LEGEND OF SYMBOLS

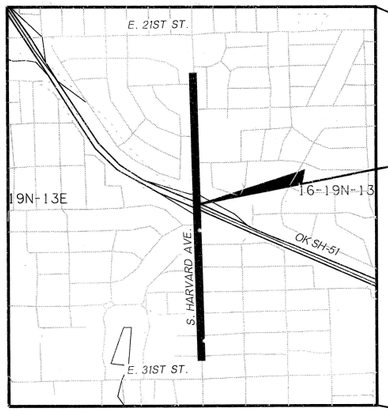
- EXISTING MANHOLE
- EXISTING CURB INLET
- PROPOSED CURB INLET
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- GAS METER/GAS RISER
- STREET LIGHT
- POWER POLE
- GUY ANCHOR
- HCR EXISTING HANDICAP RAMP
- TRAFFIC SIGNAL PULLBOX
- E POWER BOX (IN GROUND)
- P POWER RISER
- T TELEPHONE RISER
- SIGN
- MB MAILBOX
- CONTROL POINT
- SOIL BORINGS
- TREE
- GATE

- EXISTING FENCES
- EXISTING GUARD RAIL
- EXISTING ROADS, DRIVEWAYS, PARKING, AND SIDEWALKS
- C.R.L.
- PROPERTY LINE
- RIGHT-OF-WAY LINES-EXISTING
- EXISTING AERIAL POWER LINES
- PUG EXISTING UNDERGROUND POWER LINES
- SS EXISTING SANITARY SEWERS
- EXISTING WATER LINES
- RCP EXISTING STORM SEWER

UTILITY CONTACTS

AT&T	ALFORD NICHOLS	(539) 444-1069
COX COMM.	JASON HOLT	(918) 830-7238
ONG	CODY YOST	(918) 352-5745
AEP/PSO	LONNY HICKS	(918) 250-6211
CITY OF TULSA UTILITY COORDINATOR	TONY GLYNN	(918) 596-9245
METROLINK TULSA	ERIC SMITH	(918) 830-0024

POSTED SPEED 40 MPH
AADT (2017)= 29,500
EASLS (RIGID) = 3.0 MIL
5.00 LN-MI REHABILITATION



CITY OF TULSA, OKLAHOMA

CONSTRUCTION PLANS FOR

ARTERIAL STREET REHABILITATION

& WATER LINE REPLACEMENT

SOUTH HARVARD AVE.

FROM E. 21ST ST. TO E. 31ST ST.

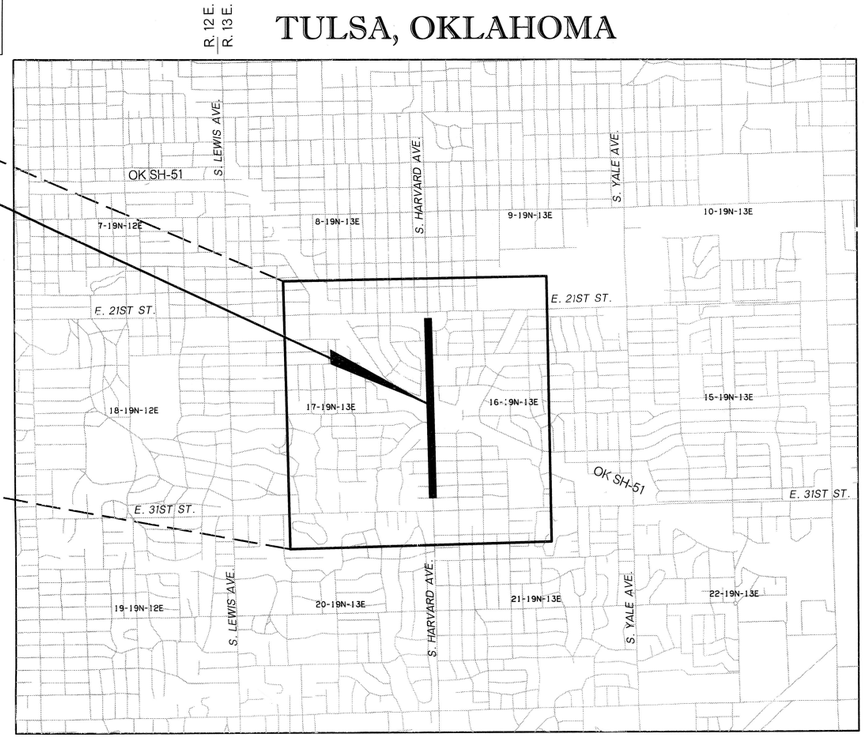
PROJECT NOS. 144017-Y, TMUA-W 17-26

ACCOUNT NO. 144017.STREETS.5453104.0453122-541106

ACCOUNT NO. 171037.WATER.7400.74003122-541101

PUBLIC WORKS DEPARTMENT

TULSA, OKLAHOMA



ENTIRE PROJECT IS WITHIN THE CORPORATE AND URBAN LIMITS OF THE CITY OF TULSA

INDEX OF SHEETS

1	COVER SHEET
2-3	PAY QUANTITIES & NOTES (ROADWAY)
4	PAY QUANTITIES & NOTES (WATER LINE)
5	SIGNAL PAY QUANTITIES & NOTES
6	GENERAL CONSTRUCTION NOTES
7	TYPICAL SECTION
8	DETAIL SHEET
9	RIGHT-OF-WAY SHEET
10	SURVEY DATA SHEET
11	GEOMETRIC PLAN
12-13	SUMMARY SHEETS
14	STORMWATER MANAGEMENT PLAN
15-25	PLAN AND PROFILE SHEETS (ROADWAY)
26	PLAN AND PROFILE SHEETS (WATERLINE)
27-28	SIGNING AND STRIPING PLANS
29-40	TRAFFIC CONTROL PLANS
41-47	TRAFFIC SIGNAL SHEETS

PROJECT NO. 144017-Y, TMUA-W 17-26, SWD NO. 11243

THE FOLLOWING CITY OF TULSA STANDARD DRAWINGS WILL BE USED FOR THIS PROJECT:

102	601	612
126	602	613
401	603	614 A&B
608A	606	616
608B	607 A&B	617 A&B
625	610 A&B	618
727 & 729	611 A	
751		
764		
765		
766		
767		
775		
790		

THE FOLLOWING ODOT STANDARD DRAWINGS WILL BE USED FOP THIS PROJECT:

TSC2-3	SSP1-1	TCS5-1	TCS 2-1
GMSI-1	SSA2-1	TCS6-1	TCS 3-1
PM1-1	FGS2-1	TCS7-1	TCS 21-1
PM3-1	PM6-1	TCS 1-1	TCS 22-1

N.T.S.

APPROVED BY

Jeremy D. Ball — 8/4/2025
CITY ENGINEER — DATE

APPROVED BY

8-5-2025
WATER AND SEWER DIRECTOR — DATE

ADVERTISEMENT DATE: 8/14/2025

PREPARED AND SUBMITTED BY

POE & ASSOCIATES INC.
4606 S. GARNETT RD., STE. 600
TULSA, OK 74146 (918) 665-8800
FAX: (918) 665-6076

CERTIFICATE OF AUTHORIZATION NO. CA 541 P.E., L.S.

Gregory J. Coker — 7-25-25
GREGORY J. COKER — DATE
REGISTERED P.E. NO. 16840

REGISTERED PROFESSIONAL ENGINEER — GREGORY JAMES COKER — 16840 — OKLAHOMA

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

CONTROL SURVEY DATA

PERMANENT BENCHMARK REFERENCES:
ADS #41 - 3" BRASS CAP SET FLUSH IN CONCRETE POST, SOUTH OF THE INTERSECTION OF E. 21ST ST. AND S. HUDSON AVE.
N= 419164.654
E=2584743.803
ELEV.=768.359'

ADS #38 - 5/8" REBAR - 1 1/2" ALUMINUM CAP SET FLUSH IN CONCRETE & STAMPED "38", S.W. OF THE INTERSECTION OF 51ST ST. & S. HUDSON AVE.
N= 403211.409
E= 2584925.161
ELEV.= 721.852'

1. HORIZONTAL CONTROL:
A. HORIZONTAL CONTROL FOR THIS SURVEY IS THE NAD83(1993) OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE.
B. ACCURACY - 3RD ORDER OR BETTER.

2. BEARINGS:
THE BEARINGS SHOWN HEREIN OR HEREON ARE "GRID" BEARINGS DERIVED FROM NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL.

3. VERTICAL CONTROL:
A. LEVEL DATUM IS MEAN SEA LEVEL DATUM OF (NGS) NAVD 1988.
B. ACCURACY - 3RD ORDER OR BETTER.

THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS.

CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AS ADOPTED BY C.O.T.

IN ACCORDANCE WITH ODOT SECTION 105.14, THE COT IS ANTICIPATING THAT THE SUCCESSFUL CONTRACTOR WILL UTILIZE THE APPROPRIATE MEANS AND METHODS TO ACCOMPLISH THE WORK DESCRIBED IN THE PLANS,WITHOUT CAUSING COLLATERAL DAMAGE TO THE EXISTING INFRASTRUCTURE. THE PLANS ARE SET UP WITH THE EXCEPTION OF PERFORMING PATCHING AND CONCRETE WORK *AFTER* MILLING OPERATIONS. THE ANTICIPATED CONSTRUCTION PHASING WILL MINIMIZE THE TIME BETWEEN MILLING AND NEW ASPHALT PLACEMENT. LEAVING OPEN MILLED SECTIONS WILL BE AT THE CONTRACTORS RISK IN THE EVENT THAT LOCAL OR CONSTRUCTION TRAFFIC CAUSES DAMAGE TO PREVIOUSLY UNDAMAGED AREAS. CURRENT COT CONSTRUCTION BUDGETS DO NOT ALLOW FOR GROWTH OF THE PROJECT.

2/25/2025 - 08:07AM I:\303898 Harvard\Plan Sheets\303898-Cover Sheet.dgn

PAY QUANTITY SUMMARY (ROADWAY) - BASE BID

ITEM	SPEC. NO.	DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
1	202(A)	UNCLASSIFIED EXCAVATION	E-3, 4, R-1	CY	988
2	220	SWPPP DOCUMENTATION AND MANAGEMENT	E-6,7,8	LS	1
3	230(A)	SOLID SLAB SODDING	E-10, 11	SY	248
4	303(A)	AGGREGATE BASE TYPE A	S-1, 2	CY	988
5	310(B)	SUBGRADE METHOD B		SY	2,930
6	325	SEPARATOR FABRIC	S-3	SY	3,434
7	409	FABRIC REINFORCEMENT (MIRAFI-PGM-G4)	S-4	SY	30,345
8	411(C)	SUPERPAVE, TYPE S4 (PG 70-28) INSOLUBLE	S-5, 6, 7, 8, 23	TON	3,500
9	411(E)	SUPERPAVE, TYPE S6 (PG 70-28)	S-5, 6, 7, 8, 23, G-1	TON	800
10	412	COLD MILL PAVEMENT	S-9, 22	SY	30,345
11	609(A)	CONCRETE CURB (8" BARRIER)	1, S-15	LF	760
12	609(B)	COMBINED CURB AND GUTTER (8" BARRIER)	1, S-12, 13, 15, 16	LF	743
13	611(I)	REPLACEMENT OF INLET FRAME & GRATES	D-2,7,8,9	EA	10
14	612(A)	MANHOLE ADJUSTED TO GRADE (PUBLIC)	S-12, R-2, D-1, 2, 6	EA	11
15	612(E)	VALVE BOX ADJUSTED TO GRADE	S-12, R-2, D-6	EA	22
16	612(F)	METER BOX ADJUSTED TO GRADE	S-12, R-2, D-6	EA	5
17	619(B)	REMOVAL OF CURB AND GUTTER	R-1, 2, 5, 6	LF	743
18	641	MOBILIZATION	G-2	EA	1
19	642	CONSTRUCTION STAKING LEVEL II	G-3, 4	EA	1
20	850(A)	GROUND MOUNTED SIGN	T-2	SF	431
21	855(A)	TRAFFIC STRIPE (4") (PLASTIC)	2,T-3	LF	25,000
22	855(B)	TRAFFIC STRIPE (PLASTIC)(ARROWS)	T-3	EA	45
23	857(A)	CONSTRUCTION TRAFFIC STRIPE (PAINT)(4" WIDE)		LF	15,000
24	857(C)	REMOVABLE PAVEMENT MARKING TAPE		LF	3,500
25	857(F)	PAVEMENT MARKING REMOVAL		LF	15,000
26	880(A)	ARROW DISPLAY	T-4	SD	600
27	880(B)	SIGNS 0.00 TO 6.25 SF	T-2, 4, 5	SD	40,000
28	880(B)	SIGNS 6.26 TO 15.99 SF	T-2, 4, 5	SD	30,000
29	880(B)	SIGNS 16.00 AND UP	T-2, 4, 5	SD	25,000
30	880(C)	BARRICADES (TYPE II)	T-2, 4, 5	SD	10,000
31	880(C)	BARRICADES (TYPE III)	T-2, 4, 5	SD	30,000
32	880(E)	TYPE "A" WARNING LIGHT	T-5	SD	75,000
33	880(F)	DRUMS	T-2, 4, 5	SD	95,000
34	880(G)	TUBE CHANNELIZERS	T-2, 4	SD	50,000
35	880(I)	FLAGGER	T-6	FD	50
36	COT 334	CONSTRUCTION AS-BUILT		LSUM	1
37	COT 335	CONTRACTORS QUALITY CONTROL		LSUM	1
38	COT 608	1-1/2" SIGN POST		LF	32
39	COT 608	1-3/4"' SIGN POST	T-3	LF	395
40	COT 608	2" SIGN POST	T-3	LF	114
41	COT 625	REMOVAL OF TRAFFIC ITEMS	T-1	EA	1
42	SPECIAL	PROJECT SIGN (CITY OF TULSA)	T-7	EA	2
43	SPECIAL	TYPE I APC PATCH	1, S-21, G-1	CY	711
44	SPECIAL	TYPE I AC PATCH	1, S-21, G-1	CY	35
45	SPECIAL	URBAN RIGHT-OF-WAY RESTORATION	G-5, 6, 9, 10	EA	1
46	SPECIAL	CRACK SEALING	G-1	LF	1,000
47	SPECIAL	OWNERS ALLOWANCE		EA	25,000
48	SPECIAL	SIGNAGE FOR LOCAL BUSINESS ACCESS (BAS-1)	T-4	SD	500

PAY QUANTITY SUMMARY (ROADWAY) - ADD ALTERNATE

ITEM	SPEC. NO.	DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
49	202(A)	UNCLASSIFIED EXCAVATION	E-3, 4, R-1	CY	98
50	230(A)	SOLID SLAB SODDING	E-10, 11	SY	910
51	303(A)	AGGREGATE BASE TYPE A	S-1, 2	CY	98
52	609(A)	CONCRETE CURB (8" BARRIER)	1, S-15	LF	123
53	609(B)	COMBINED CURB AND GUTTER (8" BARRIER)	1, S-12, 13, 15, 16	LF	436
54	610(A)	CONCRETE SIDEWALK (4")	S-12, 13, 16, 17	SY	743
55	610(A)	STAMPED CONCRETE SIDEWALK (4")	S-12, 13, 17, 18	SY	104
56	610(B)	CONCRETE DRIVEWAY (8"-H.E.S.)	1, S-12, 13, 16, 17	SY	218
57	610(I)	TACTILE WARNING DEVICE - NEW		SF	304
58	619(B)	REMOVAL OF SIDEWALK	R-1, 2, 5, 6	SY	756
59	619(B)	REMOVAL OF DRIVEWAY	R-1, 2, 5, 6	SY	218
60	619(B)	REMOVAL OF CURB AND GUTTER	R-1, 2, 5, 6	LF	436
61	SPECIAL	CONSTRUCT CURB RAMP		EA	38

ITEMS LISTED OR SHOWN ON DRAWINGS AND/OR DESCRIBED IN THE SPECIFICATIONS THAT ARE NOT INCLUDED AS A SEPARATE PAY ITEM QUANTITY SHALL BE CONSIDERED INCIDENTAL AND THE COST SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS. THE PRICE BID FOR ALL WORK SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, INCIDENTALS, AND ALL OTHER REQUIRED ITEMS TO COMPLETE THE WORK AS SHOWN ON PLANS AND SPECIFICATIONS.

PAY ITEM NOTES - PAVING & DRAINAGE

(version 11/14/2018)

E-1: NOT USED

E-2: NOT USED

E-3: THE CONTRACTOR SHALL BE PAID FOR UNCLASSIFIED EXCAVATION ON THE BASIS OF PLAN QUANTITY. ANY ADDITIONAL EXCAVATION REQUIRED OR OVERRUN OF PLAN QUANTITY WILL BE PAID FOR ON THE BASIS OF UNIT PRICE BID FOR THE ITEM. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SURVEY TO VERIFY ANY ADDITIONAL QUANTITIES.

E-4: UNCLASSIFIED EXCAVATION INCLUDES REMOVAL OF AGGREGATE BASE AND MODIFIED SUBGRADE UNDER EXISTING PAVEMENT TO BE REPAIRED.

E-5: NOT USED

E-6: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL AND MAINTENANCE OF THE STORM WATER DRAINAGE FROM THE CONSTRUCTION SITE. STORM WATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED. ALL COST ASSOCIATED WITH STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

E-7: EROSION PROTECTION SHALL BE PLACED AS FOLLOW:

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 OF ERODED MATERIAL ONTO ADJACENT PROPERTY;

C) FOR ENTIRE DURATION OF PROJECT, WITH MAINTENANCE AND REPLACEMENT, 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.

E-8: PRICE BID SHALL INCLUDE MAINTENANCE, SEDIMENT REMOVAL, DISPOSAL AND REMOVAL OF FILTERS AT THE PROJECT COMPLETION.

E-9: NOT USED

E-10: ESTIMATED QUANTITY IS BASED ON SODDING OF ALL DISTURBED AREAS OUTSIDE THE FINAL PAVING LIMITS AS INDICATED BY THE TOP-OF-CUT/TOE-OF-SLOPE LINE ON THE PLANS (EXCLUDING SURFACES OF STRUCTURES, FIXTURES AND APPURTENANCES). SOD SHALL BE OF LIKE-KIND TO EXISTING SOD. PRICE BID INCLUDED PLACEMENT AND COMPACTION OF SUITABLE BACKFILL. ANY EXISTING GRASSED AREAS BEYOND THE ABOVE STATED LIMITS THAT ARE DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESODDED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTORS'S EXPENSE.

E-11: COST OF WATERING AND FERTILIZING SHALL BE INCLUDED. FERTILIZERS SHALL BE 10-20-10 AND SHALL BE APPLIED AT THE RATE OF 1.5 LBS PER 10 SQ YDS. FERTILIZER SHALL BE APPLIED PER SECTION 230.04H OF ODOT STANDARD SPECIFICATIONS. WATERING SHALL BE APPLIED AS NECESSARY UNTIL VEGETATION IS ESTABLISHED OR UNTIL THE WORK IS ACCEPTED AS COMPLETE.

S-1: TYPE A AGGREGATE BASE WAS ESTIMATED TO BE USED AS THE BASE MATERIAL FOR 90% OF THE PATCHING. QUICK SET FLOWABLE FILL WAS ESTIMATED TO BE USED AS THE BASE MATERIAL FOR 10% OF THE PATCHING. ACTUAL QUANTITIES TO BE DETERMINED BY THE ENGINEER.

S-2: INCLUDES COMPACTION OF AGGREGATE TO 98% AASHTO T180 MODIFIED PROCTOR.

S-3: SEPARATOR FABRIC SHALL BE USED AT ALL PAVEMENT PATCHES AND RECONSTRUCTION SECTIONS. THE SEPARATOR FABRIC SHALL BE CUT AND OVERLAPPED A MINIMUM OF 2 FT AT ALL EDGES OF THE REPAIR.

S-4: FABRIC REINFORCEMENT SHALL BE USED ON OVERLAY AREAS. THE COST OF BITUMINOUS BINDER FOR FABRIC REINFORCEMENT SHALL BE INCLUDED IN THE UNIT COST OF THIS PAY ITEM. THE BITUMINOUS BINDER SHALL MEET ODOT STANDARD SPECIFICATIONS AND THE RECOMMENDATIONS OF THE FABRIC REINFORCEMENT MANUFACTURER.

S-5: THE COST OF TACK COAT, EDGE JOINT SEAL MATERIAL AND SCREENINGS FOR BLOTTING, AND ALL LABOR ASSOCIATED WITH THESE ITEMS, SHALL BE INCLUDED IN ASPHALT CONCRETE.

S-6: ESTIMATED AT 112 LBS PER SQ YD PER 1 INCH THICK.

S-7: ODOT PAY FACTOR FOR AVERAGE LOT DENSITY SHALL NOT BE USED FOR THIS PROJECT. FAILURE TO REACH AVERAGE LOT DENSITY OF 92%-97% WILL RESULT IN REJECTION OF WORK.

S-8: A HIGHER GRADE OF ASPHALT BINDER THAN INDICATED ON THE PLANS MAY BE USED, BUT AT NO ADDITIONAL COST TO THE CITY.

NOTE S8 (50) TABLE

BINDER[2] GRADE	MESALs	ADT[1]	NOTES
PG 64-22 OK	< 3	< 5,000	USE WHEN MORE THAT 4-6 INCHES BELOW THE SURFACE. ALSO USE FOR SHOULDERS, DRIVEWAYS, BELOW PCC, AND TEMPORARY CONSTRUCTION.
PG 70-28 OK	< 10	< 10,000	USE ONLY IN THE TOP 4-6 INCHES FOR DRIVING LANES.
PG 76-28 OK	>= 10	>= 10,000	USE ONLY IN THE TOP 4-6 INCHES FOR DRIVING LANES.
PG 76-28 E	—	—	CONTACT ODOT MATERIALS DIVISION FOR RECOMMENDED USE.

[1] USE ADT ONLY WHEN ESAL COMPUTATIONAL DATA IS NOT AVAILABLE. CALCULATE THE DESIGN ESALs BASED ON 20 YEARS.

[2] PG 70-28 OK OR 76-28 OK MAY BE DESIRABLE IN HIGH VOLUME AREAS WHERE SLOW, STANDING, OR TURNING TRAFFIC OCCURS, SUCH AS URBAN INTERSECTIONS OR OFF-RAMPS. OFF RAMPS SHOULD AT LEAST USE THE SAME BINDER AS THE MAINLINE.

PAY ITEM NOTES - PAVING & DRAINAGE

continued

S-9: THIS ITEM INCLUDES ALL COSTS ASSOCIATED WITH COLD MILLING AND TO PROVIDE BUTT JOINTS AS REQUIRED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR COLD MILLING BEYOND THE AVERAGE DEPTH SHOWN ON THE TYPICAL SECTIONS.

S-10: NOT USED

S-11: NOT USED

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.

S-14: NOT USED

S-15: THIS ITEM SHALL BE MEASURED AS THE ACTUAL AMOUNT OF CURB AND/OR GUTTER INSTALLED. NO PAYMENT WILL BE MADE FOR CURB AND/OR GUTTER THROUGH DRIVEWAYS AND INLETS.

S-16: CURB, GUTTER, AND/OR SIDEWALK ASSOCIATED WITH THE DRIVEWAY AND THROUGH THE DRIVEWAY IS INCLUDED IN THE COST OF THE DRIVEWAY.

S-17: ONE SIDEWALK PANEL ON EACH SIDE OF DRIVEWAYS SHALL BE A MINIMUM OF 6" THICK OR MATCH EXISTING DRIVEWAY THICKNESS, WHICHEVER IS GREATER. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE COST OF THE THICKENED SIDEWALK THROUGH THIS AREA.

S-18: STAMPED CONCRETE SIDEWALK SHALL BE INSTALLED WITH RUNNING BOND BRICK PATTERN. COLOR SHALL BE INTEGRAL AND MATCH HUE WITH FEDERAL STANDARD AMS-595 # 21105 (RED), OR APPROVED EQUAL. PAINTING OF STAMPED CONCRETE IS PROHIBITED AND WILL RESULT IN REJECTION OF WORK PRODUCT. CONTRACTOR SHALL PROVIDE A 1'X1'X4" TEST SQUARE FOR APPROVAL BY ENGINEER PRIOR TO INSTALLATION, WITH ALL COST INCLUDED IN UNIT PRICE BID FOR STAMPED CONCRETE SIDEWALK.

S-19: NOT USED

S-20: NOT USED

S-21: THIS PAY ITEM INCLUDES THE FOLLOWING:

A. SAW CUTTING
B. REMOVAL OF THE EXISTING CONCRETE AND/OR ASPHALTIC CONCRETE ROADWAY (CY)
C. TYPE S3 ASPHALTIC CONCRETE OR PC CONCRETE COMPLETE AND IN PLACE PER DETAIL
D. SEALING OF EDGES AND TACK COAT

DOES NOT INCLUDE THE FOLLOWING:

A. UNCLASSIFIED EXCAVATION
B. SUBGRADE METHOD B (SY)
C. SEPARATOR FABRIC (SY)
D. AGGREGATE BASE (TYPE A)
E. ASPHALT CONCRETE LEVELING OR SURFACE COURSE

S-22: REMOVE AC PAVEMENT ON CONCRETE DRIVEWAYS APRONS AND GUTTERS DURING EDGE MILLING AND COLD MILLING OPERATIONS.

S-23: REPLACE AC IN DRIVEWAY GUTTER, AS NEEDED, FOR POSITIVE STORMWATER DRAINAGE AND SMOOTH DRIVEWAY TRANSITIONS.

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-3: PAY ITEM INCLUDES REMOVAL OF ALL STRUCTURES AND OBSTRUCTIONS WITHIN PROJECT LIMITS NOT SPECIFIED BY OTHER ITEMS OF WORK.

R-4: INCLUDES SAWING NOT INCLUDED IN OTHER ITEMS OF WORK.

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

R-6: SHALL INCLUDE ALL COSTS ASSOCIATED WITH PLUGGING/ PATCHING HOLES IN EXISTING STRUCTURES TO REMAIN.

(PAY NOTES CONTINUED ON NEXT SHEET)

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES JOKER
19840
OKLAHOMA
4-7-25

PAY QUANTITIES AND NOTES (1)
ROADWAY

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = NA	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JB	4/25	
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED DESIGN MANAGER	HAS	6-25	CITY ENGINEER
FILE: H:\303898	DRAWING:303898-Pay Quantities-Notes		DATE: 6/4/2025	
ATLAS PAGE NO: 31, 32, 58, 59			SHEET 2 OF 47 SHEETS	

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4/7/2025

PAY ITEM NOTES - PAVING & DRAINAGE (version 11/14/2018)
continued

G-1: LOCATIONS TO BE DETERMINED IN THE FIELD AND WORK TO BE PREFORMED AT THE DIRECTION OF THE FIELD ENGINEER. QUANTITY IS ESTIMATED AND MAY BE OMITTED IN ITS ENTIRETY.

G-2: MAXIMUM OVERALL DOLLAR AMOUNT AND SCHEDULE OF PAYMENT SHALL BE IN ACCORDANCE WITH SECTION 641 OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, CURRENT EDITION. EXCLUDES MOBILIZATION FOR WATERLINE WORK.

G-3: CONSTRUCTION STAKING SHALL INCLUDE SURVEYING AND THE FURNISHING, PLACING, AND MAINTAINING OF THE CONSTRUCTION LAYOUT STAKES NECESSARY FOR THE PROPER COMPLETION AND INSPECTION OF THE ENTIRE PROJECT.

G-4: THE COST TO REPLACE REMOVED OR DAMAGED SECTION CORNERS AND ALL OTHER PERMANENT RIGHT OF WAY MARKERS SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE.

G-5: CONTRACTOR SHALL REPAIR ANY IRRIGATION SYSTEMS DAMAGED OR REQUIRING RELOCATION DURING THE CONSTRUCTION OF THIS PROJECT TO THE SATISFACTION OF THE PROPERTY OWNER AND CITY ARBORIST. COST SHALL BE INCLUDED IN THE PRICE BID.

G-6: ALL HOUSE NUMBERS SHALL BE REPLACED/ REESTABLISHED THROUGHOUT PROJECT LIMITS. COST TO BE INCLUDED IN URBAN RIGHT OF WAY RESTORATION. CONTRACTOR SHALL REESTABLISH DRAINS, ROOF DRAINS AND OTHER DRAINAGE THROUGH THE CURBS IN ACCORDANCE WITH CITY OF TULSA STANDARD 758. NEW CURB OUTLETS SHALL BE CONSTRUCTED WITHOUT APPROVAL OF THE ENGINEER.

G-7: NOT USED

G-8: NOT USED

G-9: CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS TO RESET ALL PAVERS, LANDSCAPE STONE, PRIVATE SIDEWALKS AND FENCES THAT ARE DISTURBED DURING CONSTRUCTION OPERATIONS. ALL MATERIALS, LABOR, AND EQUIPMENT REQUIRED FOR RESETTING OF SUCH ITEMS IS TO BE INCLUDED IN PRICE BID FOR URBAN RIGHT OF WAY RESTORATION

G-10: PAY ITEM INCLUDES ALL MOWING WITHIN THE RIGHT-OF-WAY AS DIRECTED DURING CONSTRUCTION.

D-1: THIS ITEM SHALL INCLUDE THE COST OF NEW MANHOLE FRAME AND COVER PER CITY OF TULSA STD NOS.752, 753, 754, 761, 762, 769A, 769B AND 775.

D-2: THE TOTAL COST FOR RUBBERIZED ASPHALT AND/OR SILICONE AT MANHOLES, VALVE BOXES, INLETS, AND INLET APRONS, SHALL BE INCLUDED.

D-3: NOT USED.

D-4: NOT USED.

D-5: NOT USED.

D-6: 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. 42 STREET NORTH, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.

D-7: INCLUDES THE COST REQUIRED TO MAKE CONNECTION. THE COST OF PC CONCRETE CURB AND GUTTER THROUGH THE INLET, 5' EACH SIDE OF THE INLET, AND THE PC CONCRETE INLET APRON SHALL BE INCLUDED. GRATE AND FLOWLINE ELEVATIONS SHALL MATCH EXISTING CONDITIONS UNLESS OTHERWISE NOTED IN THE PLANS.

D-8: QUICK SET FLOWABLE FILL SHALL BE USED TO BACKFILL AROUND STREET CURB INLETS AND REINFORCED CONCRETE PIPES, AS NEEDED, AT THE DIRECTION OF THE ENGINEER.

D-9: ALL INLETS, COMPLETE IN PLACE, SHALL BE CAST IN PLACE CONCRETE OR PRECAST CONCRETE. THIS PAY ITEM INCLUDES ANY INLET FRAME(S), GRATE(S), HOOD(S) AND CONCRETE REQUIRED FOR COMPLETE INSTALLATION OF STRUCTURE PER THE CONSTRUCTION DOCUMENTS.

D-10: NOT USED.

D-11: NOT USED.

D-12: NOT USED.

D-13: NOT USED.

D-14: NOT USED.

D-15: NOT USED.

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 AND CONCRETE PAVEMENT). THERMOPLASTIC PAVEMENT MARKINGS SHALL ONLY BE APPLIED WHEN THE SURFACE TEMPERATURE EXCEED 55°F FOR ALL OF THE SIX HOURS PRIORTO 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 DELIVER, 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: THE PAY ITEM FOR FLAGGER SHALL BE PAID FOR ON A FLAG DAY (F.D.) BASIS. ONE F.D. IS ONE COMPLETE WORKDAY AS PERFORMED BY THE CONTRACTOR AS SET FORTH IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

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

PAY ITEM NOTES - SPECIAL

1: ALL STEEL REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL BE COATED WITH RED OXIDE, INCLUDING THE ENDS, TO PROVIDE RUST PROTECTION. ALL BARS SHALL BE THOROUGHLY CLEANED OF ANY DIRT, RUST OR DELETERIOUS MATERIALS PRIOR TO PLACEMENT.

2. TRAFFIC STRIPE WIDER THAN 4" SHALL BE PAID EQUIVALENT LENGTH OF 4" TRAFFIC STRIPE.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA

REVISION	BY	DATE

PAY QUANTITIES AND NOTES (2)
ROADWAY

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE:	DRAWN	BKN	2020	APPROVED:
1" = NA	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	TA	4/25	
HORIZONTAL:	LEAD ENGR.	GJC	5/25	
1" = NA	FIELD MGR.		6/25	
VERTICAL	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER
1" = NA	FILE: H:\303898	DRAWING:303898-Poy Quantities-Notes		DATE: 8/4/2025
	ATLAS PAGE NO: 31, 32, 58, 59			SHEET 3 OF 47 SHEETS

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4/3/2025

PAY QUANTITY SUMMARY (WATER LINE) - BASE BID					
ITEM	SPEC. NO.	DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
62	SPECIAL	CONSTRUCTION AS-BUILT	24,25,27	EA	1
63	SPECIAL	OWNER ALLOWANCE	18	EA	10,000
64	COT 301	RIGHT-OF-WAY CLEARING AND RESTORING, COMPLETE IN PLACE	4,5,6,7,22,32	SY	72
65	COT 302	EXCAVATION AND BACKFILL, UNCLASSIFIED	14	CY	156
66	COT 307(A)	6" DIP, CL 51 POLYETHYLENE WRAPPED, (RJ)	1,2,3,8,9,11,27,28	LF	216
67	COT 312(J)	6" 45° D.I. BEND (RJ)	2,8	EA	4
68	COT 312(R)	6" D.I. PLUG (RJ)	2,8	EA	2
69	COT 312(S)	6" D.I. SLEEVE (RJ)	2,8,12	EA	2
70	COT 325	SODDING AND SEEDING	23	SY	200
71	COT 326	STREET WASH DOWN		LF	50
72	COT 329(B)	REMOVE AND REPLACE P.C.C. PAVEMENT	30, 34	SY	24
73	COT 329(C)	REMOVE AND REPLACE CURB AND GUTTER	30,34	LF	16
74	COT 329(D)	REMOVE AND REPLACE SIDEWALK	30,34	SY	6
75	COT 329(E)	REMOVE AND REPLACE CONCRETE DRIVEWAY	30,34	SY	7

PAY ITEM NOTES - WATER LINES

1. TESTING AND CHLORINATION OF WATER MAINS SHALL BE PERFORMED BY THE CITY OF TULSA. TESTING, CHLORINATION, AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH SECTION 109.3 OF THE GENERAL SPECIFICATIONS.

A. CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY PLUGS WITH ADEQUATE BLOCKING OR RESTRAINTS, PLUS CORPORATION STOPS, AS DIRECTED BY CITY TESTING PERSONNEL, THEN, ONCE TESTING, CHLORINATION AND FLUSHING BY CITY PERSONNEL IS COMPLETED, REMOVE TEMPORARY BLOCKING AND TIE INTO EXISTING SYSTEM, USING FITTINGS SWABBED INTERNALLY WITH 2% BLEACH SOLUTION.

B. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAIN SHALL BE PERFORMED BY CITY PERSONNEL ON MAINS WHICH ARE PHYSICALLY DISCONNECTED FROM THE EXISTING WATER SYSTEM. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAINS SHALL NOT BE PERFORMED AGAINST VALVES WHICH ARE PHYSICALLY CONNECTED TO EXISTING SYSTEM.

C. ALL COSTS FOR TEMPORARY PLUGS, BLOCKING, RESTRAINING, CORPORATION STOPS, TUBING, THREADED CONNECTIONS, BLEACH AND OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.

2. BURIED BOLTS, HARNESS LUGS, AND COUPLINGS SHALL BE GIVEN TWO COATS OF KOPPER'S BITUMASTIC 300-M (DRY MIL THICKNESS OF 16 MILS) OR EQUAL. COST TO BE INCLUDED IN UNIT PRICE BID FOR PIPE AND FITTINGS.

3. CONTRACTOR TO EXCAVATE ALL UTILITY CROSSINGS AHEAD OF PIPE LAYING SO THAT THE GRADES CAN BE ADJUSTED ON THE PROPOSED WATER MAIN TO AVOID UTILITY CONFLICTS. FAILURE TO DO SO SHALL NOT ENTITLE THE CONTRACTOR TO CLAIM EXTRA COMPENSATION FOR ADJUSTMENTS TO THE PROPOSED WATER MAIN. COST FOR EXCAVATING UTILITY CROSSINGS SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE.

4. CONTRACTOR SHALL INSURE ALL POLES WHICH ARE AFFECTED BY TRENCHING CONDITIONS ARE BRACED BY OWNERS. PAYMENT SHALL BE INCLUDED IN "RIGHT-OF-WAY CLEARING AND RESTORING". NO ADDITIONAL PAYMENT SHALL BE MADE.

5. ALL HYDRANTS, VALVES AND OTHER FITTINGS FROM ABANDONED WATER MAINS SHALL BE SALVAGED AND DELIVERED TO SOUTH YARD, 2317 S. JACKSON AVENUE. PAYMENT TO BE MADE UNDER RIGHT OF WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

6. CONTRACTOR SHALL REPAIR ANY IRRIGATION SYSTEMS, ROOF DRAINS, AND FENCING DAMAGED IN THE ZONE OF CONSTRUCTION DURING THE COURSE OF CONSTRUCTION TO SATISFACTION OF THE PROPERTY OWNER. PAYMENT SHALL BE INCLUDED IN RIGHT-OF-WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

7. COST OF ANY TEMPORARY LIVESTOCK FENCING AND POLES SHALL BE INCLUDED IN COST OF RIGHT OF WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

8. ALL COSTS FOR COMPONENTS NECESSARY TO RESTRAIN JOINTS FOR PIPE AND FITTINGS DESIGNATED RESTRAINED JOINT ("RJ") SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE OR FITTINGS.

   A. DUCTILE IRON PIPE RESTRAINED JOINT SYSTEMS: US PIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, AMERICAN FLEXRING, EBAA MEGALUG, STAR STARGRIP, SMITH-BLAIR CAMLOCK, CLOW TUFGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. SHOULD RJ PIPE BE SPECIFIED THROUGH UNCASED BORES, ONLY USPIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, OR AMERICAN FLEXRING IS TO BE USED. LOCKING GASKETS NOT PERMITTED.

   B. POLYVINYL CHLORIDE (PVC) RESTRAINED JOINT SYSTEMS: EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. LOCKING GASKETS NOT PERMITTED; SHOULD RJ PIPE BE SPECIFIED ON BORE CASING IS REQUIRED.

   C. HIGH DENSITY POLYETHYLENE (HDPE) RESTRAINED JOINT SYSTEMS: EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT.

   NO ADDITIONAL PAYMENT SHALL BE MADE.

9. ALL CUT ENDS AND WHERE SALVAGED FITTINGS HAVE BEEN REMOVED FROM ABANDONED WATER LINES LEFT IN PLACE, SHALL BE PLUGGED WITH 24" OF CONCRETE INSIDE THE PIPE. COST OF CONCRETE PLUGGING TO BE INCLUDED IN UNIT PRICE BID FOR PIPE. NO ADDITIONAL PAYMENT SHALL BE MADE.

10. NOT USED.

11. DETECTABLE MYLAR MARKING TAPE SHALL BE INSTALLED OVER DUCTILE IRON PIPE AS PER CONST SPEC 307.3 AND 307.4. COST WILL BE INCLUDED IN COST OF DUCTILE IRON PIPE.

12. ALL LABOR, MATERIALS, AND EQUIPMENT TO CONNECT PROPOSED WATER MAINS TO EXISTING WATER MAINS ARE INCLUDED IN COST OF SLEEVES/ADAPTORS. CONTRACTOR TO EXCAVATE ALL EXISTING WATER MAINS AHEAD OF PIPE LAYING SO THAT THE GRADES CAN BE ADJUSTED ACCORDINGLY. FAILURE TO DO SO SHALL NOT ENTITLE THE CONTRACTOR TO CLAIM EXTRA COMPENSATION FOR ADJUSTMENTS TO THE PROPOSED WATER MAIN. COST FOR EXCAVATING EXISTING WATER MAINS SHALL BE INCLUDED IN UNIT PRICE BID FOR SLEEVES. NO ADDITIONAL PAYMENT SHALL BE MADE.

PAY ITEM NOTES - WATER LINES (CONTINUED)

13. NOT USED.

14. CONTRACTOR IS REMINDED TO BACKFILL ALL TRENCHES EXCAVATED ACROSS ANY EXISTING OR PROPOSED DRIVING OR PARKING SURFACE WITH 1½" TYPE A AGGREGATE BASE, PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO 98% MODIFIED PROCTOR DENSITY. COST TO BE INCLUDED IN COST OF EXCAVATION AND BACKFILL. NO ADDITIONAL PAYMENT SHALL BE MADE.

15. NOT USED

16. NOT USED.

17. NOT USED.

18. THE "OWNER ALLOWANCE" CAN BE USED FOR VARIOUS WORK AND MISCELLANEOUS ITEMS NOT IDENTIFIED IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING PROVISIONS: THE ALLOWANCE SHALL BE USED FOR COST OF MATERIALS, LABOR, INSTALLATION AND OVERHEAD AND PROFIT FOR ADDITIONAL WORK AND MISCELLANEOUS ITEMS THAT ARE NOT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS AND PLANS, AND NOT INCLUDED IN THE BID ITEMS OF THE CONTRACT.

A. THE ALLOWANCE SHALL BE USED ONLY AT THE DISCRETION OF THE CITY. ANY ALLOWANCE BALANCE REMAINING AT THE COMPLETION OF THE PROJECT WILL BE CREDITED BACK TO THE CITY ON THE FINAL APPLICATION FOR PAYMENT SUBMITTED BY THE CONTRACTOR.

I. WATER SERVICE LINES OF UNKNOWN OR UNEXPECTED SIZE.

B. THE CONTRACTOR SHALL PROVIDE, TO THE CITY, A WRITTEN REQUEST FOR THE USE OF ANY ALLOWANCE, WITH A SCHEDULE OF VALUES, AND ALL ASSOCIATED BACKUP INFORMATION, INCLUDING ANY TIME EXTENSIONS REQUIRED TO PERFORM THE WORK.

C. THE CONTRACTOR SHALL PROCEED WITH THE WORK INCLUDED IN THE ALLOWANCE ONLY AFTER RECEIVING A WRITTEN ORDER, FROM THE ENGINEER AND CITY AUTHORIZING SUCH WORK. PROCEEDING WITH WORK IN THE ALLOWANCE WITHOUT A WRITTEN ORDER FROM THE CITY WILL BE AT THE CONTRACTOR'S EXPENSE.

19. NOT USED.

20. NOT USED.

21. NOT USED.

22. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING IMPROVEMENTS. LIMITS OF DISTURBANCE SHALL NOT EXCEED 9' CENTERED ON THE WATERLINE. ANY DISTURBANCE OUTSIDE OF THIS AREA SHALL BE RESTORED AT THE CONTRACTORS EXPENSE. STREETS, DRIVEWAYS AND ASSOCIATED ITEMS SHALL BE PAID FOR UNDER OTHER ITEMS OF WORK.

23. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION. THE CONTRACTOR SHALL REPLACE THE SOD TO MATCH IN-KIND AND QUALITY. LIMITS OF DISTURBANCE SHALL NOT EXCEED 9' CENTERED ON THE WATERLINE. ANY DISTURBANCE OUTSIDE OF THIS AREA SHALL BE RESTORED AT THE CONTRACTORS EXPENSE.

24. SPOT ELEVATIONS ON THE MAIN WATER LINE RELATIVE TO FINISHED GRADE SHALL BE PROVIDED AT EACH 100-FT INTERVAL, COMPLETE WITH STATION AND OFFSET. IN ADDITION, ALL VALVES, FITTINGS, FIRE HYDRANTS (TOP OF NUT) AND OTHER MAJOR APPURTENANT ITEMS SHALL BE SHOWN WITH THE PROPER DESCRIPTION, STATION, OFFSET AND ELEVATION.

25. SPOT ELEVATIONS ON WATER METER CANS, VAULTS, SHALL BE SHOWN WITH THE PROPER DESCRIPTION (METER TYPE, METER SIZE, METER NUMBER, SERVICE MATERIAL, SERVICE SIZE), STATION, OFFSET AND ELEVATION PER PLAN SURVEY CONTROL DATUM.

26. NOT USED.

27. PRESSURE TESTING AND CHLORINATION OF WATER MAINS SHALL NOT BE PERFORMED UNTIL THE CITY INSPECTOR HAS RECEIVED REQUIRED CONSTRUCTION AS-BUILT RECORDS.

28. MARKER BALLS SHALL BE INSTALLED ABOVE ALL FITTINGS, BLIND FLANGES, SERVICE TAPS AND EVERY 100 FEET IF THE DISTANCE BETWEEN FITTINGS IS GREATER THAN 100 FEET. THE COST OF MARKER BALLS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE. MARKERS SHALL BE VIVAX WATER MARKER BALLS OR EQUAL THAT WORK WITH THE VIVAX VLOC3 -PRO RECEIVER AND LOC3-10TX TRANSMITTER.

29. COST INCLUDES EBAA MEGASTOPS OR EQUAL, INSTALLED ON ALL PVC JOINTS THROUGH BORES TO PREVENT OVERBELLING.

30. AGG BASE AND SUBGRADE, PER CITY STANDARD SPECIFICATIONS AND STANDARD DETAILS 701 - 702, SHALL BE PAID UNDER EXCAVATION AND BACKFILL.

31. NOT USED.

32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL AND MAINTENANCE OF THE STORM WATER DRAINAGE FROM THE CONSTRUCTION SITE. STORM WATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRCUTION WILL NOT BE ALLOWED. ALL COST ASSOCIATED WITH STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

33. NOT USED.

34 ALL SAW CUTTING, DOWEL BARS, AND REMOVAL SHALL BE INCLUDED IN THE COST OF ITEM.

WATER & SEWER LINE CONSTRUCTION NOTES

1. THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT SHALL INSPECT ALL TRENCHING, BEDDING, PIPE INSTALLATION, BACKFILL AND COMPACTION.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT STANDARD SPECIFICATIONS AND STANDARD DETAILS, CITY OF TULSA ENGINEERING SERVICES DEPARTMENT.

3. EXISTING SERVICE CONNECTIONS ARE TO BE KEPT IN SERVICE UNTIL CONNECTIONS TO NEW MAIN ARE MADE. ALL SERVICE LINE RECONNECTIONS SHALL BE MADE BY THE CONTRACTOR. SERVICE RECONNECTIONS SHALL BE INSTALLED AS PER CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS.

4. MINIMUM COVER OVER WATERLINES SHALL BE AS NOTED ON PLANS.

5. CONTRACTOR SHALL REPLACE EXISTING GRASS WITH SEED/SOD OF SAME TYPE AND VARIETY OR AS NOTED ON PLANS.

6. CONTRACTOR SHALL BORE EXISTING TREES UNDER DRIP LINE, UNLESS DIRECTED OTHERWISE BY ENGINEER.

7. CONTRACTOR SHALL BORE EXISTING DRIVEWAYS, UNLESS DIRECTED OTHERWISE BY ENGINEER.

8. WATER OPERATIONS SHALL OPERATE ALL VALVES ON TRANSMISSION MAINS (16" AND LARGER). CONTRACTOR SHALL OPERATE ALL VALVES ON DISTRIBUTION MAINS (SMALLER THAN 16") WITH THE COORDINATION OF FIELD ENGINEERING AND WATER OPERATIONS AND IN THE PRESENCE OF A FIELD ENGINEERING INSPECTOR.

   A. ATTEMPTS WILL BE MADE WITH ASSISTANCE FROM THE CONTRACTOR TO NOTIFY ALL AFFECTED CUSTOMERS 48 HOURS IN ADVANCE, PARTICULARLY IF COMMERCIAL OR INDUSTRIAL CUSTOMERS ARE INVOLVED. PRIOR TO SHUTDOWN, FIELD ENGINEERING WILL NOTIFY WATER OPERATIONS, AT 918-596-9488, GIVING AN ESTIMATED DOWNTIME. WATER OPERATIONS WILL NOTIFY THE FIRE DEPARTMENT OF ALL FIRE HYDRANTS OUT OF SERVICE AND WHEN THEY ARE BACK IN SERVICE, BY STREET ADDRESS OR INTERSECTION.

   B. WHERE COMMERCIAL, INDUSTRIAL, OR CRITICAL CUSTOMERS ARE AFFECTED, AND FOR ALL LINES 16" AND LARGER IN SIZE, FIELD ENGINEERING WILL REQUEST WATER OPERATIONS TO SHUT DOWN THE MAIN. THERE WILL BE A MINIMUM OF 48 HOUR NOTICE TO WATER OPERATIONS.

9. CONTRACTOR SHALL PROVIDE AT LEAST 48 HOUR NOTICE TO ALL RESIDENTS OR BUSINESSES AFFECTED BEFORE TURNING OFF ANY WATER. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING DOOR HANGERS ON AFFECTED HOMES AND BUSINESSES.

10. CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF THE OKLAHOMA ONE-CALL SYSTEM, INC, NOTICE OF ANY EXCAVATION NO SOONER THAN 48 HOURS OR LATER THAN 10 DAYS, EXCLUDING SATURDAYS, SUNDAYS, LEGAL HOLIDAYS PRIOR TO COMMENCEMENT OF WORK, PHONE 1-800-522-6543.

11. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH PROJECT AT ALL TIMES. OPEN CUT STREET CROSSINGS REQUIRE AN APPROVED TRAFFIC CONTROL PLAN WITH TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH CURRENT MUTCD REQUIREMENTS.1

12. ANY DAMAGE CAUSED BY CONTRACTOR TO ADJACENT TRAFFIC SIGNAL INFRASTRUCTURE SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE TRAFFIC ENGINEER.

13. PRIOR TO PAVEMENT SAWING AND EXCAVATION NEAR SIGNALIZED INTERSECTION, CONTRACTOR SHALL CONTACT ENGINEERING SERVICES, TRAFFIC OPERATIONS, 918-596-9766, FOR SITE SPECIFIC, UNDERGROUND TRAFFIC UTILITY LOCATES.

14. CONSTRUCTION FOR ALL ENGINEERING SERVICES FACILITIES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF TITLE 252, DEPARTMENT OF ENVIRONMENTAL QUALITY, CHAPTER 626, PUBLIC WATER SUPPLY CONSTRUCTION STANDARDS, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ).

15. ALL EXCAVATED MATERIAL NOT REQUIRED IN OTHER AREAS OF 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 SHALL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY EXCESS MATERIAL IS TO BE DISPOSED OF WITHIN THE CITY LIMITS OF TULSA.

16. ANY CHANGES FROM APPROVED PLANS SHALL BE SUBMITTED TO THE CITY OF TULSA FOR WRITTEN APPROVAL PRIOR TO INSTALLATION.

17. UTILITIES SHOWN HEREIN ARE INTENDED FOR INFORMATION PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS THE EXTENT OR EXACT LOCATION AND DEPTH OF UTILITIES THAT MAY BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL FIELD VERIFY THE PRESENCE, TYPE, SIZE, LOCATION AND DEPTH OF ALL EXISTING UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION.

18. ANY DAMAGE TO THE ROADWAY PAVEMENT CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE ENGINEERS SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S SOLE EXPENSE.

19. FOR OPEN ROAD CUT, CONTRACTOR IS TO MAINTAIN ONE-WAY TRAFFIC. CONTRACTOR SHALL PRESENT A TRAFFIC CONTROL PLAN TO THE CITY OF TULSA ENGINEERING DIVISION.

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES JOKER 16840 OKLAHOMA 2-25-25

TMUA-W 17-26

PAY QUANTITIES AND NOTES (3)
WATER

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE:	DRAWN	BKN	2020	APPROVED:
1" = NA	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			8.15.06
HORIZONTAL:	LEAD ENGR.			VEW 6/25
1" = NA	FIELD MGR.			6/25
VERTICAL	RECOM.			
1" = NA	DESIGN MANAGER			CITY ENGINEER

FILE: H:\303898 DRAWING:303898-Pay Quantities-Notes DATE: 8/4/2025

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2/19/2025

TRAFFIC SIGNAL -- ADD ALTERNATE

Harvard Ave. at 27th St., BAXY, and 2400 Block

ITEM	SPEC	DESCRIPTION		UNIT	27th St.	BAXY	2400	TOTAL
76	COT 601	PULL BOX SIZE II		EA		5		5
77	COT 601	PULL BOX SIZE III		EA		5		5
78	COT 602	2" PVC SCH. 40 PLASTIC CONDUIT (TRENCHED)	(COT 602)(80)	LF	10	10		20
79	COT 602	2" HDPE SCH. 40 CONTINUOUS CONDUIT (DIRECTIONAL BORE)	(COT 602)(80)	LF	10	120		130
80	COT 602	3" PVC SCH. 40 PLASTIC CONDUIT (TRENCHED)	(COT 602)(80)	LF	10	10	60	80
81	COT 602	3" HDPE SCH. 40 CONTINUOUS CONDUIT (DIRECTIONAL BORE) (OUTSIDE IDL)	(COT 602)(80)	LF	10	235		245
82	COT 602	2-3" HDPE SCH. 40 CONTINUOUS CONDUIT (DIRECTIONAL BORE) (OUTSIDE IDL)	(COT 602)(80)	LF	60	395	55	510
83	COT 603	24" PEDESTAL FOOTING F-1	(COT 603)	EA	2	5		7
84	COT 606	PRE-EMPTION CABLE	(TP-1)	LF		1290		1290
85	COT 606	INFRARED PRE-EMPTION DETECTOR		EA		4		4
86	COT 606	PRE-EMPTION PHASE SELECTOR		EA		2		2
87	COT 607	SERVICE TO SIGNAL STANDARD	(COT 607)	EA		1		1
88	COT 608	OVERHEAD SIGN		SF		52		52
89	COT 610	TRAFFIC SIGNAL CONTROLLER CABINET ASSEMBLY	(COT 610) (91,92,93,94,95)	EA		1		1
90	COT 611	2#14 SHIELDED ELECTRICAL CONDUCTOR	(TP-1)(80,100)	LF	50	210	35	295
91	COT 611	4#14 TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)(80,100)	LF	50	250	35	335
92	COT 611	20#14 TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)(80,100)	LF	150	2170	70	2390
93	COT 611	GREEN #12 THHN ELECTRICAL CONDUCTOR	(TP-1)(80,100)	LF	150	2170	70	2390
94	COT 611	7#14 TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)(80,100)	LF	150	1610	70	1830
95	COT 611	GREEN #6 THHN ELECTRICAL CONDUCTOR	(TP-1)(80,100)	LF	150	910	70	1130
96	COT 611	CAT 6 ETHERNET CABLE	(SPECIAL)(TP-1)	LF	125	475	0	600
97	COT 612	CABINET BASE, APRON AND GUARD		EA		2		2
98	COT 613	AUDIBLE PEDESTRIAN PUSH BUTTON STATION AND SIGN	(COT 613)	EA	4	6	2	12
99	COT 613	AUDIBLE PEDESTRIAN PUSH BUTTON CONTROL CARD/UNIT	(COT 613)	EA	1	1	1	3
100	COT 613	AUDIBLE PEDESTRIAN PUSH BUTTON CONFIG/PROGRAMMING DEVICE	(COT 613)	EA	1	1	1	3
101	COT 614	LED 3 SECTION TRAFFIC SIGNAL HEAD (#36)	(COT 614)	EA		6		6
102	COT 614	LED ICC PEDESTRIAN HEAD (#33)	(COT 614)	EA	4	6		10
103	COT 617	6' PEDESTRIAN PUSH BUTTON POLE		EA	2			2
104	COT 617	10' PEDESTAL POLE		EA		5		5
105	COT 619	TEMP SIGNAL SPAN	(SPECIAL)(80)	EA		1		1
106	COT 619	TEMP SIGNAL POLE	(SPECIAL)(80)	EA		1		1
107	COT 619	TEMP SIGNAL CABINET	(SPECIAL)(80)	EA		1		1
108	COT 619	TEMP SIGNAL SERVICE	(SPECIAL)(80)	EA		1		1
109	COT 620	VIDEO DETECTION SYSTEM	(COT 620)	EA	1	1		2
110	COT 622	WIRELESS TRAFFIC SIGNAL COMMUNICATIONS SYSTEM	(COT 622)(16)	EA	1	1		2
111	COT 623	BATTERY BACKUP SYSTEM		EA		1		1
112	COT 625	REMOVAL OF TRAFFIC ITEMS	(COT 625)	EA	1	1	1	3
113	COT 626	TRAFFIC SIGNAL MAINTENANCE	(80)	HR	1	1		2
114	COT 626	SIGNAL MODIFICATIONS FOR LANE CLOSURES (PER SIGNALIZED INTERSECTION)	(80)	EA	1	1		2

TRAFFIC SIGNAL GENERAL CONSTRUCTION NOTES

(A) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EXISTING TRAFFIC SIGNAL IN A PROPER WORKING CONDITION DURING CONSTRUCTION AS DIRECTED BY THE TRAFFIC ENGINEER AND FOR FOLLOWING THE REQUIREMENTS OF COT 626 TRAFFIC SIGNAL CONSTRUCTION AND OPERATION. THE CONTRACTOR SHALL NOT PLACE NEW TRAFFIC SIGNALS INTO OPERATION UNTIL THEY HAVE BEEN PERMITTED, INSPECTED AND APPROVED BY CITY OF TULSA TRAFFIC SIGNAL INSPECTORS, AND THE CITY OF TULSA TRAFFIC OPERATIONS HAS CONTACTED THE UTILITY COMPANY TO SET UP BILLING. TRAFFIC SIGNALS SHALL ONLY BE PUT INTO OPERATION ON TUESDAYS, WEDNESDAYS, AND THURSDAYS. ALL TRAFFIC MATERIALS SHALL MEET THE REQUIREMENTS OF COT 627 PRE-QUALIFICATION FOR TRAFFIC OPERATIONS MATERIALS OR AS DIRECTED BY THE TRAFFIC ENGINEER. CONTRACTORS SHALL MEET THE REQUIREMENTS OF COT 628 SIGNAL AND LIGHTING PROJECT CONTRACTOR EXPERIENCE REQUIREMENTS.

(B) THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FOR ELECTRICAL INSPECTION ON ALL SIGNAL AND LIGHTING WORK PER COT SPECIFICATION 626 TRAFFIC SIGNAL CONSTRUCTION AND OPERATION. USE THE FOLLOWING ADDRESS (ES) FOR THE ELECTRICAL PERMIT:

2649 S HARVARD AVE TRAFFIC SIGNAL
2611 S HARVARD AVE TRAFFIC SIGNAL
2410 S HARVARD AVE TRAFFIC SIGNAL

(C) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS PART OF THIS PROJECT. ALL SIGNS AND POSTS PROVIDED SHALL BE NEW AND UNDAMAGED AND SHALL MEET THE REQUIREMENTS OF COT SPECIFICATION 608 TRAFFIC SIGNS.

(D) ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPEC 625 - REMOVAL OF TRAFFIC ITEMS.

(F) THIS PROJECT HAS BEEN DESIGNED AND IS TO BE CONSTRUCTED ACCORDING TO THE REQUIREMENTS OF THE 2022 VERSION OF THE CITY OF TULSA TRAFFIC OPERATIONS STANDARDS AND SPECIFICATIONS.

TRAFFIC SIGNAL PAY QUANTITY NOTES

(COT 602) ALL CONDUIT ENDS SHALL BE REAMED AND BUSHINGS SHALL BE INSTALLED PRIOR TO PULLING ANY WIRES.

(COT 603) POLE FOUNDATIONS SHALL BE CONSTRUCTED ACCORDING TO THE APPLICABLE REQUIREMENTS OF ODOT STANDARD SPECIFICATIONS FOR DRILLED SHAFT FOUNDATIONS AS DIRECTED BY THE TRAFFIC ENGINEER.

(COT 607) THE INSTALLED SERVICE SHALL BE FULLY OPERATIONAL, AND ANY COSTS CHARGED BY THE UTILITY COMPANY FOR THE SERVICE INSTALLATION SHALL BE PAID BY THE CONTRACTOR AND IS INCLUDED IN THIS PAY ITEM.

(COT 610) THE TRAFFIC SIGNAL CONTROLLER PROVIDED SHALL BE AN ECONOLITE ATC COBALT CONTROLLER IN A 332 SIGNAL CABINET OR 332S WHERE A BATTERY BACKUP IS INCLUDED. THE CONTROLLER SHALL USE THE EOS VERSION OF SOFTWARE

CONFLICT MONITOR SHALL BE AN EDI 2018ECLIP OR APPROVED EQUAL. AN ETHERNET PORT SHALL BE PROVIDED ON THE FRONT PANEL. THE ETHERNET PORT SHALL BE ELECTRICALLY ISOLATED FROM THE MMU ELECTRONICS AND SHALL PROVIDE MINIMUM OF 1500 VRMS ISOLATION. THE CONNECTER SHALL BE AN RJ-45 EIGHT PIN CONNECTOR. AN HTML BASED CAPABILITY SHALL BE PROVIDED IN THE MONITOR TO CONFIGURE THE NETWORK PARAMETERS OF THE MMU ETHERNET PORT USING A STANDARD HTML BROWSER. ALL DISPLAY INDICATORS SHALL BE MOUNTED ON THE FRONT PANEL OF THE SIGNAL MONITOR AND SHALL BE WATER CLEAR, T-1 PACKAGE, SUPER BRIGHT TYPE LEDS. ALL FAULT LEDS SHALL BE RED EXCEPT THE PWR INDICATOR WHICH SHALL BE GREEN. A SEPARATE RED, YELLOW, AND GREEN INDICATOR SHALL BE PROVIDED FOR EACH CHANNEL.

INCLUDE 2-19" RACK SHELVES, THAT ARE CHATSWORTH PRODUCTS PART NUMBER 10758-701 OR APPROVED EQUAL, IN ADDITION TO WHAT IS OUTLINED IN COT 610 SPECIFICATION. RACKS SHALL BE DESIGNED TO HOLD SMALL PERIPHERAL EQUIPMENT IN A CENTRAL LOCATION. EACH SHELF TYPICALLY HOLDS TWO UNITS AND ALLOWS A CONVENIENT CABLE RUN DOWN THE INSIDE OF THE RACK CHANNEL. RACK SHALL HOLD EQUIPMENT UP TO 17.35"W X 9.82"D AND MADE OF STRONG, LIGHT WEIGHT ALUMINUM THAT CAN SUPPORT UP TO 50 LB.

THE CONTROLLER CABINET DOORS SHALL BE EQUIPPED WITH A CL-TC1 GEN 2 CYBERLOCK CYLINDER AND EITHER A15481RS CCL TRAFFIC CABINET LOCK RH, OR A15481LS CCL TRAFFIC CABINET LOCK LH. THE CONTRACTOR WILL BE REQUIRED TO PURCHASE A CYBERKEY BLUE 3 THAT SHALL BE PROGRAMMED BY TRAFFIC OPERATIONS AT 4015 N HARVARD AVE, TULSA, OK 74115.

THE BATTERY BACKUP SYSTEM SHALL BE ECONOLITE ZX2000-48 SUPER CAPACITOR BATTERY MODULES AND DBLMXU-48 SERIES DOUBLE CONVERSION UPS.

(COT 610) THE CONTRACTOR SHALL DELIVER THE SIGNAL CABINET FULLY WIRED AND READY FOR INSTALLATION TO THE COT TRAFFIC OPERATIONS DIVISION FOR INSPECTION AND APPROVAL PRIOR TO INSTALLATION. COT WILL NOTIFY THE CONTRACTOR OF ANY DEFICIENCIES OR APPROVE THE CABINET WITHIN TWO WEEKS PER COT SPECIFICATION 610 FOR TRAFFIC SIGNAL CONTROLLER CABINET ASSEMBLIES.

(COT 610) THE CABINET PROVIDED SHALL BE A STRETCH CABINET MEETING THE CABINET AND DOOR HEIGHT SPECIFICATIONS OF A MCCAIN 332S CABINET. ALL OTHER DIMENSIONS SHALL MEET CURRENT COT STANDARDS AND SPECIFICATIONS.

(COT 613) THE AUDIBLE PUSH BUTTONS PROVIDED SHALL BE POLARA IN2 WITH EITHER A SHELF MOUNT CONTROL UNIT OR A CARD RACK/300 SERIES CONTROL UNIT. PUSH BUTTONS SHALL BE INSTALLED ON POLES SUCH THAT THE PUSH BUTTONS ARE INSTALLED IN ACCORDANCE WITH ADA, PROWAG, AND MUTCD REQUIREMENTS, AND WITHIN 10 INCHES MAXIMUM FROM THE EDGE OF THE LEVEL, ALL-WEATHER SURFACE (SIDEWALK LANDING) AND WITHIN 10 FEET MAXIMUM FROM THE FACE OF THE CURB AT RAMPS. PUSH BUTTONS SHALL BE MOUNTED 42 INCHES ABOVE THE LANDING, ON THE SIDE OF THE POLE CLOSEST TO THE CORRESPONDING CROSSWALK. IF A PUSH BUTTON EXTENDER ARM IS NEEDED, THE EXTENDER ARM SHALL NOT EXCEED 12 INCHES IN LENGTH. WHEN PUSH BUTTONS ARE LOCATED WITHIN 10 FEET OF EACH OTHER, AUDIBLE VOICE MESSAGES SHALL BE USED. THE PUSH BUTTONS SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

AT HARVARD AVE & 27TH STREET:

THE EAST/WEST PUSH BUTTONS (2) SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

DURING FLASHING DON'T WALK AND STEADY DON'T WALK:
"WAIT"
DURING WALK:
"HARVARD AVENUE - WALK SIGN IS ON TO CROSS HARVARD AVENUE"
DURING EXTENDED PUSH BUTTON PRESS (PRESS OF 2 SECONDS OR MORE):
"WAIT TO CROSS HARVARD AVENUE AT 27TH STREET"

THE NORTH/SOUTH PUSH BUTTONS (2) SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

DURING FLASHING DON'T WALK AND STEADY DON'T WALK:
"WAIT"
DURING WALK:
"27TH STREET- WALK SIGN IS ON TO CROSS 27TH STREET".
DURING EXTENDED PUSH BUTTON PRESS (PRESS OF 2 SECONDS OR MORE):
"WAIT TO CROSS 27TH STREET AT HARVARD AVENUE"

AT HARVARD AVENUE & HIGHWAY 51 RAMPS:

THE NORTH/SOUTH PUSH BUTTONS (6) SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

DURING FLASHING DON'T WALK AND STEADY DON'T WALK:
"WAIT"
DURING WALK:
"HIGHWAY 51 RAMPS - WALK SIGN IS ON TO CROSS HIGHWAY 51 RAMPS"
DURING EXTENDED PUSH BUTTON PRESS (PRESS OF 2 SECONDS OR MORE):
"WAIT TO CROSS HIGHWAY 51 RAMPS AT HARVARD AVENUE"

AT 2400 S. HARVARD AVENUE

THE EAST/WEST PUSH BUTTONS (2) SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

DURING FLASHING DON'T WALK AND STEADY DON'T WALK:
"WAIT"
DURING WALK:
"HARVARD AVENUE - WALK SIGN IS ON TO CROSS HARVARD AVENUE"
DURING EXTENDED PUSH BUTTON PRESS (PRESS OF 2 SECONDS OR MORE):
"WAIT TO CROSS HARVARD AVENUE"

(COT 614) HINGES SHALL BE LOCATED TO THE LEFT SIDE FOR 3-SECTION SIGNAL HEADS AND 4-SECTION SIGNAL HEADS, AND TOWARD THE OUTSIDE EDGES FOR A 5-SECTION SIGNAL HEAD.

"THIS PAY ITEM SHALL INCLUDE 6 OF THE 3-SECTION BACKPLATES. ALL BACKPLATES PROVIDED ON THIS PROJECT SHALL BE ALUMINUM, WITH A DURABLE, FACTORY-APPLIED, NON-REFLECTIVE BLACK FINISH (POWDER COATED, BAKED ENAMEL, OR OTHER STYLE AS APPROVED BY THE TRAFFIC ENGINEER) WITH LOUVERS IN THE BACKPLATE." A 2 INCH WIDE STRIP OF FLUORESCENT YELLOW RETRO-REFLECTIVE TAPE, TYPE IX, SHALL BE USED AT THE FRONT PERIMETER OF THE BACKPLATES.

THE PEDESTRIAN SIGNAL HEADS PROVIDED SHALL BE EAGLE 16" PEDESTRIAN SIGNAL HEAD OR APPROVED EQUAL. ALL PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED ON THE POLES SUCH THAT THE SIGNAL HEADS ARE VISIBLE FROM THE CROSSWALK.

(COT 620) THE DETECTION SYSTEM SHALL BE ON THE TRAFFIC OPERATIONS APPROVED PRODUCTS LIST (APL). THE DETECTION SYSTEM SHALL BE VIDEO DETECTION, AND SHALL DETECT VEHICLES, BICYCLES, AND MOTORCYCLES ON A ROADWAY BY PROCESSING VIDEO DATA THAT PROVIDES VEHICLE PRESENCE, TRAFFIC FLOW DATA, AND EVENT ALARMS, FOR REAL-TIME TRAFFIC CONTROL AND MANAGEMENT SYSTEMS.

· DETECTION SYSTEMS SHALL INCLUDE ALL MATERIALS INCLUDING VIDEO DETECTOR CAMERAS, VIDEO CARDS, COMMUNICATIONS CARDS, CABLING, AND OTHER MATERIALS AS NECESSARY TO MAKE DETECTION SYSTEM FULLY OPERATIONAL AT AN INTERSECTION.

· DETECTION SYSTEM CAMERAS SHALL BE IP-ADDRESSABLE.

· DETECTION SYSTEMS SHALL NOT USE COAXIAL. DETECTION SYSTEMS SHALL USE EITHER A 3-WIRE SYSTEM UTILIZING BROADBAND OVER POWER LINES (BPL), OR CAT 6 ETHERNET CABLE. THE 3-WIRE SYSTEM IS INTENDED TO BE USED TO REDUCE INTERFERENCE IN THE SYSTEM.

(COT 622) ETHERNET CABLE USED FOR WIRELESS SIGNAL COMMUNICATIONS SHALL BE INDUSTRIAL GRADE SHIELDED CAT 6, RATED FOR OUTDOOR USE, UNLESS OTHERWISE SPECIFIED IN THE PROJECT PLANS. SHIELDING SHALL BE RISER RATED, POLYOLEFIN INSULATION SHIELD BONDED TO AN OIL RESISTANT AND SUN RESISTANT PVC JACKET. THIS PAY ITEM SHALL INCLUDE APPROXIMATELY 240 LINEAR FEET OF CAT 6 CABLE INSTALLED FROM THE CONTROLLER TO THE SIGNAL POLE. EXCESS CABLE SHOULD BE STORED IN THE HAND HOLE OF THE SIGNAL POLE AND IN PULL BOXES. USE CAUTION WHEN WORKING WITH CAT 6 CABLE NOT TO BEND OR CRIMP THE CABLE.

(COT 625) THIS PAY ITEM INCLUDES THE REMOVAL AND DELIVERY OF THE FOLLOWING EQUIPMENT TO THE CITY OF TULSA TRAFFIC OPERATIONS SHOP AT 3801 N HARVARD AVE, WHICH IS TO REMAIN THE PROPERTY OF THE CITY OF TULSA:
TRAFFIC SIGNAL ITEMS INCLUDE; MULTI-SIDED GALVANIZED TRAFFIC SIGNAL POLES, SIGNAL HEADS, PEDESTRIAN HEADS AND PUSH BUTTONS, BACK PLATES, CONTROLLER CABINET ASSEMBLY, CABINET GUARD, UNDAMAGED PULL BOX LIDS, MAST ARM SIGNS, ASTRO-BRACKETS, SPAN WIRE EQUIPMENT AND ANY OTHER TRAFFIC SIGNAL EQUIPMENT REMOVED EXCEPT FOR THE PULL BOXES, CONDUIT AND WIRE WHICH SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE PRICE BID SHALL INCLUDE THE REMOVAL OF ALL FOOTINGS BELOW GROUND LEVEL OR AS DIRECTED BY THE ENGINEER. FOOTINGS, GREEN ARM POLES, AND ALL OTHER SIGNAL POLES OTHER THAN THE MULTI-SIDED POLES ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.

SPECIAL CONTRACTOR SHALL NOTIFY THE CITY OF TULSA AT LEAST TWO BUSINESS DAYS PRIOR TO REMOVAL OF SIGNAL EQUIPMENT TO COORDINATE REMOVAL OF ALL SIGNAL COMMUNICATIONS EQUIPMENT. THE CITY OF TULSA SHALL REMOVE AND REINSTALL THE COMMUNICATIONS EQUIPMENT. CONTRACTOR SHALL PULL CAT 6 CABLE FROM THE CONTROLLER TO THE SIGNAL POLE. EXCESS CABLE SHOULD BE STORED IN THE HANDHOLE OF THE SIGNAL POLE AND IN PULL BOXES. USE CAUTION WHEN WORKING WITH CAT 6 CABLE NOT TO BEND OR CRIMP THE CABLE.

(16) THE LOCATION OF THE COMMUNICATIONS EQUIPMENT SHOWN IS FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF TULSA TO DETERMINE WHICH POLE THE CAT 6 CABLE SHOULD BE PULLED TO DURING CONSTRUCTION.

(80) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER EXTRA WIRING AND CONDUIT HAS BEEN INCLUDED INCASE IT IS FOUND IN POOR CONDITION

(91) THE DIAMOND INTERCHANGE JUNCTION CABINET SHALL BE A 336S CABINET. THE INTERIOR SHALL BE POWDER COATED WHITE. IT SHALL HAVE A DUPLEX OUTLET WITH GFI FOR AC POWER. IT SHALL HAVE TERMINAL BLOCKS FOR FIELD WIRING CONNECTIONS FOR PEDESTRIAN PUSH BUTTONS, SIGNAL HEADS, AND PEDESTRIAN HEADS. THE CABINET SHALL HAVE A CABINET LIGHT. THE EXTERIOR SHALL BE ANODIZED ALUMINUM FINISH OR CLEAR POWDER COAT. IT SHALL BE INSTALLED ON AN ALUMINUM BASE THAT IS 18 INCHES TALL.

(92) ALL VIDEO SHALL BE TRANSMITTED TO THE CONTROL CABINET WITHOUT ANY INTERMEDIATE PROCESSING

(93) NOT USED

(94) THE JUNCTION CABINET SHALL BE FURNISHED AS PART OF THE "TRAFFIC SIGNAL CONTROLLER CABINET ASSEMBLY"

(95) CONTRACTOR IS TO DETERMINE IF LARGER GAUGE CONDUCTORS ARE REQUIRED TO CROSS UNDER THE HIGHWAY AND SERVE THE NORTH INTERSECTION DUE TO THE DISTANCE INVOLVED

(100) CABLES FROM THE EXISTING MAST ARM POLES ON THE MEDIANS TO THE ADJACENT PULL BOXES ARE TO BE REPLACED SO THE "TEMPORARY" UNDERGROUND SPLICES IN THE PULL BOXES WILL BE ELIMINATED.

(TP-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY

ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25

4-3-25
DATE

Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER — ESTHER M. SHAW-SMITH 4-3-25 23711 — OKLAHOMA

PROJECT NO. 144017Y
SIGNAL PAY QUANTITIES & NOTES
S. HARVARD AVE. REHAB
(21st ST. TO 31st ST.)
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: TEC — TRAFFIC ENGINEERING CONSULTANTS, 6901 S. 68TH E. AVE., STE 100, TULSA, OK. 74133, PHONE: 918-481-9484 FAX: 918-481-3163

REVISION	BY	DATE

PLAN SCALE: 1" = NA — PROFILE SCALE: — HORIZONTAL: 1" = NA — VERTICAL 1" = NA

DRAWN	SB	04/03/25	APPROVED:
DESIGNED	EMS	04/03/25	
SURVEY			
PROJ. MGR.			
LEAD ENGR.			
FIELD MGR.		6/25	
RECOMMENDED: DESIGN MANAGER		HAS 6-25	CITY ENGINEER

FILE: — DRAWING: — ATLAS PAGE NO:

DATE: 8/4/2025

SHEET 5 OF 47 SHEETS

04/03/25 G:\0Projects\02 Tulso Office Projects\70-824 Harvard Rehab - Tulso\CAD\QUANT SIG.dgn

GENERAL CONSTRUCTION NOTES (version: 09/12/2016)

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AS ADOPTED BY C.O.T. 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.
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.

GENERAL CONSTRUCTION NOTES (version: 09/12/2016) continued

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 DICOLORATION 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 CONTACTOR SHALL NOT PROCEED WITH ANY ASPECT OF THE WORK, WHICH IS NOT IN FULL COMPLIANCE WITH THE ADA WITHOUR 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 METRO LINK, 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.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
9840
OKLAHOMA
12-31-25

GENERAL CONSTRUCTION NOTES

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = NA
PROFILE SCALE: 1" = NA
HORIZONTAL: 1" = NA
VERTICAL: 1" = NA

DRAWN	BKN	2020	APPROVED:
DESIGNED	GJC	2020	
SURVEY	MW	2018	
PROJ. MGR.	TA	4/25	
LEAD ENGR.	DH	5/25	
FIELD MGR.	BKN	6/25	
RECOMMENDED: DESIGN MANAGER	HMS	6.25	CITY ENGINEER

FILE: H:\303898 DRAWING:303898-Pay Quantities-Notes DATE: 8/4/2025

ATLAS PAGE NO: 31, 32, 58, 59 SHEET 6 OF 47 SHEETS

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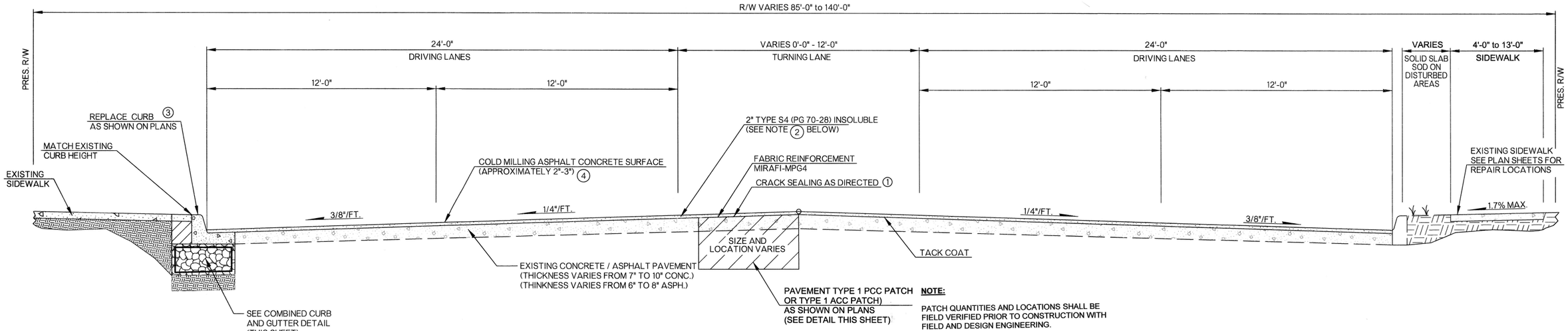
2/14/2025



NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

TYPICAL SECTION

MILLING & OVERLAY OF EXISTING APC STREET WITH CURB
STA. 103+87.00 TO 149+12.35
NOT TO SCALE

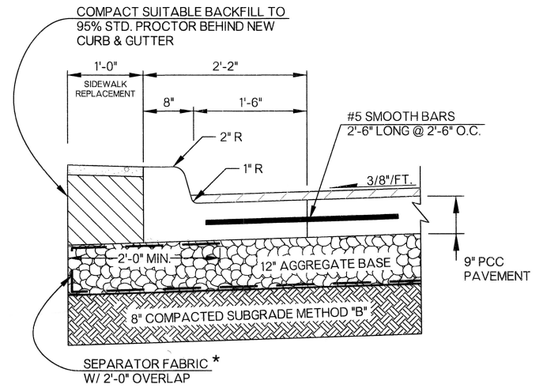
① SEAL EXISTING UNCONTROLLED CRACKS 1/4" OR GREATER EXPOSED AFTER ASPHALT MILLING OPERATIONS. ESTIMATED QUANTITY PROVIDED TO BE USED ONLY AT THE DIRECTION OF THE FIELD ENGINEER.

② TYPE S6 LEVELING COURSE PROVIDED FOR USE TO FILL ANY SURFACE CORRECTION AFTER ASPHALT MILLING OPERATIONS AND PRIOR TO FABRIC REINFORCEMENT. TYPE S6 TO BE USED AT THE DISCRETION OF THE FIELD ENGINEER.

③ IF CURB REPLACEMENT IS WITHIN THE AREA OF TYPE 1 APC PATCH, PAYMENT SHALL BE UNDER PAY ITEM 609(A) CONCRETE CURB. IF CURB REPLACEMENT IS NOT ADJACENT TO TYPE 1 PCC PATCH, PAYMENT SHALL BE UNDER PAY ITEM 609((B) COMBINED CURB AND GUTTER.

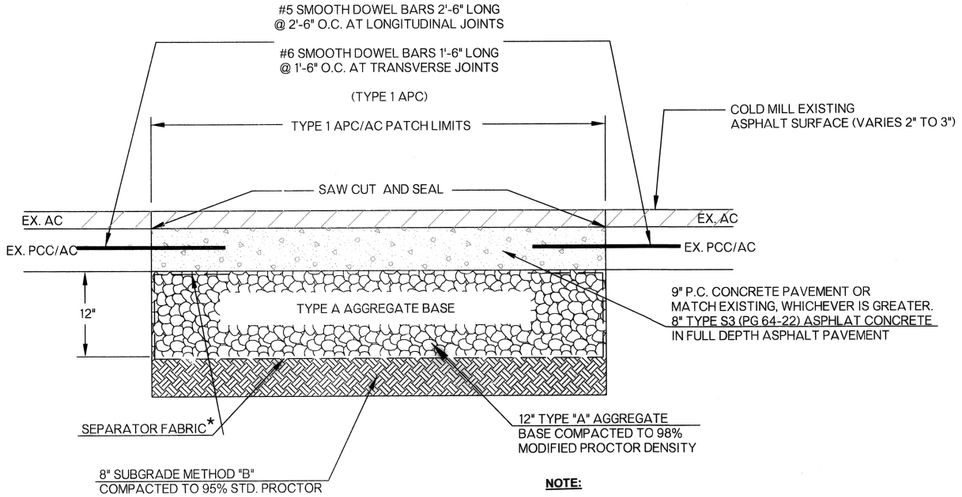
④ THE INTENT IS TO MILL OFF THE THE TOP OVERLAY SURFACE (2"-3"). IF MULTIPLE OVERLAYS EXIST THE CONTRACTOR SHALL ONLY MILL THE TOP OVERLAY. SEE CORE / BORING LOGS.

*PROVIDE 24" MIN. EDGE WRAP AND 12" MIN. LONGITUDINAL JOINT OVERLAP



COMBINED CURB AND GUTTER DETAIL (8" BARRIER)

NOT TO SCALE



TYPE 1 APC/AC PATCH*

NOT TO SCALE

NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

* NOTE: PAY ITEM FOR TYPE 1 APC/AC PATCH SHALL INCLUDE THE FOLLOWING:

A. SAW CUTTING
B. REMOVAL OF THE EXISTING CONCRETE AND/OR ASPHALTIC CONCRETE ROADWAY (CY)
C. TYPE S3 ASPHALTIC CONCRETE OR PC CONCRETE COMPLETE AND IN PLACE PER DETAIL
D. SEALING OF EDGES AND TACK COAT
E. ANY TEMPORARY ASPHALT IF TRAFFIC TO BE PLACED ON PATCH.

DOES NOT INCLUDE THE FOLLOWING:

A. UNCLASSIFIED EXCAVATION
B. SUBGRADE METHOD B (SY)
C. SEPARATOR FABRIC (SY)
D. AGGREGATE BASE (TYPE A)

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA

REVISION	BY	DATE

TYPICAL SECTION

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE:	DRAWN	BKN	2020	APPROVED:
1" = N/A	DESIGNED	CJC	2020	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	JB	9/25	
HORIZONTAL: 1" = N/A	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = N/A	RECOMMENDED:		6-25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-Typical Section			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 7 OF 47 SHEETS

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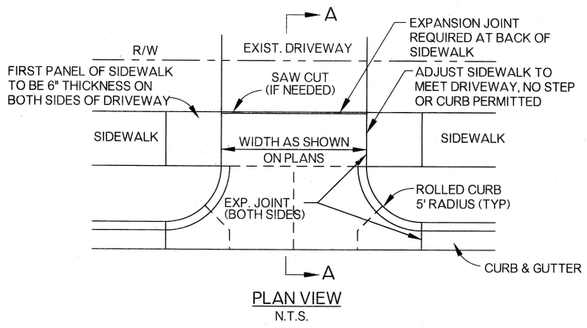
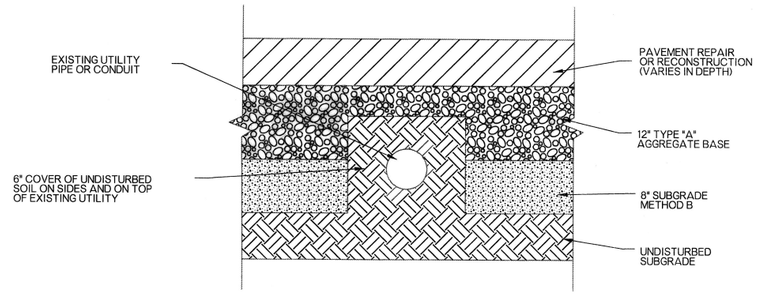


PLAN VIEW
N.T.S.

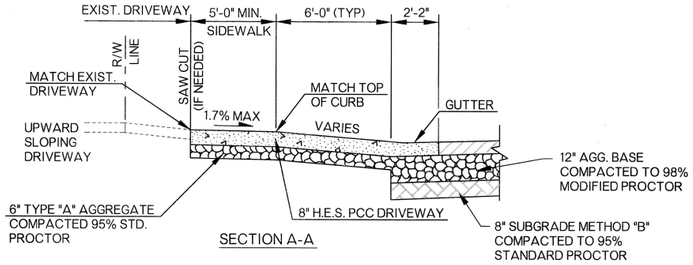
DRIVEWAY NOTES:

1. THERE WILL BE NO PAYMENT FOR CONCRETE CURB AND/OR INTEGRAL CURB FOR THE LENGTH OF THE CURB BLOCKOUT.
2. JOINT SEALERS SHALL MEET THE REQUIREMENTS OF SECTIONS 701.08b AND 701.08e. AND BE SELF LEVELING.
3. DRIVEWAY RADII ARE 5 FEET, UNLESS SHOWN ON THE PLANS.
4. SIDEWALKS SHALL MATCH THE ELEVATION OF THE DRIVEWAY WITHOUT ANY DROP OR STEP.
5. CONCRETE DRIVEWAYS WIDER THAN 12 FEET SHALL HAVE LONGITUDINAL CONTRACTION JOINTS NO MORE THAN 12 FEET APART.
6. CONCRETE DRIVEWAYS SHALL BE P.C. CONCRETE (H.E.S.) TO R/W LINE, BACK OF SIDEWALK OR AS SHOWN ON PLANS.

NOTE:QUICK SET FLOWABLE FILL MAY BE REQUIRED ABOVE OR ALONGSIDE EXISTING UTILITY LINES TO PROVIDE ADDITIONAL COVER/PROTECTION. THIS DETERMINATION WILL BE MADE ON A CASE BY CASE BASIS IN THE FIELD AND COORDINATED BETWEEN FIELD ENGINEERING, UTILITY COORDINATION, AND THE CONTRACTOR.



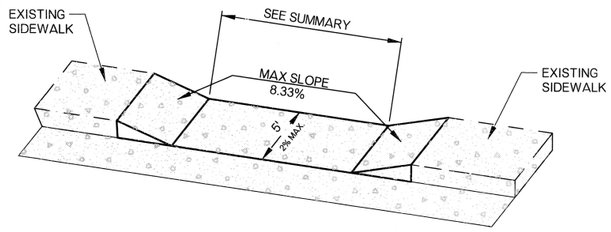
PROTECT IN PLACE EXISTING UTILITY LINE
N.T.S.



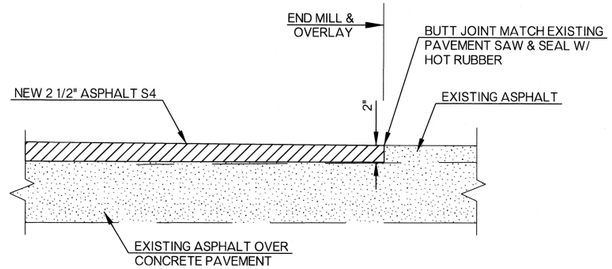
SECTION A-A

DRIVEWAY DETAIL

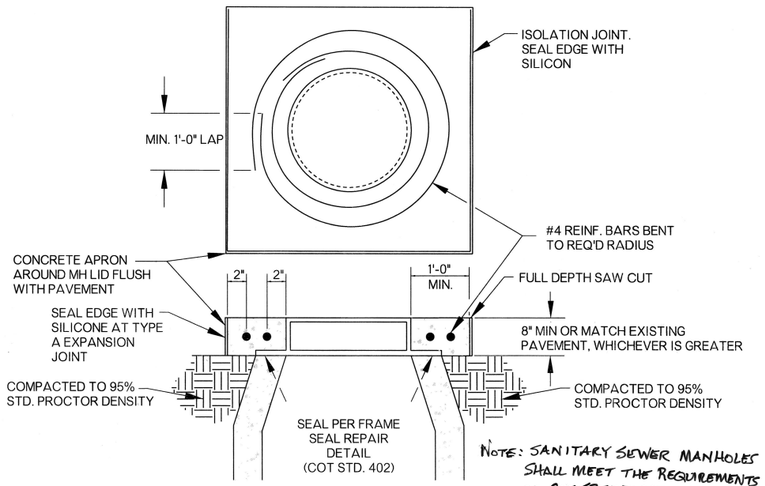
CONCRETE DRIVEWAY WITH PCC STREET AND SIDEWALK
N.T.S.



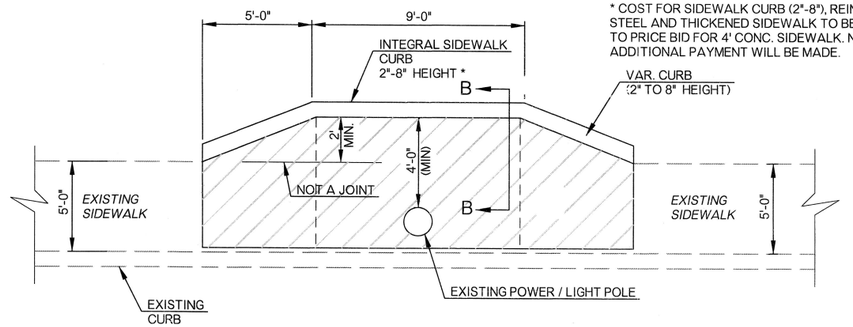
DETAIL OF DRIVEWAY
STA. 111+30.15, RT.
STA. 111+98.39, RT.



DETAIL OF BUTT JOINT FOR OVERLAYS

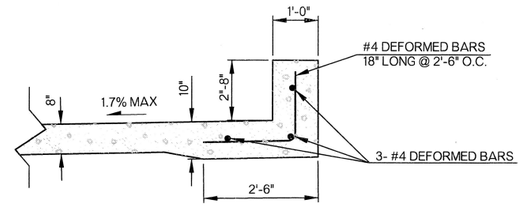


MANHOLES TO GRADE
N.T.S.



* COST FOR SIDEWALK CURB (2"-8"), REINFORCING STEEL AND THICKENED SIDEWALK TO BE INCIDENTAL TO PRICE BID FOR 4' CONC. SIDEWALK. NO ADDITIONAL PAYMENT WILL BE MADE.

TYPICAL SIDEWALK WIDENING



SECTION B-B

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES JOKER
10810
OKLAHOMA
2-25-25

DETAIL SHEET (1)

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = N/A	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JO	4/25	
HORIZONTAL: 1" = N/A	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = N/A	RECOMMENDED: HAS 6.25 DESIGN MANAGER			CITY ENGINEER
FILE: H:\303898	DRAWING:			DATE: 8/14/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 8 OF 47 SHEETS

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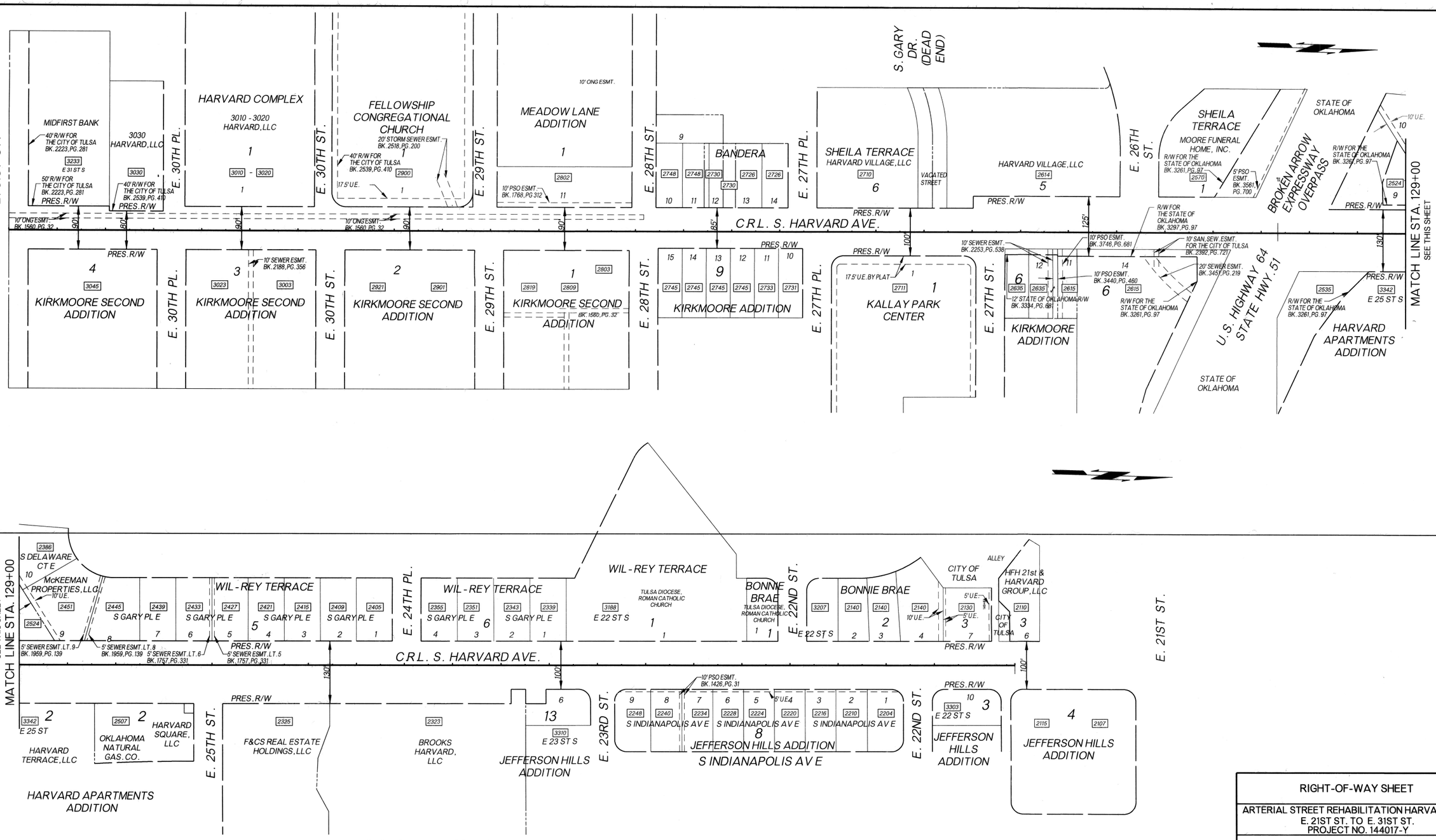

SURVEYOR'S CERTIFICATE

I, MIKE WATSON OF POE & ASSOCIATES, INC., A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF OKLAHOMA, DO HEREBY CERTIFY THE SURVEY PREPARED BY ME WAS ACTUALLY MADE UPON THE GROUND AND THAT IT AND THE INFORMATION SHOWN HEREON FOR ALL HORIZONTAL CONTROL POINTS IS A TRUE AND CORRECT REPRESENTATION OF THE SURVEY.

EXECUTED THIS 5th DAY OF May, 2021

Mike Watson

MIKE WATSON
REGISTERED PROFESSIONAL LAND SURVEYOR
OKLAHOMA L.S. 1516

REGISTERED LAND SURVEYOR — MIKE WATSON L.S. 1516 — OKLAHOMA

LEGEND

- PRESENT R/W
- EX. EASEMENTS
- LOT LINE

100 0 100 150
SCALE IN FEET

RIGHT-OF-WAY SHEET

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = 100'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	SB	8/21	
HORIZONTAL: 1" = N/A	LEAD ENGR.		5/20	
	FIELD MGR.		6/20	
VERTICAL 1" = N/A	RECOMMENDED: DESIGN MANAGER	HAS	6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-ROW			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 1 OF 47 SHEETS

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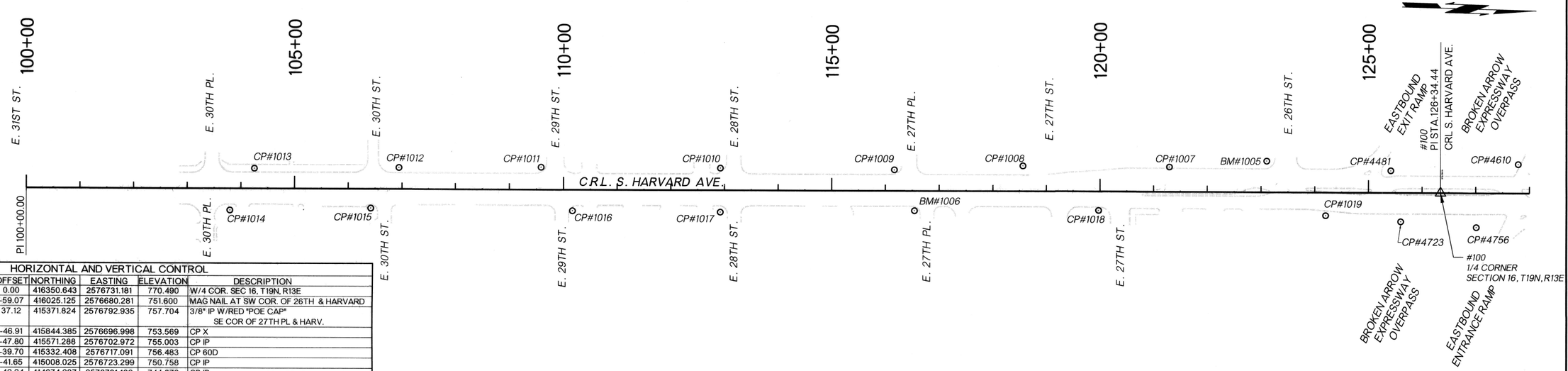
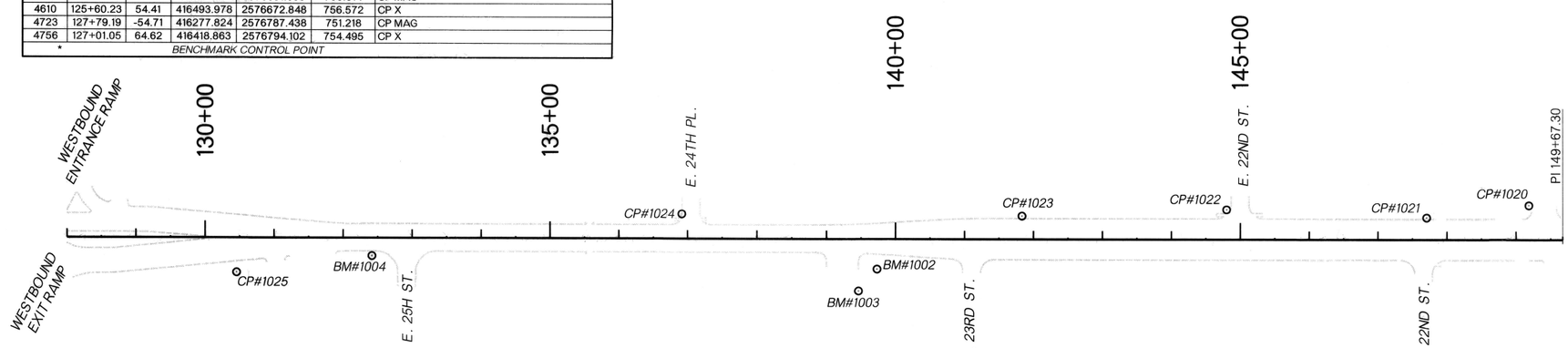


HORIZONTAL AND VERTICAL CONTROL						
PT NO	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	126+34.44	0.00	416350.643	2576731.181	770.490	W/4 COR. SEC 16, T19N, R13E
* 1005	123+10.30	-59.07	416025.125	2576680.281	751.600	MAG NAIL AT SW COR. OF 26TH & HARVARD
* 1006	116+54.37	37.12	415371.824	2576792.935	757.704	3/8" IP W/RED "POE CAP" SE COR OF 27TH PL & HARV.
1007	121+29.20	-46.91	415844.385	2576696.998	753.569	CP X
1008	118+56.04	-47.80	415571.288	2576702.972	755.003	CP IP
1009	116+16.88	-39.70	415332.408	2576717.091	756.483	CP 60D
1010	112+92.44	-41.65	415008.025	2576723.299	750.758	CP IP
1011	109+58.56	-42.24	414674.237	2576731.102	744.672	CP IP
1012	106+94.16	-40.30	414409.962	2576739.690	751.918	CP X
1013	104+25.06	-37.99	414141.009	2576748.772	757.453	CP X
1014	103+79.47	40.55	414097.412	2576828.438	757.692	CP MAG
1015	106+41.95	36.13	414359.695	2576817.409	753.611	CP X
1016	110+16.63	39.44	414734.341	2576811.300	744.909	CP MAG
1017	112+92.28	41.10	415009.949	2576806.029	750.890	CP 40D
1018	119+97.21	35.62	415714.515	2576782.813	755.480	CP IP
1019	124+20.17	43.37	416137.538	2576779.930	751.963	CP IP
4481	125+41.65	-41.92	416256.827	2576691.609	750.814	CP MAG
4610	125+60.23	54.41	416493.978	2576672.848	756.572	CP X
4723	127+79.19	-54.71	416277.824	2576787.438	751.218	CP MAG
4756	127+01.05	64.62	416418.863	2576794.102	754.495	CP X
*	BENCHMARK CONTROL POINT					



HORIZONTAL AND VERTICAL CONTROL						
PT NO	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESCRIPTION
* 1002	417689.994	2576741.148	802.673	139+73.11	43.66	IP BENCHMARK FOR PROJ.
* 1003	417663.933	2576773.811	802.320	139+46.24	75.66	X ON CURB
* 1004	416958.273	2576741.997	779.630	132+41.60	26.10	X ON SW SE COR. OF 25TH & HARVARD
1020	418632.622	2576623.845	788.485	149+18.39	-49.89	CP IP BAKER CA 5815
1021	418485.157	2576645.520	789.826	147+70.43	-31.93	CP IP
1022	418194.758	2576641.365	794.005	144+80.23	-43.39	CP IP
1023	417898.217	2576658.444	890.494	141+83.35	-33.78	CP IP
1024	417406.758	2576668.776	798.606	136+91.79	-35.81	CP IP
1025	416762.762	2576771.212	772.995	130+45.42	50.39	CP IP
* BENCHMARK CONTROL POINT						

CONTROL SURVEY DATA

PERMANENT BENCHMARK REFERENCES:
ADS #41 - 3" BRASS CAP SET FLUSH IN CONCRETE POST, SOUTH OF THE INTERSECTION OF E. 21ST ST. AND S. HUDSON AVE.
N= 419164.654
E=2584743.803
ELEV.=768.359'

1. HORIZONTAL CONTROL:
A. HORIZONTAL CONTROL FOR THIS SURVEY IS THE NAD83(1993) OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE.
B. ACCURACY - 3RD ORDER OR BETTER.

2. BEARINGS:
THE BEARINGS SHOWN HEREIN OR HEREON ARE "GRID" BEARINGS DERIVED FROM NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL.

3. VERTICAL CONTROL:
A. LEVEL DATUM IS MEAN SEA LEVEL DATUM OF (NGS) NAVD 1988.
B. ACCURACY - 3RD ORDER OR BETTER.

THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS.

CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

SURVEYOR'S CERTIFICATE

I, MIKE WATSON OF POE & ASSOCIATES, INC., A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF OKLAHOMA, DO HEREBY CERTIFY THE SURVEY PREPARED BY ME WAS ACTUALLY MADE UPON THE GROUND AND THAT IT AND THE INFORMATION SHOWN HEREON FOR ALL HORIZONTAL CONTROL POINTS IS A TRUE AND CORRECT REPRESENTATION OF THE SURVEY.

EXECUTED THIS 5th DAY OF May, 2021

Mike Watson

MIKE WATSON
REGISTERED PROFESSIONAL LAND SURVEYOR
OKLAHOMA L.S. 1516

REGISTERED LAND SURVEYOR — MIKE WATSON L.S. 1516 — OKLAHOMA

LEGEND

⊙ CP#00 CONTROL POINT

△ SECTION, 1/4 SEC. CORNER

100 0 100 150
SCALE IN FEET

SURVEY DATA SHEET

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = 100'
PROFILE SCALE:
HORIZONTAL: 1" = NA
VERTICAL 1" = NA

DRAWN	BKN	2020
DESIGNED	GJC	2020
SURVEY	MW	2018
PROJ. MGR.	JB	5/21
LEAD ENGR.		5/25
FIELD MGR.		6/25
RECOMMENDED:		6-25
DESIGN MANAGER		

APPROVED:

CITY ENGINEER

FILE: H:\303898 DRAWING: 303898-Survey Data

DATE: 8/4/2025

ATLAS PAGE NO: 31, 32, 58, 59

SHEET 10 OF 47 SHEETS

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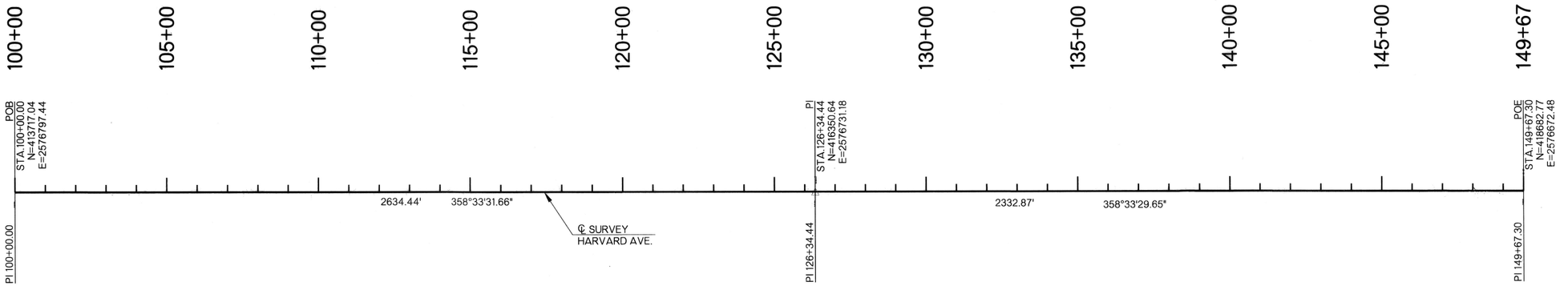
4/28/2021 - 02:04PM



200 0 200 400
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA
4-27-2021

GEOMETRIC SHEET

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = 200'	DRAWN	RJM	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW		
PROFILE SCALE:	PROJ. MGR.	JB	5/21	
HORIZONTAL: 1" = NA	LEAD ENGR.	[illegible]	5/25	
	FIELD MGR.	[illegible]	6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-Geometric			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 11 OF 47 SHEETS

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4/22/2021 - 02:38PM

ROADWAY SUMMARY (BASE BID)

P&P SHEET NO.	STREET NAME	202(A) UNCLASSIFIED EXCAVATION	230(A) SOLID SLAB SODDING	303 AGGREGATE BASE-TYPE A	310(B) SUBGRADE, METHOD B	325 SEPARATOR FABRIC	409 FABRIC REINFORCEMENT	411(C) ASPHALT CONC. TYPE S4	412 COLD MILLING PAVEMENT	414(G) TYPE 1 PCC PATCH	609(B) 2'-2" COMB. CURB & GUTTER (8" BARRIER)	609(B) 8" CONC. CURB	610(A) 4" CONCRETE SIDEWALK	610(A) 4" STAMPED BRICK PATTERN SIDEWALK	610(B) 8" CONCRETE DRIVEWAY (H.E.S.)	610(I) TACTILE WARNING DEVICE (NEW)	612(G) VALVE BOXES ADJUST TO GRADE	612(A) MANHOLES ADJUST TO GRADE	619(B) REMOVAL OF EXISTING DRIVEWAY	619(B) REMOVAL OF SIDEWALK	SPEC. CONSTRUCT CURB RAMP	SPEC. QUICK SET FLOWABLE FILL
		CY	SY	CY	SY	SY	SY	TON	SY	CY	LF	LF	SY	SY	SY	SF	EA	EA	EA	SY	EA	CY
1	STA.103+87 TO 107+50	35	25	35	95	152	2,525	283	2,525	26	75	55	0	0	-	-	4	3	-	0	0	-
2	STA. 107+50 TO 112+00	109	41	109	340	404	3,140	361	3,140	82	123	140	0	0	-	-	1	-	-	0	0	-
3	STA. 112+00 TO 116+50	134	14	134	381	429	3,200	368	3,200	101	42	175	0	0	-	-	2	-	-	0	0	-
4	STA.116+50 TO 121+00	80	-	80	218	240	3,400	391	3,400	60	-	-	0	0	-	-	6	-	-	0	0	-
5	STA. 121+00 TO 125+50	148	-	148	403	443	3,570	411	3,570	111	-	83	0	0	-	-	2	3	-	0	0	-
6	STA. 125+50 TO 130+00	183	27	183	528	601	3,150	362	3,150	138	80	175	0	0	-	-	1	3	-	0	0	-
7	STA. 130+00 TO 134+50	165	20	165	471	533	2,510	289	2,510	125	60	32	0	0	-	-	2	-	-	0	0	-
8	STA. 134+50 TO 139+00	20	3	20	58	66	2,000	230	2,000	15	10	-	0	0	-	-	-	-	-	0	0	-
9	STA.139+00 TO 143+50	38	33	38	139	178	2,800	322	2,800	29	100	95	0	0	-	-	1	-	82	0	0	-
10	STA. 143+50 TO 148+00	71	64	71	261	334	3,120	359	3,120	53	193	5	0	0	-	-	3	-	-	0	0	-
11	STA. 148+00 TO 149+12.35	6	20	6	36	54	930	104	930	4	60	-	0	0	-	-	-	2	-	0	0	-
	TOTAL	988	248	988	2,930	3,434	30,345	3,479	30,345	746	743	760	0	0	-	-	22	11	82	0	-	-

NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

ROADWAY SUMMARY (ADD ALTERNATE)

P&P SHEET NO.	STREET NAME	202(A) UNCLASSIFIED EXCAVATION	230(A) SOLID SLAB SODDING	303 AGGREGATE BASE-TYPE A	310(B) SUBGRADE, METHOD B	325 SEPARATOR FABRIC	409 FABRIC REINFORCEMENT	411(C) ASPHALT CONC. TYPE S4	412 COLD MILLING PAVEMENT	414(G) TYPE 1 PCC PATCH	609(B) 2'-2" COMB. CURB & GUTTER (8" BARRIER)	609(B) 8" CONC. CURB	610(A) 4" CONCRETE SIDEWALK	610(A) 4" STAMPED BRICK PATTERN SIDEWALK	610(B) 8" CONCRETE DRIVEWAY (H.E.S.)	610(I) TACTILE WARNING DEVICE (NEW)	612(G) VALVE BOXES ADJUST TO GRADE	612(H) METER BOXES ADJUST TO GRADE	619(B) REMOVAL OF EXISTING DRIVEWAY	619(B) REMOVAL OF SIDEWALK	SPEC. CONSTRUCT CURB RAMP	SPEC. QUICK SET FLOWABLE FILL
		CY	SY	CY	SY	SY	SY	TON	SY	CY	LF	LF	SY	SY	SY	SF	EA	EA	EA	SY	EA	CY
1	STA.103+87 TO 107+50	7	143	7	-	39	-	-	-	-	61	-	123	8	-	24	1	-	-	136	3	-
2	STA. 107+50 TO 112+00	8	192	8	69	41	-	-	-	-	65	-	165	10	58	40	-	-	58	165	5	-
3	STA. 112+00 TO 116+50	5	140	5	34	28	-	-	-	-	45	10	123	0	23	24	-	-	23	123	3	-
4	STA.116+50 TO 121+00	20	172	20	60	107	-	-	-	-	170	35	115	10	-	40	2	-	-	115	5	-
5	STA. 121+00 TO 125+50	9	116	9	68	26	-	-	-	7	-	78	110	21	55	48	-	-	55	110	6	-
6	STA. 125+50 TO 130+00	38	21	38	104	114	-	-	-	29	-	-	21	55	-	80	-	-	-	21	10	-
7	STA. 130+00 TO 134+50	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	0	0	-
8	STA. 134+50 TO 139+00	-	21	-	-	-	-	-	-	-	-	-	21	0	-	8	-	-	-	21	1	-
9	STA.139+00 TO 143+50	5	88	5	81	28	-	-	-	-	45	-	65	0	82	24	-	-	82	65	3	-
10	STA. 143+50 TO 148+00	6	17	6	18	32	-	-	-	-	50	-	0	0	-	16	-	-	-	0	2	-
11	STA. 148+00 TO 149+12.35	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	0	0	-
	TOTAL	98	910	98	434	416	-	-	-	35	436	123	743	104	218	304	3	-	218	756	38	-

SUMMARY OF DRIVEWAYS

NAME	STATION	LT/RT	RADIUS	OFFSET FROM FOC	APPROX. WIDTH	EXIST SLOPE OF DRIVE.	PROP. SLOPE OF DRIVE.	SUBGRADE METHOD B	AGG. BASE TYPE A	8" CONCRETE DRIVEWAY
			FT	FT.	FT.	%	%	SY	CY	SY
DRIVEWAY	111+30.15	RT	0	7	38	7.15	7.15	31	5.2	31
DRIVEWAY	111+98.39	RT	0	12	20	5.00	5.00	50	8.3	50
DRIVEWAY	122+16.10	RT	5	7	30	6.50	6.50	33	5.5	33
DRIVEWAY	122+79.43	RT	5	7	28	7.00	7.00	22	3.7	22
DRIVEWAY	139+22.91	RT	15	13	47	8.00	8.00	82	13.7	82
						PROJECT TOTAL:		**218**	**36**	**218**

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES DOKER
16610
OKLAHOMA
2-25-25

REVISION	BY	DATE

SUMMARY SHEET (1)
ROADWAY SUMMARY

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = NA	DRAWN	BKN	2020
	DESIGNED	GJC	2020
	SURVEY	MW	2018
PROFILE SCALE:	PROJ. MGR.	JB	4/25
HORIZONTAL: 1" = NA	LEAD ENGR.	GJD	5/25
	FIELD MGR.	JBrm	6/25
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6.25
FILE: H:\303898	DRAWING: 303898-Summary Sheets		
ATLAS PAGE NO: 31, 32, 58, 59			

APPROVED:

CITY ENGINEER

DATE: 8/4/2025

SHEET 12 OF 47 SHEETS

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2/14/2025

SIGN SUMMARY

SIGN NO.	SIGN TYPE	BASELINE STATION	OFFSET		DESCRIPTION	PROPOSED SIGN AREA 850[A]	2"	1 3/4"	1 1/2"	BASELINE STATION	OFFSET		SIGN DIMENSION	SIGN STATUS
						S.F.	L.F.	L.F.	L.F.					
1	R2-1	104+62.77	32.90	RT	SPEED LIMIT 40 MPH	7.5	3	11	2	104+65.31	32.92	RT	36"X 30"	NEW
2	R1-1, COT 608(2)	106+33.75	49.79	LT	STOP, S HARVARD Ave, E 30th St S 3300	21.61	3	11	2	106+33.30	47.77	LT	30" X 30", 9" X 48", 9" X 42"	NEW
3	R1-1, COT 608(2)	106+83.82	40.86	RT	STOP, S HARVARD Ave, E 30th St S 3300	21.61	3	11	2	106+83.99	38.83	RT	30" X 30", 9" X 48", 9" X 42"	NEW
4	R1-1, COT 608(2)	109+64.20	48.76	LT	STOP, S HARVARD Ave, E 29th St S 3300	21.61	3	11	2	109+64.05	46.77	LT	30" X 30", 9" X 48", 9" X 42"	NEW
5	R1-1, COT 608(2)	110+13.11	45.06	RT	STOP, S HARVARD Ave, E 29th St S 3300	21.61	3	11	2	110+13.16	43.03	RT	30" X 30", 9" X 48", 9" X 42"	NEW
6	R1-1, COT 608(2)	113+00.43	63.32	LT	STOP, S HARVARD Ave, E 28th St S 3300	21.61	3	11	2	113+00.47	60.73	LT	30" X 30", 9" X 48", 9" X 42"	NEW
7	R1-1, COT 608(2)	113+34.86	45.79	RT	STOP, S HARVARD Ave, E 28th St S 3300	21.61	3	11	2	113+35.04	43.76	RT	30" X 30", 9" X 48", 9" X 42"	NEW
8	R1-1, COT 608(2)	116+29.22	48.87	LT	STOP, S HARVARD Ave, E 27th Pl S 3300	21.61	3	11	2	116+29.22	48.87	LT	30" X 30", 9" X 48", 9" X 42"	NEW
9	R1-1, COT 608(2)	116+94.21	41.58	RT	STOP, S HARVARD Ave, E 27th Pl S 3300	21.61	3	11	2	116+94.02	43.73	RT	30" X 30", 9" X 48", 9" X 42"	NEW
10	R2-1	119+31.04	40.90	LT	SPEED LIMIT 40 MPH	21.61	3	11	2	119+33.39	41.01	LT	36"X 30"	NEW
11	R6-1	120+15.41	49.75	RT	ONE WAY	3	3	8.5		120+15.41	49.75	RT	36" X 12"	NEW
12	NOT USED						3							
13	W4-2	122+04.58	47.76	LT	RIGHT LANE MERGE	9	3	11.5		122+06.94	47.87	LT	36" X 36"	NEW
14	R3-2	123+06.52	1.51	LT	NO LEFT TURN	6	3	11		123+08.56	1.53	LT	36"X 24"	NEW
15	R1-1, COT 608(2)	123+21.84	61.18	LT	STOP, S HARVARD Ave, E 26th St S 3300	21.61	3	11	2	123+21.24	58.89	LT	30" X 30", 9" X 48", 9" X 42"	NEW
16	W8-18	123+48.55	38.34	RT	CAUTION POSSIBLE FLOODING	9.00	3	11.5		123+48.55	38.34	RT	36" X 36"	NEW
17	R3-2	123+90.29	6.15	LT	NO LEFT TURN	6	3	11		123+92.51	6.07	LT	36"X 24"	NEW
18	W9-1	124+43.40	48.13	LT	RIGHT LANE ENDS	9	3	11.5		124+45.76	48.24	LT	36" X 36"	NEW
19	R3-2	125+54.35	2.32	LT	NO LEFT TURNS	6	3	11.5		125+52.42	2.26	LT	36"X 24"	NEW
20	NOT USED													
21	W8-18	129+42.27	44.28	LT	CAUTION POSSIBLE FLOODING	9	3	11.5		129+42.27	44.28	LT	36" X 36"	NEW
22	R1-1, COT 608(2)	133+16.30	35.93	RT	STOP, S HARVARD Ave, E 25th St S 3300	21.61	3	11	2	133+16.30	35.03	RT	30" X 30", 9" X 48", 9" X 42"	NEW
23	SPECIAL	133+65.43	22.23	RT	TULSA TRANSIT BUS STOP		3	9		133+65.43	22.23	RT		REUSE
24	R2-1	134+24.61	22.23	RT	SPEED LIMIT 40 MPH	7.5	3	11		134+24.61	22.23	RT	36"X 30"	NEW
25	R10-6A	135+21.34	22.77	RT	STOP HERE ON RED	5	3	10.5		135+21.34	22.77	RT	24" X 36"	NEW
26	R10-6A	135+93.41	22.75	LT	STOP HERE ON RED	5	3	10.5		135+93.41	22.75	LT	24" X 36"	NEW
27	SPECIAL	135+94.05	29.04	LT	TULSA TRANSIT BUS STOP		3	9		135+94.05	29.04	LT		REUSE
28	W12-2	136+24.72	24.18	LT	CLEARANCE SIGN 14'-4"	9	3	11.5		136+24.72	24.18	LT	36" X 36"	NEW
29	R1-1, COT 608(2)	136+87.34	42.96	LT	STOP, S HARVARD Ave, E 24th Pl 3300	21.61	3	11	2	136+87.34	42.96	LT	30" X 30", 9" X 48", 9" X 42"	NEW
30	R1-1	139+48.17	35.23	RT	STOP SIGN (PRIVATE)	5.18	3	11		139+48.17	35.23	RT	30" X 30"	(PRIVATE) REUSE
31	R1-1, COT 608(2)	141+26.91	48.56	RT	STOP, S HARVARD Ave, E 23rd St S 3300	21.61	3	11	2	141+26.91	48.56	RT	30" X 30", 9" X 48", 9" X 42"	NEW
32	SPECIAL	141+85.77	32.03	LT	TULSA TRANSIT BUS STOP		3	9		141+85.77	32.03	LT		NEW
33	SPECIAL	141+89.18	32.59	RT	TULSA TRANSIT BUS STOP		3	9		141+89.18	32.59	RT		REUSE
34	R1-1, COT 608(2)	144+84.43	53.68	LT	STOP, S HARVARD Ave, E 22nd St S 3300	21.61	3	11	2	144+84.43	53.68	LT	30" X 30", 9" X 48", 9" X 42"	NEW
35	SPECIAL	145+19.14	31.76	RT	TULSA TRANSIT BUS STOP		3	9		145+19.14	31.76	RT		REUSE
36	R2-1	147+60.67	38.70	LT	SPEED LIMIT 40 MPH	7.5	3	11		147+60.67	38.70	LT	36"X 30"	NEW
37	R1-1, COT 608(2)	147+83.36	43.73	RT	STOP, S HARVARD Ave, E 22nd St S 3300	21.61	3	11	2	147+83.36	43.73	RT	30" X 30", 9" X 48", 9" X 42"	NEW
38	SPECIAL	148+32.28	32.43	RT	TULSA TRANSIT BUS STOP		3	9		148+32.28	32.43	RT		REUSE
39	S1-1, W16-9	148+70.52	32.66	RT	SCHOOL, AHEAD	8.75	3	11.5		148+70.52	32.66	RT	36" X36", 24" X 12"	NEW
					TOTAL:	**430.58**	**114**	**395**	**32**					

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3/10/2025 - 09:31AM

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES JOKER 19340 OKLAHOMA 3-10-25

REVISION	BY	DATE

SUMMARY SHEET (2)
SIGN SUMMARY

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = NA	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
	LEAD ENGR.			
HORIZONTAL: 1" = NA	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED DESIGN MANAGER		6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-Summary Sheets			DATE 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 13 OF 47 SHEETS

STORM WATER MANAGEMENT PLAN

REVISIONS	
DESCRIPTION	DATE

SITE DESCRIPTION

PROJECT LIMITS: S. HARVARD AVENUE FROM S. 31ST STREET TO S. 21ST STREET

PROJECT DESCRIPTION:
PAVEMENT RECONSTRUCTION CONSISTING OF MILLING, PATCHING AND OVERLAY

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:
PLACE TEMPORARY EROSION CONTROL DEVISES THAT WILL NOT INTERFERE WITH CONSTRUCTION
PERFORM PAVEMENT REHABILITATION
REMOVE TEMPORARY EROSION DEVICES

SOIL TYPE: NA

TOTAL AREA OF THE CONSTRUCTION SITE: APPROX. 8 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.2 ACREAS

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 95%

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 95%

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.90

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 0.90

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: JOE CREEK

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

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

IF YES, LIST IMPAIRMENT: WWAC

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

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [X] NO [ ]

IF YES, LOCATION: OKS 000201, TULSA,OK

REVISED 07 / 13 / 2017

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
- X 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
- X TEMPORARY SEDIMENT REMOVAL
- ____ RIP RAP
- X INLET SEDIMENT FILTER
- ____ TEMPORARY BRUSH SEDIMENT BARRIERS
- ____ SANDBAG BERMS
- ____ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

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

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

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

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

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

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

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

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

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, NOVEMBER 1, 2023.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
10840
OKLAHOMA
2-25-25

TMUA-W 17-26

STORM WATER MANAGEMENT PLAN

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

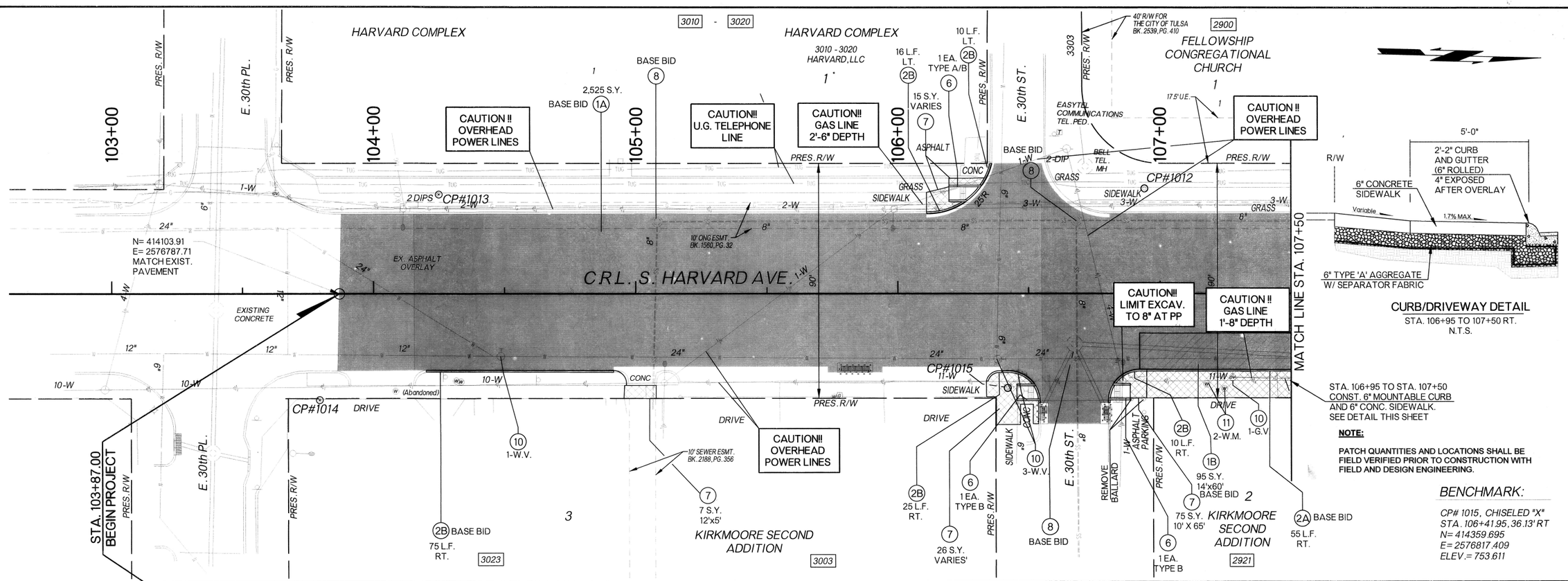
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

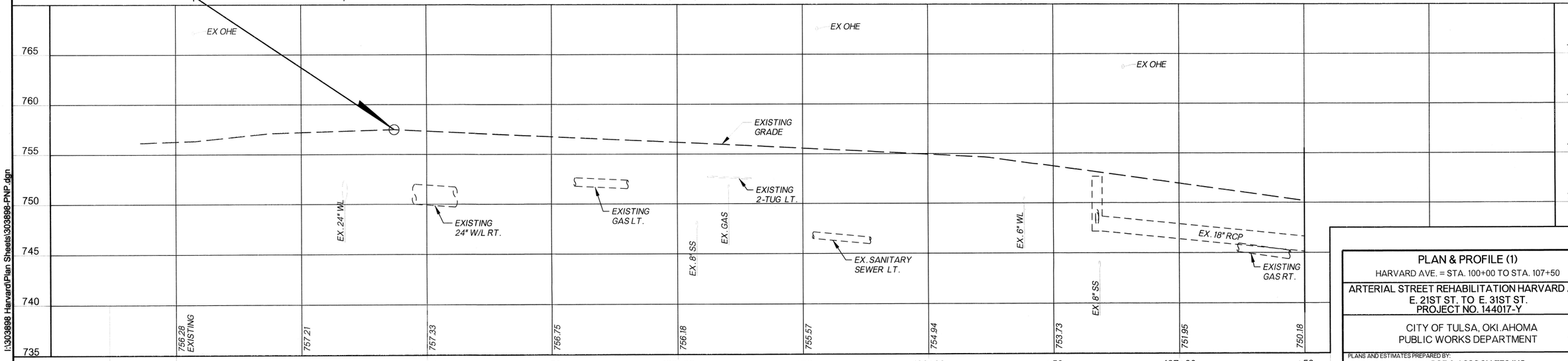
PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = NA	DRAWN	RSM	10/2018	APPROVED:
	DESIGNED	GJC	10/2018	
	SURVEY	MW	3/2018	
PROFILE SCALE:	PROJ. MGR.	JB	4/25	
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-Storm Water Mgmt Plan			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 14 OF 47 SHEETS

I:\303898 Harvard\Plan Sheets\303898-Storm Water Mgmt Plan.dgn
2/14/2025





LEGEND

(1A) MILL & OVERLAY	(4) CONSTRUCT INLET	(9) ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
(1B) TYPE 1 PCC PATCH	(5) CONSTRUCT DRIVEWAY	(10) ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
(2A) CONSTRUCT CURB	(6) CONSTRUCT CURB RAMP	(11) ADJUST WATER METER BOX TO GRADE	SIDEWALK
(2B) CONSTRUCT CURB & GUTTER	(7) CONSTRUCT SIDEWALK	(12) ADJUST UTILITY TO GRADE	MILL AND OVERLAY
(3) REPLACE INLET FRAME & GRATE	(8) ADJUST MANHOLE TO GRADE	(13) STAMPED BRICK PATTERN SIDEWALK	⊠ BH#1 SOIL BORING NO.
			○ 1000 CP IP CONTROL POINT
			X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
5 0 5 10
VERTICAL SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 18851 OKLAHOMA 8-14-25

REVISION	BY	DATE

PLAN & PROFILE (1)

HARVARD AVE. = STA. 100+00 TO STA. 107+50

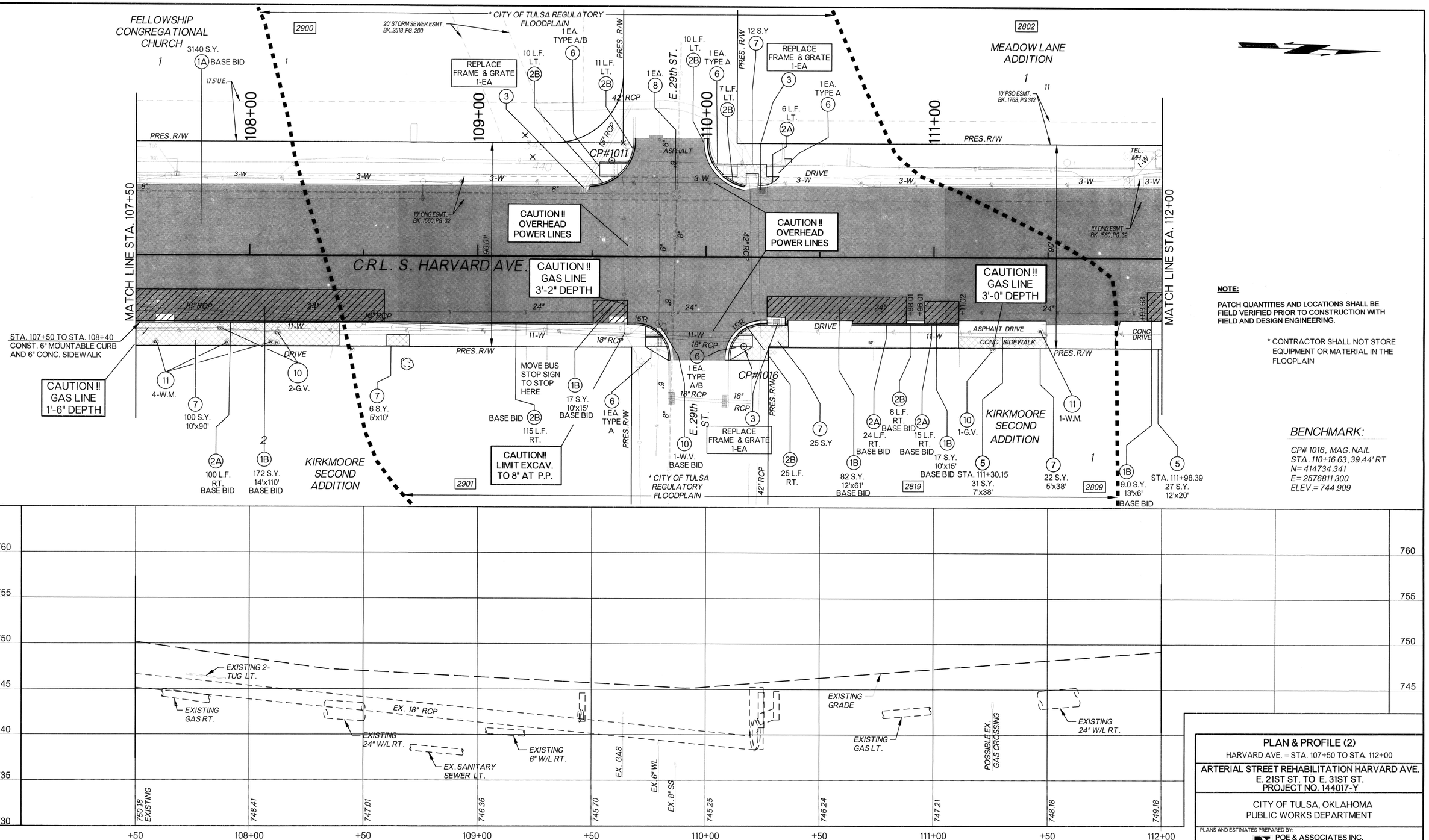
ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JB	8/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.		8/25	
	FIELD MGR.		8/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER	HAS 8.25		CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP01			DATE: 8/14/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 15 OF 47 SHEETS

2/19/2025 I:\303898 Harvard\Plan Sheets\303898-PNP.dgn



NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

* CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL IN THE FLOOPLAIN

BENCHMARK:

CP# 1016, MAG. NAIL
STA. 110+16.63, 39.44' RT
N= 414734.341
E= 2576811.300
ELEV.= 744.909

LEGEND

1A MILL & OVERLAY	4 CONSTRUCT INLET	9 ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
1B TYPE 1 PCC PATCH	5 CONSTRUCT DRIVEWAY	10 ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
2A CONSTRUCT CURB	6 CONSTRUCT CURB RAMP	11 ADJUST WATER METER BOX TO GRADE	SIDEWALK
2B CONSTRUCT CURB & GUTTER	7 CONSTRUCT SIDEWALK	12 ADJUST UTILITY TO GRADE	MILL AND OVERLAY
3 REPLACE INLET FRAME & GRATE	8 ADJUST MANHOLE TO GRADE	13 STAMPED BRICK PATTERN SIDEWALK	⊠ BH#1 SOIL BORING NO.; ○ 1000 CP IP CONTROL POINT; X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG 811 1-800-522-6543 CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
5 0 5 10
VERTICAL SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COMER 19440 OKLAHOMA 2-24-25

REVISION	BY	DATE

PLAN & PROFILE (2)

HARVARD AVE. = STA. 107+50 TO STA. 112+00

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020
	DESIGNED	GJC	2020
	SURVEY	MW	2018
PROFILE SCALE: 1" = 20'	PROJ. MGR.	JO	4/25
HORIZONTAL:	LEAD ENGR.		5/25
VERTICAL 1" = 5'	FIELD MGR.		
	RECOMMENDED: DESIGN MANAGER	HAS	6.25

APPROVED: CITY ENGINEER

FILE: H:\303898 DRAWING: 303898-PNP; PNP02 DATE: 8/4/2025

ATLAS PAGE NO: 31, 32, 58, 59 SHEET 16 OF 47 SHEETS

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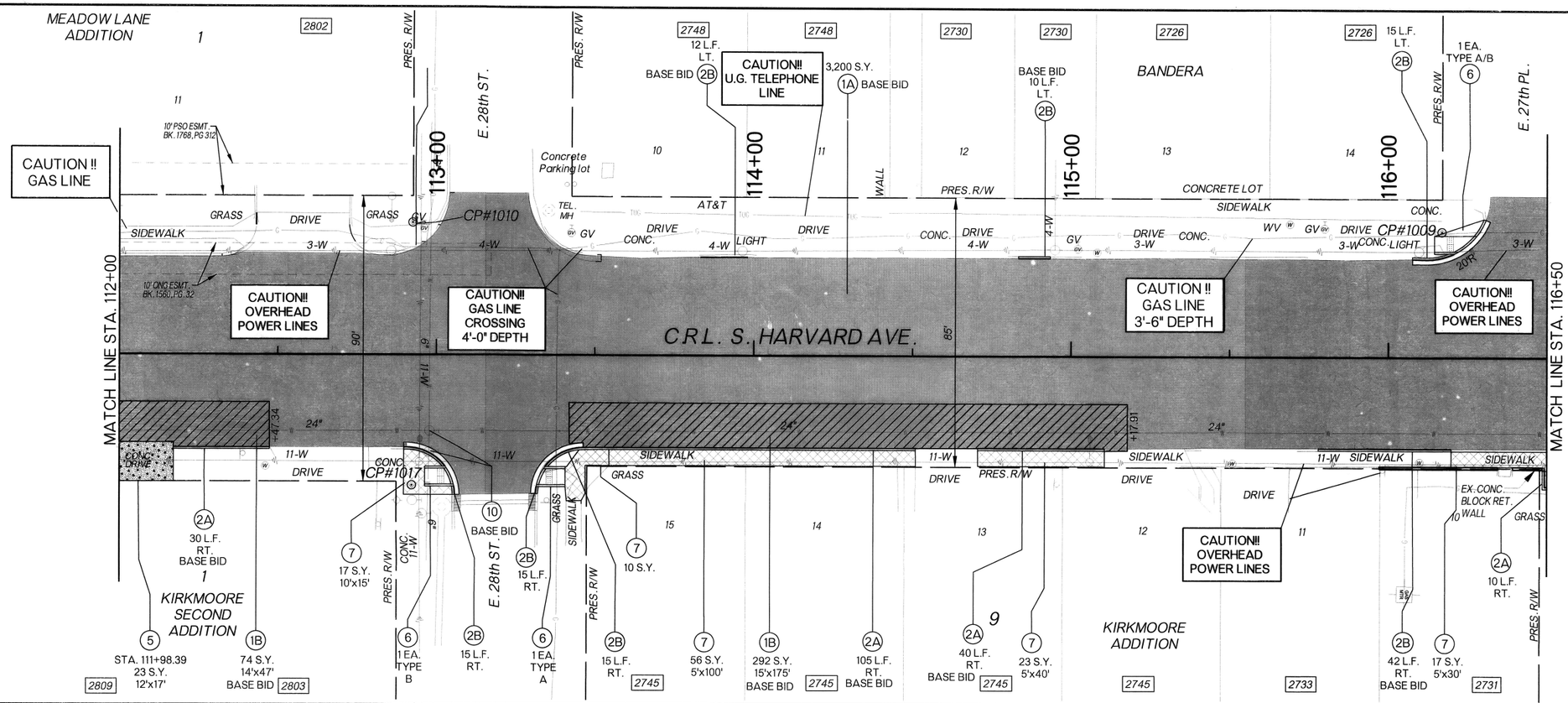
2/19/2025

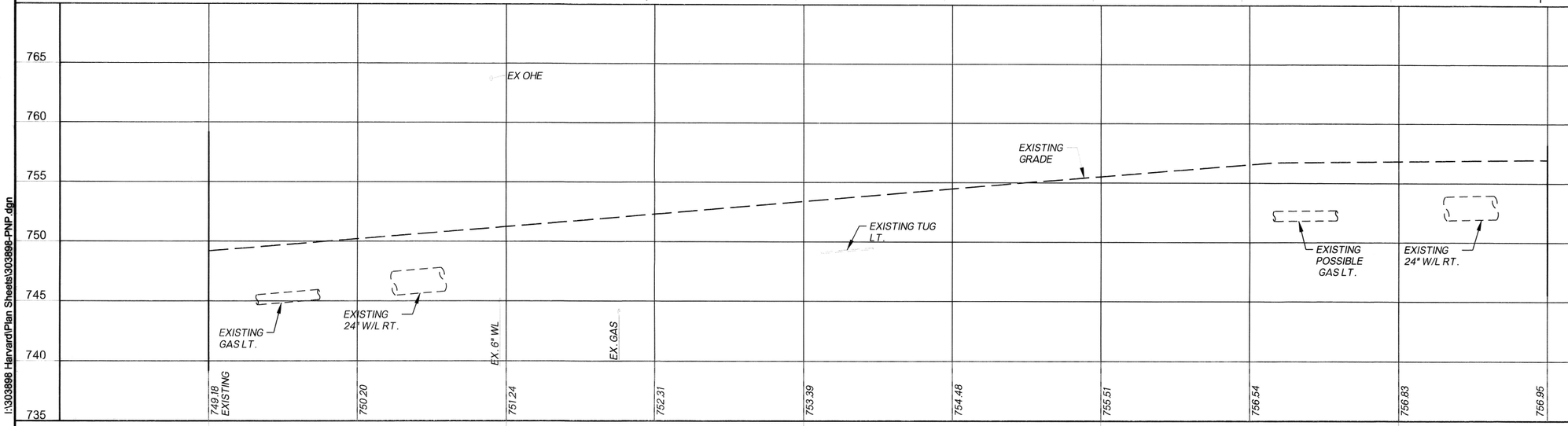


NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

BENCHMARK:

CP# 1009, 60D NAIL
STA. 116+16.88, 39.70' LT
N= 415332.408
E= 2576717.091
ELEV.= 756.483



LEGEND

- (1A) MILL & OVERLAY
- (1B) TYPE 1 PCC PATCH
- (2A) CONSTRUCT CURB
- (2B) CONSTRUCT CURB & GUTTER
- (3) REPLACE INLET FRAME & GRATE
- (4) CONSTRUCT INLET
- (5) CONSTRUCT DRIVEWAY
- (6) CONSTRUCT CURB RAMP
- (7) CONSTRUCT SIDEWALK
- (8) ADJUST MANHOLE TO GRADE
- (9) ADJUST INLET TO GRADE
- (10) ADJUST WATER OR GAS VALVE TO GRADE
- (11) ADJUST WATER METER BOX TO GRADE
- (12) ADJUST UTILITY TO GRADE
- (13) STAMPED BRICK PATTERN SIDEWALK
- TYPE 1 PCC PATCH
- DRIVEWAY REPAIR
- SIDEWALK
- MILL AND OVERLAY
- ⊠ BH#1 SOIL BORING NO.
- ○ 1000 CP IP CONTROL POINT
- X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 17840 OKLAHOMA 8-24-25

REVISION	BY	DATE

PLAN & PROFILE (3)

HARVARD AVE. = STA. 112+00 TO STA. 116+50

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JB	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER		6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP, PNP03			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 17 OF 47 SHEETS

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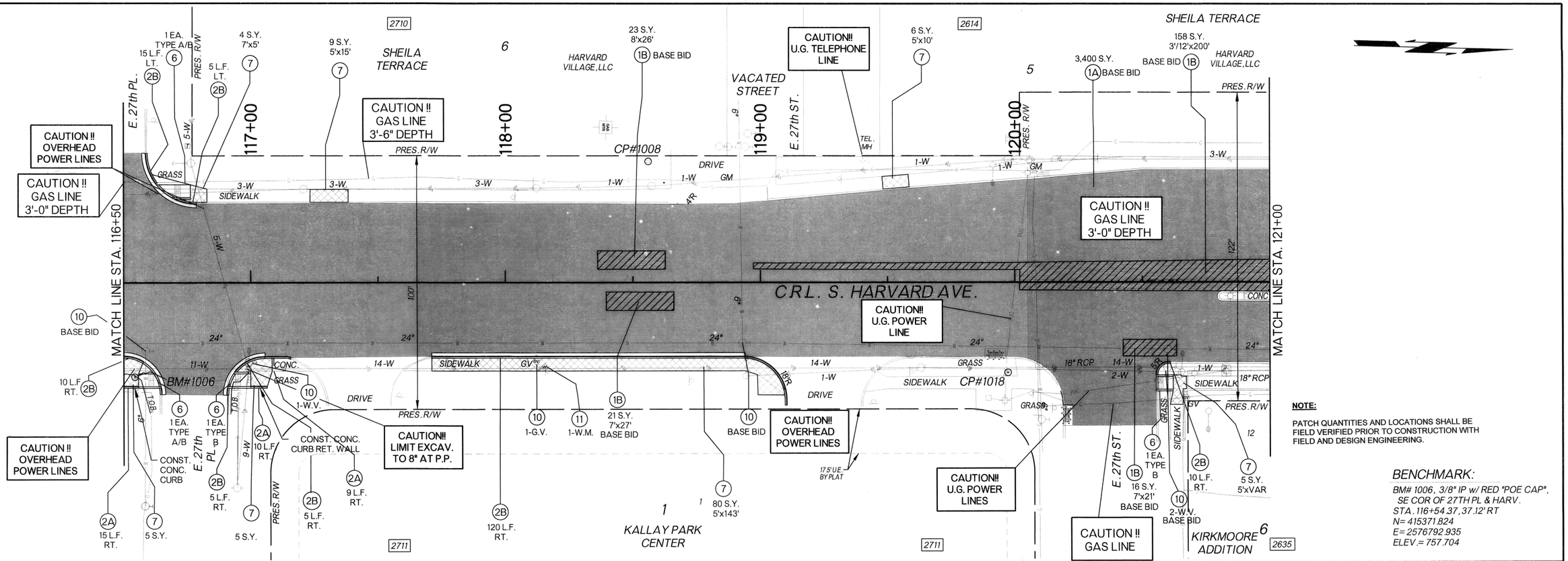
2/19/2025

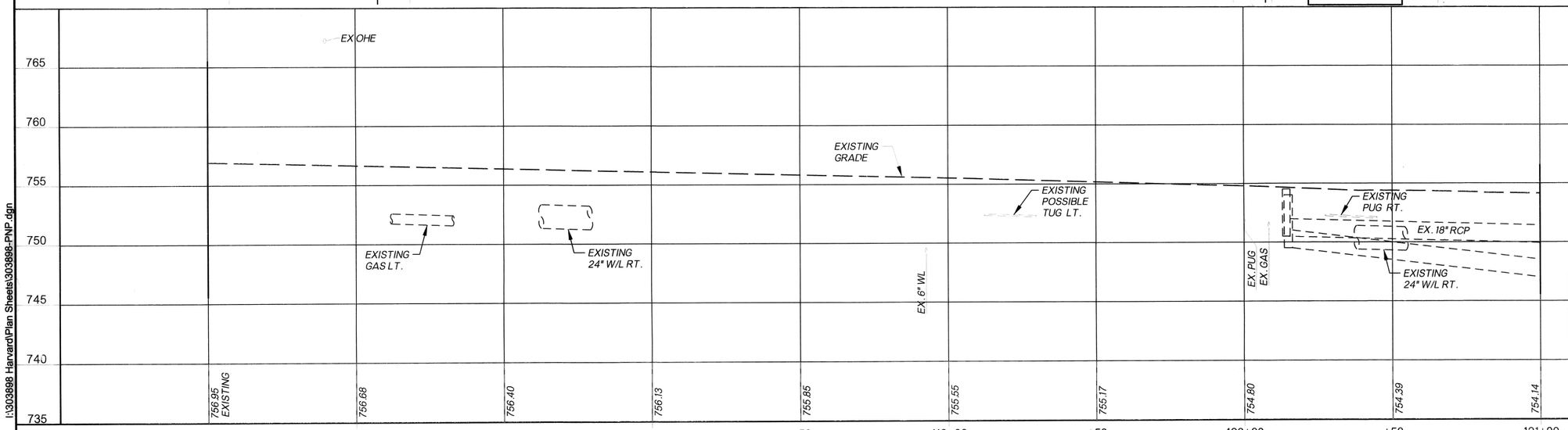


NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

BENCHMARK:

BM# 1006, 3/8" IP w/ RED "POE CAP", SE COR OF 27TH PL & HARV. STA. 116+54.37, 37.12' RT
N= 415371.824
E= 2576792.935
ELEV.= 757.704



LEGEND

(1A) MILL & OVERLAY	(4) CONSTRUCT INLET	(9) ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
(1B) TYPE 1 PCC PATCH	(5) CONSTRUCT DRIVEWAY	(10) ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
(2A) CONSTRUCT CURB	(6) CONSTRUCT CURB RAMP	(11) ADJUST WATER METER BOX TO GRADE	SIDEWALK
(2B) CONSTRUCT CURB & GUTTER	(7) CONSTRUCT SIDEWALK	(12) ADJUST UTILITY TO GRADE	MILL AND OVERLAY
(3) REPLACE INLET FRAME & GRATE	(8) ADJUST MANHOLE TO GRADE	(13) STAMPED BRICK PATTERN SIDEWALK	⊠ BH#1 SOIL BORING NO.
			○ 1000 CP IP CONTROL POINT
			X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
VERTICAL SCALE IN FEET
5 0 5 10

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 16400 OKLAHOMA 2-24-25

REVISION	BY	DATE

PLAN & PROFILE (4)

HARVARD AVE. = STA. 116+50 TO STA. 121+00

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JB	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.	GJC	5/25	
	FIELD MGR.	MW	6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER

FILE: H:\303898 DRAWING: 303898-PNP; PNP04 DATE: 8/4/2025

ATLAS PAGE NO: 31, 32, 58, 59 SHEET 18 OF 47 SHEETS

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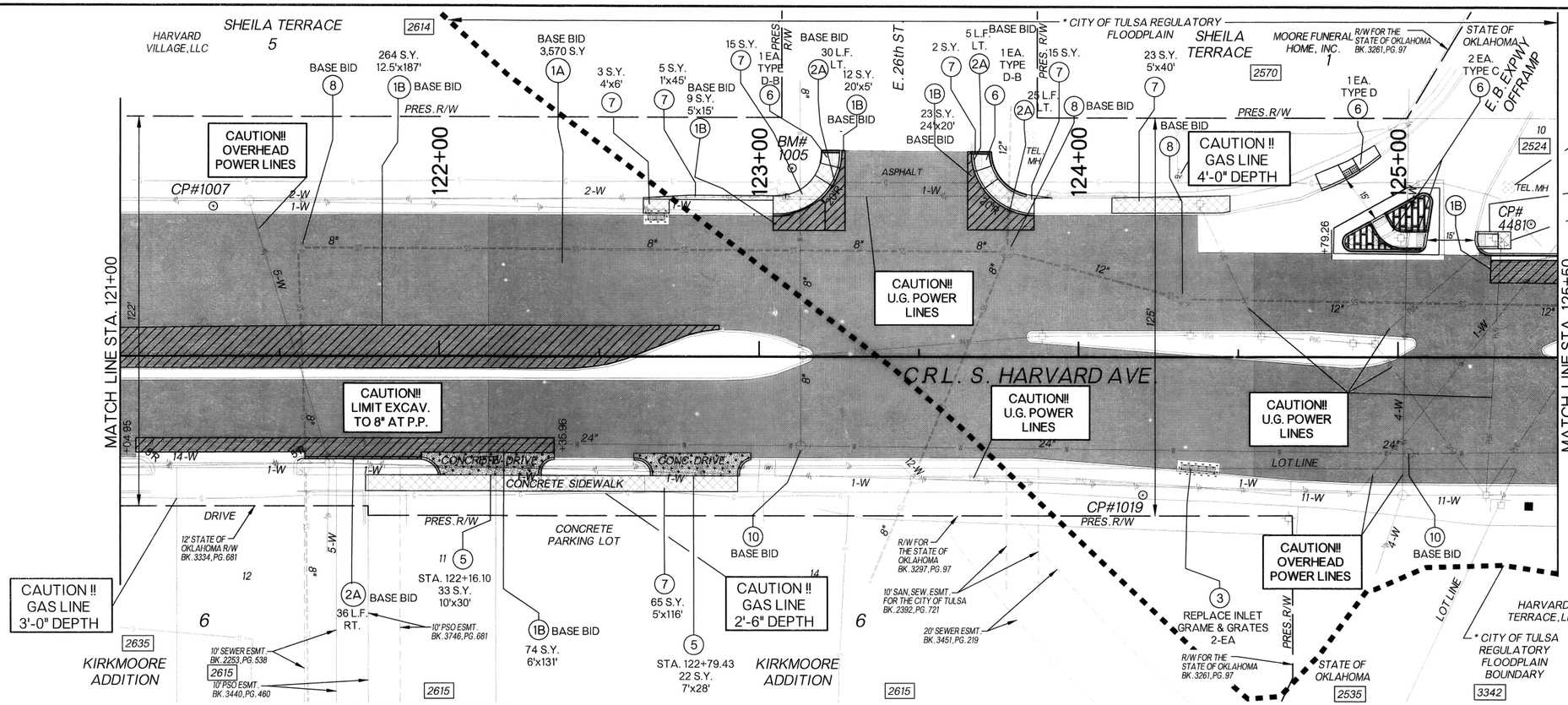
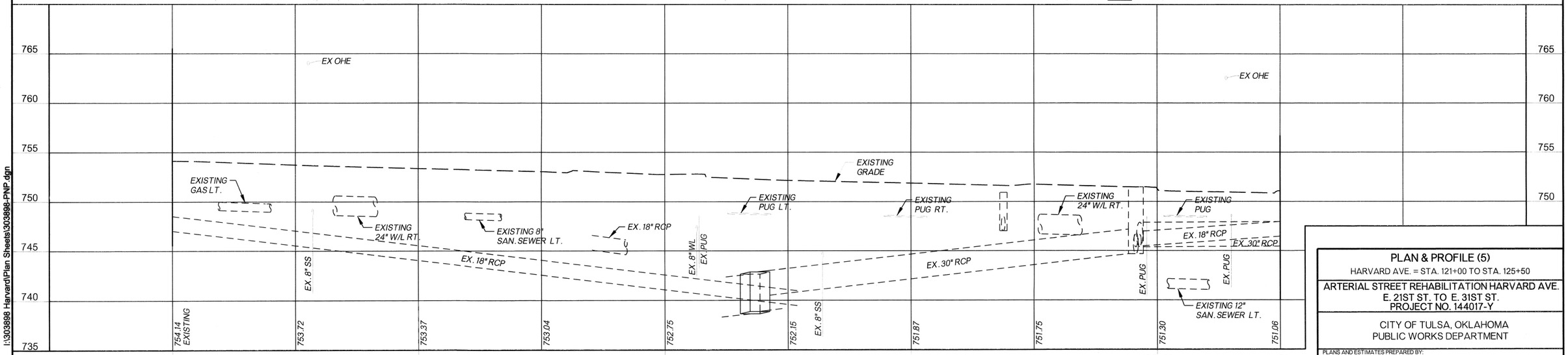
2/19/2025





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2/19/2025

LEGEND

1A MILL & OVERLAY	4 CONSTRUCT INLET	9 ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
1B TYPE 1 PCC PATCH	5 CONSTRUCT DRIVEWAY	10 ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
2A CONSTRUCT CURB	6 CONSTRUCT CURB RAMP	11 ADJUST WATER METER BOX TO GRADE	SIDEWALK
2B CONSTRUCT CURB & GUTTER	7 CONSTRUCT SIDEWALK	12 ADJUST UTILITY TO GRADE	MILL AND OVERLAY
3 REPLACE INLET FRAME & GRATE	8 ADJUST MANHOLE TO GRADE	13 STAMPED BRICK PATTERN SIDEWALK	⊠ BH#1 SOIL BORING NO.; ○ 1000 CP IP CONTROL POINT; X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET 20 0 20 40

VERTICAL SCALE IN FEET 5 0 5 10

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 19810 OKLAHOMA

REVISION	BY	DATE

PLAN & PROFILE (5)

HARVARD AVE. = STA. 121+00 TO STA. 125+50

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	TO	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.	GJC	5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP05			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 19 OF 47 SHEETS

STATE OF OKLAHOMA
BASE BID 46 L.F. LT. (2A)
5' PSO ESMT. BK. 3561, PG. 700
BASE BID 20 L.F. LT. (2A)
LOT LINE
REPLACE INLET FRAME & GRADE 2-EA. (3)
BASE BID
CONC.
90 S.Y. 10'x80' (1B) BASE BID
3,150 S.Y. (1A)
BROKEN ARROW EXPWY.
BASE BID 20 L.F. LT. (2B)
BASE BID (8)
SIDEWALK
PWRRIS
CP#4610
STATE OF OKLAHOMA
3 S.Y. 5'x5' (7)
1 EA. TYPE B (6)
PRES. R/W
* CITY OF TULSA REGULATORY FLOODPLAIN BOUNDARY
SEE ISLAND DETAIL 'A' FOR QUANTITIES
W.B. EXPRESSWAY ONRAMP
STATE OF OKLAHOMA
WIL-REY TERRACE
10
R/W FOR THE STATE OF OKLAHOMA BK. 3261, PG. 97
SEE DETAIL 'D'
24" RCP
1 EA. TYPE B (6)
PRES. R/W
CAUTION !! GAS LINE 4'-0" DEPTH
2524
WIL-REY TERRACE
REPLACE INLET FRAME & GRADE 2-EA. (3)
4 S.Y. (7)
9
10' UE.
2451
307 S.Y. VARIABLE
McKEEMAN PROPERTIES, LLC.
(1B) BASE BID
BASE BID 105 L.F. (2A)
BUILDING
PRES. R/W
DRIVE
8' HIGH CONC. RET. WALL
1-W
SIDEWALK
WALL
5' SEWER ESMT. LT. 9 BK. 1958, PG. 190
CAUTION!! OVERHEAD POWER LINES
MATCH LINE STA. 125+50
MATCH LINE STA. 130+00
18" RCP
30.29
12"
CONC. MEDIAN
CONC. MEDIAN
EX. SS MH #451
CAUTION!! O.H. POWER LINES
C.R.L. S. HARVARD AVE.
CONC. MEDIAN
30" RCP
1-W
27'
+93.59
140'
130'
+44.19
+95.88
CAUTION!! U.G. POWER LINES
8 1 EA.
EX. SS MH #452
24"
30" RCP
30" RCP
30" RCP
CONC.
10-W
10-W
SIDEWALK
10-W
+42.72
15-W
SIDEWALK
Top of Bank
CAUTION !! GAS LINE
CP# 4723
CP# 4724
3 REPLACE INLET FRAME & GRADE 2-EA.
CP#4756
7 3 S.Y. 5'x5'
SEE ISLAND DETAIL 'B' FOR QUANTITIES
30" RCP
18" RCP
LOT LINE
BRICK MH
(EX. M.H. TO REMAIN)
W.B. EXPRESSWAY OFF-RAMP
SLOPEWALL
CONC.
SEE DETAIL 'C'
5 S.Y.
* CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL IN THE FLOODPLAIN
8 1 EA.
10 BASE BID
2B 60 L.F. RT.
6 1 EA. TYPE B
2535
STATE OF OKLAHOMA
STATE OF OKLAHOMA
CITY OF TULSA REGULATORY FLOODPLAIN BOUNDARY
R/W FOR THE STATE OF OKLAHOMA BK. 3261, PG. 97
PRES. R/W
HARVARD TERRACE, LLC
1B 35 S.Y. 12'x26' BASE BID
2A 26 L.F. RT. BASE BID
E 25 ST S
3342
HARVARD APARTMENTS ADDITION
1B 67 S.Y. 20'x30' BASE BID
BASE BID 2A 20 L.F. RT.
BASE BID 1B 7 S.Y. 16'x4'
2A 3 L.F. RT. BASE BID
2

(1B) 16 S.Y. 16'x9
18 L.F. (2B)
(13) 32 S.Y. (1B) 18 L.F. (2B)
3' R
(6) 1 EA. TYPE C
3' R
(2B) 33 L.F.
(2B) 24 L.F.
(7) 12 S.Y. 22'x5'
(13) 19 S.Y. 24'x7'
ISLAND DETAIL 'A'

(13) 7 S.Y. 24'x3'
(2B) 23 L.F.
2' R
1' R
(1B) 32 S.Y.
(6) 2 EA. TYPE B
(2B) 18 L.F.
(13) 8 S.Y.
2' R
(2B) 32 L.F.
ISLAND DETAIL 'B'

BENCHMARK:

CP# 4610, CHISELED "X"
STA. 125+60.23, 54.41' RT
N= 416493.978
E= 2576672.848
ELEV.= 756.572

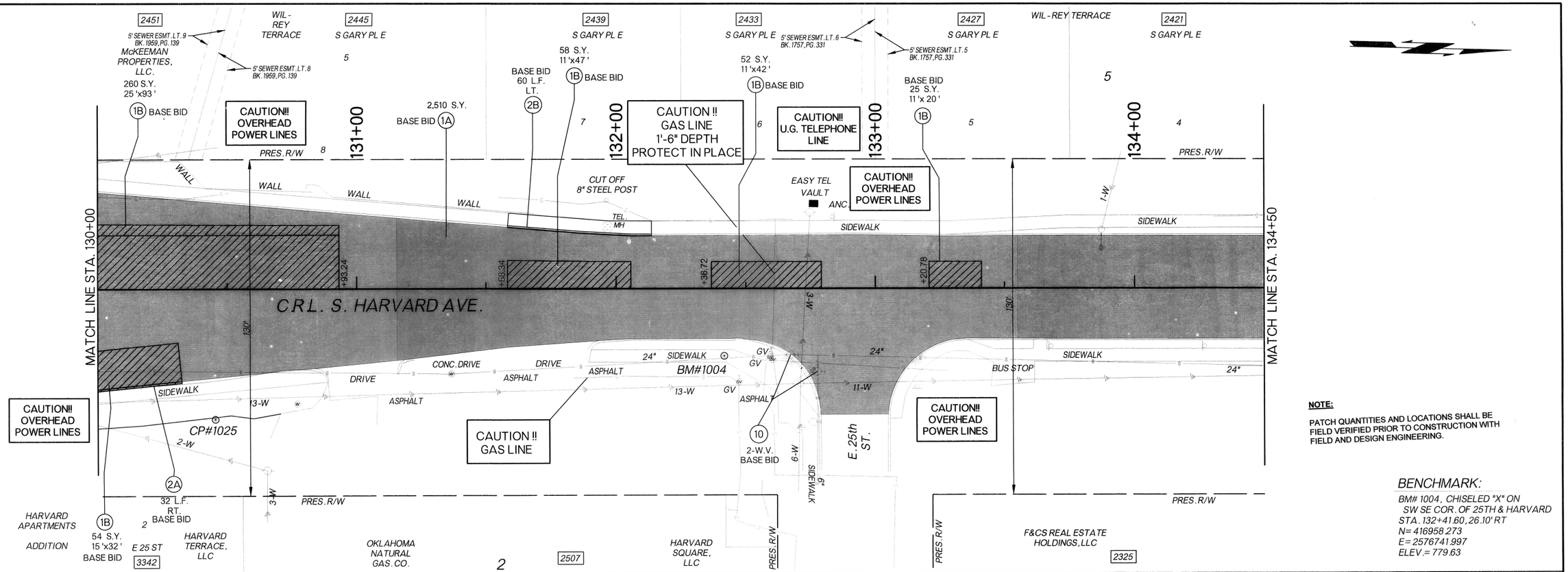
DETAIL 'D'
50 L.F. (2B)
5 L.F. (2B)
10' R
(6) 2 EA. TYPE B
5' R

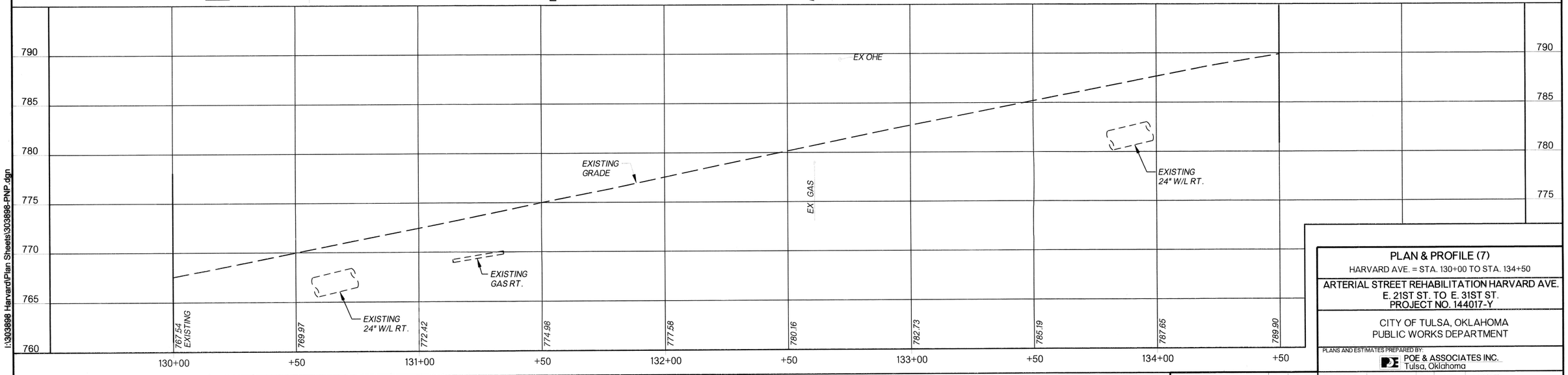
EX OHE

DETAIL 'C'
16 L.F. (2B)
TAPER CURB TO ZERO
(6) 1 EA. TYPE B
(7) 2 S.Y.
(1B) 4 S.Y. 3'x10'
RAMP
LANDING

EXISTING GRADE
EXISTING GAS RT.
EXISTING 24" W/L RT.
EXISTING PUG LT.
EXISTING PUG RT.
EX. 18" RCP LT.
EX. 18" RCP
EX. 30" RCP
EXISTING GAS LT.
EX. 30" RCP RT.
EX. 30" RCP
EX. 30" RCP
EXISTING 24" W/L RT.
EXISTING SAN. SEWER LT.
EX. 12" SS
EX. PUG

| | | |





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2/19/2025

LEGEND

- 1A MILL & OVERLAY
- 1B TYPE 1 PCC PATCH
- 2A CONSTRUCT CURB
- 2B CONSTRUCT CURB & GUTTER
- 3 REPLACE INLET FRAME & GRATE
- 4 CONSTRUCT INLET
- 5 CONSTRUCT DRIVEWAY
- 6 CONSTRUCT CURB RAMP
- 7 CONSTRUCT SIDEWALK
- 8 ADJUST MANHOLE TO GRADE
- 9 ADJUST INLET TO GRADE
- 10 ADJUST WATER OR GAS VALVE TO GRADE
- 11 ADJUST WATER METER BOX TO GRADE
- 12 ADJUST UTILITY TO GRADE
- 13 STAMPED BRICK PATTERN SIDEWALK

TYPE 1 PCC PATCH
DRIVEWAY REPAIR
SIDEWALK
MILL AND OVERLAY

⊠ BH#1 SOIL BORING NO.
○ 1000 CP IP CONTROL POINT
X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG OKIE 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
VERTICAL SCALE IN FEET
5 0 5 10

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 18400 OKLAHOMA 2-27-25

REVISION	BY	DATE

PLAN & PROFILE (7)

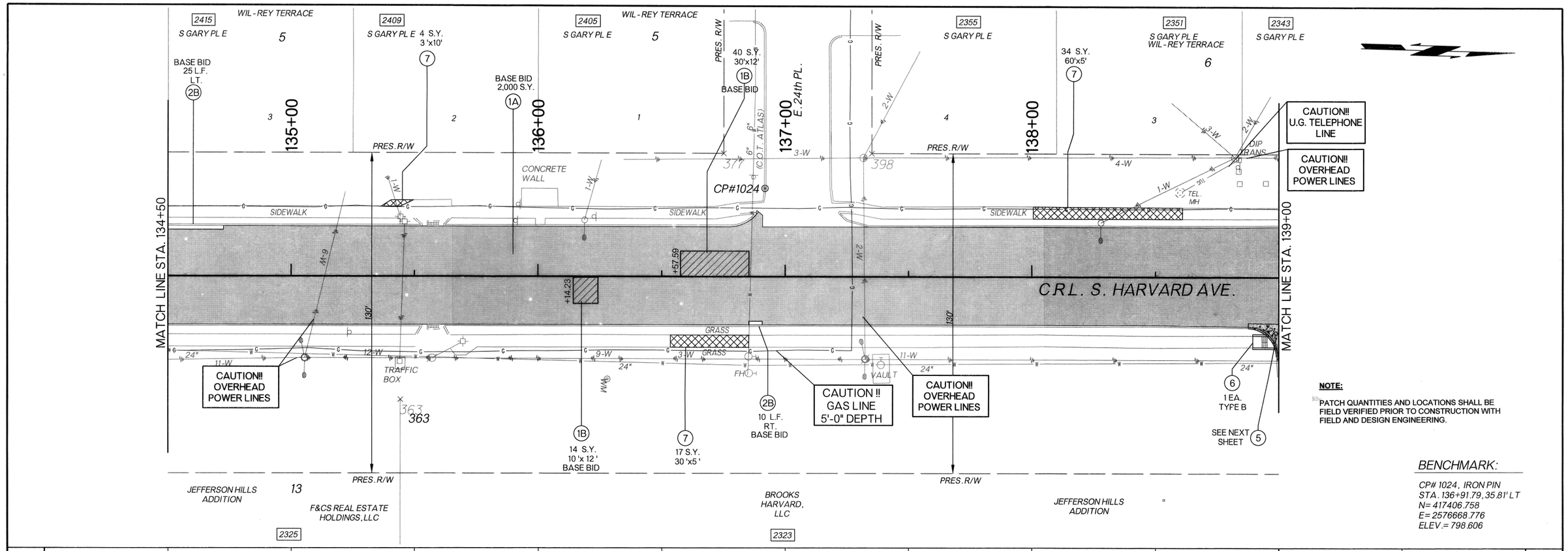
HARVARD AVE. = STA. 130+00 TO STA. 134+50

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE: 1" = 20'	PROJ. MGR.	JC	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.	GJC	5/25	
	FIELD MGR.	Jaii	6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER	HAS	6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP07		DATE:	8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59			SHEET	21 OF 47 SHEETS

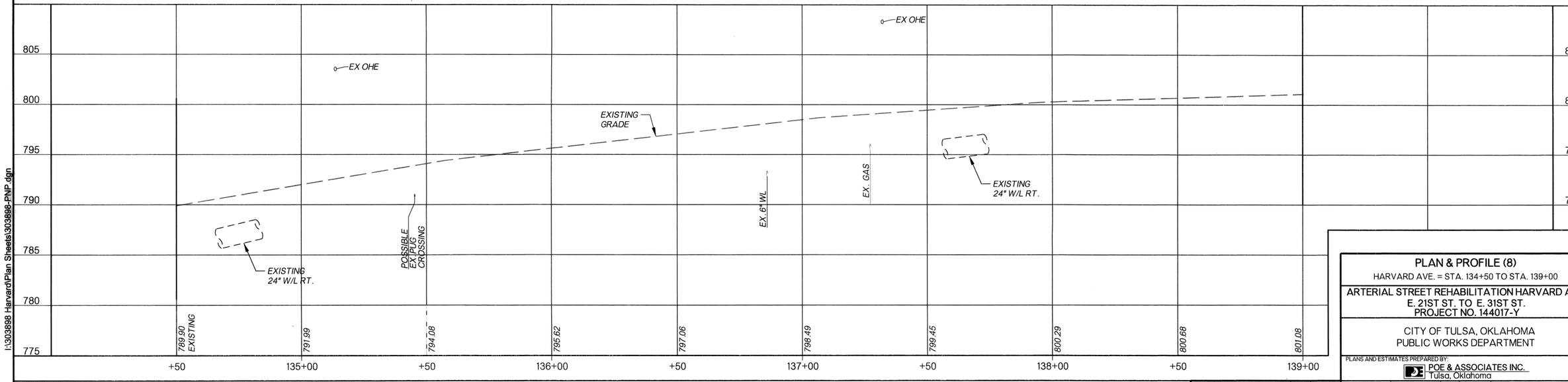


NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

BENCHMARK:

CP# 1024, IRON PIN
STA. 136+91.79, 35.81' LT
N= 417406.758
E= 2576668.776
ELEV.= 798.606



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2/19/2025

LEGEND

1A MILL & OVERLAY	4 CONSTRUCT INLET	9 ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
1B TYPE 1 PCC PATCH	5 CONSTRUCT DRIVEWAY	10 ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
2A CONSTRUCT CURB	6 CONSTRUCT CURB RAMP	11 ADJUST WATER METER BOX TO GRADE	SIDEWALK
2B CONSTRUCT CURB & GUTTER	7 CONSTRUCT SIDEWALK	12 ADJUST UTILITY TO GRADE	MILL AND OVERLAY
3 REPLACE INLET FRAME & GRATE	8 ADJUST MANHOLE TO GRADE	13 STAMPED BRICK PATTERN SIDEWALK	

BH#1 SOIL BORING NO.

1000 CP IP CONTROL POINT

X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG CALL OKIE 811 1-800-522-OKIE

HORIZONTAL SCALE IN FEET 20 0 20 40

VERTICAL SCALE IN FEET 5 0 5 10

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 16840 OKLAHOMA

REVISION	BY	DATE

PLAN & PROFILE (8)

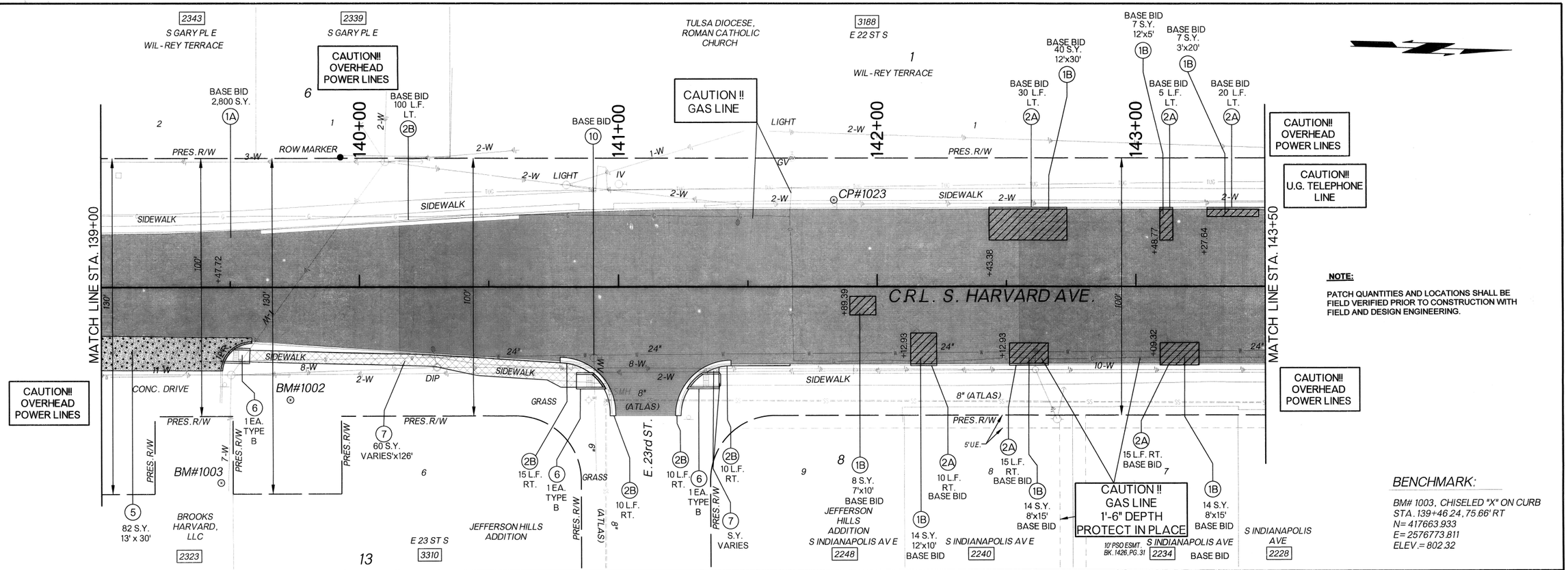
HARVARD AVE. = STA. 134+50 TO STA. 139+00

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JD	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.	DJ	5/25	
	FIELD MGR.	Paul	6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER	HAS	6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP08			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 22 OF 47 SHEETS

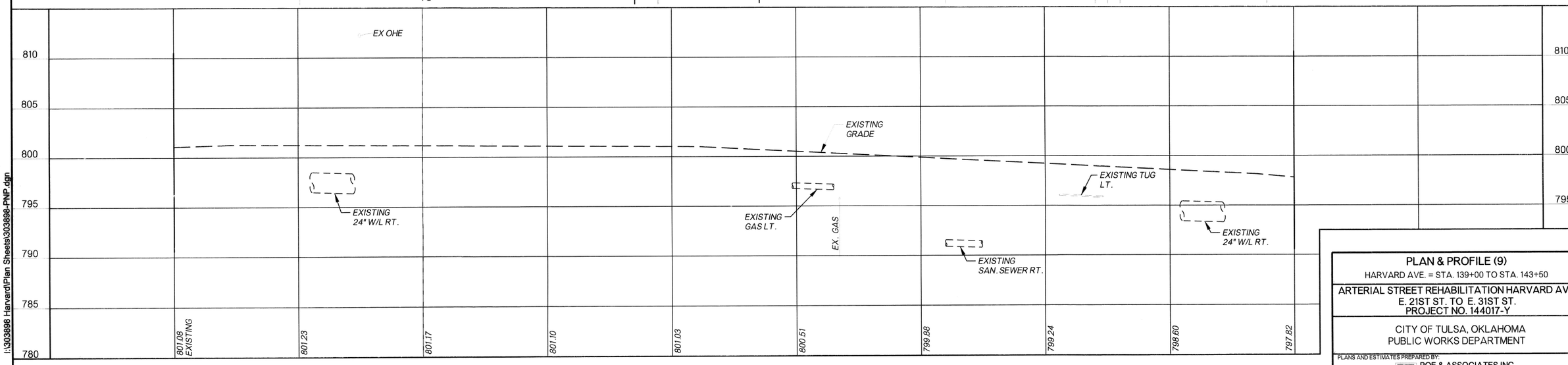


NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

BENCHMARK:

BM# 1003, CHISELED "X" ON CURB
STA. 139+46.24, 75.66' RT
N= 417663.933
E= 2576773.811
ELEV.= 802.32



LEGEND

- (1A) MILL & OVERLAY
- (1B) TYPE 1 PCC PATCH
- (2A) CONSTRUCT CURB
- (2B) CONSTRUCT CURB & GUTTER
- (3) REPLACE INLET FRAME & GRATE
- (4) CONSTRUCT INLET
- (5) CONSTRUCT DRIVEWAY
- (6) CONSTRUCT CURB RAMP
- (7) CONSTRUCT SIDEWALK
- (8) ADJUST MANHOLE TO GRADE
- (9) ADJUST INLET TO GRADE
- (10) ADJUST WATER OR GAS VALVE TO GRADE
- (11) ADJUST WATER METER BOX TO GRADE
- (12) ADJUST UTILITY TO GRADE
- (13) STAMPED BRICK PATTERN SIDEWALK
- TYPE 1 PCC PATCH
- DRIVEWAY REPAIR
- SIDEWALK
- MILL AND OVERLAY
- ⊠ BH#1 SOIL BORING NO.
- ○ 1000 CP IP CONTROL POINT
- X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG OKIE 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
5 0 5 10
VERTICAL SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 19849 OKLAHOMA 8-21-25

REVISION	BY	DATE

PLAN & PROFILE (9)

HARVARD AVE. = STA. 139+00 TO STA. 143+50

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JO	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP09			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 23 OF 47 SHEETS

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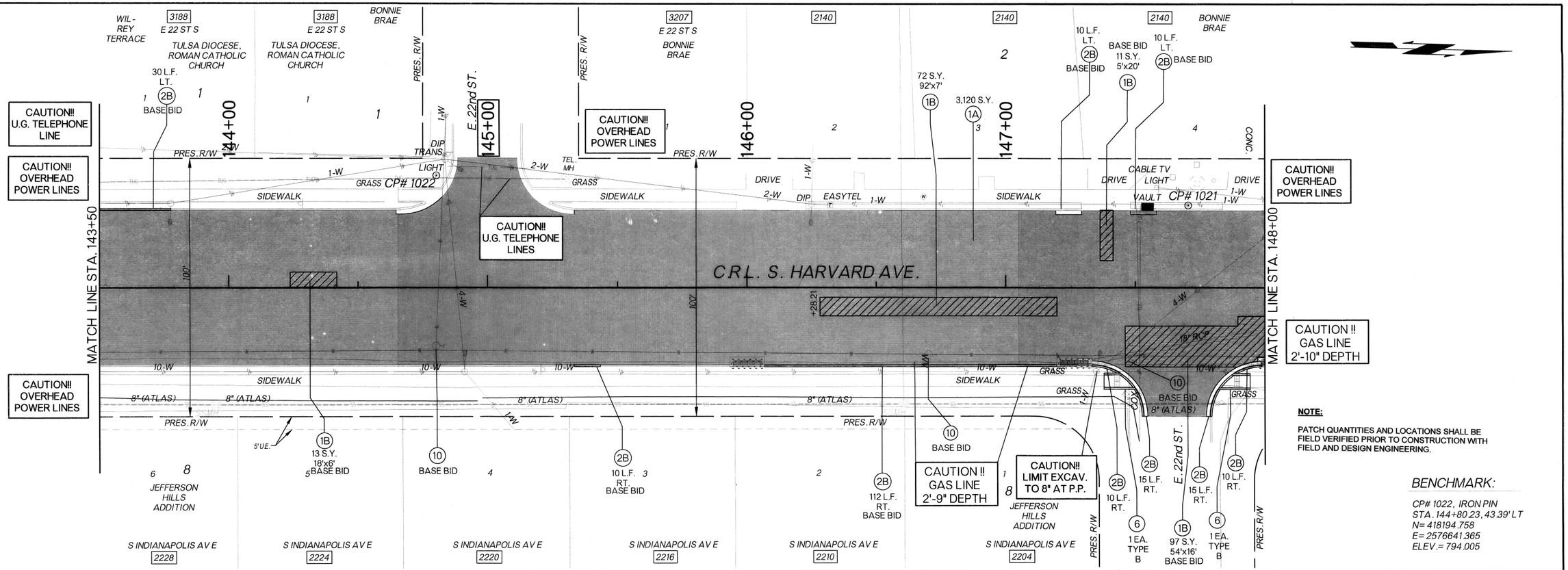
2/19/2025

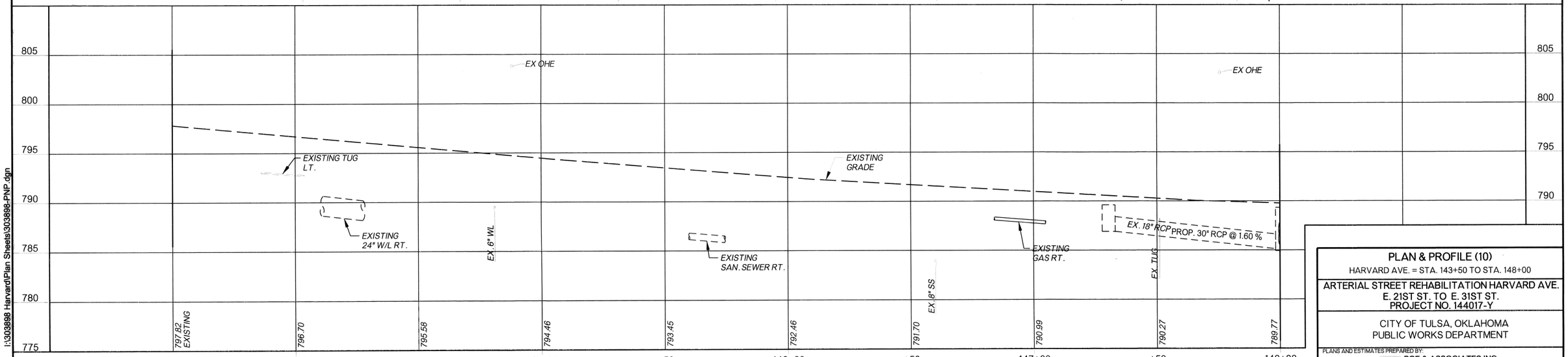


NOTE:

PATCH QUANTITIES AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FIELD AND DESIGN ENGINEERING.

BENCHMARK:

CP# 1022, IRON PIN
STA. 144+80.23, 43.39' LT
N= 418194.758
E= 2576641.365
ELEV.= 794.005



LEGEND

1A MILL & OVERLAY	4 CONSTRUCT INLET	9 ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
1B TYPE 1 PCC PATCH	5 CONSTRUCT DRIVEWAY	10 ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
2A CONSTRUCT CURB	6 CONSTRUCT CURB RAMP	11 ADJUST WATER METER BOX TO GRADE	SIDEWALK
2B CONSTRUCT CURB & GUTTER	7 CONSTRUCT SIDEWALK	12 ADJUST UTILITY TO GRADE	MILL AND OVERLAY
3 REPLACE INLET FRAME & GRATE	8 ADJUST MANHOLE TO GRADE	13 STAMPED BRICK PATTERN SIDEWALK	⊠ BH#1 SOIL BORING NO.
			○ 1000 CP IP CONTROL POINT
			X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG OKIE 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
5 0 5 10
VERTICAL SCALE IN FEET.

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 19810 OKLAHOMA 8-14-25

REVISION	BY	DATE

PLAN & PROFILE (10)

HARVARD AVE. = STA. 143+50 TO STA. 148+00

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE: 1" = 20'	PROJ. MGR.	SO	8/25	
	LEAD ENGR.	DH	8/25	
HORIZONTAL: 1" = 20'	FIELD MGR.		6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER		8/25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP10			DATE: 8/14/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 24 OF 47 SHEETS

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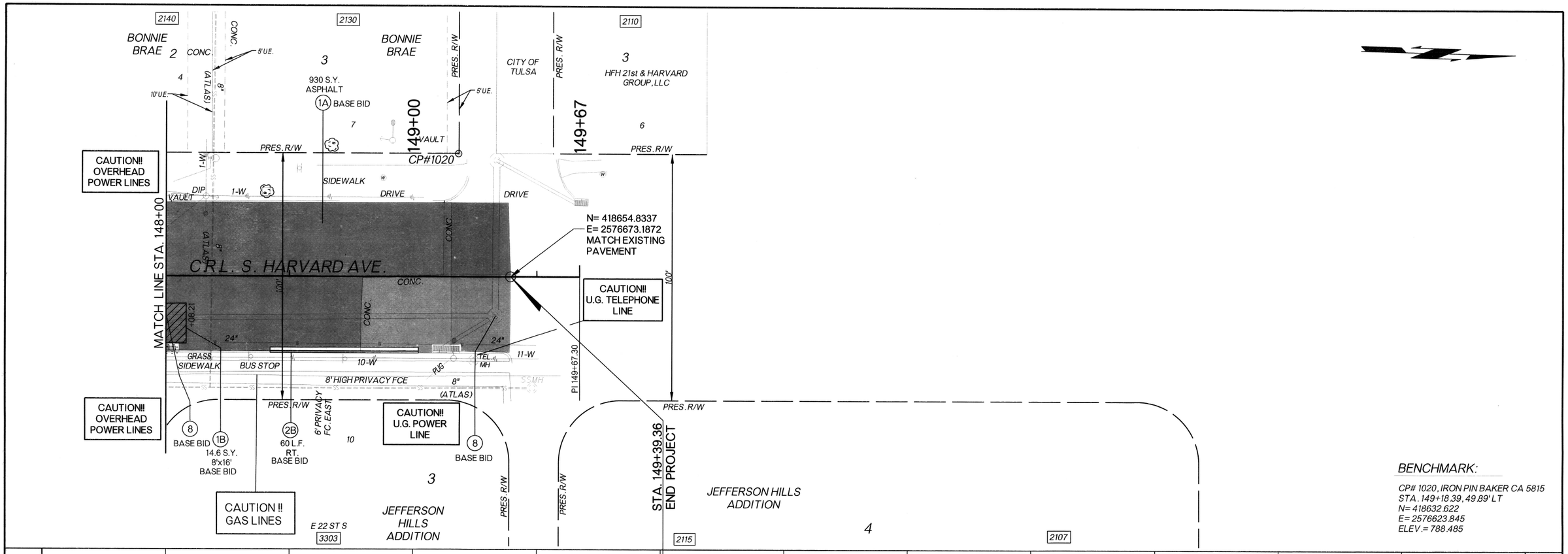
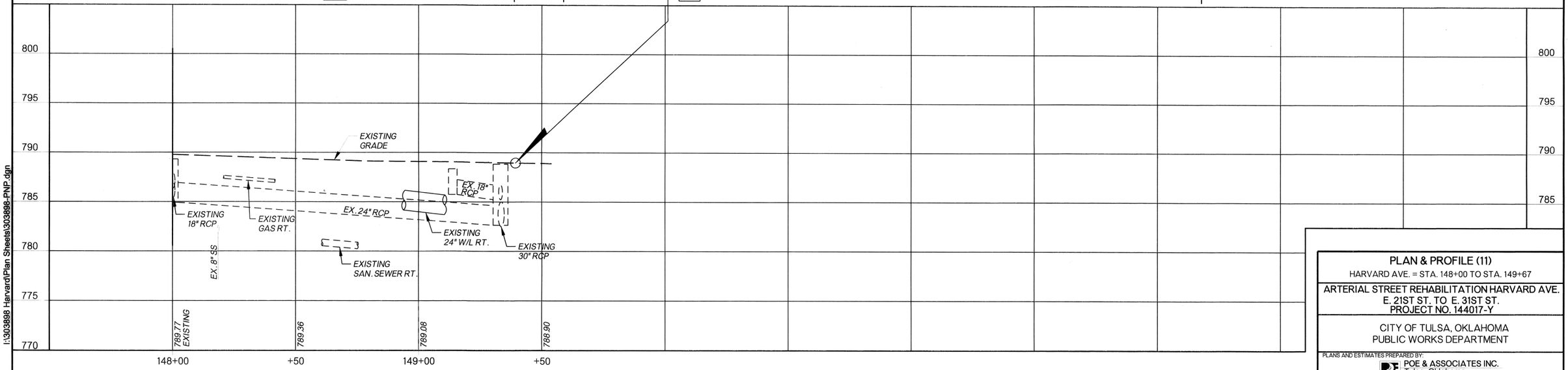
2/19/2025



BENCHMARK:

CP# 1020, IRON PIN BAKER CA 5815
STA. 149+18.39, 49.89' LT
N= 418632.622
E= 2576623.845
ELEV.= 788.485



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2/19/2025

LEGEND

1A MILL & OVERLAY	4 CONSTRUCT INLET	9 ADJUST INLET TO GRADE	TYPE 1 PCC PATCH
1B TYPE 1 PCC PATCH	5 CONSTRUCT DRIVEWAY	10 ADJUST WATER OR GAS VALVE TO GRADE	DRIVEWAY REPAIR
2A CONSTRUCT CURB	6 CONSTRUCT CURB RAMP	11 ADJUST WATER METER BOX TO GRADE	SIDEWALK
2B CONSTRUCT CURB & GUTTER	7 CONSTRUCT SIDEWALK	12 ADJUST UTILITY TO GRADE	MILL AND OVERLAY
3 REPLACE INLET FRAME & GRATE	8 ADJUST MANHOLE TO GRADE	13 STAMPED BRICK PATTERN SIDEWALK	

BH#1 SOIL BORING NO.

1000 CP IP CONTROL POINT

X-XX PROPOSED STRUCTURE NUMBER

BEFORE YOU DIG CALL OKIE 811 1-800-522-OKIE

HORIZONTAL SCALE IN FEET 20 0 20 40

VERTICAL SCALE IN FEET 5 0 5 10

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 16840 OKLAHOMA 2-24-25

REVISION	BY	DATE

PLAN & PROFILE (11)

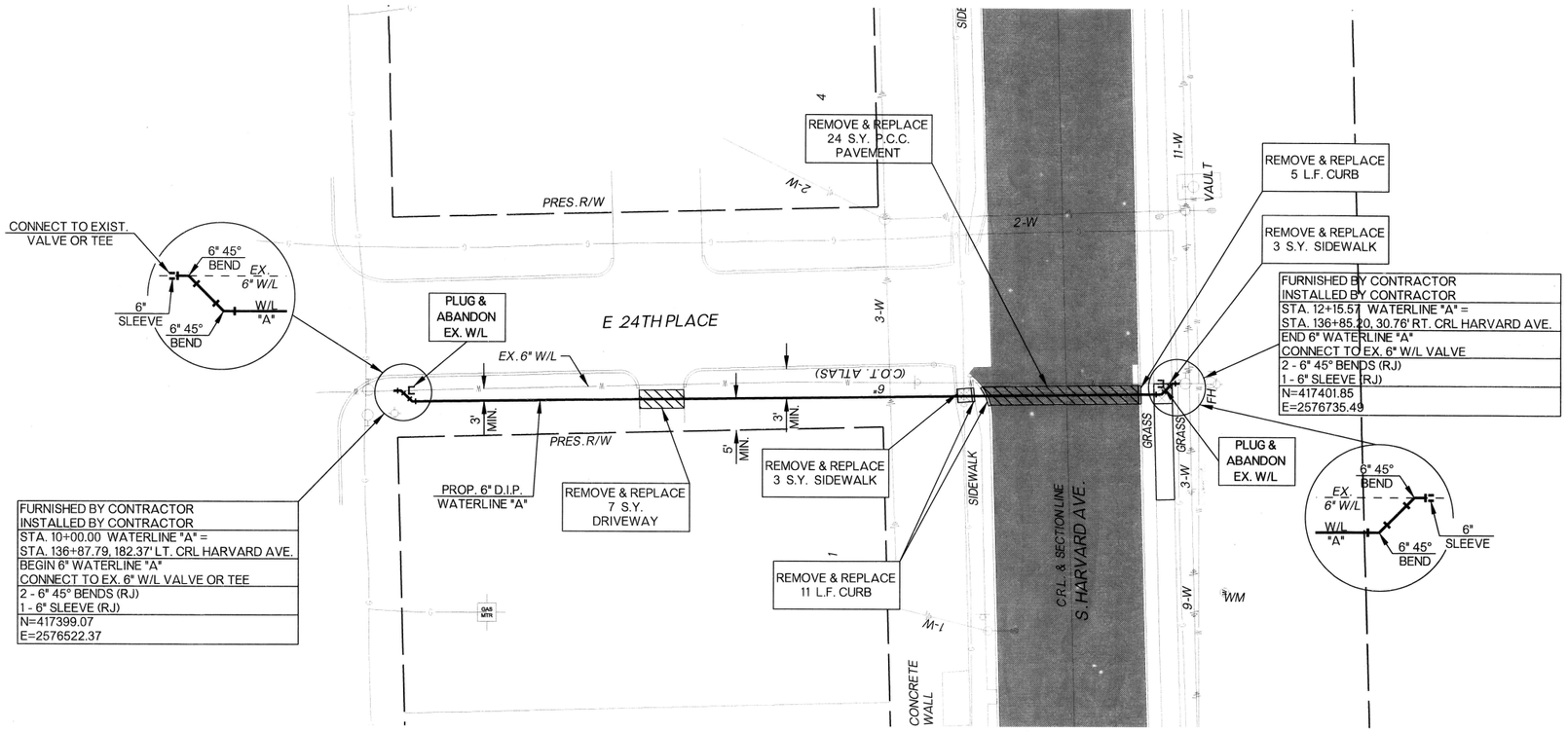
HARVARD AVE. = STA. 148+00 TO STA. 149+67

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

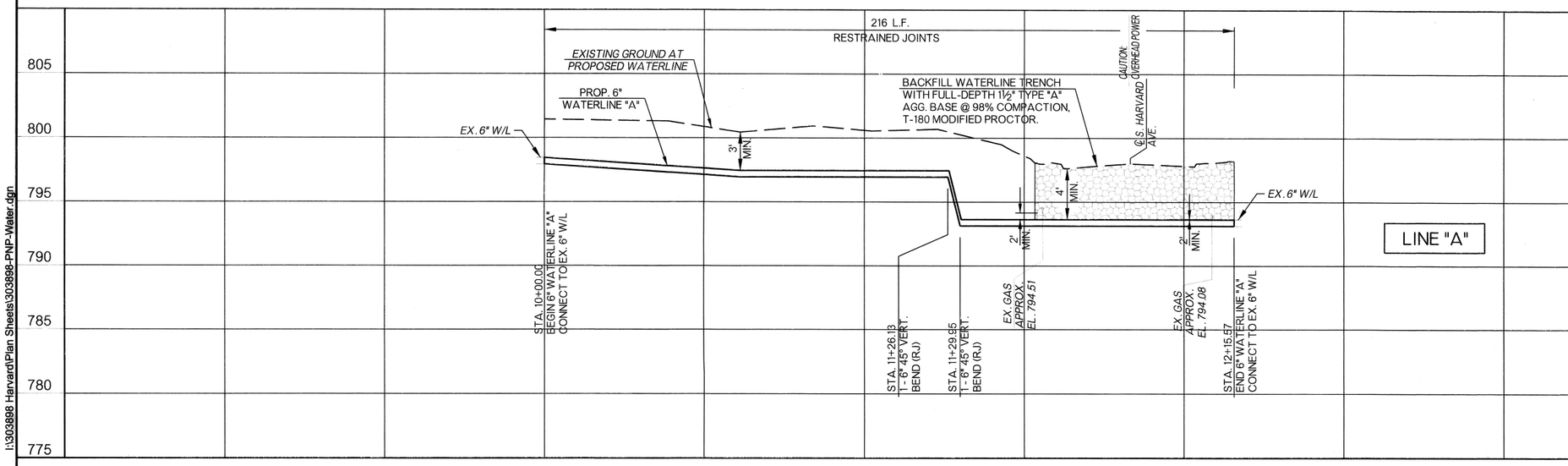
PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.	JB	4/25	
HORIZONTAL: 1" = 20'	LEAD ENGR.			
	FIELD MGR.	[signature]	6/25	
VERTICAL 1" = 5'	RECOMMENDED: HAS 6-25 DESIGN MANAGER			CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-PNP; PNP11			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 25 OF 47 SHEETS



FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR
STA. 10+00.00 WATERLINE "A" = STA. 136+87.79, 182.37' LT. CRL HARVARD AVE.
BEGIN 6" WATERLINE "A" CONNECT TO EX. 6" W/L VALVE OR TEE
2 - 6" 45° BENDS (RJ) 1 - 6" SLEEVE (RJ)
N=417399.07 E=2576522.37

FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR
STA. 12+15.57 WATERLINE "A" = STA. 136+85.20, 30.76' RT. CRL HARVARD AVE.
END 6" WATERLINE "A" CONNECT TO EX. 6" W/L VALVE
2 - 6" 45° BENDS (RJ) 1 - 6" SLEEVE (RJ)
N=417401.85 E=2576735.49

RESTRAINED JOINT LENGTH CALCULATION		
LINE SIZE	FITTING TYPE	RESTRAINED LENGTH*
6"	VALVE	80 L.F.
6"	45° HORIZ.	8 L.F.
6"	22.5° HORIZ.	4 L.F.
6"	11.25° HORIZ.	2 L.F.
6"	TEE (BRANCH)	82 L.F.
6"	45° VERT	33 L.F.
* RESTRAINED JOINT LENGTH SHOWN ARE FROM EACH DIRECTION OF FITTING		



LINE "A"

I:\303898 Harvard\Plan Sheets\303898-PNP-Water.dgn

2/19/2025

LEGEND

- PROPOSED WATERLINE
- X" RESET WATER METER (X = SIZE OF METER)
- CONCRETE CURB REPAIR
- CONCRETE SIDEWALK REPAIR
- 1½" TYPE "A" AGGREGATE BASE
- TYPE I P.C.C. PATCHING
- CONCRETE MEDIAN PATCHING

BEFORE YOU DIG OKIE 811 1-800-522-OKIE CALL OKIE

HORIZONTAL SCALE IN FEET
20 0 20 40
5 0 5 10
VERTICAL SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 26840 OKLAHOMA 8-31-25

REVISION	BY	DATE

TMUA-W 17-26

PLAN & PROFILE WATERLINE (1)

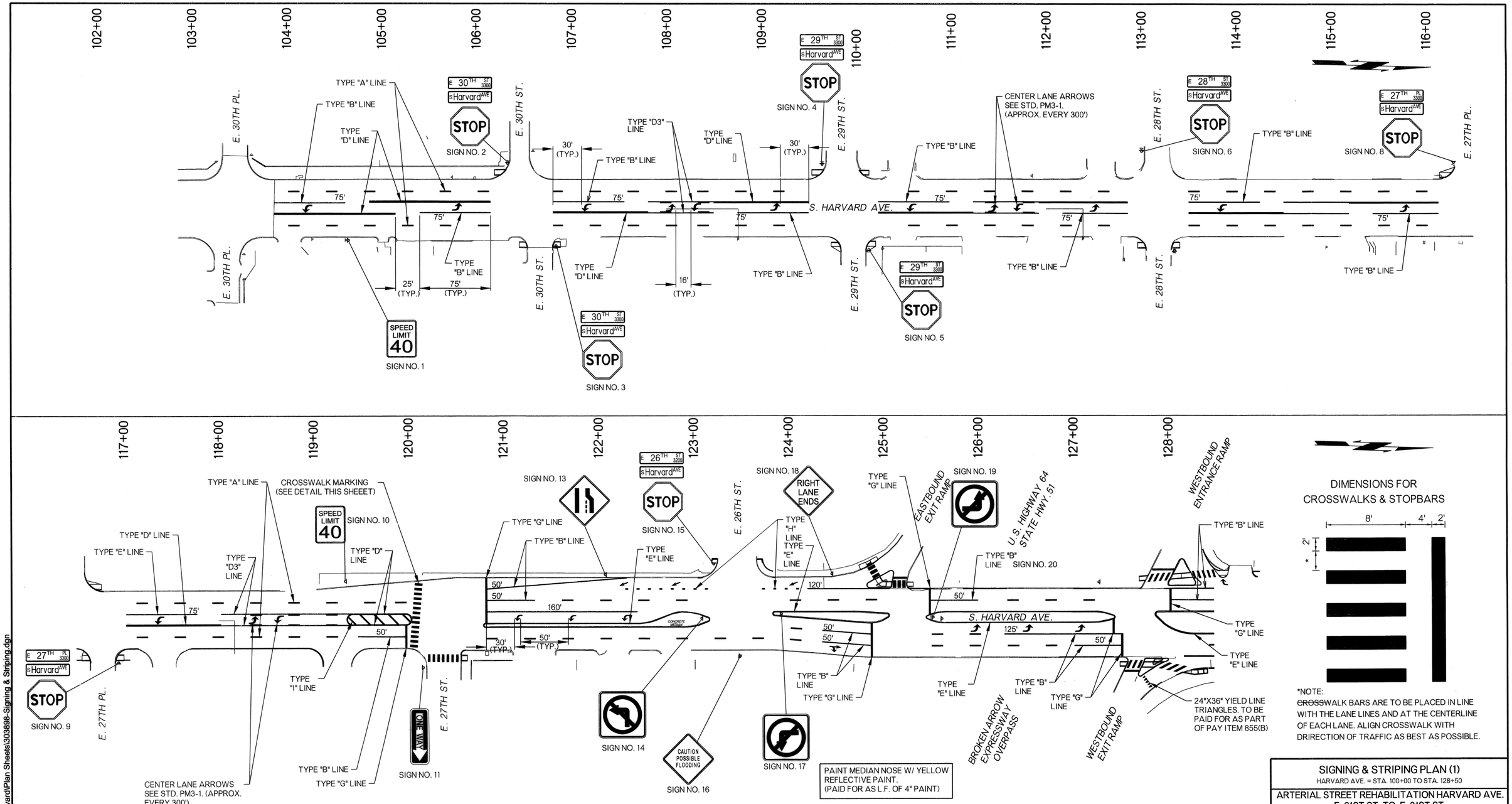
WATERLINE "A"

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 20'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = 20'	LEAD ENGR.	CEW	6/25	
	FIELD MGR.		6/25	
VERTICAL 1" = 5'	RECOMMENDED: DESIGN MANAGER			CITY ENGINEER
FILE: H:\303898	DRAWING: WL-X01			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 26 OF 47 SHEETS



LEGEND

- TYPE "A" LINE — 4" DAHSED WHITE (12', 28', 10'; 40' CYCLE)
- TYPE "B" LINE — 4" SOLID WHITE
- TYPE "D" LINE — 4" DOUBLE SOLID YELLOW
- TYPE "D3" LINE — 4" SOLID YELLOW LINE WITH INSIDE DASHED YELLOW LINE. 2-WAY LEFT TURN ARROWS
- TYPE "E" LINE — 4" SOLID YELLOW
- TYPE "F" LINE — 12" SOLID WHITE (NOT USED)
- TYPE "G" LINE — 24" SOLID WHITE (STOP LINE)
- TYPE "H" LINE — 4" WHITE DOTTED LANE LINE (3' STRIPE W/ 9' SPACING)
- TYPE "I" LINE — 8" YELLOW DIAGONAL (45°, 15' C/C)

PAINT MEDIAN NOSE W/ YELLOW REFLECTIVE PAINT. (PAID FOR AS L.F. OF 4" PAINT)

NOTE:

SIGNING AND STRIPING PLANS ARE FOR BIDDING PURPOSES ONLY. FINAL SIGNING AND STRIPING LAYOUTS WILL BE PROVIDED PRIOR TO PLACEMENT.

50 0 50 100
SCALE IN FEET

DIMENSIONS FOR CROSSWALKS & STOPBARS

*NOTE:
~~CROSS~~WALK BARS ARE TO BE PLACED IN LINE WITH THE LANE LINES AND AT THE CENTERLINE OF EACH LANE. ALIGN CROSSWALK WITH DRIRECTION OF TRAFFIC AS BEST AS POSSIBLE.

REGISTERED PROFESSIONAL ENGINEER — GREGORY JAMES COKER — 16840 — OKLAHOMA — 3/10/25

REVISION	BY	DATE

SIGNING & STRIPING PLAN (1)

HARVARD AVE. = STA. 100+00 TO STA. 128+50

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 50'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.	MWS	7/25	
	FIELD MGR.	BKN	6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HBS	6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-Signing & Striping			DATE: 8/9/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 27 OF 47 SHEETS

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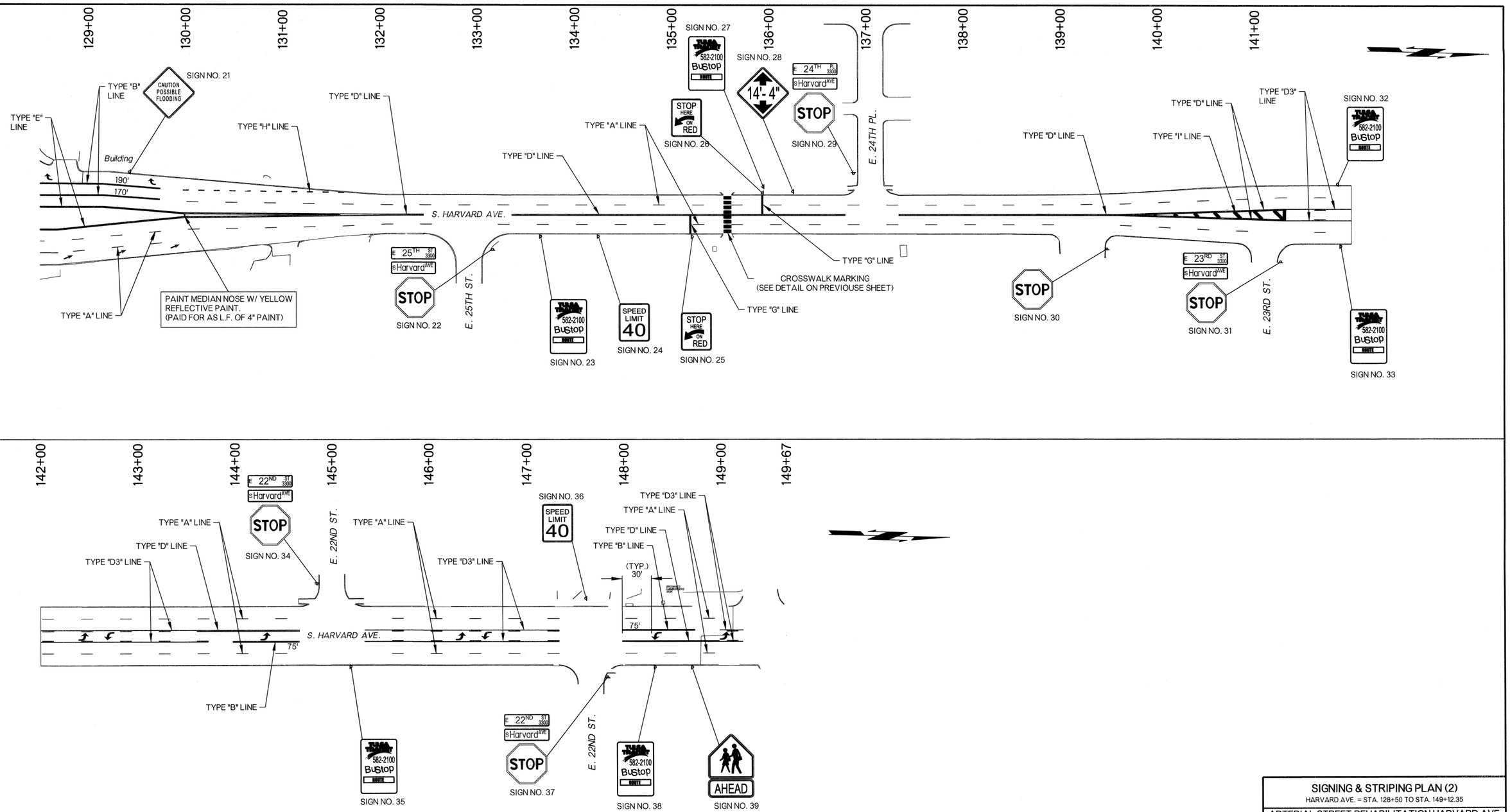

LEGEND

- TYPE "A" LINE — 4" DAHSED WHITE (12', 28', 10'; 40' CYCLE)
- TYPE "B" LINE — 4" SOLID WHITE
- TYPE "D" LINE — 4" DOUBLE SOLID YELLOW
- TYPE "D3" LINE — 4" SOLID YELLOW LINE WITH INSIDE DASHED YELLOW LINE. 2-WAY LEFT TURN ARROWS
- TYPE "E" LINE — 4" SOLID YELLOW
- TYPE "F" LINE — 12" SOLID WHITE (NOT USED)
- TYPE "G" LINE — 24" SOLID WHITE (STOP LINE)
- TYPE "H" LINE — 4" WHITE DOTTED LANE LiNE (3' STRIPE W/ 9' SPACING)
- TYPE "I" LINE — 8" YELLOW DIAGONAL (45°; 15' C/C)

50 0 50 100
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER — GREGORY JAMES COKER — 19841 — OKLAHOMA — 3-10-25

REVISION	BY	DATE

SIGNING & STRIPING PLAN (2)

HARVARD AVE. = STA. 128+50 TO STA. 149+12.35

ARTERIAL STREET REHABILITATION HARVARD AVE. E. 21ST ST. TO E. 31ST ST. PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 50'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.	MWS	7/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED:	HAS	6.25	CITY ENGINEER
	DESIGN MANAGER			
FILE: H:\303898	DRAWING: 303898-Signing & Striping			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 28 OF 47 SHEETS

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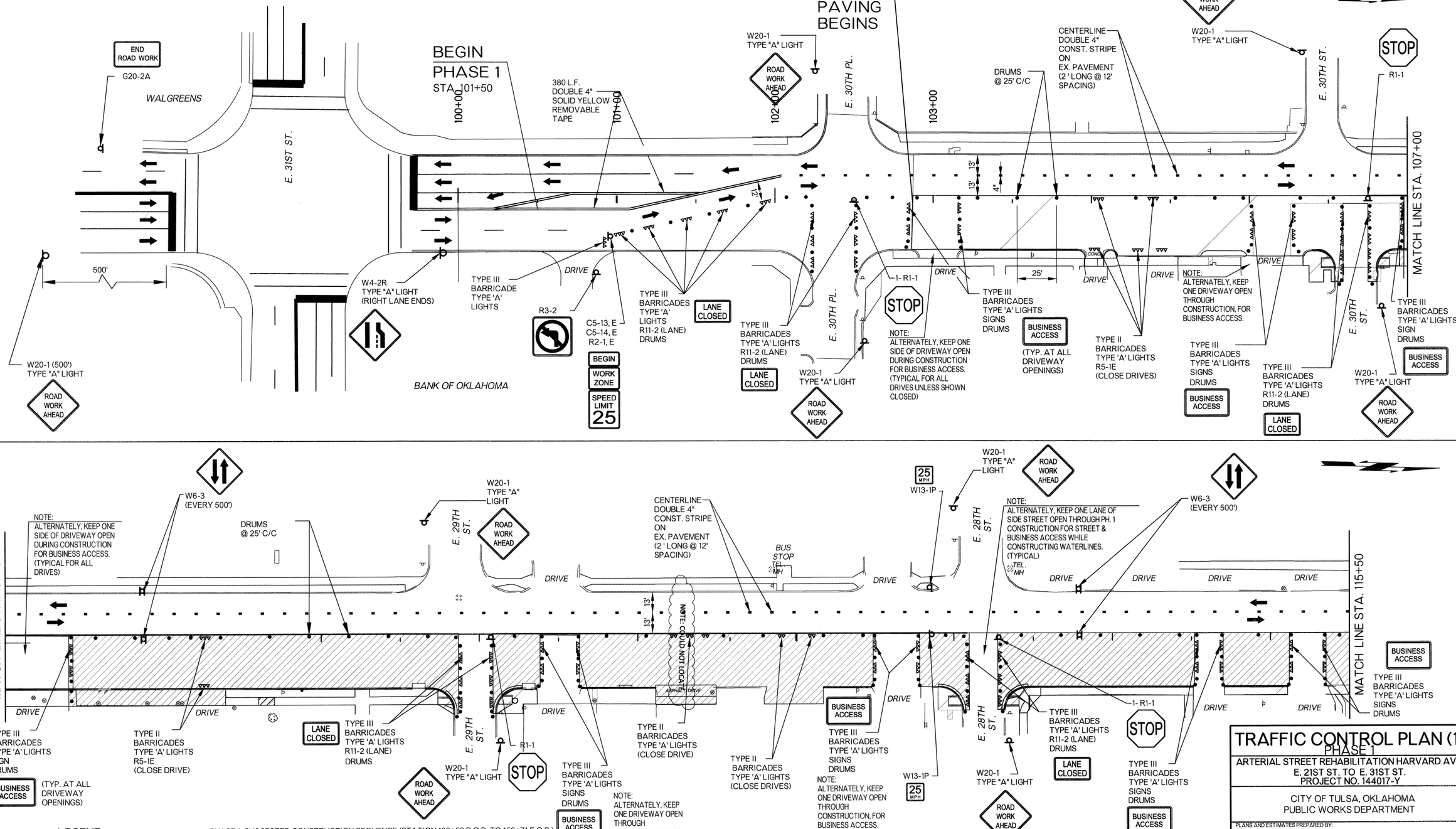

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 1 SUGGESTED CONSTRUCTION SEQUENCE (STATION 100+50 B.O.P. TO 150+71 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON EXISTING SOUTHBOUND LANES. (STATION 100+50 B.O.P. TO 150+71 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM CENTER AND NORTHBOUND LANES.
4. PERFORM PC PAVEMENT REPAIRS, DRAINAGE REPAIRS , SIDEWALK AND RAMPS.

THE FOLLOWING SUGGESTED CONSTRUCTION SEQUENCE SHOWN FOR PHASES 1-3 IS FOR BIDDING PURPOSES ONLY. THE CITY OF TULSA MAY REQUEST MODIFICATION TO THE PLAN. THE CONTRACTOR SHALL MEET WITH THE CITY TO DISCUSS THE CONSTRUCTION SEQUENCE AND SUBMIT CONSTRUCTION SEQUENCE PLAN FOR APPROVAL PRIOR TO CONSTRUCTION.

NOTE:
REMOVE EXISTING STRIPING THAT CONFLICTS WITH TEMPORARY CONSTRUCTION ZONE STRIPING.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
6810
OKLAHOMA
4-7-25

TRAFFIC CONTROL PLAN (1)
PHASE 1

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020
	DESIGNED	GJC	2020
	SURVEY	MW	2018
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25
	FIELD MGR.		6/25
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER		6.25

APPROVED: CITY ENGINEER

FILE: H:\303898 DRAWING: 303898-Traffic Control_Ph DATE: 8/4/2025

ATLAS PAGE NO: 31, 32, 58, 59

SHEET 29 OF 47 SHEETS

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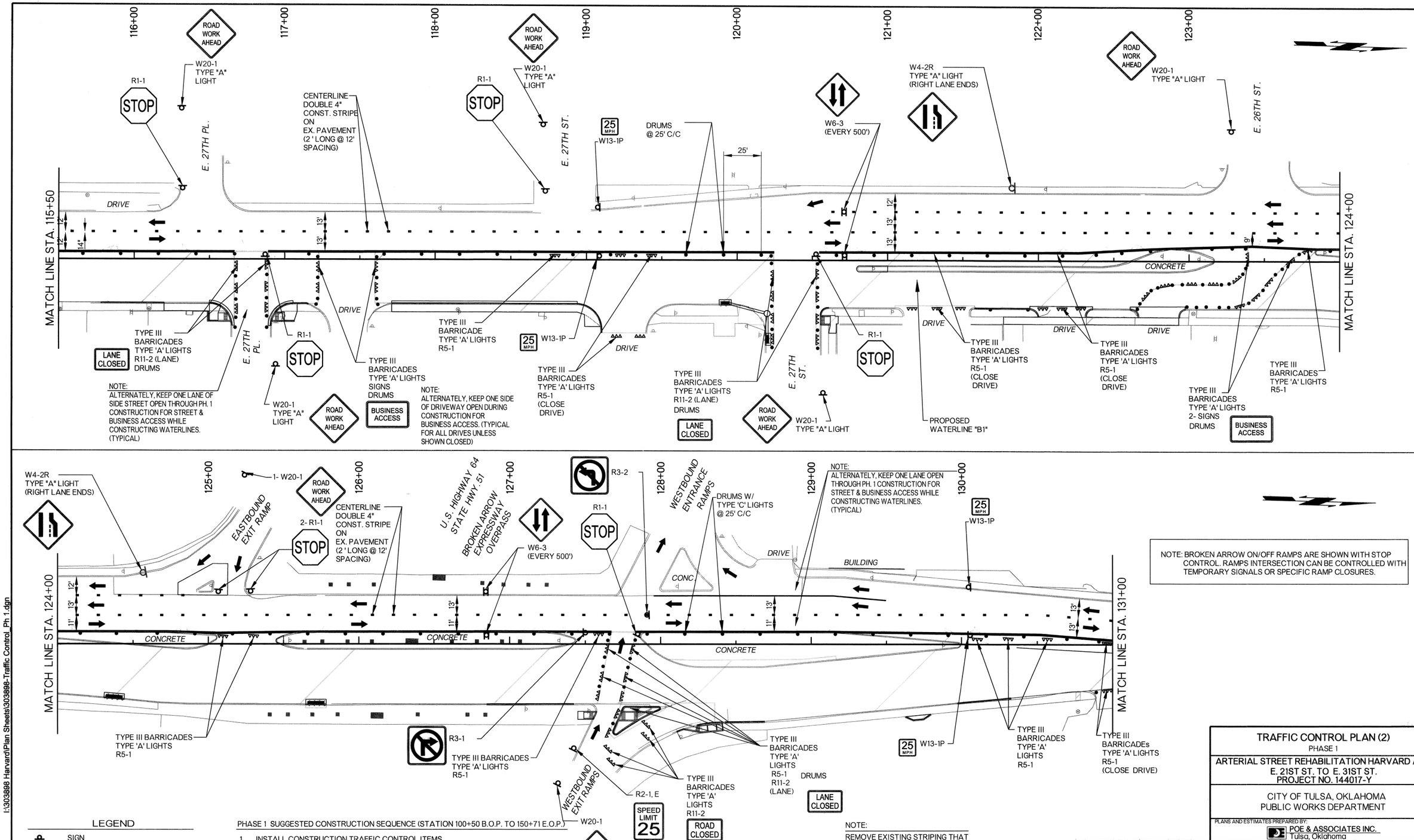

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 1 SUGGESTED CONSTRUCTION SEQUENCE (STATION 100+50 B.O.P. TO 150+71 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON EXISTING SOUTHBOUND LANES. (STATION 100+50 B.O.P. TO 150+71 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM CENTER AND NORTHBOUND LANES.
4. PERFORM PC PAVEMENT REPAIRS, DRAINAGE REPAIRS , SIDEWALK AND RAMPS.

NOTE:
REMOVE EXISTING STRIPING THAT CONFLICTS WITH TEMPORARY CONSTRUCTION ZONE STRIPING.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (2)

PHASE 1

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER
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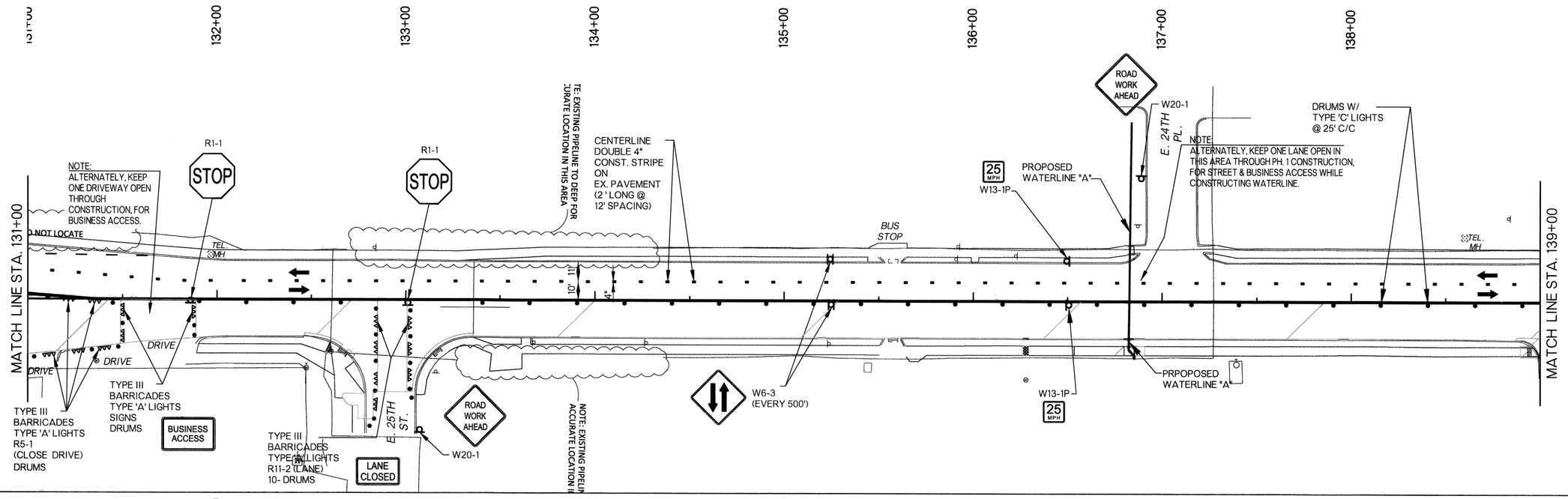

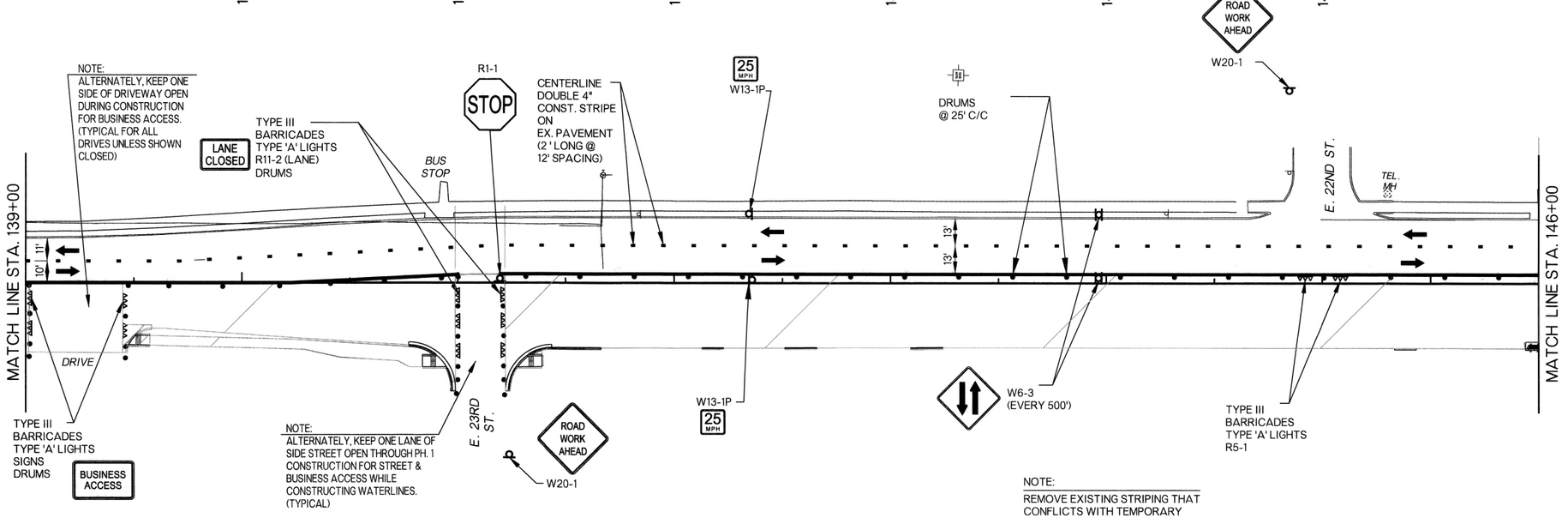

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 1 SUGGESTED CONSTRUCTION SEQUENCE (STATION 100+50 B.O.P. TO 150+71 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON EXISTING SOUTHBOUND LANES. (STATION 100+50 B.O.P. TO 150+71 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM CENTER AND NORTHBOUND LANES.
4. PERFORM PC PAVEMENT REPAIRS, DRAINAGE REPAIRS , SIDEWALK AND RAMPS.

NOTE:
REMOVE EXISTING STRIPING THAT CONFLICTS WITH TEMPORARY CONSTRUCTION ZONE STRIPING.

TRAFFIC CONTROL PLAN (3)

PHASE 1

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES JOKER
19840
OKLAHOMA
7-7-25

REVISION	BY	DATE

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020
	DESIGNED	GJC	2020
	SURVEY	MW	2018
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = NA	LEAD ENGR.		5/15
	FIELD MGR.		6/25
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER		6.25

APPROVED: CITY ENGINEER

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ATLAS PAGE NO: 31, 32, 58, 59 SHEET 31 OF 47 SHEETS

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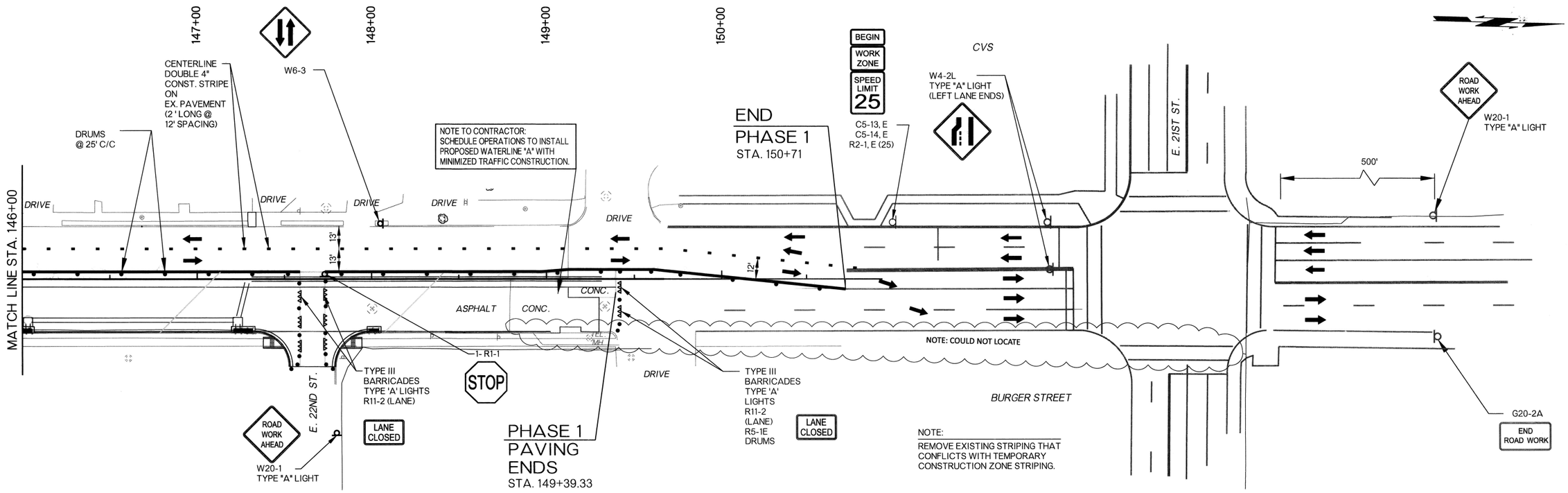

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 1 SUGGESTED CONSTRUCTION SEQUENCE (STATION 100+50 B.O.P. TO 150+71 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON EXISTING SOUTHBOUND LANES. (STATION 100+50 B.O.P. TO 150+71 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM CENTER AND NORTHBOUND LANES.
4. PERFORM PC PAVEMENT REPAIRS, DRAINAGE REPAIRS , SIDEWALK AND RAMPS.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES BAKER
16840
OKLAHOMA
4/7/25

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (4)

PHASE 1

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
	LEAD ENGR.	DJJ	5/25	
HORIZONTAL: 1" = NA	FIELD MGR.	BKN	6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6.25	CITY ENGINEER

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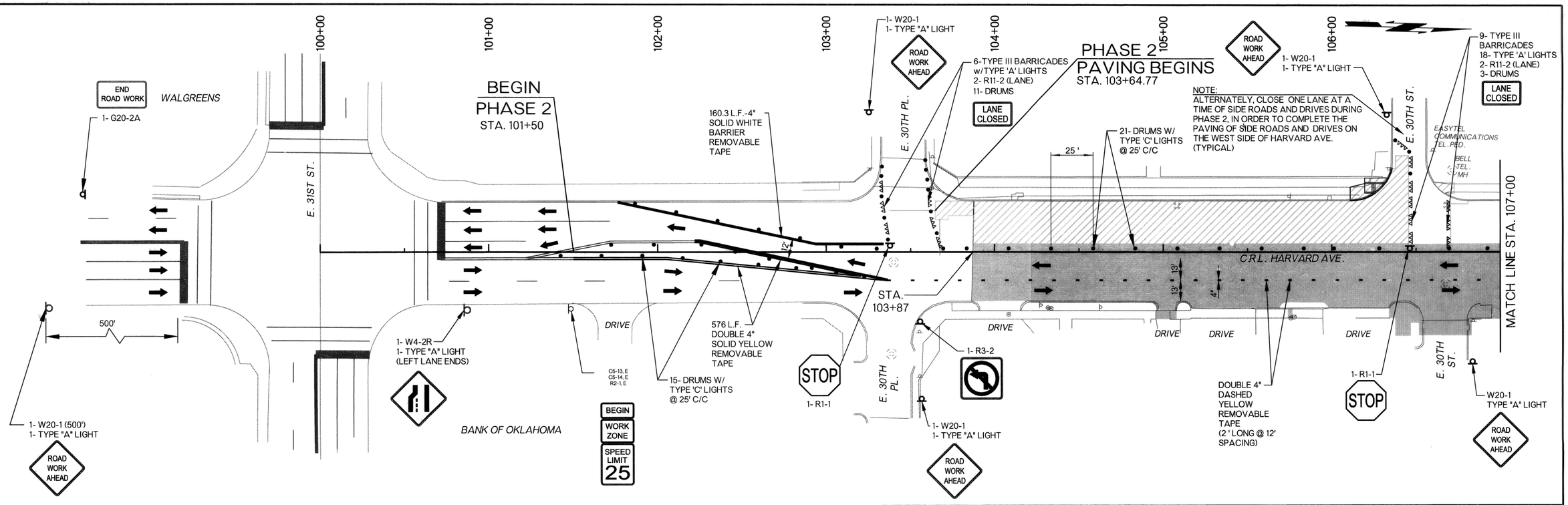
4/3/2025



LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 2 SUGGESTED CONSTRUCTION SEQUENCE (STATION 101+50 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON COMPLETED NORTHBOUND LANES. (STATION 101+50 B.O.P. TO 150+00 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM SOUTHBOUND LANES.
4. INSTALL NEW WATERLINE A. FINISH CONNECTION TO WATERLINE B1 &B2.
5. COMPLETE SANITARY SEWER LINE RELOCATION.
4. PERFORM PC PAVEMENT REPAIRS, NEW DRAINAGE STRUCTURES, SIDEWALK AND RAMPS.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES BOKER
19840
OKLAHOMA
5-27-25

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (1)

PHASE 2

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25	
	FIELD MGR.			
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER		6-25	CITY ENGINEER

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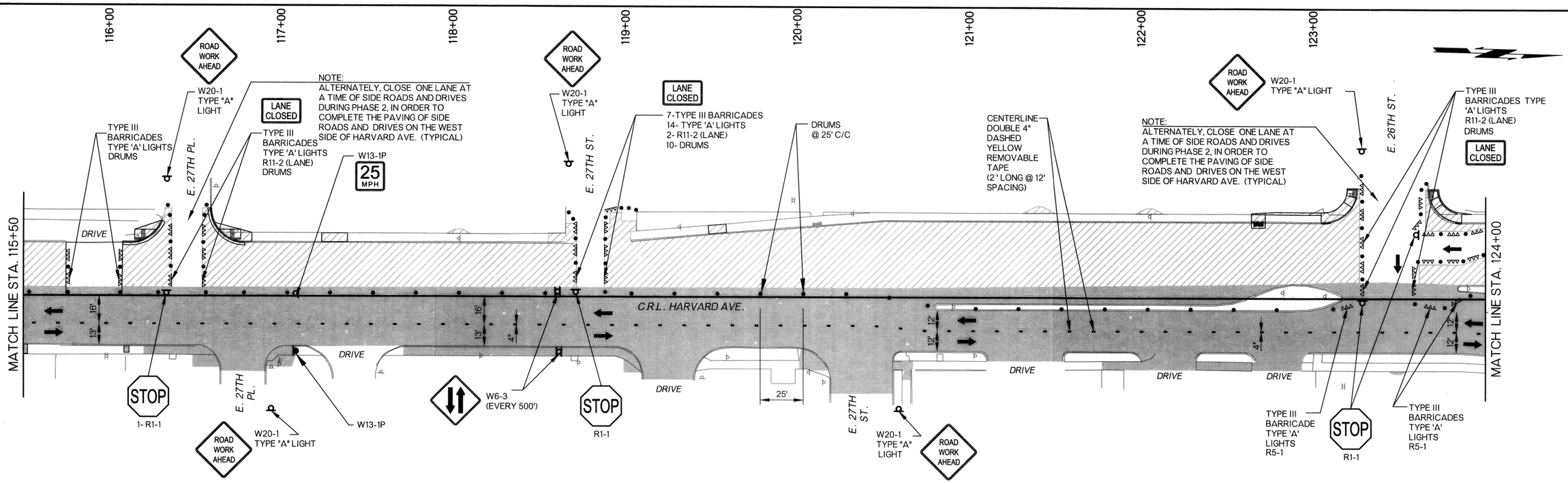

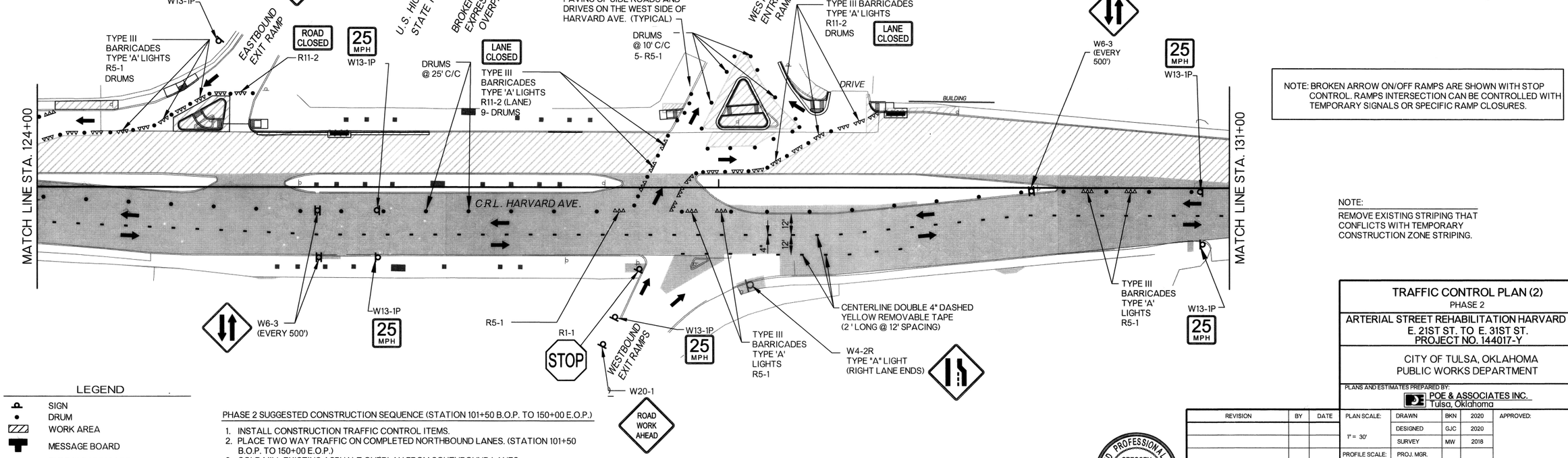

NOTE: BROKEN ARROW ON/OFF RAMPS ARE SHOWN WITH STOP CONTROL. RAMPS INTERSECTION CAN BE CONTROLLED WITH TEMPORARY SIGNALS OR SPECIFIC RAMP CLOSURES.

NOTE:
REMOVE EXISTING STRIPING THAT CONFLICTS WITH TEMPORARY CONSTRUCTION ZONE STRIPING.

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 2 SUGGESTED CONSTRUCTION SEQUENCE (STATION 101+50 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON COMPLETED NORTHBOUND LANES. (STATION 101+50 B.O.P. TO 150+00 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM SOUTHBOUND LANES.
4. PERFORM PC PAVEMENT REPAIRS, NEW DRAINAGE STRUCTURES, SIDEWALK AND RAMPS.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES DICKER
16840
OKLAHOMA

TRAFFIC CONTROL PLAN (2)

PHASE 2

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020
	DESIGNED	GJC	2020
	SURVEY	MW	2018
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = NA	LEAD ENGR.	GJ	5/25
	FIELD MGR.	BKN	6/25
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6.25

APPROVED:
CITY ENGINEER
DATE: 8/4/2025

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SHEET 34 OF 47 SHEETS

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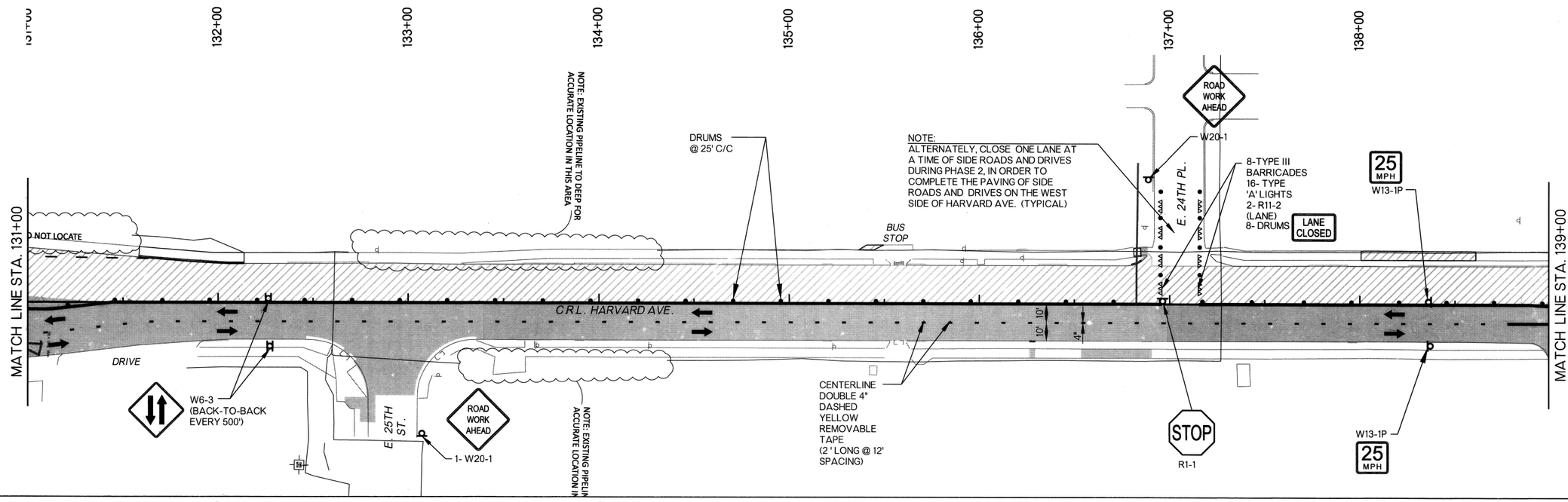

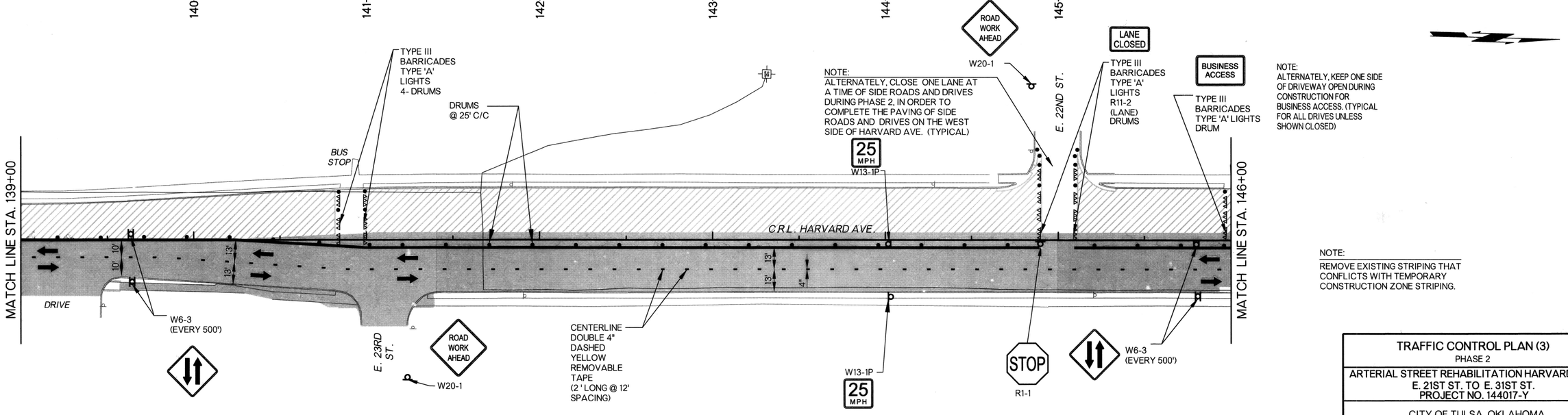

NOTE:
REMOVE EXISTING STRIPING THAT CONFLICTS WITH TEMPORARY CONSTRUCTION ZONE STRIPING.

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 2 SUGGESTED CONSTRUCTION SEQUENCE (STATION 101+50 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON COMPLETED NORTHBOUND LANES. (STATION 101+50 B.O.P. TO 150+00 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM SOUTHBOUND LANES.
4. PERFORM PC PAVEMENT REPAIRS, NEW DRAINAGE STRUCTURES, SIDEWALK AND RAMPS.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA
7-1-25

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (3)

PHASE 2

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		7/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER		6-25	CITY ENGINEER
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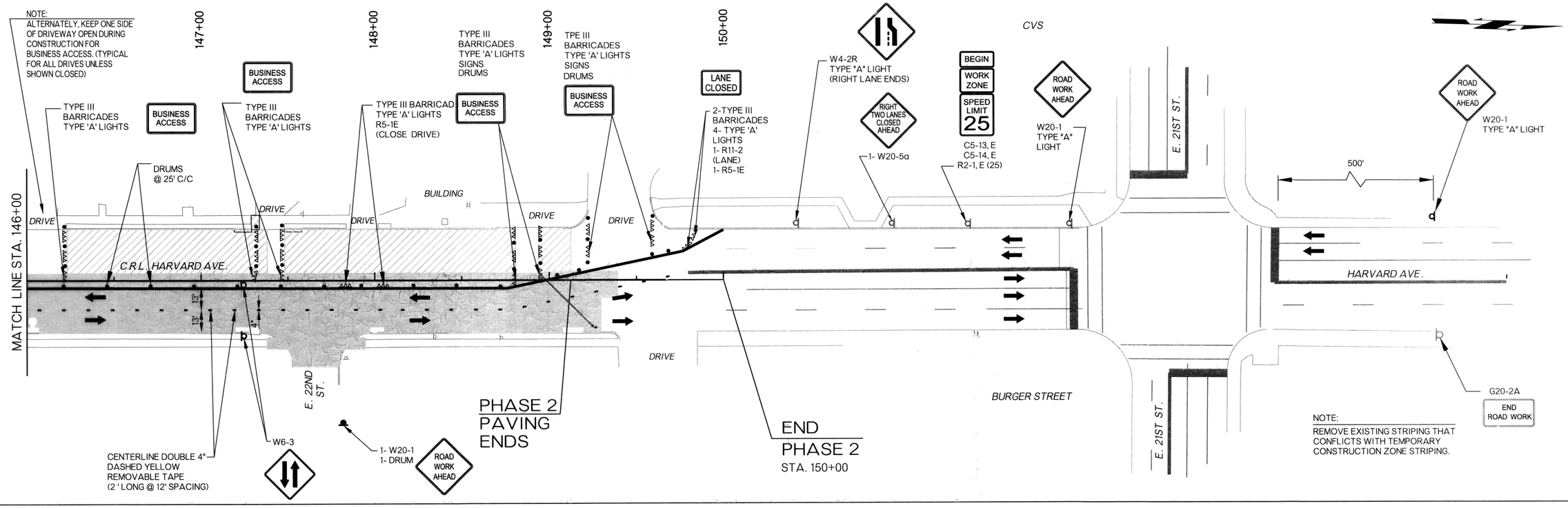

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 2 SUGGESTED CONSTRUCTION SEQUENCE (STATION 101+50 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS.
2. PLACE TWO WAY TRAFFIC ON COMPLETED NORTHBOUND LANES. (STATION 101+50 B.O.P. TO 150+00 E.O.P.)
3. COLD MILL EXISTING ASPHALT OVERLAY FROM SOUTHBOUND LANES.
4. INSTALL NEW WATERLINE A. FINISH CONNECTION TO WATERLINE B1 &B2.
5. PERFORM PC PAVEMENT REPAIRS, NEW DRAINAGE STRUCTURES, SIDEWALK AND RAMPS.

REGISTERED PROFESSIONAL ENGINEER — GREGORY JAMES COKER 16940 — OKLAHOMA — 8-7-25

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (4)

PHASE 2

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25.	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED DESIGN MANAGER		6·25	CITY ENGINEER
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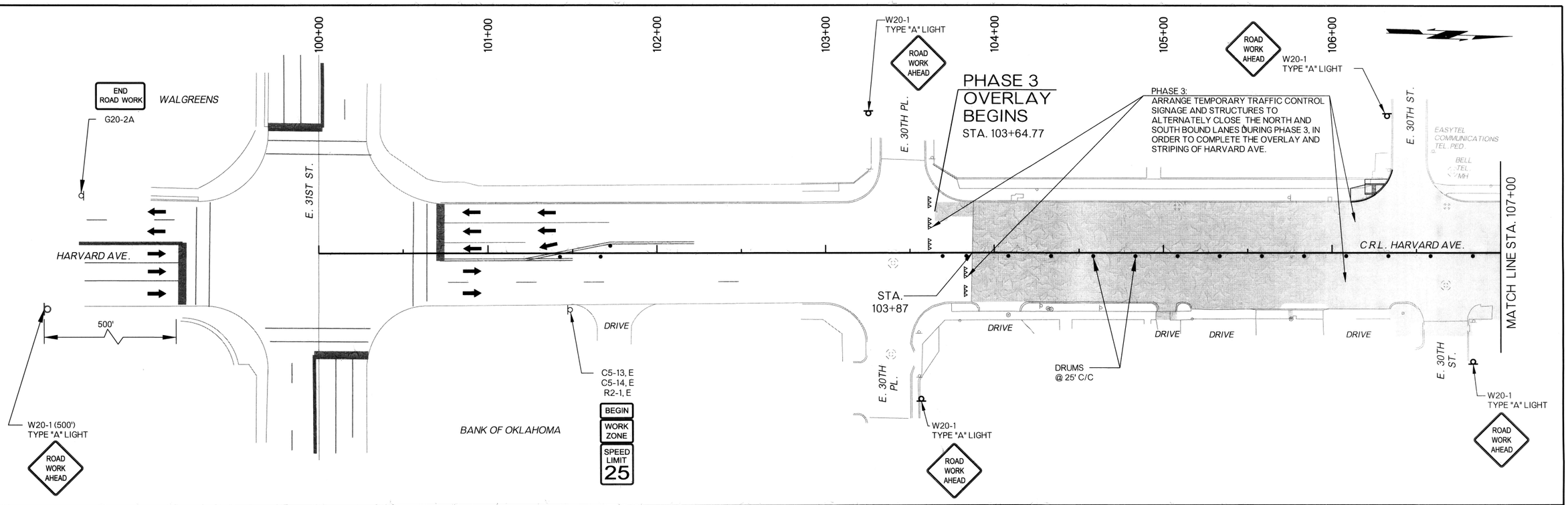

PHASE 3 SUGGESTED CONSTRUCTION SEQUENCE (STATION 103+64.77 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS TO ALTERNATE BETWEEN NORTH AND SOUTH BOUND LANES TO OVERLAY AND STRIPE HARVARD AVE.
2. INSTALL S5 ASPHALT COURSE AND FABRIC REINFORCEMENT.
3. PLACE 2" S4 ASPHALT CONCRETE.
4. INSTALL PERMANENT STRIPING & SIGNING.

REGISTERED PROFESSIONAL ENGINEER GREGORY JAMES COKER 16840 OKLAHOMA

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (1)
PHASE 3 - OVERLAY & STRIPING

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6-25	CITY ENGINEER
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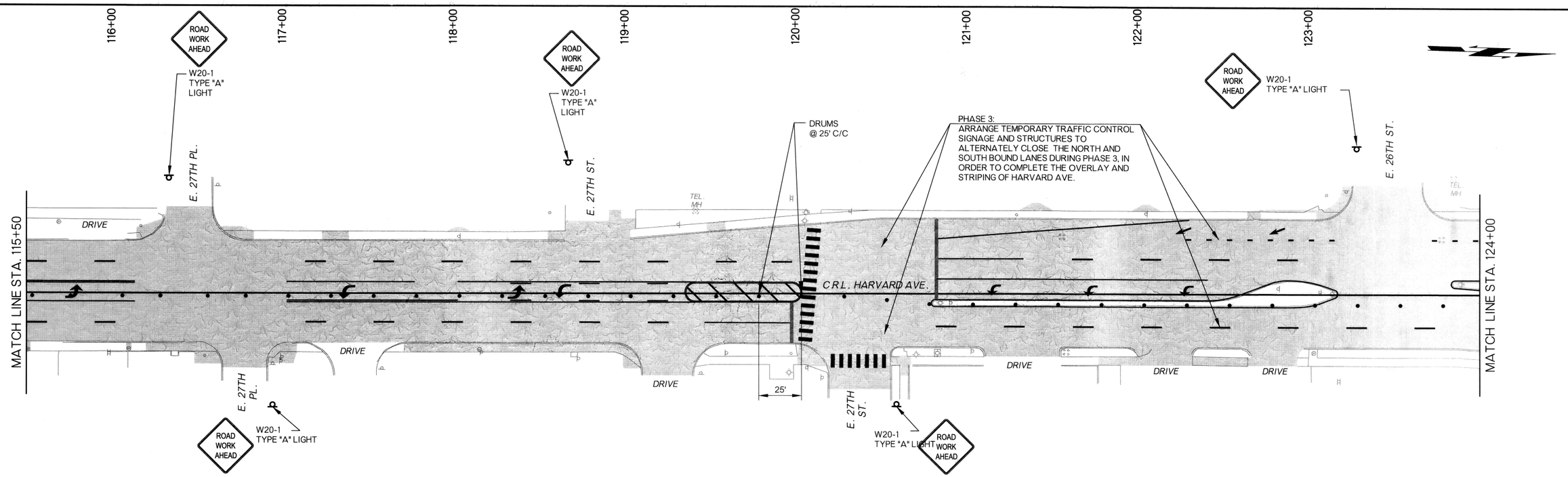
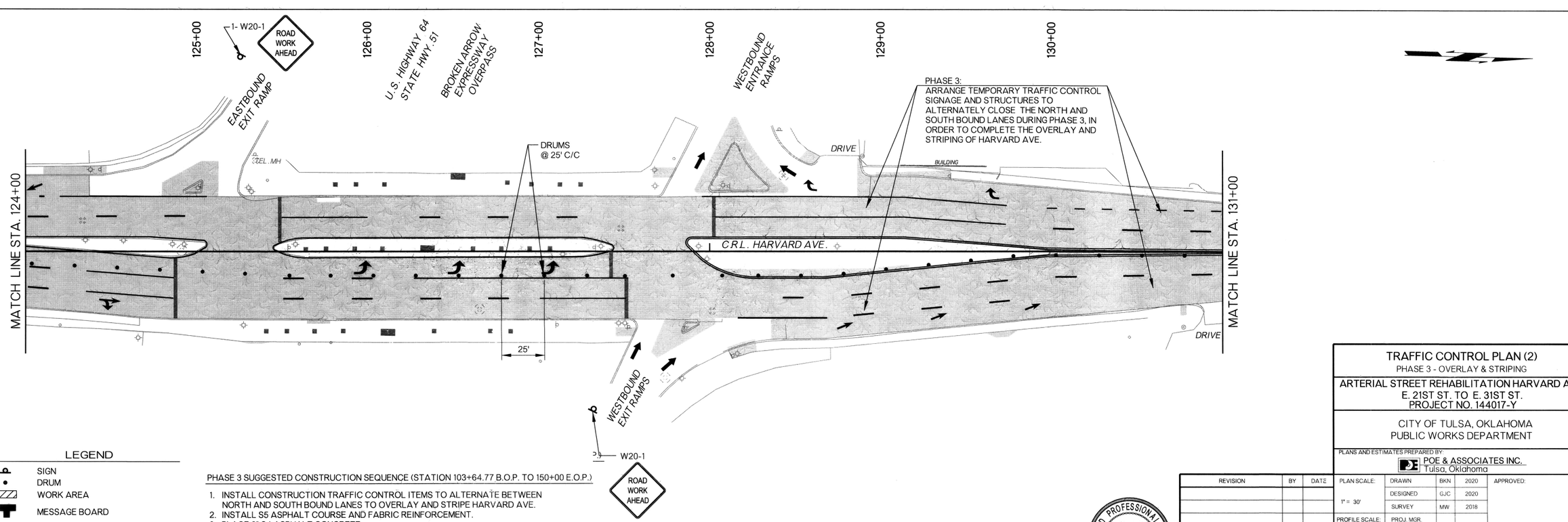
4/4/2025





LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 3 SUGGESTED CONSTRUCTION SEQUENCE (STATION 103+64.77 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS TO ALTERNATE BETWEEN NORTH AND SOUTH BOUND LANES TO OVERLAY AND STRIPE HARVARD AVE.
2. INSTALL S5 ASPHALT COURSE AND FABRIC REINFORCEMENT.
3. PLACE 2" S4 ASPHALT CONCRETE.
4. INSTALL PERMANENT STRIPING & SIGNING.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (2)

PHASE 3 - OVERLAY & STRIPING

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		5/25	
	FIELD MGR.		6/25	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER		6.25	CITY ENGINEER
FILE: H:\303898	DRAWING: 303898-Traffic Control_Ph 3			DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59				SHEET 38 OF 47 SHEETS

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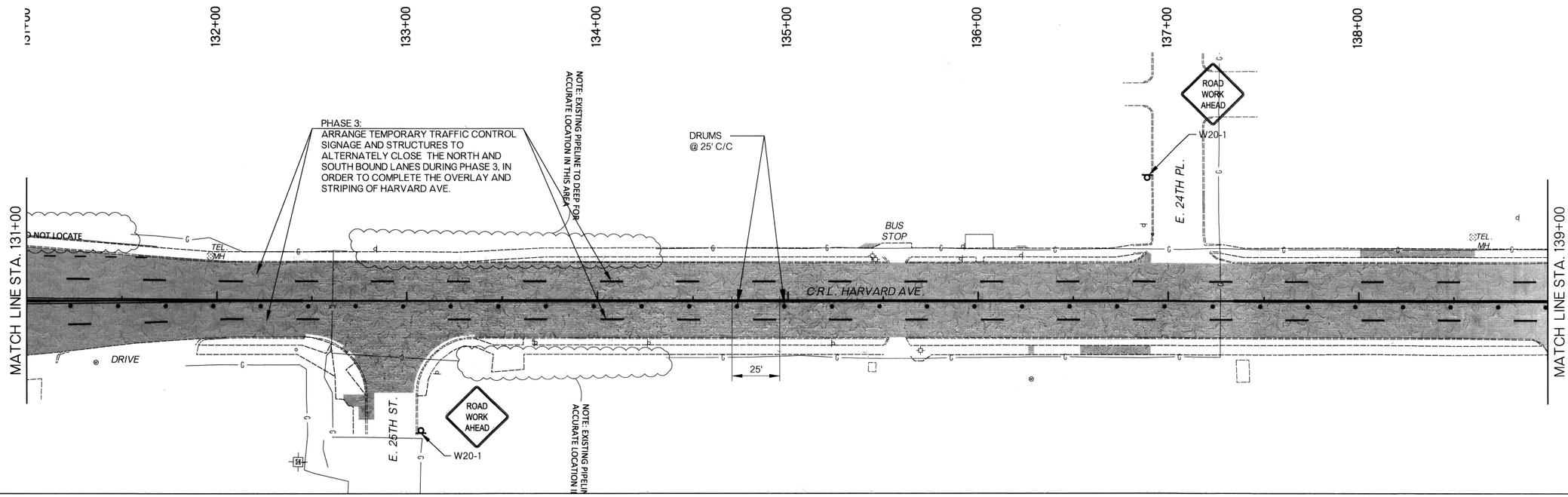
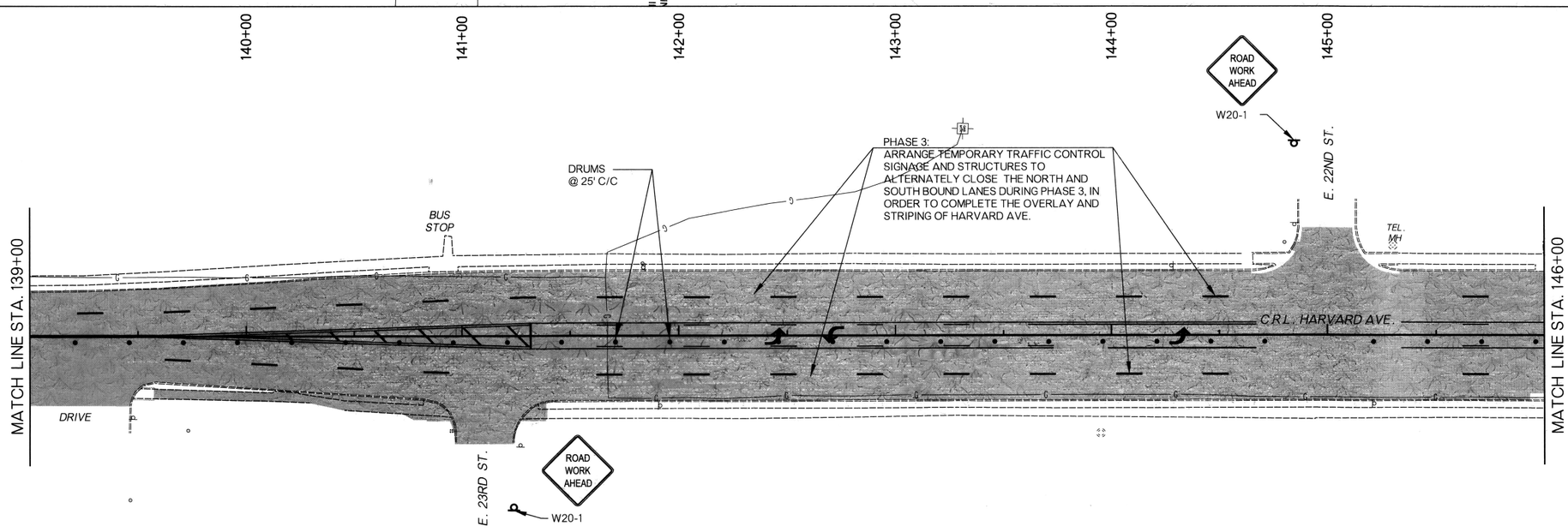
4/4/2025





LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 3 SUGGESTED CONSTRUCTION SEQUENCE (STATION 103+64.77 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS TO ALTERNATE BETWEEN NORTH AND SOUTH BOUND LANES TO OVERLAY AND STRIPE HARVARD AVE.
2. INSTALL S5 ASPHALT COURSE AND FABRIC REINFORCEMENT.
3. PLACE 2" S4 ASPHALT CONCRETE.
4. INSTALL PERMANENT STRIPING & SIGNING.

REGISTERED PROFESSIONAL ENGINEER — GREGORY JAMES COKER — 16680 — OKLAHOMA — 4-7-25

TRAFFIC CONTROL PLAN (3)

PHASE 3 - OVERLAY & STRIPING

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

REVISION	BY	DATE

PLAN SCALE: 1" = 30'
PROFILE SCALE:
HORIZONTAL: 1" = NA
VERTICAL 1" = NA

DRAWN	BKN	2020	APPROVED:
DESIGNED	GJC	2020	
SURVEY	MW	2018	
PROJ. MGR.			
LEAD ENGR.			
FIELD MGR.			
RECOMMENDED DESIGN MANAGER			CITY ENGINEER

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DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59
SHEET 39 OF 47 SHEETS

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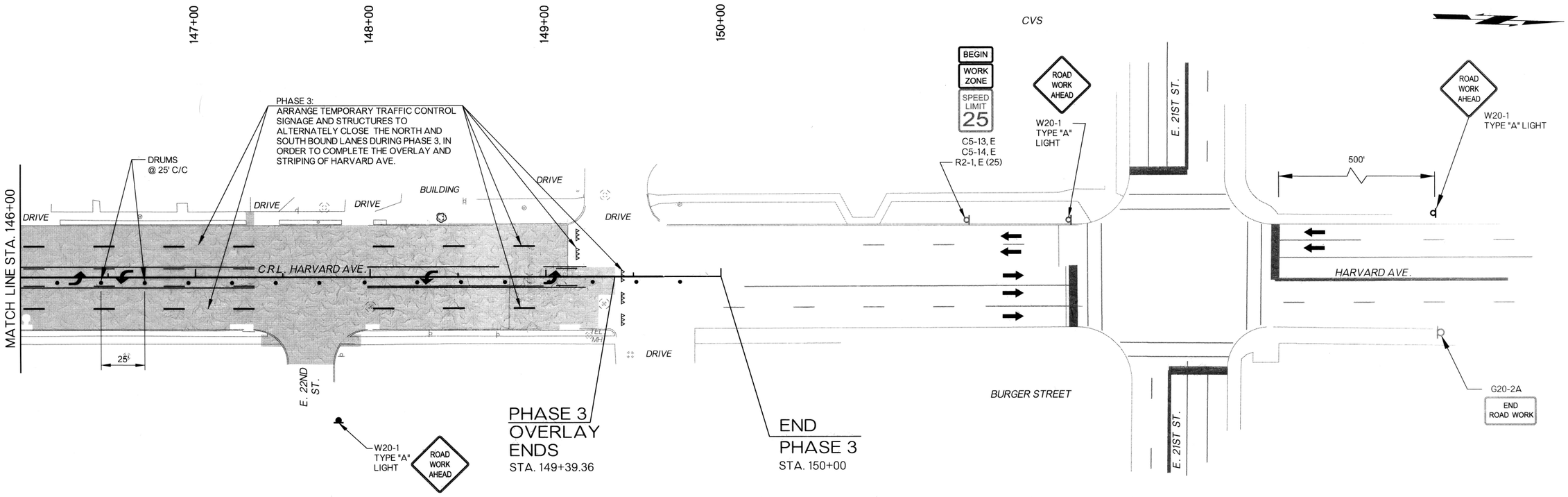

LEGEND

- SIGN
- DRUM
- WORK AREA
- MESSAGE BOARD
- TYPE III BARRICADE
- VERTICAL PANEL
- IMPACT ATTENUATOR
- TUBE CHANNELIZER
- STACKABLE VERTICAL PANELS w/ TYPE "C" LIGHTS

PHASE 3 SUGGESTED CONSTRUCTION SEQUENCE (STATION 103+64.77 B.O.P. TO 150+00 E.O.P.)

1. INSTALL CONSTRUCTION TRAFFIC CONTROL ITEMS TO ALTERNATE BETWEEN NORTH AND SOUTH BOUND LANES TO OVERLAY AND STRIPE HARVARD AVE.
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3. PLACE 2" S4 ASPHALT CONCRETE.
4. INSTALL PERMANENT STRIPING & SIGNING.

REGISTERED PROFESSIONAL ENGINEER
GREGORY JAMES COKER
16840
OKLAHOMA
4-7-25

REVISION	BY	DATE

TRAFFIC CONTROL PLAN (4)

PHASE 3 - OVERLAY & STRIPING

ARTERIAL STREET REHABILITATION HARVARD AVE.
E. 21ST ST. TO E. 31ST ST.
PROJECT NO. 144017-Y

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
POE & ASSOCIATES INC.
Tulsa, Oklahoma

PLAN SCALE: 1" = 30'	DRAWN	BKN	2020	APPROVED:
	DESIGNED	GJC	2020	
	SURVEY	MW	2018	
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.		5/15/25	
	FIELD MGR.			
VERTICAL 1" = NA	RECOMMENDED DESIGN MANAGER	HAS 6-25		CITY ENGINEER

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DATE: 8/4/2025
ATLAS PAGE NO: 31, 32, 58, 59
SHEET 40 OF 47 SHEETS

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4/4/2025

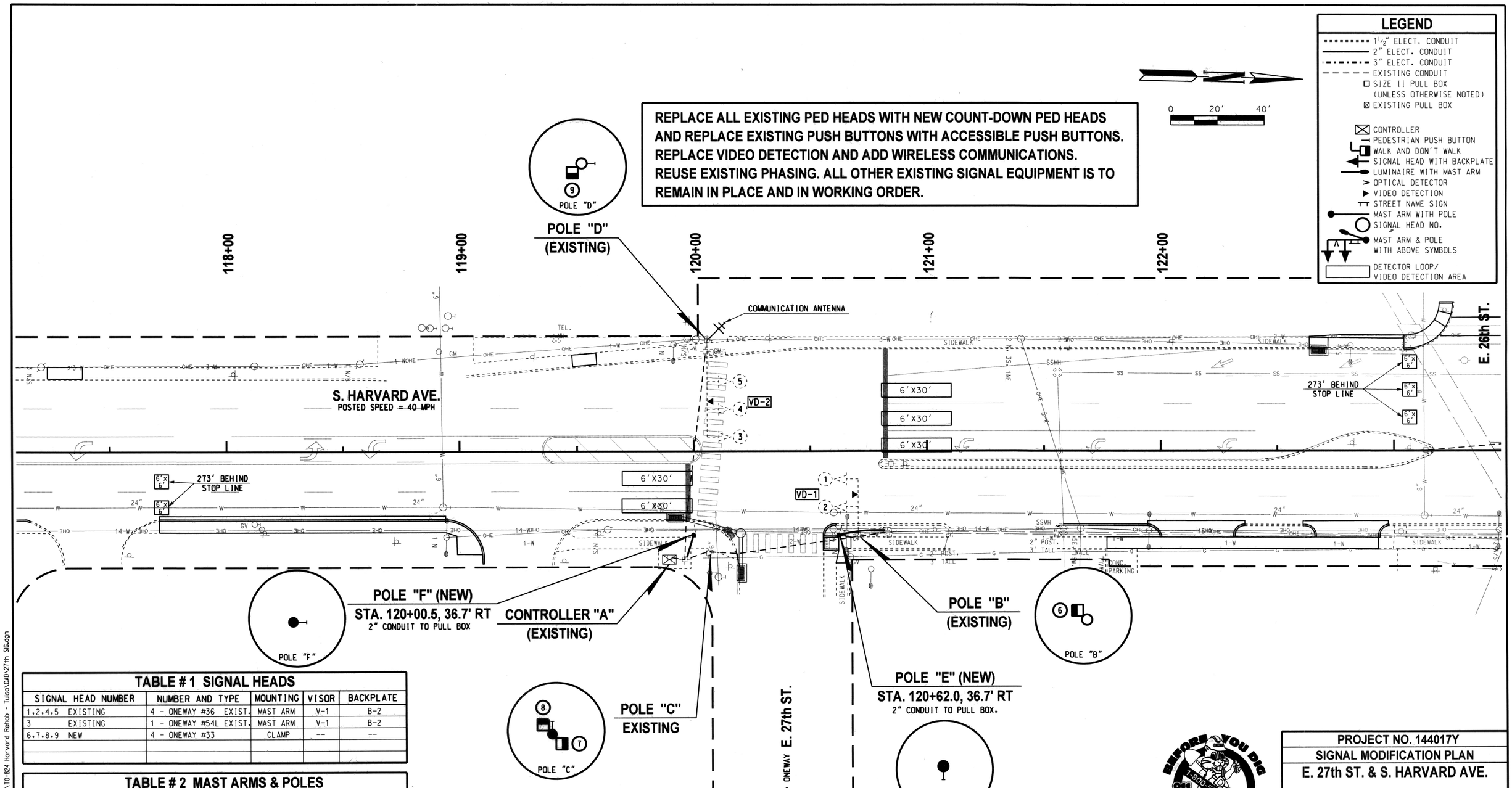


TABLE # 1 SIGNAL HEADS

SIGNAL HEAD NUMBER	NUMBER AND TYPE	MOUNTING	VISOR	BACKPLATE
1,2,4,5 EXISTING	4 - ONEWAY #36 EXIST.	MAST ARM	V-1	B-2
3 EXISTING	1 - ONEWAY #54L EXIST.	MAST ARM	V-1	B-2
6,7,8,9 NEW	4 - ONEWAY #33	CLAMP	--	--

TABLE # 2 MAST ARMS & POLES

LOCATION	MOUNTING HT.	MAST ARMS LENGTHS	FOUNDATION
B		EXISTING MAST ARM POLE	
C		EXISTING PED POLE	
D		EXISTING MAST ARM POLE	
E	6'	PED POLE	F-1
F	6'	PED POLE	F-1

TABLE # 3 ELECTRICAL CABLE

ELECTRICAL CABLE TO CONTROLLER "A" LOCATION
B-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO
D-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO

PUSH BUTTON NOTE:
PUSH BUTTONS SHALL BE INSTALLED IN LOCATIONS THAT MEET PROWAG, ADA AND MUTCD REQUIREMENTS. THE POLE ENLARGEMENT DETAIL IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE PLACEMENT OF THE PEDESTRIAN PUSH BUTTONS AND SIGNAL HEADS SHALL BE INSTALLED ON THE POLES SUCH THAT THE SIGNAL HEADS ARE VISIBLE FROM THE CROSSWALK AND THE PUSH BUTTONS ARE UNOBSTRUCTED AND ADJACENT TO, AND WITHIN 10" MAXIMUM OF A LEVEL, ALL-WEATHER SURFACE AND NO MORE THAN 10 FT. MAXIMUM FROM THE FACE OF CURB AT RAMP TO PROVIDE ACCESS FOR A WHEELCHAIR. THE PUSH BUTTONS ARE TO BE MOUNTED ON THE SIDE OF THE POLE CLOSEST TO THE CORRESPONDING CROSSWALK.

ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25
4-3-25
DATE

Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER ESTHER M. SHAW-SMITH 4-3-25 23711 OKLAHOMA

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

PROJECT NO. 144017Y
SIGNAL MODIFICATION PLAN
E. 27th ST. & S. HARVARD AVE.

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: TEC
TRAFFIC ENGINEERING CONSULTANTS
6801 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-8484 FAX: 918-481-3163

REVISION	BY	DATE

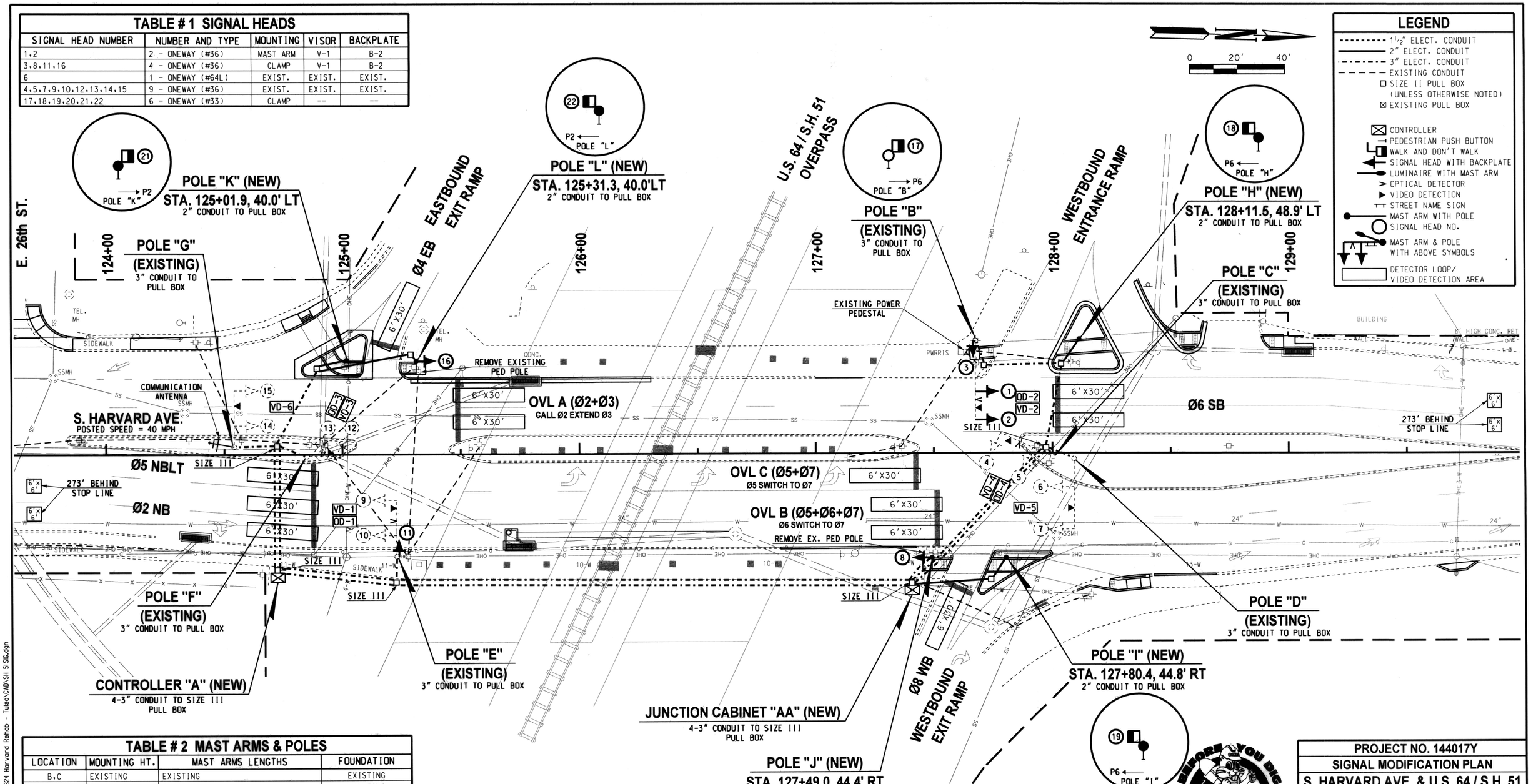
PLAN SCALE: 1" = 20'
PROFILE SCALE:
HORIZONTAL: 1" = N/A
VERTICAL 1" = N/A

DRAWN	SB	04/03/25
DESIGNED	EMS	04/03/25
SURVEY		
PROJ. MGR.		
LEAD ENGR.	MAS	7/25
FIELD MGR.		6/25
RECOMMENDED: DESIGN MANAGER	MAS	6-25

APPROVED: CITY ENGINEER
FILE: DRAWING:
DATE: 8/4/2025
ATLAS PAGE NO:
SHEET 41 OF 47 SHEETS

04/03/25 G:\0IProjects\02 Tulsa Office Projects\10-824 Harvard Rehab - Tulsa\CAD\27th St.dgn

TABLE # 1 SIGNAL HEADS				
SIGNAL HEAD NUMBER	NUMBER AND TYPE	MOUNTING	VISOR	BACKPLATE
1,2	2 - ONEWAY (#36)	MAST ARM	V-1	B-2
3,8,11,16	4 - ONEWAY (#36)	CLAMP	V-1	B-2
6	1 - ONEWAY (#64L)	EXIST.	EXIST.	EXIST.
4,5,7,9,10,12,13,14,15	9 - ONEWAY (#36)	EXIST.	EXIST.	EXIST.
17,18,19,20,21,22	6 - ONEWAY (#33)	CLAMP	--	--



LEGEND

- 1½" ELECT. CONDUIT
- 2" ELECT. CONDUIT
- 3" ELECT. CONDUIT
- EXISTING CONDUIT
- SIZE II PULL BOX (UNLESS OTHERWISE NOTED)
- EXISTING PULL BOX
- CONTROLLER
- PEDESTRIAN PUSH BUTTON
- WALK AND DON'T WALK
- SIGNAL HEAD WITH BACKPLATE
- LUMINAIRE WITH MAST ARM
- OPTICAL DETECTOR
- VIDEO DETECTION
- STREET NAME SIGN
- MAST ARM WITH POLE
- SIGNAL HEAD NO.
- MAST ARM & POLE WITH ABOVE SYMBOLS
- DETECTOR LOOP/ VIDEO DETECTION AREA

TABLE # 2 MAST ARMS & POLES			
LOCATION	MOUNTING HT.	MAST ARMS LENGTHS	FOUNDATION
B,C	EXISTING	EXISTING	EXISTING
D,E	EXISTING	EXISTING	EXISTING
F,G	EXISTING	EXISTING	EXISTING
H,I,J,K,L	10'	5 - PED POLES	F-1

TABLE # 3 ELECTRICAL CABLE
ELECTRICAL CABLE TO CONTROLLER "A" LOCATION
B-20C#14/#12 THHN GREEN/#6 THHN GREEN/7C#14/VIDEO/OPTICOM
C-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO/OPTICOM
D-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO
J-20C#14/#12 THHN GREEN/#6 THHN GREEN/7C#14
E-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO/OPTICOM
F-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO/OPTICOM
G-20C#14/#12 THHN GREEN/#6 THHN GREEN/VIDEO
L-20C#14/#12 THHN GREEN/#6 THHN GREEN/7C#14

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ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25
4-3-25
DATE
Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER ESTHER M. SHAW-SMITH 4-3-25 23711 OKLAHOMA

REVISION	BY	DATE

PROJECT NO. 144017Y
SIGNAL MODIFICATION PLAN
S. HARVARD AVE. & U.S. 64 / S.H. 51

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

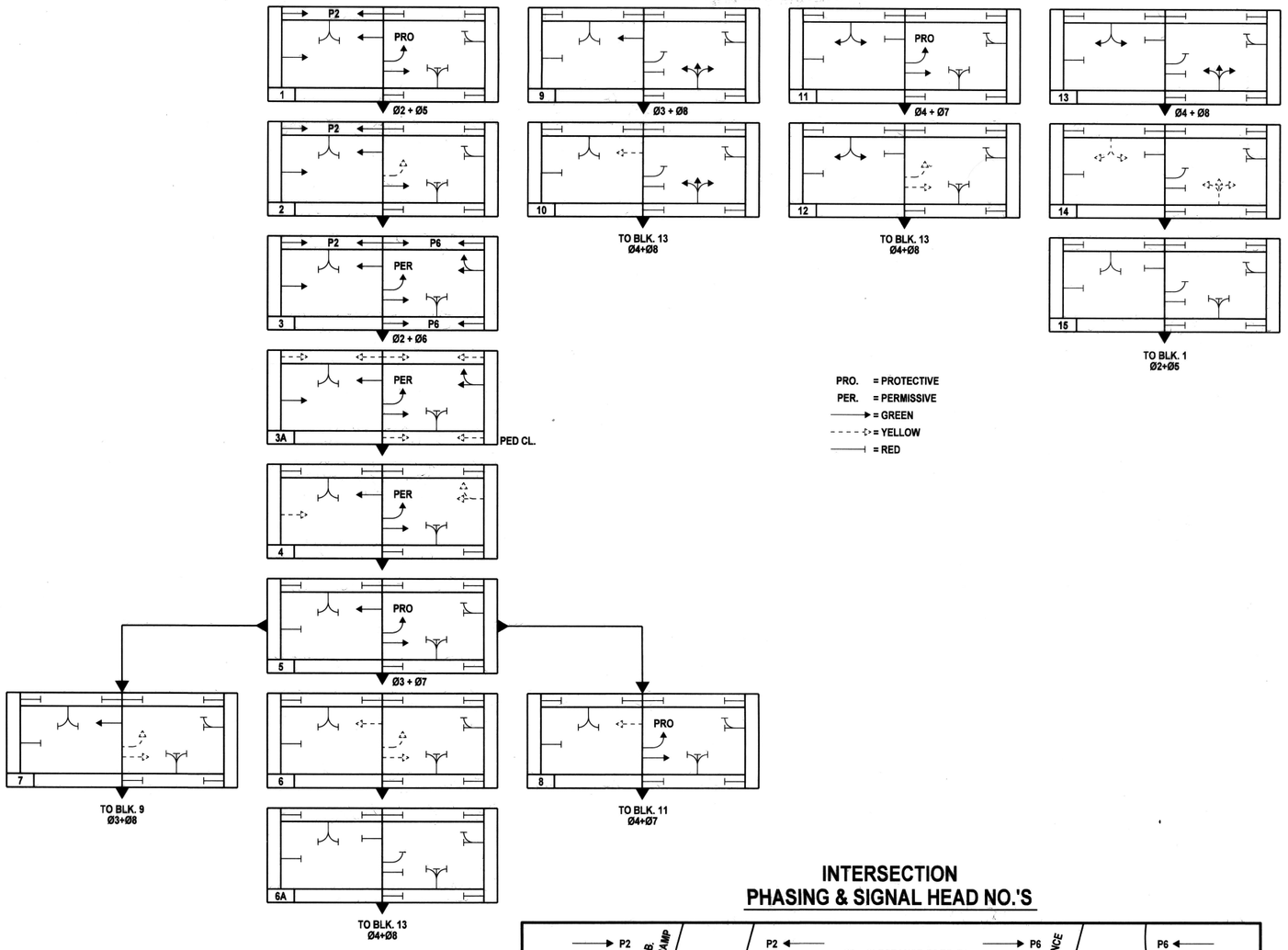
PLANS AND ESTIMATES PREPARED BY: TEC
TRAFFIC ENGINEERING CONSULTANTS
6931 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-3484 FAX: 918-481-3163

PLAN SCALE: 1" = 20'	DRAWN	CCC	04/03/25
	DESIGNED	EMS	04/03/25
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = N/A	LEAD ENGR.	MWS	7/25
	FIELD MGR.	KTW	6/25
VERTICAL 1" = N/A	RECOMMENDED: DESIGN MANAGER	HAS	6-25

APPROVED: CITY ENGINEER
DATE: 8/4/2025
FILE: DRAWING:
ATLAS PAGE NO:
SHEET 42 OF 47 SHEETS

04/03/25 G:\0Projects\02 Tulsa Office Projects\10-824 Harvard Rehab - Tulsa\CAD\SH 51SIG.dgn

PHASING DIAGRAM

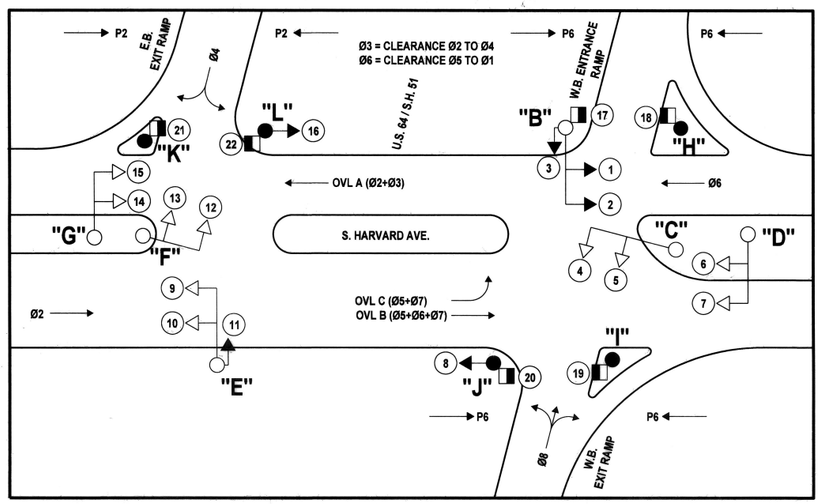


PRO. = PROTECTIVE
PER. = PERMISSIVE
→ = GREEN
- - - - = YELLOW
—— = RED

SEQUENCE CHART

DIRECTION	BLOCK NO.	PHASE Ø6	Ø8	OVL C	OVL B	Ø2	Ø4	OVL A	P6	P2
		SIGNAL HEAD NO. 1,2	3,4,5	6	7,8	9,10	11,12,13	14,15,16	17,18,19,20	21,22
Ø2, OVL A, OVL B, OVL C, P2 ROW	1	R	R	G/G	G	G	R	G	DW	W
Ø2, OVL A, B, P2 ROW & OVL C CL	2	R	R	G/Y	G	G	R	G	DW	W
Ø2, Ø6, OVL A, OVL B, OVL C, P2, P6 ROW	3	G	R	G	G	G	R	G	W	W
Ø2, Ø6, OVL A, OVL B, OVL C ROW & P2, P6 CL	3A	G	R	G	G	G	R	G	FDW	FDW
OVL A, OVL B, OVL C ROW & Ø2, Ø6 CL	4	Y	R	G	G	Y	R	G	DW	DW
OVL A, OVL B, OVL C ROW	5	R	R	G/G	G	R	R	G	DW	DW
OVL A, OVL B, OVL C CL	6	R	R	Y/Y	Y	R	R	Y	DW	DW
ALL RED	6A	R	R	R	R	R	R	R	DW	DW
OVL A ROW & OVL B, OVL C CL	7	R	R	Y/Y	Y	R	R	G	DW	DW
OVL B, OVL C ROW & OVL A CL	8	R	R	G/G	G	R	R	Y	DW	DW
Ø8, OVL A ROW	9	R	G	R	R	R	R	G	DW	DW
Ø8 ROW & OVL A CL	10	R	G	R	R	R	R	Y	DW	DW
Ø4, OVL B, OVL C ROW	11	R	R	G/G	G	R	G	R	DW	DW
Ø4 ROW & OVL B, OVL C CL	12	R	R	Y/Y	Y	R	G	R	DW	DW
Ø4, Ø8 ROW	13	R	G	R	R	R	G	R	DW	DW
Ø4, Ø8 CL	14	R	Y	R	R	R	Y	R	DW	DW
ALL RED	15	R	R	R	R	R	R	R	DW	DW
FLASHING OPERATION	--	FR	FR	FR	FR	FR	FR	FR	--	--

INTERSECTION PHASING & SIGNAL HEAD NO.'S



ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25

4-3-25
DATE

Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER — ESTHER M. SHAW-SMITH 4-3-25 23711 — OKLAHOMA

PROJECT NO. 144017Y

SIGNAL DETAIL (1 OF 2)

S. HARVARD AVE. & U.S. 64 / S.H. 51

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TEC — TRAFFIC ENGINEERING CONSULTANTS
6931 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-5484 FAX: 918-481-3163

REVISION	BY	DATE

PLAN SCALE: 1" = NA	DRAWN	SB	04/03/25
	DESIGNED	EMS	04/03/25
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = NA	LEAD ENGR.	MVA	7/25
	FIELD MGR.	KM	6/25
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6/25

APPROVED:

CITY ENGINEER

FILE: DRAWING:

DATE: 8/4/2025

ATLAS PAGE NO:

SHEET 43 OF 47 SHEETS

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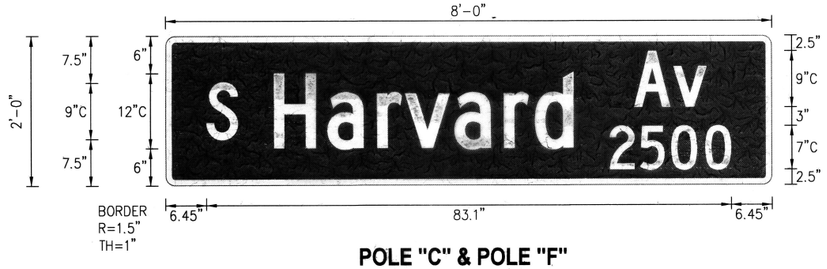
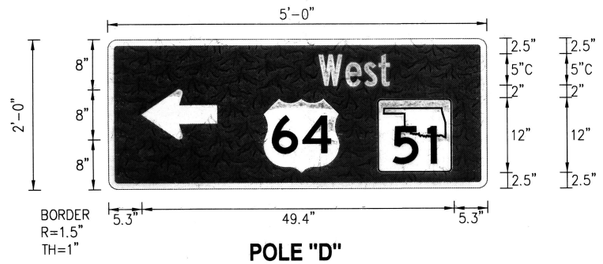
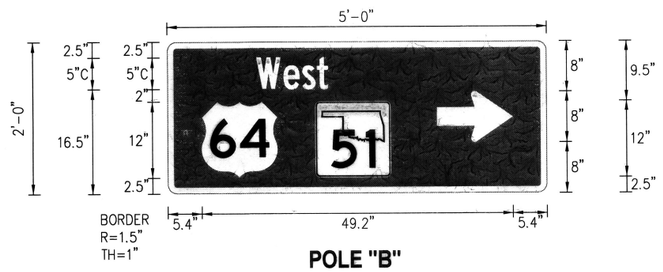


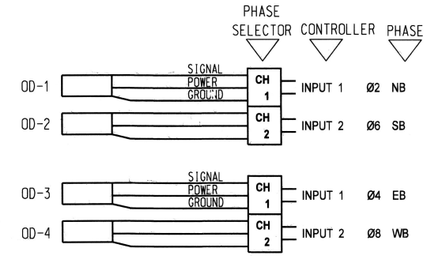
POLE "C" & POLE "F"



POLE "D"



POLE "B"



PRE-EMPTOR DETAILS

SUMMARY OF MAST ARM MOUNTED SIGNS

MESSAGE	POLE LOCATION	NO. OF SIGN	LENGTH	HEIGHT	SQ. FT. SIGN AREA	TOTAL AREA SQ. FT.
S Harvard Av 2500	C,F	2	96"	24"	16.00	32.00
← West US 64 / SH 51	D	1	60"	24"	10.00	10.00
West US 64 / SH 51 →	B	1	60"	24"	10.00	10.00
					TOTAL	52.00

PRIMARY DIRECTION = 9" SERIES 'C' STANDARD HIGHWAY (WHITE)
NUMBER / NAME = 12" SERIES 'C' STANDARD HIGHWAY (WHITE)
NUMBER SUFFIX = 9" SERIES 'C' STANDARD HIGHWAY (WHITE)
SECONDARY DIRECTION = 12" SERIES 'C' STANDARD HIGHWAY (WHITE)
STREET TYPE = 9" SERIES 'C' STANDARD HIGHWAY (WHITE)
BLOCK NUMBER = 7" SERIES 'C' STANDARD HIGHWAY (WHITE)

SHEETING = DIAMOND GRADE VIP (WHITE)
OVERLAY = ELECTRONIC CUTTABLE OVERLAY FILM (GREEN)

ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25

4-3-25
DATE

LICENSED PROFESSIONAL ENGINEER
ESTHER M. SHAW-SMITH
4-3-25
23711
OKLAHOMA

Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

REVISION	BY	DATE

PROJECT NO. 144017Y
SIGNAL DETAIL (2 OF 2)
S. HARVARD AVE. & U.S. 64 / S.H. 51

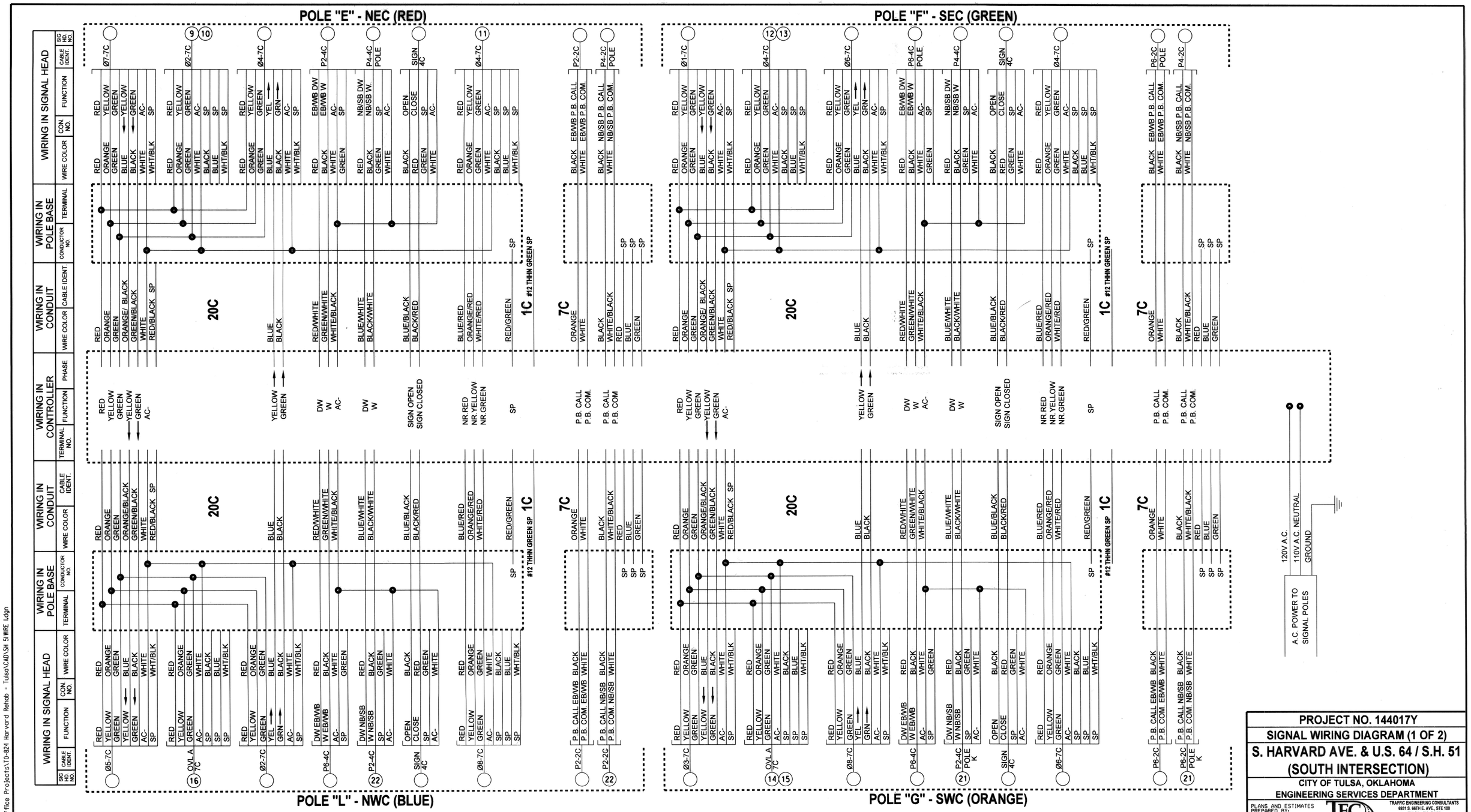
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TRAFFIC ENGINEERING CONSULTANTS
6931 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-5404 FAX: 918-481-5163

PLAN SCALE: 1" = NA	DRAWN	SB	04/03/25	APPROVED:
	DESIGNED	EMS	04/03/25	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" = NA	LEAD ENGR.	MJS	7/25	
	FIELD MGR.		6/05	
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS 6.25		CITY ENGINEER
FILE:	DRAWING:			DATE: 8/4/2025
ATLAS PAGE NO:				SHEET 44 OF 47 SHEETS

04/03/25 G:\0Projects\02 Tulsa Office Projects\TO-824 Harvard Rehab - Tulsa\CAD\SH 51DETAIL 2.dgn



NOTE:
IF JUMPERS OR OTHER CONNECTIONS ARE MADE IN THE FIELD DURING INSTALLATION, AND ARE ACCEPTED BY THE ENGINEER THIS SHOULD BE SHOWN ON THE WIRING DIAGRAM FOR FUTURE REFERENCE.

ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25

4-3-25
DATE

Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER
ESTHER M. SHAW-SMITH
4-3-25
23711
OKLAHOMA

REVISION	BY	DATE

PROJECT NO. 144017Y

SIGNAL WIRING DIAGRAM (1 OF 2)

S. HARVARD AVE. & U.S. 64 / S.H. 51 (SOUTH INTERSECTION)

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: TEC

TRAFFIC ENGINEERING CONSULTANTS
6931 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-8484 FAX: 918-481-3163

PLAN SCALE: 1" =	DRAWN	SB	04/03/25	APPROVED:
	DESIGNED	EMS	04/03/25	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.			
HORIZONTAL: 1" =	LEAD ENGR.			
	FIELD MGR.		6/25	
VERTICAL 1" =	RECOMMENDED: HAS 6-25			CITY ENGINEER
	DESIGN MANAGER			
FILE:	DRAWING:			DATE: 8/4/2025
ATLAS PAGE NO:				SHEET 45 OF 47 SHEETS

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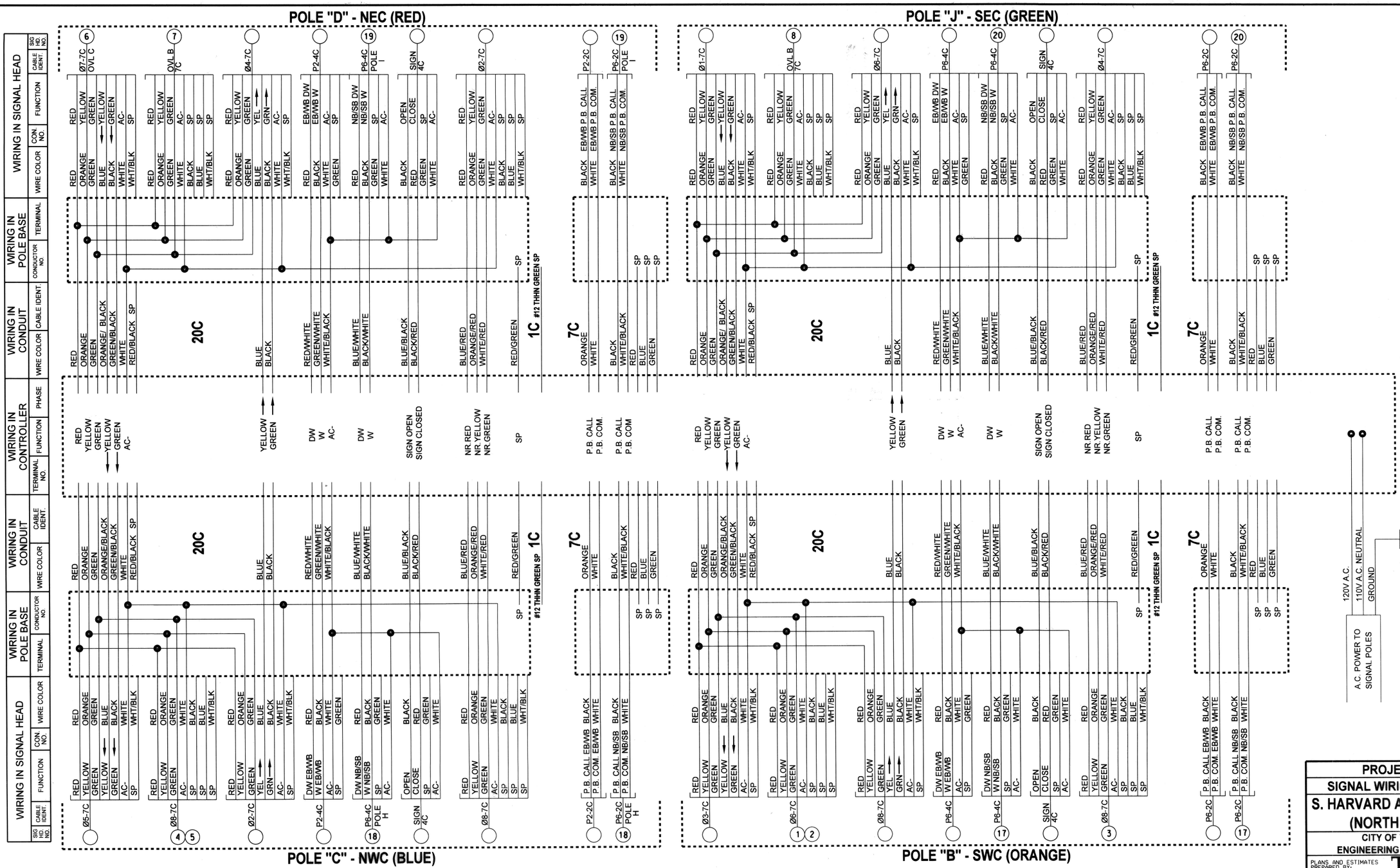

NOTE:
IF JUMPERS OR OTHER CONNECTIONS ARE MADE IN THE FIELD DURING INSTALLATION, AND ARE ACCEPTED BY THE ENGINEER THIS SHOULD BE SHOWN ON THE WIRING DIAGRAM FOR FUTURE REFERENCE.

ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25

4-3-25
DATE

Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman, OK 73069
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER — ESTHER M. SHAW-SMITH 4-3-25 23711 — OKLAHOMA

REVISION	BY	DATE

PROJECT NO. 144017Y

SIGNAL WIRING DIAGRAM (2 OF 2)

S. HARVARD AVE. & U.S. 64 / S.H. 51 (NORTH INTERSECTION)

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TRAFFIC ENGINEERING CONSULTANTS
8801 S. 66TH E. AVE., STE 100
TULSA, OK 74133
PHONE: 918-481-8484 FAX: 918-481-3163

PLAN SCALE: 1" =	DRAWN	SB	04/03/25
	DESIGNED	EMS	04/03/25
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" =	LEAD ENGR.		
	FIELD MGR.		
VERTICAL 1" =	RECOMMENDED: HBK 6-25		
	DESIGN MANAGER		

APPROVED:

CITY ENGINEER

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REPLACE EXISTING PUSH BUTTONS WITH ACCESSIBLE PUSH BUTTONS.

REUSE EXISTING PHASING. ALL OTHER EXISTING SIGNAL EQUIPMENT IS TO REMAIN IN PLACE AND IN WORKING ORDER.

0 10' 20'

LEGEND

- $1\frac{1}{2}$" ELECT. CONDUIT
- 2" ELECT. CONDUIT
- 3" ELECT. CONDUIT
- EXISTING CONDUIT
- SIZE II PULL BOX (UNLESS OTHERWISE NOTED)
- EXISTING PULL BOX
- SERVICE POLE
- CONTROLLER
- PEDESTRIAN PUSH BUTTON
- WALK AND DON'T WALK
- SIGNAL HEAD WITH BACKPLATE
- LUMINAIRE WITH MAST ARM
- OPTICAL DETECTOR
- VIDEO DETECTION
- STREET NAME SIGN
- MAST ARM WITH POLE
- SIGNAL HEAD NO.
- MAST ARM & POLE WITH ABOVE SYMBOLS
- DETECTOR LOOP/ VIDEO DETECTION AREA

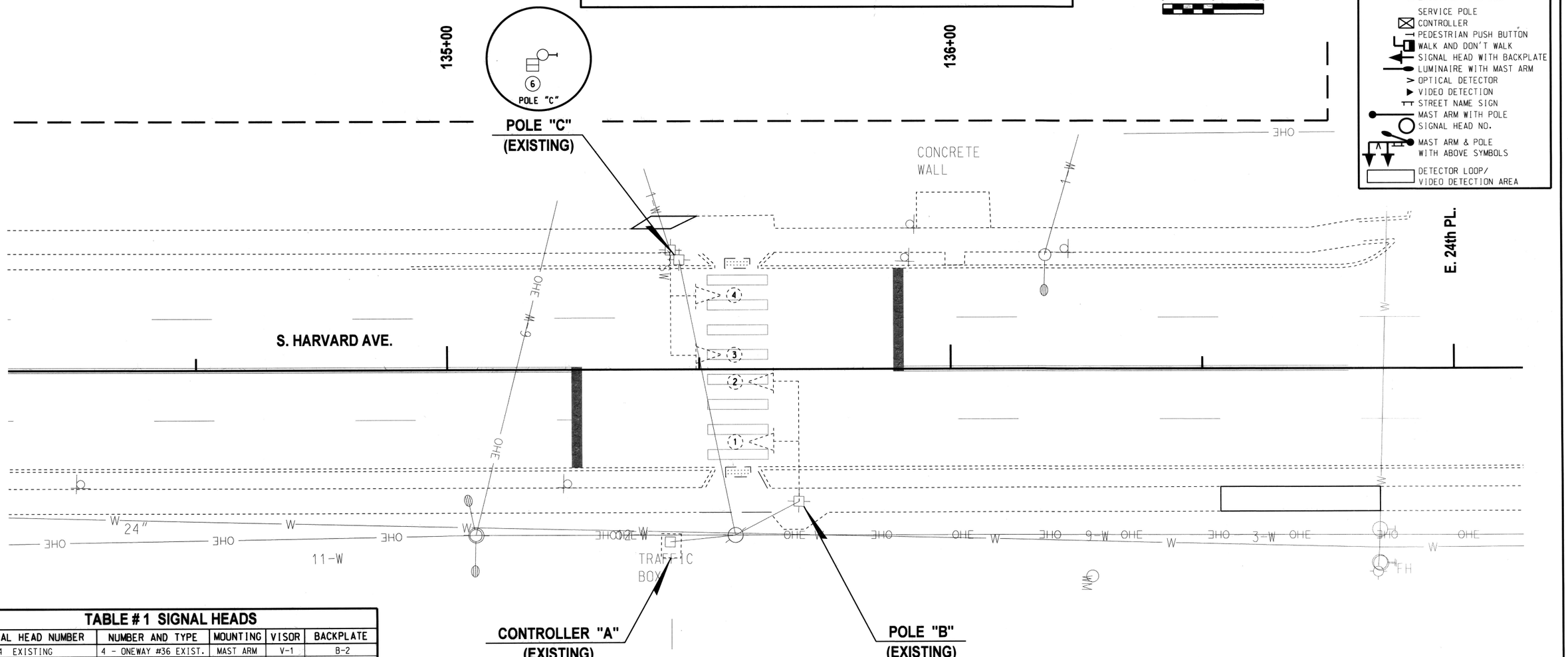

TABLE # 1 SIGNAL HEADS

SIGNAL HEAD NUMBER	NUMBER AND TYPE	MOUNTING	VISOR	BACKPLATE
1,2,3,4 EXISTING	4 - ONEWAY #36 EXIST.	MAST ARM	V-1	B-2
5,6 EXISTING	2 - ONEWAY #33 EXIST.	CLAMP	--	--

TABLE # 2 MAST ARMS & POLES

LOCATION	MOUNTING HT.	MAST ARMS LENGTHS	FOUNDATION
B		EXISTING MAST ARM POLE	
C		EXISTING MAST ARM POLE	

TABLE # 3 ELECTRICAL CABLE

ELECTRICAL CABLE TO CONTROLLER "A" LOCATION
USE EXISTING WIRE AND CONDUIT

PUSH BUTTON NOTE:
PUSH BUTTONS SHALL BE INSTALLED IN LOCATIONS THAT MEET PROWAG, ADA AND MUTCD REQUIREMENTS. THE POLE ENLARGEMENT DETAIL IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE PLACEMENT OF THE PEDESTRIAN PUSH BUTTONS AND SIGNAL HEADS SHALL BE INSTALLED ON THE POLES SUCH THAT THE SIGNAL HEADS ARE VISIBLE FROM THE CROSSWALK AND THE PUSH BUTTONS ARE UNOBSTRUCTED AND ADJACENT TO, AND WITHIN 10" MAXIMUM OF A LEVEL, ALL-WEATHER SURFACE AND NO MORE THAN 10 FT. MAXIMUM FROM THE FACE OF CURB AT RAMP TO PROVIDE ACCESS FOR A WHEELCHAIR. THE PUSH BUTTONS ARE TO BE MOUNTED ON THE SIDE OF THE POLE CLOSEST TO THE CORRESPONDING CROSSWALK.

ESTHER M. SHAW-SMITH, P.E. # 23711
C.A. # 1160, RENEWAL 06-30-25

4-3-25
DATE

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LICENSED PROFESSIONAL ENGINEER
ESTHER M. SHAW-SMITH
4-3-25
23711
OKLAHOMA

BEFORE YOU DIG
811
1800-522-OKIE
CALL OKIE

PROJECT NO. 144017Y
PED SIGNAL MODIFICATION PLAN
2400 S. HARVARD AVE.

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
TEC
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PHONE: 918-481-5464 FAX: 918-481-5163

REVISION	BY	DATE

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	DESIGNED	EMS	04/03/25
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = N/A	LEAD ENGR.	MWS	7/25
	FIELD MGR.		6/25
VERTICAL 1" = N/A	RECOMMENDED: DESIGN MANAGER		6-25

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