

CALL OKIE FOR A LIST OF CONTACTS IN THE AREA.

UTILITY COORDINATION	
UTILITY/DEPARTMENT	NUMBER
OKLAHOMA ONE-CALL SYSTEM, INC.	811
CITY OF TULSA - UTILITY COORDINATION (CHRIS KOVAC)	918-596-9649
OKLAHOMA NATURAL GAS (JONATHAN MEADOWS)	918-831-8215
AT&T (AL NICHOLS)	918-596-4237
PSO (ADAM FIELDS)	918-250-6257
COX COMMUNICATIONS (BRANDON WADE)	918-286-4716

THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS AND IS ENTIRELY LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF TULSA. CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

SYMBOL LEGEND

—X—	FENCE
—	WATER LINE
—	OVERHEAD ELECTRIC LINE
—	GAS LINE
—	SANITARY SEWER
—	PROP. CENTERLINE ROADWAY
—	ROW
—	PROPERTY LINE
—	LOT LINE
—	STORM DRAIN
—	FIBER OPTIC
—	UNDERGROUND ELECTRIC
RJ	RESTRAINED JOINT
⊕	SANITARY MANHOLE
⊕	FIBER OPTIC MANHOLE
⊕	STORM MANHOLE
⊕	TELE MANHOLE
⊕	WATER METER
⊕	WATER VALVE
⊕	FIRE HYDRANT
⊕	POWER POLE
⊕	GUY ANCHOR
⊕	TELE RISER
⊕	TRANSFORMER
⊕	GAS METER
⊕	LIGHT POLE
⊕	GRADED INLET
⊕	CURB INLET
⊕	GAS VALVE
⊕	TEMPORARY BENCH MARK
⊕	SIGN
⊕	ELECTRIC BOX
⊕	TREE
⊕	EVERGREEN
⊕	SHRUB



MYLAR CONSTRUCTION PLANS FOR ARTERIAL BRIDGE REHABILITATION FOR BRIDGE 167 - CHARLES PAGE BLVD. BRIDGE 261A - WB 21st STREET BRIDGE 261B - EB 21st STREET BRIDGE 359 - S. ELWOOD AVE.

PROJECT NO. TD-2020-B1A

ACCOUNT NO. 2036B0167Z.Bridges.BridgMR.4281.42813122-541107

ACCOUNT NO. 2037B0261A.Bridges.BridgMR.4281.42813122-541107

ACCOUNT NO. 2037B0261B.Bridges.BridgMR.4281.42813122-541107

ACCOUNT NO. 2037B0359Z.Bridges.BridgMR.4281.42813122-541107

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PROJECT SITE

SEC. 3, T-19-N, R-12-E (BRIDGE 167)

SEC. 13, T-19-N, R-13-E (BRIDGE 261A)

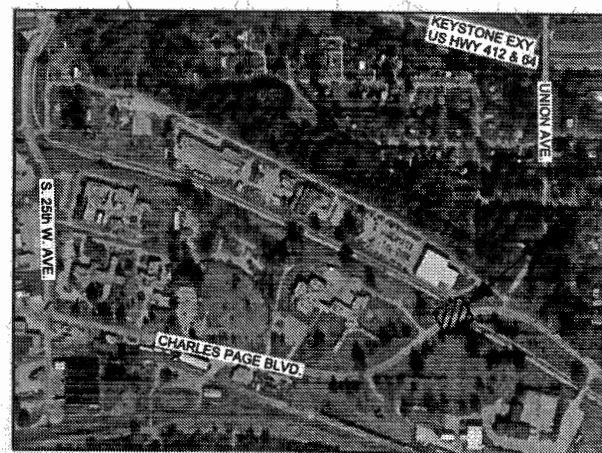
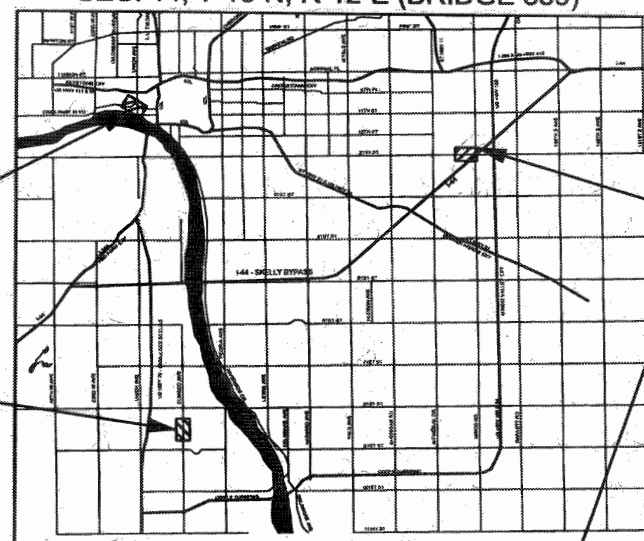
SEC. 13, T-19-N, R-13-E (BRIDGE 261B)

SEC. 14, T-18-N, R-12-E (BRIDGE 359)

BRIDGE 167
(NBI 17168)

BRIDGE 359
(NBI 08253)

BRIDGE 261A
(NBI 20841)
BRIDGE 261B
(NBI 20842)



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE)
4	SUMMARY OF PAY QUANTITIES AND NOTES (TRAFFIC)
5	GENERAL NOTES
6-9	STORMWATER MANAGEMENT PLAN
10	BRIDGE 167 - GENERAL PLAN AND ELEVATION
11	BRIDGE 167 - RCB REPAIR DETAILS
12	BRIDGE 261A - GENERAL PLAN AND ELEVATION
13	BRIDGE 261A - SEQUENCE OF CONSTRUCTION
14	BRIDGE 261A - TYPICAL SECTION
15-16	BRIDGE 261A - BRIDGE DECK REPAIR
17	BRIDGE 261A - APPROACH REPAIR DETAILS
18	BRIDGE 261B - GENERAL PLAN AND ELEVATION
19	BRIDGE 261B - SEQUENCE OF CONSTRUCTION
20	BRIDGE 261B - TYPICAL SECTION
21	BRIDGE 261B - BRIDGE DECK REPAIR
22	BRIDGE 261B - APPROACH REPAIR DETAILS
23	BRIDGES 261A & B - ADVANCED WARNING SIGNS
24	BRIDGES 261A & B - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL - PHASE 1 DETOUR
25	BRIDGES 261A & B - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL - PHASE 2
26	BRIDGES 261A & B - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL - PHASE 3
27	BRIDGES 261A & B - PAVEMENT MARKING
28	BRIDGE 359 - GENERAL PLAN AND ELEVATION
29	BRIDGE 359 - CONCRETE BARRIER DETAILS
30	BRIDGE 359 - ROADWAY PLAN SHEET
31	BRIDGE 359 - DETAILS FOR GUARDRAIL INSTALLATION AT INTERSECTING ROADWAY
32	BRIDGE 359 - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL PLAN
33	BRIDGE 359 - PAVEMENT MARKING

ODOT STANDARDS

TRAFFIC CONTROL	TRAFFIC SIGNING	TRAFFIC SAFETY
TCS1-1-01	TCS8-1-00	TCS20-1-00
TCS2-1-00	TCS9-1-01	TCS21-1-02
TCS3-1-01	TCS10-1-00	TCS22-1-00
TCS4-1-01	TCS11-1-01	TCS23-1-02
TCS5-1-00	TCS13-1-00	TCS24-1-02
TCS6-1-02	TCS14-1-00	TCS25-1-00
TCS7-1-02	TCS19-1-01	

CITY OF TULSA STANDARDS

102	PROJECT SIGN
126	STANDARD SILT FENCE & CONSTRUCTION ENTRANCE
608A	STREET NAME SIGNS
608B	TRAFFIC SIGNS

City Engineer *[Signature]* 02-29-23
Date

ADVERTISE DATE: 10/19/2022

10/19/2022

Bradley R. Thompson, P.E.
responsible for pages: 1-3, 5-22, 28-31

10/12/22

Kelly D. Harris, P.E.
responsible for pages: 4, 23-27, 32-33

10/12/22

Date



PREPARED BY:

6100 SOUTH YALE SUITE 1300
TULSA, OKLAHOMA 74136
(918) 250-5922 (VOICE)
(918) 858-0107 (FAX)
CERT. OF AUTH. #4193
EXPIRES 6-30-2024

PROJ. NO. TD-2020-B1A - CITYWIDE BRIDGE REHABILITATION FOR BRIDGE 167 (CHARLES PAGE BLVD.), BRIDGE 261A (21st STREET), AND 359 (S. ELWOOD AVE.)

COMMON 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.

SUGGESTED SEQUENCE OF CONSTRUCTION:

A SUGGESTED SEQUENCE OF CONSTRUCTION HAS BEEN INCLUDED IN THE PLANS. ANY CHANGES TO THE SUGGESTED SEQUENCE OF CONSTRUCTION MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO WORK SHALL BEGIN UNTIL THE ENGINEER HAS APPROVED THE CHANGES TO THE SUGGESTED SEQUENCE OF CONSTRUCTION.

VERIFICATION OF EXISTING CONDITIONS:

ALL DIMENSIONS OF THE EXISTING COMPONENTS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA NECESSARY FOR CONSTRUCTION SEQUENCING AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

BIDDERS SHALL FULLY INFORM THEMSELVES OF THE NATURE OF THE WORK AND CONDITIONS UNDER WHICH IT WILL BE PERFORMED. THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICE AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE EXISTING BRIDGE OR ATTACHMENTS. ANY DAMAGE TO THE EXISTING BRIDGE STRUCTURE OR ROADWAY DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

CONTRACTOR SHALL BE AWARE OF EXISTING CONDITIONS AND POTENTIAL HAZARDS DURING CONSTRUCTION. CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN THE INTEGRITY OF ANY EXISTING UTILITIES AND STRUCTURES. ANY DAMAGE TO THESE ITEMS DURING CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE ENGINEER'S SATISFACTION.

THE ORIGINAL BRIDGE CONSTRUCTION PLANS FOR BRIDGES 167, 261A, 261B, & 359 ARE AVAILABLE AND CAN BE OBTAINED FROM:

ENGINEERING SERVICES DEPARTMENT
CITY OF TULSA
2317 SOUTH JACKSON AVENUE
TULSA, OKLAHOMA 74107

REMOVED MATERIAL:

ALL MATERIAL REMOVED DURING THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY EXCESS MATERIAL IS TO BE DISPOSED OF WITHIN THE CITY LIMITS OF TULSA.

CONCRETE:

ALL CONCRETE SHALL BE PLACED IN THE DRY. ALL EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OR SHOWN ON PLANS. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER. ALL CLASS "AA" CONCRETE SHALL BE AIR-ENTRAINED.

ALL CONCRETE IN THE CONCRETE PARAPETS SHALL BE CLASS "AA" CONCRETE, F'C = 4,000 P.S.I. MINIMUM STRENGTH AT 28 DAYS.

WHEN VIBRATING CONCRETE CONTAINING EPOXY COATED REINFORCING STEEL, THE VIBRATOR SHALL BE EQUIPPED WITH A PLASTIC TIP DESIGNED TO PREVENT DAMAGE TO THE EPOXY COATING.

REINFORCING:

ALL REINFORCING STEEL SHALL HAVE A 2" CLEARANCE UNLESS SHOWN OR NOTED OTHERWISE. ALL REINFORCING STEEL SHALL BE DEFORMED BARS, COLD BENT WITH NO WELDS. BAR BEND DIMENSIONS ARE OUT TO OUT, UNLESS NOTED OTHERWISE. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60.

FIELD WELDING OF CROSSING REINFORCING BARS SHALL NOT BE PERMITTED. TACK WELDING OF REINFORCING BARS SHALL BE PROHIBITED IN ALL CASES.

BRIDGE PAY ITEM NOTES

(B1) PAYMENT FOR THIS ITEM WILL BE BASED ON THE PLAN QUANTITIES ONLY. SEE SECTION 109.01.B OF THE STANDARD SPECIFICATIONS.

(B2) QUANTITIES HAVE BEEN INCREASED BY 20% IN ORDER TO ACCOUNT FOR MISCELLANEOUS UNFORESEEN REPAIRS.

(B3) THE CELLS OF BRIDGE 167 CONTAIN CRACKS THAT SHALL BE REPAIRED. THE CRACKS SHALL BE REPAIRED BY CLEANING AND INJECTING WITH EPOXY. THE CRACK REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS. THE ACTUAL LOCATION AND EXTENTS OF THE CRACK REPAIRS SHALL BE ADJUSTED IN THE FIELD BY THE ENGINEER. PAYMENT WILL ONLY BE MADE FOR THE ACTUAL CRACK REPAIRS PERFORMED.

ALL COST TO COMPLETE THE CRACK REPAIRS AS SPECIFIED OR AS SHOWN IN THE PLANS INCLUDING THE COST OF MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "PREPARATION OF CRACKS, ABOVE WATER" AND THE PRICE BID PER GALLON ON "EPOXY RESIN, ABOVE WATER".

(B4) THE CELLS OF BRIDGE 167 & THE SIDEWALK OF BRIDGE 261A CONTAIN SPALLS WITH EXPOSED REINFORCING AND SHALL BE REPAIRED WITH PNEUMATICALLY PLACED MORTAR IN A MANNER APPROVED BY THE ENGINEER AND IN ACCORDANCE WITH SECTION 521 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE REMOVAL OF LOOSE CONCRETE SHALL BE DONE USING HAND TOOLS ONLY. NO POWER TOOLS WILL BE ALLOWED. POWER TOOLS WILL BE ALLOWED ONLY IF HAND TOOLS PROVE TO BE INCAPABLE OF REMOVING ALL UNSOUND CONCRETE AND IF THEIR USE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. ANY DETERIORATED REINFORCING STEEL WITH A SECTION LOSS GREATER THAN 25%, AS DETERMINED BY THE ENGINEER, SHALL BE REPORTED TO THE BRIDGE ENGINEER FOR REMEDIAL ACTION. PRIOR TO MORTAR APPLICATION, BLAST CLEAN THE CONCRETE SURFACE AND REINFORCING STEEL FREE OF DEBRIS AND CORROSION. APPLY PNEUMATICALLY PLACED MORTAR TO REPLACE DETERIORATED CONCRETE. BUILD UP MORTAR TO MATCH THE ORIGINAL LINES AND GRADES OF THE MEMBER BEING REPAIRED.

THE CONTRACTOR MAY PROPOSE AND USE AS AN ALTERNATE ONE OF THE FOLLOWING REPAIR METHODS:

1. CAST-IN-PLACE CONCRETE
2. PRE-PLACED AGGREGATE CONCRETE
3. FORMED AND PUMPED CONCRETE AND MORTAR
4. TROWELING AND DRY-PACKING OF REPAIR MORTAR

SUBSTRUCTURE REPAIRS SHOWN IN THE PLANS ARE INTENDED TO DESCRIBE APPROXIMATE REPAIR AREAS. REPAIRS ARE NOT LIMITED TO THE DESIGNATED AREAS AS SHOWN. THE SPECIFIC REPAIR LOCATION, CLASSIFICATION AND EXTENT OF REPAIRS SHALL BE ADJUSTED IN THE FIELD BY THE ENGINEER. THE REPAIRS SHALL ONLY BE MADE IN THE AREAS SELECTED BY THE ENGINEER. PAYMENT WILL BE MADE ONLY FOR THE ACTUAL REPAIRS PERFORMED.

IF THE CONTRACTOR ELECTS TO USE A METHOD OTHER THAN PNEUMATICALLY PLACED MORTAR, THEY SHALL SUBMIT TO THE ENGINEER, FOR HIS APPROVAL, A PROPOSED WORK PLAN. THE WORK PLAN SHOULD INCLUDE SURFACE PREPARATION METHODS, PATCHING MATERIAL, BONDING AGENTS, MATERIAL PLACING METHODS, COMPATIBILITY WITH CORROSION INHIBITORS AND FINISHING METHODS. THE CONTRACTOR SHALL REPAIR A TEST AREA TO VERIFY THE EFFECTIVENESS OF THEIR PROPOSED REPAIR METHODS PRIOR TO COMMENCEMENT OF THE WORK ON THE ENTIRE STRUCTURE. FAULTY REPAIRS SHALL BE REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY OF TULSA. THE COST FOR ALL PATCHING METHODS WILL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "PNEUMATICALLY PLACED MORTAR".

(B5) FOR SEVERE DETERIORATION OF UNSOUND CONCRETE IN THE CELLS OF BRIDGE 167 SHALL BE REPAIRED AS DESCRIBED HERE. PRIOR TO REPAIRING AN AREA, ENSURE THAT ALL UNSOUND CONCRETE HAS BEEN REMOVED FROM THE AREA AND THE NEWLY EXPOSED SURFACE HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 521.04.C OF THE STANDARD SPECIFICATIONS. REPAIR ANY DETERIORATED REINFORCING STEEL BARS WITH SECTION LOSS GREATER THAN 25%, AND APPLY CORROSION INHIBITOR TO THE REPAIR AREAS IN ACCORDANCE WITH SPECIAL PROVISION 535-1.

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

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

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

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

COLD WEATHER PRACTICES SHALL BE AS FOLLOWS:

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

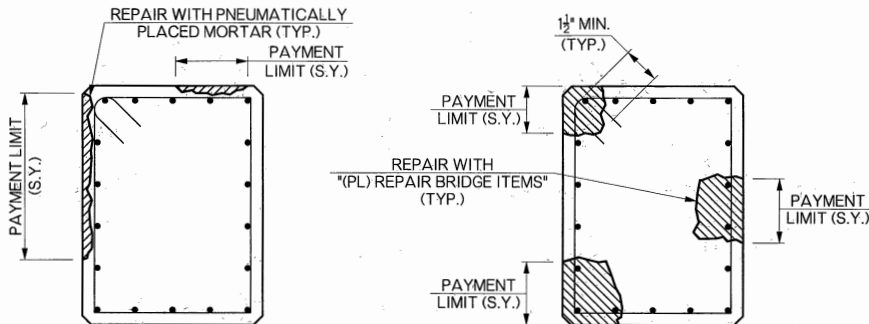
AIR TEMPERATURES SHALL BE GREATER THAN 45°F WHEN PLACING EARLY STRENGTH CONCRETE.

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

6. QUIKRETE SHOTCRETE M5 WITH POLYPROPYLENE FIBERS
7. SIKACEM 103F
8. SIKACEM 133
9. SIKACRETE 211 SCG PLUS
10. BASF MASTEREMACO S 210SP
11. BASF MASTEREMACO S 211SP
12. PROSPEC SHOTCRETE 300V
13. EUCOSHOT F

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

ALL COSTS TO COMPLETE THE REPAIRS INCLUDING ALL COSTS OF REMOVALS, CLEANING, SURFACE PREPARATION, CORROSION INHIBITOR, NEW CONCRETE, PROPORTIONING, MIXING, FORMWORK, PLACING CONCRETE, FINISHING CONCRETE, MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD OF "PL REPAIR BRIDGE ITEMS".



PNEUMATICALLY PLACED MORTAR

(PL) REPAIR BRIDGE ITEMS

CONCRETE REPAIR

(B6) ITEM "CLASS A BRIDGE DECK REPAIR" SHALL CONSIST OF PARTIAL DEPTH DECK REPAIR DOWN TO THE TOP LAYER OF REINFORCING STEEL ON BRIDGES 261A & 261B. ESTIMATED REPAIR AREAS ARE SHOWN FOR BRIDGE 261A ON SHEET NOS. 15 & 16 AND FOR BRIDGE 261B ON SHEET NO. 21. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 513 OF THE STANDARD SPECIFICATIONS.

PAYMENT ONLY FOR ACTUAL REPAIRS PERFORMED WILL BE ALLOWED. PAYMENT WILL NOT BE MADE FOR REPAIRS NOT MADE.

ALL COSTS OF THE REPAIR INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "CLASS A BRIDGE DECK REPAIR".

(B7) ITEM "CLASS B BRIDGE DECK REPAIR" SHALL CONSIST OF PARTIAL DEPTH DECK REPAIR BELOW THE TOP LAYER OF REINFORCING STEEL ON BRIDGES 261A & 261B. ESTIMATED REPAIR AREAS ARE SHOWN FOR BRIDGE 261A ON SHEET NO. 16 AND FOR BRIDGE 261B ON SHEET NO. 21. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 513 OF THE STANDARD SPECIFICATIONS.

PAYMENT ONLY FOR ACTUAL REPAIRS PERFORMED WILL BE ALLOWED. PAYMENT WILL NOT BE MADE FOR REPAIRS NOT MADE.

ALL COSTS OF THE REPAIR INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "CLASS B BRIDGE DECK REPAIR".

(B8) ITEM "RAPID CURE JOINT SEALANT" INCLUDES PLACING BACKER ROD AND SEALANT AT ABUTMENT NOS. 1 & 2 ON BRIDGE 261A (SEE SHEET NO. 14). THE JOINTS SHALL BE SEALED WITH RAPID CURE JOINT SEALANT IN ACCORDANCE WITH SUBSECTION 518.04.C(5)(b) AND SUBSECTION 701.08.G OF THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE PLANS.

ALL COSTS ASSOCIATED WITH THE USE OF RAPID CURE JOINT SEALANT INCLUDING REMOVAL OF EXISTING JOINT MATERIAL, SEALANT, BACKER ROD, LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "RAPID CURE JOINT SEALANT".

(B9) THIS ITEM SHALL CONSIST OF SLABJACKING AND SUBSEALING/UNDERSEALING APPROACH SLAB NO. 1 AND ADJACENT CONCRETE APPROACH PANELS ON BRIDGE 261A & 261B ONLY AS SHOWN IN THE PLANS AND ACCORDING TO THESE SPECIFICATIONS. THIS WORK SHALL BE COMPLETED DURING THE PHASE I DETOUR.

MATERIALS:

THE MEDIUM USED IS A HIGH DENSITY POLYURETHANE FORMULATION. THE POLYURETHANE SHALL EXHIBIT THE FOLLOWING PHYSICAL CHARACTERISTICS AND PROPERTIES:

	ORIGINAL	AFTER 1 YEAR CONTROL	AFTER 10 YEARS BURIED
PROPOPERTY DENSITY, PCF	2.1	2.2	2.1
TENSILE STRENGTH, PSI	54	68	58
ELONGATION, %	5.1	6.3	6.5
COMPRESSION STRENGTH, PSI (AT YIELD POINT)	47	51	50
K-FACTOR, BTU IN/HR°F	0.123	0.127	0.144
VOLUME CHANGE, % OF ORIGINAL	--	0	4.2

EQUIPMENT:

THE FOLLOWING LIST IS THE MINIMUM OF EQUIPMENT REQUIRED, BUT SHALL NOT PRECLUDE THE USE OF ADDITIONAL EQUIPMENT.

- (1): A PNEUMATIC DRILL CAPABLE OF DRILLING 1/2" - 5/8" DIAMETER HOLES.
- (2): A SELF-CONTAINED TRUCK MOUNTED PUMPING UNIT CAPABLE OF STORING, PROPORTIONING, BLENDING, AND INJECTING THE POLYURETHANE FORMULATION UNDER THE CONCRETE PAVEMENT. THE EQUIPMENT WILL BE OF SIZE AND NATURE TO CONTROL THE RATE OF RISE OF THE PAVEMENT.
- (3): A LASER LEVELING UNIT, STRAIGHT EDGE, OR STRINGLINE TO ENSURE THAT THE CONCRETE IS RAISED TO AN EVEN PLANE AND/OR TO THE REQUIRED ELEVATION.

CONSTRUCTION METHODS:

- (A) THE 1/2-INCH DIAMETER HOLE SHALL BE DRILLED IN THE FOLLOWING MANNER.
 - (1) A SERIES OF HOLES SHALL BE DRILLED AT SIX FOOT INTERVALS, STAGGERED THROUGHOUT THE APPROACH SLABS AND ADJACENT CONCRETE APPROACH PANELS. THE EXACT LOCATION OF THE HOLES SHALL BE DETERMINED BY THE ENGINEER.
- (B) THE FOLLOWING CONSTRUCTION PROCEDURES WILL BE USED:
 - (1) A PROFILE OF THE REPAIR AREA WILL BE DEVELOPED TO DETERMINE THE EXTENT TO BE RAISED.
 - (2) A SERIES OF 1/2-INCH DIAMETER HOLES WILL BE DRILLED AT THE NECESSARY LOCATIONS AND INTERVALS.
 - (3) THE POLYURETHANE FORMULATION IS THEN INJECTED UNDER THE APPROACH SLABS AND PANELS.
 - (4) AS THE POLYURETHANE CHEMICALLY REACTS IT WILL EXPAND, EXERTING THE NECESSARY LIFTING FORCE, AND HARDEN TO PROVIDE THE STRUCTURAL STRENGTH REQUIRED.
- (C) THE AMOUNT OF RISE SHALL BE CONTROLLED BY THE PUMPING UNIT AND THE INJECTION GUN.
- (D) THE VENDOR SHALL BE RESPONSIBLE FOR ANY PAVEMENT BLOWOUTS AS WELL AS EXCESSIVE OR UNEVEN PAVEMENT MOVING WHICH WILL CAUSE PONDING AND SHALL REPLACE OR FIX THE DAMAGED AREA TO THE SATISFACTION OF THE ENGINEER.
- (E) WHEN THE INJECTION NOZZLE IS REMOVED FROM THE HOLE, ANY EXCESSIVE POLYURETHANE MATERIAL SHALL BE REMOVED FROM THE AREA AND THE HOLE SEALED WITH POLYURETHANE MATERIAL OR A QUICKSET CONCRETE PATCH.
- (F) VEHICULAR TRAFFIC SHALL BE DETOURED WHILE THE SLABJACKING OF THE APPROACH SLABS AND ADJACENT CONCRETE APPROACH PANELS. THE PEDESTRIAN SIDEWALK WILL BE CLOSED DURING WORK HOURS BUT WILL BE OPENED AT ALL OTHER TIMES.

MEASUREMENT:

THE POLYURETHANE MATERIAL SHALL BE PAID FOR BY THE POUND WHICH WILL INCLUDE FURNISHING, BLENDING, AND INJECTING MATERIAL.

PAYMENT:

ALL COSTS ASSOCIATED WITH THE USE OF THE POLYURETHANE INJECTION INCLUDING POLYURETHANE MATERIAL, DRILLING, LABOR, EQUIPMENT, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER POUND OF "POLYURETHANE INJECTION FOR PAVEMENT".

(B10) ITEM "ELASTOMERIC MORTAR" SHALL BE USED AT ABUTMENT NO. 1 AS SPECIFIED ON BRIDGE 261A (SEE SHEET NO. 14) IN CONJUNCTION WITH THE RAPID CURE JOINT SEALANT. PLACE THE BACKER ROD AND RAPID CURE JOINT SEALANT AFTER THE MORTAR HAS HARDENED. THE EXPANSION JOINT REPLACEMENT SHALL BEGIN AFTER THE SLABJACKING OF APPROACH SLAB NO. 1 OF BRIDGE 261A.

THE EXISTING CONCRETE FOR THE JOINT REPLACEMENT SHALL BE REMOVED AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING DECK. ANY DAMAGE TO THE EXISTING DECK SHALL BE REPAIRED OR REPLACED, AS NEEDED, TO THE SATISFACTION OF THE CITY OF TULSA.

ALL COSTS ASSOCIATED WITH THE USE OF ELASTOMERIC MORTAR INCLUDING REMOVAL OF EXISTING MATERIAL, MORTAR, LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER CUBIC FOOT OF "ELASTOMERIC MORTAR".



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

CITYWIDE BRIDGE REHABILITATION
PROJECT NO. TD-2020-B1A

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
6100 S. YALE AVE., SUITE 1300 TULSA, OKLAHOMA 74136 Phone: (918) 250-5922 Fax: (918) 558-0107

DRAWN	JMH	222	APPROVED:
DESIGNED	JMH	222	
SURVEY			
PROJ. MGR.	BRT	322	
LEAD MGR.	GD	4/22	
FIELD MGR.	See 11/22		
RECOMMENDED:			
HAS 11/22			
DESIGN MANAGER			
CITY ENGINEER			

ADVERTISE DATE:	
REVISION	BY DATE

ATLAS PAGE NO. 19,129,130,886,887,1009,1010 SHEET 2 OF 33 SHEETS

J:\Work\Projects\MicroStation\Drawings\Amendment\1BRIDGE\ECOT_TD-2020-B1_AMEND1_SUMMARY OF PAY QUANTITIES AND NOTES 2.dgn
9/2/2022 11:12:14 AM
WORKSPACE MicroStation
L:\2020\20103030 - COT 1072 Bridge Rehabilitation\Drawings\Amendment\1BRIDGE\ECOT_TD-2020-B1_AMEND1_SUMMARY OF PAY QUANTITIES AND NOTES 2.dgn

BRIDGE PAY ITEM NOTES (CONT'D)

(B11) ITEMS "SEALER CRACK PREPARATION" & "SEALER RESIN" SHALL BE USED TO SEAL CRACKS LOCATED ON THE DRIVING SURFACES OF THE BRIDGE DECK AND APPROACH SLABS FOR BRIDGES 261A & 261B. THE CRACKS SHALL BE SEALED IN ACCORDANCE WITH SECTION 523 OF THE STANDARD SPECIFICATIONS.

ALL COSTS OF SEALING CRACKS ON THE BRIDGE DECK AND APPROACH SLABS INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "SEALER CRACK PREPARATION" AND PER GALLON OF "SEALER RESIN".

(B12) ITEM "DECK AREA SEALED (FLOODCOATS)" SHALL CONSIST OF APPLYING A FLOOD COAT DECK SEAL TO THE FOLLOWING CONCRETE SURFACES OF BRIDGE 261A & 261B:

1. DRIVING SURFACES OF THE BRIDGE DECK AND APPROACH SLABS.
2. ALL EXPOSED FACES OF THE 5'-0" SIDEWALK AND 8" CURB.
3. THE INSIDE AND TOP FACES OF BOTH EXTERIOR PARAPETS.

EXISTING PAVEMENT STRIPING SHALL BE REMOVED PRIOR TO FLOOD COAT DECK SEAL APPLICATION. ANY TRAFFIC STRIPING RENDERED INEFFECTIVE OR DAMAGED DURING APPLICATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR MUST PREVENT THE FLOOD COAT DECK SEAL FROM PENETRATING ANY JOINT THAT HAS BEEN SEALED WITH SILICONE. IF THE FLOOD COAT DECK SEAL PENETRATES ANY SILICONE JOINT, THE CONTRACTOR, AT HIS OWN EXPENSE, WILL BE REQUIRED TO:

1. REMOVE ALL FLOOD COAT DECK SEAL FROM THESE JOINTS AFTER BULK CURE.
2. REMOVE AND REPLACE THE SILICONE JOINT SEALANT.

THIS WORK WILL BE PERFORMED AFTER ALL OTHER WORK ON THE BRIDGE HAS BEEN COMPLETED, WITH THE EXCEPTION OF FINISHED PAVEMENT MARKINGS.

ALL COSTS TO SEAL THE CONCRETE SURFACES WITH FLOOD COAT DECK SEAL INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "DECK AREA SEALED (FLOODCOATS)".

(B13) ITEM "(PL)REPLACE BRIDGE ITEMS" SHALL BE USED TO CLEAN THE EXPANSION JOINTS AND REMOVE & REPLACE THE NEOPRENE GLAND AT THE EXPANSION JOINTS OF BRIDGES 261A & 261B. ESTIMATED REPAIR AREAS ARE SHOWN FOR BRIDGE 261A ON SHEET NO. 14 AND FOR BRIDGE 261B ON SHEET NO. 20. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SUBSECTION 518.04.C(5)(G) AND SUBSECTION 701.08H(3) OF THE STANDARD SPECIFICATIONS.

ALL COSTS ASSOCIATED WITH THE USE OF (PL)REPLACE BRIDGE ITEMS INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER EACH OF "(PL)REPLACE BRIDGE ITEMS".

(B14) ITEM "(PL)REMOVE DRIFT AND SILT" SHALL CONSIST OF REMOVING OBSTRUCTIONS & DEBRIS WITHIN THE CHANNEL ADJACENT TO BRIDGE 359 AS SHOWN ON SHEET NO. 28.

ALL COSTS ASSOCIATED WITH THE DEBRIS REMOVAL INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER LUMP SUM OF "(PL)REMOVE DRIFT AND SILT".

(B15) ITEM "CONCRETE PARAPET" SHALL BE USED FOR THE CONSTRUCTION OF NEW CONCRETE BARRIER ALONG BOTH SIDES OF BRIDGE 359 AS SHOWN ON SHEET NO. 29. CONSTRUCTION OF THE NEW CONCRETE PARAPETS SHALL BE IN ACCORDANCE WITH SECTION 504 OF THE STANDARD SPECIFICATIONS.

ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF CONCRETE BARRIER INCLUDING CLASS AA CONCRETE, EPOXY COATED REINFORCING STEEL, LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".

(B16) ITEM "REMOVAL OF EXISTING PARAPET" SHALL BE USED FOR THE REMOVAL OF EXISTING CONCRETE AND METAL RAILING ALONG BOTH SIDES OF BRIDGE 359 AS SHOWN ON SHEET NO. 28.

WHEN REMOVING THE EXISTING CONCRETE POSTS AND RAILS ON BOTH SIDES OF THE BRIDGE AS SHOWN ON THE PLANS, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION NECESSARY TO PREVENT DAMAGING THE REMAINING COMPONENTS OF THE EXISTING BRIDGE. ONLY HAND TOOLS OR HAND OPERATED POWER TOOLS WILL BE ALLOWED TO MAKE THE REMOVALS. NO VEHICLE MOUNTED TOOLS OR EQUIPMENT WILL BE ALLOWED TO MAKE REMOVALS. ANY DAMAGES CAUSED BY THE CONTRACTOR TO THE EXISTING BRIDGE DECK OR CURB SHALL BE REPAIRED OR COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. THE ENGINEER WILL DETERMINE IF THE DAMAGED COMPONENTS CAN BE REPAIRED OR IF NOT THE COMPONENT SHALL BE COMPLETELY REPLACED.

ALL COSTS NECESSARY TO COMPLETE THE WORK AS SPECIFIED OR AS SHOWN IN THE PLANS INCLUDING THE COST OF SAFETY PLATFORMS, SAWING, CUTTING, DEMOLITION, CONTAINMENT AND REMOVAL OF DEBRIS, MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "REMOVAL OF EXISTING PARAPET".

ROADWAY PAY ITEM NOTES

(R-1) WASTE MATERIAL TO BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE IN A MANNER APPROVED BY THE ENGINEER.

(R-2) ALL SAW CUTTING AND REMOVAL SHALL BE INCLUDED IN THE COST OF THE ITEM TO BE ADJUSTED, REMOVED, REPAIRED, OR REPLACED.

(R-5) ITEMS TO BE REMOVED MAY OR MAY NOT BE PRESENT IN ANY SPECIFIED CONDITION.

(R-18) ESTIMATED AT 140 LBS. PER CU. FT.

(R-24) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.

(S-10) FOR P.C. CONCRETE TYPICAL SECTIONS, CONTRACTOR MAY SUBSTITUTE INTEGRAL CURB FOR CURB & GUTTER, AND VICE VERSA, ONLY WITH APPROVAL OF THE ENGINEER, WITH NO ADJUSTMENT MADE TO UNIT PRICE OR QUANTITY.

(S-11) CONCRETE PAVEMENT SHALL BE COMPLETE IN PLACE. NO PARTIAL OR FINAL PAYMENT SHALL BE MADE UNTIL PAVEMENT HAS BEEN SAWED AND SEALED. ANY SECTIONS OF PAVEMENT WITH UNAPPROVED DEVIATIONS FROM THE JOINT LAYOUT PROVIDED IN THE PLANS MAY BE REJECTED AT THE DISCRETION OF THE ENGINEER.

(S-12) THE USE OF FLY-ASH IN CONCRETE IS PROHIBITED.

(S-13) INCLUDES ALL COST OF SAWED JOINTS AND SEALING OF ALL JOINTS INCLUDING LONGITUDINAL JOINTS.

(TP-12) ESTIMATED QUANTITY ONLY. TO CONSTRUCT A VARIABLE WIDTH BY 4" THICK PAVED SURFACE UNDER NEW GUARDRAIL INSTALLATIONS AS DIRECTED BY THE ENGINEER. SEE STANDARD GHW1-1 (LATEST REVISION).

(TP-25) NO RAW GUARDRAIL ENDS SHALL BE LEFT EXPOSED TO TRAFFIC DURING NON-WORKING HOURS.

(TP-26) INCLUDES VARIOUS SHOP CURVED SECTIONS OF GUARDRAIL AT THE NORTHWEST CORNER OF BRIDGE 359. THE ACTUAL RADIUS TO BE USED SHALL BE DETERMINED BY THE CONTRACTOR.

(1) INCLUDES THE COST OF ONE W-BEAM SECTION (FLARED), COMPLETE AND IN PLACE.

(2) INCLUDES THE COST OF AGGREGATE BASE, TYPE A AND SEPARATOR FABRIC.

EROSION CONTROL NOTES:

(E-7) EROSION PROTECTION SHALL BE PLACED AS FOLLOWS:

A) AROUND INLETS TO PREVENT INFLOW OF ERODED MATERIAL INTO STORM SEWER SYSTEM;

B) IN LOCATIONS THROUGHOUT PROJECT SITE, AS DETERMINED BY THE ENGINEER, TO PREVENT WASH OR ERODED MATERIAL ONTO ADJACENT PROPERTY;

C) FOR ENTIRE DURATION OF PROJECT, WITH MAINTENANCE AND REPLACEMENTS, AS DIRECTED BY THE ENGINEER;

D) WITH PERIODIC REMOVAL OF SEDIMENT IN ACCORDANCE WITH STORMWATER MANAGEMENT PLAN.

ALL COST FOR ITEMS A-D ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

BRIDGE 167 (NBI 17168)			PAY QUANTITIES		W. CHARLES PAGE BLVD. OVER PARKVIEW DITCH	
ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY	
1	520(A)	PREPARATION OF CRACKS, ABOVE WATER	(B2,3)	L.F.	132	
2	520(C)	EPOXY RESIN, ABOVE WATER	(B2,3)	GAL.	5	
3	521(A)	PNEUMATICALLY PLACED MORTAR	(B2,4)	S.Y.	3	
4	540	(PL)REPAIR BRIDGE ITEMS	(B5)	S.Y.	29	

BRIDGE 261A (NBI 20841)			PAY QUANTITIES		WB E. 21ST STREET OVER MINGO CREEK	
ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY	
5	414(A)	P.C. CONCRETE PAVEMENT (PLACEMENT)	(S-10,11)	S.Y.	29	
6	414(G)	P.C. CONCRETE FOR PAVEMENT	(S-10,11,12,13)(2)	C.Y.	8	
7	426(D)	POLYURETHANE INJECTION FOR PAVEMENT	(B9)	LB.	510	
8	513(A)	CLASS A BRIDGE DECK REPAIR	(B6)	S.Y.	33	
9	513(B)	CLASS B BRIDGE DECK REPAIR	(B7)	S.Y.	19	
10	518(C)	RAPID CURE JOINT SEALANT	(B1,8)	L.F.	54	
11	518(D)	ELASTOMERIC MORTAR	(B1,10)	C.F.	18	
12	521(A)	PNEUMATICALLY PLACED MORTAR	(B2,4)	S.Y.	2	
13	523(A)	SEALER CRACK PREPARATION	(B11)	L.F.	142	
14	523(B)	SEALER RESIN	(B11)	GAL.	2	
15	523(C)	DECK AREA SEALED (FLOODCOATS)	(B12)	S.Y.	1,043	
16	545	(PL)REPLACE BRIDGE ITEMS	(B13)	EA.	6	
17	619(B)	REMOVAL OF CONCRETE PAVEMENT	(R-1,2,5)	S.Y.	29	

BRIDGE 261B (NBI 20842)			PAY QUANTITIES		EB E. 21ST STREET OVER MINGO CREEK	
ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY	
18	426(D)	POLYURETHANE INJECTION FOR PAVEMENT	(B9)	LB.	609	
19	513(A)	CLASS A BRIDGE DECK REPAIR	(B6)	S.Y.	29	
20	513(B)	CLASS B BRIDGE DECK REPAIR	(B7)	S.Y.	12	
21	523(A)	SEALER CRACK PREPARATION	(B11)	L.F.	270	
22	523(B)	SEALER RESIN	(B11)	GAL.	3	
23	523(C)	DECK AREA SEALED (FLOODCOATS)	(B12)	S.Y.	1,043	
24	545	(PL)REPLACE BRIDGE ITEMS	(B13)	EA.	6	

BRIDGE 359 (NBI 08253)			PAY QUANTITIES		S. ELWOOD AVE OVER HAGER CREEK	
ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY	
25	201	(PL)REMOVE DRIFT AND SILT	(B14, R-1)	LSUM.	1	
26	221(B)	TEMPORARY SILT FENCE	(E-7)	L.F.	473	
27	402(E)	TRAFFIC BOUND SURFACE COURSE TYPE E	(R-18)	TON	57	
28	411(C)	SUPERPAVE, TYPE S4(PG 70-28 OK)	(R-24)(TP12)	TON	34	
29	504(E)	CONCRETE PARAPET	(B15, S-12)	L.F.	68	
30	619(B)	REMOVAL OF EXISTING PARAPET	(B16, R-1)	L.F.	68	
31	623	(PL)GUARDRAIL CURBING		EA.	4	
32	623(A)	BEAM GUARDRAIL W-BEAM SINGLE	(TP-25)	L.F.	63	
33	623(G)	GUARDRAIL END TREATMENT (31")	(TP-25)	EA.	3	
34	623(I)	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	(TP-25)	EA.	4	
35	623(J)	CURVED APPROACH GUARDRAIL	(TP-25,26)(1)	EA.	1	

CONSTRUCTION				PAY QUANTITIES	
ITEM NO.	SPEC. NO.	DESCRIPTION		UNIT	QUANTITY
36	220	SWPPP DOCUMENTATION AND MANAGEMENT		LSUM	1
37	641	MOBILIZATION		EA.	1
38	SPECIAL	OWNER ALLOWANCE		EA.	20,000
39	COT 334	CONSTRUCTION AS-BUILT		LSUM	1
40	COT 335	CONTRACTOR'S QUALITY CONTROL		LSUM	1

ADVERTISE DATE:					
REVISION	BY	DATE			



SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 2 OF 2)					
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A					
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT					
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107					
DRAWN JMH 2/22		DESIGNED JMH 2/22		APPROVED:	
SURVEY		PROJ. MGR. BRT 3/22			
LEAD MGR. <i>AD</i> 1/22		FIELD MGR. <i>AD</i> 1/22			
RECOMMENDED:					
PLAN SCALE					
PROFILE SCALE					
HORIZONTAL:					
VERTICAL:					
FILE:		DRAWING:		DATE:	
ATLAS PAGE NO. 19,129,130,886,887,1009,1010		SHEET 3		OF 33 SHEETS	

PAY ITEM NOTES (VERSION: 10/13/2021)

TRAFFIC GENERAL CONSTRUCTION NOTES

PAY QUANTITIES - BRIDGE 261A				
TRAFFIC				
ITEM CODE	DESCRIPTION		UNIT	QUANTITY
41	102	(SP) PROJECT SIGN (CITY OF TULSA)	(T-7) EA	1
42	855(A)	TRAFFIC STRIPE (4" WHITE)(THERMOPLASTIC)	(T-3) LF	1218
43	857(C)	REMOVABLE PAVEMENT MARKING TAPE	LF	896
44	859	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	LF	425
45	880(B)	SIGNS 0 TO 6.25 SF	(T-2,4,5) SD	645
46	880(B)	SIGNS 6.26 SF TO 15.99 SF	(T-2,4,5) SD	210
47	880(B)	SIGNS 16.0 AND UP	(T-2,4,5) SD	360
48	880(C)	BARRICADES (TYPE III)	(T-2,4,5) SD	180
49	880(C)	WING BARRICADES	(T-2,4,5) SD	195
50	880(E)	TYPE A LIGHT	(T-5) SD	495
51	880(F)	DRUMS	(T-2,4,5) SD	420
52	880(G)	TUBE CHANNELIZERS	(T-2,4) SD	120

T-1 ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.

T-2 REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.

T-3 ALL PLASTIC PAVEMENT MARKINGS SHALL BE: EXTRUDED-APPLIED THERMOPLASTIC (USE ON ASPHALT PAVEMENT). THERMOPLASTIC PAVEMENT MARKINGS SHALL ONLY BE APPLIED WHEN THE SURFACE TEMPERATURE EXCEEDS 55° FOR ALL OF THE SIX HOURS PRIOR TO INSTALLATION AND MAXIMUM WIND GUSTS ARE BELOW 15 MPH AT THE TIME OF APPLICATION. PRICE BID TO INCLUDE FLEX TABS OR LIKE KIND FOR POST CONSTRUCTION LANE MARKING/SEPARATION. MECHANICALLY APPLIED PREFORMED PLASTIC TAPE ("COLD TAPE") WILL NOT BE ACCEPTED.

T-4 PAYMENT SHALL BE MADE ON A SIGN-DAY BASIS ONLY FOR TRAFFIC CONTROL DEVICES THAT ARE PROPERLY INSTALLED AND IN GOOD WORKING ORDER. COSTS FOR DELIVERY, INSTALLATION, RELOCATION, MAINTENANCE REMOVAL AND REPLACEMENT, AS NEEDED AT THE DISCRETION OF THE ENGINEER, INCLUDED IN UNIT PRICE BID.

T-5 IF WARNING LIGHTS ARE TO BE USED ON TRAFFIC CONTROL DEVICES, TYPE "A" LIGHTS SHALL ONLY BE USED ON DEVICES WARNING OF UNEXPECTED HAZARDS, AND SHALL NOT BE USED FOR DELINEATION OF THE TRAVELED WAY. ONLY TYPE "C" WARNING LIGHTS SHALL BE USED FOR DELINEATION OF THE TRAVELED WAY, AND TYPE "C" LIGHTS SHALL NOT BE USED FOR ANY OTHER PURPOSE.

T-6 NOT USED

T-7 PRICE BID FOR THIS ITEM INCLUDES INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF PROJECT SIGN.

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

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE O.D.O.T. STANDARDS AND DETAIL DRAWINGS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRAACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

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.

CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN SUCH A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT ADDITION", AND APPLICABLE O.D.O.T. STANDARD DRAWINGS. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK IF A CHANGE TO THE TRAFFIC CONTROL PLAN IS PROPOSED.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET O.D.O.T.'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES.


PAY QUANTITIES - BRIDGE 261B				
TRAFFIC				
ITEM CODE	DESCRIPTION		UNIT	QUANTITY
53	102	(SP) PROJECT SIGN (CITY OF TULSA)	(T-7) EA	1
54	855(A)	TRAFFIC STRIPE (4" WHITE)(THERMOPLASTIC)	(T-3) LF	1220
55	857(C)	REMOVABLE PAVEMENT MARKING TAPE	LF	896
56	859	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	LF	425
57	880(B)	SIGNS 0 TO 6.25 SF	(T-2,4,5) SD	645
58	880(B)	SIGNS 6.26 SF TO 15.99 SF	(T-2,4,5) SD	195
59	880(B)	SIGNS 16.0 AND UP	(T-2,4,5) SD	360
60	880(C)	BARRICADES (TYPE III)	(T-2,4,5) SD	180
61	880(C)	WING BARRICADES	(T-2,4,5) SD	180
62	880(E)	TYPE A LIGHT	(T-5) SD	495
63	880(F)	DRUMS	(T-2,4,5) SD	420
64	880(G)	TUBE CHANNELIZERS	(T-2,4) SD	120

SIGN NO.	ALIGNMENT	APPROXIMATE STATION LOCATION	SIGN TYPE	SIGN SUMMARY					(PL) REMOVAL OF EXISTING SIGNS	REMARKS	
				SIGN THICKNESS			POSTS				
				0.063"	0.080"	0.100"	12 GA.				
				SHEET ALUMINUM			1-¾" SQUARE TUBE POST				
				850(A)			851(C)				805(A)
				(STD.)	(S.F.)	(S.F.)	(S.F.)	POST A (L.F.)			POST B (L.F.)
1	BRIDGE 359	SOUTHWEST BRIDGE APPROACH	SPECIAL SIGN, OM3-R	-	2.5	-	12.5	-	2	NEW "HAGER CREEK" SIGN W/OBJECT MARKER	
2	BRIDGE 359	NORTHWEST BRIDGE APPROACH	OM3-L	-	1	-	10.0	-	1	-	
3	BRIDGE 359	NORTHEAST BRIDGE APPROACH	SPECIAL SIGN, OM3-R	-	2.5	-	12.5	-	2	NEW "HAGER CREEK" SIGN W/OBJECT MARKER	
4	BRIDGE 359	SOUTHEAST BRIDGE APPROACH	OM3-L	-	1	-	10.0	-	-	-	
TOTAL				7.0			45		5		

PAY QUANTITIES - BRIDGE 359				
TRAFFIC				
ITEM CODE	DESCRIPTION		UNIT	QUANTITY
65	102	(SP) PROJECT SIGN (CITY OF TULSA)	(T-7) EA	2
66	805(A)	(PL) REMOVAL OF EXISTING SIGNS	(T-1) EA	5
67	823	(SP) PORTABLE TRAFFIC SIGNAL SYSTEM	SD	30
68	850(A)	SHEET ALUMINUM SIGNS	(T-2) SF	7
69	851(C)	1-3/4" SQUARE TUBE POST	LF	45
70	855(A)	TRAFFIC STRIPE (4" WHITE)(THERMOPLASTIC)	(T-3) LF	1504
71	855(A)	TRAFFIC STRIPE (4" YELLOW)(THERMOPLASTIC)	(T-3) LF	752
72	857(C)	REMOVABLE PAVEMENT MARKING TAPE	LF	1303
73	859	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	LF	752
74	870(A)	SAND FILLED IMPACT ATTEN.MODULE	SD	60
75	877(B)	DELIVER PORTABLE LONGITUDINAL BARRIER	LF	550
76	880(B)	SIGNS 0 TO 6.25 SF	(T-2,4,5) SD	300
77	880(B)	SIGNS 6.26 SF TO 15.99 SF	(T-2,4,5) SD	60
78	880(B)	SIGNS 16.0 AND UP	(T-2,4,5) SD	420
79	880(C)	WING BARRICADES	(T-2,4,5) SD	120
80	880(E)	TYPE A LIGHT	(T-5) SD	390
81	880(F)	DRUMS	(T-2,4,5) SD	930



ADVERTISE DATE:		
REVISION	BY	DATE

SUMMARY OF PAY QUANTITIES AND NOTES (TRAFFIC)			
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
	APPROVED:		
	DRAWN	AJF	03/22
	DESIGNED	KDH	03/22
	SURVEY	N/A	N/A
PLAN SCALE	PROJ. MGR.	AK	11/22
	LEAD MGR.	AK	11/22
	FIELD MGR.	KDH	11/22
PROFILE SCALE HORIZONTAL:	RECOMMENDED:		
	HAS 11/22		
VERTICAL:	DESIGN MANAGER		CITY ENGINEER
FILE:	DRAWING:		DATE:
ATLAS PAGE NO. 19, 129, 130, 886, 887, 1009, 1010		SHEET 4 OF 33 SHEETS	

GENERAL CONSTRUCTION NOTES (VERSION DATE: 9/12/2016)

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE CURRENT CITY OF TULSA ENGINEERING SERVICES DEPARTMENT'S STANDARD SPECIFICATIONS AND STANDARD DETAILS AND STANDARD DRAWINGS AND CITY OF TULSA SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTION ON AS HIS OWN RESPONSIBILITY OR AS THE ENGINEER MAY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
3. PAY ITEMS SHALL BE AS SPECIFIED ON THE CITY OF TULSA OR ON THE ODOT STANDARD DRAWINGS EXCEPT AS MODIFIED BY THE CONTRACT.
4. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
5. THE LOCATIONS OF THE UTILITIES ARE SHOWN ACCORDING TO ALL AVAILABLE INFORMATION. THE CONTRACTOR SHALL NOTIFY EACH UTILITY OWNER PRIOR TO COMMENCEMENT OF WORK TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATIONS. THE FOLLOWING IS A LIST OF UTILITY OWNERS; AT&T, PUBLIC SERVICE COMPANY OF OKLAHOMA (AEP), OKLAHOMA NATURAL GAS (ONG), COX COMMUNICATIONS, MCI/VERIZON, EASYTEL COMMUNICATIONS, WELLSCO VALLOR TELECOM, CITY OF TULSA-WATER AND SEWER, CITY OF TULSA-TRAFFIC OPERATIONS. SEE TITLE SHEET FOR CONTACT INFORMATION.
6. THE CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF OKLAHOMA ONE-CALL SYSTEM, INC. NOTICE OF ANY EXCAVATION NO SOONER THAN TEN DAYS NOR LATER THAN 48 HOURS , EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO THE COMMENCEMENT OF WORK. PHONE 1-800-522-6543.
7. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PREVENT EXCESS MOISTURE FROM INCLEMENT WEATHER OR OTHER SOURCES FROM ENTERING ANY STREET EXCAVATION. IF EXCESS MOISTURE DOES ENTER THE EXCAVATION THROUGH THE NEGLIGENCE OF THE CONTRACTOR AND THE ADJOINING PAVEMENT IS ADVERSELY EFFECTED BY THE EXCESS MOISTURE, THE CONTRACTOR SHALL REPLACE THE ADJOINING PAVEMENT AND SUBBASE AT HIS SOLE EXPENSE.
8. THE CONTRACTOR SHALL PRESERVE THE INTEGRITY OF THE SANITARY SEWER STRUCTURES AND ALL OTHER UTILITY STRUCTURES WITHIN THE PROJECT EXTENTS.
9. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. ALL FLAGMEN, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE FIELD ENGINEERING REPRESENTATIVE.
10. CONSTRUCTION SIGNAGE WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT ADDITION, AND APPLICABLE ODOT STANDARD DRAWINGS. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK.
11. THE CONTRACTOR SHALL NOTIFY THE CITY OF TULSA FIELD ENGINEERING, 918-596-9404, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK OR PRIOR TO REMOVING TRAFFIC SIGNS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS LISTED IN THE SIGNAGE SCHEDULE FOR THE PROJECT. ALL SIGNS AND POLES PROVIDED SHALL BE NEW AND UNDAMAGED AND SHALL MEET THE REQUIREMENTS OF COT SPECIFICATION 608 TRAFFIC SIGNS. ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING, NEIGHBORHOOD, MTTA ETC. TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS PART OF THIS PROJECT.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARATION AND DISTRIBUTION OF A WRITTEN NOTICE TO RESIDENTS 48 HOURS PRIOR TO BEGINNING PAVEMENT REMOVAL AND MILLING AND OVERLAY OPERATIONS.
14. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AT ALL TIMES.
15. ALL PUBLIC AND PRIVATE STREETS AND DRIVES SHALL BE ACCESSIBLE AT ALL TIMES.
16. ALL BROKEN CONCRETE, WASTE MATERIAL, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.
17. ALL EXCAVATED MATERIAL NOT REQUIRED IN THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY MATERIAL IS STORED ON THE PROJECT SITE AND/OR DISPOSED OF WITHIN THE CITY LIMITS.
18. ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER IS TO BE CLEANED OUT TO THE RIGHT-OF-WAY LINE IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK. TREES OUTSIDE THE FILL SLOPES AND THE TOP OF CUT SLOPES SHALL NOT BE DISTURBED EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.
19. WHERE MATERIALS ARE TRANSPORTED IN THE PROSECUTION OF WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE CAPACITY RECOMMENDED BY THE VEHICLE MANUFACTURER OR AS PRESCRIBED BY ANY FEDERAL, STATE OR LOCAL LAW OR REGULATION.
20. ANY DAMAGE TO THE ROADWAY PAVEMENT, CURB, DRIVEWAYS OR SIDEWALK CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S SOLE EXPENSE. ALL DISTURBED ITEMS SHALL BE REPAIRED TO MATCH EXISTING MATERIALS AND PATTERNING.
21. IF THE CONTRACTOR ENCOUNTERS VOIDS WHEN PATCHING STREETS, THE CONTRACTOR SHALL CALL FIELD ENGINEERING AT 918-596-7814 FOR AN INSPECTION BEFORE PROCEEDING WITH WORK.

22. THE PROJECT SHALL BE CONSTRUCTED WITH CONTINUOUS FLOW OF MATERIAL SUPPLIED TO THE PROJECT SUCH THAT THE LAYDOWN MACHINE WILL REMAIN IN MOTION. ANY DELAY IN FORWARD PROGRESSION OF THE LAYDOWN MACHINE MAY REQUIRE A TRANSVERSE JOINT AS DIRECTED BY THE ENGINEER.
23. NO FLY ASH IS ALLOWED TO BE USED ON THIS PROJECT.
24. PHYSICAL TESTING FOR QUALITY ASSURANCE SHALL BE FURNISHED BY THE CITY.
25. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY QUALITY CONTROL TESTING TO ENSURE THAT PROJECT REQUIREMENTS ARE MET.
26. MASONRY STRUCTURES SHALL NOT BE CONSTRUCTED WITHIN THE STREET RIGHT-OF-WAY.
27. ALL CONCRETE CURB AND GUTTERS SHALL BE MONOLITHIC POURS. DOWELED-ON CURBS WILL NOT BE ALLOWED.
28. NO LIFTING HOLES WILL BE ALLOWED ON ANY REINFORCED CONCRETE PIPES OR REINFORCED CONCRETE BOXES.
29. CURB RAMP CONSTRUCTION SHALL COMPLY WITH THE CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
30. REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.
31. ALL SANITARY AND STORM SEWER MANHOLE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW LIDS AND CASTINGS AND THE OLD ONES SHALL BE SALVAGED AND DELIVERED TO THE METAL RECYCLE BINS IN THE STOCKROOM AREA AT SEWER OPERATIONS AND MAINTENANCE, 9319 E. 42ND STREET NORTH, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.
32. THE SIGN PLACEMENT STATIONING AND LOCATIONS SHOWN ON THE PLAN SHEETS AND SUMMARY SHEETS ARE APPROXIMATE. EXACT STATIONING AND LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH CITY OF TULSA STANDARDS, CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES, OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.
33. POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE. EXACT LENGTHS SHALL BE DETERMINED BY A FIELD SURVEY CONDUCTED BY THE CONTRACTOR.
34. ALL ASPHALT STREETS THAT ARE TO BE RECONSTRUCTED SHALL BE LEFT WITH A DRIVABLE SURFACE AT ALL TIMES. THE CONTRACTOR WILL NOT BE ALLOWED TO MILL OFF ALL THE ASPHALT BEFORE EXCAVATION BEGINS.
35. THE CONTRACTOR SHALL REPLACE ANY SECTION CORNERS OR OTHER PERMANENT RIGHT OF WAY MARKERS REMOVED OR DISTURBED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT. REPLACEMENT OF SECTION CORNERS OR ANY OTHER MONUMENTS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR AUTHORIZED TO PERFORM WORK IN THE STATE OF OKLAHOMA.
36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND MAINTENANCE OF THE STORMWATER DRAINAGE. STORMWATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED.
37. STRAW OR HAY BALES AS STORMWATER BEST MANAGEMENT PRACTICES ARE NO LONGER ALLOWED ON CONSTRUCTION PROJECTS.
38. THE CONTRACTOR MUST CALL 1-800-458-4251 IMMEDIATELY IF A NATURAL GAS PIPELINE IS CUT, DAMAGED, OR OTHERWISE DISTURBED.
39. PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.
40. ALL FEATURES OF THIS PROJECT INCLUDING, BUT NOT LIMITED TO, SIDEWALKS, CURB RAMPS, AND CROSSWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, ACCESSIBILITY GUIDELINES, AND THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY, PUBLISHED ON JULY 26, 2011 BY THE U.S. ACCESS BOARD. WHERE SPATIAL LIMITATIONS OR EXISTING FEATURES WITHIN THE LIMITS OF THE PROJECT PREVENT FULL COMPLIANCE WITH THIS ACT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERY OF SUCH FEATURES. THE CONTRACTOR SHALL NOT PROCEED WITH ANY ASPECT OF THE WORK, WHICH IS NOT IN FULL COMPLIANCE WITH THE ADA WITH OUR PRIOR WRITTEN APPROVAL FROM THE ENGINEER. ANY WORK WHICH IS NOT PERFORMED WITHIN THE GUIDELINES OF THE ADA, FOR WHICH THE CONTRACTOR DOES NOT HAVE WRITTEN APPROVAL, SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
41. ALL TRENCH WIDTHS & BEDDING MATERIAL SHALL BE AS SHOWN ON COT STANDARD PIPE BEDDING DETAIL, STANDARD NO. 751. SPECIFIED TRENCH WIDTHS SHALL BE MAINTAINED FULL DEPTH FROM THE FLOWLINE TO THE GRADING TEMPLATE. THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED.
42. THE CONTRACTOR SHALL NOTIFY THE METROPOLITAN TULSA TRANSIT AUTHORITY (MTTA), ERIC SMITH 918-830-0024, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK, LANE CLOSURES OR PRIOR TO DETOURING TRAFFIC.
43. CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN.
44. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING NEIGHBORHOOD, MTTA ETC. TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS PART OF THIS PROJECT.



Handwritten signature and date:
10-18-22

ADVERTISE DATE:					
REVISION	BY	DATE			
			FILE:	DRAWING:	DATE:
			ATLAS PAGE NO. 19,129,130,886,887,1009,1010		

GENERAL NOTES					
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A					
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT					
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE. SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107					
	DRAWN	JMH	2/22	APPROVED:	
	DESIGNED	JMH	2/22		
	SURVEY				
	PROJ. MGR.	BRT	3/22		
PLAN SCALE	LEAD MGR.	0	1/22		
PROFILE SCALE	FIELD MGR.	1/22	1/22		
HORIZONTAL:	RECOMMENDED:				
VERTICAL:	HAS 1.22				
			DESIGN MANAGER	CITY ENGINEER	
			FILE:	DRAWING:	DATE:
ATLAS PAGE NO. 19,129,130,886,887,1009,1010 SHEET 5 OF 33 SHEETS					

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 167, LOCATED ON CHARLES PAGE BLVD OVER PARKVIEW DITCH.

PROJECT DESCRIPTION: BRIDGE 167, CULVERT BARRELS.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: N/A

SOIL TYPE: URBAN LAND COMPLEX

TOTAL AREA OF THE CONSTRUCTION SITE: 0.0 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.0 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.0 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.0 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.9

LATITUDE & LONGITUDE OF CENTER OF PROJECT: N 36°09'07" - W 96°00'46"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: ARKANSAS RIVER

SENSITIVE WATERS OR WATERSHEDS: YES NO X

303(d) IMPAIRED WATERS: YES NO X

IF YES, LIST IMPAIRMENT:

LOCATED IN A TMDL: YES NO X

LAKE THUNDERBIRD TMDL: NO X

MS4 ENTITY YES X NO

IF YES, LOCATION: CITY OF TULSA

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

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- 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.



10-18-22

ADVERTISE DATE:		
REVISION	BY	DATE

STORMWATER MANAGEMENT PLAN			
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 1700 W. CHARLES PAGE BLVD. OVER PARKVIEW DITCH			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN	ACF	7/22	APPROVED:
DESIGNED	ACF	7/22	
SURVEY			
PROJ. MGR.	BRT	7/22	LEAD MGR. 802 10/14 FIELD MGR. 202 11/22 RECOMMENDED:
FILE:	DRAWING:	DATE:	
ATLAS PAGE NO. 19			

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 261A, LOCATED ON EAST 21ST STREET CROSSING OVER MINGO CREEK.

PROJECT DESCRIPTION: WORK ON THE DECK, APPROACH SLABS, AND WESTERN ADJACENT APPROACH PAVEMENT PANELS ON BRIDGE 261A.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: N/A

SOIL TYPE: SILT LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 0.01 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.01 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.01 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.01 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.9

LATITUDE & LONGITUDE OF CENTER OF PROJECT: N 36°08'00" - W 95°52'13"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: MINGO CREEK, BIRD CREEK, ULTIMATELY THE VERDIGRIS RIVER

SENSITIVE WATERS OR WATERSHEDS: YES NO X

303(d) IMPAIRED WATERS: YES NO X

IF YES, LIST IMPAIRMENT:

LOCATED IN A TMDL: YES NO X

LAKE THUNDERBIRD TMDL: NO X

MS4 ENTITY YES X NO

IF YES, LOCATION: CITY OF TULSA

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

OFFSITE VEHICLE TRACKING:

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

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

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

WASTE MATERIALS:

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

HAZARDOUS MATERIALS:

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

GENERAL NOTES:

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

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

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



ADVERTISE DATE:	REVISION	BY	DATE

STORMWATER MANAGEMENT PLAN			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
9500 WB E. 21ST STREET OVER MINGO CREEK			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN ACF 7/22		APPROVED:	
DESIGNED ACF 7/22			
SURVEY			
PROJ. MGR. BRT 7/22			
LEAD MGR. Doc 10/22			
FIELD MGR. Jim 11/22			
RECOMMENDED:			
HLS 11/22			
DESIGN MANAGER		CITY ENGINEER	
FILE:		DATE:	
DRAWING:			
ATLAS PAGE NO. 129		SHEET 7 OF 33 SHEETS	

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 261B, LOCATED ON EAST 21ST STREET CROSSING MINGO CREEK.

PROJECT DESCRIPTION: WORK ON THE DECK AND APPROACH SLAB OF BRIDGE 261B.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: N/A

SOIL TYPE: SILT LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 0.0 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.0 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.0 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.0 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.9

LATITUDE & LONGITUDE OF CENTER OF PROJECT: N 36°08'00" - W 95°52'13"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: MINGO CREEK, BIRD CREEK, ULTIMATELY THE VERDIGRIS RIVER

SENSITIVE WATERS OR WATERSHEDS: YES NO X

303(d) IMPAIRED WATERS: YES NO X

IF YES, LIST IMPAIRMENT:

LOCATED IN A TMDL: YES NO X

LAKE THUNDERBIRD TMDL: NO X

MS4 ENTITY YES X NO

IF YES, LOCATION: CITY OF TULSA

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

OFFSITE VEHICLE TRACKING:

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

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

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

WASTE MATERIALS:

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

HAZARDOUS MATERIALS:

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

GENERAL NOTES:

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

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

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



STORMWATER MANAGEMENT PLAN	
CITYWIDE BRIDGE REHABILITATION	
PROJECT NO. TD-2020-B1A	
9500 EB E. 21ST STREET OVER MINGO CREEK	
CITY OF TULSA, OKLAHOMA	
ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
6100 S. YALE AVE., SUITE 1300 TULSA, OKLAHOMA 74136 Phone: (918) 250-5922 Fax: (918) 858-0107	
DRAWN	ACF 7/22
DESIGNED	ACF 7/22
SURVEY	
PROJ. MGR.	BRT 7/22
LEAD MGR.	BOL 10/22
FIELD MGR.	Wm W/22
RECOMMENDED:	
HAS 11-2-2	
DESIGN MANAGER	CITY ENGINEER
FILE:	DRAWING:
ATLAS PAGE NO. 130	SHEET 8 OF 33 SHEETS

ADVERTISE DATE:		
REVISION	BY	DATE

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 359, LOCATED ON SOUTH ELWOOD AVENUE CROSSING
HAGER CREEK.

PROJECT DESCRIPTION: INSTALLING GUARDRAIL AND GUARDRAIL WIDENING AT ALL
CORNERS OF BRIDGE 359. ALSO REMOVING DEBRIS FROM THE CHANNEL.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. PLACE TEMPORARY SEDIMENT CONTROL DEVICES AT DRAINAGE LOCATIONS PRIOR TO
STRUCTURE MODIFICATION AND CLEARING OPERATIONS.

2. PERFORM CLEARING OPERATIONS AND REMOVALS, PRESERVING ANY VEGETATION NOT
IMPEDING CONSTRUCTION. PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED TO
PREVENT EROSION.

3. AS PERMANENT VEGETATION IS ESTABLISHED (70% COVER) TEMPORARY SEDIMENT
DEVICES MAY BE REMOVED.

4. AS CONDITIONS WARRANT, THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER,
MAY MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIC PRACTICE OR CONTROLS TO
IMPROVE EFFECTIVENESS.

NOTE: THIS SHOULD INCLUDE MAJOR ACTIVITIES REQUIRED TO CONSTRUCT THE PROJECT
AND EROSION CONTROL ITEMS.

SOIL TYPE: SILT LOAM AND VERY FINE SANDY LOAM

TOTAL AREA OF THE
CONSTRUCTION SITE: 0.03 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.03 ACRES

OFFSITE AREA TO BE DISTURBED:
(FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA
PRE-CONSTRUCTION: 0.03 ACRES

TOTAL IMPERVIOUS AREA
POST-CONSTRUCTION: 0.03 ACRES

POST-CONSTRUCTION RUNOFF
COEFFICIENT OF THE SITE: 0.9

LATITUDE & LONGITUDE
OF CENTER OF PROJECT: N 36°02'21" - W 95°59'37"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: HAGER CREEK, POLECAT CREEK

SENSITIVE WATERS OR WATERSHEDS: YES NO X

303(d) IMPAIRED WATERS: YES NO X

IF YES, LIST IMPAIRMENT:

LOCATED IN A TMDL: YES NO X

LAKE THUNDERBIRD TMDL: NO X

MS4 ENTITY YES X NO

IF YES, LOCATION: CITY OF TULSA

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
- X PERMANENT SODDING, SPRIGGING OR SEEDING
- 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
- TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BERMES
- 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:

SILT SHALL BE REMOVED FROM TEMPORARY EROSION
CONTROL DEVICES WHEN HALF FULL. COST TO BE INCLUDED IN
THE PRICE BID FOR EROSION CONTROL DEVICE.

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 MATERIAL 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.

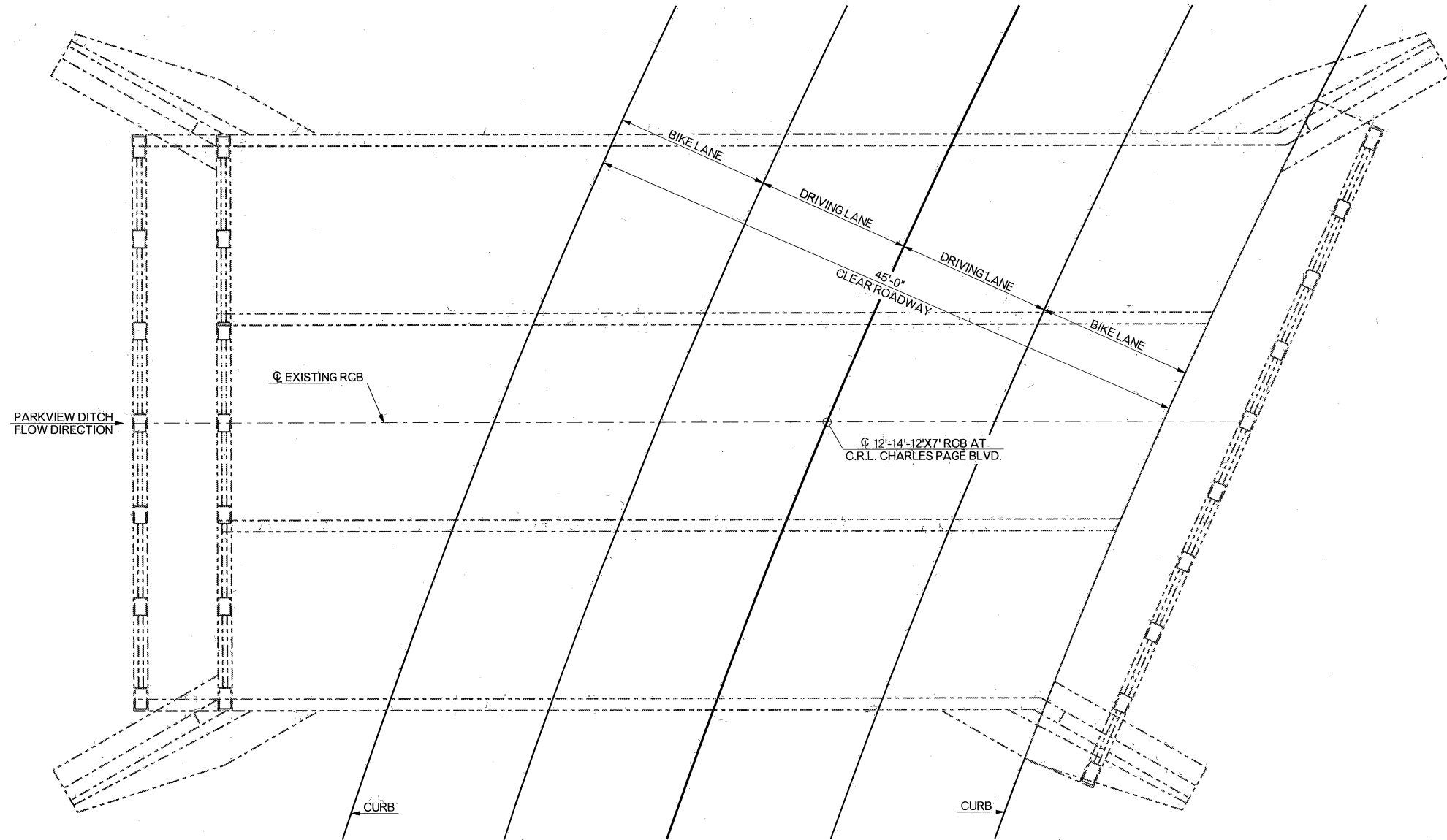
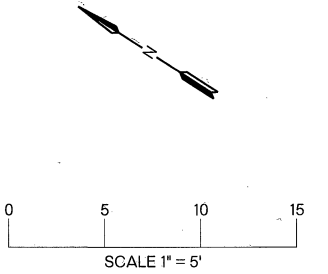


Handwritten signature and date: 10-18-22

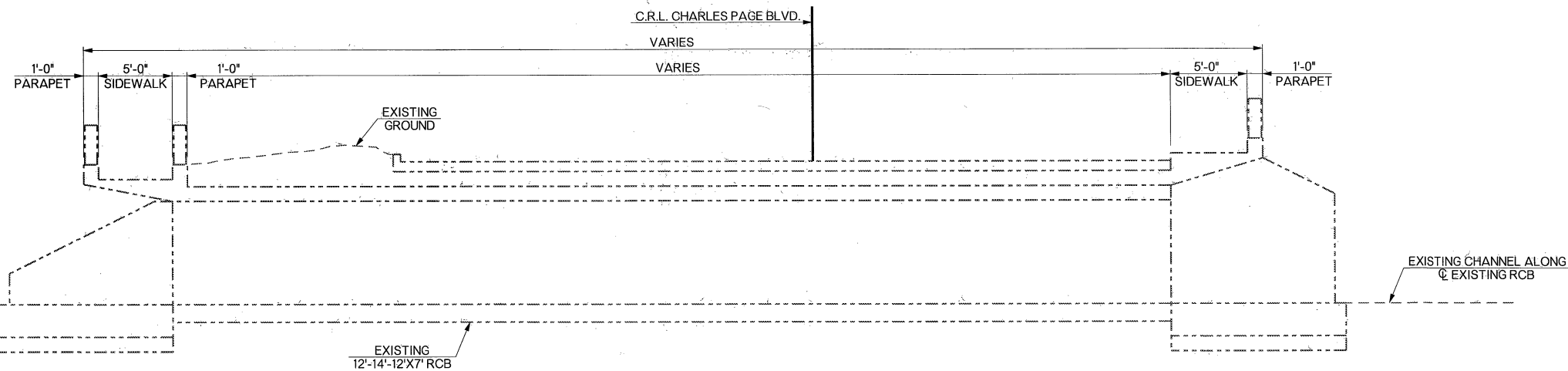
ADVERTISE DATE:		
REVISION	BY	DATE

STORMWATER MANAGEMENT PLAN					
CITYWIDE BRIDGE REHABILITATION					
PROJECT NO. TD-2020-B1A					
8600 S. ELWOOD AVE OVER HAGER CREEK					
CITY OF TULSA, OKLAHOMA					
ENGINEERING SERVICES DEPARTMENT					
PLANS AND ESTIMATES PREPARED BY:					
6100 S. YALE AVE. SUITE 1300 Phone: (918) 250-5922					
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107					
	DRAWN	ACF	7/22		
	DESIGNED	ACF	7/22		
	SURVEY				
	PROJ. MGR.	BRT	7/22		
PLAN SCALE	LEAD MGR.	BRT	10/22		
PROFILE SCALE	FIELD MGR.		11/22		
HORIZONTAL:	RECOMMENDED:				
VERTICAL:	HAS 11-22				
FILE:	DESIGN MANAGER	CITY ENGINEER			
DRAWING:	DATE:				
ATLAS PAGE NO. 886,887,1009,1010					
SHEET 9 OF 33 SHEETS					

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



PLAN



ELEVATION

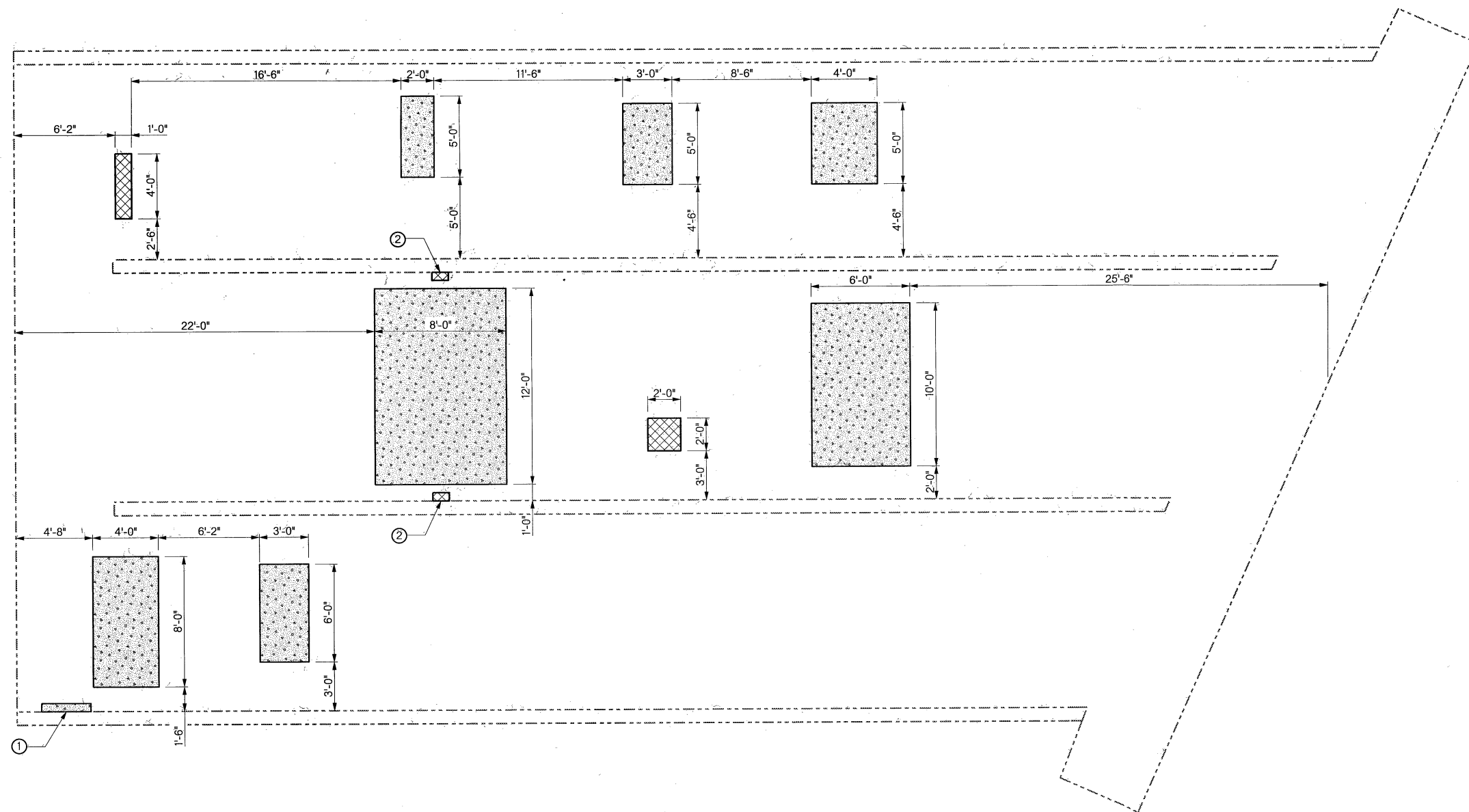
INDEX OF SHEETS	
SHEET NO.	TITLE
10	BRIDGE 167 - GENERAL PLAN AND ELEVATION
11	BRIDGE 167 - RCB REPAIR DETAILS



BRIDGE 167 - GENERAL PLAN AND ELEVATION			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
1700 W. CHARLES PAGE BLVD. OVER PARKVIEW DITCH			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE. SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN	JMH	2/22	APPROVED:
DESIGNED	JMH	2/22	
SURVEY			
PROJ. MGR.	BRT	2/22	
LEAD MGR.	JD	11/22	
FIELD MGR.	JD	11/22	
RECOMMENDED:			
PLAN SCALE	1" = 5'		
PROFILE SCALE	1" = 5'		
HORIZONTAL	1" = 5'		
VERTICAL	1" = 5'		
FILE:	HAS 11-22	DATE:	
DRAWING:	DESIGN MANAGER	CITY ENGINEER	
ATLAS PAGE NO. 19			SHEET 10 OF 33 SHEETS

ADVERTISE DATE:	BY	DATE
REVISION		

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



RCB LAYOUT
(SHOWING BOTTOM OF TOP SLAB OF RCB)

- LEGEND**
- EXISTING STRUCTURE
 - [Pattern] (PL) REPAIR BRIDGE ITEMS
 - [Pattern] PNEUMATICALLY PLACED MORTAR REPAIR

- ① REPAIR VERTICAL CRACK WITH EXPOSED REINFORCING IN WALL OF SOUTHWEST CORNER WITH PNEUMATICALLY PLACED MORTAR.
- ② REPAIR VERTICAL CRACK IN WALL WITH PNEUMATICALLY PLACED MORTAR.



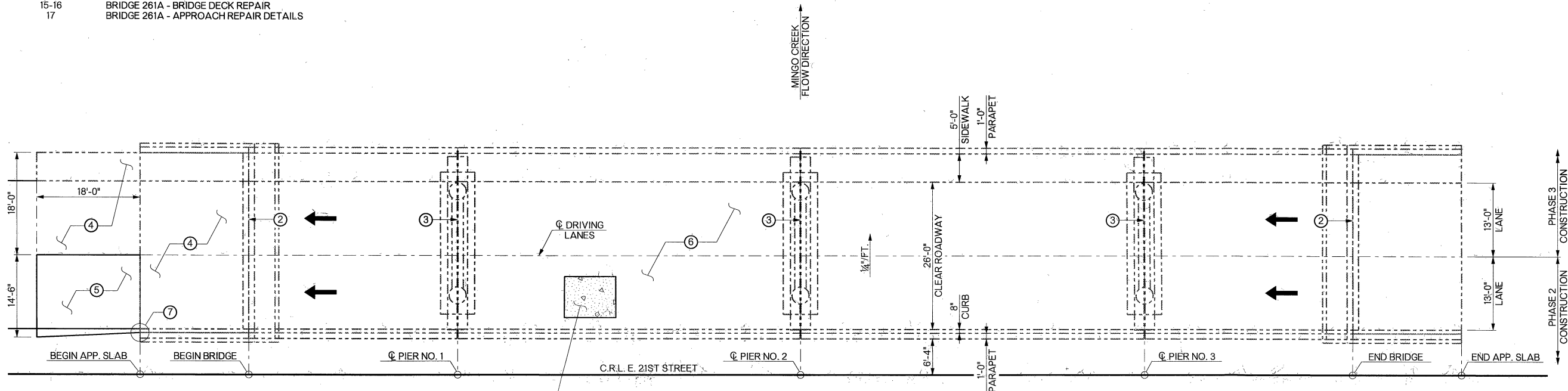
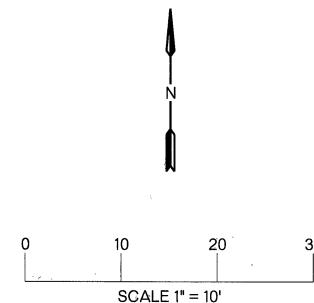
BRIDGE 167 - RCB REPAIR DETAILS			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
1700 W. CHARLES PAGE BLVD. OVER PARKVIEW DITCH			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
8100 S. YALE AVE. SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN	JMH	2/22	APPROVED:
DESIGNED	JMH	2/22	
SURVEY			
PROJ. MGR.	BRT	2/22	
PLAN SCALE			
PROFILE SCALE			
HORIZONTAL:			
VERTICAL:			
DESIGN MANAGER			
FILE:			
DRAWING:			
ATLAS PAGE NO. 19			

ADVERTISE DATE:	
REVISION	BY DATE

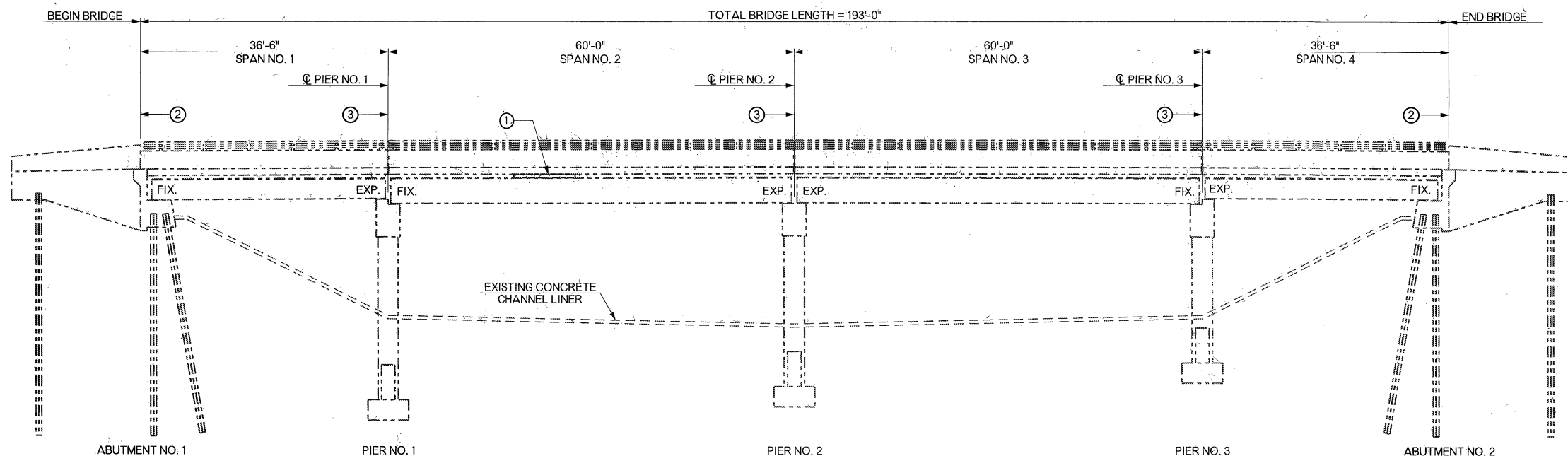
INDEX OF SHEETS

SHEET NO.	TITLE
12	BRIDGE 261A - GENERAL PLAN AND ELEVATION
13	BRIDGE 261A - SEQUENCE OF CONSTRUCTION
14	BRIDGE 261A - TYPICAL SECTION
15-16	BRIDGE 261A - BRIDGE DECK REPAIR
17	BRIDGE 261A - APPROACH REPAIR DETAILS

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



PLAN



ELEVATION

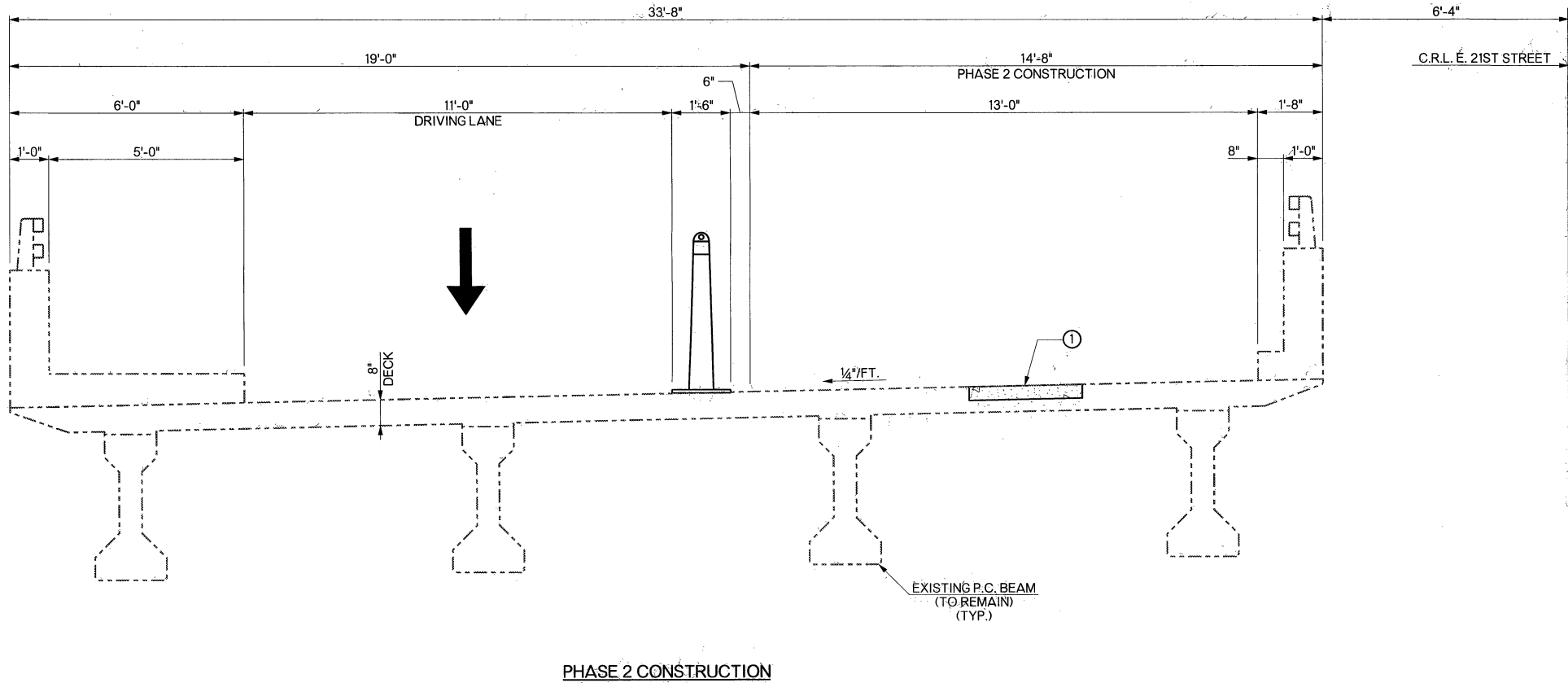
- CLASS A OR B DECK REPAIR. SEE "BRIDGE DECK REPAIR" SHEETS FOR MORE INFORMATION.
- DRIVING LANES ONLY: REPLACE ELASTOMERIC MORTAR AND RESEAL JOINT. SEE "TYPICAL SECTION" SHEET FOR MORE INFORMATION.
- DRIVING LANES ONLY: CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT. SEE "TYPICAL SECTION" SHEET FOR MORE INFORMATION.
- SLABJACKING OF APPROACH SLAB NO. 1 AND THE ADJACENT CONCRETE APPROACH PANEL IN THE NORTH LANE USING POLYURETHANE FOAM. SEE SHEET 17 FOR ADDITIONAL DETAILS. THIS WORK SHALL BE COMPLETED DURING THE PHASE I DETOUR.
- REMOVE AND REPLACE CONCRETE APPROACH PANEL IN THE SOUTH LANE ONLY. SEE SHEET NO. 17 FOR ADDITIONAL DETAILS. THIS WORK SHALL BE COMPLETED DURING THE PHASE I DETOUR.
- APPLY FLOOD COAT TREATMENT TO BRIDGE DECK, APPROACH SLAB, AND PARAPETS AS SHOWN ON THE "TYPICAL SECTION" SHEET. EXTENTS ARE INDICATED BY HEAVY LINE.
- REPAIR SPALLED SOUTHWEST CORNER OF RAISED MEDIAN WITH CLASS AA CONCRETE. COSTS INCLUDED IN OTHER ITEMS OF WORK.



BRIDGE 261A - GENERAL PLAN AND ELEVATION	
CITYWIDE BRIDGE REHABILITATION	
PROJECT NO. TD-2020-B1A	
9500 WB E. 21ST STREET OVER MINGO CREEK	
CITY OF TULSA, OKLAHOMA	
ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
8100 S. YALE AVE. SUITE 1300 Phone: (918) 250-5922	
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107	
DRAWN	JMH 2/22
DESIGNED	JMH 2/22
SURVEY	
PROJ. MGR.	BRT 2/22
LEAD MGR.	11/22
FIELD MGR.	2/24 11/22
RECOMMENDED:	
FILE:	HAS 11-22
DRAWING:	DESIGN MANAGER
DATE:	CITY ENGINEER
ATLAS PAGE NO. 129	SHEET 12 OF 33 SHEETS

ADVERTISE DATE:	REVISION	BY	DATE

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



① CLASS A OR B BRIDGE DECK REPAIR
AS SHOWN IN THE PLANS.

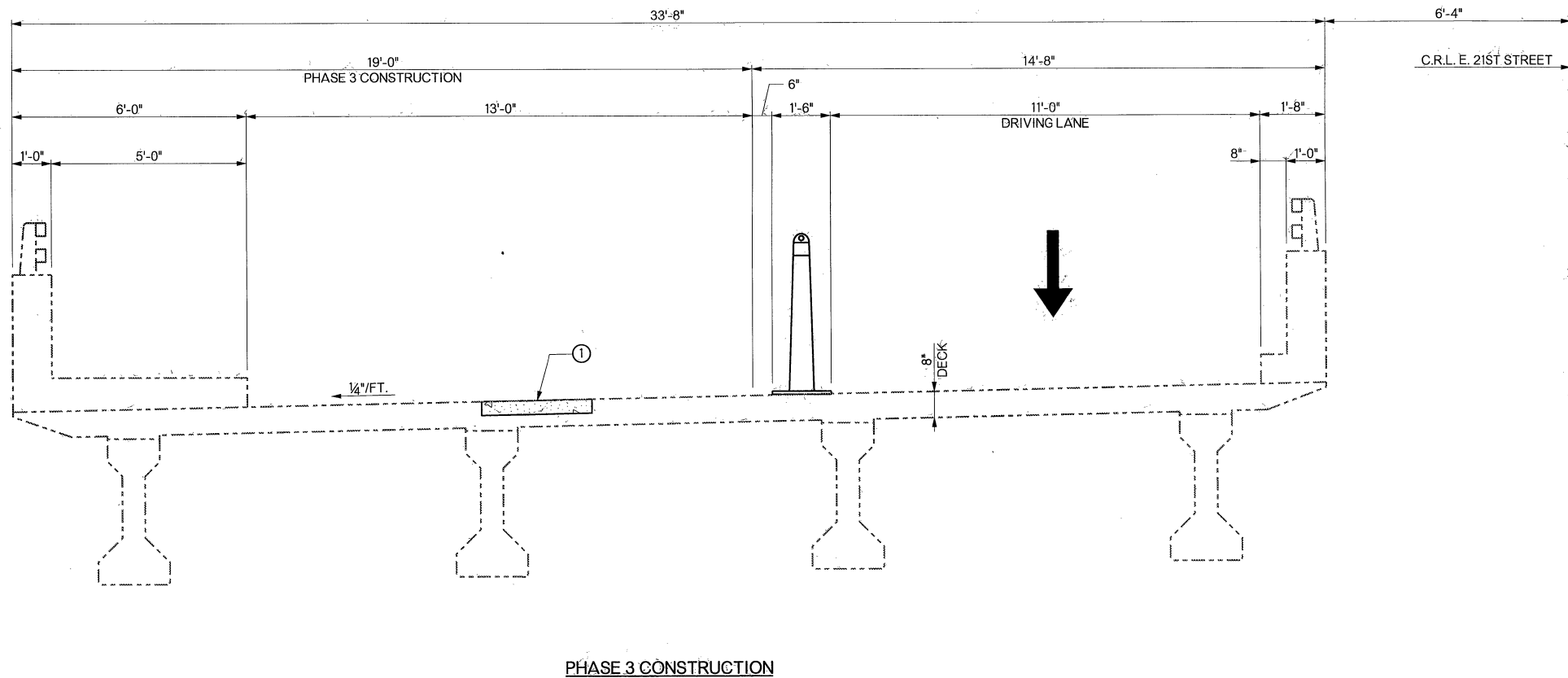
LEGEND

EXISTING STRUCTURE

 BRIDGE DECK REPAIR AREA

CHANNELIZER CONE

NOTE:
SEE ODOT TRAFFIC CONTROL STD. TCS6-1-02
FOR CHANNELIZER CONE.



BRIDGE 261A - SEQUENCE OF CONSTRUCTION

CITYWIDE BRIDGE REHABILITATION
PROJECT NO. TD-2020-B1A
WB E. 21ST STREET OVER MINGO CREEK

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

8100 S. TALE AVE., SUITE 1300
TULSA, OKLAHOMA 74136
Phone: (918) 250-3922
Fax: (918) 858-0107

DRAWN	JMH	2/22	APPROVED:
DESIGNED	JMH	2/22	

GARVER	DESIGNED	CIVIL	DATE
	SURVEY		

<i>10/22</i>	PROJ. MGR.	BRT	2/22
--------------	------------	-----	------

PLAN SCALE	LEAD MGR.	④	4/22
	FILE MGR.	3	1

FIELD MGR: 2700 11/2

RECOMMENDED:

PROFILE SCALE
HORIZONTAL:

		1188
--	--	------

VERTICAL: HAS 11-22
DESIGN MANAGER

FILE:	DRAWING:	DATE:
-------	----------	-------

ATLAS PAGE NO. 129 SHEET 13 OF 33 SHEET

10-18-22

ADVERTISE DATE:

REVISION	BY
----------	----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

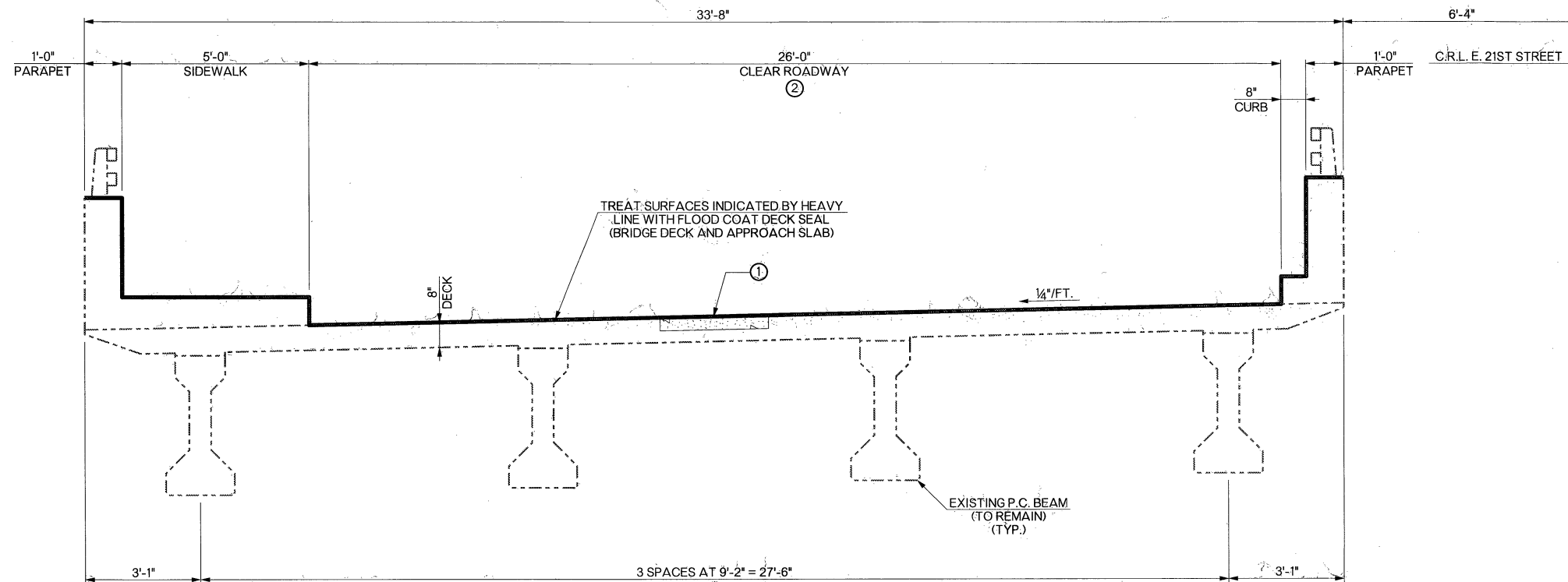
[illegible]

VERTICAL	Hex 11:22	
----------	-----------	---

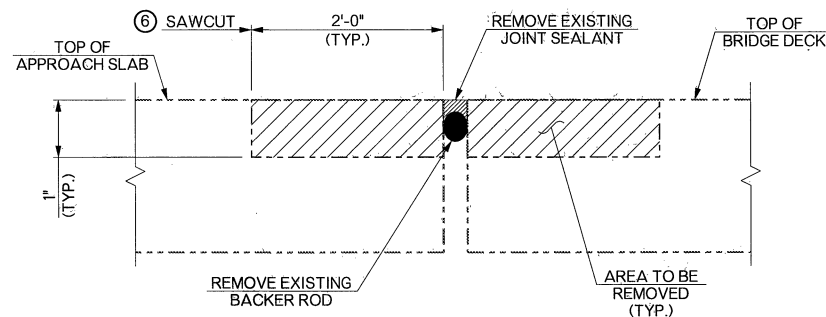
DESIGN MANAGER	CITY ENGINEER
----------------	---------------

FILE: _____	DRAWING: _____	DATE: _____
ATLAS/PAGE NO. 129		SHEET 13 OF 33 SHEET

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.

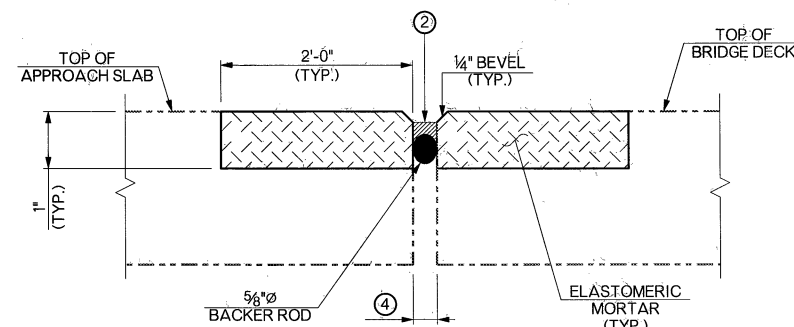


TYPICAL SECTION
(LOOKING FORWARD STATION)



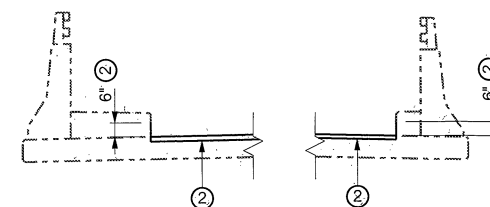
EXISTING SECTION

⑥ WHEN BROKEN OR SPALLED EXISTING CONCRETE OR ELASTOMERIC MORTAR IS GREATER THAN 6" SHOWN, CHIP TO SOUND CONCRETE AND SAWCUT SQUARES/RECTANGULAR AROUND DAMAGED AREA. REPAIR WITH CLASS B BRIDGE DECK REPAIR.

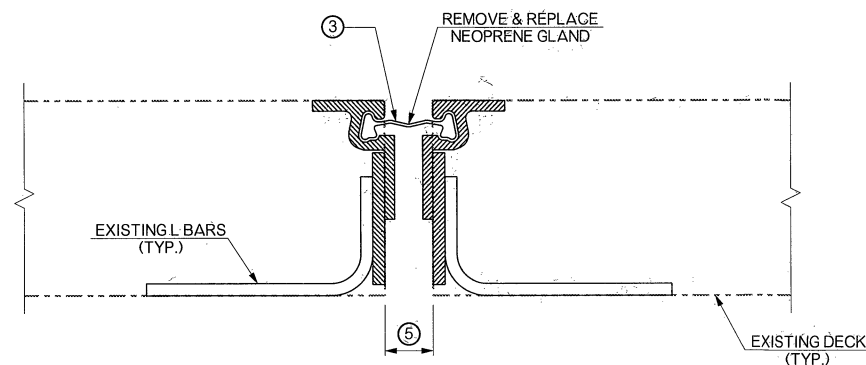


PROPOSED SECTION

ABUTMENT NO. 1 AND 2 JOINT REPAIR DETAIL
(SHALL BE REMOVED AND CONSTRUCTED IN STAGES)
(ONLY APPLICABLE IN THE DRIVING LANES)



DETAIL "A"



EXPANSION JOINT DETAIL AT PIERS 1-3
(SHALL BE REMOVED AND CONSTRUCTED IN STAGES)
(ONLY APPLICABLE IN THE DRIVING LANES)

⑤ THE EXPANSION JOINT OPENING SHALL MATCH THE EXISTING JOINT WIDTH AT THE SPECIFIED TEMPERATURE DIRECTED BY THE ENGINEER.

LEGEND

EXISTING STRUCTURE

 BRIDGE DECK REPAIR AREA

- ① CLASS A OR B BRIDGE DECK REPAIR AS SHOWN IN THE PLANS.
- ② ELASTOMERIC MORTAR WITHIN THE CLEAR ROADWAY EXTENTS AT ABUTMENT NO. 1 AND 2. RAPID CURE JOINT SEALANT WITH BACKER ROD WITHIN THE CLEAR ROADWAY EXTENTS. EXTEND 6" UP VERTICAL FACE OF CURBS. SEE "ABUTMENT NO. 1 AND 2 JOINT REPAIR DETAIL" & DETAIL "A" FOR ADDITIONAL INFORMATION.




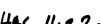

③ CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT WITHIN THE CLEAR ROADWAY EXTENTS AT THE FOLLOWING LOCATIONS:

- PIER NO. 1
- PIER NO. 2
- PIER NO. 3

SEE "EXPANSION JOINT DETAIL AT PIERS 1-3".

④ WIDTH OF JOINT OPENING TO MATCH EXISTING JOINT WIDTH, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



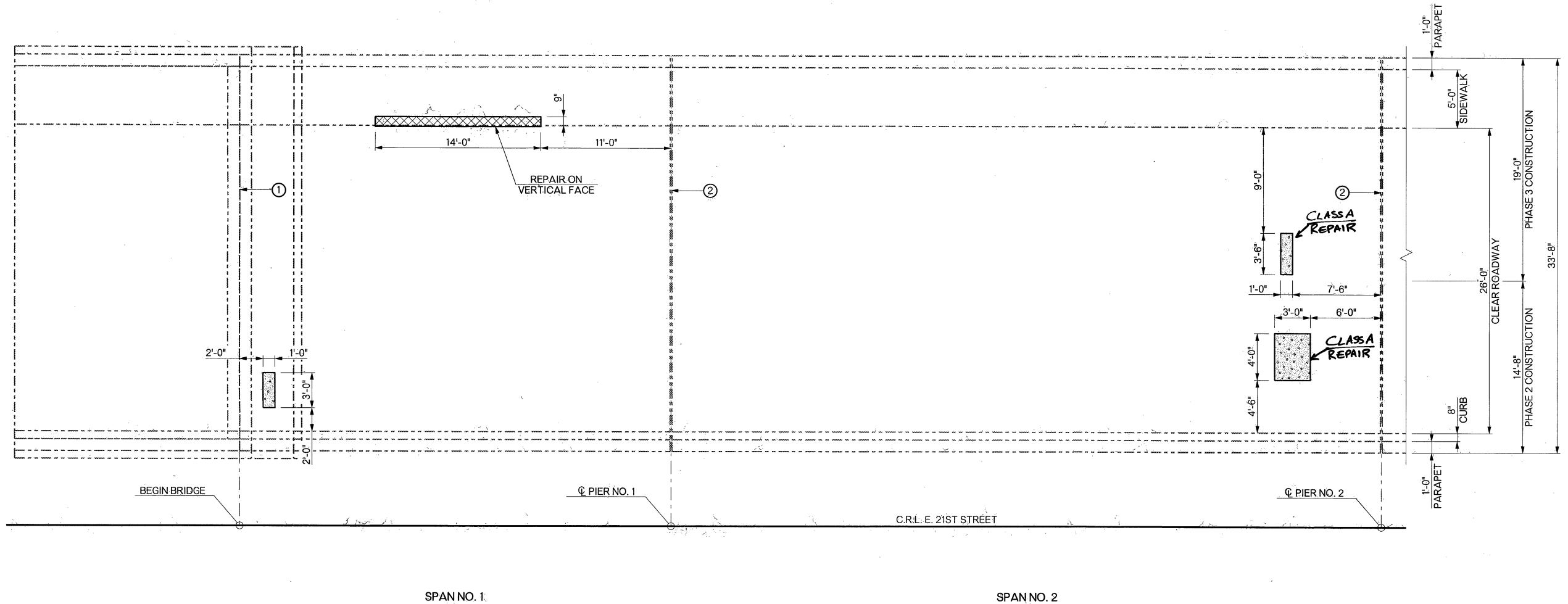
BRIDGE 261A - TYPICAL SECTION	
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 9500 WB E. 21ST STREET OVER MINGO CREEK	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: \$100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74104 Fax: (918) 856-0107	
 PLAN SCALE PROFILE SCALE HORIZONTAL: VERTICAL: FILE: ATLAS PAGE NO. 129	DRAWN JMH / 2/22 DESIGNED JMH / 2/22 SURVEY PROJ. MGR. BRT / 2/22 LEAD MGR.  / 4/22 FIELD MGR.  / 11/22 RECOMMENDED:  DESIGN MANAGER
	APPROVED:  CITY ENGINEER
	DATE:
	SHEET 14 OF 33 SHEETS

ADVERTISE DATE:		
REVISION	BY	DA

JUMHoak 10/3/2022 10:27:36 AM
WORKSPACE:MicroStation Imperial
L:\2020\2020103050 - COT 1072 Bridge Rehabilitation\Drawings\Amendment 1\BRIDGE\Bridge #261\ACOT_TD-2020-B1-261A_TYPICAL SECTION.dgn

JMHoak 10/3/2022 10:27:36 AM

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



BRIDGE DECK REPAIR PLAN

- ① DRIVING LANES ONLY: REPLACE ELASTOMERIC MORTAR AND RESEAL JOINT.
② DRIVING LANES ONLY: CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT.

LEGEND

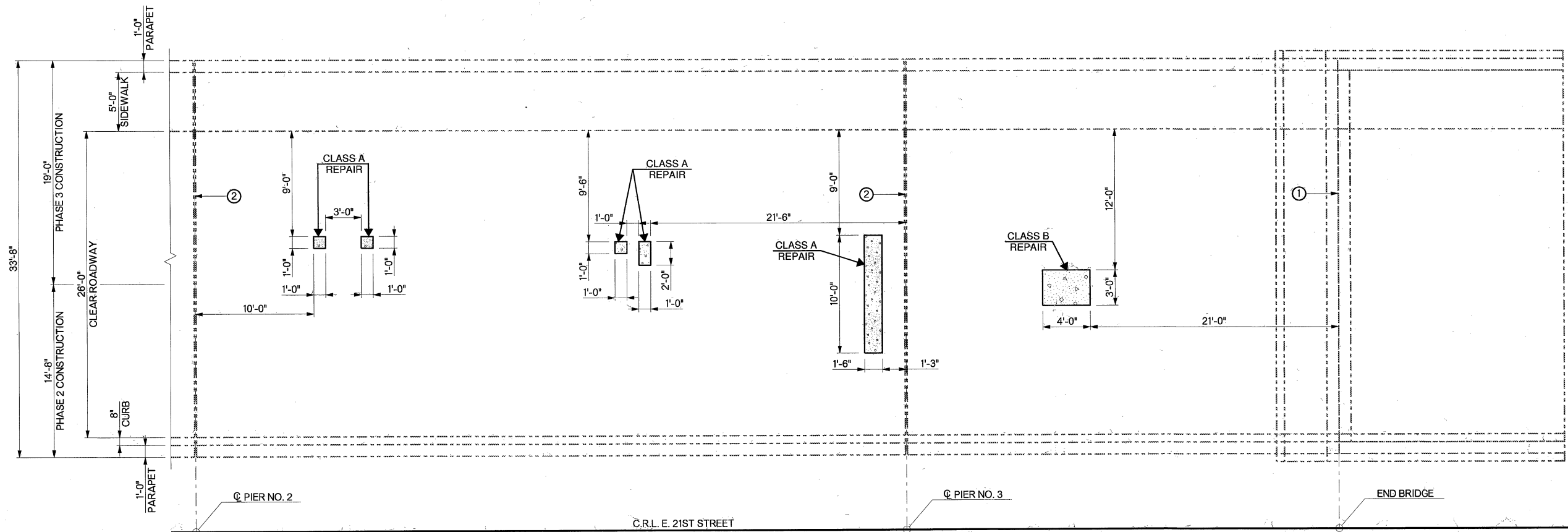
- EXISTING STRUCTURE
CLASS A BRIDGE DECK REPAIR
PNEUMATICALLY PLACED MORTAR REPAIR IN SIDEWALK



BRIDGE 261A - BRIDGE DECK REPAIR (SHEET 1 OF 2)	
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 9500 WB E. 21ST STREET OVER MINGO CREEK CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 558-0107	
DRAWN JMH 2/22	APPROVED:
DESIGNED JMH 2/22	
SURVEY	
PROJ. MGR. BRT 2/22	
LEAD MGR. 11/22	
FIELD MGR. 11/22	
RECOMMENDED:	
DATE: 11-22	
DESIGN MANAGER	
FILE:	DRAWING:
ATLAS PAGE NO. 129	SHEET 15 OF 33 SHEETS

ADVERTISE DATE:	REVISION	BY	DATE

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



SPAN NO. 3

SPAN NO. 4

BRIDGE DECK REPAIR PLAN

- ① DRIVING LANES ONLY: CLEAN AND RESEAL JOINT.
② DRIVING LANES ONLY: CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT.

LEGEND

- EXISTING STRUCTURE
CLASS A BRIDGE DECK REPAIR
CLASS B BRIDGE DECK REPAIR



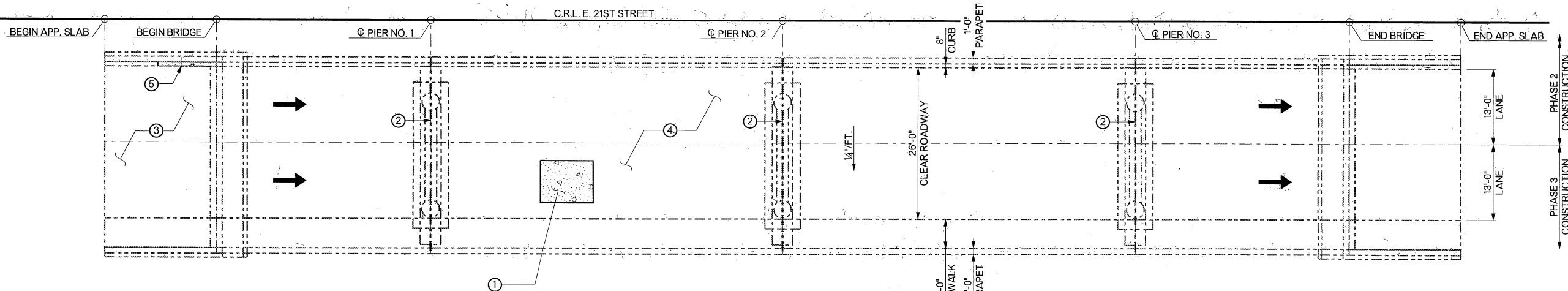
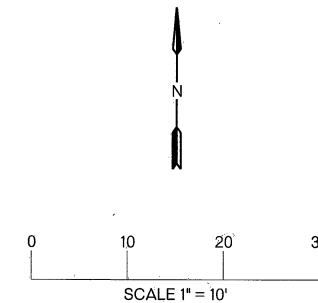
BRIDGE 261A - BRIDGE DECK REPAIR (SHEET 2 OF 2)	
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 9500 WB E. 21ST STREET OVER MINGO CREEK CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107	
DRAWN JMH 2/22	APPROVED:
DESIGNED JMH 2/22	
SURVEY	
PROJ. MGR. BRT 2/22	
LEAD MGR. 2/23	
FIELD MGR. 2/23	
PLAN SCALE	RECOMMENDED:
PROFILE SCALE	
HORIZONTAL:	
VERTICAL:	
ADVERTISE DATE:	
REVISION	BY DATE
FILE:	DRAWING:
ATLAS PAGE NO. 129	SHEET 16 OF 33 SHEETS

INDEX OF SHEETS

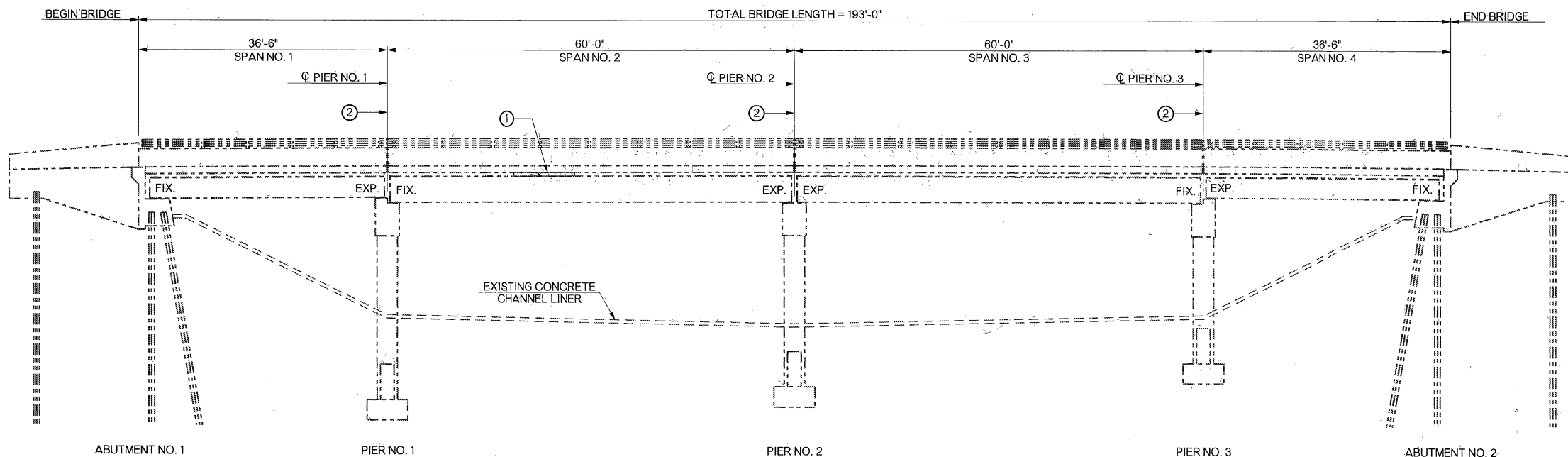
SHEET NO.	TITLE
18	BRIDGE 261B - GENERAL PLAN AND ELEVATION
19	BRIDGE 261B - SEQUENCE OF CONSTRUCTION
20	BRIDGE 261B - TYPICAL SECTION
21	BRIDGE 261B - BRIDGE DECK REPAIR
22	BRIDGE 261B - APPROACH REPAIR DETAILS

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.

MINGO CREEK
FLOW DIRECTION



PLAN



ELEVATION

- ① CLASS A OR B DECK REPAIR. SEE "BRIDGE DECK REPAIR" SHEET FOR MORE INFORMATION.
- ② DRIVING LANES ONLY: CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT. SEE "TYPICAL SECTION" SHEET FOR MORE INFORMATION.
- ③ SLABJACKING OF APPROACH SLAB NO. 1 USING POLYURETHANE FOAM. SEE SHEET 22 FOR ADDITIONAL DETAILS. THIS WORK SHALL BE COMPLETED DURING THE PHASE 1 DETOUR.
- ④ APPLY FLOOD COAT TREATMENT TO BRIDGE DECK, APPROACH SLAB, AND PARAPETS AS SHOWN ON THE "TYPICAL SECTION" SHEET. EXTENTS ARE INDICATED BY HEAVY LINE.
- ⑤ REPAIR 10' OF CURB USING CLASS A BRIDGE DECK REPAIR.



BRIDGE 261B - GENERAL PLAN AND ELEVATION

CITYWIDE BRIDGE REHABILITATION
PROJECT NO. TD-2020-B1A
9500 EB E. 21ST STREET OVER MINGO CREEK

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107

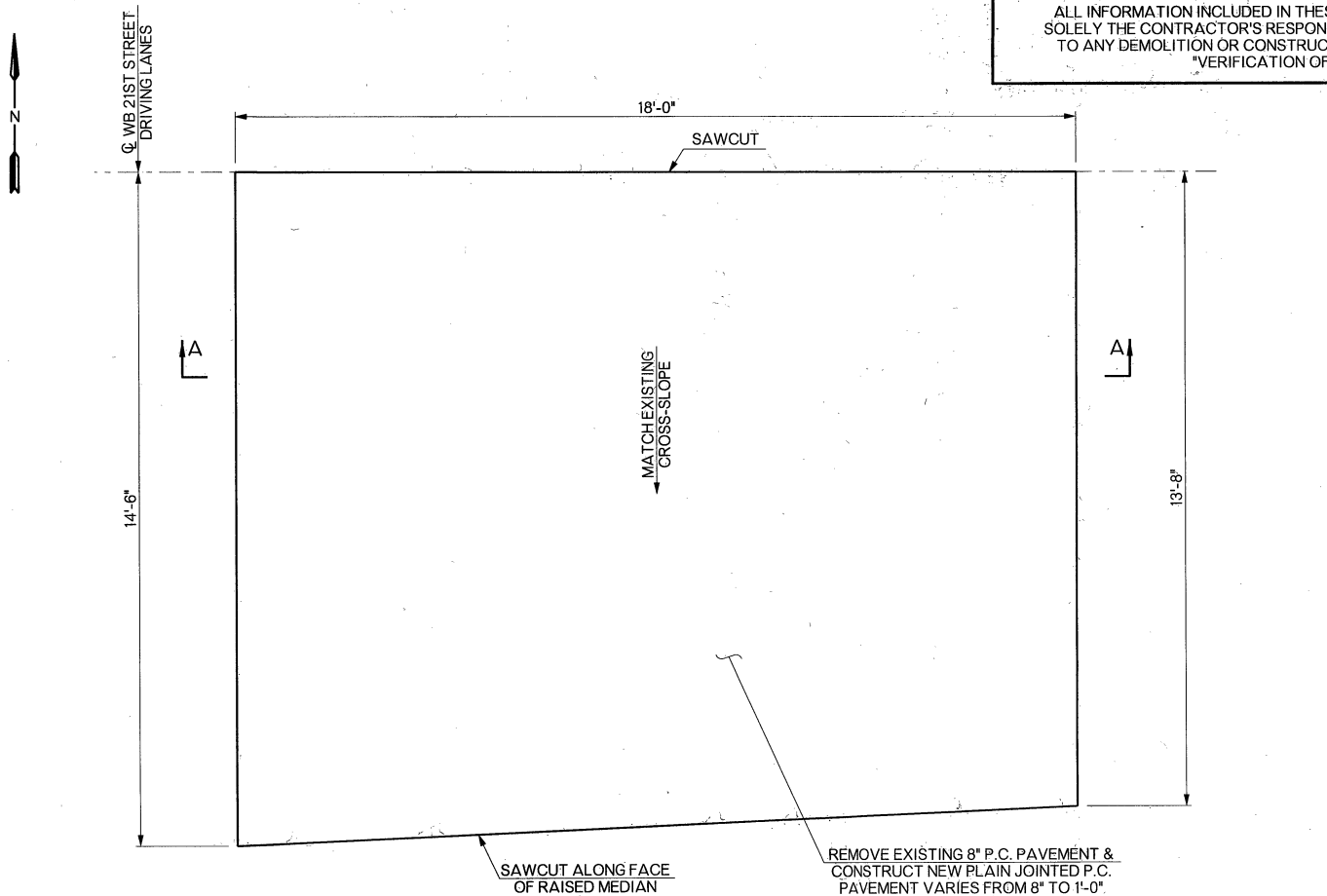
DRAWN	JMH	2/22
DESIGNED	JMH	2/22
SURVEY		
PROJ. MGR.	BRT	2/22
LEAD MGR.	②	4/22
FIELD MGR.	②	4/22

PLAN SCALE
1" = 10'
PROFILE SCALE
HORIZONTAL:
1" = 10'
VERTICAL:
1" = 10'

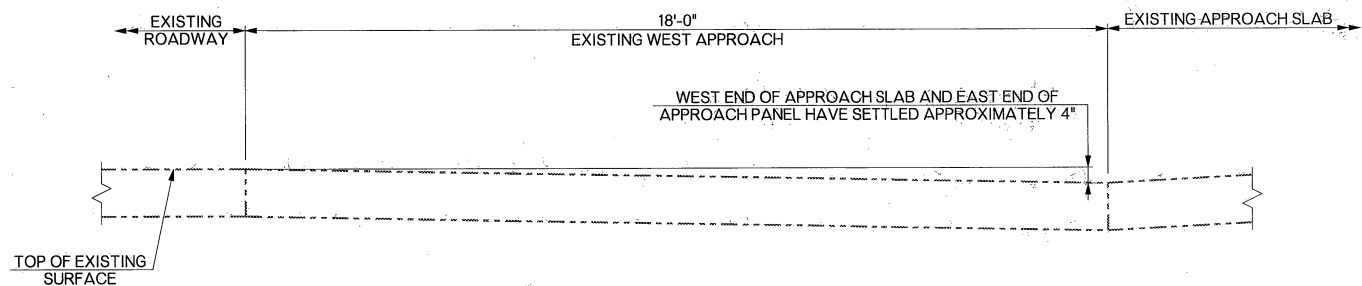
RECOMMENDED:
DATE: 11-22
DESIGN MANAGER
CITY ENGINEER

ADVERTISE DATE:	REVISION	BY	DATE
FILE:	DRAWING:	DATE:	
ATLAS PAGE NO. 130			SHEET 18 OF 33 SHEETS

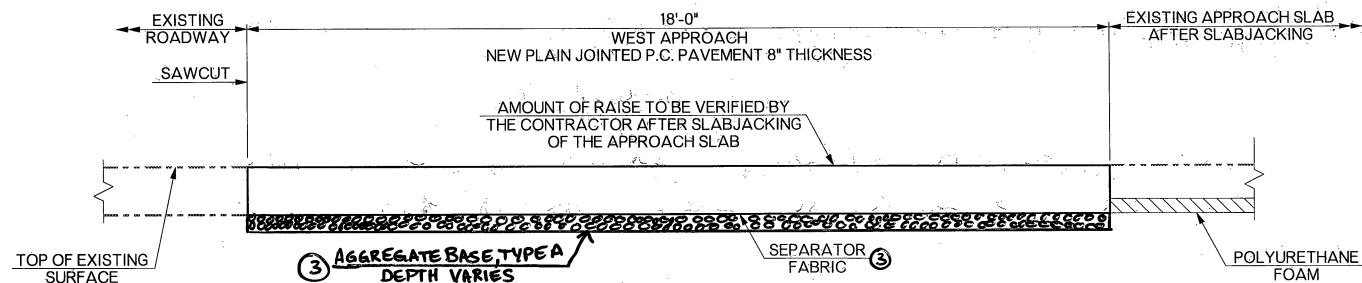
ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



DEMOLITION & CONSTRUCTION PLAN
(ONLY APPLICABLE AT THE SOUTH LANE OF THE ADJACENT WESTERN APPROACH PAVEMENT)



EXISTING CONDITION - SECTION A-A



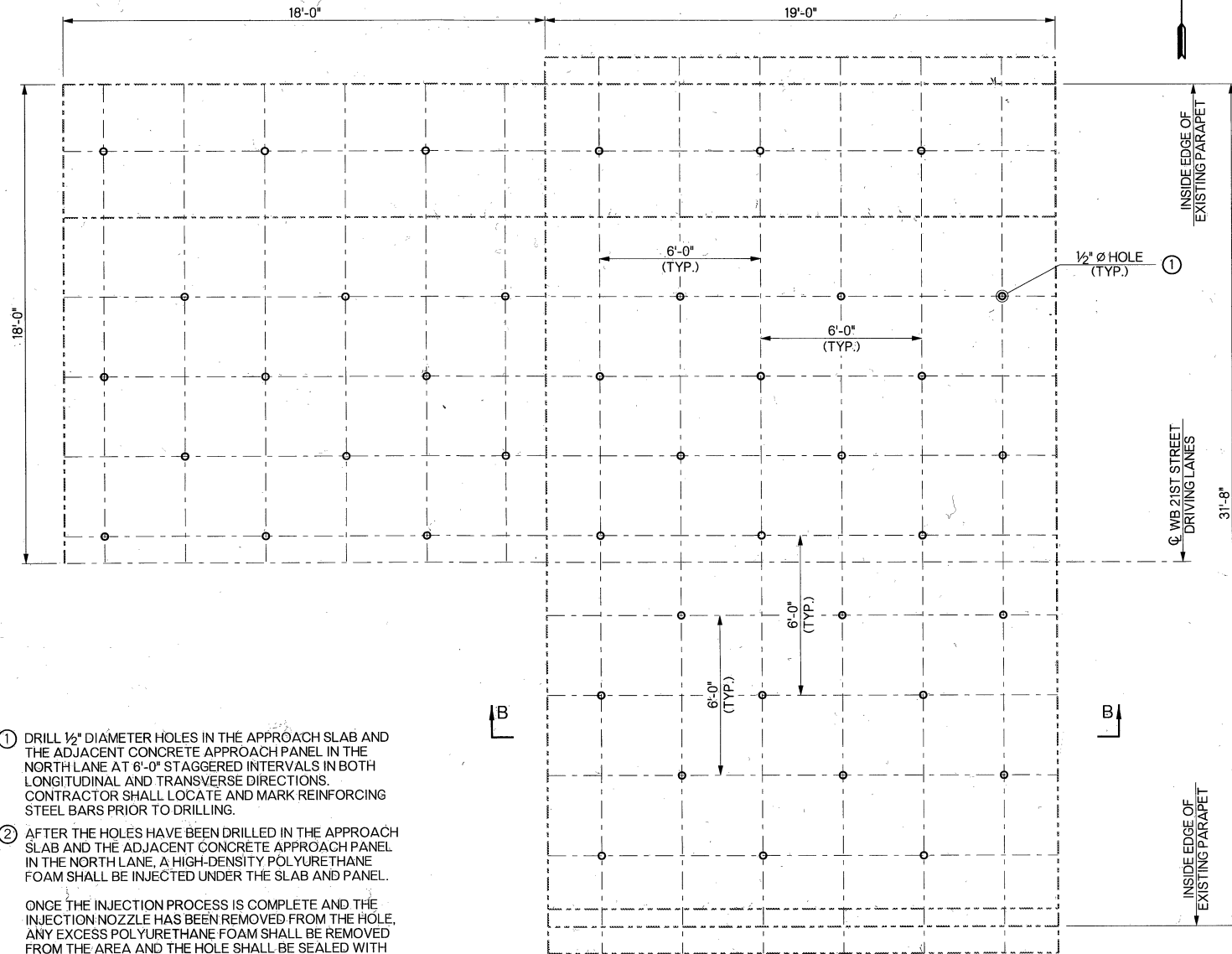
PROPOSED CONDITION - SECTION A-A

GENERAL NOTES:

REMOVAL:
COST OF REMOVAL SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "REMOVAL OF CONCRETE PAVEMENT".

CONSTRUCTION:
COST OF CONSTRUCTION SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "P.C. CONCRETE PAVEMENT (PLACEMENT)" AND PER CUBIC YARD OF "P.C. CONCRETE PAVEMENT".

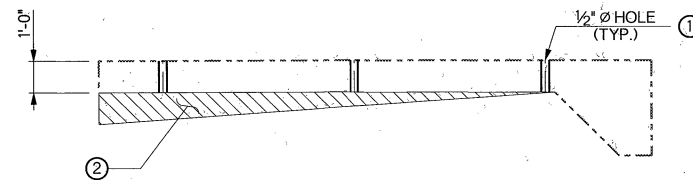
③ THE COST OF SEPARATOR FABRIC AND AGGREGATE BASE, TYPE A SHALL BE INCLUDED IN OTHER ITEMS OF WORK.



PLAN
(APPROACH SLAB AT ABUTMENT NO. 1)

- ① DRILL 1/2" DIAMETER HOLES IN THE APPROACH SLAB AND THE ADJACENT CONCRETE APPROACH PANEL IN THE NORTH LANE AT 6'-0" STAGGERED INTERVALS IN BOTH LONGITUDINAL AND TRANSVERSE DIRECTIONS. CONTRACTOR SHALL LOCATE AND MARK REINFORCING STEEL BARS PRIOR TO DRILLING.
- ② AFTER THE HOLES HAVE BEEN DRILLED IN THE APPROACH SLAB AND THE ADJACENT CONCRETE APPROACH PANEL IN THE NORTH LANE, A HIGH-DENSITY POLYURETHANE FOAM SHALL BE INJECTED UNDER THE SLAB AND PANEL.

ONCE THE INJECTION PROCESS IS COMPLETE AND THE INJECTION NOZZLE HAS BEEN REMOVED FROM THE HOLE, ANY EXCESS POLYURETHANE FOAM SHALL BE REMOVED FROM THE AREA AND THE HOLE SHALL BE SEALED WITH POLYURETHANE MATERIAL OR A QUICK SETTING CONCRETE PATCH.



SECTION B-B

SLABJACKING DETAILS

NOTE:

THE EXPECTATION OF WORK FROM THE CONTRACTOR IN REGARDS TO THE SLABJACKING OF THE APPROACH SLAB AND THE ADJACENT CONCRETE APPROACH PANEL IN THE NORTH LANE IS TO PROVIDE A SMOOTH AND EVEN SURFACE ACROSS THE BRIDGE DECK, APPROACH SLABS AND APPROACH ROADWAY. THE CONTRACTOR SHALL RAISE THE APPROACH ROADWAY SIDE OF THE APPROACH SLAB; THE DECK SIDE OF THE APPROACH SLAB WILL NOT REQUIRE MODIFICATION.

THE DETAILS SHOWN ARE FOR A CONCEPTUAL DRILLING PLAN. THE CONTRACTOR SHALL DETERMINE THE ACTUAL DRILLING LOCATIONS AND PREPARE A DRILLING PLAN TO ACHIEVE THE DESIRED RESULTS.

ADVERTISE DATE:

REVISION

BY

DATE

BRIDGE 261A - APPROACH REPAIR DETAILS

CITYWIDE BRIDGE REHABILITATION

PROJECT NO. TD-2020-B1A

9500 WB E. 21ST STREET OVER MINGO CREEK

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922

TULSA, OKLAHOMA 74136 Fax: (918) 858-0107

APPROVED:

DRAWN JMH 2/22

DESIGNED JMH 2/22

SURVEY

PROJ. MGR. BRT 2/22

LEAD MGR. [Signature] 1/12

FIELD MGR. [Signature] 1/12

RECOMMENDED:

DATE: 11-22

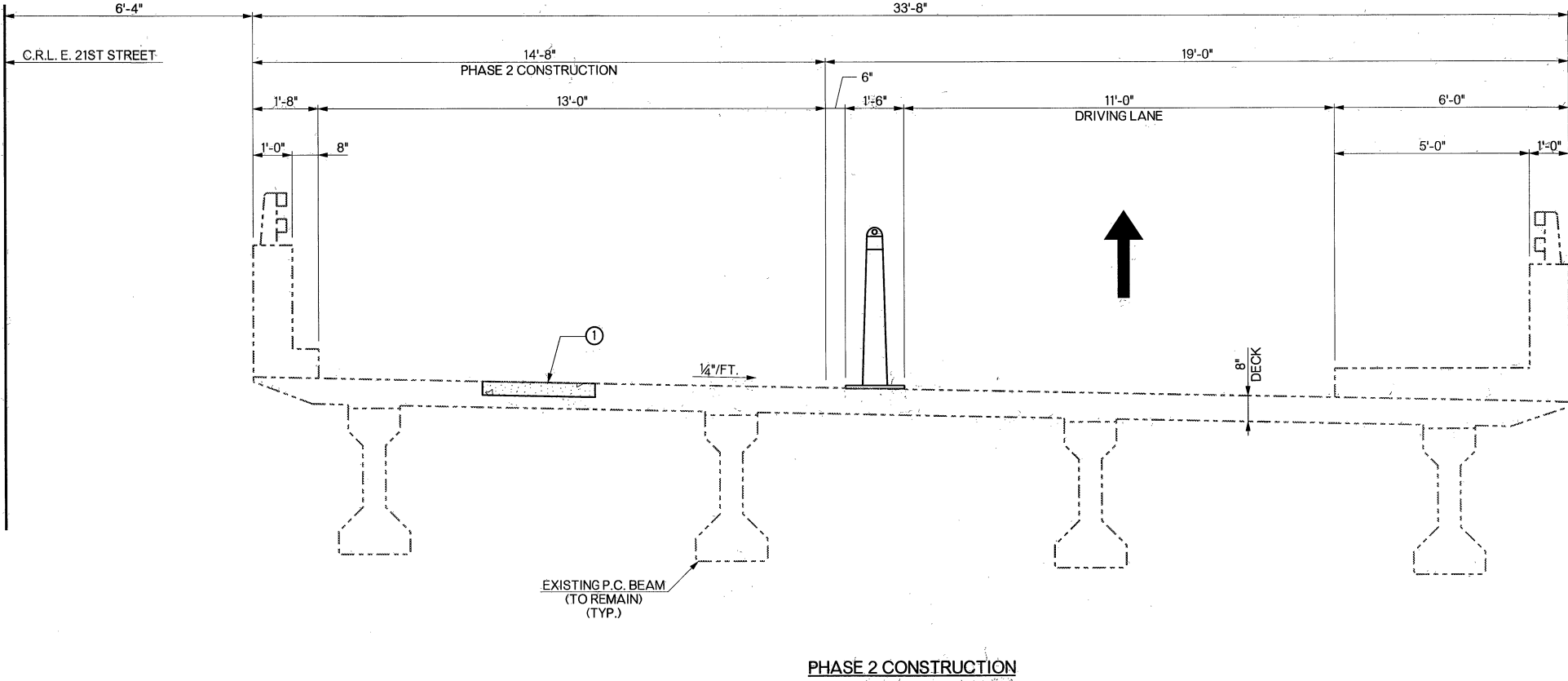
DESIGN MANAGER

CITY ENGINEER

FILE: DRAWING: ATLAS PAGE NO. 129

SHEET 17 OF 33 SHEETS

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



① CLASS A BRIDGE DECK REPAIR AS SHOWN IN THE PLANS.

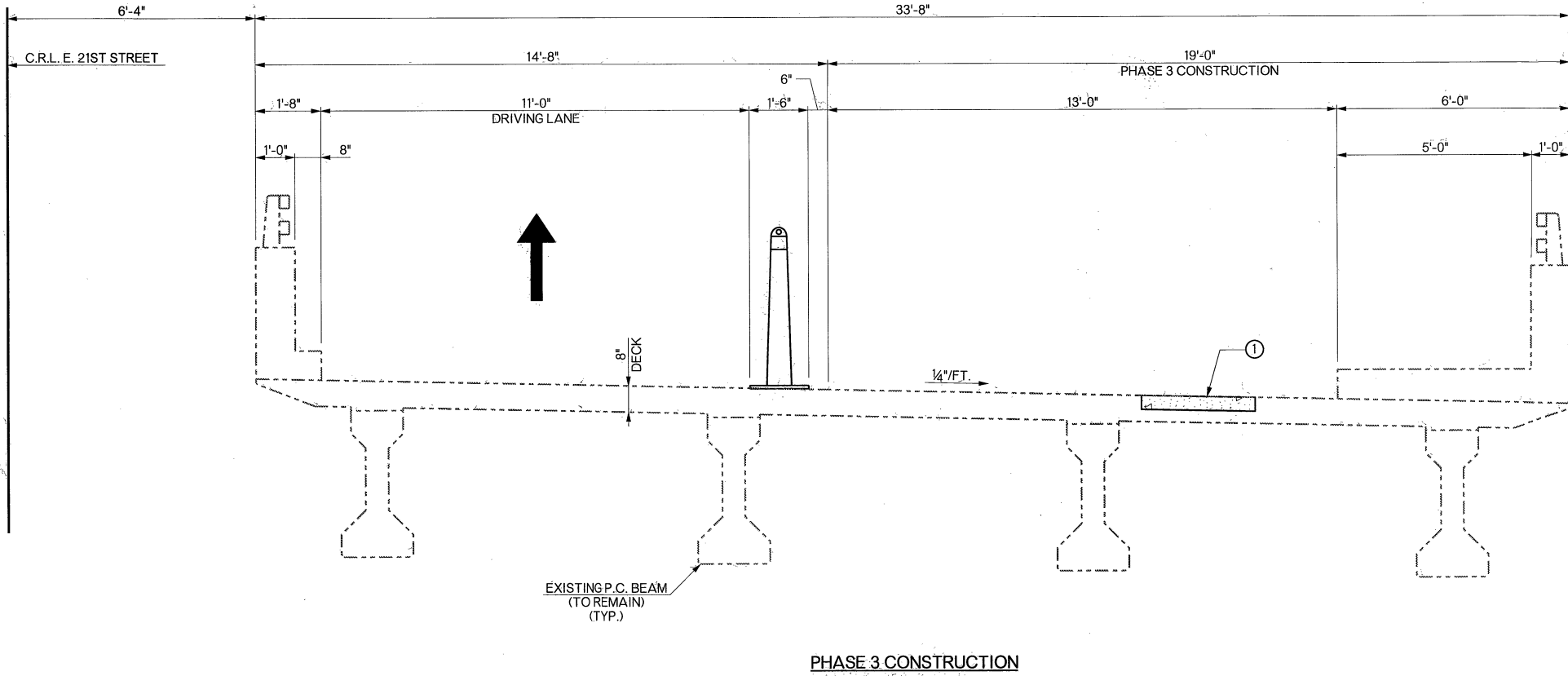
LEGEND




EXISTING STRUCTURE

 BRIDGE DECK REPAIR AREA

 CHANNELIZER CONE

NOTE:
SEE ODOT TRAFFIC CONTROL STD. TCS6-1-02
FOR CHANNELIZER CONE.



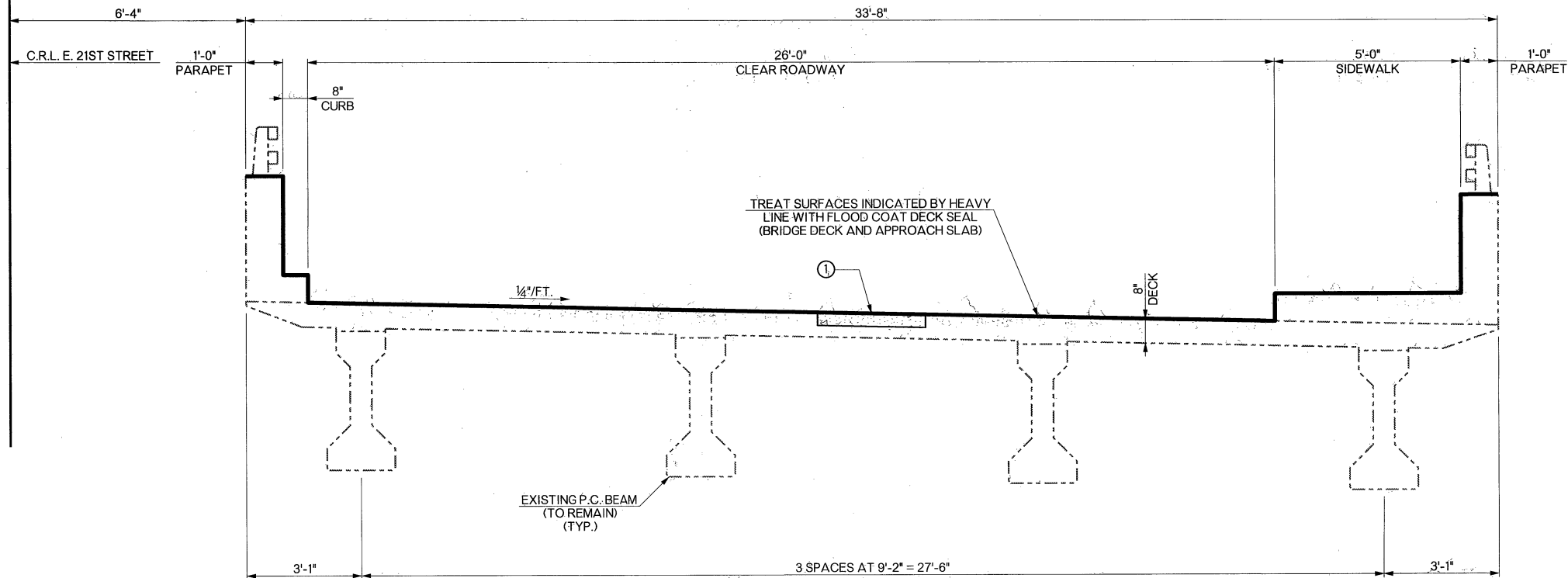
BRIDGE 261B - SEQUENCE OF CONSTRUCTION	
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 9500 EB E. 21ST STREET OVER MINGO CREEK CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107	
	DRAWN JMH 2/22 DESIGNED JWH 2/22 SURVEY PROJ. MGR. BRT 2/22
	LEAD MGR.  1/16 FIELD MGR.  1/16 RECOMMENDED:
	PLAN SCALE PROFILE SCALE HORIZONTAL:
	VERTICAL: HAS 11-22 DESIGN MANAGER
	FILE: DRAWING: DATE:
	ATLAS PAGE NO. 130 SHEET 19 OF 33 SHEETS

ADVERTISE DATE:		
REVISION	BY	

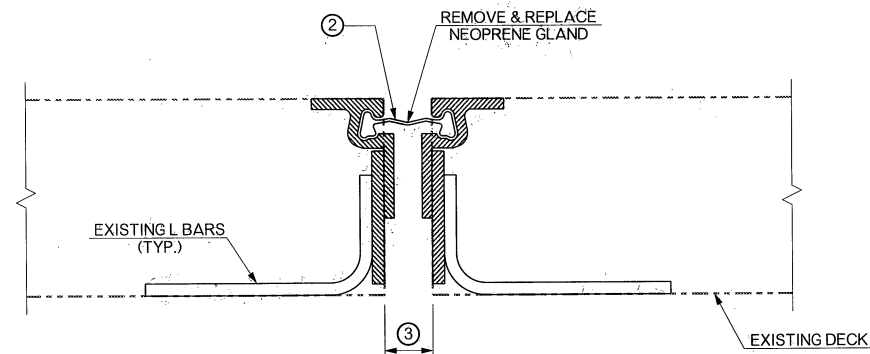
JNHoak	10/3/2022	10:27:42 AM	WORKSPACE:MicroStation Imperial \\p0201201\m03a350 - COT 1072 Bridge Rehabilitation\Drawings\Amendment 1\BRIDGE\Bride #281\B00T- TD-2020-B1-261B_SEQUENCE OF CONSTRUCTION.dgn
--------	-----------	-------------	--

03/03/2022 10:27:42 AM

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



TYPICAL SECTION
(LOOKING FORWARD STATION)



EXPANSION JOINT DETAIL
(SHALL BE REMOVED AND CONSTRUCTED IN STAGES)
(ONLY APPLICABLE IN THE DRIVING LANES)

LEGEND

- EXISTING STRUCTURE
- BRIDGE DECK REPAIR AREA

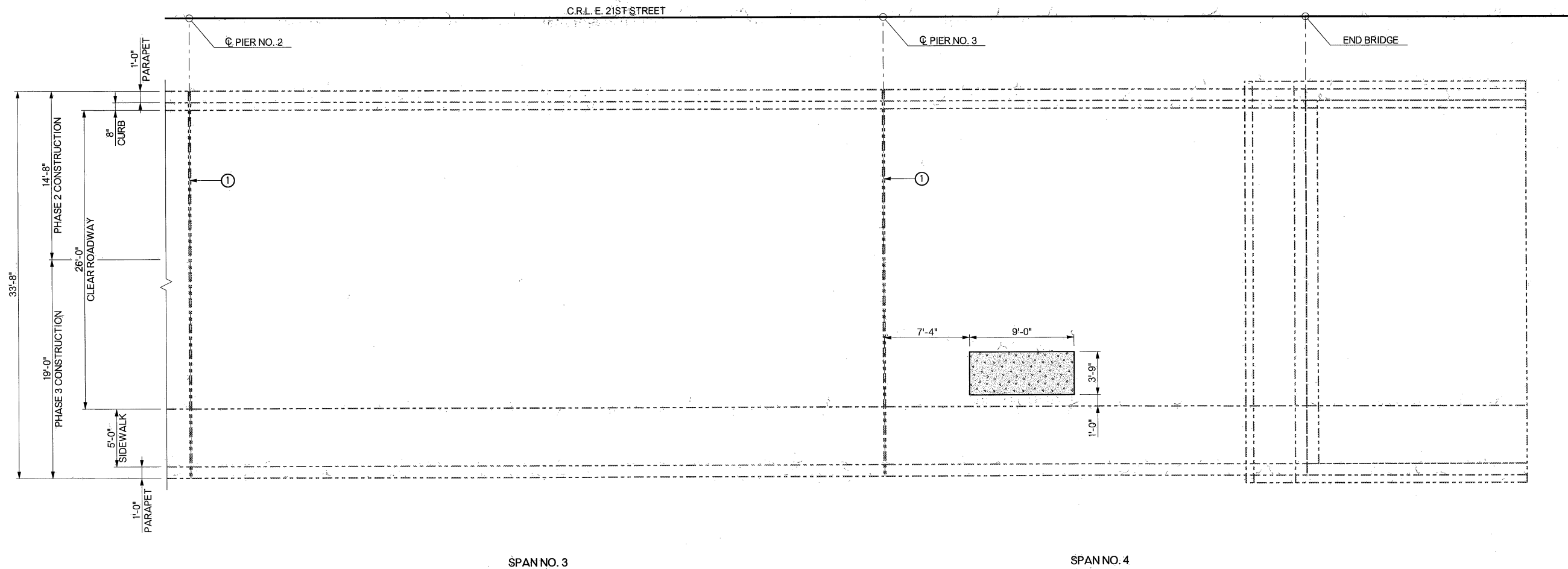
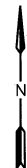
- CLASS A OR B BRIDGE DECK REPAIR AS SHOWN IN THE PLANS.
- CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT WITHIN THE CLEAR ROADWAY EXTENTS AT THE FOLLOWING LOCATIONS:
PIER NO. 1
PIER NO. 2
PIER NO. 3
SEE "EXPANSION JOINT DETAIL".
- THE EXPANSION JOINT OPENING SHALL MATCH THE EXISTING JOINT WIDTH AT THE SPECIFIED TEMPERATURE DIRECTED BY THE ENGINEER.



BRIDGE 261B - TYPICAL SECTION			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
9500 EB E. 21ST STREET OVER MINGO CREEK			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
APPROVED:			
DRAWN	JMH	2/22	APPROVED:
DESIGNED	JMH	2/22	
SURVEY			
PROJ. MGR.	BRT	2/22	
LEAD MGR.	(D)	1/22	
FIELD MGR.	Don	1/22	RECOMMENDED:
PLAN SCALE	HORIZONTALLY		
PROFILE SCALE	HORIZONTALLY		
ADVERTISE DATE:	REVISION	BY	DATE
FILE:	DRAWING:	DATE:	
ATLAS PAGE NO. 130			SHEET 20 OF 33 SHEETS

10-18-22

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



BRIDGE DECK REPAIR PLAN

① DRIVING LANES ONLY: CLEAN JOINT AND REMOVE & REPLACE THE NEOPRENE GLAND IN THE EXPANSION JOINT.

LEGEND

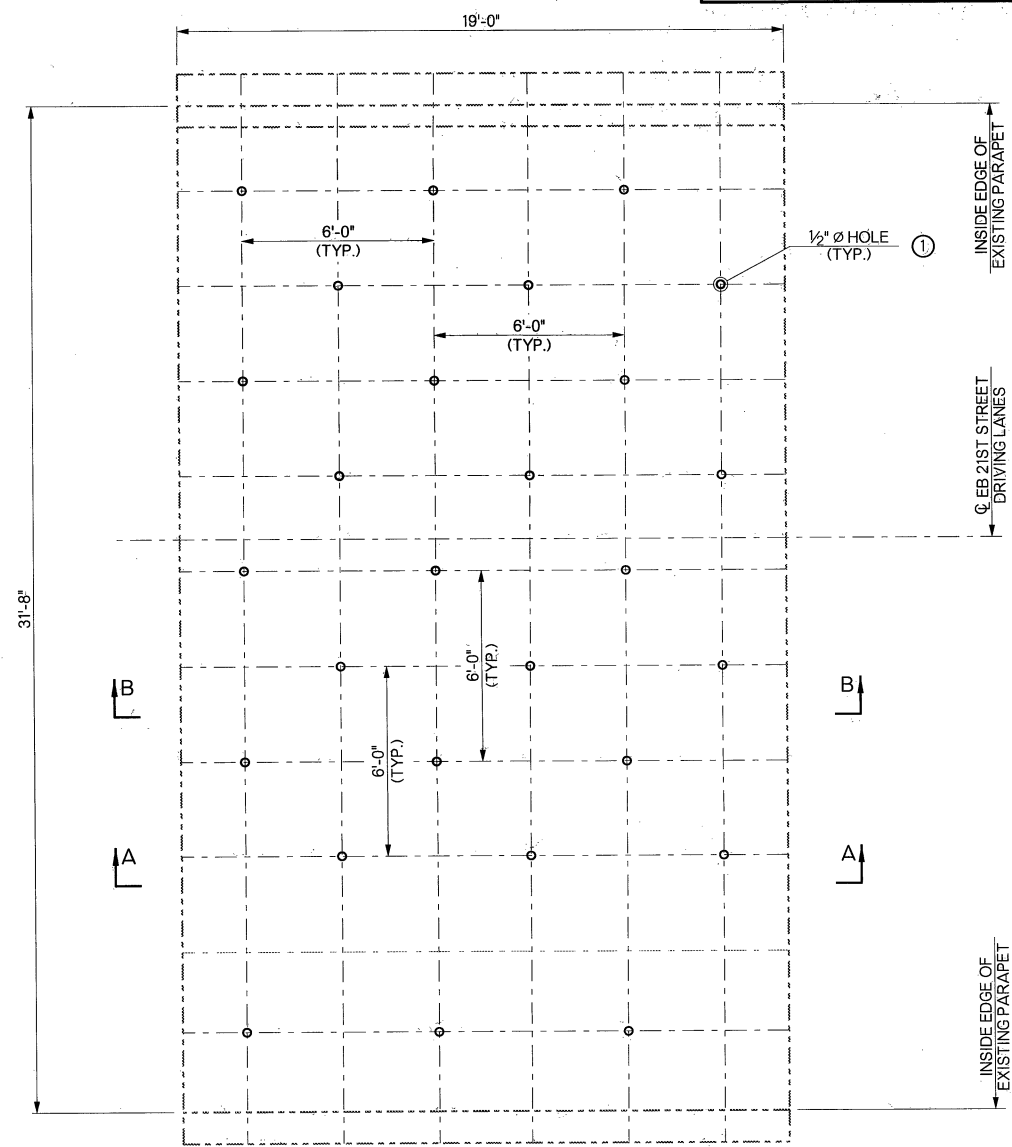
- EXISTING STRUCTURE
- ▨ CLASS A BRIDGE DECK REPAIR



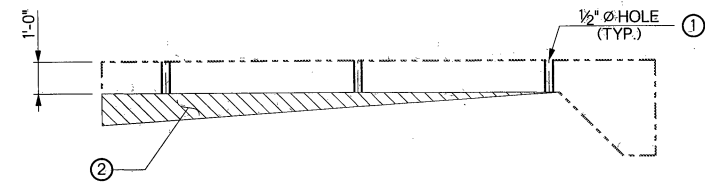
BRIDGE 261B - BRIDGE DECK REPAIR	
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 9500 EB E. 21ST STREET OVER MINGO CREEK CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 TULSA, OKLAHOMA 74136 Phone: (918) 250-5922 Fax: (918) 858-0107	
DRAWN JMH 2/22	APPROVED:
DESIGNED JMH 2/22	
SURVEY	
PROJ. MGR. BRT 2/22	
LEAD MGR. JDT 1/22	
FIELD MGR. JDT 1/22	
PLAN SCALE	RECOMMENDED:
PROFILE SCALE	
HORIZONTAL:	
VERTICAL:	
FILE: H&S 11.22	DATE: 11/22
DESIGN MANAGER:	CITY ENGINEER:
ATLAS PAGE NO. 130	SHEET 21 OF 33 SHEETS

ADVERTISE DATE:	BY:	DATE:
REVISION		

ALL INFORMATION INCLUDED IN THESE PLANS IS BASED ON THE EXISTING AS-BUILT PLANS. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY VERIFY THIS INFORMATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTE "VERIFICATION OF EXISTING CONDITIONS" ON SHEET NO. 2.



PLAN
(APPROACH SLAB AT ABUTMENT NO. 1)



SECTION B-B

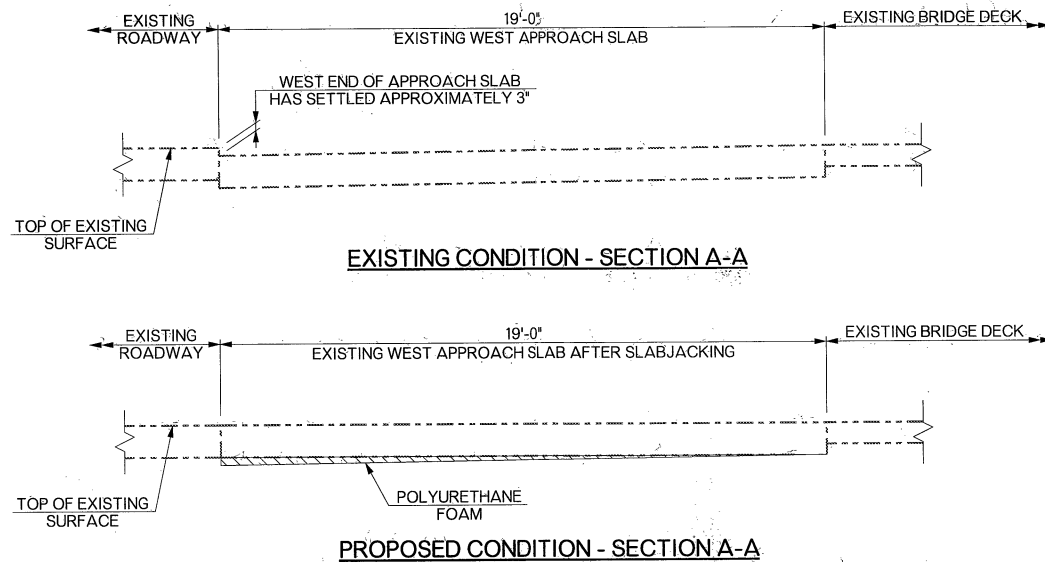
- ① DRILL 1/2" DIAMETER HOLES IN THE APPROACH SLAB AT 6'-0" STAGGERED INTERVALS IN BOTH LONGITUDINAL AND TRANSVERSE DIRECTIONS. CONTRACTOR SHALL LOCATE AND MARK REINFORCING STEEL BARS PRIOR TO DRILLING.
- ② AFTER THE HOLES HAVE BEEN DRILLED IN THE APPROACH SLAB A HIGH-DENSITY POLYURETHANE FOAM SHALL BE INJECTED UNDER THE SLAB.

ONCE THE INJECTION PROCESS IS COMPLETE AND THE INJECTION NOZZLE HAS BEEN REMOVED FROM THE HOLE, ANY EXCESS POLYURETHANE FOAM SHALL BE REMOVED FROM THE AREA AND THE HOLE SHALL BE SEALED WITH POLYURETHANE MATERIAL OR A QUICK SETTING CONCRETE PATCH.

NOTE:
THE EXPECTATION OF WORK FROM THE CONTRACTOR IN REGARDS TO THE SLABJACKING OF THE APPROACH SLAB AND THE ADJACENT CONCRETE APPROACH PANEL IN THE NORTH LANE IS TO PROVIDE A SMOOTH AND EVEN SURFACE ACROSS THE BRIDGE DECK, APPROACH SLABS AND APPROACH ROADWAY. THE CONTRACTOR SHALL RAISE THE APPROACH ROADWAY SIDE OF THE APPROACH SLAB; THE DECK SIDE OF THE APPROACH SLAB WILL NOT REQUIRE MODIFICATION.

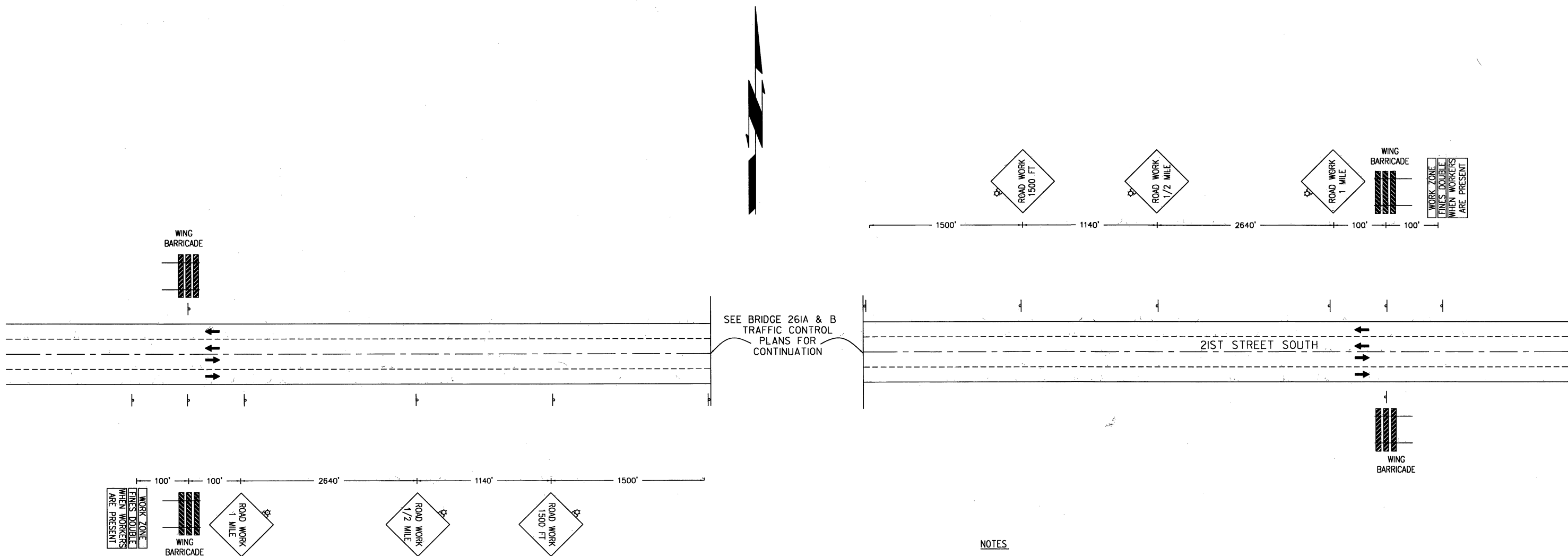
THE DETAILS SHOWN ARE FOR A CONCEPTUAL DRILLING PLAN. THE CONTRACTOR SHALL DETERMINE THE ACTUAL DRILLING LOCATIONS AND PREPARE A DRILLING PLAN TO ACHIEVE THE DESIRED RESULTS.

SLABJACKING DETAILS



BRIDGE 261B - APPROACH REPAIR DETAILS			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
9500 EB E. 21ST STREET OVER MINGO CREEK			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN JMH 2/22		APPROVED:	
DESIGNED JMH 2/22			
SURVEY JMH 2/22			
PROJ. MGR. BRT 2/22			
LEAD MGR. JMH 11/22			
FIELD MGR. JMH 11/22			
RECOMMENDED:			
HAS 11/22			
DESIGN MANAGER		DATE:	
DRAWING:		SHEET 22 OF 33 SHEETS	
ATLAS PAGE NO. 130			

ADVERTISE DATE:	BY	DATE
REVISION		



- NOTES**
1. ADVANCED WARNING SIGNS TO BE INSTALLED DURING PHASES 2 AND 3.
 2. CONSTRUCTION SPEED LIMIT TO BE SET AT 25 MPH.

CONSTRUCTION SEQUENCING

PHASE 1: DETOUR TRAFFIC AROUND BRIDGES 261A & B

PHASE 2: SHIFT TRAFFIC TO OUTSIDE LANES.

PHASE 3: SHIFT TRAFFIC TO INSIDE LANES.



ADVERTISE DATE:	REVISION	BY	DATE

BRIDGES 261 A & B - ADVANCED WARNING SIGNS

CITYWIDE BRIDGE REHABILITATION
PROJECT NO. TD-2020-B1A
21ST STREET SOUTH

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922
TULSA, OKLAHOMA 74136 Fax: (918) 558-0107

DRAWN	AJF	03/22	APPROVED:
DESIGNED	KDH	03/22	
SURVEY	N/A	N/A	
PROJ. MGR.	Z	10/22	
LEAD MGR.	DP	11/22	
FIELD MGR.	PM	11/22	

PLAN SCALE

PROFILE SCALE

HORIZONTAL:

VERTICAL:

DATE:

FILE:

DRAWING:

ATLAS PAGE NO. 129 & 130

SHEET 23 OF 33 SHEETS



PHASE I DETOUR CONSTRUCTION

1. SHIFT E 21ST STREET TRAFFIC, AT BRIDGES 261A & B, TO DETOUR DURING PHASE I CONSTRUCTION.

NOTES

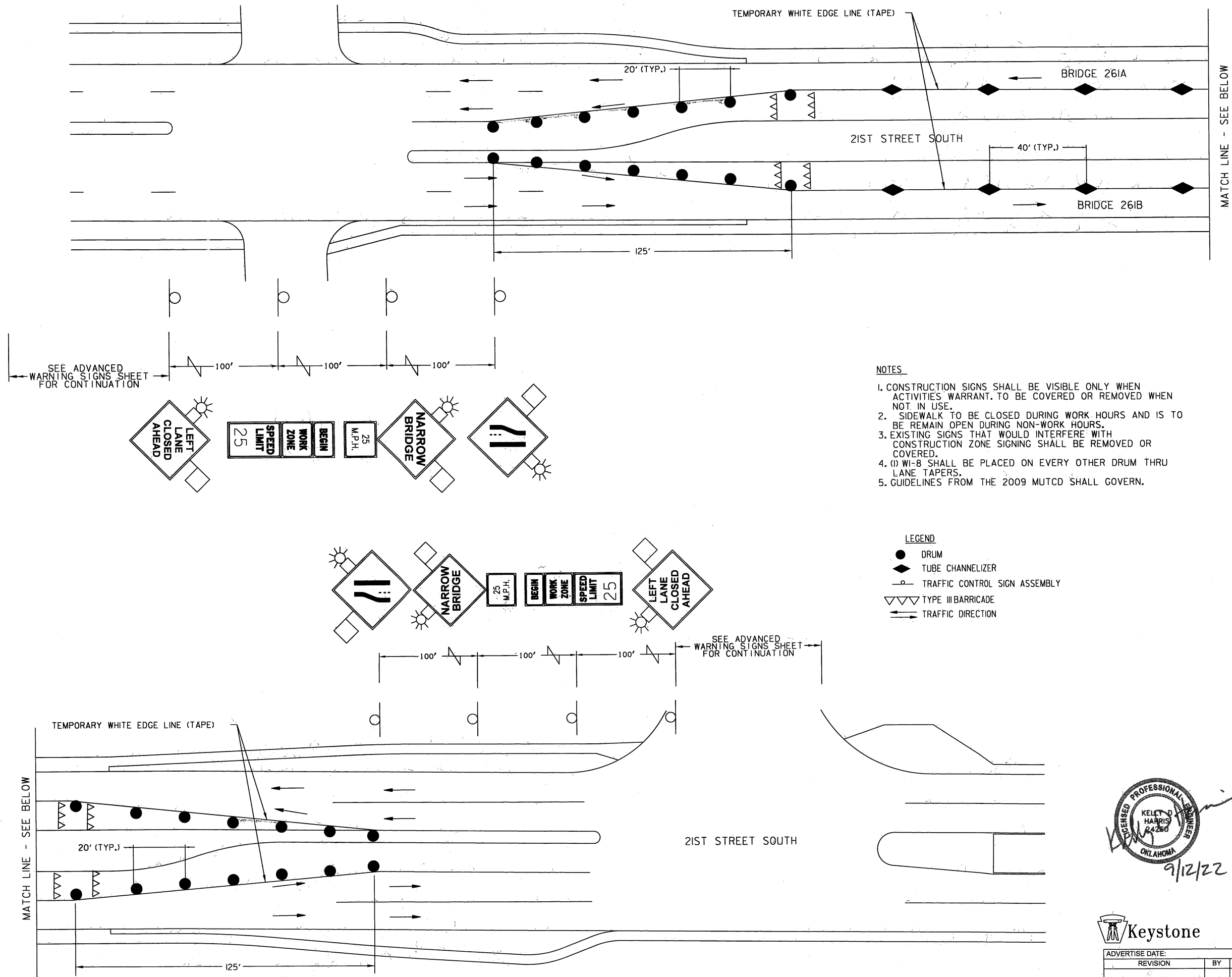
1. CONSTRUCTION SIGNS SHALL BE VISIBLE ONLY WHEN ACTIVITIES WARRANT. TO BE COVERED OR REMOVED WHEN NOT IN USE.
2. EXISTING SIGNS THAT WOULD INTERFERE WITH CONSTRUCTION ZONE SIGNING SHALL BE REMOVED OR COVERED.
3. GUIDELINES FROM THE 2009 MUTCD SHALL GOVERN.

- 1. BRIDGE CLOSED
- 2A. BRIDGE CLOSED
- 2B. BRIDGE CLOSED
- 3. BRIDGE CLOSED AHEAD
- 4. DETOUR AHEAD
- 5. DETOUR
- 6. DETOUR
- 7. DETOUR



ADVERTISE DATE:		
REVISION	BY	DATE

BRIDGES 261 A & B - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL - PHASE 1 DETOUR			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
21ST STREET SOUTH			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN DESIGNED SURVEY PROJ. MGR. LEAD MGR. FIELD MGR.	AJF	03/22	APPROVED:
	KDH	03/22	
	N/A	N/A	
PLAN SCALE 1"=600'			RECOMMENDED:
PROFILE SCALE HORIZONTAL:			
VERTICAL:			DATE:
FILE:			
ATLAS PAGE NO. 129 & 130			SHEET 24 OF 33 SHEETS

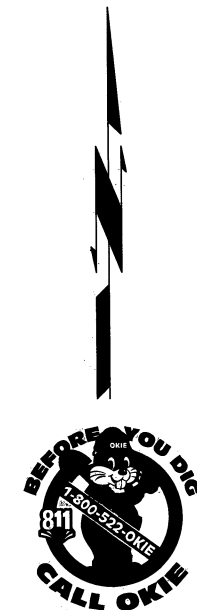


NOTES

1. CONSTRUCTION SIGNS SHALL BE VISIBLE ONLY WHEN ACTIVITIES WARRANT. TO BE COVERED OR REMOVED WHEN NOT IN USE.
2. SIDEWALK TO BE CLOSED DURING WORK HOURS AND IS TO BE REMAIN OPEN DURING NON-WORK HOURS.
3. EXISTING SIGNS THAT WOULD INTERFERE WITH CONSTRUCTION ZONE SIGNING SHALL BE REMOVED OR COVERED.
4. (1) W-8 SHALL BE PLACED ON EVERY OTHER DRUM THRU LANE TAPERS.
5. GUIDELINES FROM THE 2009 MUTCD SHALL GOVERN.

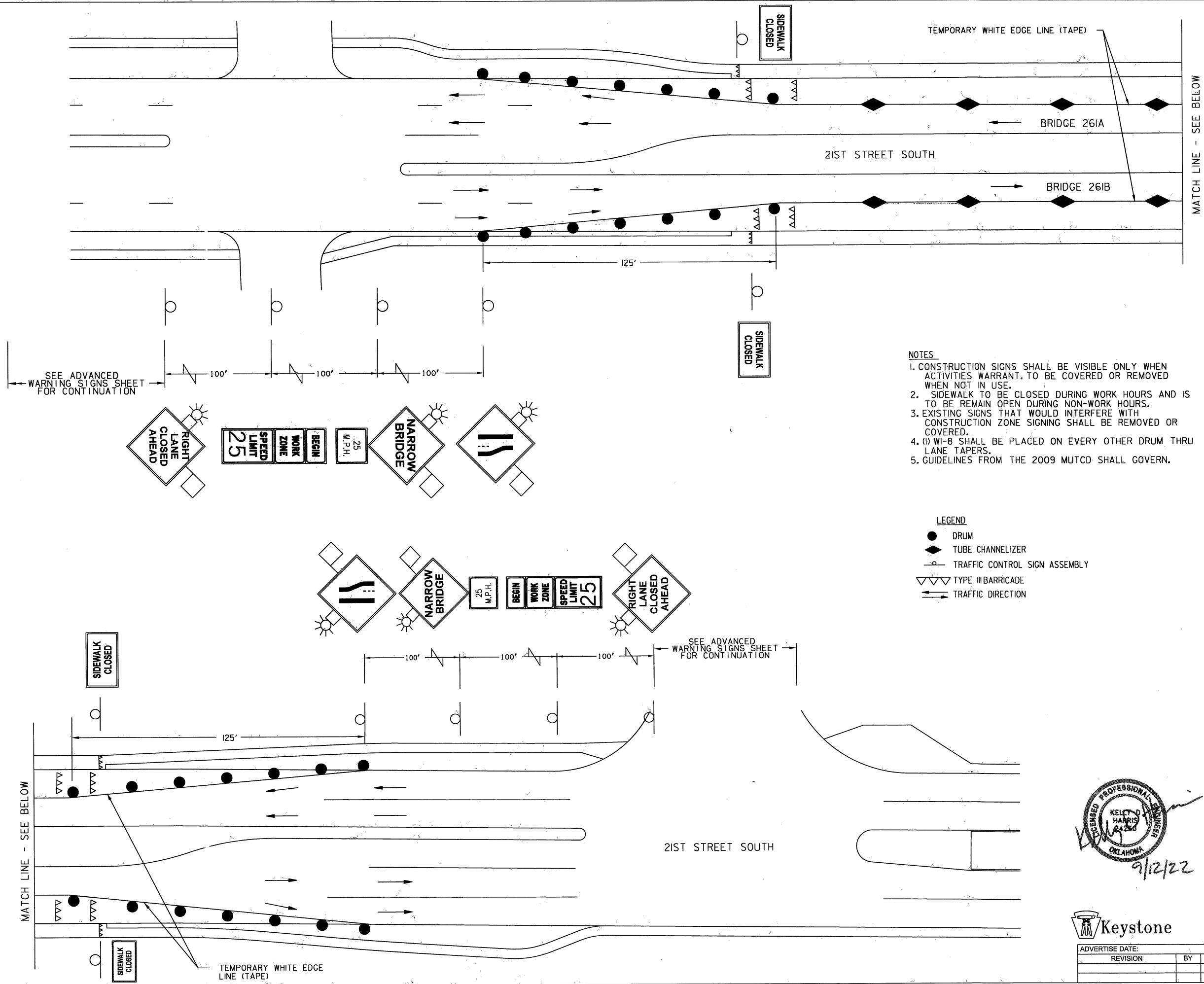
LEGEND

- DRUM
- ◆ TUBE CHANNELIZER
- ⊥ TRAFFIC CONTROL SIGN ASSEMBLY
- ▽▽▽ TYPE III BARRICADE
- TRAFFIC DIRECTION



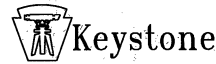
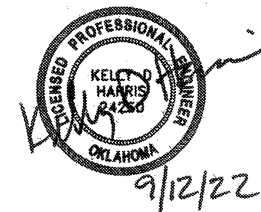
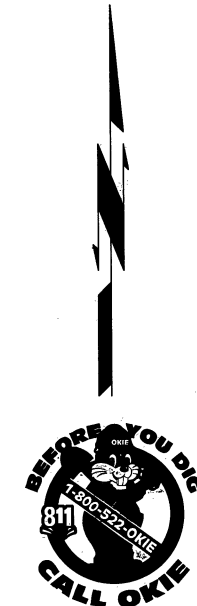
ADVERTISE DATE:		
REVISION	BY	DATE

BRIDGES 261 A & B - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL - PHASE 2		
CITYWIDE BRIDGE REHABILITATION		
PROJECT NO. TD-2020-B1A		
21ST STREET SOUTH		
CITY OF TULSA, OKLAHOMA		
ENGINEERING SERVICES DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY:		
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5822		
TULSA, OKLAHOMA 74136 Fax: (918) 658-0107		
APPROVED:		
DRAWN	AJF	03/22
DESIGNED	KDH	03/22
SURVEY	N/A	N/A
PROJ. MGR.	J	1/4/22
LEAD MGR.	JD	4/22
FIELD MGR.	JD	11/22
RECOMMENDED:		
DATE: 11/22		
CITY ENGINEER		
SHEET 25 OF 33 SHEETS		



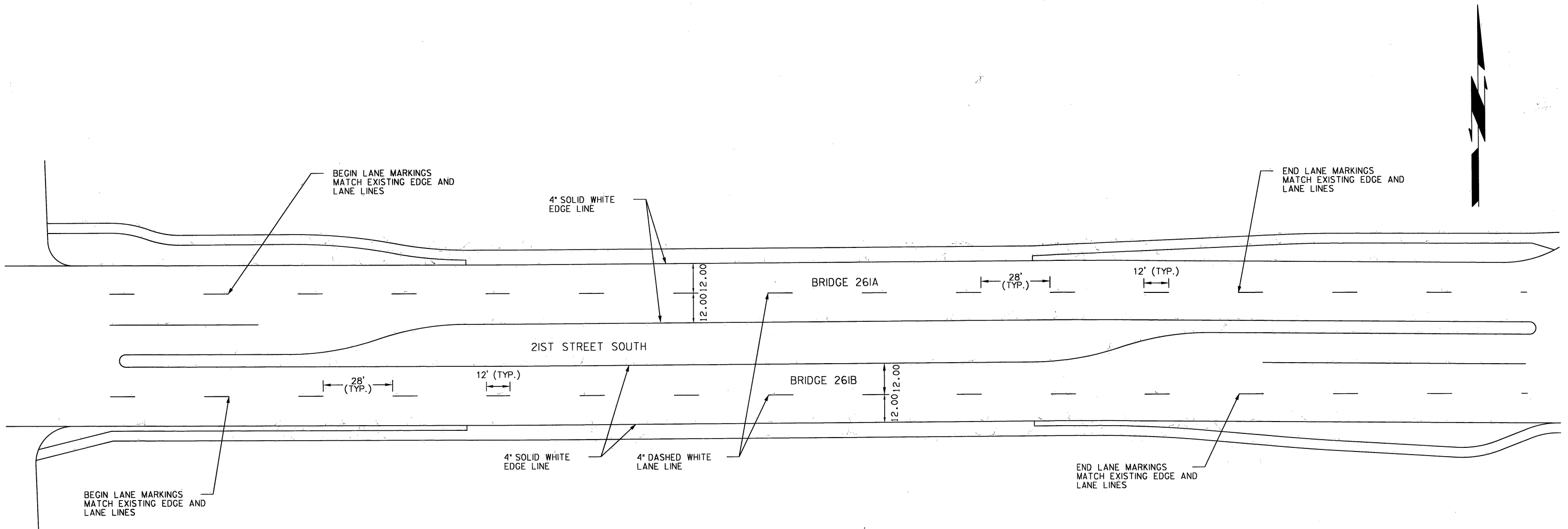
- NOTES
1. CONSTRUCTION SIGNS SHALL BE VISIBLE ONLY WHEN ACTIVITIES WARRANT. TO BE COVERED OR REMOVED WHEN NOT IN USE.
 2. SIDEWALK TO BE CLOSED DURING WORK HOURS AND IS TO BE REMAIN OPEN DURING NON-WORK HOURS.
 3. EXISTING SIGNS THAT WOULD INTERFERE WITH CONSTRUCTION ZONE SIGNING SHALL BE REMOVED OR COVERED.
 4. (I) W-8 SHALL BE PLACED ON EVERY OTHER DRUM THRU LANE TAPERS.
 5. GUIDELINES FROM THE 2009 MUTCD SHALL GOVERN.

- LEGEND
- DRUM
 - ◆ TUBE CHANNELIZER
 - p— TRAFFIC CONTROL SIGN ASSEMBLY
 - ▽▽▽ TYPE III BARRICADE
 - TRAFFIC DIRECTION



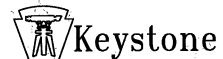
BRIDGES 261 A & B - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL - PHASE 3			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
21ST STREET SOUTH			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922			
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN		AJF	03/22
DESIGNED		KDH	03/22
SURVEY		N/A	N/A
PROJ. MGR.		J	4/22
LEAD MGR.		100	4/22
FIELD MGR.		100	4/22
RECOMMENDED:			
DATE:		11/1/22	
DESIGN MANAGER			
CITY ENGINEER			
ADVERTISE DATE:			
REVISION		BY	DATE
FILE:			
DRAWING:			
ATLAS PAGE NO. 129 & 130			
SHEET 26 OF 33 SHEETS			

9/12/2022 2:55:50 PM
aferguson
WORKSPACE:
G:\Civil 3D Projects\Tulsa - Garver - Bridge 261 A & B & 35904_DGN\Tulsa - Bridges 261 & 359 - sheets.dgn



NOTES

1. ALL STRIPING SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.
2. ALL STRIPING SHALL MATCH EXISTING STRIPING AT PROJECT TERMINAL POINTS.
3. ALL EXISTING SIGNS ARE TO REMAIN IN PLACE.
4. SEE ODOT STANDARD DRAWINGS FOR ADDITIONAL DETAILS.

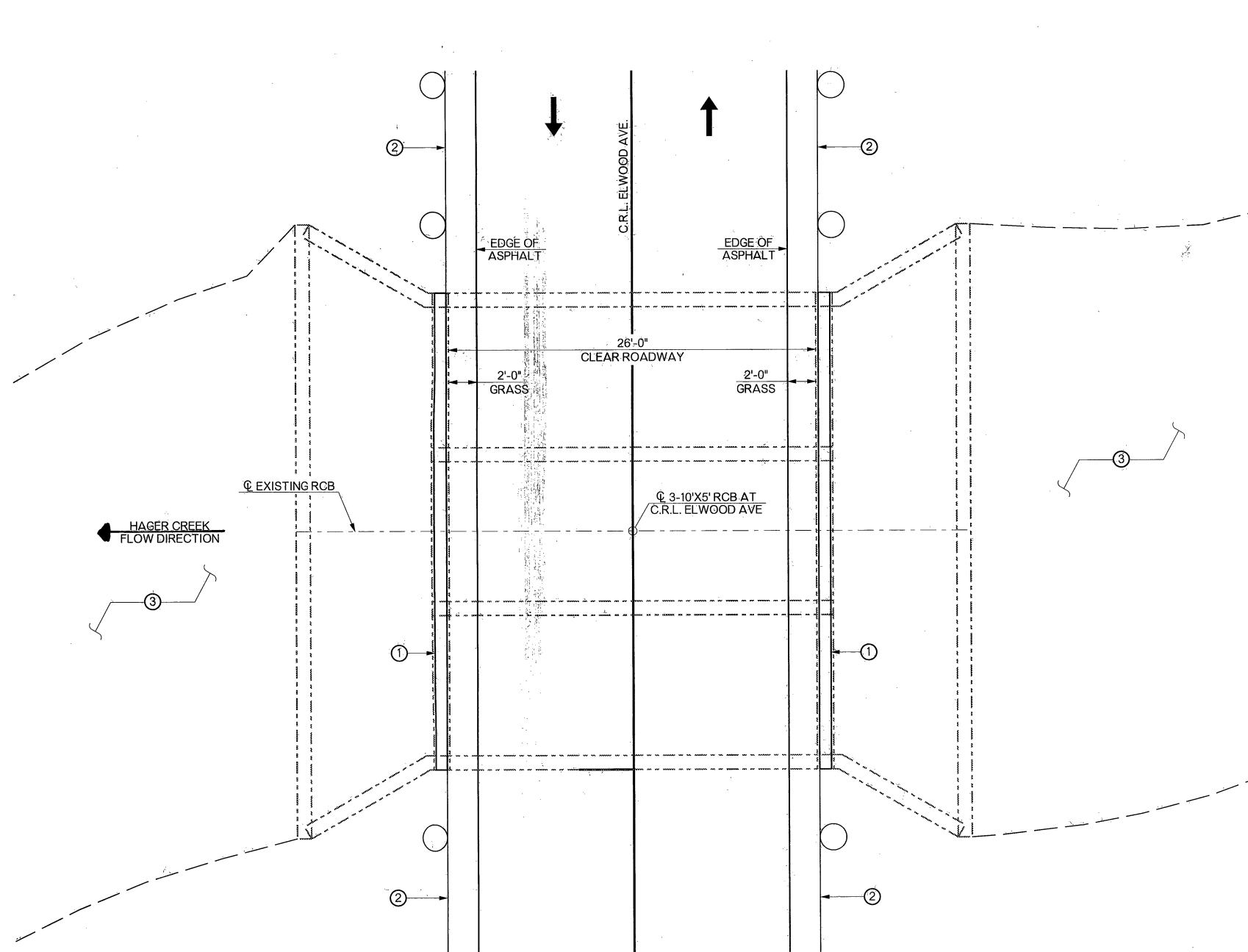


ADVERTISE DATE:		
REVISION	BY	DATE

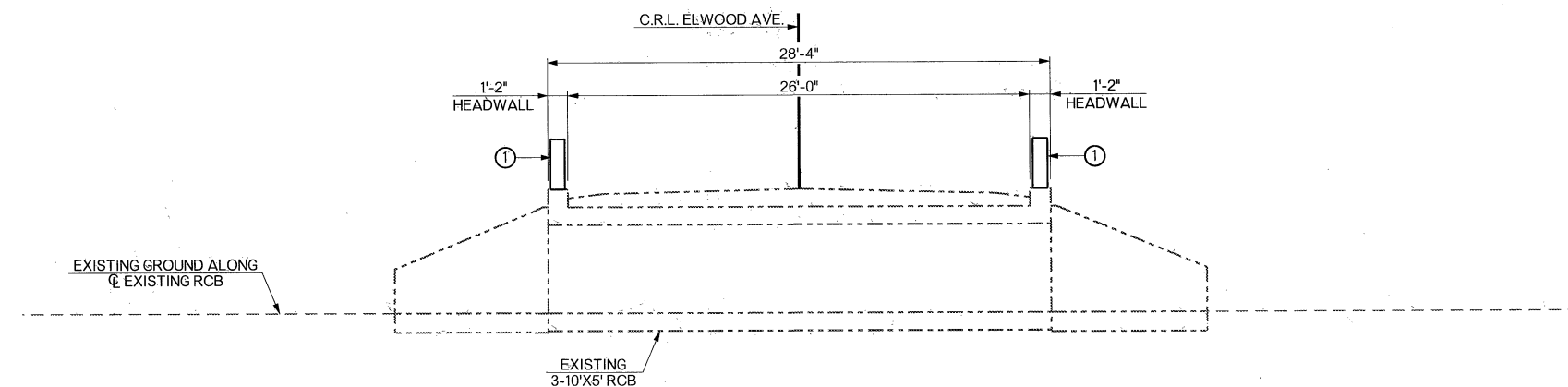
BRIDGES 261 A & B - PAVEMENT MARKING		
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 21ST STREET SOUTH		
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT		
PLANS AND ESTIMATES PREPARED BY:		
6100 S. YALE AVE., SUITE 1300 TULSA, OKLAHOMA 74136 Phone: (918) 250-5922 Fax: (918) 858-0107		
DRAWN	AJF	03/22
DESIGNED	KDH	03/22
SURVEY	N/A	N/A
PROJ. MGR.	JK	10/22
LEAD MGR.	Q	4/22
FIELD MGR.	JK	4/22
RECOMMENDED:		
PLAN SCALE 1" = 20'		
PROFILE SCALE		
HORIZONTAL:		
VERTICAL:		
FILE:	DRAWING:	DATE:
ATLAS PAGE NO. 129 & 130		

CITY ENGINEER

SHEET 27 OF 33 SHEETS



PLAN



ELEVATION

INDEX OF SHEETS	
SHEET NO.	TITLE
28	BRIDGE 359 - GENERAL PLAN AND ELEVATION
29	BRIDGE 359 - CONCRETE BARRIER DETAILS
30	BRIDGE 359 - ROADWAY PLAN SHEET
31	BRIDGE 359 - DETAILS FOR GUARDRAIL INSTALLATION AT INTERSECTING ROADWAY

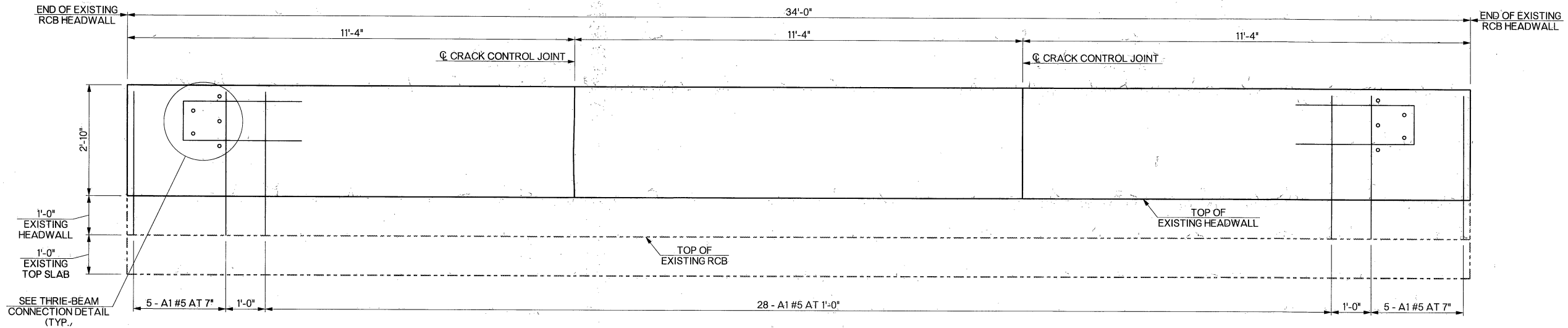
- ① REMOVE EXISTING CONCRETE POST & RAIL WITH W-BEAM; CONSTRUCT NEW CONCRETE BARRIER. SEE SHEET NO. 29 FOR DETAILS.
- ② EXISTING GUARDRAIL TO BE REPLACED AT ALL FOUR CORNERS. SEE SHEET NO. 30 FOR DETAILS.
- ③ REMOVE DEBRIS IN CHANNEL

NOTE:
STATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY.

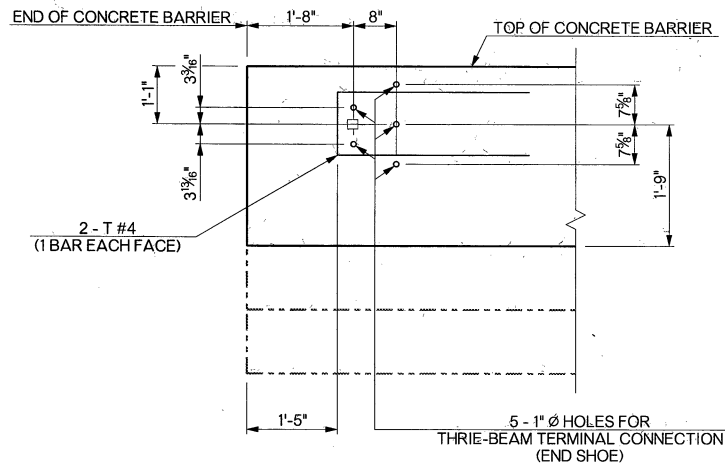


BRIDGE 359 - GENERAL PLAN AND ELEVATION			
CITYWIDE BRIDGE REHABILITATION			
PROJECT NO. TD-2020-B1A			
8600 S. ELWOOD AVE OVER HAGER CREEK			
CITY OF TULSA, OKLAHOMA			
ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
6100 S. YALE AVE., SUITE 1300 TULSA, OKLAHOMA 74136		Phone: (918) 250-5922 Fax: (918) 858-0107	
DRAWN	JMH	2/22	APPROVED:
DESIGNED	JMH	2/22	
SURVEY			
PROJ. MGR.	BRT	2/22	
LEAD MGR.	①	11/22	
FIELD MGR.	②	11/22	
RECOMMENDED:			
HAS 11-22			
DESIGN MANAGER		CITY ENGINEER	
FILE:	DRAWING:	DATE:	
ATLAS PAGE NO. 886,887,1009,1010		SHEET 28 OF 33 SHEETS	

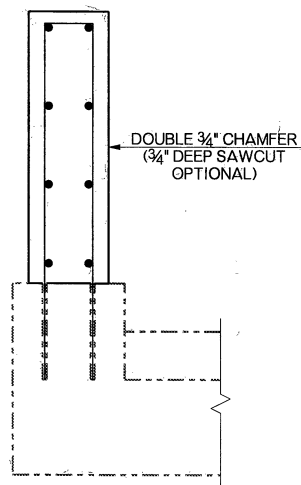
ADVERTISE DATE:	BY	DATE
REVISION		



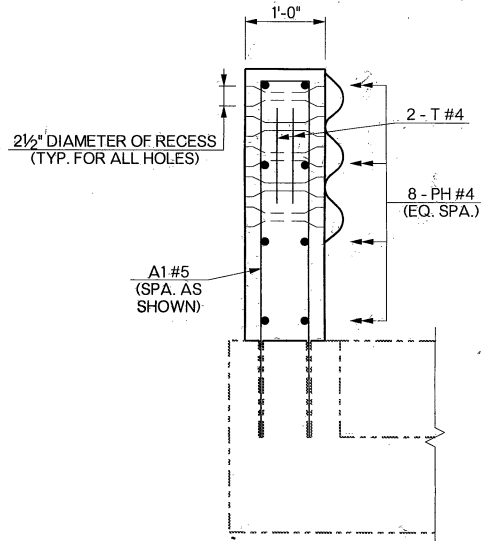
CONCRETE BARRIER LAYOUT
(LOOKING AT INSIDE FACE OF WEST CONCRETE PARAPET.
EAST CONCRETE PARAPET SIMILAR, BUT OPPOSITE HAND.)



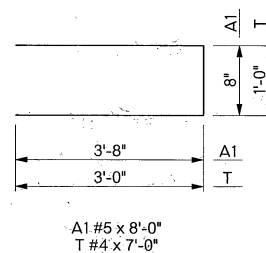
THRIE-BEAM CONNECTION DETAIL



CRACK CONTROL JOINT
(PH BARS TO BE CONTINUOUS
THROUGH CRACK CONTROL JOINT)



END VIEW



TYPICAL CONCRETE BARRIER SECTION

BAR LIST - CONCRETE BARRIER (EAST & WEST BARRIERS SHOWN)				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING STEEL				
A1	#5	76	BENT	8'-0"
PH	#4	16	STR.	33'-8"
T	#4	8	BENT	7'-0"

1 ANCHORAGE SYSTEM:

THE ANCHORAGE SYSTEM SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE REINFORCING STEEL THAT IS TO BE ANCHORED. THE EMBEDMENT DEPTH SHOWN IS TO BE ADJUSTED TO MEET THE MANUFACTURER'S REQUIREMENTS. ANCHORAGES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR THE SYSTEM USED, THE CONTRACTOR SHALL HAVE THE OPTION OF THE METHODS BY WHICH THE A1 BARS SHOWN IN THE PLANS ARE TO BE ANCHORED INTO THE EXISTING HEADWALLS. ANCHORAGE INTO THE CONCRETE OF THE EXISTING RCB SHALL BE ACCOMPLISHED BY ONE OF THE FOLLOWING METHODS:

1. SELF-MIXING INJECTION TYPE ANCHORAGE SYSTEMS SUCH AS "HILTI FASTENING SYSTEMS", "UNITEX PRO-PROXY 300 FAST" OR AN APPROVED EQUAL. ANCHORAGES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR THE SYSTEMS USED.

2. ENCAPSULATED NON-EXPANDING CHEMICAL TYPE ANCHORAGE SYSTEMS SUCH AS "RAWLPLUG COMPANY CHEM-STUD", "HILTI ENCAPSULATED" OR AN APPROVED EQUAL. ANCHORAGES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR THE SYSTEMS USED.

DRILLING INTO THE EXISTING CONCRETE TO INSTALL THE ANCHORAGE SHALL BE ACCOMPLISHED WITHOUT CUTTING EXISTING CONCRETE REINFORCING STEEL BARS. PRIOR TO DRILLING, THE CONTRACTOR SHALL LOCATE AND MARK THE EXISTING CONCRETE REINFORCING STEEL BARS WITH NON-DESTRUCTIVE TOOLS, EQUIPMENT AND METHODS APPROVED BY THE ENGINEER. IF EXISTING REINFORCING STEEL BARS ARE ENCOUNTERED DURING DRILLING, THE DRILLING SHALL CEASE AND THE HOLE SHALL BE GROUTED. THE HOLE SHALL THEN BE RELOCATED TO CLEAR THE EXISTING REINFORCING STEEL BARS. ANY ADJUSTMENT IN THE LOCATIONS OF THE A1 BARS FROM THE PLAN LOCATIONS SHOWN SHALL BE THE MINIMUM AMOUNT NECESSARY TO AVOID CUTTING THE EXISTING CONCRETE REINFORCING STEEL BARS AND SHALL BE APPROVED BY THE ENGINEER.

ALL COSTS OF THE ANCHORAGE ASSEMBLIES INCLUDING LABOR, MATERIALS, TOOLS, DRILLING, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".

CONCRETE BARRIER NOTES:

CONSTRUCT THE CONCRETE BARRIER TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION (ENGLISH) AS WELL AS THE FOLLOWING REQUIREMENTS.

CLASS AA CONCRETE:

USE CLASS AA CONCRETE IN THE CONCRETE BARRIER. ALL COSTS OF CONCRETE TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".

REINFORCING STEEL:

ALL REINFORCING STEEL USED IN THE CONCRETE BARRIER IS TO BE EPOXY COATED. ALL REINFORCING STEEL IS TO HAVE 1/2" CLEARANCE, UNLESS OTHERWISE NOTED. THE BAR LENGTH FOR THE A1 BAR SHALL BE DETERMINED IN ACCORDANCE WITH THE EMBEDMENT DEPTH REQUIRED BY THE ANCHORAGE SYSTEM USED (SEE "ANCHORAGE SYSTEM" NOTE THIS SHEET). REINFORCING STEEL IS NOT TO BE MEASURED FOR PAYMENT. ALL COSTS OF THE A1, PH, & T BARS ARE TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".

CRACK CONTROL JOINTS:

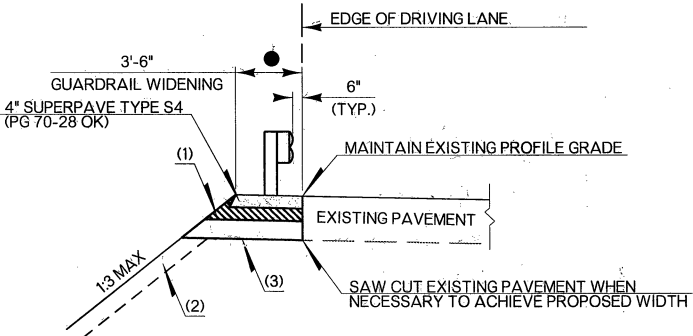
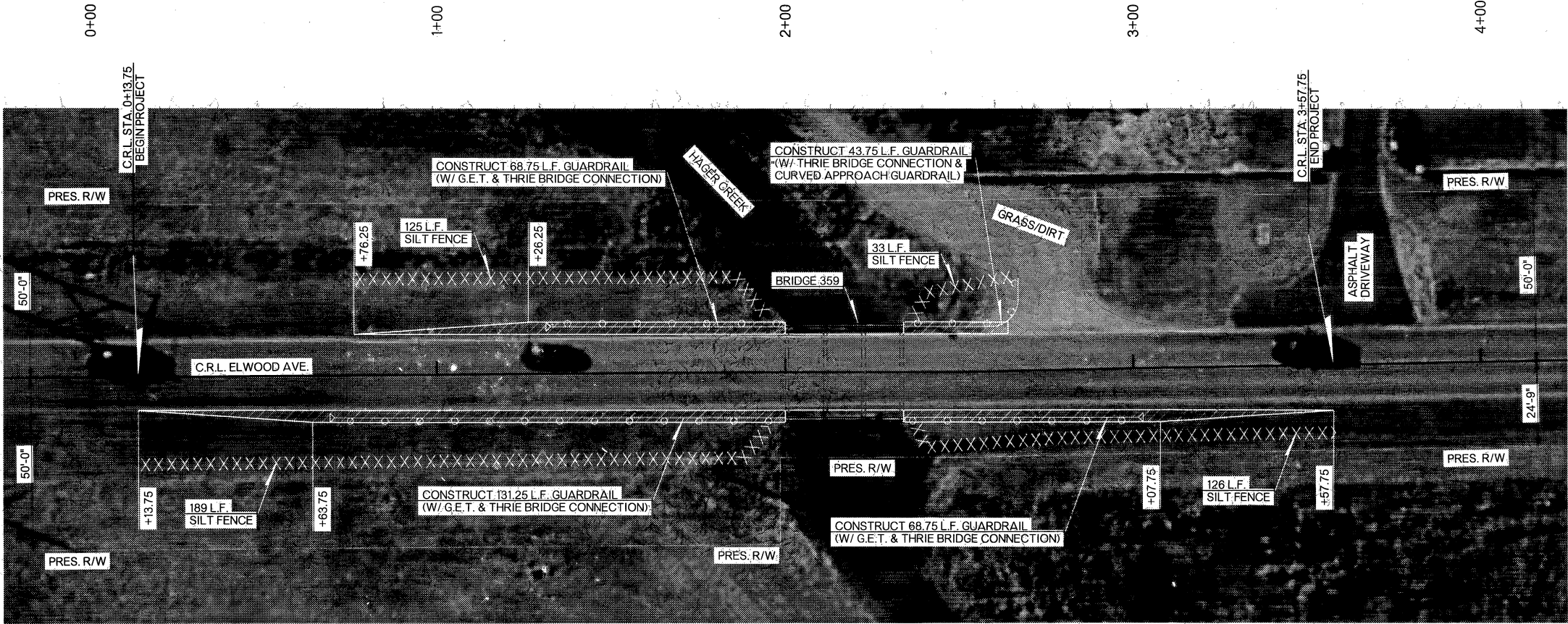
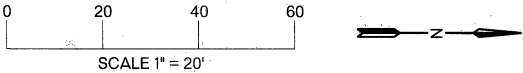
PROVIDE DOUBLE 3/4" CHAMFERS OR 3/4" DEEP SAWCUT IN ACCORDANCE WITH THE DETAILS SHOWN. ALL BARS SHALL BE CONTINUOUS THROUGH THE CRACK CONTROL JOINTS.

ALL COSTS ASSOCIATED WITH THE CONCRETE BARRIER, INCLUDING CONCRETE, REINFORCING STEEL, CRACK CONTROL JOINTS, MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "CONCRETE PARAPET".



BRIDGE 359 - CONCRETE BARRIER DETAILS			
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 8600 S. ELWOOD AVE OVER HAGER CREEK			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE. SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107			
DRAWN	JMH	2/22	APPROVED:
DESIGNED	JMH	2/22	
SURVEY			
PROJ. MGR.	BRT	2/22	
LEAD MGR.	W	11/22	
FIELD MGR.	W	11/22	
RECOMMENDED:			
VERTICAL: HAS 11-22 DESIGN MANAGER CITY ENGINEER			
FILE:	DRAWING:	DATE:	
ATLAS PAGE NO. 886,887,1009,1010 SHEET 29 OF 33 SHEETS			

LEGEND	
	PROPOSED PAVEMENT
XXXX	SILT FENCE



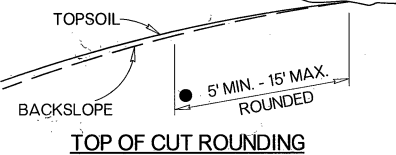
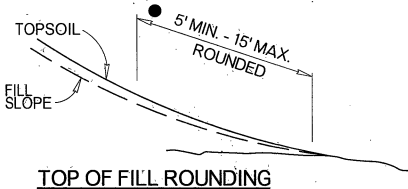
GUARDRAIL WIDENING TYPICAL SECTION

NOT TO SCALE

- C.R.L. STA. 0+13.75 TO C.R.L. STA. 0+63.75 - TRANSITION 0'-0" TO 3'-6" RT
- C.R.L. STA. 0+63.75 TO C.R.L. STA. 2+00.00 - 3'-6" RT
- C.R.L. STA. 2+34.00 TO C.R.L. STA. 3+07.75 - 3'-6" RT
- C.R.L. STA. 3+07.75 TO C.R.L. STA. 3+57.75 - TRANSITION 3'-6" TO 0'-0" RT
- C.R.L. STA. 0+76.25 TO C.R.L. STA. 1+26.25 - TRANSITION 0'-0" TO 3'-6" LT
- C.R.L. STA. 1+26.25 TO C.R.L. STA. 2+00.00 - 3'-6" LT
- C.R.L. STA. 2+34.00 TO C.R.L. STA. 2+64.00 - 3'-6" LT

ROUNDING DETAIL

- INTERSECTION OF CUT AND/OR FILL SLOPES WITH GROUND LINE TO BE ROUNDED AS PART OF FINISHING OPERATIONS. ROUNDED SHALL BE 5' MINIMUM FOR SMALLER CUTS AND FILLS TO 15' MAXIMUM FOR LARGER CUTS AND FILLS OR AS DESIGNATED BY THE ENGINEER. COST OF ROUNDED TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS OF WORK.



NOTE:
STATIONS SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY.



Signature: [Handwritten Signature]
Date: 10-16-22

(1) BACKFILL NOTE:
TO BE BACKFILLED AS PART OF THE FINISHING OPERATIONS. THICKNESS MAY VARY TO MAINTAIN THE EXISTING PROFILE GRADE. QUANTITY IS MEASURED IN T.B.S.C. TYPE E.

(2) TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

(3) UNCLASSIFIED BACKFILL NOTE:
TO BE BACKFILLED AS NEEDED TO MAINTAIN EXISTING PROFILE GRADE. QUANTITY IS INCLUDED IN OTHER ITEMS OF WORK.

ADVERTISE DATE:		
REVISION	BY	DATE

BRIDGE 359 - ROADWAY PLAN SHEET

CITYWIDE BRIDGE REHABILITATION

PROJECT NO. TD-2020-B1A

8600 S. ELWOOD AVE OVER HAGER CREEK

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922

TULSA, OKLAHOMA 74136 Fax: (918) 858-0107

DRAWN	JMH	3/22	APPROVED:
DESIGNED	JMH	3/22	
SURVEY			
PROJ. MGR.	BRT	3/22	
LEAD MGR.	[Signature]	11/22	
FIELD MGR.	[Signature]	11/22	
RECOMMENDED:			

PLAN SCALE 1" = 20'

PROFILE SCALE HORIZONTAL:

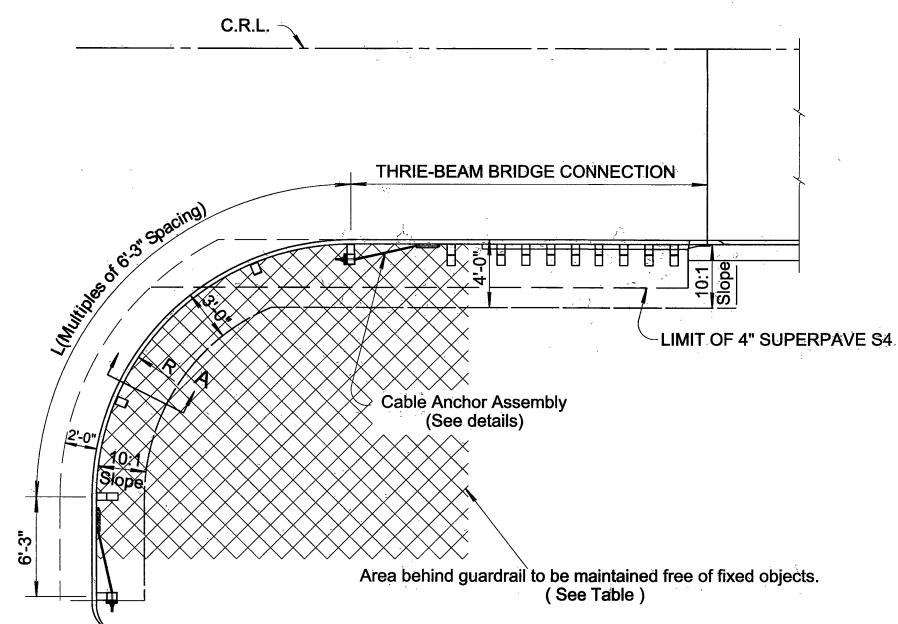
VERTICAL:

FILE:

ATLAS PAGE NO. 886,887,1009,1010

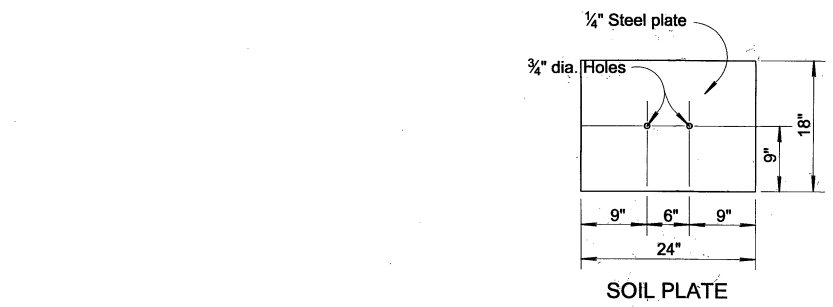
DATE:

SHEET 30 OF 33 SHEETS

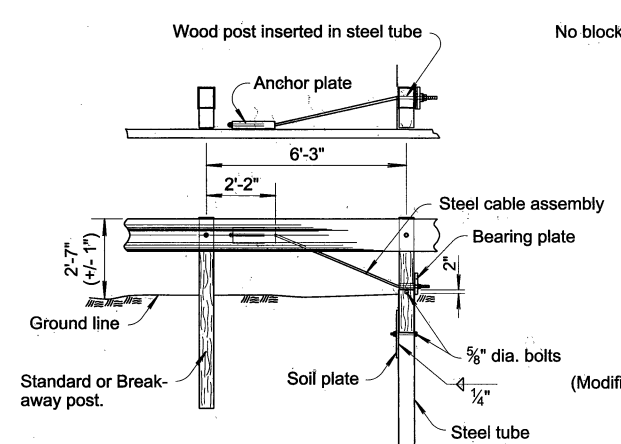


TERMINAL TREATMENT
AT ENTRANCE

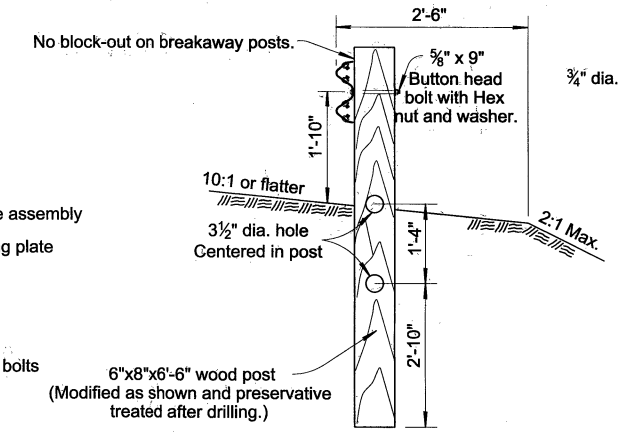
L	R	Required Area Free of Fixed Objects
12'-6"	8'-0"	20 X 20



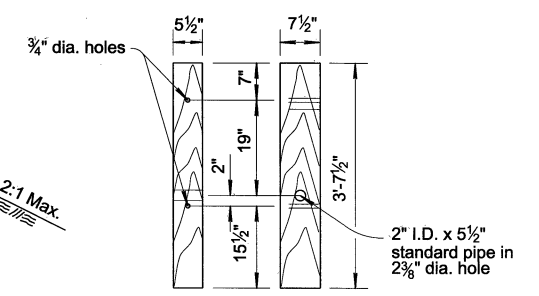
General notes:
The curved rail element is 12 ga, and shop bent.
Use wood Breakaway Posts through curved section of guardrail, all other posts may be either wood or steel with no mixing of types.
Set steel tube and soil plate in place prior to the installation of the wood anchor assembly post.
Cost of materials and installation shall be included in price bid for Beam Guardrail



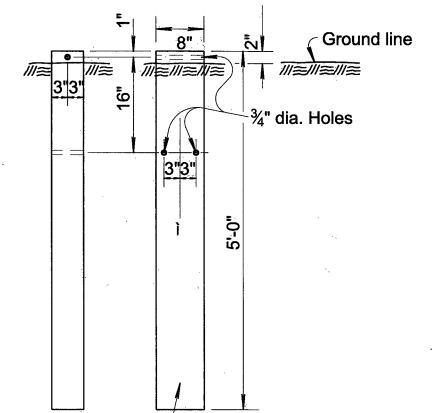
ANCHOR ASSEMBLY



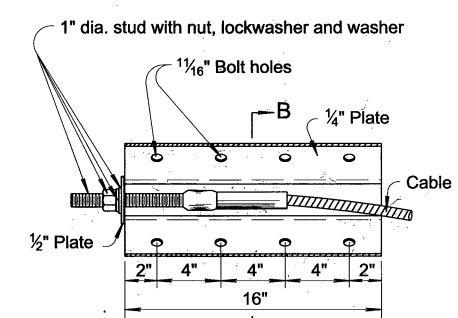
SECTION A-A
(Typical through curved portion
of guardrail.)



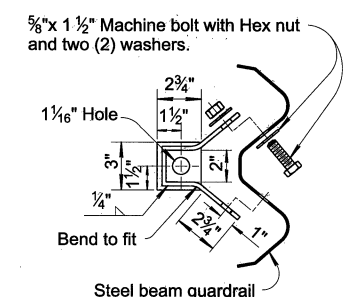
ANCHOR ASSEMBLY POST



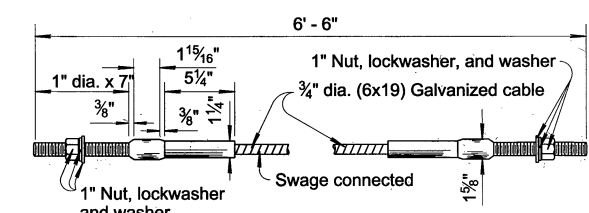
STEEL TUBE



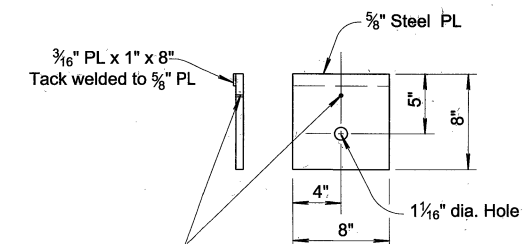
ANCHOR PLATE



MODIFIED SECTION B-B





CABLE ASSEMBLY
(40,000 lbs. min. breaking strength)
Tighten cable to taut tension.



BEARING PLATE



BRIDGE 359 - DETAILS FOR GUARDRAIL INSTALLATION AT INTERSECTING ROADWAY				
CITYWIDE BRIDGE REHABILITATION PROJECT NO. TD-2020-B1A 8600 S. ELWOOD AVE OVER HAGER CREEK				
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT				
PLANS AND ESTIMATES PREPARED BY: 6100 S. YALE AVE., SUITE 1300 Phone: (918) 250-5922 TULSA, OKLAHOMA 74136 Fax: (918) 858-0107				
 <i>for</i>	DRAWN	MSM	2/22	APPROVED:
	DESIGNED	MSM	2/22	
	SURVEY			
	PROJ. MGR.	BRT	3/22	
PLAN SCALE	LEAD MGR.	<i>P</i>	<i>4/22</i>	 CITY ENGINEER
PROFILE SCALE HORIZONTAL:	FIELD MGR.	<i>PLA</i>	<i>11/22</i>	
	RECOMMENDED:			
VERTICAL:	<i>HAS 11-22</i> DESIGN MANAGER			
FILE:	DRAWING:		DATE:	
ATLAS PAGE NO. 886,887,1009,1010				SHEET 31 OF 33 SHEETS

ADVERTISE DATE:		
REVISION	BY	DATE

JM/bak 9/7/2022 10:52:50 AM
WORKSPACE:MicroStation Imperial
L:\2020\20103050 - COT 1012 Bridge Rehabilitation\Drawings\Amendment 1\BRIDGE\Bridge 359\B1-359 GUARDRAIL INSTALLATION.dgn



NOTES

1. CONSTRUCTION SIGNS SHALL BE VISIBLE ONLY WHEN ACTIVITIES WARRANT. TO BE COVERED OR REMOVED WHEN NOT IN USE.
2. EXISTING SIGNS THAT WOULD INTERFERE WITH CONSTRUCTION ZONE SIGNING SHALL BE REMOVED OR COVERED.
3. (1) W-8 SHALL BE PLACED ON EVERY OTHER DRUM THRU LANE TAPERS.
4. GUIDELINES FROM THE 2009 MUTCD SHALL GOVERN.
5. ACCESS TO DRIVEWAYS TO BE MAINTAINED AT ALL TIMES.
6. CONSTRUCTION SPEED LIMIT TO BE DETERMINED BY THE ENGINEER.

LEGEND

- DRUM
- TT PORTABLE TRAFFIC SIGNAL
- TRAFFIC CONTROL SIGN ASSEMBLY
- SAND FILLED IMPACT ATTENUATOR
- TRAFFIC DIRECTION

CONSTRUCTION SEQUENCING

1. NARROW ROADWAY TO ONE-WAY 12' LANE
2. INSTALL PORTABLE TRAFFIC SIGNAL



ADVERTISE DATE:		
REVISION	BY	DATE

BRIDGE 359 - CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL PLAN	
CITYWIDE BRIDGE REHABILITATION	
PROJECT NO. TD-2020-B1A	
8600 S. ELWOOD AVE OVER HAGER CREEK	
CITY OF TULSA, OKLAHOMA	
ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
6100 S. YALE AVE, SUITE 1300 Phone: (918) 250-5922	
TULSA, OKLAHOMA 74136 Fax: (918) 858-0107	
	DRAWN AJF 03/22
	DESIGNED KDH 03/22
	SURVEY N/A N/A
	PROJ. MGR. L 10/22
	LEAD MGR. D 10/22
FIELD MGR. J 10/22	
RECOMMENDED:	
HAS 11.2.22	
DESIGN MANAGER CITY ENGINEER	
DATE:	
FILE: DRAWING:	
ATLAS PAGE NO. 886, 887, 1009, 1010	
SHEET 32 OF 33 SHEETS	

