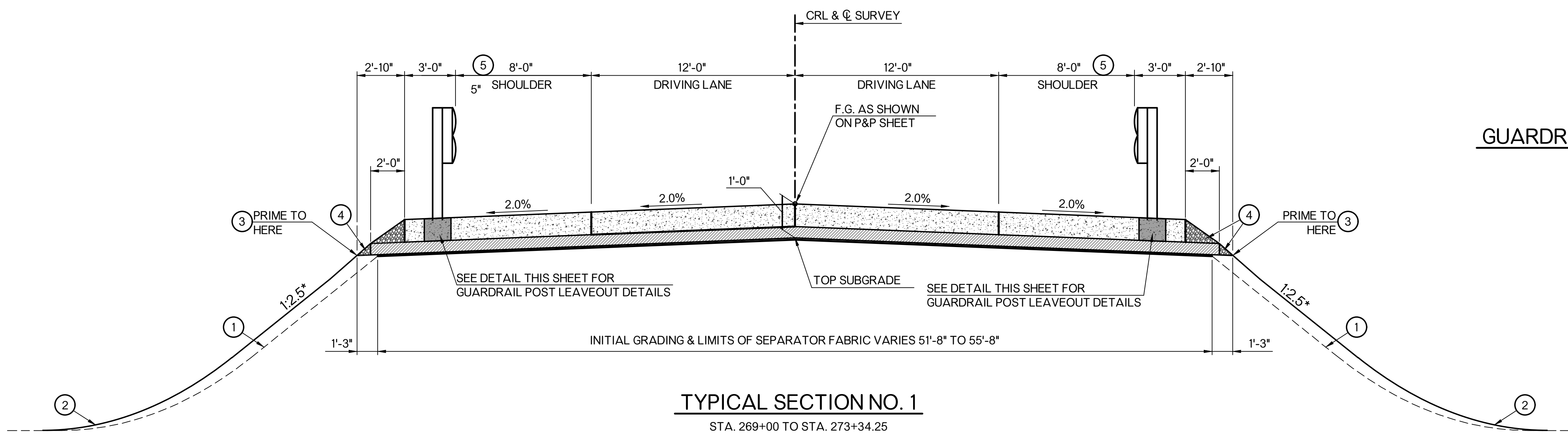
NOTES:

* 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:
2. 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. SEE ROUNDING DETAIL.
3. ESTIMATED AT 0.25 GALLONS PER SQ. YD. TOP OF BASE COURSE AND 0.35 GALLONS PER SQ. YD. TOP OF SUBGRADE.
4. AREA TO BE BACKFILLED AND COMPACTED WITH TBSC TYPE "E" AS PART OF FINISHING OPERATIONS.
5. SHOULDER WIDTH VARIES FROM 8'-0" TO 10'-0".
6. THE LEAVE OUTS SHALL BE FILLED WITH GROUT. PAYMENT FOR THE FURNISHING AND PLACEMENT OF THE GROUTING MIXTURE WILL BE INCLUDED IN THE COST OF W-BEAM GUARDRAIL.



GUARDRAIL POST LEAVE OUT



TYPICAL SECTION NO. 1

STA. 269+00 TO STA. 273+34.25
STA. 293+35.25 TO 298+00

PAVEMENT REQUIREMENTS		
8" PAVT. STRUCTURE	12' DRIVING LANES	8' PAVED SHOULDERS & GUARDRAIL WIDEN
SURFACE COURSE	8" P.C. CONCRETE PAVEMENT	8" P.C. CONCRETE PAVEMENT
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

DESIGN	WS	10/19
DRAWN	RR	10/19
CHECKED	WS	10/19
APPROVED		
SQUAD	hb	ENGINEERS

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

TYPICAL SECTION

COUNTY MUSK./SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. 0002

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 SAP NO. 51(9). PLANS OF THIS PROJECT ARE AVAILABLE FROM THE OKLAHOMA DEPARTMENT OF TRANSPORTATION TECHNOLOGY SERVICES PLANS SECTION, 200 N.E. 21ST STREET, OKLAHOMA CITY, OKLAHOMA, 73105.

WORK OVER WATERWAY -
PERFORM ALL WORK IN ACCORDANCE WITH THE APPROPRIATE GOVERNMENTAL AGENCIES HAVING REGULATORY AUTHORITY OVER THE WATERWAY, INCLUDING THE U.S. COAST GUARD AND THE U.S. ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL FINES OR PENALTIES IMPOSED BY ANY GOVERNMENTAL AGENCY AS A RESULT OF THE CONTRACTOR'S ACTIVITIES IN OR ON THE WATERWAY.
TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE TRAVELING PUBLIC FROM CONSTRUCTION ACTIVITIES. RESTRICT BOAT ACCESS TO AREAS BELOW BRIDGE SECTIONS UNDER CONSTRUCTION. MAINTAIN A SAFE BOATING ROUTE UNDER THE BRIDGE(S) AT ALL TIMES. MARK RESTRICTED AREAS AND THE SAFE BOATING ROUTE WITH SIGN BUOYS AND MARKERS PLACED IN THE WATER IN ACCORDANCE WITH STANDARD NCD1-1. INCLUDE ALL COST OF SIGN BUOYS AND MARKERS IN OTHER ITEMS OF WORK.

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) WILL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES:

AXIAL LOAD RESISTANCE = PHI * [SQRT (E) * 0.875 * LG (10 * N) - 50] (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.

DRILLED SHAFTS -
USE A MIX DESIGN FOR ALL DRILLED SHAFTS THAT WILL LIMIT CURING TEMPERATURES TO LOWER THAN 150 DEGREES FAHRENHEIT, WHILE RESULTING IN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 56 DAYS. USE TYPE I, II OR V CEMENT WITH UP TO 35% CLASS F FLY ASH REPLACEMENT. ALTERNATIVELY, A TYPE IP(XX) CEMENT MAY BE USED PROVIDED CLASS F FLY ASH IS UTILIZED FOR THE POZZOLAN AND AN ADDITIONAL REPLACEMENT OF CLASS F FLY ASH DURING BATCHING UP TO 35-(XX)% IS MADE. USE A MINIMUM OF 25% CLASS F FLY ASH REPLACEMENT. CLASS C FLY ASH AND ADDITIONAL PORTLAND CEMENT WILL NOT BE ALLOWED. OTHER TEMPERATURE CONTROL CONCRETE MIXES MAY BE ALLOWED WITH THE APPROVAL OF THE ENGINEER.
PROVIDE A METHOD FOR MONITORING CONCRETE TEMPERATURE IN DRILLED SHAFTS DURING CURING. SUBMIT A TEMPERATURE MONITORING PLAN TO THE ENGINEER FOR APPROVAL. BEGIN MONITORING WHEN THE CONCRETE IS PLACED AND MONITOR CONTINUOUSLY FOR SEVEN DAYS. MONITOR TEMPERATURES AT MIDHEIGHT OF THE SHAFT, WITHIN FIVE FEET OF THE TOP OF SHAFT, AND AS DIRECTED BY ENGINEER. IF THE TEMPERATURE EXCEEDS 145 DEGREES FAHRENHEIT, MAKE ADJUSTMENTS TO THE MIX DESIGN PRIOR TO PLACING CONCRETE IN THE NEXT SHAFT.
PERFORM THERMAL INTEGRITY PROFILER (TIP) TESTING ON EACH DRILLED SHAFT. PERFORM CROSSHOLE SONIC LOGGING TESTING ON EACH DRILLED SHAFT.

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 PLATE GIRDERS 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) OR ASHTO M270 (ASTM A709), GRADE HPS70W (WEATHERING STEEL, NON FRACTURE CRITICAL CHARPY V-NOTCH TESTED FOR ZONE 2) AS SHOWN IN THE PLANS. USE SHEAR CONNECTORS CONFORMING TO AASHTO M169 (ASTM A108), GRADE 1015, 1018 OR 1020. PROVIDE WELDING WITH WEATHERING CHARACTERISTICS. CAMBER GIRDERS TO ACCOUNT FOR DEAD LOAD DEFLECTION AND VERTICAL CURVE. NON-DESTRUCTIVE TESTING WILL BE REQUIRED AS APPROPRIATE.
PROVIDE STRUCTURAL STEEL FOR LATERAL BRACING MEMBERS, CROSS FRAME SHAPES, AND 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.
PROVIDE STRUCTURAL STEEL FOR ANCHOR 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 B8M (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.
PROVIDE STRUCTURAL STEEL FOR PARAPET CLOSURE PLATES IN ACCORDANCE WITH AASHTO M270 (ASTM A709), GRADE 36 (CHARPY V-NOTCH TESTING NOT REQUIRED). GALVANIZE PARAPET CLOSURE PLATES IN ACCORDANCE TO AASHTO M111. USE WELDED STUDS CONFORMING TO AASHTO M169 (ASTM A108), GRADE 1015, 1018 OR 1020. USE CAP SCREWS CONFORMING TO ASTM F879 AND NUTS CONFORMING TO ASTM F594. PERFORM ALL WELDING CONSISTENT WITH PROCEDURES FOR STAINLESS STEEL. PAINT THE PARAPET CLOSURE PLATES AFTER FABRICATION WITH A CATEGORY "N" PAINT SYSTEM IN ACCORDANCE WITH SECTION 512 OF THE SPECIFICATIONS. PROVIDE A TOPCOAT COLOR MATCHING THE SURFACE FINISH COLOR OF THE PARAPET CONCRETE.
FABRICATE PLATE GIRDERS AND CROSS-FRAMES FOR A STEEL DEAD LOAD FIT (ALSO KNOWN AS ERECTED FIT) CONDITION WHERE GIRDERS ARE APPROXIMATELY PLUMB IMMEDIATELY FOLLOWING GIRDER ERECTION AND BEFORE DECK CONCRETE PLACEMENT. SUBMIT A WORK PLAN DETAILING SEQUENCE OF GIRDER ERECTION TO THE BRIDGE ENGINEER. INCLUDE ANTICIPATED TYPES AND LOCATIONS OF CRANES TO BE USED AND METHODS TO SECURE AND BRACE ERECTED GIRDERS BETWEEN SUBSEQUENT LIFT OPERATIONS. DO NOT BEGIN GIRDER ERECTION OPERATIONS UNTIL APPROVAL OF WORK PLAN BY THE BRIDGE ENGINEER IS RECEIVED.

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 SECTION AT A TIME CONSISTENT WITH THE DECK SLAB POURING SEQUENCE DIAGRAM SHOWN IN THE PLANS. 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.

STAY-IN-PLACE DECK FORMS -
THE CONTRACTOR MAY USE STAY-IN-PLACE STEEL DECK FORMS IN ALTERNATE A 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.

PRECAST DECK PANELS -
SUBMIT SHOP DRAWINGS FOR PRESTRESSED CONCRETE DECK FORM PANELS IN ACCORDANCE WITH SECTION 105.02 OF THE SPECIFICATIONS. INCLUDE A LIFTING PLAN PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA. DO NOT BEGIN PANEL FABRICATION UNTIL APPROVAL FROM THE BRIDGE ENGINEER IS RECEIVED.
PROVIDE TIGHT FIT AT TRANSVERSE JOINTS BETWEEN PANELS. BEAR ERECTED PANELS UNIFORMLY ON BEDDING STRIPS OF EXTRUDED POLYSTYRENE PLACED ALONG TOP FLANGE EDGES. PANELS MAY BE SUPPORTED BY AN ALTERNATE METHOD IF APPROVED BY THE BRIDGE ENGINEER. LONGITUDINAL TOP SLAB REINFORCEMENT MAY REST ON TOP OF PRESTRESSED CONCRETE PANELS IF NECESSARY TO MAINTAIN CLEAR COVER.
USE BEDDING STRIPS COMPRISED OF A SINGLE LAYER. BEDDING STRIP THICKNESS MAY BE INCREASED IN 1/4" INCREMENTS. USE THE SAME THICKNESS STRIP UNDER ANY ONE PANEL EDGE. LIMIT THE MAXIMUM CHANGE IN THICKNESS BETWEEN ADJACENT PANELS 1/4". ALTERNATIVELY, CUT BEDDING STRIPS TO GRADE. BOND BEDDING STRIPS TO BEAMS AND PANELS WITH A COMPATIBLE ADHESIVE.
ENSURE PROPER CLEANING OF CONSTRUCTION DEBRIS AND CONSOLIDATION OF CONCRETE MORTAR UNDER THE EDGES OF THE PANELS. PLACE BEDDING STRIPS AT BEAM FLANGE EDGES SO THAT ADEQUATE SPACE IS PROVIDED FOR THE MORTAR TO FLOW A MINIMUM OF 1 1/2" UNDER THE PANELS AS THE SLAB CONCRETE IS PLACED. MAINTAIN 1" MINIMUM VERTICAL OPENING TO ALLOW THE PROPER AMOUNT OF MORTAR TO FLOW BETWEEN GIRDER AND PANEL. ROADWAY CROSS-SLOPE REDUCES THE OPENING AVAILABLE FOR ENTRY OF THE MORTAR. BEDDING STRIPS OF DIFFERENT THICKNESSES AT EACH EDGE OF A SINGLE GIRDER MAY BE REQUIRED.
IF ADDITIONAL BLOCKING IS NEEDED, FOLLOW SPECIAL GRADING DETAILS SHOWN IN THE PLANS FOR SUPPORTING THE PANELS AND PROVIDE EXTRA REINFORCING BETWEEN GIRDER AND SLAB. INCLUDE ALL COSTS FOR ADDITIONAL CONCRETE, REINFORCING, LABOR, EQUIPMENT AND INCIDENTALS ASSOCIATED WITH SPECIAL GRADING IN OTHER ITEMS OF WORK.
INCLUDE ALL COSTS ASSOCIATED WITH THE FABRICATION AND INSTALLATION OF PRESTRESSED CONCRETE DECK PANELS, INCLUDING ALL CONCRETE, REINFORCING STEEL, PRESTRESSING STRANDS, PRESTRESSING, BEDDING STRIPS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE WORK IN THE CONTRACT UNIT PRICE OF "PRESTRESSED CONCRETE DECK PANELS".

STEEL GIRDER 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 PF 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 -
THE FOLLOWING COMPUTER SOFTWARE WAS USED IN THE ANALYSIS AND DESIGN OF THE STRUCTURE(S) DETAILED IN THE PLANS:

(X) WHITE ENGINEERING ASSOCIATES, INC. DECK SLAB DESIGN (VERSION 2.06, 10-12-07)
(X) WHITE ENGINEERING ASSOCIATES, INC. DECK CLOSURE SLAB ANALYSIS (VERSION 1.01, 08-31-04)
(X) WHITE ENGINEERING ASSOCIATES, INC. BRIDGE LOAD DISTRIBUTION (VERSION 1.10, 12-23-04)
(X) WHITE ENGINEERING ASSOCIATES, INC. PRECAST BEAM DESIGN (VERSION 2.01, 04-27-09)
(X) MDX STEEL LINE GIRDER DESIGN AND RATING (VERSION 6.5.655, 10-16-09)
(X) WHITE ENGINEERING ASSOCIATES, INC. ELASTOMERIC BEARING PAD DESIGN (VERSION 3.00, 12-30-09)
(X) WHITE ENGINEERING ASSOCIATES, INC. PIER DESIGN (VERSION 2.02, 09-24-07)
(X) IES VISUALANALYSIS (VERSION 4.01.013, 02-01-02)
(X) PORTLAND CEMENT ASSOCIATION PCACOL (VERSION 3.00, 01-27-99)
(X) WHITE ENGINEERING ASSOCIATES, INC. ABUTMENT/RETAINING WALL DESIGN (VERSION 2.00, 10-19-07)
(X) ENERCALC SEL (VERSION 5.6.1, 10-25-02)

PROPOSED R/W
FEBRUARY 2021

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

S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)
SHEET 1 OF 2

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA | DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04) | SHEET NO. AB01

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PROPOSED R/W
FEBRUARY 2021

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 XX.X C.Y. OF CLASS AA CONCRETE AND X,XXX LB. OF EPOXY COATED REINFORCING STEEL. PROVIDE FILL AS REQUIRED ON EMBANKMENTS AND UNDER APPROACH SLABS TO ENSURE CONTINUOUS SUPPORT. COMPACT FILL IN ACCORDANCE WITH SECTION 202 OF THE SPECIFICATIONS. ADJUST EXISTING DRAINS TO NEW FINISHED GRADE AS NECESSARY. INCLUDE THE COST OF FILL MATERIAL, COMPACTION, AND DRAIN ADJUSTMENTS IN THE CONTRACT UNIT PRICE OF "APPROACH SLABS".

(BR-4) THE FIXED BEARING ASSEMBLIES CONTAIN AN ESTIMATED TOTAL OF X,XXX LB. OF STAINLESS STEEL AND X,XXX LB. OF STRUCTURAL STEEL.

(BR-5) THE EXPANSION BEARING ASSEMBLIES CONTAIN AN ESTIMATED TOTAL OF X,XXX LB. OF STAINLESS STEEL.

(BR-6) PROVIDE THE CIM1000 URETHANE COATING SYSTEM AS MANUFACTURED BY C.I.M. INDUSTRIES, INC., POLYCOAT-PC-IM129 BY POLYCOAT PRODUCTS, OR APPROVED EQUAL, WITH THE MATERIALS, DIMENSIONS, DETAILS, AND INSTALLATION MEETING THE REQUIREMENTS OF THE SPECIAL PROVISIONS AND AS SHOWN IN THE PLANS. SANDBLAST AND PRIME THE SURFACES AS RECOMMENDED BY THE MANUFACTURER BEFORE APPLICATION.

(BR-7) THE QUANTITY SHOWN FOR CLASS AA CONCRETE INCLUDES AN ESTIMATED xxx.x C.Y. FOR BEAM HAUNCHES.

(BR-8) 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-9) QUANTITY SHOWN FOR CROSSHOLE SONIC LOGGING INCLUDES TESTING EACH DRILLED SHAFT. ACTUAL NUMBER OF TESTS PERFORMED WILL BE AT THE DISCRETION OF THE ENGINEER AND PAYMENT WILL BE BASED ON ACTUAL NUMBER OF DRILLED SHAFTS TESTED.

(BR-10) QUANTITY SHOWN INCLUDES TESTING EACH DRILLED SHAFT.

(BR-11) QUANTITY SHOWN FOR SEALER RESIN ESTIMATED AT 0.011 GALLONS PER FOOT OF CONSTRUCTION JOINT.

(BR-12) QUANTITY SHOWN FOR FILTER BLANKET ESTIMATED AT 105 LB. PER CUBIC FOOT.

(BR-13) 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-3.

(BR-14) 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-3.

(BR-15) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVING AND DISPOSING OF THE SUPERSTRUCTURE AND SUBSTRUCTURE 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 4(100' CONT., (207'-334'-207' CONT.) 3(100' CONT.) 4(100' CONT.) 75' ℄ GIRDER SPANS WITH 28' CLEAR ROADWAY.

(BR-16) PROVIDE AND INSTALL THE NAVIGATION LIGHTING SYSTEM AS SHOWN IN THE PLANS IN ACCORDANCE WITH THE SPECIAL PROVISION "BRIDGE NAVIGATION LIGHTING". THE REQUIRED SYSTEM INCLUDES EIGHT 180-DEGREE RED LIGHTS AND SIX 360-DEGREE GREEN LIGHTS WITH SWING ARM ASSEMBLIES COMPLETE WITH PANEL MOUNTS.

J.P. NO. 32100(04)
0200 BRIDGE BASE BID
NBI NO. xxxxx

PAY QUANTITIES

S.H.100/U.S.64 OVER ARKANSAS RIVER
240'-320'-410'-320'-(3) 208' ℄ GIRDER SPANS
40'-0" CL. RDWY. WITH F-SHAPED PARAPETS
℄ STA. 283+38.75, 0° SKEW

ITEM NO.	ITEM DESCRIPTION		UNIT	TOTAL
501(B) 1300	SUBSTRUCTURE EXCAVATION COMMON	(BR-1, 2)	C.Y.	
501(G) 1800	CLSM BACKFILL	(BR-1)	C.Y.	
504(A) 5200	APPROACH SLAB	(BR-1, 3)	S.Y.	
504(B) 5300	SAW-CUT GROOVING	(BR-1)	S.Y.	
504(E) 5520	42" F-SHAPED PARAPET	(BR-1)	L.F.	
506(A) 7200	STRUCTURAL STEEL	(BR-1)	LB.	
507(A) 8200	STAINLESS STEEL FIXED BEARING ASSEMBLY	(BR-1, 4)	EA.	
507(B) 8300	STAINLESS STEEL EXP. BEARING ASSEMBLY	(BR-1, 5)	EA.	
509 0120	ELASTOMERIC COATING	(BR-1, 6)	S.F.	
509(A) 0210	CLASS AA CONCRETE	(BR-1, 7)	C.Y.	
509(B) 0320	CLASS A CONCRETE	(BR-1)	C.Y.	
511(A) 2210	REINFORCING STEEL	(BR-1)	LB.	
511(B) 2310	EPOXY COATED REINFORCING STEEL	(BR-1)	LB.	
514(A) 5220	PILES, FURNISHED (HP 12x53)	(BR-8)	L.F.	
514(B) 5320	PILES, DRIVEN (HP 12x53)		L.F.	
514(L) 6300	PILE SPLICE, H-PILE (NON-BIDDABLE)		EA.	
515(A) 7200	WATER REPELLENT (VISUALLY INSPECTED)	(BR-1)	S.Y.	
516(A) 8260	DRILLED SHAFTS 96" DIAMETER		L.F.	
516(C) 8400	CROSSHOLE SONIC LOGGING	(BR-9)	EA.	
516(G) 8800	THERMAL INTEGRITY PROFILER	(BR-10)	EA.	
518(I) 0700	MODULAR EXPANSION JOINT	(BR-1)	L.F.	
523(A) 3200	SEALER CRACK PREPARATION	(BR-1)	L.F.	
523(B) 3300	SEALER RESIN	(BR-1, 11)	GAL.	
601(C) 1310	TYPE I-A FILTER BLANKET	(BR-1, 12)	TON	
613(H) 6205	6" PERFORATED PIPE UNDERDRAIN ROUND	(BR-1, 13)	L.F.	
613(I) 6310	6" NON-PERF. PIPE UNDERDRAIN RND.	(BR-14)	L.F.	
619(D) 6700	REMOVAL OF EXISTING BRIDGE STRUCTURE	(BR-15)	L.SUM	
809(G) 7800	(SP) BRIDGE NAVIGATION LIGHTING	(BR-16)	L.SUM	

J.P. NO. 32100(04)
0600 STAKING

PAY QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
642(B) 3300	CONSTRUCTION STAKING LEVEL II	L.SUM	

J.P. NO. 32100(04)
0640 CONSTRUCTION

PAY QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
220 1100	SWPPP DOCUMENTATION AND MANAGEMENT	L.SUM	
640(A) 1200	FIELD OFFICE	EA.	
641 2100	MOBILIZATION	L.SUM	

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

S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO.
SEQUOYAH CO.

GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)
SHEET 2 OF 2

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. AB02

1:\Active\20013\Drawings\AB02 Pay Items.dwg, 2/26/2021 1:16:28 PM

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED R/W

FEBRUARY 2021

ROADWAY GENERAL CONSTRUCTION NOTES:

THIS PROJECT SHALL BE CONSTRUCTED BY CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. TRAFFIC WILL BE DETOURED USING PORTIONS OF SH-100, I-40 & US-64. SEE SHEET T001 FOR DETOUR PLAN.

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 LYING 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-1(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.

THE CONTRACTOR SHALL GIVE NOTICE TO CHEROKEE COUNTY AND THE OKLAHOMA DEPARTMENT OF TRANSPORTATION DIVISION I ENGINEER, IN WRITING FOURTEEN (14) CALENDAR DAYS BEFORE WORK BEGINS ON THE PROJECT.

BENCHING OF EXISTING SIDE SLOPES STEEPER THAN 1:4 WILL BE REQUIRED.

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

G-6 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.

G-8 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.

G-9 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.

G-11 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.

G-13 THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

G-18 VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "MULCHING TILLER METHOD", AS SPECIFIED IN 233.04B(2) OF THE STANDARD SPECIFICATIONS.

G-23 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.

G-25 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.

G-27 THE CONTRACTOR SHALL REMOVE AND RESET MAILBOXES AS NECESSARY. MAILBOXES ARE TO BE MAINTAINED IN AN UPRIGHT POSITION AND ACCESSIBLE TO MAIL CARRIER'S CAR DURING CONSTRUCTION. ANY DAMAGE TO BOXES OR SUPPORTS SHALL BE REPAIRED BY THE CONTRACTOR. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

G-30 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.

G-31 T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER 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 [redacted] CU. YDS. FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS EARTHWORK.

R-8 PRICE BID TO INCLUDE COST OF SEDIMENT REMOVAL AND ALL MAINTENANCE. SEDIMENT MUST BE REMOVED WHEN IT REACHES HALF OF THE HEIGHT OF THE DEVICE.

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

R-28 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-30 QUANTITY INCLUDES AN ESTIMATED [redacted] C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.

R-36 INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.

R-37 TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.

R-38 MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.

1. THE LIMITS OF CLEARING AND GRUBBING SHALL BE THE MINIMUM AMOUNT REQUIRED FOR CONSTRUCTION AND INSTALLATION OF NEW FENCE.
2. INCLUDES [redacted] TONS TO BE USED AS DIRECTED BY THE ENGINEER.
3. QUANTITY INCLUDES [redacted] CY FOR USE IF ON-SITE MATERIAL IS UNSUITABLE, AS DIRECTED BY THE ENGINEER.
4. ESTABLISHMENT OF HORIZONTAL AND VERTICAL CONTROLS, INCLUDING THE SETTING OF BENCHMARKS, THE STAKING OF RIGHT OF WAY, RE-ESTABLISHMENT OF RIGHT OF WAY FOR FENCING AS REQUIRED, SETTING THE CENTERLINE, CALCULATING AND STAKING HAUNCH GRADES FOR BRIDGE AS REQUIRED SHALL BE INCLUDED IN THE PRICE BID FOR STAKING.
5. 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.
6. 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.
7. THE FIELD OFFICE IS TO HAVE HIGH-SPEED INTERNET AVAILABLE THROUGHOUT THE ENTIRE PROJECT. PRICE BID TO BE INCLUDED IN THE COST FOR FIELD OFFICE.

0300 ROADWAY

PAY QUANTITIES (ROADWAY)

J/P NO. 32100(04)

SPEC. NO.	BAMS NO.	DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
201(A)	0102	CLEARING AND GRUBBING	1	L.SUM	
202(A)	0183	UNCLASSIFIED EXCAVATION	R-3	C.Y.	
202(D)	0184	UNCLASSIFIED BORROW	3,5,R-1,R-3	C.Y.	
221(C)	2801	TEMPORARY SILT FENCE	R-8	L.F.	
221(F)	0100	TEMPORARY SILT DIKE	R-8	L.F.	
317	4270	CEMENT TREATED BASE		S.Y.	
325	5271	SEPARATOR FABRIC		S.Y.	
402(E)	0225	TRAFFIC BOUND SURFACE COURSE TYPE E	2,R-18	TON	
408	5774	PRIME COAT	R-28	GAL.	
414(A)	0210	P.C. CONCRETE PAVEMENT (PLACEMENT)		S.Y	
414(G)	5275	P.C. CONCRETE FOR PAVEMENT		C.Y.	
509(D)	0325	CLASS C CONCRETE	R-30	C.Y.	
619(A)	0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS	R-36,R-37	L.SUM	
619(B)	4727	REMOVAL OF CONCRETE PAVEMENT	R-37,6	S.Y.	
619(B)	4728	REMOVAL OF ASPHALT PAVEMENT	R-37,R-38,6	S.Y.	
619(B)	4780	REMOVAL OF GUARDRAIL	R-37	L.F.	
619(C)	0924	SAWING PAVEMENT	6	L.F.	
623(A)	0932	BEAM GUARDRAIL W-BEAM SINGLE		L.F.	
623(I)	8700	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")		EA.	

DESIGN	WS	10/19
DRAWN	RR	10/19
CHECKED	WS	10/19
APPROVED		
SQUAD	hub	ENGINEERS

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SUMMARY OF PAY QUANTITIES & NOTES (ROADWAY)

COUNTY MUSK /SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO.AR01

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED
R/W
FEBRUARY 2021

PAY ITEM 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-21 INCLUDED IN THE COST OF THIS ITEM SHALL BE INSTALLATION, MAINTENANCE, AND REMOVAL. THIS ITEM SHALL BE BID ACCORDINGLY.

TC-23 QUANTITY SHOWN FOR THIS ITEM INCLUDES THOSE SIGNS WHICH COMPRISE THE ROUTE MARKER ASSEMBLIES USED TO INDICATE THE DETOUR ROUTE.

TC-24 QUANTITIES SHOWN FOR CONSTRUCTION SIGNING AND STRIPING HAVE BEEN INCREASED TO ALLOW FOR TRAFFIC CONTROL ON CROSS STREETS NOT SHOWN ON THE PLANS.

TC-25 ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO 8/2018 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 AND PAVEMENT MARKING REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES, WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.

TC-25a THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK.

TC-26 CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL OF TRAFFIC ON UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION, AND APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR ITEM SHALL BE PAY PAYMENT IN FULL FOR INSTALLATION, MAINTENANCE, AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.

TC-28 INCLUDED IN THIS ITEM ARE ALL S.C.S (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

TC-29 INCLUDED IN THIS ITEM ARE ALL S.C.S (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

TC-30 INCLUDED IN THIS ITEM ARE ALL S.C.S (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

PAY ITEM NOTES (CONT.)

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 O.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 SURFACES ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN TRAFFIC CONTROL SUPERVISOR.

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-84 450 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-1 QUANTITIES OF PAY ITEMS ARE BASED ON CONTRACTOR CONSTRUCTION THE PROJECT FROM BEGINNING OF PROJECT TO END OF PROJECT FOR EACH CONSTRUCTION PHASE.

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.

PAY QUANTITIES (TRAFFIC)

0300
TRAFFIC CONTROL

J/P NO 28969(04)

SPEC. NO.	BAMS NO.	DESCRIPTION	PAY ITEM NOTES	BID UNIT	QUANTITY
880(B)	8818	CONSTRUCTION SIGNS 0 TO 6.25 SF	TC-1,21,23,24,25,25a,26,28,33,39,58,84	SD	
880(B)	8821	CONSTRUCTION SIGNS 6.26 TO 15.99 SF	TC-1,21,23,24,25,25a,26,29,33,39,58,84	SD	
880(B)	8824	CONSTRUCTION SIGNS 16.00 TO 32.99 SF	TC-1,21,23,24,25,25a,26,30,33,39,58,84	SD	
880(C)	8842	CONSTRUCTIN BARRICADES (TYPE III)	TC-9,TC-26,TC-84	SD	
880(E)	8860	WARNING LIGHTS (TYPE A)	TC-1,21,25,25a,26,39,84	SD	
882(A)	8306	PORTABLE CHANGEABLE MESSAGE SIGN	(SP-1,2) TC-1,21,25,25a,39,84,85	SD	

DESIGN	WS	10/19
DRAWN	RR	10/19
CHECKED	WS	10/19
APPROVED		
SQUAD	hub ENGINEERS	

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SUMMARY OF PAY QUANTITIES & NOTES (TRAFFIC)

COUNTY MUSK./SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. AT01

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED
R/W
FEBRUARY 2021

SIGNING & STRIPING GENERAL CONSTRUCTION NOTES:

REMOVED MATERIAL TO BECOME PROPERTY OF CONSTRUCTOR AND IT SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

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.

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.

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.

NO SPLICES SHALL BE PERMITTED IN ANY PIPE OR WIDE FLANGE SIGN POST.

ALL ANCHOR BOLTS SHALL BE GRADE A-36 STEEL.

POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.

ALL EXISTING AND NEW BREAKAWAY SIGN POSTS, PIPES AND WIDE FLANGE BEAMS SHALL HAVE SHEET METAL BOLT RETAINER PLATES AS SPECIFIED IN O.D.O.T. STD. FGS1-1-(LATEST REVISION). REPLACEMENT COST OF MISSING OR DAMAGED BOLT RETAINER PLATES AND ALL ASSOCIATED HARDWARE AND LABOR SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

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.

AFTER REMOVAL OF ANY SIGN FOOTINGS, THE HOLES SHALL BE FILLED WITH SOIL AND TAMPED AND SHAPED IN A MANNER APPROVED BY THE ENGINEER.

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.

WHERE EXISTING SIGNS NEED RE-ADJUSTMENT TO KEEP THE SIGN 1" ABOVE THE FUSE PLATE TO COMPLY WITH STD. FGS1-1 AND FGS2-1-(LATEST REVISION), THE CONTRACTOR SHALL CUT ANY WIDE FLANGE SIGN POSTS THAT EXTEND ABOVE THE SIGN. THE CUT SURFACE SHALL BE GROUND SMOOTH AND GIVEN A HEAVY AND THOROUGH COAT OF ZINC-RICH PAINT IN A MANNER APPROVED BY THE ENGINEER.

SIGNING & STRIPING PAY QUANTITY NOTES:

(SP-1) INCLUDED IN THE COST FOR THIS ITEM IS THE REMOVAL OF EXISTING DELINEATORS. EXISTING DELINEATORS AND POST TO BECOME THE PROPERTY OF THE STATE AND STORED IN AN AREA FOR PICK UP AS DIRECTED BY THE ENGINEER. SEE SHEET T025 FOR DETAIL.

(SP-2) ANY SIGNS WHICH ARE TO BE REMOVED DURING THIS PROJECT WILL BE STORED IN A PROTECTED AREA AS DESIGNATED BY THE RESIDENT ENGINEER. UNTIL SUCH A TIME THAT THEY ARE TO BE RESET BY THE CONTRACTOR. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK.

(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-25) QUANTITY SHOWN INCLUDES [redacted] L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND [redacted] L.F. TRAFFIC STRIPE (MULTI-POLYMER)(BLACK) AND WILL BE MEASURED BY THE LINEAR FOOT OF SIX INCH (6") WIDE TRAFFIC STRIPE.

(TS-26) QUANTITY SHOWN INCLUDES [redacted] L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND [redacted] L.F. TRAFFIC STRIPE (MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF EIGHT INCH (8") WIDE TRAFFIC STRIPE.

0301 TRAFFIC

PAY QUANTITIES

J/P NO 28969(04)

SPEC. NO.	BAMS NO.	DESCRIPTION	PAY ITEM NOTES	BID UNIT	QUANTITY
805(D)	8760	(PL) REMOVE & RESET GROUND MOUNTED SIGN	(SP-2)(TS-1)	EA	
850(A)	8110	SHEET ALUMINUM SIGNS		SF	
851(C)	8324	2' SQUARE TUBE POST		LF	
853	9024	DELINEATORS (TYPE 1, CODE 1)	(SP-1)	EA	
856(A)	8535	TRAFFIC STRIPE (MULTI-POLY.)(6" WIDE)	(TS-25)(1)	LF	
856(A)	8540	TRAFFIC STRIPE (MULTI-POLY.)(8" WIDE)	(TS-26)(1)	LF	

DESIGN	WS	10/19
DRAWN	RR	10/19
CHECKED	WS	10/19
APPROVED		
SQUAD	hub	ENGINEERS

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SUMMARY OF PAY QUANTITIES & NOTES (SIGNING & STRIPING)

COUNTY MUSK/SEQ HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. AT02

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED R/W

FEBRUARY 2021

SUMMARY OF GUARDRAIL

LOCATION			TOTAL PANEL LENGTH INCLUDING ANCHOR UNITS	PRIME COAT	P.C. CONCRETE PAVEMENT (PLACEMENT)	P.C. CONCRETE FOR PAVEMENT	REMOVAL OF GAURDRAIL	BEAM GUARDRAIL W-BEAM SINGLE	GUARDRAIL END TREATMENT (GET)	BRIDGE GUARDRAIL CONNECTION-THRIE BEAM (31")	REMOVAL OF CONCRETE PAVEMENT	GUARDRAIL DELINEATORS (TYPE 1, CODE 1)
STATION TO STATION	LANE											
	INSIDE LANE	OUTSIDE LANE		408	414(A)	414(G)	619(B)	623(A)	623(G)	623(I)	619(B)	
			LF	GAL	SY	CY	LF	LF	EA	EA	SY	EA
TOTALS												

SUMMARY OF SURFACING

STATION TO STATION	LENGTH	CEMENT TREATED BASE	SEPARATOR FABRIC	TRAFFIC BOUND SURFACE COURSE TYPE E	TACK COAT	PRIME COAT	P.C. CONCRETE PAVEMENT (PLACEMENT)	P.C. CONCRETE FOR PAVEMENT	REMOVAL OF ASPHALT PAVEMENT	SAWING PAVEMENT
		317	325	402(E)	407(B)	408	414(A)	414(G)	619(B)	619(C)
	LF	SY	SY	TON	GAL	GAL	SY	CY	SY	LF
TOTALS										

SUMMARY OF TEMPORARY SEDIMENT CONTROLS

LOCATION				TEMPORARY SILT FENCE 221(C)	TEMPORARY SILT DIKE 221(F)
STATION TO STATION	LT.	RT.	DESCRIPTION		
				LF	LF
TOTALS					

HUB Engineers
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DESIGN	WS	10/19
DRAWN	RR	10/19
CHECKED	WS	10/19
APPROVED		
SQUAD	hub	ENGINEERS

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SUMMARY SHEET

COUNTY MUSK./SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. AX01

PROPOSED R/W
FEBRUARY 2021

272 273 274 275 276 277

BEGIN APPROACH SLAB NO. 1 STA. 273+36.75

BEGIN BRIDGE STA. 273+81.75

5'-0" GUARDRAIL WIDENING

8'-0"

12'-0"

12'-0"

8'-0"

5'-0" GUARDRAIL WIDENING

EXISTING R/W

B-1

C.R.L. & ℄ SURVEY S.H.100/U.S.64
N 54° 15'57.84" E

EXISTING R/W

EXISTING R/W

90° TYP.

EXISTING BRIDGE

B-2

1'-6" F-SHAPED PARAPET

40'-0" CLEAR ROADWAY

20'-0" 2%

20'-0" 2%

1'-6" F-SHAPED PARAPET

MATCH LINE STA. 278+00

EXISTING DRILLED SHAFT PIER PROTECTION (TYPICAL)

BM #109
⅜" IRON PIN
STA. 261+52 93' RT. ELEV.=477.65

BM #110
CORP OF ENGINEER'S BRASS CAP
STA. 268+08 176' RT. ELEV.=470.56

#7502
ODOT BRASS CAP
STA. 271+13 428' RT. ELEV.=467.55

#7400
½" IRON PIN
STA. 274+06 410' RT. ELEV.=464.13

PLAN
1"=20'

BEGIN BRIDGE
BEGIN SLAB
ABUTMENT NO. 1
STA. 273+81.75
F.G. ELEV. 527.55

1914'-0" TOTAL BRIDGE LENGTH

240'-0"

320'-0"

℄ PIER NO. 1
STA. 276+21.75

PROFILE GRADE LINE

FIX.

EXP. EXP.

100-YEAR FLOOD ELEVATION 480.73

MEAN HIGHWATER ELEVATION 463.39 (1)

ORDINARY LOW WATER NAVIGATION POOL ELEVATION 458.39 (1)

NORMAL POOL ELEVATION 460.39 (1)

ORDINARY HIGH WATER ELEVATION XXX.XX

EXISTING DRILLED SHAFT PIER PROTECTION (TYPICAL)

EXISTING GROUND LINE AT C.R.L.

(1) ELEVATIONS SHOWN CONVERTED TO NAV88 DATUM AND BASED ON DATUM NGV29 ELEVATIONS OF 460.00 (NORMAL POOL) AND 458.00 (NAVIGATION POOL) AS SHOWN IN PLANS OF EXISTING STRUCTURE.

MATCH LINE STA. 278+00

ELEVATION
1"=20'

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

S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

GENERAL PLAN AND ELEVATION (SHEET 1 OF 5)
240'-320'-410'-320'-(3) 208' ℄ GIRDER SPANS
40'-0" CL. RDWY. WITH F-SHAPED PARAPETS
℄ STA. 283+38.75, 0° SKEW

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA — DEPARTMENT OF TRANSPORTATION

JOB PIECE NO. 32100(04) — SHEET NO. B001

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PROPOSED R/W
FEBRUARY 2021

279 280 281 282 283

MATCH LINE STA. 278+00

MATCH LINE STA. 284+00

EXISTING SHEET PILE CELL PIER PROTECTION

300.2' EXISTING MINIMUM HORIZONTAL CLEARANCE

℄ NAVIGATION CHANNEL

EXISTING SHEET PILE CELL PIER PROTECTION

EXISTING R/W

B-3

B-4

18.7' 18.1' 18.8' 20.5' 19.6' 19.1' 19.0' 17.9' 18.8' 18.0' 17.3' 18.9'

78° 31' 40"

1'-6" F-SHAPED PARAPET

8' SHLDR.

40'-0" CLEAR ROADWAY

20'-0" 2%

12' LANE

12' LANE

20'-0" 2%

8' SHLDR.

1'-6" F-SHAPED PARAPET

C.R.L. & ℄ SURVEY S.H.100/U.S.64
N 54° 15' 57.84" E

90° TYP.

EXISTING BRIDGE

ARKANSAS RIVER

LOCATION OF MINIMUM VERTICAL CLEARANCE

WATER DEPTH FROM ORDINARY LOW WATER ELEVATION (TYPICAL)

EXISTING DRILLED SHAFT PIER PROTECTION (TYPICAL)

LIMITS OF NAVIGATION CHANNEL

150'-0"

150'-0"

LIMITS OF NAVIGATION CHANNEL

PLAN
1"=20'

1914'-0" TOTAL BRIDGE LENGTH

320'-0" 410'-0" 320'-0"

℄ PIER NO. 2
STA. 279+41.75

℄ PIER NO. 3
STA. 283+51.75

PROFILE GRADE LINE

LOCATION OF MINIMUM VERTICAL CLEARANCE ELEVATION 523.40

FIX. FIX.

300'-0" NAVIGATIONAL OPENING

52.5' VERT. CL.

52.8' VERT. CL.

52.5' VERT. CL.

52'-0" NAVIGATIONAL OPENING

NAVIGATIONAL ENVELOPE (SHOWN AT C.R.L.)

2% FLOWLINE ELEVATION 470.89 ①

MEAN HIGHWATER ELEVATION 463.39 ①

ORDINARY HIGH WATER ELEVATION xxx.xx

ORDINARY LOW WATER NAVIGATION POOL ELEVATION 458.39 ①

NORMAL POOL ELEVATION 460.39 ①

100-YEAR FLOOD ELEVATION 480.73

EXISTING DRILLED SHAFT PIER PROTECTION (TYPICAL)

EXISTING SHEET PILE CELL PIER PROTECTION (TYPICAL)

300.2' EXISTING MINIMUM HORTIZONAL CLEARNACE (SHOWN ALONG SKEW AND UPSTREAM OF C.R.L.)

EXISTING GROUND LINE AT C.R.L.

EXISTING GROUND LINE LT.

EXISTING GROUND LINE RT.

540 530 520 510 500 490 480 470 460 450 440 430 420 410 400 390 380 360

279 280 281 282 283

① ELEVATIONS SHOWN CONVERTED TO NAV88 DATUM AND BASED ON DATUM NGV29 ELEVATIONS OF 470.50 (2% FLOWLINE), 460.00 (NORMAL POOL) AND 458.00 (NAVIGATION POOL) AS SHOWN IN PLANS OF EXISTING STRUCTURE.

ELEVATION
1"=20'

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO.
SEQUOYAH CO.

GENERAL PLAN AND ELEVATION (SHEET 2 OF 5)
240'-320'-410'-320'-(3) 208' ℄ GIRDER SPANS
40'-0" CL. RDWY. WITH F-SHAPED PARAPETS
℄ STA. 283+38.75, 0° SKEW

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. B002

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PROPOSED R/W
FEBRUARY 2021

285 286 287 288 289

EXISTING DRILLED SHAFT PIER PROTECTION (TYPICAL)

B-5

EXISTING R/W

MATCH LINE STA. 284+00

C.R.L. & ℄ SURVEY S.H.100/U.S.64
N 54° 15'57.84" E

90° TYP.

EXISTING BRIDGE

1'-6" F-SHAPED PARAPET
20'-0" 2%
40'-0" CLEAR ROADWAY
20'-0" 2%
1'-6" F-SHAPED PARAPET

B-6

EXISTING R/W

MATCH LINE STA. 290+00

440 450

PLAN
1"=20'

1914'-0" TOTAL BRIDGE LENGTH

320'-0" 208'-0" 208'-0"

PROFILE GRADE LINE

℄ PIER NO. 4
STA. 286+71.75

℄ PIER NO. 5
STA. 288+79.75

EXP. EXP. FIX.

ORDINARY LOW WATER NAVIGATION POOL ELEVATION 458.39 ①

NORMAL POOL ELEVATION 460.39 ①

ORDINARY HIGH WATER ELEVATION xxx.xx

MEAN HIGHWATER ELEVATION 463.39 ①

100-YEAR FLOOD ELEVATION 480.73

EXISTING DRILLED SHAFT PIER PROTECTION (TYPICAL)

① ELEVATIONS SHOWN CONVERTED TO NAV88 DATUM AND BASED ON DATUM NGV29 ELEVATIONS OF 460.00 (NORMAL POOL) AND 458.00 (NAVIGATION POOL) AS SHOWN IN PLANS OF EXISTING STRUCTURE.

EXISTING GROUND LINE AT C.R.L.

ELEVATION
1"=20'

540 530 520 510 500 490 480 470 460 450 440 430 420 410 400 390 380

285 286 287 288 289

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

GENERAL PLAN AND ELEVATION (SHEET 3 OF 5)
240'-320'-410'-320'-(3) 208' ℄ GIRDER SPANS
40'-0" CL. RDWY. WITH F-SHAPED PARAPETS
℄ STA. 283+38.75 0° SKEW

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. B003

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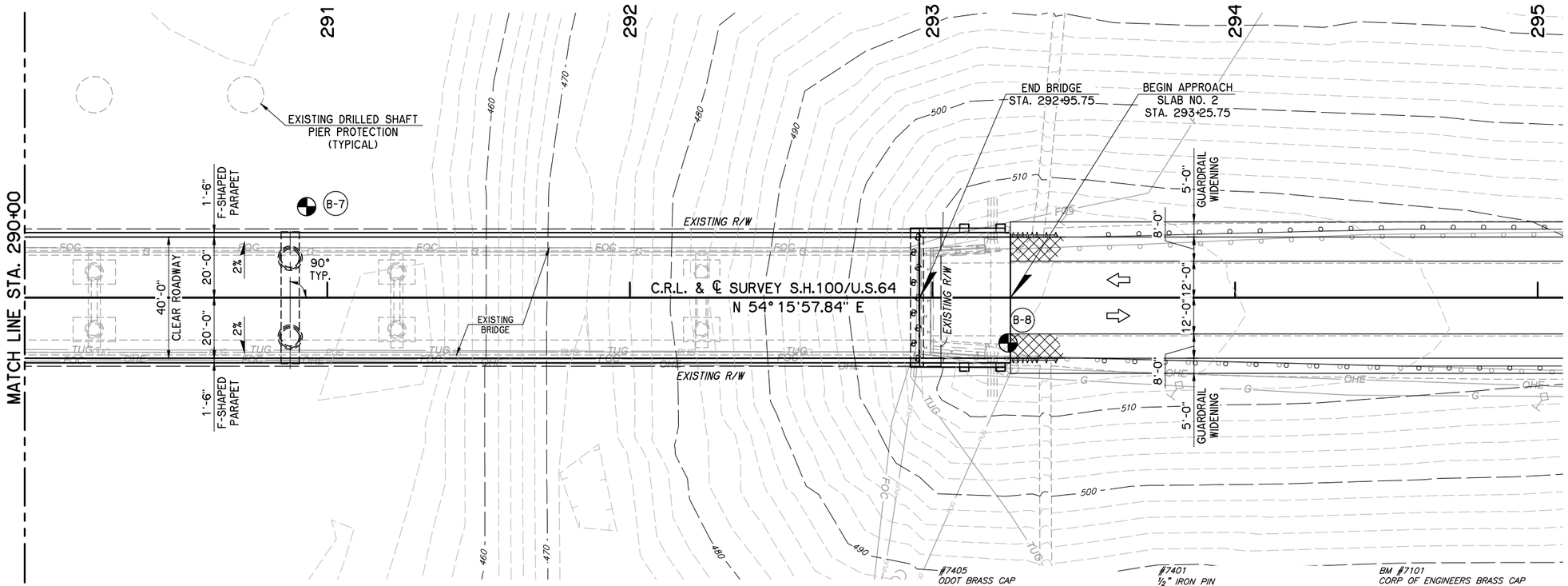
PROPOSED R/W
FEBRUARY 2021



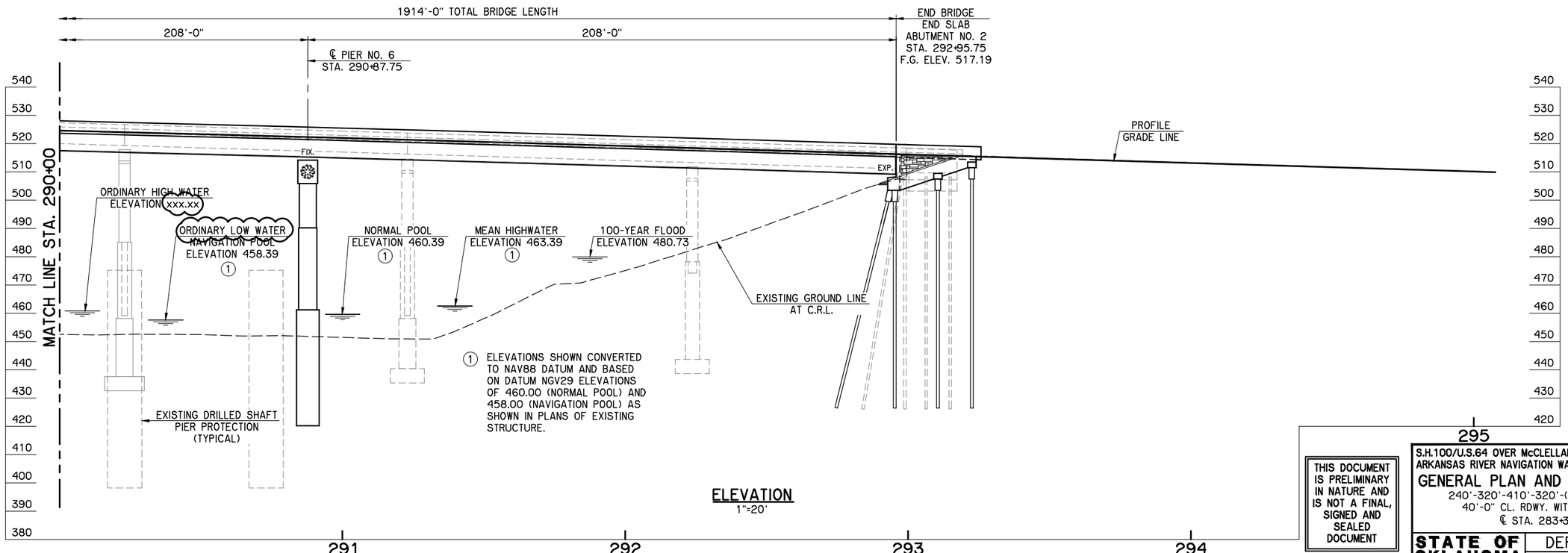
PLAN
1"=20'

#7405
ODOT BRASS CAP
STA. 292+47 371' LT. ELEV.=474.65

#7401
½" IRON PIN
STA. 292+70 336' LT. ELEV.=472.97

BM #7101
CORP OF ENGINEERS BRASS CAP
STA. 297+51 87' LT. ELEV.=488.94

BM #201
CHISELED SQUARE ON HEADWALL
STA. 302+05 54' LT. ELEV.=489.55



ELEVATION
1"=20'

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

GENERAL PLAN AND ELEVATION (SHEET 4 OF 5)

240'-320'-410'-320'-(3) 208' ℄ GIRDER SPANS
40'-0" CL. RDWY. WITH F-SHAPED PARAPETS
℄ STA. 283+38.75, 0° SKEW

Design	CEG
Detail	DRB
Check	

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. B004

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PROPOSED R/W
FEBRUARY 2021

SUMMARY OF BRIDGE QUANTITIES

ITEM DESCRIPTION	UNIT	ABUTMENTS	PIERS	SUPERSTR.	APPR. SLABS	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	C.Y.					
CLSM BACKFILL	C.Y.					
APPROACH SLAB	S.Y.					
SAW-CUT GROOVING	S.Y.					
42" F-SHAPED PARAPET	L.F.					
STRUCTURAL STEEL	LB.					
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA.					
STAINLESS STEEL EXP. BEARING ASSEMBLY	EA.					
ELASTOMERIC COATING	S.F.					
CLASS AA CONCRETE	C.Y.					
CLASS A CONCRETE	C.Y.					
REINFORCING STEEL	LB.					
EPOXY COATED REINFORCING STEEL	LB.					
PILES, FURNISHED (HP12x53)	L.F.					
PILES, DRIVEN (HP12x53)	L.F.					
PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.					
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.					
DRILLED SHAFTS 96" DIAMETER	L.F.					
CROSSHOLE SONIC LOGGING	EA.					
THERMAL INTEGRITY PROFILER	EA.					
MODULAR EXPANSION JOINTS	L.F.					
SEALER CRACK PREPARATION	L.F.					
SEALER RESIN	GAL.					
TYPE I-A FILTER BLANKET	TON					
6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.					
6" NON-PERF. PIPE UNDERDRAIN RND.	L.F.					
REMOVAL OF EXISTING BRIDGE STRUCTURE	L.SUM					
(SP) BRIDGE NAVIGATION LIGHTING	L.SUM					

DESIGN DATA

LOAD AND RESISTANCE FACTOR DESIGN

CONCRETE CLASS AA	f'c = 4 K.S.I.
CONCRETE CLASS A	f'c = 3 K.S.I.
REINFORCING STEEL (GRADE 60)	fy = 60 K.S.I.
STRUCTURAL STEEL M270 (GRADE 50W)	Fy = 50 K.S.I.
STRUCTURAL STEEL M270 (GRADE HPS 70W)	Fy = 70 K.S.I.
STAINLESS STEEL A240 (TYPE 316)	Fy = 30 K.S.I.

LOADING:
HL-93 OR OKLAHOMA OVERLOAD TRUCK OR TYPE 315 OVERLOAD TRUCK
20 PSF FUTURE WEARING SURFACE
5 PSF STAY-IN-PLACE FORMS

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

HL93 INVENTORY RATING FACTOR: x.xx
HL93 OPERATING RATING FACTOR: x.xx

INDEX OF SHEETS

STANDARDS

FSHP-42-2
LECS-4-2
PUD-3-3
HP1-2
LTU-4-0

FOUNDATION DATA

ABUTMENTS

DESIGN CRITERIA	ABUTMENT 1	ABUTMENT 2
FACTORED PILE REACTION (HP 12x53) PILE LENGTH		

PIERS

DESIGN CRITERIA	PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 4	PIER NO. 5	PIER NO. 6
DIAMETER	96"	96"	96"	96"	96"	96"
MINIMUM DEPTH INTO ROCK DEPTH OF ROCK NEGLECTED FOR FRICTION						
UNIT BEARING RESISTANCE BEARING RESISTANCE FACTOR FACTORED BEARING RESISTANCE						
UNIT FRICTION RESISTANCE FRICTION RESISTANCE FACTOR FACTORED FRICTION RESISTANCE						
TOTAL FACTORED RESISTANCE TOTAL FACTORED REACTION						

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.

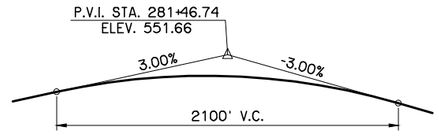
HYDRAULIC SUMMARY

TOTAL DRAINAGE AREA = 85,840.00 SQ. MILES
CONTROLLED DRAINAGE AREA = 647.00 SQ. MILES
EFFECTIVE DRAINAGE AREA = 85,193.00 SQ MILES

FREQUENCY (YEARS)	DISCHARGE (CFS)	WATER SURFACE ELEVATION (FT)	VELOCITY (FPS)	CONTR. SCOUR (FT)	PIER SCOUR (FT)	TOTAL SCOUR (FT)
2	168000	460.99	8.16			
5	265000	467.24	9.25			
10	317000	470.34	9.69			
25	394000	474.52	10.30			
50	452000	478.45	10.23	7.04	26.71	33.75
100	509000	480.73	10.67			
500	645000	484.99	11.89			
172 (OT)	533582	481.49	10.93	7.79	26.91	34.69

LOW BEAM ELEVATION = 509.78

NOTE:
FOUNDATION DESIGN BASED ON BORINGS TO NON-ERODIBLE ROCK AND NOT COMPUTED SCOUR DEPTHS.



VERTICAL CURVE DATA

PREPARED BY:

WHITE ENGINEERING ASSOCIATES, INC.

XXXXXXXX
OKLAHOMA LICENSE NO. XXXXX

DATE

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO.
SEQUOYAH CO.

GENERAL PLAN AND ELEVATION (SHEET 5 OF 5)
245'-322.5'-400'-322.5'-(3) 212' ℞ GIRDER SPANS
40'-0" CL. RDWY. WITH F-SHAPED PARAPETS
℄ STA. 283+36.38, 0° SKEW

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. B005

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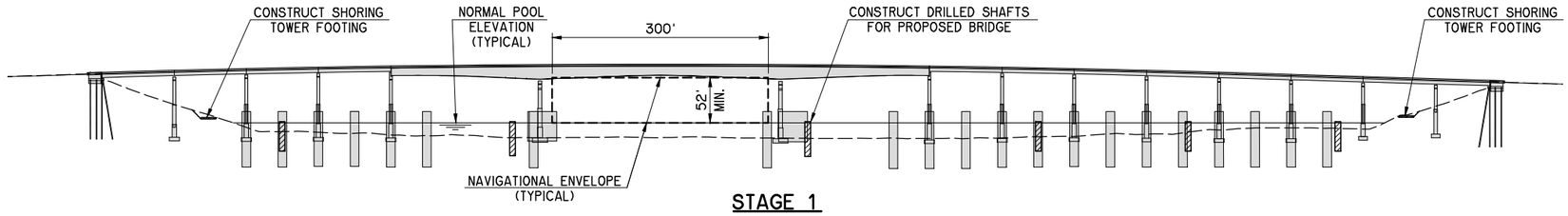
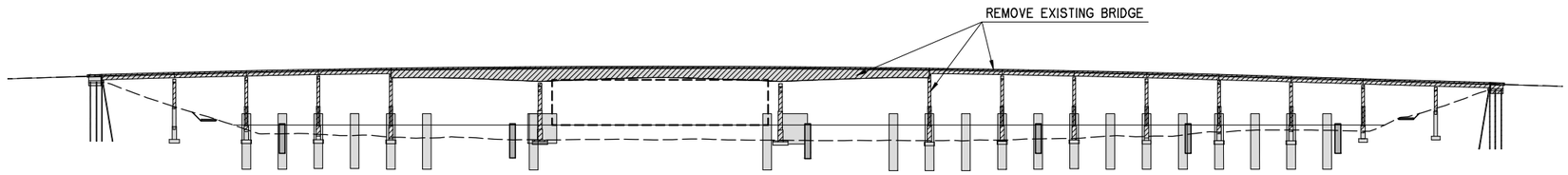
PROPOSED R/W
FEBRUARY 2021



STAGE 1



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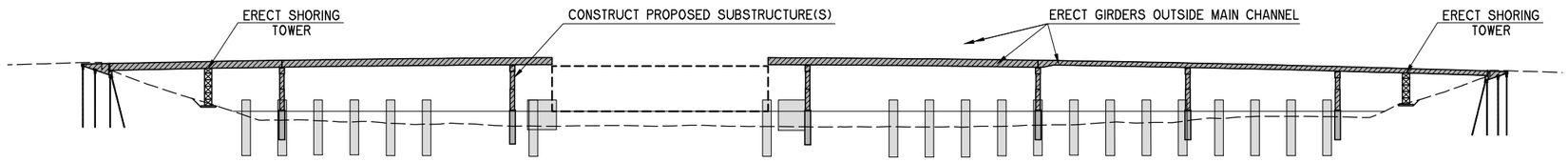

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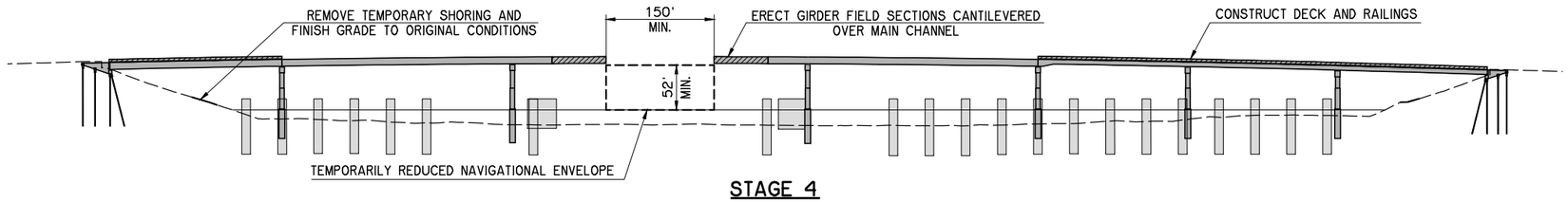

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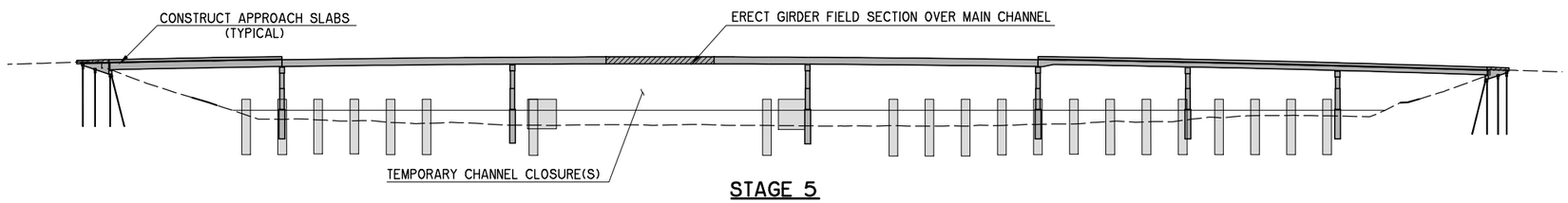

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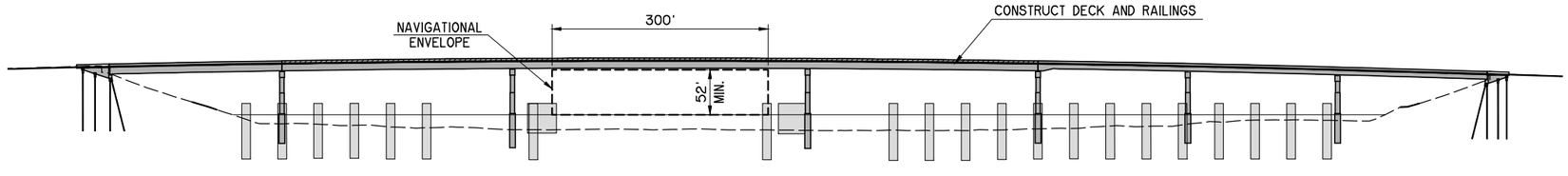

STAGE 6

BRIDGE CONSTRUCTION SEQUENCE NOTES

STAGE 1:
1. CONSTRUCT NEW DRILLED SHAFTS AND TEMPORARY SHORING FOOTINGS

STAGE 2:
1. REMOVE EXISTING BRIDGE

STAGE 3:
1. CONSTRUCT NEW PIERS AND ABUTMENTS
2. ERECT GIRDERS FOR SPAN 1 AND SPANS 5 THRU 7
3. ERECT GIRDERS FOR SPANS 2 AND 4 AS SHOWN

STAGE 4:
1. CONSTRUCT NEW DECK AND RAILINGS ON SPAN 1 AND SPANS 5 THRU 7
2. ERECT CANTILEVERED GIRDER FIELD SECTIONS FOR SPAN 3 OVER THE NAVIGATION CHANNEL

STAGE 5:
1. ERECT FINAL GIRDER FIELD SECTION FOR SPAN 3 OVER THE NAVIGATION CHANNEL
2. CONSTRUCT THE APPROACH SLABS

STAGE 6:
1. CONSTRUCT NEW DECK AND RAILINGS ON SPANS 2 THRU 4

LEGEND

CONSTRUCTION ACTIVITY

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MUSKOGEE CO. SEQUOYAH CO.

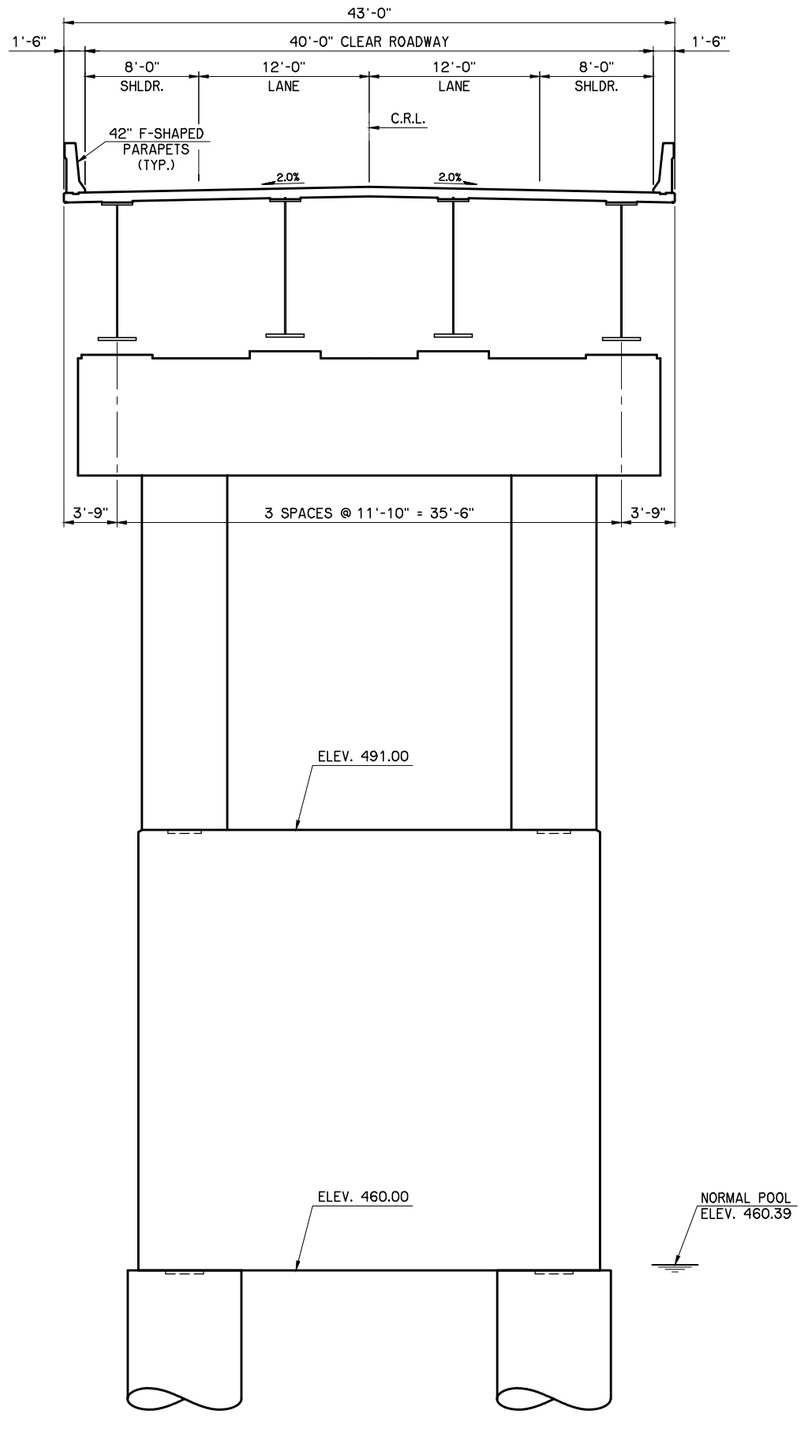
SEQUENCE OF BRIDGE CONSTRUCTION

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. B006

PROPOSED R/W
FEBRUARY 2021



TYPICAL BRIDGE SECTION

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

BRIDGE TYPICAL SECTION

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA — DEPARTMENT OF TRANSPORTATION

JOB PIECE NO. 32100(04) — SHEET NO. B007

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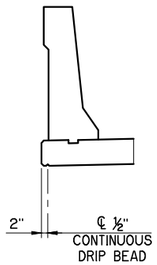
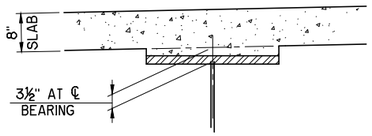
PROPOSED R/W
FEBRUARY 2021

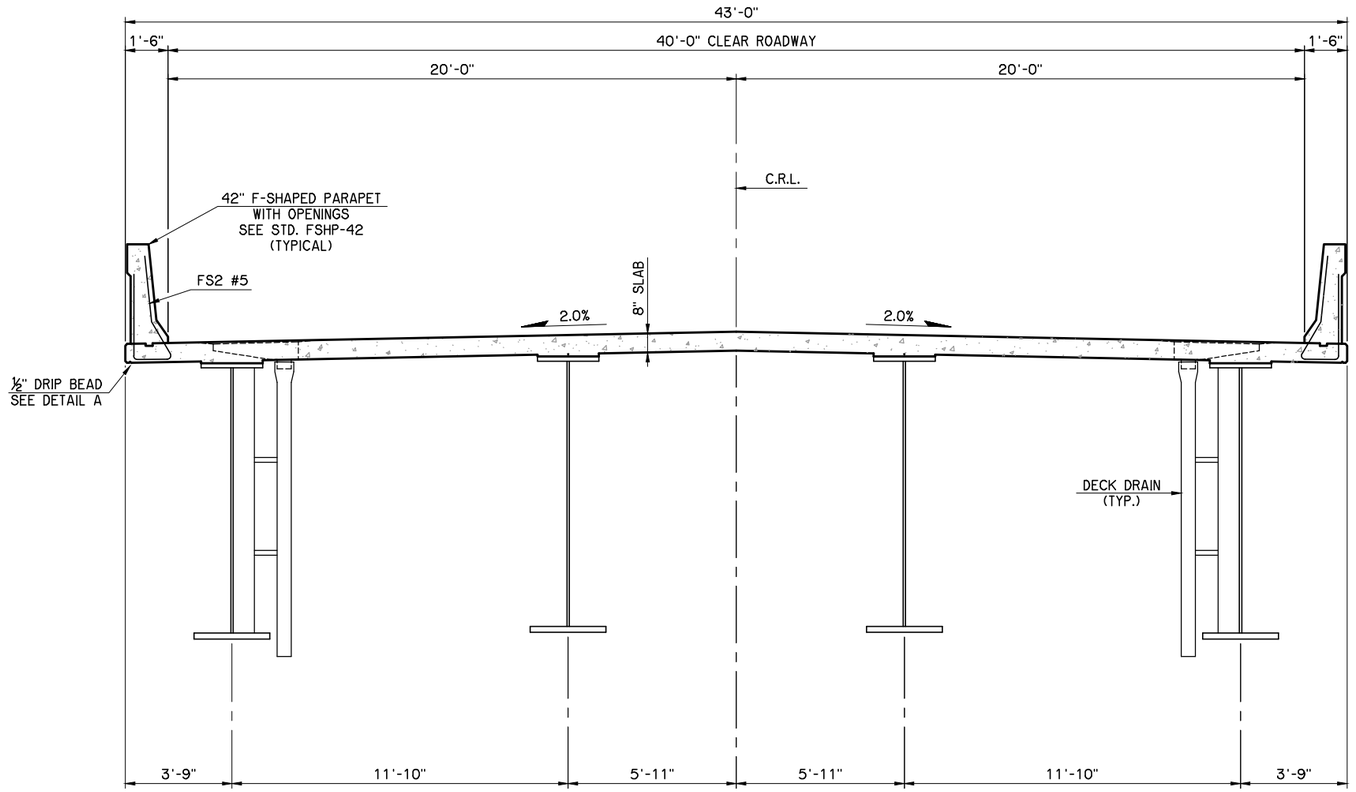


DETAIL A



GIRDER HAUNCH DETAIL

NOTE:
PLAN QUANTITIES FOR CLASS AA CONCRETE INCLUDE GIRDER HAUNCHES. THE HAUNCH HEIGHT SHOWN IS THE THEORETICAL HAUNCH HEIGHT MEASURED FROM THE BOTTOM OF THE DECK SLAB TO THE TOP OF THE GIRDER WEB, AND VARIES ACROSS THE SPAN. DETERMINE THE ACTUAL HAUNCH HEIGHT (ACCOUNTING FOR GIRDER 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.



TYPICAL CROSS SECTION

ALTERNATE A

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO.
SEQUOYAH CO.

Design	RMF	
Detail	DRB	
Check		

SUPERSTRUCTURE DETAILS
SHEET 1 OF (X)
TYPICAL CROSS SECTION

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04)
SHEET NO. B008

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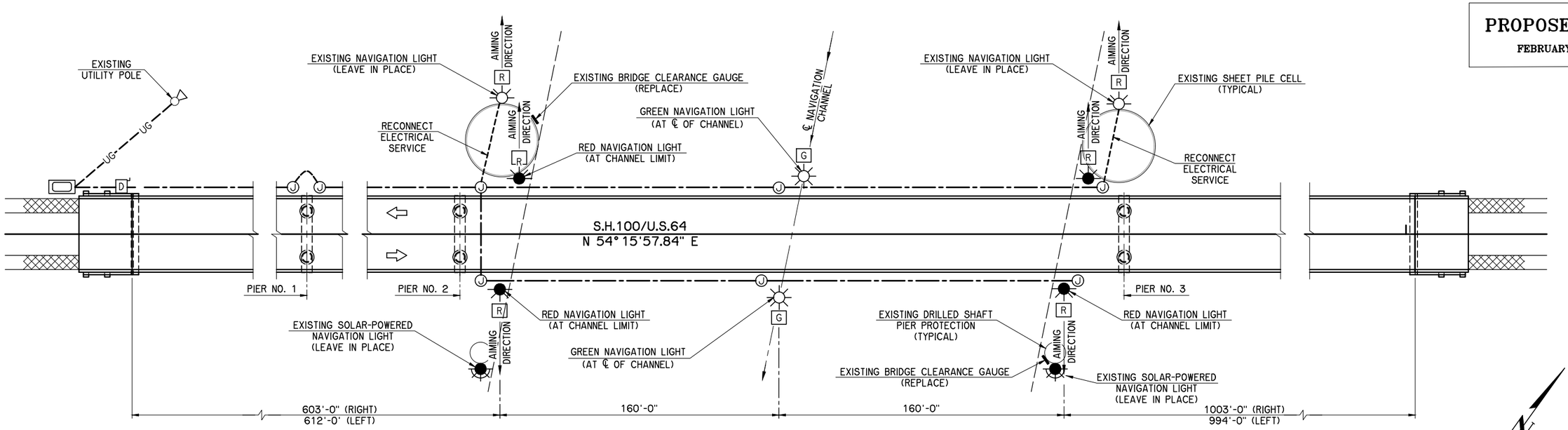
PROPOSED R/W
FEBRUARY 2021



NAVIGATION LIGHTING PLAN

NAVIGATION LIGHTING AND MARKING NOTES

PERFORM ALL ELECTRICAL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND THE SPECIAL PROVISION "BRIDGE NAVIGATION LIGHTING". COOPERATE WITH THE ENGINEER AND THE xxxxxxx xxxxxx UTILITY COMPANY TO KEEP THE EXISTING NAVIGATION LIGHTING SYSTEM AT PIER PROTECTION IN SERVICE WHILE PERFORMING THE WORK SPECIFIED IN THIS CONTRACT UNTIL NAVIGATION LIGHTS ON NEW BRIDGE ARE FULLY OPERATIONAL. FOR TYPICAL ELECTRICAL DETAILS, REFERENCE STANDARDS:

CCD1-1, CCD2-1, PBD1-1, SCD1-1, SPD1-1

FURNISH NAVIGATION LIGHTS, RETROREFLECTIVE PANELS, AND CLEARANCE GAUGES COMPLYING WITH THE U.S. DEPARTMENT OF TRANSPORTATION, U.S. COAST GUARD, BRIDGE ADMINISTRATION DIVISION REQUIREMENTS AS SPECIFIED IN 33 CFR 118 - BRIDGE LIGHTING AND OTHER SIGNALS, LATEST EDITION.

PROVIDE 120 VOLT AC INPUT "TIDELAND SIGNAL" MODEL MLED-140 SIGNAL LANTERNS, OR APPROVED EQUAL, WITH EITHER A GREEN 360° OR RED 180° ACRYLIC FRESNEL LENS FOR INVERTED USE.

FURNISH THE NAVIGATION LIGHT ASSEMBLY WITH THE PROPER NAVIGATION LIGHT AND SWING ARM ASSEMBLY OF THE PROPER LENGTH AND WITH REQUIRED SPECIAL MOUNTING BRACKETS AND HARDWARE INCLUDED AT NO ADDITIONAL COST TO THE DEPARTMENT. FABRICATE THE SWING ARM ASSEMBLY AS SHOWN ON THE PLANS. THE SUPPLIER OF THE SWING ARM ASSEMBLY SHALL FURNISH THE ANCHOR PLATE COMPLETE WITH THE SWING ARM OR PROVIDE CONNECTION DESIGN AND/OR DETAILS. INCLUDE ALL COSTS OF INSTALLATION SUPERVISION BY THE NAVIGATION LIGHT ASSEMBLY SUPPLIER(S) IN OTHER ITEMS OF WORK, IF UTILIZED. A POSSIBLE SUPPLIER OF THIS ASSEMBLY IS:

HALLSTEN CORPORATION OF SACRAMENTO, CA 95841
TELEPHONE: (916)331-7211
FAX: (916)331-7223

MATERIAL REQUIREMENTS FOR THE NAVIGATION LIGHT ASSEMBLY ARE AS FOLLOWS:

(1) PROVIDE SWING ARM ANCHOR PLATE CONFORMING TO AASHTO M270 (ASTM A709), GRADE 50W (WEATHERING STEEL, CHARPY V-NOTCH TESTING NOT REQUIRED). GALVANIZE ANCHOR PLATE AFTER FABRICATION.
(2) PROVIDE CONCRETE ANCHORS HAVING A MINIMUM TENSILE CAPACITY OF 5,000 LBS. AND A MINIMUM SHEAR CAPACITY OF 10,000 LBS.
(3) PROVIDE RETROREFLECTIVE PANELS AND CLEARANCE GAUGE PANELS COMPOSED OF 0.063" THICK ALUMINUM ALLOY FLAT SHEET CONFORMING TO ASTM B209, ALLOY 6061-T6 OR 5052-H38.
(4) PROVIDE RETROREFLECTIVE PANEL MOUNT PLATE CONFORMING TO ASTM B209, ALLOY 6061 OR 6063-T6, OR AASHTO M270 (ASTM A709), GRADE 36 (GALVANIZED).
(5) PROVIDE BOLTS CONFORMING TO ASTM A193, GRADE B8M, CLASS 2 (TYPE 316 STAINLESS STEEL).
(6) PROVIDE LOCK NUTS CONFORMING TO ASTM A194, GRADE 8M (TYPE 316 STAINLESS STEEL).
(7) PROVIDE WASHERS COMPOSED OF TYPE 316 STAINLESS STEEL.
(8) FURNISH MISCELLANEOUS HARDWARE COMPOSED OF NON-CORROSIVE MATERIALS ISOLATE ALUMINUM COMPONENTS FROM DISSIMILAR MATERIALS THROUGH THE USE OF NEOPRENE OR BITUMINOUS COATINGS.

PROVIDE ALL JUNCTION AND PULL BOXES SUITABLE FOR DAMP LOCATION TO PREVENT MOISTURE ENTERING OR ACCUMULATING WITHIN THE BOX. PROVIDE CONTINUOUS SUPPORT FOR ALL GALVANIZED STEEL CONDUIT USING GALVANIZED STRAPS CLAMPED TO BRIDGE SURFACES.

PROVIDE CLEARANCE GAUGES AT LOCATIONS SHOWN USING 36 SERIES E NUMERALS. ATTACH GAUGE PANELS TO CONCRETE COLUMN SURFACES WITH STAINLESS STEEL EXPANSION ANCHORS.

ALL REMOVED NAVIGATION LIGHTS AND BRACKETS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

NOTE:
SEE SHEET XXX FOR TYPICAL NAVIGATION LIGHT ASSEMBLY DETAILS.

LEGEND

—UG—	1" SCH. 80 PVC CONDUIT (UNDERGROUND)
	3/4" GALVANIZED STEEL CONDUIT (EXPOSED) WITH TWO NO. 10 AWG CONDUCTORS
	3/4" FLEXIBLE CONDUIT (EXPOSED) WITH CONDUCTORS AT BRIDGE EXPANSION JOINT
J	WEATHER PROOF JUNCTION BOX (6"x6"x4" GALV.) SPACED 200' MAX. FOR EASY PULL
D	DISCONNECT SWITCH
	PULL BOX (SEE STD. PBD1)
	GREEN NAVIGATION LIGHT (360 DEGREE HORIZONTAL ARC)
	RED NAVIGATION LIGHT (180 DEGREE HORIZONTAL ARC)
	RED SOLAR POWERED NAVIGATION LIGHT
	EXISTING RED NAVIGATION LIGHT
R	RED SQUARE RETROREFLECTIVE PANEL
G	GREEN SQUARE RETROREFLECTIVE PANEL
	CLEARANCE GAUGE

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

NAVIGATION LIGHTING DETAILS
SHEET 1 OF 2

Design	CEG	
Detail	DRB	
Check		

WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04) SHEET NO. B009

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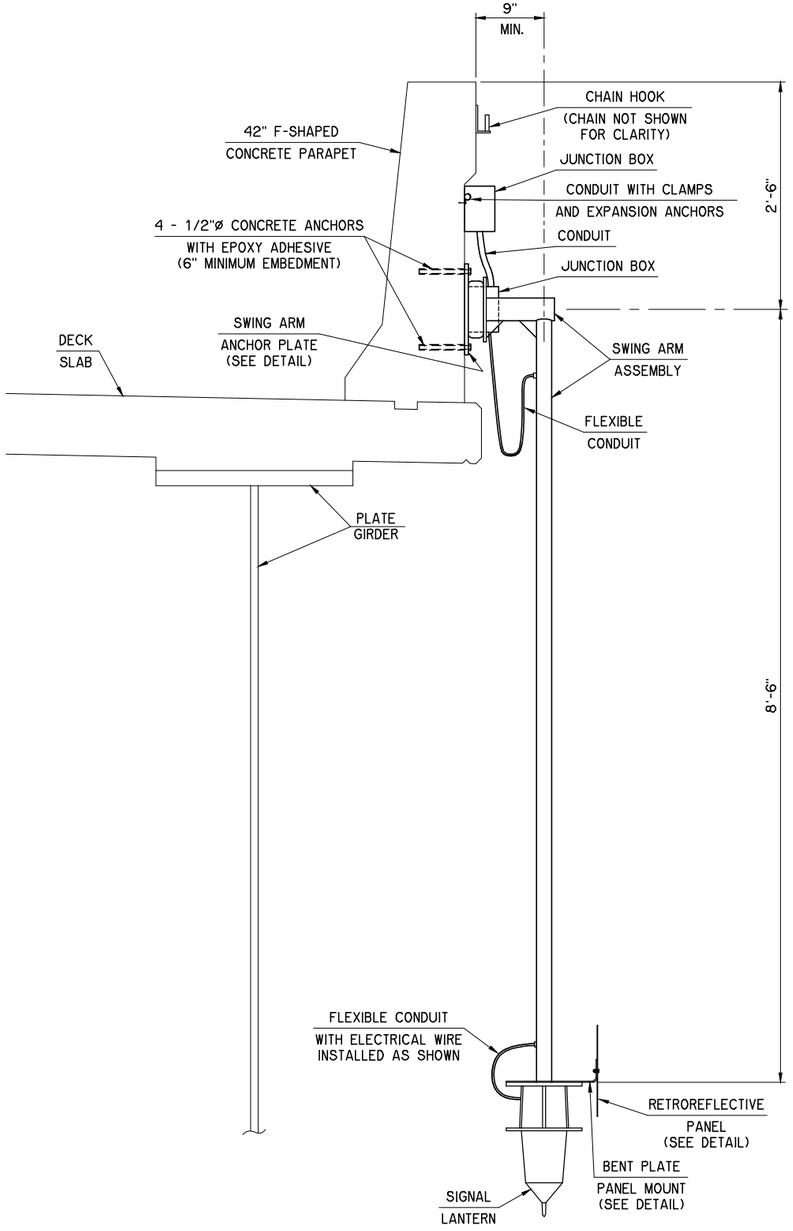
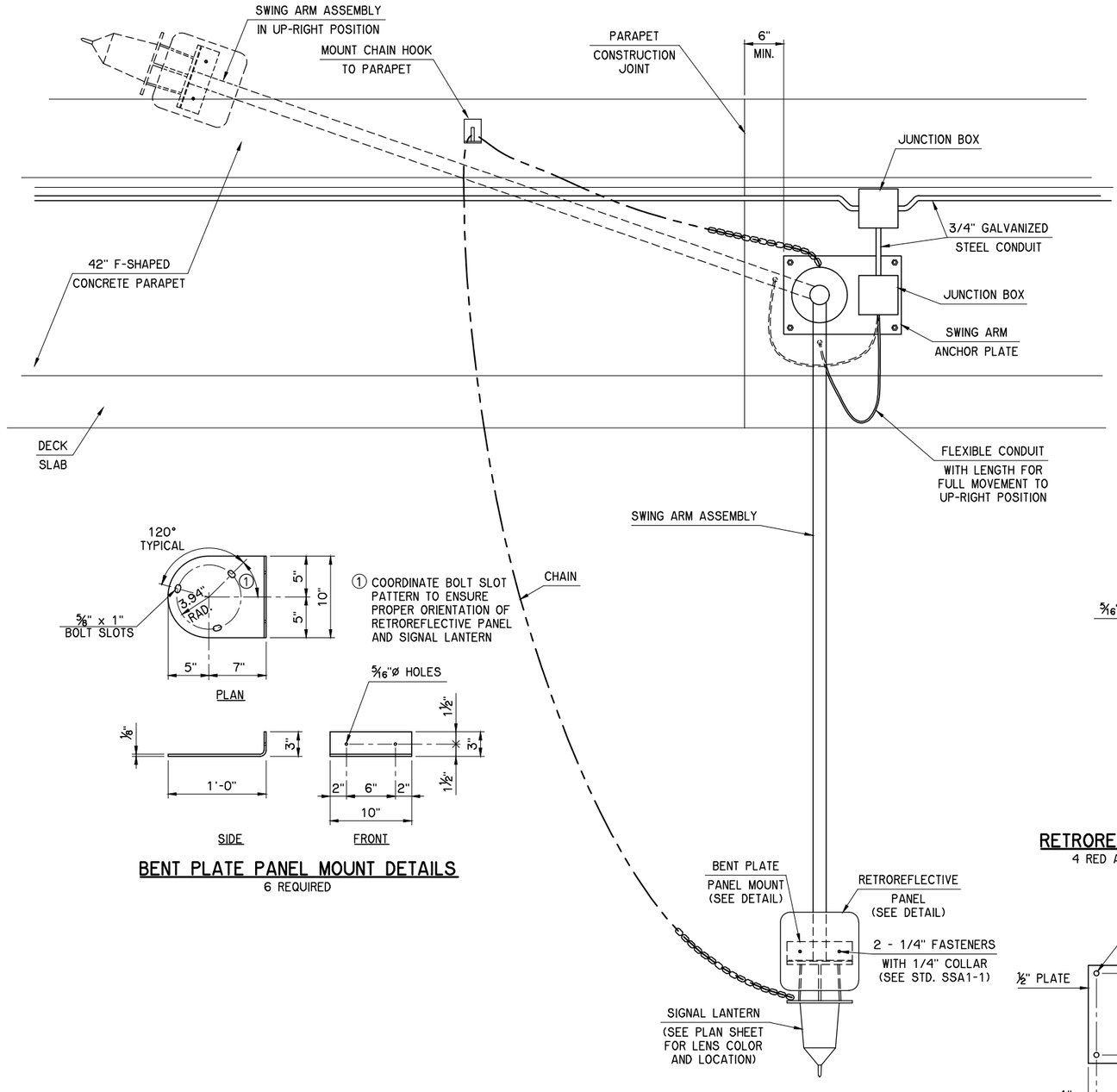
PROPOSED R/W
FEBRUARY 2021



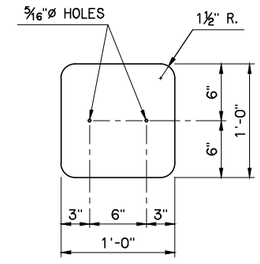
SIDE



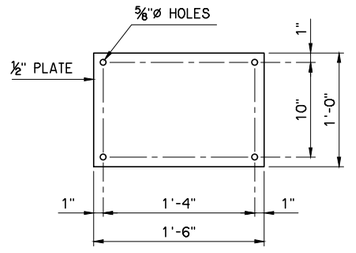
ELEVATION

BENT PLATE PANEL MOUNT DETAILS
6 REQUIRED

① COORDINATE BOLT SLOT PATTERN TO ENSURE PROPER ORIENTATION OF RETROREFLECTIVE PANEL AND SIGNAL LANTERN



RETROREFLECTIVE PANEL DETAIL
4 RED AND 2 GREEN PANELS REQUIRED (6 TOTAL)



SWING ARM ANCHOR PLATE DETAIL
6 REQUIRED

NAVIGATION LIGHT AND SWING ARM ASSEMBLY DETAILS
6 REQUIRED

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S.H.100/U.S.64 OVER McCLELLAN-KERR ARKANSAS RIVER NAVIGATION WATERWAY
MUSKOGEE CO. SEQUOYAH CO.

NAVIGATION LIGHTING DETAILS
SHEET 2 OF 2

Design	CEG	
Detail	DRB	
Check		

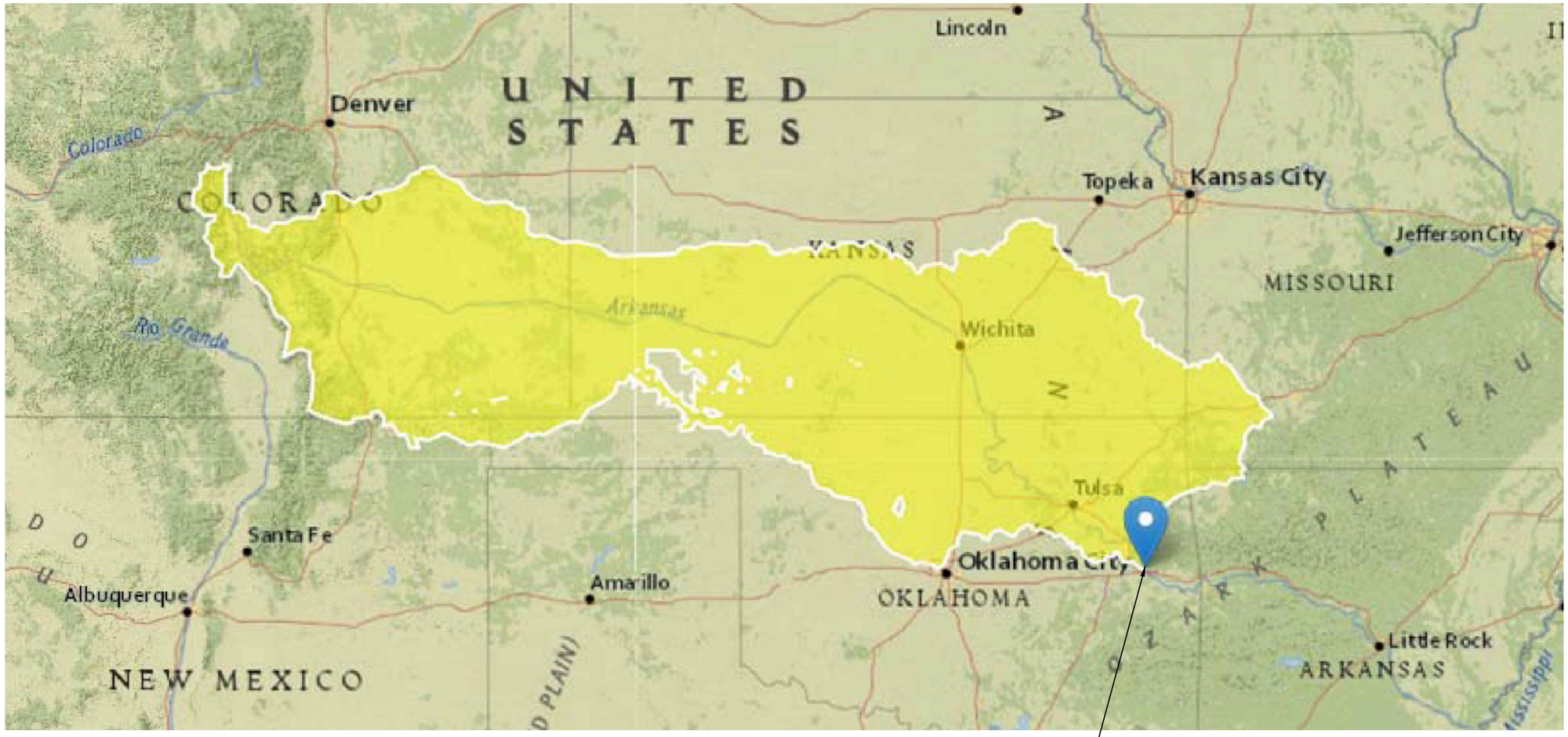
WHITE ENGINEERING ASSOCIATES

STATE OF OKLAHOMA | DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 32100(04) | SHEET NO. B010

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED
R/W

FEBRUARY 2021



RECEIVING WATERS =
McCLELLAN KERR ARKANSAS
RIVER NAVIGATION SYSTEM

DESIGN	WS	10/19	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	RR	10/19	
CHECKED	WS	10/19	DRAINAGE MAP
APPROVED			
SQUAD		ENGINEERS	

COUNTY MUSK./SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. R001

HUB Engineers
Time of Plot: 2/26/2021 9:46 AM Plot Style: --HUB--HALF.CTB
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STORM WATER MANAGEMENT PLAN

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED R/W

FEBRUARY 2021

SITE DESCRIPTION

PROJECT LIMITS: SH-100 OVER McCLELLAN KERR ARKANSAS RIVER NAVIGATION SYSTEM APPROXIMATELY 2900 FEET.

PROJECT DESCRIPTION: BRIDGE AND APPROACHES

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: OKLARED FINE SANDY LOAM KIOMATIA LOAMY FINE

TOTAL AREA OF THE CONSTRUCTION SITE: XX.X ACRES

ESTIMATED AREA TO BE DISTURBED: XX.X ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: XX.X ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: XX.X ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: XX.X

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 35°31'09"N, -95°07'34"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: ARKANSAS RIVER-ROBERT S. KERR LAKE

SENSITIVE WATERS OR WATERSHEDS: YES [X] NO [ ]

303(d) IMPAIRED WATERS: YES [X] NO [ ]

IF YES, LIST IMPAIRMENT: TURBIDITY

LOCATED IN A TMDL: YES [ ] NO [X]

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [ ] NO [X]

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.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- _____ TEMPORARY SEEDING
- _____ PERMANENT SODDING, SPRIGGING OR SEEDING
- __X__ VEGETATIVE MULCHING
- _____ SOIL RETENTION BLANKET
- __X__ PRESERVATION OF EXISTING VEGETATION

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
- __X__ TEMPORARY SILT FENCE
- __X__ TEMPORARY SILT DIKES
- _____ TEMPORARY FIBER LOG
- _____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- _____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- _____ ROCK FILTER DAMS
- _____ TEMPORARY SLOPE DRAIN
- __X__ PAVED DITCH W/ DITCH LINER PROTECTION
- _____ TEMPORARY DIVERSION CHANNELS
- _____ TEMPORARY SEDIMENT BASINS
- _____ TEMPORARY SEDIMENT TRAPS
- _____ TEMPORARY SEDIMENT FILTERS
- __X__ TEMPORARY SEDIMENT REMOVAL
- __X__ RIP RAP
- _____ INLET SEDIMENT FILTER
- _____ TEMPORARY BRUSH SEDIMENT BARRIERS
- _____ SANDBAG BERMS
- _____ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- __X__ HAUL ROADS DAMPENED FOR DUST CONTROL
- __X__ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- __X__ 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 AND CONTROL
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, SEPTEMBER 13, 2017.

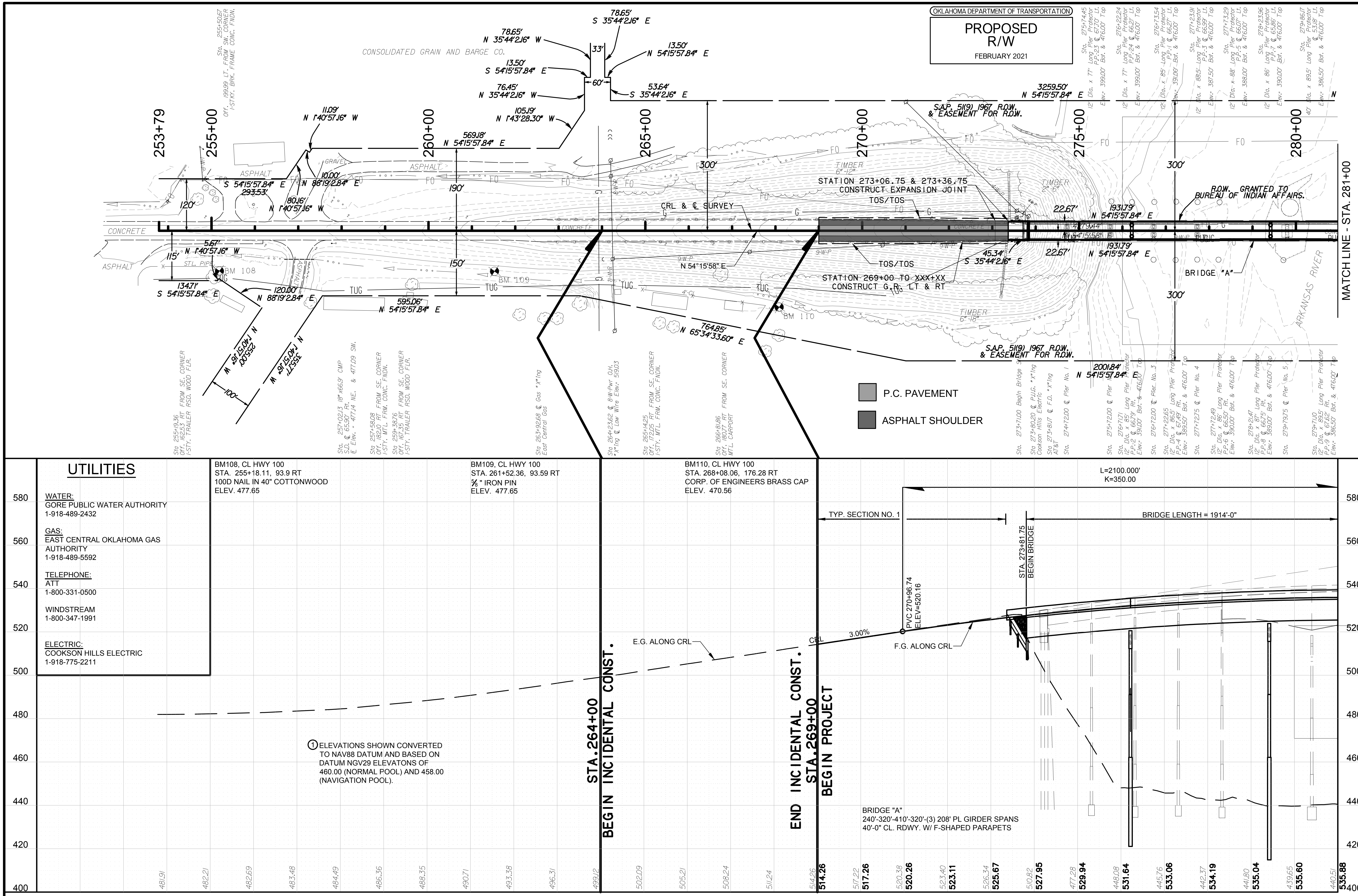
DESIGN	WS	10/19
DRAWN	RR	10/19
CHECKED	WS	10/19
APPROVED		
SQUAD	hub	ENGINEERS

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

STORM WATER MANAGEMENT PLAN

COUNTY MUSK./SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. R002

REVISED 08 / 18 / 2017



OKLAHOMA DEPARTMENT OF TRANSPORTATION
PROPOSED R/W
FEBRUARY 2021
CONSOLIDATED GRAIN AND BARGE CO.
Sta. 255+50.67 Off. 199.99 LT. FROM SW. CORNER 1-STKY. BRK. FRAME CONC. FNDN.
253+79
255+00
260+00
265+00
270+00
275+00
280+00
78.65' S 35°44'2.16" E
78.65' N 35°44'2.16" W
33'
13.50' N 54°15'57.84" E
13.50' S 54°15'57.84" E
60'
76.45' N 35°44'2.16" W
53.64' S 35°44'2.16" E
105.19' N 1°43'28.30" W
11.09' N 1°40'57.16" W
569.18' N 54°15'57.84" E
3259.50' N 54°15'57.84" E
S.A.P. 51(9) 1967 R.O.W. & EASEMENT FOR R.O.W.
ASPHALT
GRAVEL
S 54°15'57.84" E 293.53'
10.00' N 88°19'2.84" E
80.16' N 1°40'57.16" W
120'
190'
300'
TIMBER 6"-12"
TIMBER 2"-6"
STATION 273+06.75 & 273+36.75 CONSTRUCT EXPANSION JOINT
TOS/TOS
CRL & ℄ SURVEY
CONCRETE
22.67'
1931.79' N 54°15'57.84" E
279.44'
N 54°15'58" E
R.O.W. GRANTED TO BUREAU OF INDIAN AFFAIRS.
MATCH LINE - STA. 281+00
5.67' N 1°40'57.16" W
115'
STL. PIPE
BM 108
134.71' S 54°15'57.84" E
120.00' N 88°19'2.84" E
150'
BM 109
TUG
595.06' N 54°15'57.84" E
N 54°15'58" E
9-W-P
STATION 269+00 TO XXX+XX CONSTRUCT G.R. LT & RT
45.34' S 35°44'2.16" E
1931.79' N 54°15'57.84" E
BRIDGE "A"
ARKANSAS RIVER
TIMBER 6"-18"
BM 110
764.85' N 65°34'33.60" E
2001.84' N 54°15'57.84" E
N 1°40'57.16" W 255.00'
N 1°40'57.16" W 355.77'
100'
P.C. PAVEMENT
ASPHALT SHOULDER
Sta 255+19.36 Off. 162.53 RT FROM SE. CORNER 1-STY. TRAILER RSD. WOOD FLR.
Sta. 257+02.13 18"x66.9' CMP S.D. ℄ 65.90' Rt. FL Elev. = 477.14 NE. & 477.09 SW.
Sta 257+58.08 Off. 182.10 RT FROM SE. CORNER 1-STY. MTL. FRM. CONC. FNDN.
Sta 259+38.76 Off. 167.35 RT FROM SE. CORNER 1-STY. TRAILER RSD. WOOD FLR.
Sta 263+92.68 ℄ Gas "X"ing East Central Gas
Sta 264+23.62 ℄ 8-W-Pwr O.H. "X"ing ℄ Low Wire Elev.= 519.03
Sta 265+14.25 Off. 172.05 RT FROM SE. CORNER 1-STY. MTL. FRM. CONC. FNDN.
Sta 266+81.86 Off. 180.77 RT FROM SE. CORNER MTL. CARPORT
Sta. 273+71.00 Begin Bridge
Sta 273+80.20 ℄ P.U.G. "X"ing Cookson Hills Electric
Sta 273+81.17 ℄ F.O. "X"ing AT&T
Sta. 274+72.00 ℄ Pier No. 1
Sta. 275+72.00 ℄ Pier No. 2
Sta. 276+71.71 12' Dia. x 85' Long Pier Protector P.P.-2 ℄ 66.79' Rt. Elev.= 391.00' Bot. & 476.00' Top
Sta. 276+72.00 ℄ Pier No. 3
Sta. 277+22.65 12' Dia. x 86.5' Long Pier Protector P.P.-4 ℄ 67.49' Rt. Elev.= 389.50' Bot. & 476.00' Top
Sta. 277+72.75 ℄ Pier No. 4
Sta. 277+72.49 12' Dia. x 86' Long Pier Protector P.P.-6 ℄ 66.50' Rt. Elev.= 390.00' Bot. & 476.00' Top
Sta. 278+21.47 12' Dia. x 87' Long Pier Protector P.P.-8 ℄ 66.75' Rt. Elev.= 389.00' Bot. & 476.00' Top
Sta. 279+79.75 ℄ Pier No. 5
Sta. 279+71.10 12' Dia. x 89.5' Long Pier Protector P.P.-9 ℄ 67.62' Rt. Elev.= 386.50' Bot. & 476.00' Top
Sta. 275+74.45 12' Dia. x 77' Long Pier Protector P.P.-23 ℄ 67.70' Lt. Elev.= 399.00' Bot. & 476.00' Top
Sta. 276+22.24 12' Dia. x 77' Long Pier Protector P.P.-24 ℄ 66.21' Lt. Elev.= 399.00' Bot. & 476.00' Top
Sta. 276+73.54 12' Dia. x 85' Long Pier Protector P.P.-1 ℄ 66.27' Lt. Elev.= 391.00' Bot. & 476.00' Top
Sta. 277+23.91 12' Dia. x 88.5' Long Pier Protector P.P.-3 ℄ 66.99' Lt. Elev.= 387.50' Bot. & 476.00' Top
Sta. 277+73.29 12' Dia. x 88' Long Pier Protector P.P.-5 ℄ 66.07' Lt. Elev.= 388.00' Bot. & 476.00' Top
Sta. 278+23.96 12' Dia. x 86' Long Pier Protector P.P.-7 ℄ 65.86' Lt. Elev.= 390.00' Bot. & 476.00' Top
Sta. 279+86.17 40' Dia. x 89.5' Long Pier Protector ℄ 53.18' Lt. Elev.= 386.50' Bot. & 476.00' Top
UTILITIES
WATER:
GORE PUBLIC WATER AUTHORITY
1-918-489-2432
GAS:
EAST CENTRAL OKLAHOMA GAS AUTHORITY
1-918-489-5592
TELEPHONE:
ATT
1-800-331-0500
WINDSTREAM
1-800-347-1991
ELECTRIC:
COOKSON HILLS ELECTRIC
1-918-775-2211
BM108, CL HWY 100
STA. 255+18.11, 93.9 RT
100D NAIL IN 40" COTTONWOOD
ELEV. 477.65
BM109, CL HWY 100
STA. 261+52.36, 93.59 RT
5/8" IRON PIN
ELEV. 477.65
BM110, CL HWY 100
STA. 268+08.06, 176.28 RT
CORP. OF ENGINEERS BRASS CAP
ELEV. 470.56
L=2100.000'
K=350.00
TYP. SECTION NO. 1
BRIDGE LENGTH = 1914'-0"
STA. 273+81.75 BEGIN BRIDGE
PVC 270+96.74 ELEV=520.16
3.00%
CRL
E.G. ALONG CRL
F.G. ALONG CRL
STA.264+00 BEGIN INCIDENTAL CONST.
END INCIDENTAL CONST. STA.269+00 BEGIN PROJECT
(1) ELEVATIONS SHOWN CONVERTED TO NAV88 DATUM AND BASED ON DATUM NGV29 ELEVATONS OF 460.00 (NORMAL POOL) AND 458.00 (NAVIGATION POOL).
BRIDGE "A"
240'-320'-410'-320'-(3) 208' PL GIRDER SPANS
40'-0" CL. RDWY. W/ F-SHAPED PARAPETS
580
560
540
520
500
480
460
440
420
400
481.91
482.21
482.69
483.48
484.49
486.36
488.35
490.71
493.38
496.31
499.12
502.09
505.21
508.24
511.24
514.26
514.26
517.22
517.26
520.38
520.26
523.40
523.11
526.34
525.67
510.82
527.95
477.28
529.94
448.08
531.64
445.76
533.06
442.37
534.19
441.80
535.04
439.65
535.60
440.51
535.88
251+00
252+00
253+00
254+00
255+00
256+00
257+00
258+00
259+00
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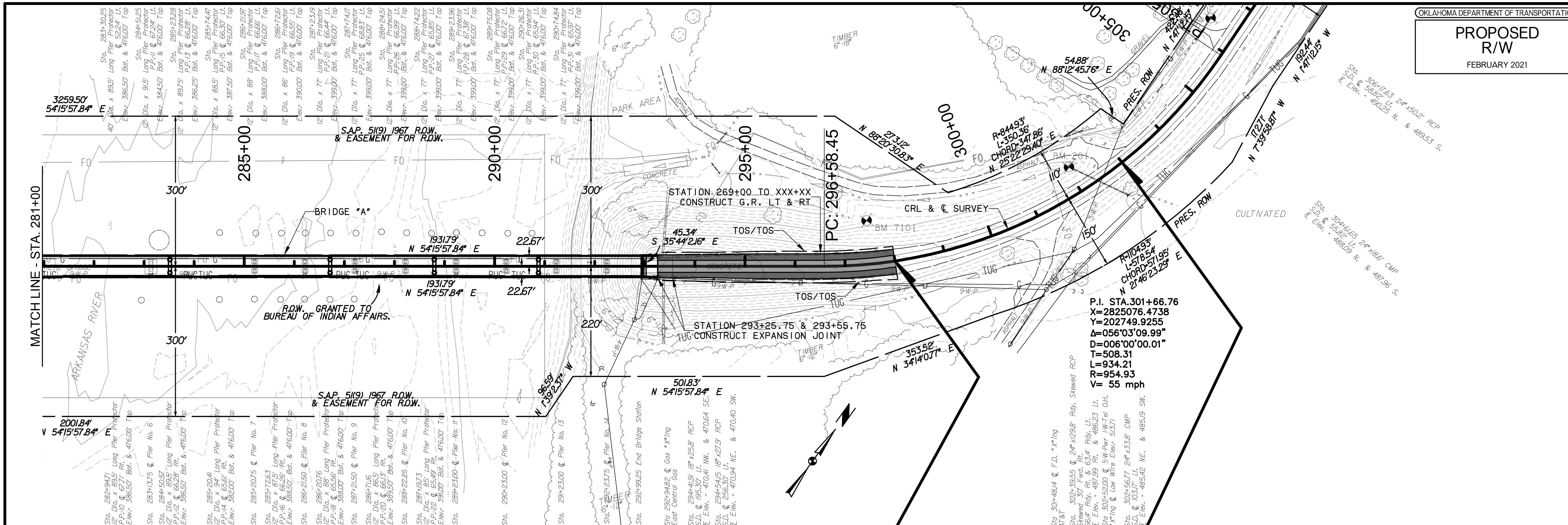
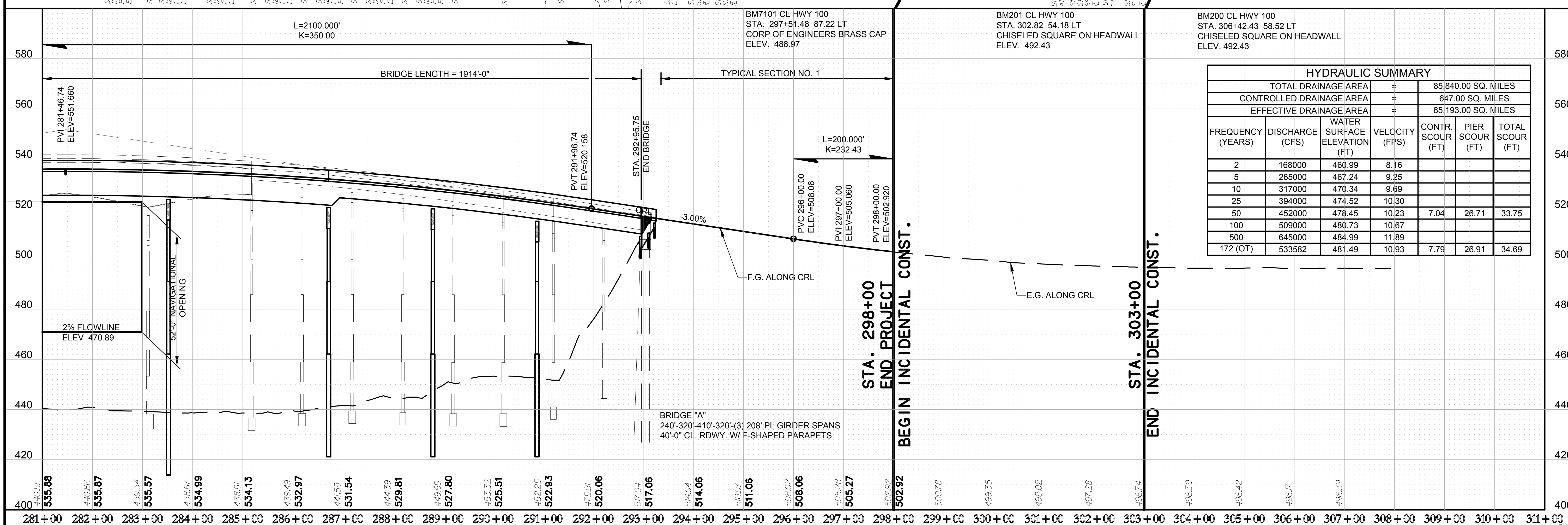
281+00

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED R/W

FEBRUARY 2021





HYDRAULIC SUMMARY

TOTAL DRAINAGE AREA			=	85,840.00 SQ. MILES		
CONTROLLED DRAINAGE AREA			=	647.00 SQ. MILES		
EFFECTIVE DRAINAGE AREA			=	85,193.00 SQ. MILES		
FREQUENCY (YEARS)	DISCHARGE (CFS)	WATER SURFACE ELEVATION (FT)	VELOCITY (FPS)	CONTR. SCOUR (FT)	PIER SCOUR (FT)	TOTAL SCOUR (FT)
2	168000	460.99	8.16			
5	265000	467.24	9.25			
10	317000	470.34	9.69			
25	394000	474.52	10.30			
50	452000	478.45	10.23	7.04	26.71	33.75
100	509000	480.73	10.67			
500	645000	484.99	11.89			
172 (OT)	533582	481.49	10.93	7.79	26.91	34.69

SURVEY DATA SHEETS

MUSKOGEE & SEQUOYAH COUNTY
S.H. 100
SWO 5375(1)
STATE JOB NO. 32100(04)

PROJECT LOCATION

SURVEY CONTROL DATA

1. POSITIONAL CONTROL:

   A. POSITIONAL CONTROL FOR THIS SURVEY IS THE NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM, NAD83 (1993), LAMBERT PROJECTION (NORTH 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 STATIC GPS.

   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: October 15, 2018
SURVEY COMPLETED: January 11, 2019

SURVEY CREW MEMBERS:

Tony Robison, Professional Land Surveyor
Edward Seaton, Professional Land Surveyor
Ryan Thompson, Party Chief
Dakota Robison, Draftsman/Survey Technician
Lucas Standridge, Survey Technician
Cody Sherman, Survey Technician

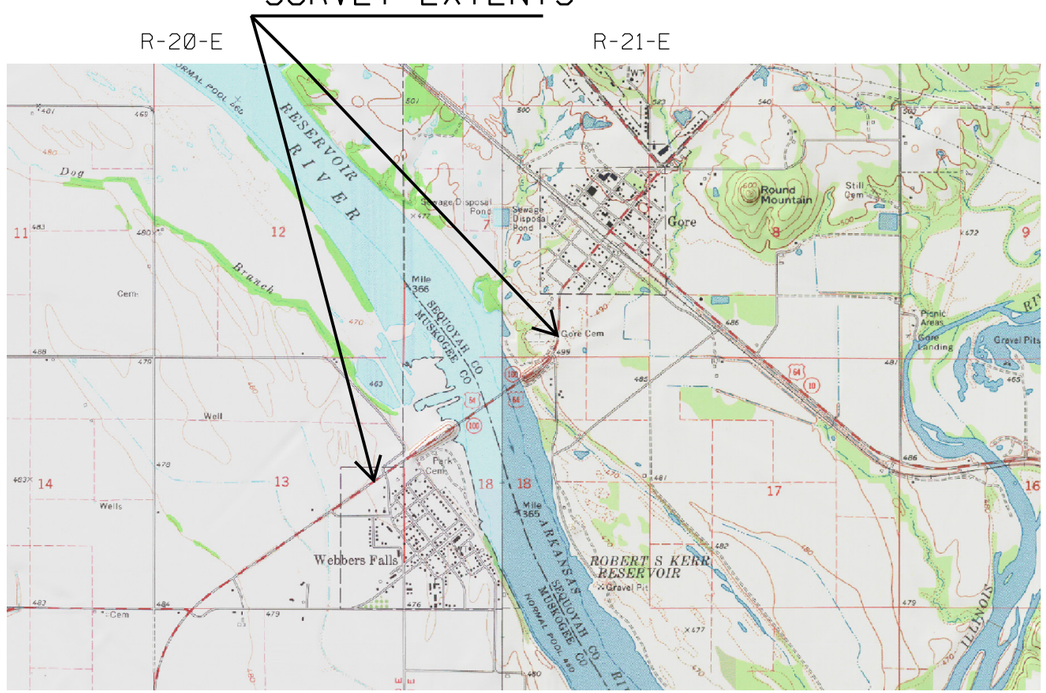
EQUIPMENT:

5	TRIMBLE R8-3 GPS RECIEVER
1	TRIMBLE R8-2 GPS RECIEVER
3	TRIMBLE TSC3 DATA COLLECTOR
1	TRIMBLE TSC2 DATA COLLECTOR
1	TOPCON GPT-2003 TOTAL STATION
1	TRIMBLE M3 TOTAL STATION
1	TRIMBLE DiNi DIGITAL LEVEL

SCALES 1"

SURVEY DATA SHEETS	1" =	50' TOWN
SURVEY DATA SHEETS	1" =	100'
GEOMETRIC DATA SHEETS	1" =	500'

SURVEY EXTENTS



MUSKOGEE CO/SEQUOYAH CO

PROJECT LENGTH 5,413 Ft. 1.0 MI.

BEGINNING STATION : 253+79.01
ENDING STATION : 307+92.44

INDEX OF SURVEY SHEETS

"CALL BEFORE YOU DIG"
THE NEW NATIONAL LOCATE NUMBER
••811••

UTILITY COMPANY OWNER'S LIST

E.C.O.G.A.	918-489-5592
GORE P.W.A.	918-489-2432
COOKSON HILLS ELECTRIC	918-775-2211
OG&E	405-272-9741
AT&T	800-331-0500
WINDSTREAM COMMUNICATIONS	800-347-1991
CROSS TELEPHONE	918-473-0196

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SWO 5375(1) Job/Piece 32100(04) Engr. Contract No. 1872-B

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 11 day of January , 2019 .

Land Surveyor Tony Robison (seal)
Signature

TONY ROBISON
Printed Name

Oklahoma Licensed Land Surveyor No. 1686

Certificate of Authorization No. 4849

LICENSED PROFESSIONAL LAND SURVEYOR — TONY ROBISON 1686 — OKLAHOMA

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, 2017 GOVERN.

BEFORE YOU DIG OKIE CALL 811 CALL OKIE

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PLS	TR		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DR		SURVEY DATA SHEET
CHECKED	TR		SWO 5375(1)
APPROVED	TR		
CREW	HL		

COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S001

SWO5375(1) – J/P No. 32100(04)
U.S. 169 Muskogee and Sequoyah County
Beginning 2,000 feet West of the Bridge over the Arkansas River,
East 1 Mile along S.H. 100.

Historical Letter & Written Report

1. GENERAL:
   Survey Began: October 15, 2018
   Survey Completed: January 11, 2019

   Personnel on this survey:

Tony Robison	Licensed Land Surveyor
Edward R. Seaton	Licensed Land Surveyor
Ryan Thomson	Party Chief
Dakota Robison	Survey Technician / Draftsman
Lucas Standridge	Survey Technician
Cody Sherman	Survey Technician

2. ASSIGNMENT:

   This Survey was assigned to me by Mr. Darin Stratton of ODOT Survey Department, via email dated 10/15/2018. Heartland Surveying and Mapping, PLLC, under the direct supervision of Mr. Tony Robison, began work on the project on 10/19/2018.

3. PURPOSE:

   The purpose of this survey was to furnish sufficient data to develop Preliminary Engineering and Preparation of Construction plans. The survey included the Alignment, Right of Way, Topographic data, Utilities and Drainage structures.

4. LIMITS:

   The Survey began 2,000 feet West of the Bridge over the Arkansas River, crossing the Muskogee/Seqouyah county line along State Highway 100. The Survey ended 1 Mile East along S.H. 100. The survey width is 150 feet left and right of the Centerline.

5. ALIGNMENT:

   U.S. HWY 100: The Centerline of Survey for this project is from Plans SAP No. 51(9) Part 1 & Part 2, Grading and Bridge Plans "Revised as Built" (6-18-70), U.S Highway 64.

   The Alignment and Right-of-Way were reconstructed using these Plans, and SWO2638 provided by Darin Stratton.

6. STATIONING:

   A001: The stationing for this survey was given a value of 253+79.01 approximately 2,000 feet West of the Bridge over the Arkansas River, and ends at station 307+92.44 approximately 1,500 feet East of the Bridge over the Arkansas River.

7. HORIZONTAL CONTROL:

   Horizontal control for this survey is Oklahoma State Plane Coordinate System, NAD83(2011), North Zone (3501) and was derived by utilizing Monument "M-51-951" previously established by ODOT personnel.

   The Control Network and Primary Control Points were completed by the ODOT Survey Department.

   Primary control points established by ODOT:

7400	1/2"X12" Rebar with orange plastic cap.
7401	1/2"X12" Rebar with orange plastic cap.
7405	Brass Monument set in concrete. (ODOT No. S-68-192)
7501	Brass Monument set in concrete. (ODOT No. S-68-192)
7502	Brass Monument set in concrete. (ODOT No. M-51-457)

   Heartland Surveying and Mapping, PLLC, checked the control utilizing RTK methods with base receiver on NGS "M-51-951".

8. VERTICAL CONTROL:

   a.) Vertical Control for this survey is NAVD88, derived from monument M-51-951.

   b.) All leveling was conducted by the Heartland Surveying and Mapping, PLLC and double loop levels were run to all existing benchmarks which were set by Heartland Personnel.

   A Benchmark list depicting all 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:

    No Photo Controls were utilized in this Survey.

PLS	TR	
DRAWN	DR	
CHECKED	TR	
APPROVED	TR	
CREW	HL	

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5375(1)

COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S002

11. TOPOGRAPHY:

Topography information was obtained during this survey by field conventional and RTK GPS methods along the present Right of Way of State Highway 100.

Mapping limits are as follows:

150 feet right and left of Centerline of Survey from the Beginning of Survey to the End of Survey.

12. CROSS SECTION/DTM:

All surface feature information was obtained during this survey by field conventional, and RTK GPS methods. The riverbed surface was obtained by utilizing a Trimble Sonar Mite echo sounder. A DTM file was created and archived. (See: SUBMITTED DATA below).

13. ENVIRONMENTAL CONCERNS:

No evidence was found of Hazardous waste sites during this survey.
One Cemetery is found on this survey. Beginning approximately 60 feet left at station 303+52.95 and ending approximately 85 feet left at station 307+15.20.

14. UTILITIES:

All utility companies servicing the project extents were contacted, after first contacting OKIE.
Underground utilities were marked and tied to the survey. USIC provided plans via Email for Windstream Communications, Cross Telephone, and OG&E. Windstream Communication, and Cross Telephone lines were placed in survey using these plans, and utility markers found in survey limits. SDT Solutions provided plans via Email for AT&T. AT&T lines were placed in survey using these plans, and utility markers found in survey limits. East Central Oklahoma Gas Authority provided plans via Email of their gas lines located West of the Bridge. ECOGA lines were placed in survey using these plans, and utility markers found in survey limits.

15. LAND TIES:

No Section Corner or Quarter Section Corners were tied on this Survey.

16. PROPERTY OWNERS:

No information on property owners are shown on this survey.

17. DRAINAGE:

No Information on Drainage Areas are shown on this survey.

18. DATA SUBMITTED:

REPORTS

1. ODOT form SD-20, Survey Control.
2. ODOT form SD-41, Surveyor's Certification.
3. ODOT form SD-7, Public & Privately-owned Utilities List
4. Benchmark and Check Level List.
5. Alignment Report.
6. COGO List.

DGN

7. Perimeter File.
8. Surface Feature File.
9. Triangle File.
10. TOPO File.
11. V1 File.

CIVIL

12. DTM File.
13. ALG File.

PLS	TR	
DRAWN	DR	
CHECKED	TR	
APPROVED	TR	
CREW	HL	

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5375(1)

COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S003

POINT	EASTING	NORTHING	ELEVATION	POINT	EASTING	NORTHING	ELEVATION
300	2821190.075	199953.7727		7643	2824991.223	202566.7514	
301	2825076.474	202749.9255		7644	2824998.588	202576.7227	
302	2825054.396	203457.6696		7645	2825090.235	202725.7541	
311	2824663.86	202453.0618		7646	2824927.759	203031.0319	
312	2824106.161	203228.2138		7647	2824982.608	203032.7434	
313	2825060.625	203257.9874		7648	2825203.378	203097.8986	
321	2821850.653	200429.0399		7649	2825180.338	203269.0614	
322	2822345.796	200785.281		7650	2824969.435	203455.016	
323	2824377.338	202246.9172		7651	2825174.338	203461.411	
324	2824544.645	202367.2896		8000	2820902.685	199894.8349	
325	2824915.05	202720.6829		8001	2820901.619	199931.1106	
7300	2817260.552	197175.292	486.14	8002	2820955.296	199932.6873	
7400	2823075.663	200805.065	464.1338	8003	2820910.147	199981.3826	
7401	2824152.511	202499.091	472.9743	8004	2821027.781	199984.8381	
7405	2824113.403	202513.835	474.65	8005	2820901.1	200289.3698	
7501	2824580.173	201865.055	470.72	8006	2821170.983	200297.2975	
7502	2822848.093	200619.197	467.5482	8007	2821220.962	200298.7655	
7600	2821119.992	200051.1812		8008	2820911.013	199611.3243	
7601	2821257.237	199860.4228		8009	2821185.336	199808.692	
7602	2821177.008	200092.2026		8010	2820919.53	199321.3736	
7603	2821225.994	200127.4468		8011	2821199.409	199329.5949	
7604	2821366.585	199939.0956		8012	2821234.322	199843.9362	
7605	2821366.419	199944.7638		8013	2821238.964	199685.9099	
7606	2821376.414	199945.0574		8014	2821373.906	199689.8737	
7607	2821358.257	200222.6062		8015	2821383.902	199690.1673	
7608	2821486.367	199948.2872		8016	2821819.294	201470.5844	
7609	2821355.904	200302.7294		8017	2822453.367	200645.2641	
7610	2821365.899	200303.023		8018	2822423.382	200644.3157	
7611	2821365.574	200314.1051		8019	2822443.705	200002.2068	
7612	2821493.854	199693.3971		8020	2825010.618	202179.7179	
7613	2821593.811	199696.3333		8021	2825032.576	201455.0974	
7614	2821583.365	200051.9452		8022	2825061.911	201400.2547	
7615	2821856.099	200248.1691		8023	2825099.622	200076.8953	
7616	2821827.598	200646.518		9001	2821784.559	202624.2929	
7617	2822066.396	200399.4718		9002	2824364.145	202704.7357	
7618	2821824.432	200751.658		9003	2827003.19	202781.1291	
7619	2821779.785	200813.714		9004	2827079.344	200132.5681	
7620	2821790.743	200821.5983		9005	2827155.486	197484.4025	
7621	2821744.81	200885.4415		9006	2824516.691	197411.1838	
7622	2821771.597	200904.7142		9007	2821941.886	197339.7406	
7623	2821817.53	200840.8711		9008	2821863.995	199985.9045	
7624	2821828.489	200848.7554		9009	2824440.406	200058.3571	
7625	2821838.432	200834.9349					
7626	2821859.818	200805.2111					
7627	2822425.964	200562.7607					
7628	2822162.935	201023.2955					
7629	2822762.802	200715.7277					
7630	2822793.811	201135.5427					
7631	2822820.29	201098.7385					
7632	2824387.772	201884.8467					
7633	2824384.989	201981.3988					
7634	2824361.918	202263.7506					
7635	2824388.397	202226.9464					
7636	2824366.904	202608.9878					
7637	2824649.328	202171.5828					
7638	2824401.894	202634.1624					
7639	2824673.193	202188.7531					
7640	2824505.679	202708.8327					
7641	2824792.345	202274.4795					
7642	2824778.69	202716.7357					

Project Name: SWO5375_1_V1
Description:
Horizontal Alignment Name: A001
Description: S.H. 100
Style: Centerline

		STATION	EASTING	NORTHING
Element: Linear				
POB	(300)	253+79.01	2821190.0745366	199953.7726538
PC	(311)	296+58.45	2824663.8601762	202453.0617967
Tangent Direction:		N 54°15'57.84" E		
Tangent Length:		4279.44		
Element: Circular				
PC	(311)	296+58.45	2824663.8601762	202453.0617967
PI	(301)	301+66.76	2825076.4738246	202749.9254833
CC	(312)		2824106.1605762	203228.2137503
PT	(313)	305+92.67	2825060.6253088	203257.9873848
Radius:		954.93		
Delta:		56°03'09.99" Left		
Degree of Curvature (Arc):		6°00'00.01"		
Length:		934.21		
Tangent:		508.31		
Chord:		897.40		
Middle Ordinate:		111.98		
External:		126.86		
Tangent Direction:		N 54°15'57.84" E		
Radial Direction:		S 35°44'02.16" E		
Chord Direction:		N 26°14'22.84" E		
Radial Direction:		N 88°12'47.85" E		
Tangent Direction:		N 1°47'12.15" W		
Element: Linear				
PT	(313)	305+92.67	2825060.6253088	203257.9873848
POE	(302)	307+92.44	2825054.3964097	203457.6695730
Tangent Direction:		N 1°47'12.15" W		
Tangent Length:		199.78		

PLS	TR	
DRAWN	DR	
CHECKED	TR	
APPROVED	TR	
CREW	HL	

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

SWO 5375(1)

COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S004

S.H. 100, APPROXIMATELY 2,000 FEET WEST OF THE BRIDGE OVER THE ARKANSAS RIVER
EAST 1 MILE ALONG S.H. 100.
SWO 5375(1) J/P 32100(04)
MUSKOGEE/SEQUOYAH COUNTY

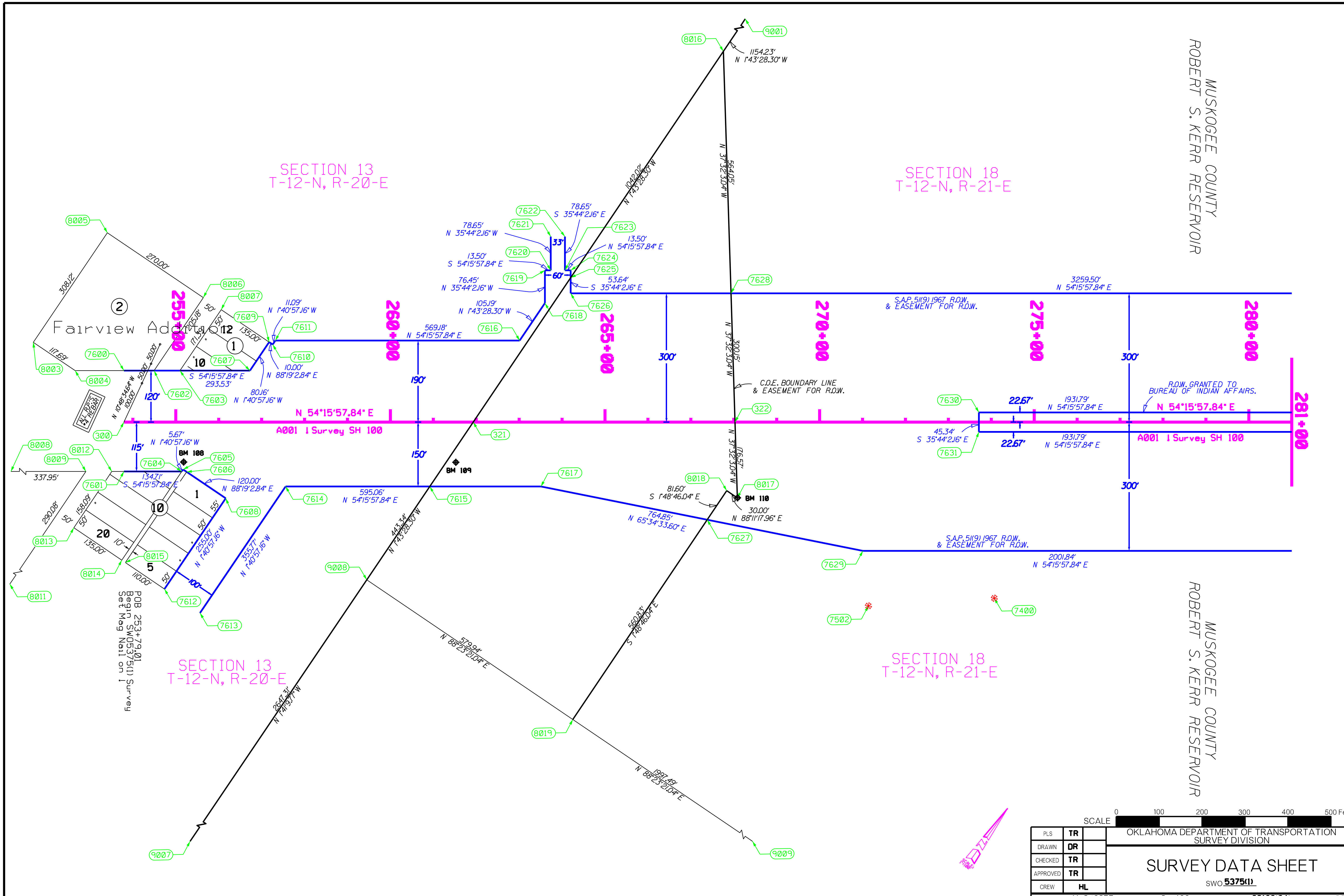
BENCH MARK AND CHECK LEVEL LIST

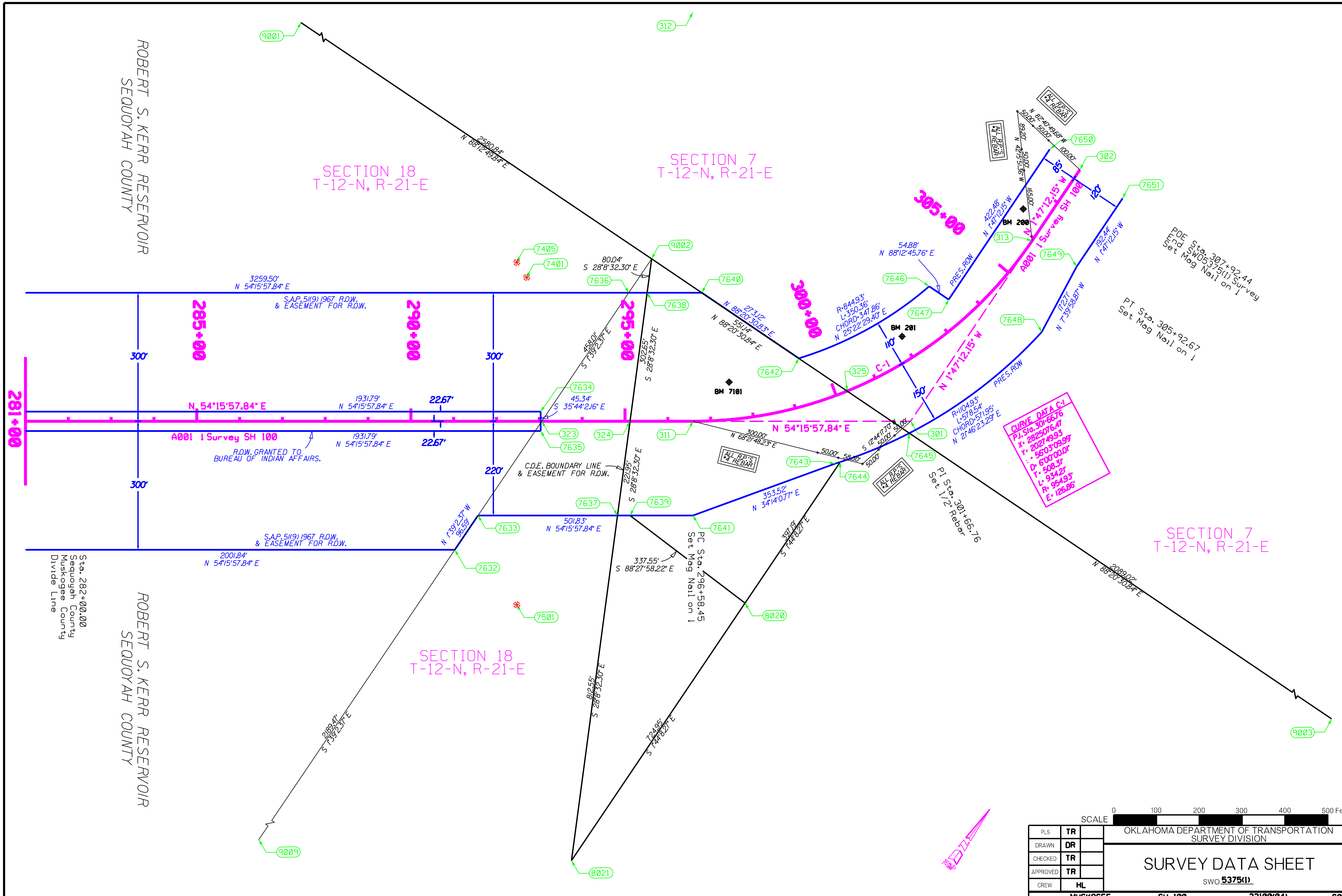
STATION	DIFF. EL. 1ST RUN	DIFF. EL. 2ND RUN	MEAN DIFF. ELEVATION	UNADJUSTED ELEVATON	ADJUSTED ELEVATION	STATION	OFFSET	DESCRIPTION
7300					486.1400			1/2" IRON PIN
	-.8673	.8700	-.8687					
BM101				485.2714	485.2714			RAILROAD SPIKE IN POWER POLE
	2.7276	-2.7293	2.7285					
BM102				487.9998	487.9998			RAILROAD SPIKE IN 36" ELM
	-9.4313	9.4343	-9.4328					
BM103				478.5670	478.5670			CHISELED "X" ON SOUTH END OF HEADWALL
	.9929	-.9918	.9924					
BM104				479.5594	479.5594			RAILROAD SPIKE IN POWER POLE
	.0157	-.0177	.0167					
BM105				479.5761	479.5761			CHISELED "X" ON SOUTH END OF HEADWALL
	-1.8586	1.8512	-1.8549					
BM106				477.7212	477.7212			CHISELED "X" ON SOUTH END OF HEADWALL
	.8202	-.8260	.8231					
BM107				478.5443	478.5443			RAILROAD SPIKE IN 36" COTTONWOOD
	2.3263	-2.3299	2.3291					
BM108				480.8734	480.8734	255+18	93 R	100D NAIL IN 40" COTTONWOOD
	-3.2182	3.2215	-3.2199					
BM109				477.6535	477.6535	261+52	93 R	5/8" IRON PIN
	-7.0936	7.0895	-7.0916					
BM110				470.5620	470.5620	268+08	176 R	CORP OF ENGINEERS BRASS CAP
	-3.0166	3.0109	-3.0138					
7502				467.5482	467.5482	271+13	428 R	ODOT BRASS CAP
	-3.4137	3.4151	-3.4144					
7400				464.1338	464.1338	274+08	410 R	1/2" IRON PIN

STATION	DIFF. EL. 1ST RUN	DIFF. EL. 2ND RUN	MEAN DIFF. ELEVATION	UNADJUSTED ELEVATON	ADJUSTED ELEVATION	STATION	OFFSET	DESCRIPTION
7405					474.6500	292+47	371 L	ODOT BRASS CAP
	-1.6753	1.6761	-1.6757					
7401				472.9743	472.9743	292+70	336 L	1/2" IRON PIN
	15.9836	-15.9609	15.9623					
BM 7101				488.9366	488.9366	297+51	87 L	CORP OF ENGINEERS BRASS CAP
	.6111	-.6128	.6120					
BM 201				489.5485	489.5485	302+05	54 L	CHISELED SQUARE ON HEADWALL
	2.8872	-2.8853	2.8863					
BM 200				492.4348	492.4348	306+42	58 L	CHISELED SQUARE ON HEADWALL

PLS	TR	OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	DR	
CHECKED	TR	SURVEY DATA SHEET
APPROVED	TR	SWO 5375(1)
CREW	HL	

COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S005

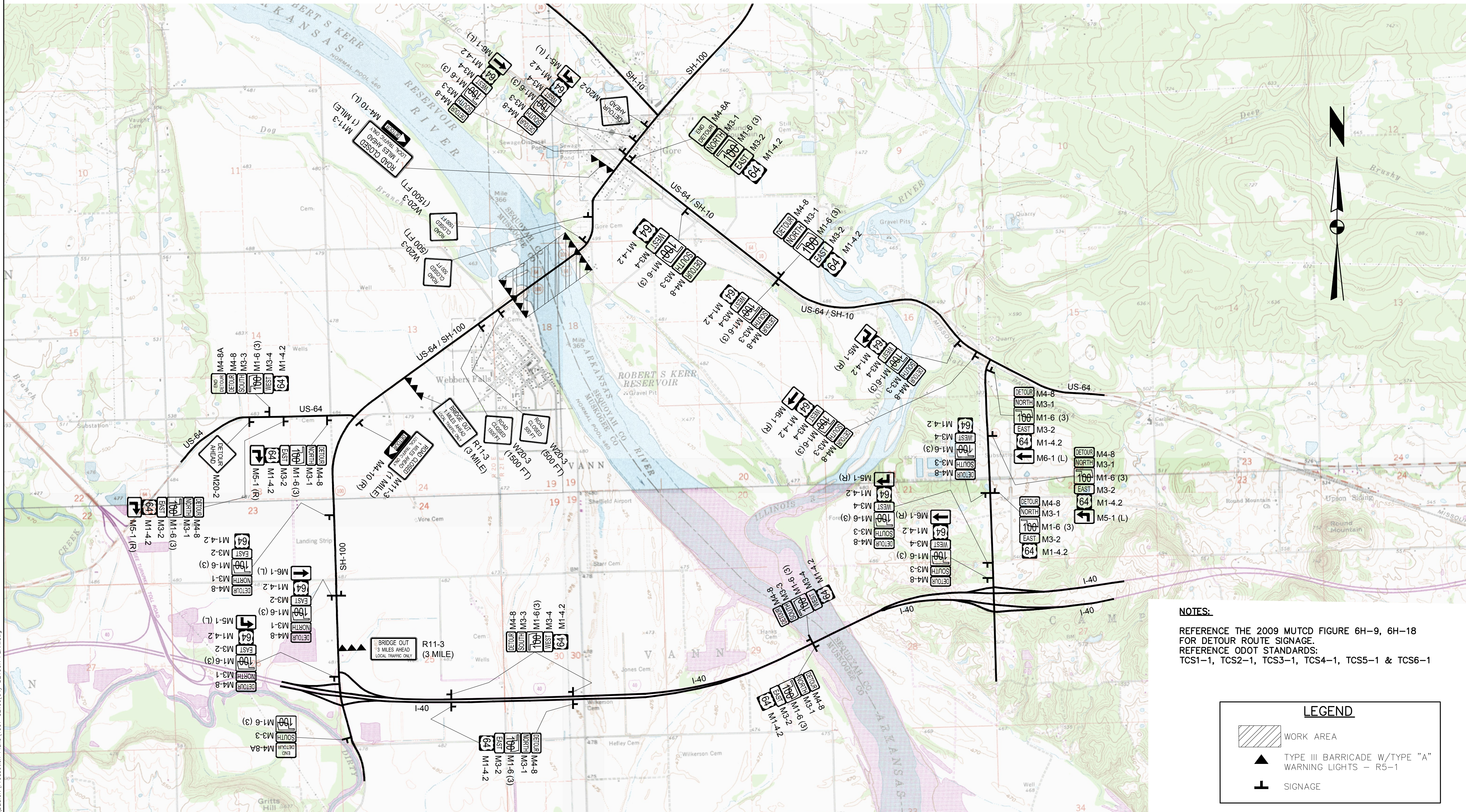

SECTION 13
T-12-N, R-20-E
SECTION 18
T-12-N, R-21-E
MUSKOGEE COUNTY
ROBERT S. KERR RESERVOIR
SECTION 13
T-12-N, R-20-E
SECTION 18
T-12-N, R-21-E
MUSKOGEE COUNTY
ROBERT S. KERR RESERVOIR
Fairview Addition
255+00
260+00
265+00
270+00
275+00
280+00
281+00
N 54°15'57.84" E
A001 Survey SH 100
S.A.P. 51(9) 1967 R.O.W. & EASEMENT FOR R.O.W.
3259.50' N 54°15'57.84" E
C.O.E. BOUNDARY LINE & EASEMENT FOR R.O.W.
R.O.W. GRANTED TO BUREAU OF INDIAN AFFAIRS.
S.A.P. 51(9) 1967 R.O.W. & EASEMENT FOR R.O.W.
2001.84' N 54°15'57.84" E
1154.23' N 1°43'28.30" W
1042.02' N 1°43'28.30" W
564.05' N 3°32'53.04" W
300.15' N 3°32'53.04" W
176.57' N 3°32'53.04" W
443.34' N 1°43'28.30" W
2647.31' N 1°41'31.77" W
579.94' N 88°23'21.04" E
1997.49' N 88°23'21.04" E
560.83' S 1°48'46.04" E
764.85' N 65°34'33.60" E
595.06' N 54°15'57.84" E
569.18' N 54°15'57.84" E
BM 108
BM 109
BM 110
POB 253+79.01
Begin SW0537(1) Survey
Set Mag Nail on
SCALE
0 100 200 300 400 500 Feet
PLS TR
DRAWN DR
CHECKED TR
APPROVED TR
CREW HL
OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION
SURVEY DATA SHEET
SWO 5375(1)
COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S006



SECTION 18
T-12-N, R-21-E
SECTION 7
T-12-N, R-21-E
ROBERT S. KERR RESERVOIR
SEQUOYAH COUNTY
ROBERT S. KERR RESERVOIR
SEQUOYAH COUNTY
Sta. 282+00.00
Sequoyah County
Muskogee County
Divide Line
281+00
285+00
290+00
295+00
300+00
305+00
A001 ⁝ Survey SH 100
N 54°15'57.84" E
S.A.P. 51(9) 1967 R.O.W.
& EASEMENT FOR R.O.W.
R.O.W. GRANTED TO
BUREAU OF INDIAN AFFAIRS.
C.O.E. BOUNDARY LINE
& EASEMENT FOR R.O.W.
PRES. ROW
BM 7101
BM 200
BM 201
PC Sta. 296+58.45
Set Mag Nail on ⁝
PI Sta. 301+66.76
Set 1/2" Rebar
PT Sta. 305+92.67
Set Mag Nail on ⁝
POE Sta. 307+92.44
End SW05375(1) Survey
Set Mag Nail on ⁝
CURVE DATA C-1
P.I. Sta. 301+66.76
X= 2825076.47
Y= 202749.93
Δ= 56°03'09.99"
D= 6°00'00.01"
T= 508.31'
L= 934.21'
R= 954.93'
E= 126.86'
ALL R.P.'S
#4 REBAR
SCALE
0 100 200 300 400 500 Feet
PLS TR
DRAWN DR
CHECKED TR
APPROVED TR
CREW HL
OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION
SURVEY DATA SHEET
SWO 5375(1)
COUNTY MUSKOGEE HIGHWAY SH 100 STATE JOB NO. 32100(04) SHEET NO. S007

OKLAHOMA DEPARTMENT OF TRANSPORTATION

PROPOSED
R/W
FEBRUARY 2021



NOTES:

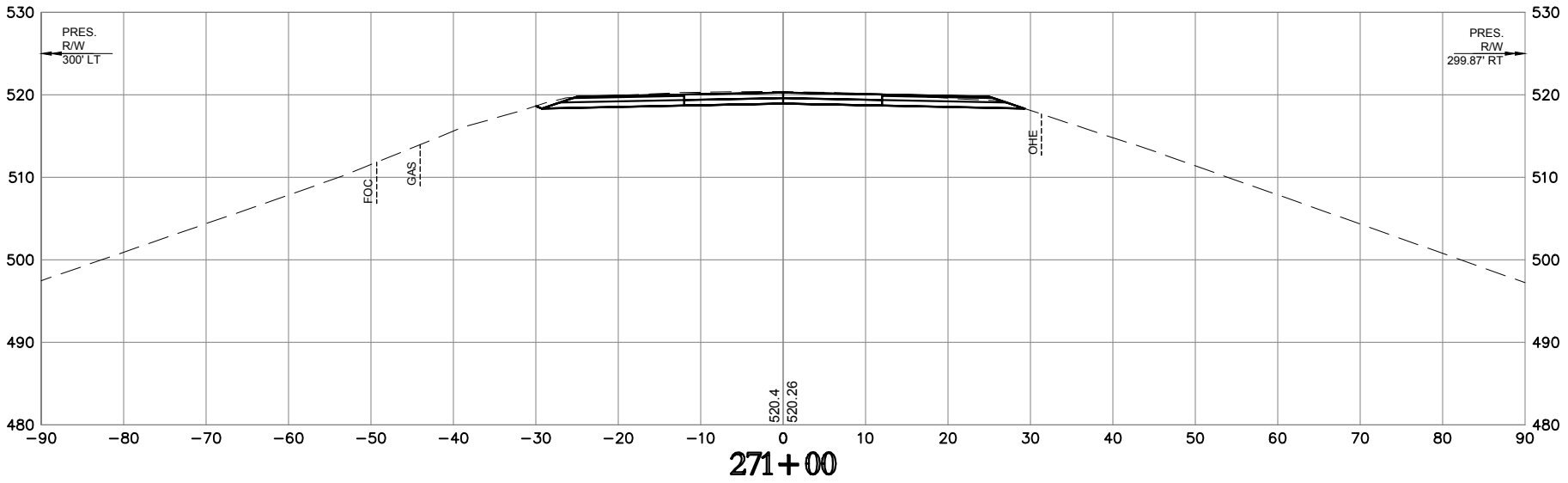
REFERENCE THE 2009 MUTCD FIGURE 6H-9, 6H-18 FOR DETOUR ROUTE SIGNAGE.
REFERENCE ODOT STANDARDS:
TCS1-1, TCS2-1, TCS3-1, TCS4-1, TCS5-1 & TCS6-1

LEGEND

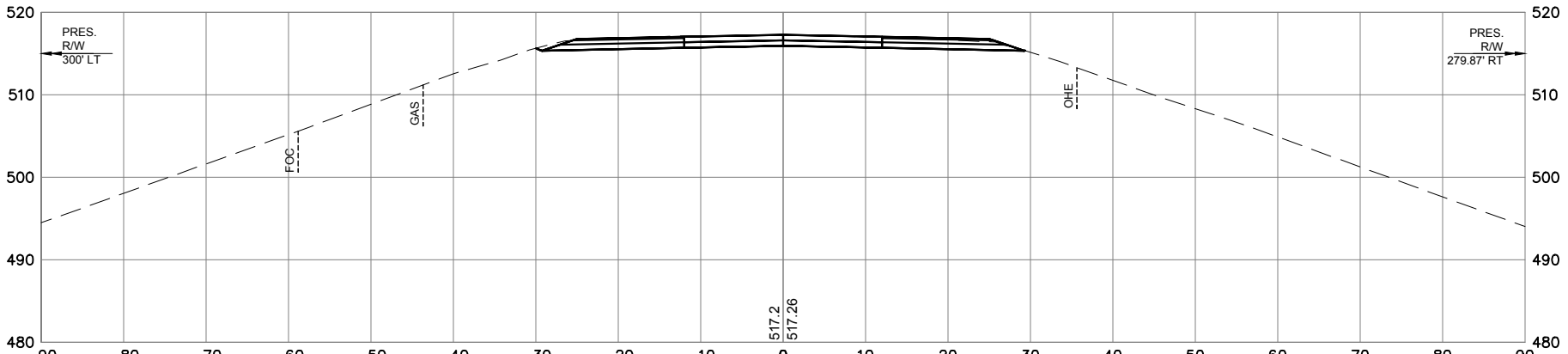
- WORK AREA
- TYPE III BARRICADE W/TYPE "A" WARNING LIGHTS – R5-1
- SIGNAGE

DESIGN	WS	10/19	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	RES	06/20	
CHECKED	WS	10/19	DETOUR PLAN
APPROVED			
SQUAD		ENGINEERS	

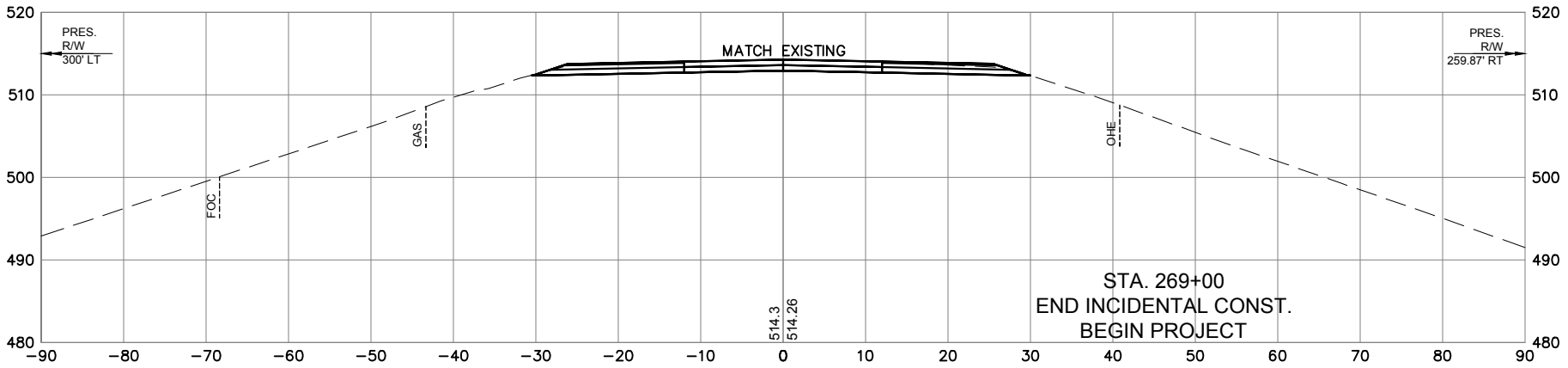
COUNTY MUSK./SEQ. HIGHWAY SH-100 STATE JOB NO. 32100(04) SHEET NO. T001



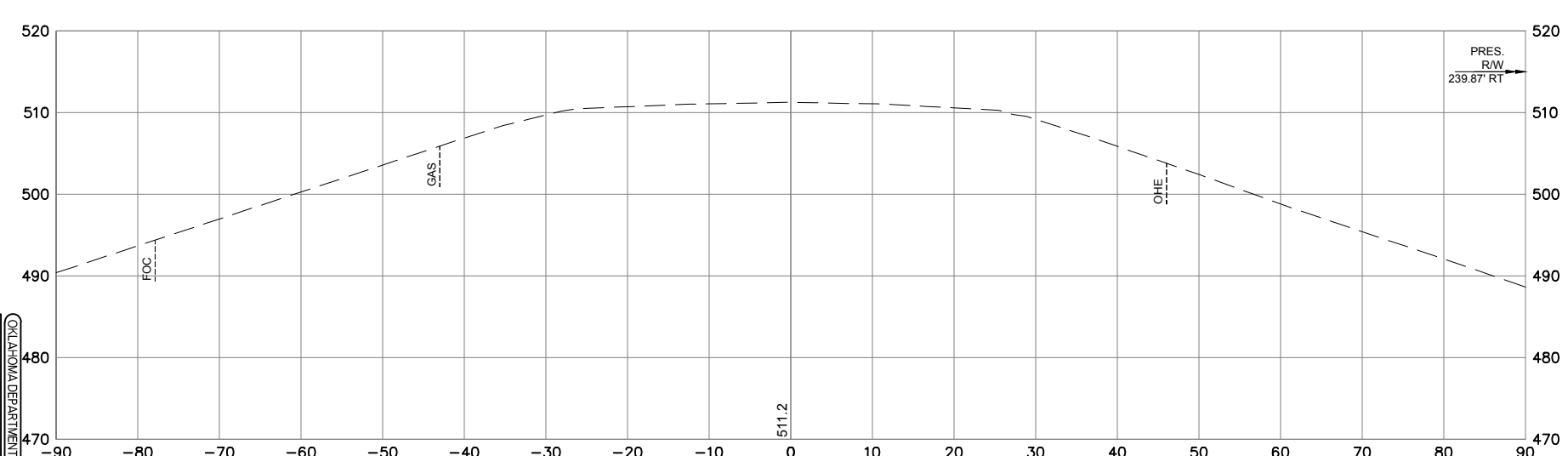
271+00



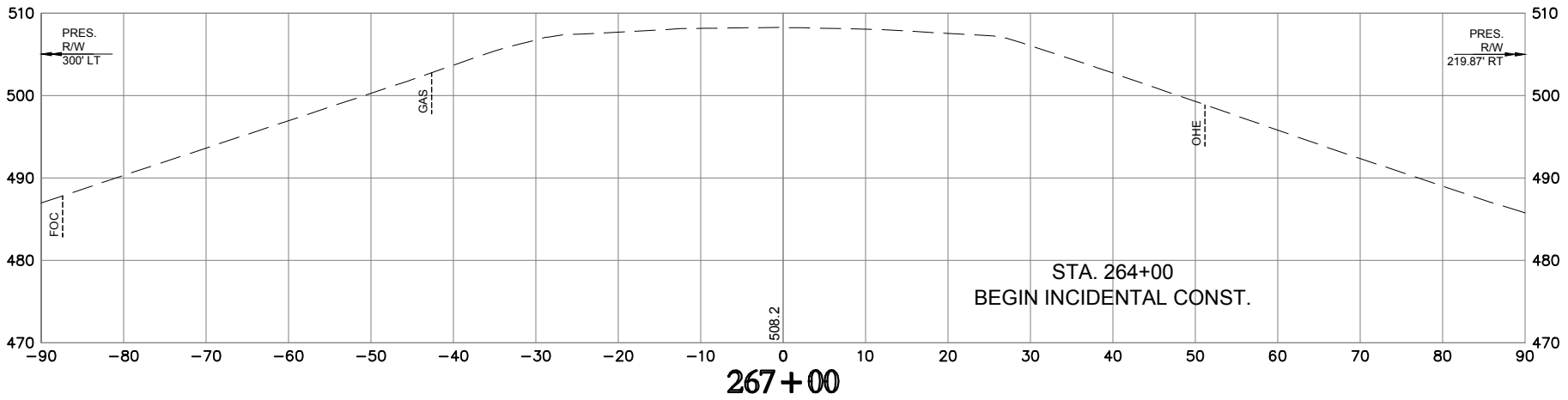
270+00



269+00



268+00



267+00

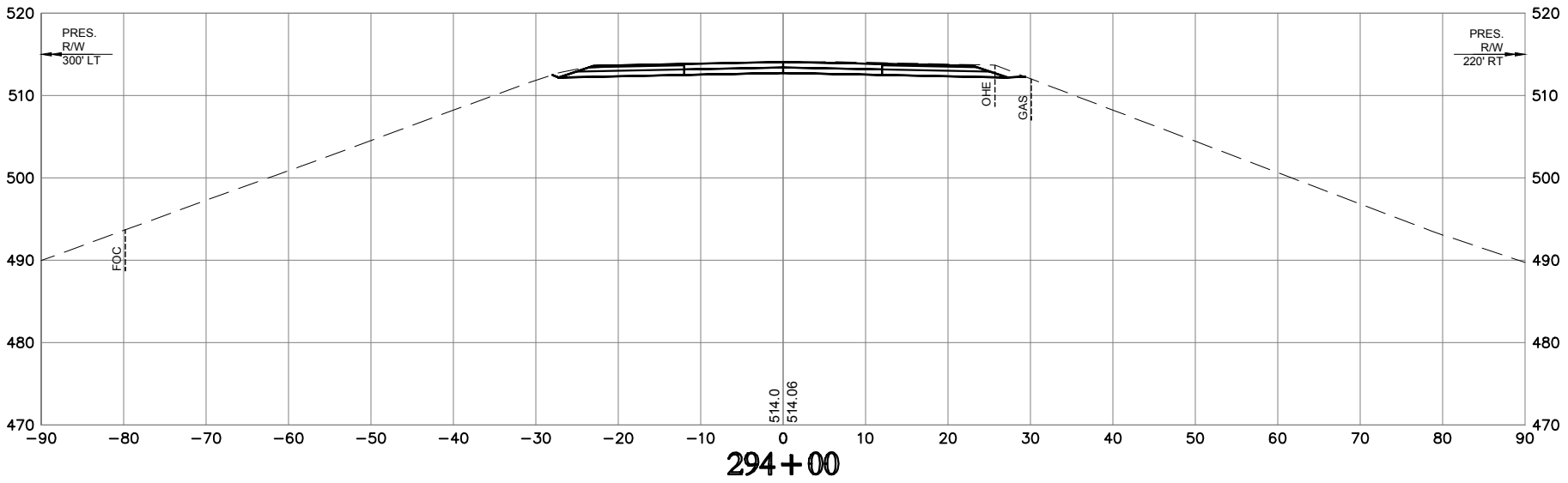
PROPOSED R/W

FEBRUARY 2021

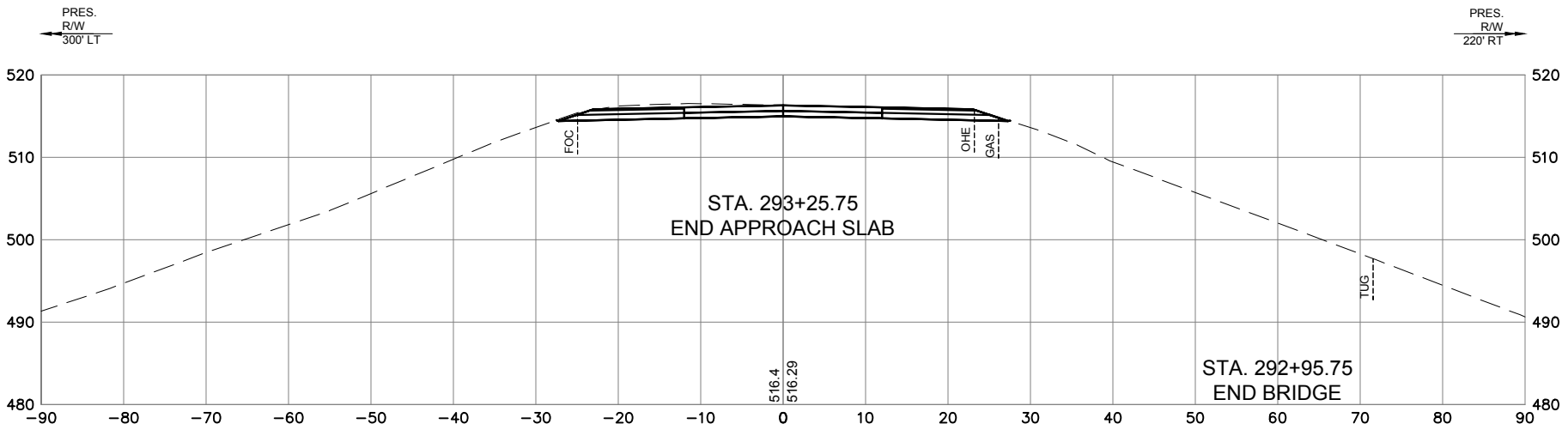
OKLAHOMA DEPARTMENT OF TRANSPORTATION

STATE JOB NO. 31200(04)

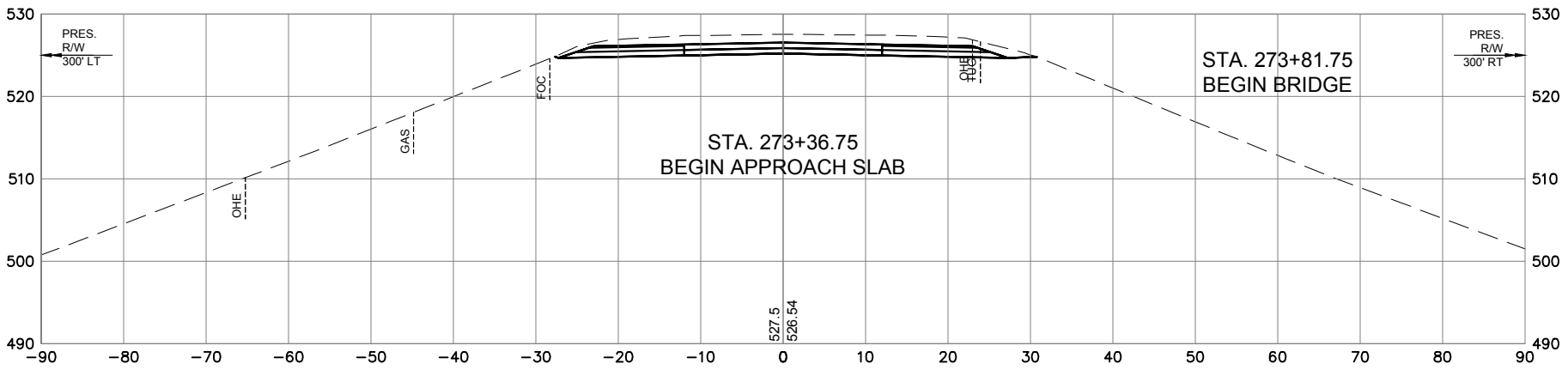
MUSKOGEE/SEQUOYAH COUNTY SHEET NO. X001



294+00



293+25.75



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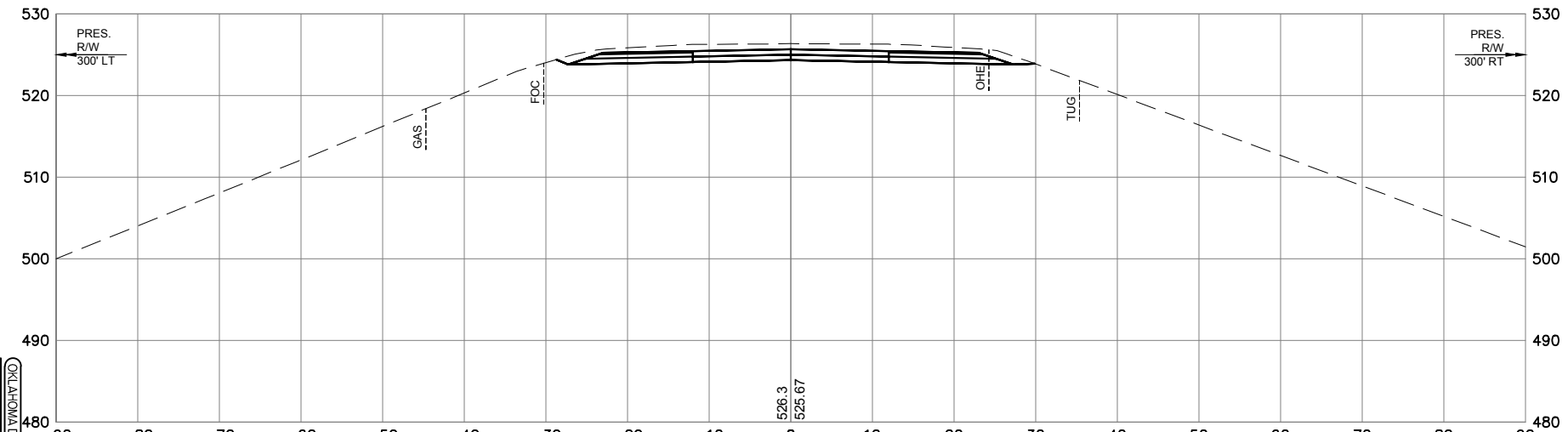

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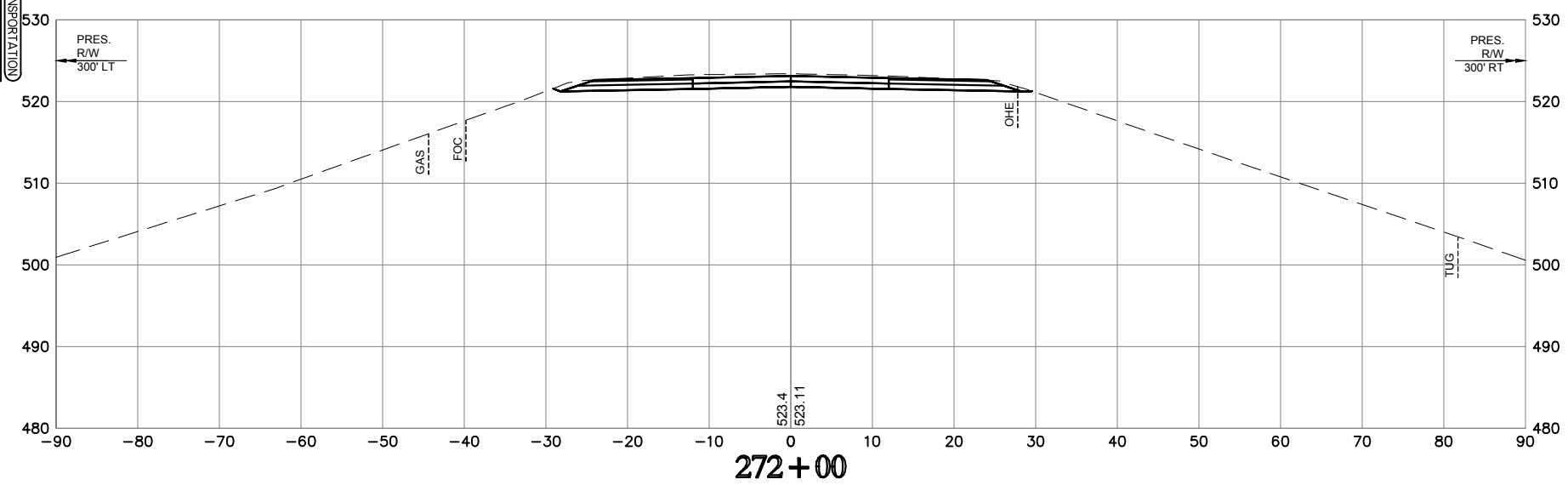


272+00

PROPOSED R/W

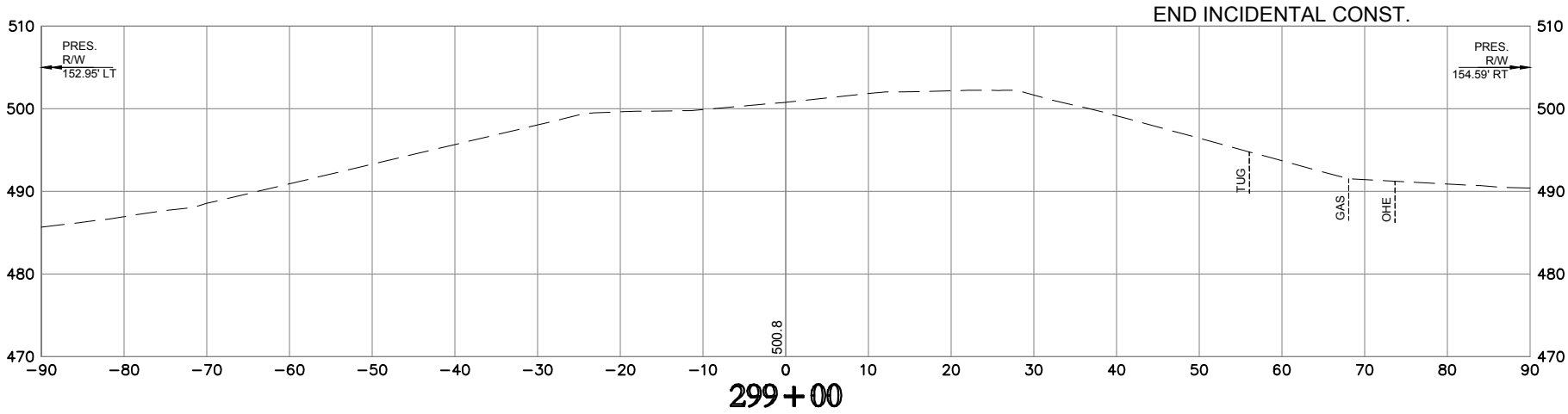
FEBRUARY 2021

OKLAHOMA DEPARTMENT OF TRANSPORTATION

STATE JOB NO. 31200(04)

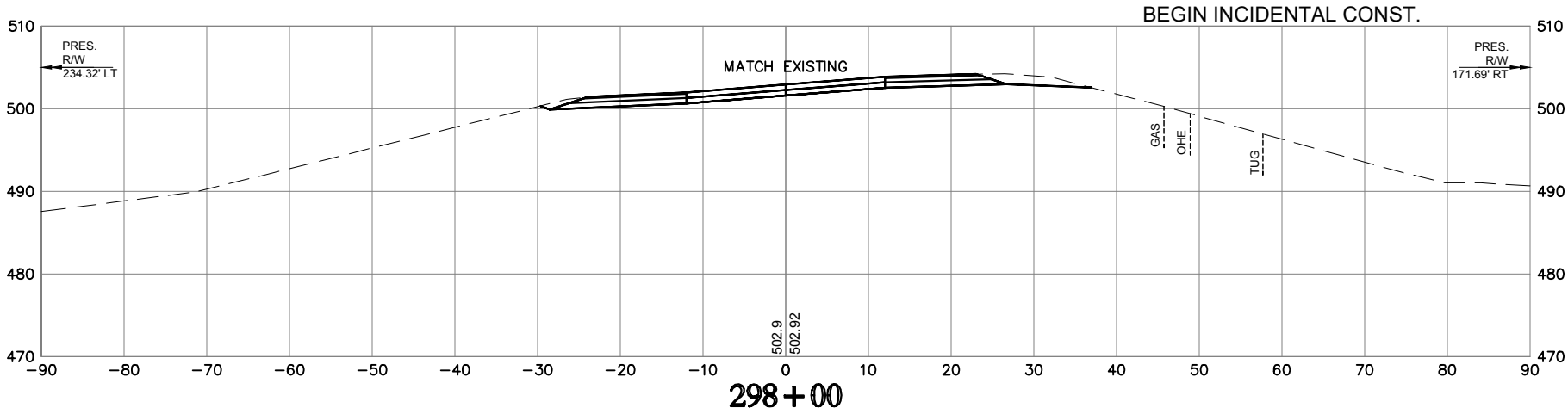
MUSKOGEE/SEQUOYAH COUNTY SHEET NO. X002

STA. 303+00
END INCIDENTAL CONST.



299+00

STA. 298+00
END PROJECT
BEGIN INCIDENTAL CONST.



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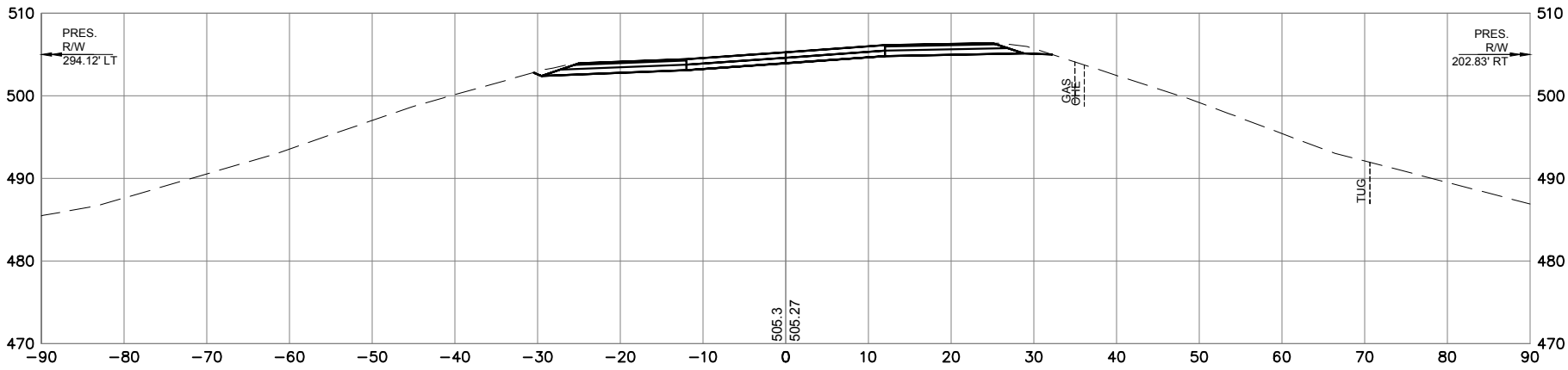

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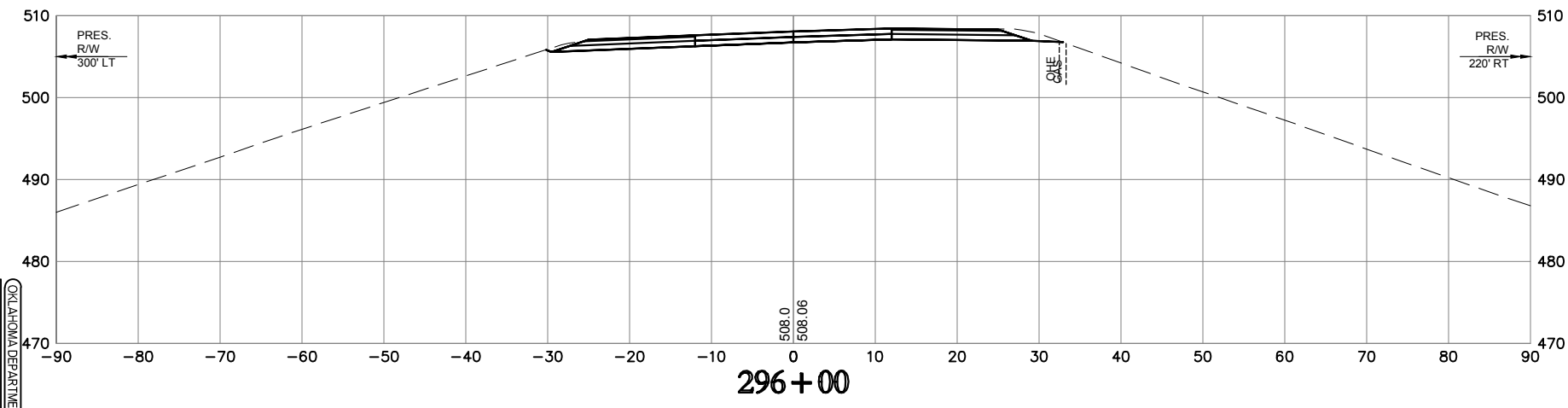

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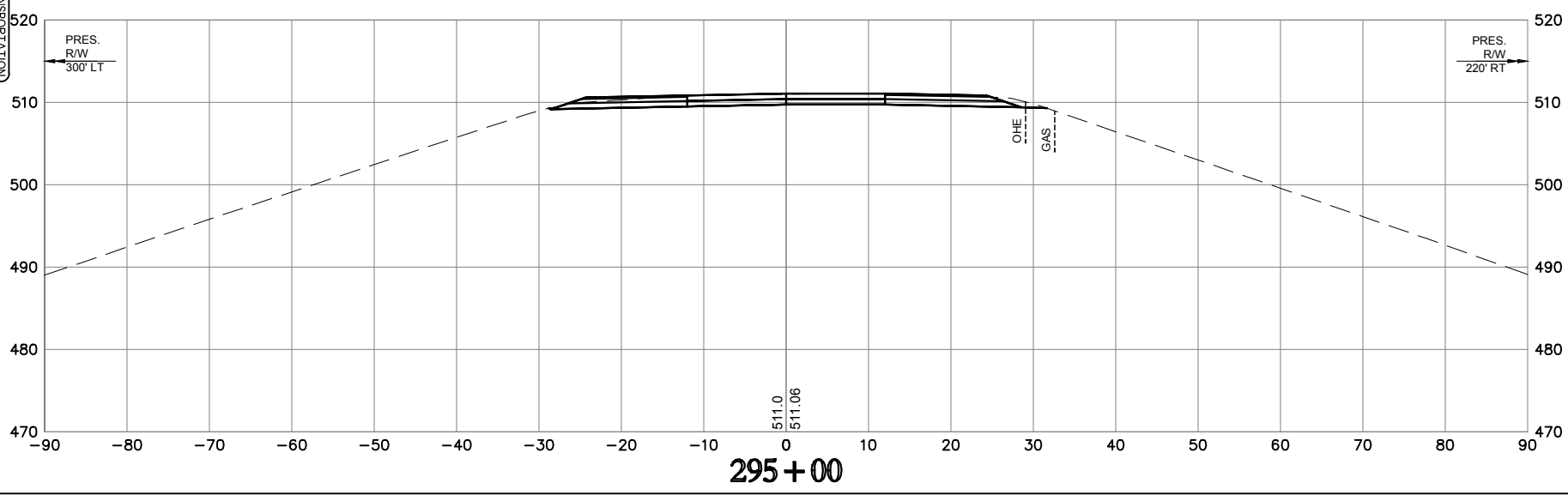

295+00

PROPOSED R/W

FEBRUARY 2021

OKLAHOMA DEPARTMENT OF TRANSPORTATION

STATE JOB NO. 31200(04)

MUSKOGEE/SEQUOYAH COUNTY SHEET NO. X003