CONSTRUCTION PLANS FOR

ARTERIAL STREET REHABILITATION FOR UNION AVENUE SOUTHWEST BLVD. TO 41ST ST. INCLUDING 41ST ST. INTERSECTION

PROJECT NO. 144017-G AND 144017-AS

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

BENCHMARK CONTROL DATA

HORIZONTAL DATUM: OKLAHOMA STATE PLANE COORDINATE SYSTEM, NAD83 [1993]
VERTICAL DATUM: NAVD 1988
SEE SURVEY DATA SHEET FOR INITIAL CONTROL INFORMATION

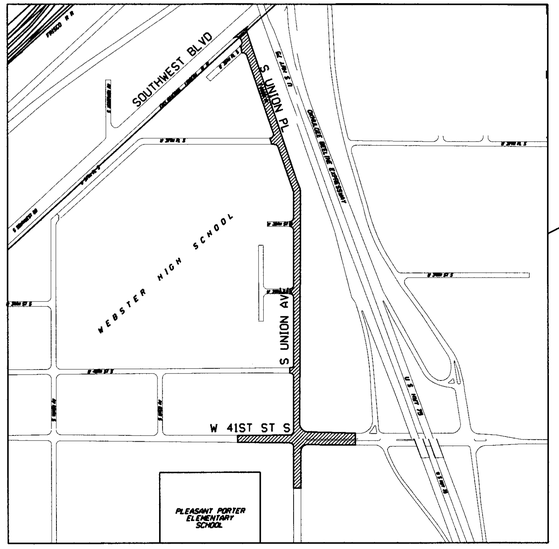
SYMBOL LEGEND

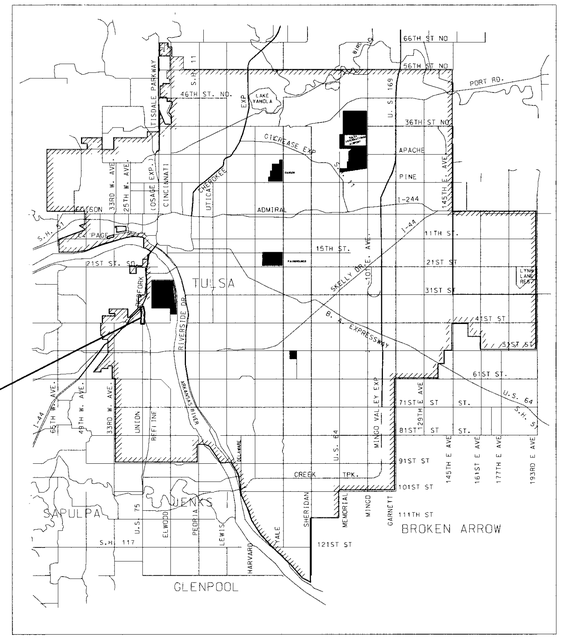
- EM – Electric Meter
- EB – Electric Box
- ET – Electric Transformer
- FH – Fire Hydrant
- GM – Gas Meter
- GV – Gas Valve
- GP – Gate Post
- GUY – Guy Anchor
- ICV – Irrigation Control Valve
- JB – Junction Box
- LP – Light Pole
- MB – Mailbox
- PP – Power Pole
- SN – Sign
- SSCO – Sanitary Sewer Cleanout
- SSMH – Sanitary Sewer Manhole
- SDMH – Storm Drain Manhole
- SH – Sprinkler Head
- TS – Traffic Signal
- TSB – Traffic Signal Box
- TPED – Telephone Pedestal
- UG – Underground Gas
- UGM – Underground Gas Meter
- UTMH – Underground Telephone Manhole
- WM – Water Meter
- WV – Water Valve
- Deciduous Tree
- Coniferous Tree
- Bush
- Bench Mark
- Existing Reinforced Concrete Box
- Existing Right Of Way
- Survey Control Point Found
- Survey Control Point Set
- Temporary Right Of Way
- Proposed Right Of Way
- Existing Edges of RCB
- TSMH – Traffic Signal Man Hole
- OE – Overhead Electric
- UE – Underground Electric

DESIGN DATA

ADT 2024 = 4,992
ADT 2044 = 9,016
GROWTH RATE = 3%
V = 35MPH
20 YR RIGID ESALS = 3.4M

PROJECT LOCATION





VICINITY MAP

N.T.S.

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

REHABILITATION LENGTH = 2.00 LANE MILES



UTILITY COORDINATION		
UTILITY COMPANY	CONTACT	PHONE #
CITY OF TULSA	TONY GLYNN	918-596-9245
TSU RAILROAD CONTACT	KEVIN TUCKER	918-638-4009
AEP/PSO	EMERGENCY	888-216-3523
ONG	EMERGENCY	800-664-5463
AT&T	EMERGENCY	800-288-2020
COX COMMUNICATION	CUSTOMER SERVICE	918-806-6000
VERIZON	CUSTOMER SERVICE	888-294-6804
WINDSTREAM	CUSTOMER SERVICE	800-347-1991

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. ON ASPHALT OVERLAID ON P.C. CONCRETE (APC) PAVEMENT, IT IS EXPECTED FOR THE ASPHALT MILLING OPERATION TO BE PERFORMED PRIOR TO TYPE 1 PCC PATCHING ON THE CONCRETE PAVEMENT. FURTHER, THE ANTICIPATED CONSTRUCION PHASING WILL MINIMIZE THE TIME BETWEEN MILLED STREETS AND NEW ASPHALT PLACEMENT. LEAVING OPEN MILLED SECTIONS FOR EXTENDED PERIODS WILL BE AT THE CONTRACTOR'S RISK IF LOCAL OR CONSTRUCION TRAFFIC CAUSES DAMAGE TO PREVIOUSLY UNDAMAGED AREAS. CURRENT COT CONSTRUCTION BUDGETS DO NOT ALLOW FOR GROWTH OF THE PROJECT.

CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS (CURRENT) GOVERN. ALL OTHER CONSTRUCTION MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS ADOPTED BY THE COT.

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

UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE LOCATIONS ONLY. LOCATIONS SHOWN ARE THOSE SUPPLIED BY UTILITY COMPANY ATLAS SHEETS AND SOME HORIZONTAL LOCATIONS FLAGGED IN THE FIELD. NO VERTICAL LOCATIONS OR EXPOSED LOCATIONS WERE OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES BEFORE STARTING ANY EXCAVATION.

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APPROVED BY:

PUBLIC WORKS DIRECTOR — DATE: 6/8/2026

ADVERTISEMENT DATE: 06.19.26

ENGINEER'S CERTIFICATION

MICHAEL D. SEARS, OKLA. REG. ENGR. 29303 — DATE: 01/21/2026

LICENSED PROFESSIONAL ENGINEER — MICHAEL D. SEARS — 29303 — OKLAHOMA

$DATE$ $FILE$

PROJECT 144017-G & 144017-AS UNION AVE.

THE FOLLOWING CITY STANDARDS WILL BE REQUIRED

STD. NO.	STANDARD NAME
STD 102	PROJECT SIGN
STD 126	STANDARD SILT FENCE AND CONSTRUCTION ENTRANCE
STD 304	BEDDING DETAIL - RIGID PIPE
STD 306	TRENCH DETAIL CONSTRUCTION ADJACENT TO ROADWAY
STD 307	BORE/OPEN CUT CONDUIT DETAIL
STD 312	FRAME AND LID FOR WATER VAULTS
STD 313	VALVE BOX
STD 352	FRAME AND LID FOR MANHOLES
STD 353	FRAME AND LID FOR 4' I.D. SANITARY MANHOLE
STD 354	FRAME AND LID FOR 5' I.D. AND LARGER SANITARY MANHOLE
STD 401	MANHOLE GRADE ADJUSTMENT
STD 405	RUBBER SEAL AT MANHOLE
STD 414	MANHOLE ADJUSTING RING
STD 601	PULL BOX INSTALLATION
STD 602	CONDUIT INSTALLATION
STD 603	SIGNAL POLE FOOTING DETAILS
STD 606	EMERGENCY PRE-EMPTION DETAIL
STD 607A	TRAFFIC SIGNAL SERVICE POLE AND SERVICE TO SIGNAL STANDARD
STD 607B	TRAFFIC SIGNAL PEDESTAL SERVICE
STD 608A	STREET NAME SIGNS
STD 608B	TRAFFIC SIGNS
STD 610A	332 CONTROLLER CABINET DETAIL
STD 610C	332 CABINET WIRING
STD 611A	POLE WIRING DETAIL
STD 612	CABINET GUARD DETAIL
STD 613	PEDESTAL AND MAST ARM POLE DETAILS
STD 614A	TRAFFIC SIGNALS AND ACCESSORIES
STD 614B	SIGNAL HEAD WIRING
STD 616	MAST ARM BRACKETS
STD 617A	SIGNAL POLES AND MAST ARMS
STD 617B	SINGLE MAST ARM DETAILS
STD 618	BONDING DIAGRAM

STD. NO.	STANDARD NAME
STD 713	PAVEMENT REMOVAL AND REPLACEMENT
STD 714	PAVEMENT CUTS
STD 725	STANDARD PAVEMENT PATCH AND REPAIR
STD 729	CONCRETE PAVEMENT STANDARD DETAILS FOR RESIDENTIAL AND COLLECTOR STREETS (2 OF 2)
STD 730	STANDARD ASPHALT PAVEMENT CUT AND REPAIR
STD 751	PIPE BEDDING DETAIL FOR STORM SEWER
STD 752	FRAME AND LID FOR STORMWATER MANHOLES
STD 753	FRAME AND LID FOR 4' AND 5' I.D. STORMWATER MANHOLE
STD 754	FRAME AND LID FOR 6' AND 8' I.D. STORMWATER MANHOLE AND JUNCTION BOXES
STD 755	CONFIGURATIONS OF CAST IRON CURB INLETS
STD 764	STANDARD REINFORCED CONCRETE STORMWATER INLETS
STD 765	STANDARD STORMWATER FRAMES
STD 766	STANDARD STORMWATER GRATES
STD 767	STANDARD CAST IRON CURB
STD 770	STANDARD DROP INLET 15", 18", AND 24"
STD 771	STANDARD DROP INLET 30", 36", AND 42" WITH NO ACCESS MANHOLE
STD 775	STANDARD PRECAST CONCRETE STORMWATER MANHOLE
STD 790	STANDARD SIDEWALK RAMP

THE FOLLOWING ODOT STANDARDS WILL BE REQUIRED

ROADWAY DESIGN

SSS-1-1	SOLID SLAB SODDING
TSC2-3-2	TEMPORARY SEDIMENT CONTROLS
TSC2-2-00E	(1999) TEMORARY SEDIMENT CONTROLS
PCES-4-1	PREFABRICATED CULVERT END SECTIONS
DC-3-2	PAVED DITCHES AND FLUMES
LECS-4-1	JOINTS AND SEALERS - LONGITUDINAL, EXPANSION & CONTRACTION
LTU-5-1	LOAD TRANSFER UNITS FOR CONCRETE PAVEMENT JOINTS
WCR-3-1	WHEELCHAIR RAMPS
TWD-1-0	TACTILE WARNING DEVICES
PUD-3-2	PIPE UNDERDRAIN INSTALLATION

TRAFFIC

PM1-1-02	PAVEMENT MARKING (CROSSWALKS AND LEFT TURN BAY)
PM5-1-00	PAVEMENT MARKING (WORDS AND NUMERALS)
PM6-1-00	PAVEMENT MARKING (ARROWS)
PM8-1-00	PAVEMENT MARKING (RAILROAD CROSSING)

TRAFFIC CONTROL

TCS2-1-00	TRAFFIC CONTROL TABLES AND CHARTS
TCS3-1-01	TEMPORARY TRAFFIC CONTROL ELEMENTS
TCS6-1-02	CHANNELIZING DEVICES
TCS7-1-02	ADVANCE WARNING SIGNS
TCS8-1-00	CONSTRUCTION SIGNS
TCS9-1-01	CONSTRUCTION SIGNS
TCS10-1-00	CONSTRUCTION SIGNS
TCS11-1-01	CONSTRUCTION SIGNS
TCS12-1-00	CONSTRUCTION SIGNS
TCS13-1-00	CONSTRUCTION SIGNS
TCS14-1-00	CONSTRUCTION SIGNS
TCS15-1-00	CONSTRUCTION SIGNS
TCS18-1-01	CONSTRUCTION SIGNS
TCS19-1-01	CONSTRUCTION SIGNS
TCS20-1-00	CONSTRUCTION SIGNS
TCS21-1-02	CONSTRUCTION ZONE PAVEMENT MARKINGS

$DATE$ $FILE$

REVISION	BY	DATE

INDEX OF STANDARDS

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7203 - fax 918.587.2071

PLAN SCALE:	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE: HORIZONTAL:	PROJ. MGR.		5/2026
	LEAD ENGR.		5/26
	FIELD MGR.		6/26
VERTICAL:	RECOMMENDED DESIGN MANAGER	HAS	6.26

APPROVED

CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 2 OF 59 SHEETS

SUMMARY OF ROADWAY PAY QUANTITIES

ITEM NUMBER	SPEC NUMBER	PAY ITEM DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
ROADWAY BASE BID					
1	201(A)	CLEARING AND GRUBBING	E-1, 2	ACRE	2
2	202(A)	UNCLASSIFIED EXCAVATION	E-3, 4, 5, R-1	CY	1,276
3	205(A)	TYPE A SALVAGED TOPSOIL		CY	500
4	220	SWPPP DOCUMENTATION AND MANAGEMENT	E-6, E-7, E-8	LSUM	1
5	230(A)	SOLID SLAB SODDING (LIKE KIND)	E-10, 11	SY	2,700
6	303(A)	TYPE A AGGREGATE BASE	S-1, 2	CY	1,168
7	310(B)	8" SUBGRADE METHOD B		SY	2,974
8	325	SEPARATOR FABRIC	S-3	SY	3,949
9	409(A)	FABRIC REINFORCEMENT	S-4	SY	10,578
10	411(C)	SUPERPAVE, TYPE S4 (PG 70-28 OK)	S-5, 6, 7, 8, 23	TON	1,209
11	411(E)	SUPERPAVE, TYPE S6 (PG 64-22 OK)	S-5, 6, 7, 8, 23	TON	296
12	412	COLD MILLING PAVEMENT	S-9, 22	SY	10,578
13	414(A)	8" P.C. CONCRETE PAVEMENT. (PLACEMENT)	S-10,11	SY	574
14	414(G)	P.C. CONCRETE FOR PAVEMENT	S-10,11,12,13	CY	128
15	509(B)	CLASS A CONCRETE	S-12, 13, 24	CY	82
16	511(A)	REINFORCING STEEL, GRADE 60		LB	6,537
17	609(A)	INTEGRAL CONCRETE CURB (6" BARRIER)	S-15	LF	866
18	609(B)	6" COMBINED CURB AND GUTTER (6" BARRIER)	S-12, 13, 15, 16	LF	602
19	610(A)	4" CONCRETE SIDEWALK	S-12, 13, 16, 17	SY	2,276
20	610(E)	4" STAMPED CONCRETE SIDEWALK	S-12, 13, 17, 18	SY	26
21	610(B)	6" CONCRETE DRIVEWAY	S-12, 13, 16, 17, 23	SY	1,056
22	610(I)	TACTILE WARNING DEVICE		SF	266
23	611(A)	MANHOLE (5 DIA), COMPLETE IN PLACE	D-1, 2, 3, 4, 5	EA	1
24	611(G)	INLET, CICI DES 2 STD, COMPLETE IN PLACE	D-2, 3, 7 ,8, 9, 10, 11	EA	7
25	611(G)	INLET, CICI DES 2 W/ SMALL JUNCTION BOX, COMPLETE IN PLACE	D-2, 3, 7 ,8, 9, 10, 11	EA	2
26	611(G)	INLET, CICI DES 4 STD, COMPLETE IN PLACE	D-2, 3, 7 ,8, 9, 10, 11	EA	5
27	611(G)	INLET, CICI DES 4 W/ SMALL JUNCTION BOX, COMPLETE IN PLACE	D-2, 3, 7 ,8, 9, 10, 11	EA	2
28	611(H)	ADDITIONAL DEPTH OF INLET, CICI DES 2 STD	D-10	VF	1
29	611(H)	ADDITIONAL DEPTH OF INLET, CICI DES 2 W/ SMALL JUNCTION BOX	D-10	VF	1
30	611(H)	ADDITIONAL DEPTH OF INLET, CICI DES 4 W/ SMALL JUNCTION BOX	D-10	VF	3
31	612(A)	MANHOLES ADJUST TO GRADE	S-12, R-2, D-1, 2, 6	EA	10
32	613(L)	18" PREFAB CULVERT END SECTION, ROUND		EA	1
33	613(W)	JACKED CONDUIT (42" DIA. STEEL CASING) (0.5625 INCH WALL THICKNESS)		LF	16
34	619(A)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	R-1, 2, 3, 4, 5	LSUM	1
35	619(B)	REMOVAL OF EXISTING RCP STORM SEWER PIPE	R-1, 2, 5, 6	LF	78
36	619(B)	REMOVAL OF EXISTING ASPHALT PAVEMENT	R-1, 2, 5, 6	SY	201
37	619(B)	REMOVAL OF EXISTING APC PAVEMENT	R-1, 2, 5, 6	SY	147
38	619(B)	REMOVAL OF EXISTING CONCRETE PAVEMENT	R-1, 2, 5, 6	SY	189
39	619(B)	REMOVAL OF EXISTING CURB	R-1, 2, 5, 6, S-22	LF	2,225
40	619(B)	REMOVAL OF DRIVEWAY	R-1, 2, 5, 6, S-22	SY	995
41	619(B)	REMOVAL OF SIDEWALK	R-1, 2, 5, 6	SY	302
42	619(B)	REMOVAL OF TREE	R-1, 2, 5, 6	EA	5
43	619(B)	REMOVAL OF EXISTING STORM SEWER INLETS	R-1, 2, 5, 6	EA	11
44	624(E)	NEW 48" CHAIN LINK FENCE (BLACK VINYL)		LF	115
45	641	MOBILIZATION	G-2	LSUM	1
46	642(B)	CONTRACTOR CONSTRUCTION STAKING LEVEL II	G-3, 4	EA	1
47	COT 202	QUICK SETTING FLOWABLE FILL	G-1, D-8	CY	50
48	COT 334	CONSTRUCTION AS-BUILT		LSUM	1
49	COT 335	CONTRACTOR QUALITY CONTROL		LSUM	1
50	COT 608	GROUND SIGN		SF	249
51	COT 608	1-1/2" SIGN POST		LF	20
52	COT 608	1-3/4" SIGN POST		LF	389
53	COT 608	2" SIGN POST		LF	75
54	COT 625	REMOVAL OF TRAFFIC ITEMS	T-1	EA	49
55	855(A)	TRAFFIC STRIPE (PLASTIC)(4" WIDE)(WHITE)	T-3	LF	30,200
56	855(A)	TRAFFIC STRIPE (PLASTIC) (4" WIDE) (YELLOW)	T-3	LF	13,380
57	855(A)	TRAFFIC STRIPE (PLASTIC) (8" WIDE) (WHITE)	T-3	LF	1,450
58	855(A)	TRAFFIC STRIPE (PLASTIC) (8" WIDE) (YELLOW)	T-3	LF	410
59	855(A)	TRAFFIC STRIPE (PLASTIC) (24" WIDE) (WHITE)	T-3	LF	128
60	855(A)	TRAFFIC STRIPE (PLASTIC) (24" WIDE) (GREEN)	T-3	LF	504
61	855(B)	TRAFFIC STRIPE (PLASTIC)(SYMBOLS) (BIKE SYMBOLS)	T-3	EA	10
62	855(B)	TRAFFIC STRIPE (PLASTIC)(SYMBOLS) (BIKE SYMBOLS WITH GREEN)	T-3	EA	10
63	855(B)	TRAFFIC STRIPE (PLASTIC)(SYMBOLS)(RAILROAD)	T-3	EA	1
64	855(B)	TRAFFIC STRIPE (PLASTIC)(SYMBOLS)(ARROWS)	T-3	EA	20
65	857(C)	REMOVABLE PAVEMENT MARKING TAPE (4"WIDE)		LF	6,000
66	857(F)	PAVEMENT MARKING REMOVAL (HYDROBLASTING)		LF	800
67	880(B)	CONSTRUCTION SIGNS 0 SF TO 6.25	T-2, 4, 5	SD	4,000

SUMMARY OF ROADWAY PAY QUANTITIES CONTINUED

ITEM NUMBER	SPEC NUMBER	PAY ITEM DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
ROADWAY BASE BID					
68	880(B)	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	T-2, 4, 5	SD	9,000
69	880(C)	BARRICADES (TYPE III)	T-2, 4, 5	SD	9,000
70	880(E)	WARNING LIGHTS(TYPE A)	T-5	SD	5,000
71	880(F)	DRUMS	T-2, 4, 5	SD	30,000
72	880(G)	TUBE CHANNELIZERS	T-2, 4	SD	26,000
73	880(I)	FLAGGER	T-6	FD	120
74	882(A)	CHANGEABLE MESSAGE SIGN	T-4	SD	270
75	SPECIAL	TYPE I PC PATCH	S-21,G-1	CY	490
76	SPECIAL	INTEGRAL CURB REPAIR	S-21, S-22, G-1	LF	390
77	SPECIAL	SIGNAGE FOR LOCAL BUSINESS ACCESS	T-4	SD	2,000
78	SPECIAL	CURB RAMP		EA	22
79	SPECIAL	URBAN RIGHT OF WAY RESTORATION	G-5,6,7,8,9,10	EA	1
80	SPECIAL	OWNER ALLOWANCE		EA	25,000
81	SPECIAL	PROJECT SIGN	T-7	EA	2
82	SPECIAL	INSURANCE FOR WORK WITHIN ROAILROAD RIGHT-OF-WAY		EA	10,000
83	SPECIAL	RAILROAD FLAGMAN		EA	5,000
84	SPECIAL	COORDINATION WITH RAILROAD		EA	10,000
85	COT 630	DOUBLE SIDED RRFB WITH APBS, INSTALLED	T-8	EA	2

SUMMARY OF STORMWATER PIPE OPTIONS

ITEM NUMBER	SPEC NUMBER	PAY ITEM DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
STORMWATER PIPE OPTION 1 (RCP)					
86	613(A)	15" REINFORCED CONCRETE PIPE (RCP), COMPLETE IN PLACE	D-8,12,13	LF	39
87	613(A)	18" REINFORCED CONCRETE PIPE (RCP), COMPLETE IN PLACE	D-8,12,13	LF	265
88	613(A)	24" REINFORCED CONCRETE PIPTE (RCP), COMPLETE IN PLACE	D-8,12,13	LF	492
STORMWATER PIPE OPTION 2 (CPP)					
89	COT 215	15" CORRUGATED POLYPROPYLENE PIPE (CPP), COMPLETE IN PLACE	D-13,14,15	LF	39
90	COT 215	18" CORRUGATED POLYPROPYLENE PIPE (CPP), COMPLETE IN PLACE	D-13,14,15	LF	265
91	COT 215	24" CORRUGATED POLYPROPYLENE PIPE (CPP), COMPLETE IN PLACE	D-13,14,15	LF	492

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.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/26/2026

ROADWAY PAY ITEM SUMMARY

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1350 South Boulder · Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7383 · fax 918.587.8071

REVISION	BY	DATE

PLAN SCALE:NA
PROFILE SCALE HORIZONTAL:NA
VERTICAL:NA

DRAWN	DEI	03/17
DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		5/26/26
LEAD ENGR.		5/26
FIELD MGR.		5/26
RECOMMENDED DESIGN MANAGER	HAS	6.26

APPROVED
CITY ENGINEER

FILE: DRAWING:
DATE:SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 3 OF 59 SHEETS

$DATE$ $FILE$

PAY ITEM NOTES - ROADWAY (11/14/2018)

EARTHWORK / EROSION CONTROL / SITE PREPARATION (E1 - E11)

E-1: ALL COSTS FOR REMOVING TREES, SHRUBS, STUMPS, POSTS, AND ALL OTHER DEBRIS AND/OR OBSTRUCTIONS NOT COVERED BY A SEPARATE PAY ITEM ARE INCLUDED IN THE PRICE BID.

E-2: ALL EXISTING DRAINAGE STRUCTURES SHALL BE CLEANED AND CLEARED OF ALL SEDIMENTATION AND DEBRIS TO THE RIGHT OF WAY. COST OF CLEARING SHALL BE INCLUDED IN THE PRICE BID.

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 FOLLOWS:
A) AROUND INLETS TO PREVENT INFLOW OF ERODED MATERIAL INTO STORM SEWER SYSTEM;
B) IN LOCATIONS THROUGHOUT PROJECT SITE, AS DETERMINED BY THE ENGINEER, TO PREVENT WASH OF ERODED MATERIAL ONTO ADJACENT PROPERTY;
C) FOR ENTIRE DURATION OF PROJECT, WITH MAINTENANCE AND REPLACEMENTS, AS DIRECTED BY THE ENGINEER;
D) WITH PERIODIC REMOVAL OF SEDIMENT IN ACCORDANCE WITH STORMWATER MANAGEMENT PLAN.
ALL COST FOR ITEMS A-D ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

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

E-9: NOT USED

E-10: ESTIMATED QUANTITY IS BASED ON SODDING OF ALL DISTURBED AREAS OUTSIDE THE FINAL PAVING LIMITS AND WITHIN THE FINAL GRADING 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 INCLUDES 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 CONTRACTOR'S SOLE 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.

SURFACING / STRUCTURES (S1 - S21)

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: PG 70-28 OK OR PG 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.

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

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

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

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

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

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: STANDARD BEDDING MATERIAL TO BE TYPE A AGGREGATE BASE COMPACTED TO 95% STANDARD PROCTOR DENSITY (AASHTO T-T99). TYPE A AGGREGATE BASE IN THE ROADWAY SHALL BE COMPACTED TO 98% MODIFIED PROCTOR (AASHTO T-180).

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 DRIVEWAY 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.

S-24: CLASS A CONCRETE PAY ITEM SHALL INCLUDE ALL INCIDENTALS NECESSARY TO CONSTRUCT RETAINING WALLS, STEPS, REPAIRS TO EXISTING 10 X 2 RCB, AND TIE-INS TO 10 X 2 RCB. THESE SHALL INCLUDE BUT NOT BE LIMITED TO DRILLING AND EPOXY, HANDRAILS, EXPANSION JOINTS, SALVAGED VENEER STONE, GEOTEXTILE DRAINAGE FABRIC, NO.57 WASHED ROCK BACKFILL, PVC UNDERDRAIN, PVC WEEP HOLES, FORM LINER WALL FINISH, CONSTRUCTION JOINTS, AND CONTROL JOINTS.

REMOVAL / ADJUSTMENT (R1 - R6)

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.

GENERAL (G1 - G10)

G-1: LOCATIONS TO BE DETERMINED IN THE FIELD AND WORK TO BE PERFORMED 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 PAYMENTS SHALL BE IN ACCORDANCE 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. NO NEW CURB OUTLETS SHALL BE CONSTRUCTED WITHOUT APPROVAL OF THE ENGINEER.

G-7: AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST SHALL OVERSEE ALL PLANTINGS AND/OR REMOVAL OF TREES. CONTACT CITY ARBORIST TO ACCEPT FINAL PLANTINGS. CONTACT NUMBER: 918-596-2548

G-8: TREE GRATES ARE NOT ACCEPTABLE PER CITY ARBORIST. CONCRETE PAVERS ARE TO BE USED AS NECESSARY AROUND TREES.

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.

DRAINAGE (D1 - D15)

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. SANITARY SEWER MANHOLES SHALL MEET REQUIRMENTS OF COT SPECIFICATION 418.

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

D-3: NO MASONRY STRUCTURES SHALL BE CONSTRUCTED WITHIN THE RIGHT OF WAY.

D-4: ADDITIONAL DEPTH IN A MANHOLE SHALL BE MEASURED FROM 6FT AS MEASURED FROM THE TOP OF RIM TO THE LOWEST FLOWLINE.

D-5: ALL MANHOLES SHALL BE COMPLETE IN PLACE. THIS PAY ITEM INCLUDES FRAME, COVER, CONCRETE AND ALL OTHER INCIDENTALS REQUIRED FOR PLACEMENT.

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 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.

D-7: INCLUDES THE COST REQUIRED TO MAKE CONNECTION AND REMOVAL OF EXISTING INLETS. THE COST OF PC CONCRETE CURB AND GUTTER THROUGH THE INLET, 5½' 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: QUICKSET FLOWABLE FILL SHALL BE USED TO BACKFILL AROUND STREET CURB INLETS AND REINFORCED CONCRETE PIPE, 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: ADDITIONAL DEPTH QUANTITIES SHALL BE MEASURED AND PAID FOR ALL INLETS EXCEEDING STANDARD DEPTH. STANDARD DEPTHS ARE AS FOLLOWS:
A) CAST IRON CURB INLET: 3.71 VF, MEASURED FROM CENTER ELEVATION OF LOWEST CAST IRON CURB TO FLOWLINE OF OUTLET PIPE.
B) RECESSED CURB INLET: 3.00 VF, MEASURED FROM TOP OF SLAB TO FLOWLINE OF OUTLET PIPE.
C) STANDARD DROP INLET: SEE STANDARD DETAILS 770, 771, 772 AND 773 - VARIES BASED ON PIPE SIZE, MEASURED FROM LOWEST ELEVATION OF INFLOW APRON TO FLOWLINE OF OUTLET PIPE.

D-11: CAST IRON CURB INLET CONFIGURATION NAMING CONVENTION PROVIDED IN COT STANDARD NO. 755. SEPARATE DETAILS SHALL BE REFRENCED OR PROVIDED IN THE PLANS FOR NON-CITY-STANDARD INLETS.
STANDARD NAMING: CI(C) DES G(T) [W/AMH]
G: NUMBER OF GRATES.
T: LETTER(S) CORRESPONDING TO ARRANGEMENT OF CAST IRON HOODS TO BE INSTALLED UPSTREAM OF GRATES.
W/AMH: IF SHOWN, INLET TO BE CONSTRUCTED WITH ATTACHED ACCESS MANHOLE.

D-12: REINFORCED CONCRETE PIPE TO BE CLASS III. ALL REINFORCED CONCRETE PIPE AND MANHOLES TO BE SUPPLIED WITH AN IMNI-FLEX JOINT GASKET OR APPROVED EQUAL. MASTIC JOINT SEALANT SHALL NOT BE ALLOWED.

D-13: THIS PAY ITEM SHALL BE COMPLETE IN PLACE AND SHALL INCLUDE ALL PIPE, STANDARD BEDDING MATERIAL AND TRENCH EXCAVATION, JOINT GASKETS AND ALL OTHER INCIDENTALS. NO ADDITIONAL COST WILL BE MADE. PRIOR TO ACCEPTANCE, INTERIOR OF PIPE SHALL BE INSPECTED FOR DEFECTS USING SELF-PROPELLED MOBILE CLOSED-CIRCUIT CAMERA SYSTEM.

D-14: WHERE CORRUGATED POLYPROPYLENE PIPE CONNECTS TO REINFORCED CONCRETE STRUCTURES, CONTRACTOR SHALL ENSURE CONNECTIONS ARE WATER-TIGHT AND FULLY SEALED AGAINST SOIL INFILTRATION.

D-15: WHERE QUICKSET FLOWABLE FILL IS USED TO BACKFILL AROUND CORRUGATED POLYPROPYLENE PIPE, THE CONTRACTOR SHALL UTILIZE AN ANCHORING SYSTEM APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL COSTS FOR LABOR, EQUIPMENT AND MATERIALS REQUIRED TO IMPLEMENT APPROVED ANCHORING SYSTEM INCLUDED IN PRICE BID FOR CORRUGATED POLYPROPYLENE PIPE.

TRAFFIC (T1 - T8)

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 EXCEEDS 55°F FOR ALL OF THE SIX HOURS PRIOR TO INSTALLATION AND MAXIMUM WIND GUSTS ARE BELOW 15 MPH AT THE TIME OF APPLICATION. PRICE BID TO INCLUDE FLEX TABS OR LIKE KIND FOR POST CONSTRUCTION LANE MARKING/SEPARATION. MECHANICALLY APPLIED PREFORMED PLASTIC TAPE (COLD TAPE) WILL NOT BE ACCEPTED.

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

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

T-6: THE PAY ITEM FOR FLAGGER SHALL BE PAID FOR ON A FLAG DAY (F.D.) BASIS. ONE F.D. IS ONE COMPLETE WORKDAY 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.

T-8: PRICE BID TO INCLUDE ALL COMPONENTS OF DUAL-SIDED RECTANGULAR RAPID FLASHING BEACON. SEE SHEET 38 FOR DETAIL AND NOTES.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/7/2026

REVISION	BY	DATE

ROADWAY PAY ITEM NOTES

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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PLAN SCALE: N/A
PROFILE SCALE HORIZONTAL: N/A
VERTICAL: N/A

DRAWN	DEI	03/17
DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		5/2026
LEAD ENGR.		5/26
FIELD MGR.		6/26
RECOMMENDED DESIGN MANAGER	HAS	6.26

APPROVED
CITY ENGINEER

FILE: DRAWING: DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 4 OF 59 SHEETS

$FILES

$DATES

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: 4100 S. UNION AVENUE

(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 SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.

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 RACK MOUNT COBALT CONTROLLER IN A 332 SIGNAL CABINET OR 332S WHERE A BATTERY BACKUP IS INCLUDED. THE LATEST VERSION OF EOS SHALL BE INSTALLED ON THE CONTROLLER. TRAFFIC SIGNAL CABINETS SHALL BE A 332S EXT RACK PER THE 2025SPEC. THE SIDES OF THE CONTROLLER CABINET SHALL BE PARALLEL TO THE STREETS. THE FRONT DOOR OF THE CABINET SHALL FACE AWAY FROM THE INTERSECTION. THE DOOR HINGES SHALL BE LOCATED ON THE SIDES OF THE CABINET FURTHEST AWAY FROM THE INTERSECTION, SO THE DOORS SWING OPEN AWAY FROM THE INTERSECTION.

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, LIGHTWEIGHT 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, AND 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.

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 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:

THE EAST/WEST PUSH BUTTONS (4) SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

DURING FLASHING DON'T WALK AND STEADY DON'T WALK:
"WAIT"
DURING WALK:
"(UNION AVENUE) - WALK SIGN IS ON TO CROSS (UNION AVENUE)"
DURING EXTENDED PUSH BUTTON PRESS (PRESS OF 2 SECONDS OR MORE):
"WAIT TO CROSS(UNION AVENUE) AT (41ST STREET)"

THE NORTH/SOUTH PUSH BUTTONS (4) SHALL BE FACTORY PROGRAMMED WITH THE FOLLOWING VERBAL MESSAGES:

DURING FLASHING DON'T WALK AND STEADY DON'T WALK:
"WAIT"
DURING WALK:
"(41ST STREET) - WALK SIGN IS ON TO CROSS (41ST STREET)"
DURING EXTENDED PUSH BUTTON PRESS (PRESS OF 2 SECONDS OR MORE):
"WAIT TO CROSS(41ST STREET) AT (UNION 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 (7) OF THE 3-SECTION BACKPLATES, (4) OF THE 4-SECTION BACKPLATES, AND (1) OF THE 5-SECTION "DOGHOUSE" STYLE 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 617) THE CONTRACTOR SHALL SUPPLY LED LUMINAIRE WITH THE FOLLOWING ATTRIBUTES: 15,700 LUMENS, 120 VOLT, MINIMUM 118 LUMENS PER WATT, GRAY (UNLESS BLACK POLES ARE SPECIFIED), TYPE 3 DISTRIBUTION, 4000 KELVIN, WITH SURGE PROTECTION, 7 PIN RECEPTACLE AND LONG LIFE PHOTOCELL. AMERICAN ELECTRIC LIGHTING # ATBM F MVOLT R3 P7 PCLL OR APPROVED EQUAL.

(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

- 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 250 LINEAR FEET OF CAT 6 CABLE INSTALLED FROM THE CONTROLLER TO THE SIGNAL POLE FURTHEST FROM THE CONTROLLER. 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 CONTRACTOR 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.

(80) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.

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

TRAFFIC PAY QUANTITIES

W. 41st St & S. Union Ave.

ITEM	SPEC	DESCRIPTION		UNIT	TOTAL
92	COT 601	PULL BOX SIZE II		EA	3
93	COT 601	PULL BOX SIZE III		EA	1
94	COT 602	2" PVC SCH. 40 PLASTIC CONDUIT (TRENCHED)	(COT 602)	LF	75
95	COT 602	3" PVC SCH. 40 PLASTIC CONDUIT (TRENCHED)	(COT 602)	LF	80
96	COT 602	2-3" HDPE SCH. 40 CONTINUOUS CONDUIT (DIRECTIONAL BORE) (OUTSIDE IDL)	(COT 602)	LF	330
97	COT 603	24" SIGNAL FOOTING S-18/24	(COT 603)	EA	1
98	COT 603	30" SIGNAL FOOTING S-30/36	(COT 603)	EA	2
99	COT 603	36" SIGNAL FOOTING S-42/50	(COT 603)	EA	1
100	COT 603	24" PEDESTAL FOOTING F-1	(COT 603)	EA	4
101	COT 607	SERVICE TO SIGNAL STANDARD	(COT 607)	EA	1
102	COT 608	OVERHEAD SIGN		SF	86
103	COT 610	TRAFFIC SIGNAL CONTROLLER CABINET ASSEMBLY	(COT 610)	EA	1
104	COT 611	2#14 SHIELDED ELECTRICAL CONDUCTOR	(TP-1)	LF	195
105	COT 611	4#14 TRAFFIC SIGNAL ELECTRICALCABLE	(TP-1)	LF	235
106	COT 611	7#14 TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)	LF	460
107	COT 611	20#14 TRAFFIC SIGNAL ELECTRICAL CAB_E	(TP-1)	LF	530
108	COT 611	GREEN #12 THHN ELECTRICAL CONDUCTOR	(TP-1)	LF	640
109	COT 611	2#12 UF ELECTRICAL CONDUCTOR WITH GROUND	(TP-1)	LF	775
110	COT 611	GREEN #6 THHN ELECTRICAL CONDUCTOR	(TP-1)	LF	455
111	COT 611	CAT 6 ETHERNET CABLE	(TP-1)(SPECIAL)	LF	250
112	COT 612	CABINET BASE, APRON AND GUARD		EA	1
113	COT 613	AUDIBLE PEDESTRIAN PUSH BUTTON STATION AND SIGN	(COT 613)	EA	8
114	COT 613	AUDIBLE PEDESTRIAN PUSH BUTTON CONTROL CARD/UNIT	(COT 613)	EA	1
115	COT 613	AUDIBLE PEDESTRIAN PUSH BUTTON CONFIG/PROGRAMMING DEVICE	(COT 613)	EA	1
116	COT 614	LED 3 SECTION TRAFFIC SIGNAL HEAD (#36)	(COT 614)	EA	7
117	COT 614	LED 4 SECTION TRAFFIC SIGNAL HEAD (#S-13L)(FLTYA)	(COT 614)	EA	4
118	COT 614	LED 5 SECTION TRAFFIC SIGNAL HEAD (#34R)	(COT 614)	EA	1
119	COT 614	LED ICC PEDESTRIAN HEAD (#33)	(COT 614)	EA	8
120	COT 614	BACKPLATES	(COT 614)	EA	12
121	COT 615	BASE COVERS		EA	4
122	COT 617	24' MODULAR TRAF. SIGNAL MAST ARM AND POLE W/LUM. EXT	(COT 617)	EA	1
123	COT 617	30' MODULAR TRAF. SIGNAL MAST ARM AND POLE W/LUM. EXT	(COT 617)	EA	1
124	COT 617	42' MODULAR TRAF. SIGNAL MAST ARM AND POLE W/LUM. EXT	(COT 617)	EA	1
125	COT 617	36' MODULAR TRAF. SIGNAL MAST ARM AND POLE W/O LUM EXT		EA	1
126	COT 617	10' PEDESTAL POLE		EA	4
127	COT 619	TEMP SIGNAL SPAN		EA	1
128	COT 619	TEMP SIGNAL POLE		EA	1
129	COT 619	TEMP SIGNAL CABINET		EA	1
130	COT 619	TEMP SIGNAL SERVICE		EA	1
131	COT 620	VIDEO DETECTION SYSTEM	(COT 620)	EA	1
132	COT 622	WIRELESS TRAFFIC SIGNAL COMMUNICATIONS SYSTEM	(COT 622)	EA	1
133	COT 623	BATTERY BACKUP SYSTEM		EA	1
134	COT 625	REMOVAL OF TRAFFIC ITEMS	(COT 625)	EA	1
135	COT 626	TRAFFIC SIGNAL MAINTENANCE	(80)	HR	1
136	COT 626	SIGNAL MODIFICATIONS FOR LANE CLOSURES (PER SIGNALIZED INTERSECTION)	(80)	EA	1

PROJECT NO. 144017-AS&G

TRAFFIC PAY ITEM SUMMARY

W. 41st ST. & S. UNION AVE.

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TRAFFIC ENGINEERING CONSULTANTS
6901 S. 65TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-461-8484 FAX: 918-461-3163

JACKSON SLAYTER, P.E. # 36851
C.A. # 1160, RENEWAL 06-30-27

5/26/26
DATE

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

LICENSED PROFESSIONAL ENGINEER — JACKSON SLAYTER — 5/26/26 — 36851 — OKLAHOMA

REVISION	BY	DATE

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

DRAWN	CAL	05/26/26	APPROVED:
DESIGNED	JCS	05/26/26	
SURVEY			
PROJ. MGR.			
LEAD ENGR.		05/26/26	
FIELD MGR.		6/26	
RECOMMENDED: DESIGN MANAGER		6-26	CITY ENGINEER

FILE: DRAWING:
ATLAS PAGE NO:
DATE: MAY 2026
SHEET 5 OF 77 SHEETS

05/26/26 G:\0Projects\02 Tulsa Office Projects\10-6229 - W 41st Street and Union Ave Additional Work Task 16\CAD\QUANT.dgn

GENERAL CONSTRUCTION NOTES

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

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 METROPOLITAN TULSA TRANSIT AUTHORITY (MTTA), ERIC SMITH 918-830-0024, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK, LANE CLOSURES OR PRIOR TO DETOURING TRAFFIC.

43. CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN.

REVISION	BY	DATE

GENERAL CONSTRUCTION NOTES

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

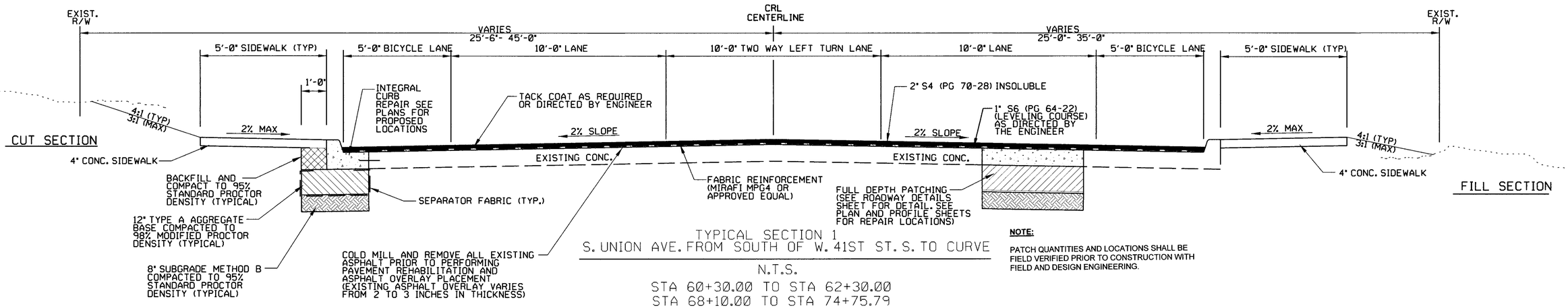
PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1750 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.8871

PLAN SCALE: N/A	DRAWN	DEI	03/17	APPROVED
	DESIGNED	DEI	03/17	
	SURVEY	SWA	08/15	
PROFILE SCALE HORIZONTAL: N/A	PROJ. MGR.	[signature]	01/2026	
	LEAD ENGR.	[signature]	1/26	
	FIELD MGR.	[signature]	6/26	
VERTICAL: N/A	RECOMMENDED DESIGN MANAGER	[signature]	6-26	CITY ENGINEER

FILE: $FILE$ DRAWING: $DATE$ DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET 6 OF 59 SHEETS



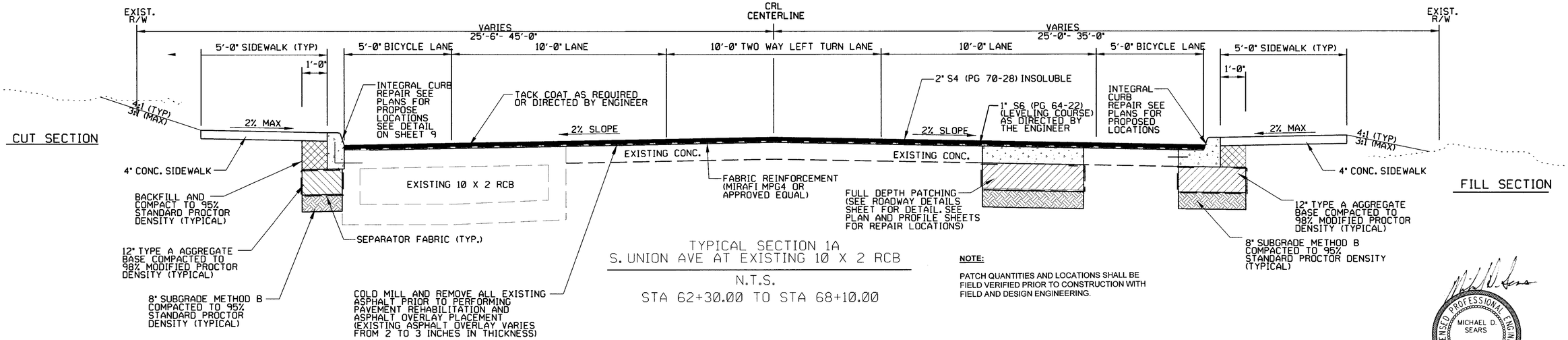
TYPICAL SECTION 1
S. UNION AVE. FROM SOUTH OF W. 41ST ST. S. TO CURVE

N.T.S.

STA 60+30.00 TO STA 62+30.00
STA 68+10.00 TO STA 74+75.79

NOTE:

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



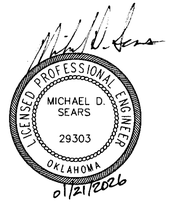
TYPICAL SECTION 1A
S. UNION AVE AT EXISTING 10 X 2 RCB

N.T.S.

STA 62+30.00 TO STA 68+10.00

NOTE:

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



$DATE$ $FILE$

REVISION	BY	DATE

TYPICAL SECTIONS (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
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1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.8871

PLAN SCALE:NA	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL:NA	PROJ. MGR.		01/2026
	LEAD ENGR.		2/26
	FIELD MGR.		6/26
VERTICAL:NA	RECOMMENDED DESIGN MANAGER	HAS 6-26	

APPROVED

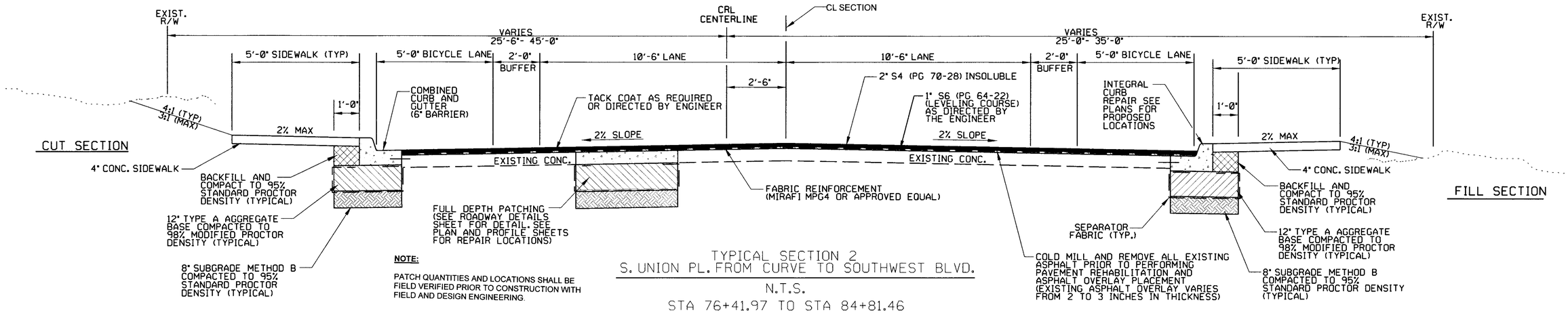
CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 7 OF 59 SHEETS



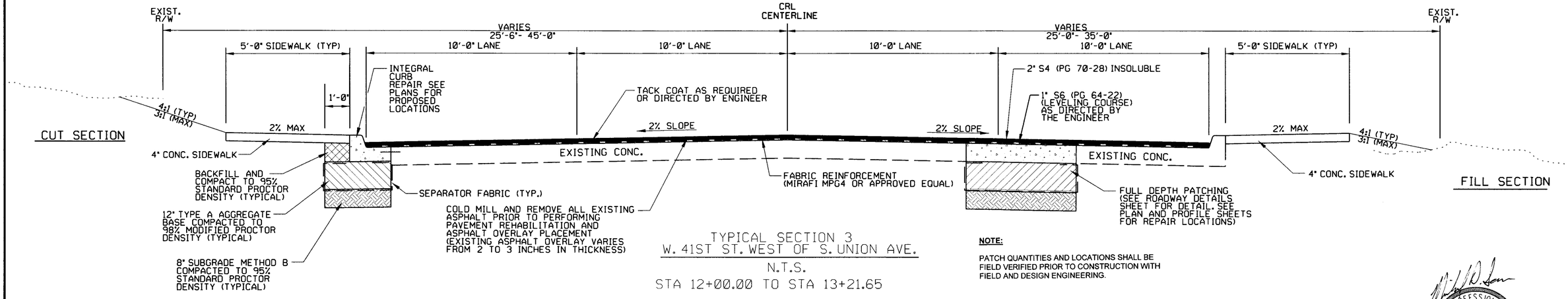
NOTE:

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

TYPICAL SECTION 2
S. UNION PL. FROM CURVE TO SOUTHWEST BLVD.

N.T.S.

STA 76+41.97 TO STA 84+81.46



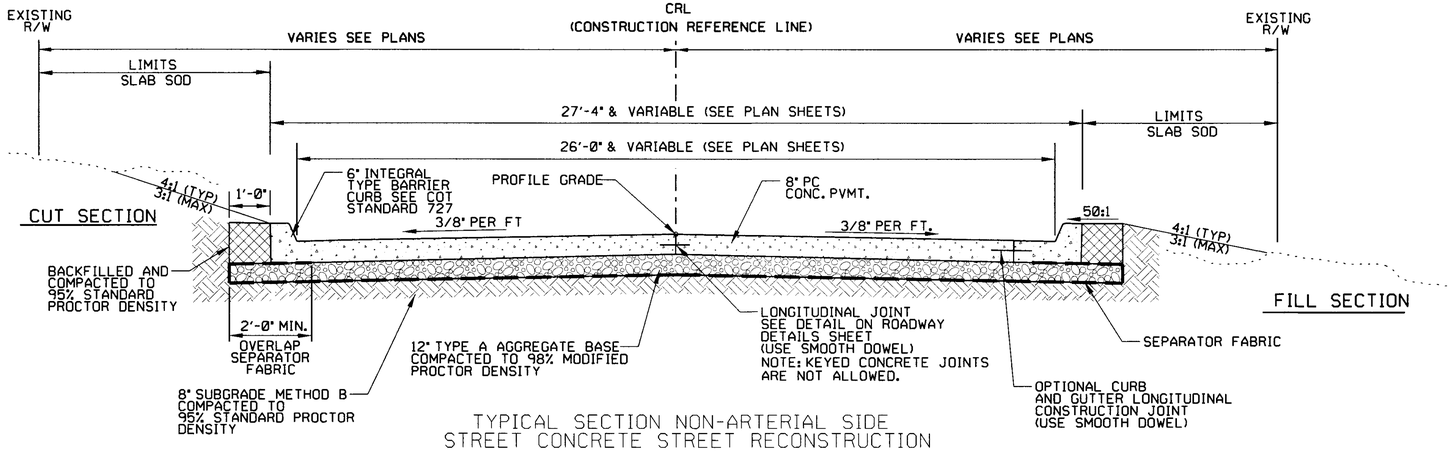
TYPICAL SECTION 3
W. 41ST ST. WEST OF S. UNION AVE.

N.T.S.

STA 12+00.00 TO STA 13+21.65

NOTE:

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



TYPICAL SECTION NON-ARTERIAL SIDE STREET CONCRETE STREET RECONSTRUCTION

N.T.S.

$FILE$

$DATE$

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

REVISION	BY	DATE

TYPICAL SECTIONS (2)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 602
Tulsa, Oklahoma 74119 - 3216
918.587.7263 - Fax 918.587.2071

PLAN SCALE: N/A	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: N/A	PROJ. MGR.		01/2026
	LEAD ENGR.		2/26
	FIELD MGR.		2/6/26
VERTICAL: N/A	RECOMMENDED DESIGN MANAGER		1/26 6-26

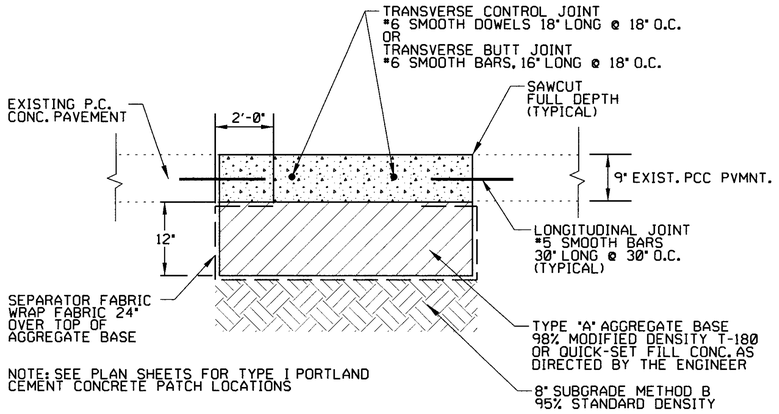
APPROVED

CITY ENGINEER

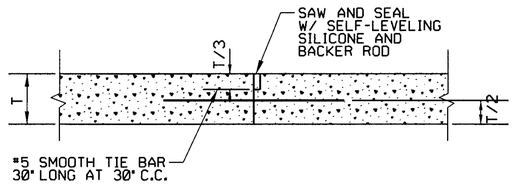
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ATLAS PAGE NO.: 140, 141, 191

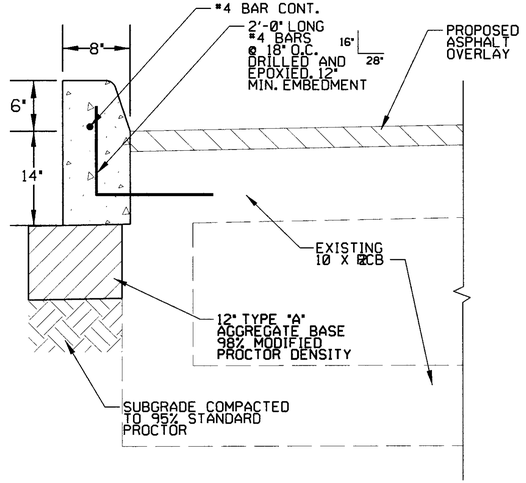
SHEET 8 OF 59 SHEETS



TYPE I PCC PATCH
N.T.S.

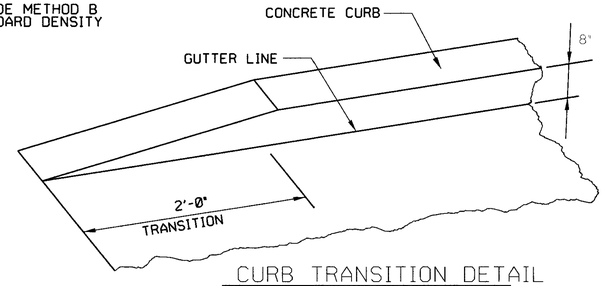


TIED BUTT JOINT
OR
LONGITUDINAL CONSTRUCTION JOINT
OR
TRANSVERSE CONSTRUCTION JOINT
N.T.S.

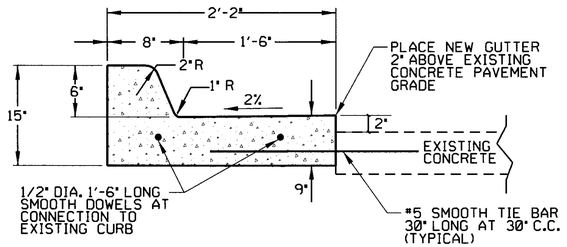


NOTE: FULL DEPTH SAWOUT AND REMOVE EXISTING CURB INTEGRAL TO RCB. CONSTRUCT NEW STANDING CURB TIED TO TOP SECTION OF EXISTING RCB.

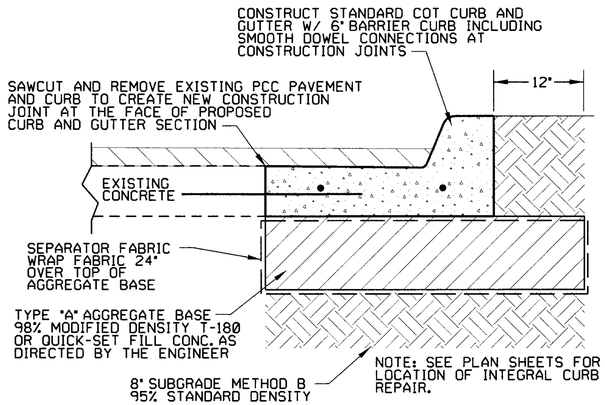
STANDING CURB
N.T.S.



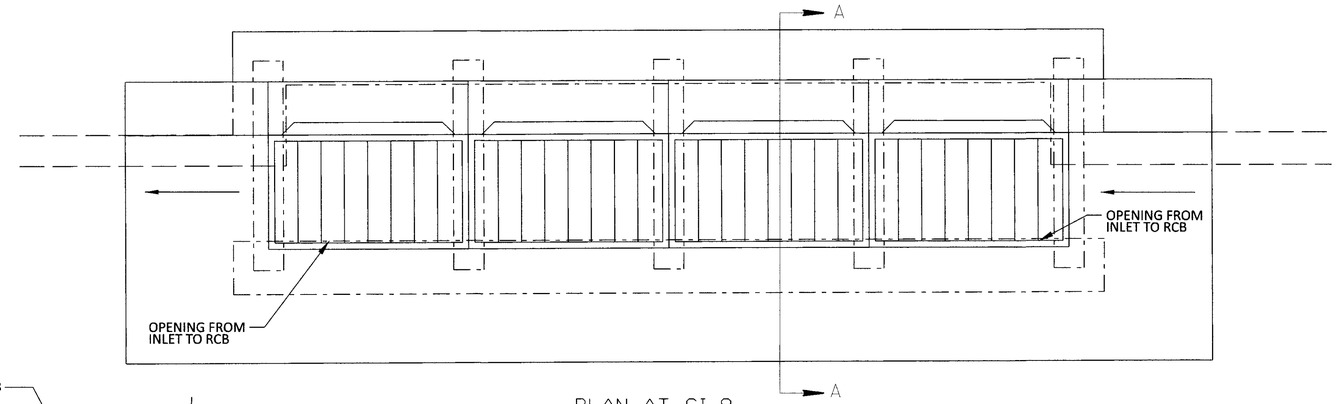
CURB TRANSITION DETAIL
N.T.S.



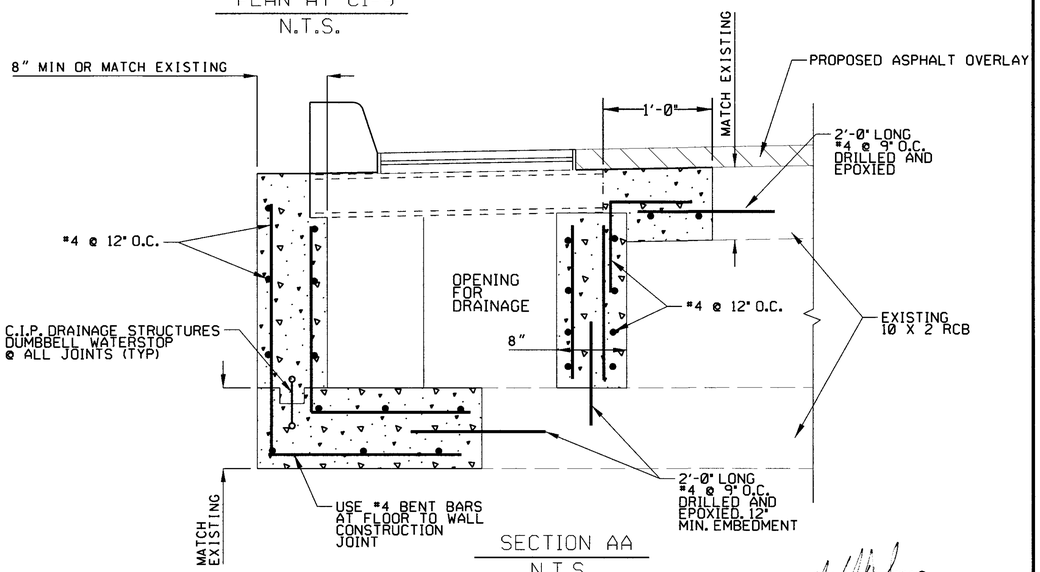
COMBINED CURB & GUTTER
(6" BARRIER)
N.T.S.



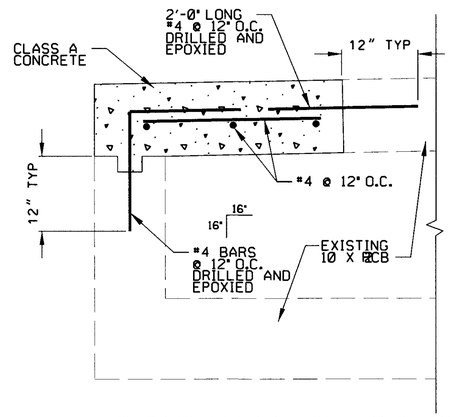
INTEGRAL CURB REPAIR
N.T.S.



PLAN AT CI-9
N.T.S.



SECTION AA
N.T.S.



REPAIR DETAIL FOR EXISTING
RCB STRUCTURE AT INLET REMOVAL
N.T.S.



REVISION	BY	DATE

ROADWAY DETAILS

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

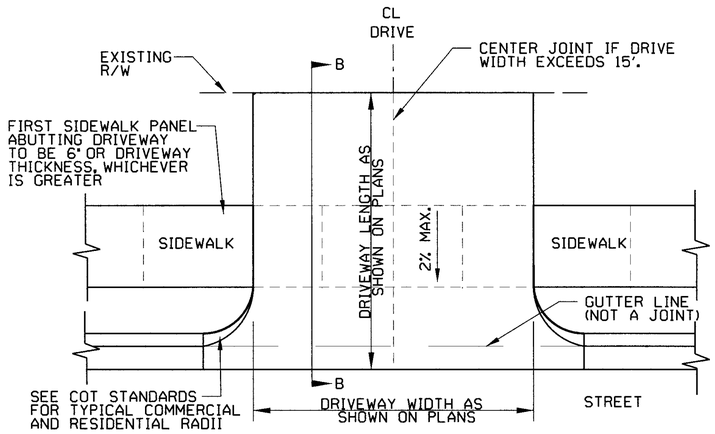
Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - Fax 918.587.8871

PLAN SCALE NA	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: NA	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		6/26
VERTICAL: NA	RECOMMENDED DESIGN MANAGER	HAS	6-26

APPROVED
CITY ENGINEER

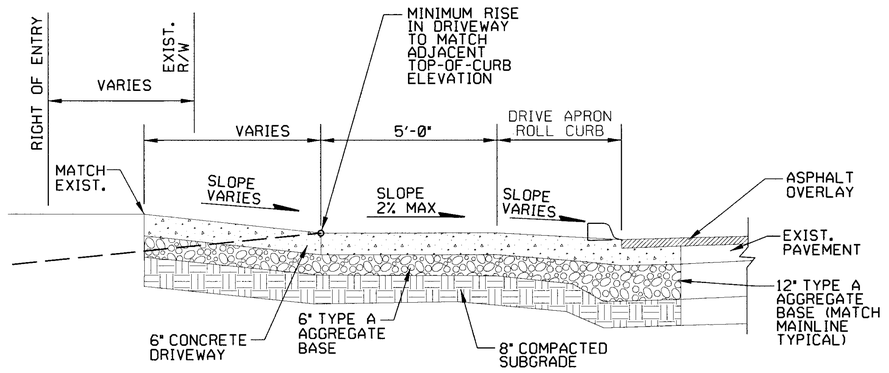
FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 9 OF 59 SHEETS

$DATE$ $FILE$



RADIUS DRIVEWAY REPAIR PLAN

N.T.S.



SECTION B-B SECTION DETAIL AT DRIVEWAY

N.T.S.

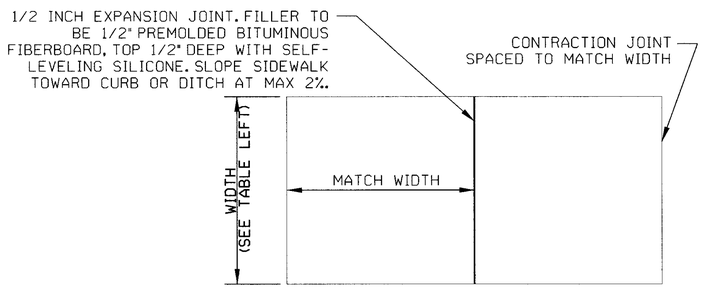
JOINT SPACING FOR STRAIGHT RUNS			
WALK WIDTH	CONTRACTION JOINT SPACING		EXPANSION JOINT SPACING
	TRANSVERSE	LONGITUDINAL	
4'-0"	4'-0"	NOT REQUIRED	24'-0"
5'-0"	5'-0"	NOT REQUIRED	25'-0"
6'-0"	6'-0"	NOT REQUIRED	24'-0"

NOTES:

1. PROVIDE 1/2" EXPANSION JOINTS WHERE SIDEWALKS ABUT PLAIN CONCRETE PAVEMENT AND LARGE CONCRETE SURFACED AREAS.
2. TRANSVERSE EXPANSION JOINTS SHALL BE CONTINUOUS THROUGH BOTH WALK AND CURB WHERE WALK ABUTS CONCRETE CURB AND GUTTER.
3. ISOLATION JOINTS SHALL BE REQUIRED BETWEEN CURBS THAT ABUT THE SIDEWALK LONGITUDINALLY.

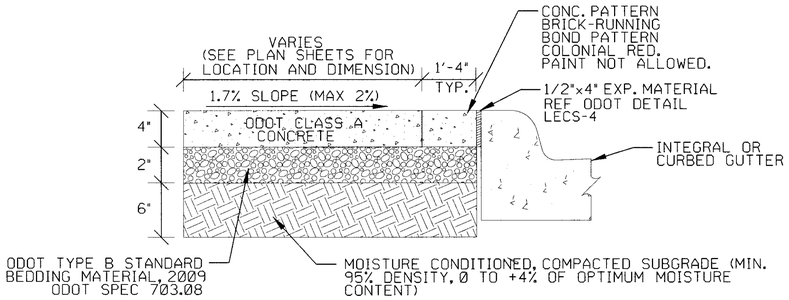
4" CONCRETE SIDEWALK

N.T.S.



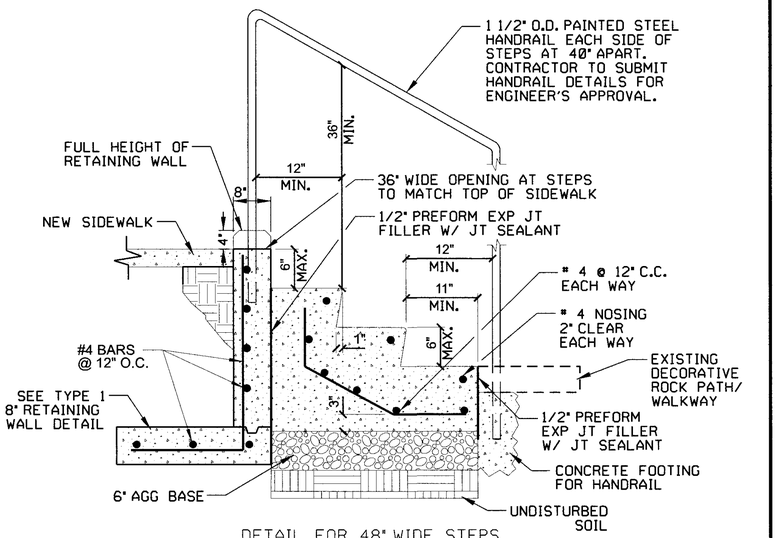
SIDEWALK PLAN VIEW

N.T.S.



SIDEWALK TYPICAL SECTION

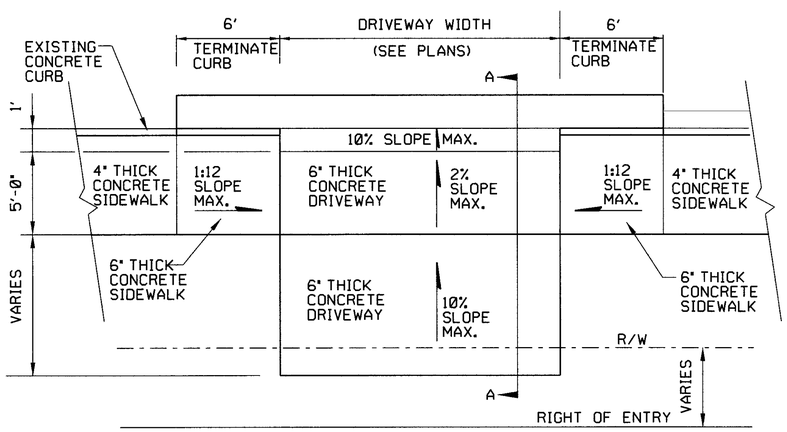
N.T.S.



DETAIL FOR 48" WIDE STEPS

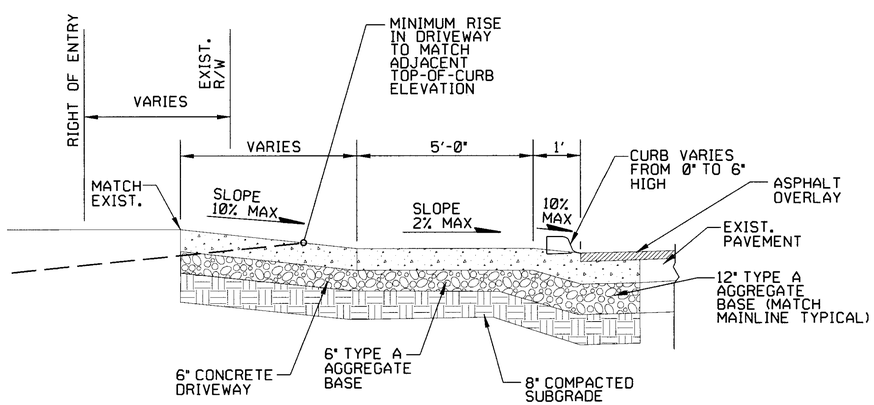
STA. 67+81.86 (RT)

N.T.S.



RAMP DRIVEWAY REPAIR PLAN

N.T.S.



SECTION A - A DRIVE APRON

N.T.S.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/27/2026

DRIVEWAY AND SIDEWALK DETAILS

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

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Tulsa, Oklahoma 74119 - 3216
918.587.7263 - Fax 918.587.2077

REVISION	BY	DATE

PLAN SCALE: N/A

PROFILE SCALE HORIZONTAL: N/A

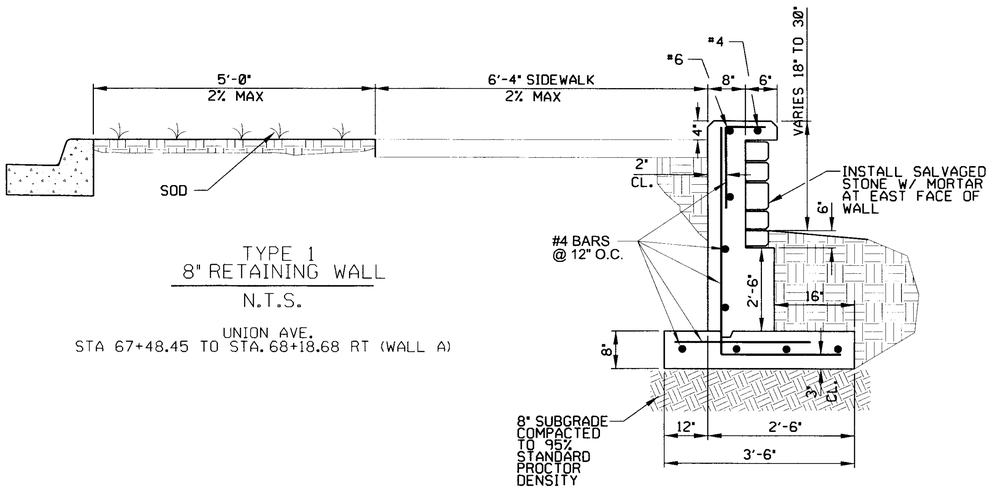
VERTICAL: N/A

DRAWN	DEI	03/17	APPROVED
DESIGNED	DEI	03/17	
SURVEY	SWA	08/15	
PROJ. MGR.		01/2026	
LEAD ENGR.		1/26	
FIELD MGR.		6/26	
RECOMMENDED DESIGN MANAGER	HBJ	6-26	CITY ENGINEER

FILE: DRAWING: DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET 10 OF 59 SHEETS

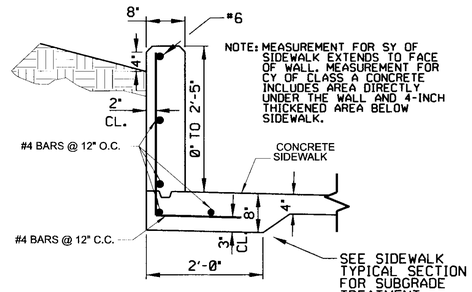
$DATE$ $FILE$



TYPE 1
8" RETAINING WALL

N.T.S.

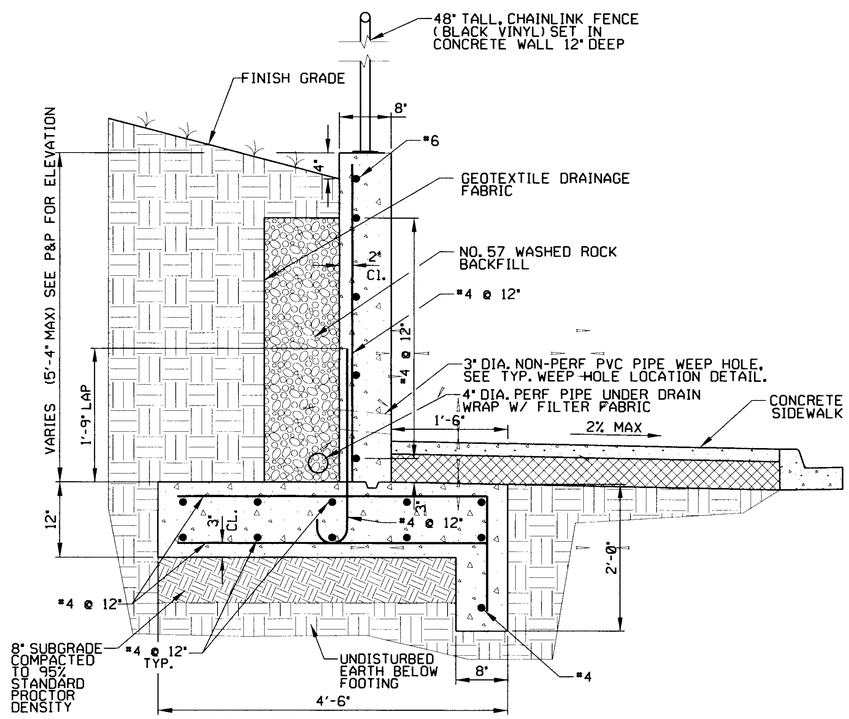
UNION AVE.
STA 67+48.45 TO STA. 68+18.68 RT (WALL A)



TYPE 2
8" RETAINING WALL

N.T.S.

UNION AVE. / UNION PL.
STA 71+04.00 TO STA. 72+16.62 LT (WALL C)
STA 72+32.31 TO STA. 72+94.13 LT (WALL D)
STA 75+82.02 TO STA 76+69.79 LT (WALL E)
STA 76+93.11 TO STA 77+62.82 LT (WALL F)
STA 77+67.16 TO STA. 78+91.59 LT (WALL G)
STA 79+37.41 TO STA. 79+70.33 LT (WALL H)
STA 80+03.21 TO STA. 80+29.19 LT (WALL I)
STA 80+40.26 TO STA 80+80.52 LT (WALL J)
STA 81+46.69 TO STA 82+22.55 LT (WALL K)
STA 82+36.68 TO STA 83+97.83.71 LT (WALL L)



TYPE 3
8" RETAINING WALL

N.T.S.

UNION AVE
STA 70+92.08 TO STA. 71+04.85 LT (WALL B)

FINISH

WALL FINISH TO HAVE EQUIVALENT FORM LINER DESIGN EQUAL TO GREENSTREAK ARCHITECTURAL FORM LINER STONE DESIGN NO. 330 ASHLAR STONE OR APPROVED EQUAL.

SPECIFICATIONS:

DESIGN - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 7TH EDITION, 2004.
CONSTRUCTION - OKLAHOMA DEPARTMENT OF TRANSPORTATION 2009 EDITION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

GEOTECHNICAL REPORT:

SUBSURFACE INVESTIGATION BY KLEINFELDER REPORT NO. 20161079 DATED 06-01-2015.

DESIGN LOADS:

BACKFILL = 2:1 MAX SLOPE
INTERNAL FRICTION ANGLE = 30 DEGREES
COEFFICIENT OF FRICTION BETWEEN FOOTING AND BEARING SURFACE = 0.46
NON-COHESIVE ACTIVE SOIL PRESSURE = 40 PCF PER FOOT

CONCRETE:

CONCRETE SHALL BE CLASS A (F'C = 3,000 PSI)
EXPOSED EDGES TO HAVE 3/4" CHAMFER UNLESS OTHERWISE NOTED

REINFORCING STEEL:

DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL REINFORCING BAR DIMENSIONS ON THE DETAILED DRAWINGS ARE TO THE CENTERS OF BARS EXCEPT WHERE OTHERWISE NOTED. REINFORCING BARS SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI-315. ALL REINFORCEMENT SHALL HAVE A 2" COVER UNLESS OTHERWISE NOTED.

MINIMUM REINFORCING BAR SPLICE LENGTHS: (UNLESS OTHERWISE NOTED)

BAR SIZE:	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8
SPLICE LENGTH :	1'-9"	2'-2"	2'-9"	3'-9"	4'-11"

FOUNDATIONS:

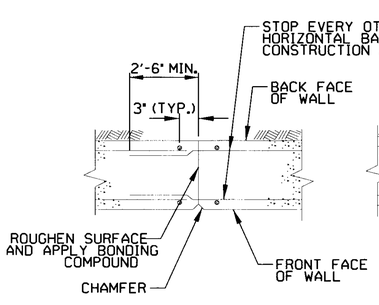
THE FOOTING IS DESIGNED TO EXERT A MAXIMUM FOUNDATION PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. BOTTOM OF FOOTINGS SHALL BE LOCATED IN VIRGIN SOIL OR COMPACTED FILL THAT HAS BEEN APPROVED BY THE GEOTECHNICAL ENGINEER OR THE PROJECT INSPECTOR TO BE ADEQUATE TO SUPPORT THE DESIGN BEARING PRESSURE PRIOR TO PLACEMENT OF FOOTING CONCRETE. IF REQUIRED, SUBGRADE SHALL BE PREPARED BY REMOVING UNSUITABLE MATERIAL AND BACKFILLING WITH SELECT MATERIAL AS DIRECTED BY THE GEOTECHNICAL ENGINEER. CARE IS REQUIRED DURING EXCAVATION FOR THE CONCRETE SHEAR KEY TO ALLOW CONSTRUCTION OF THE KEY IN AN UNFORMED EXCAVATION AGAINST VIRGIN SOIL OR COMPACTED FILL.

BACKFILL:

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO BRACE WALLS WHEN BACKFILLING. CARE SHALL BE TAKEN DURING PLACEMENT OF BACKFILL ADJACENT TO THE WALL SO AS NOT TO OVERLOAD THE WALL DUE TO HEAVY EQUIPMENT. ONLY LIGHTWEIGHT COMPACTION EQUIPMENT (NOT EXCEEDING 2,000 POUNDS) SHALL BE PERMITTED WITHIN THE CRITICAL ZONE DEFINED AS BEGINING AT THE BASE OF THE WALL AND WIDENING UPWARD FROM THE BASE AT A 1:1 SLOPE. ALL PRECAUTIONS SHALL BE TAKEN TO PROVIDE ADEQUATE DRAINAGE PRIOR TO AND AFTER CONSTRUCTION. BACKFILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER SHALL BE PLACED IN 8 INCH LOOSE LIFTS (6 INCH WHEN USING LIGHTWEIGHT COMPACTION EQUIPMENT) COMPACTED TO AT LEAST 95% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY PER ASTM D698.

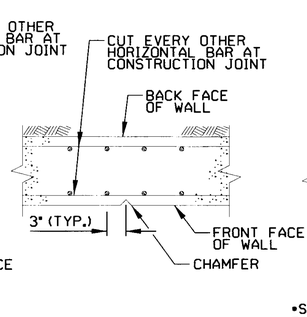
CONSTRUCTION NOTES:

THE STRUCTURE IS TO BE LOCATED IN THE FIELD AS SHOWN ON THE ROADWAY PLAN AND PROFILE SHEETS AND RETAINING WALL ELEVATIONS. ALL DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES, PROPERTY LINES, EASEMENTS, UTILITIES, EXISTING AND PROPOSED CONTOURS, AND OTHER EXISTING OR PROPOSED FEATURES SHOWN ON THE DRAWINGS, HAVE BEEN OBTAINED FROM TOPOGRAPHICAL SURVEYS AND SITE INVESTIGATIONS. THE CONTRACTOR SHALL VERIFY THESE DIMENSIONS AND ELEVATIONS PRIOR TO START OF CONSTRUCTION OF THE STRUCTURE AND SHALL REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.



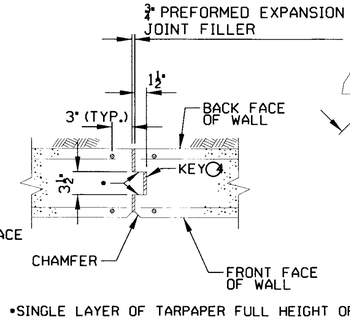
NOTE: CONSTRUCTION JOINT CAN REPLACE CONTROL JOINT

CONSTRUCTION JOINT
(C.J.)



NOTE: PROVIDE CONTROL JOINTS AS SHOWN ON WALL ELEVATION (25'-0" INTERVALS MAX.)

CONTROL JOINT
(C.J.)



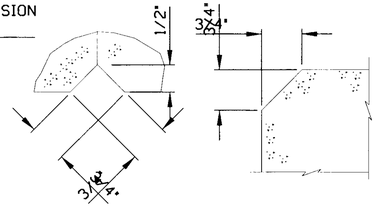
•SINGLE LAYER OF TARPAPER FULL HEIGHT OF KEY. FASTEN TO CONCRETE WITH ASPHALTIC CEMENT.

NOTE: PROVIDE EXPANSION JOINTS AS SHOWN ON WALL ELEVATION (100'-0" INTERVALS MAX.)

EXPANSION JOINT
(E.J.)

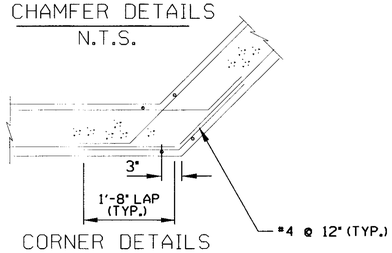
TYPICAL VERTICAL JOINT DETAILS

N.T.S.



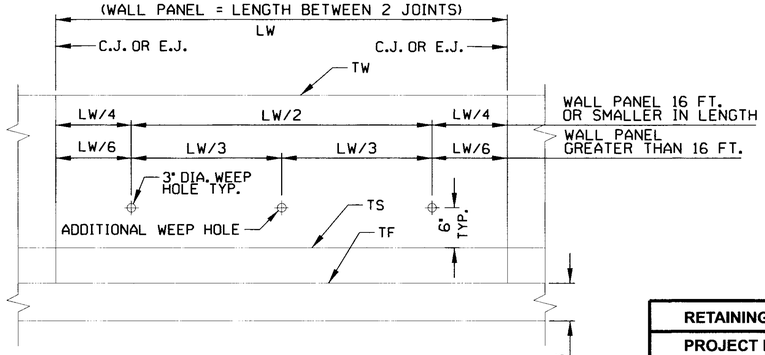
CHAMFER DETAILS

N.T.S.



CORNER DETAILS

N.T.S.



TYP. WEEP HOLE LOCATION

N.T.S.

(2 WEEP HOLES PER PANEL 16 FT. IN LENGTH OR LESS)
(3 WEEP HOLES PER PANEL GREATER THAN 16 FT.)



RETAINING WALL DETAILS AND NOTES

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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918.587.7283 - fax 918.587.0871

REVISION	BY	DATE

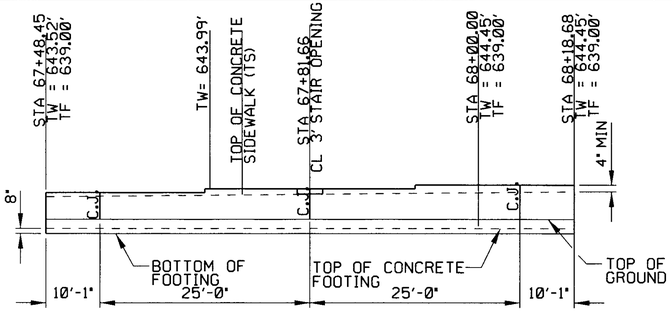
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	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: NA	PROJ. MGR.		5/2026
	LEAD ENGR.		5/26
	FIELD MGR.		6/26
VERTICAL: NA	RECOMMENDED DESIGN MANAGER		

APPROVED
CITY ENGINEER

FILE: DRAWING: DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET 11 OF 59 SHEETS

$FILES
$DATES

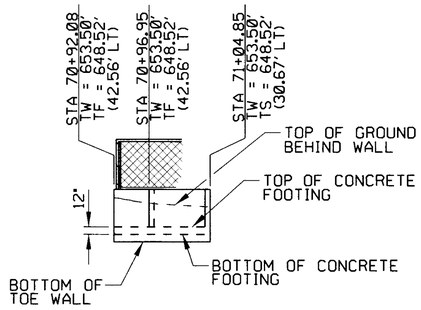


TYPE 1 - 8" RETAINING WALL
N.T.S.

UNION AVE.
STA 67+48.45 TO STA. 68+18.68 RT (WALL A)

SUMMARY OF PAY QUANTITIES - WALL A			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	18.2*	CY	CLASS A CONCRETE
511(A)	862*	LB	REINF. STEEL , GRADE 60

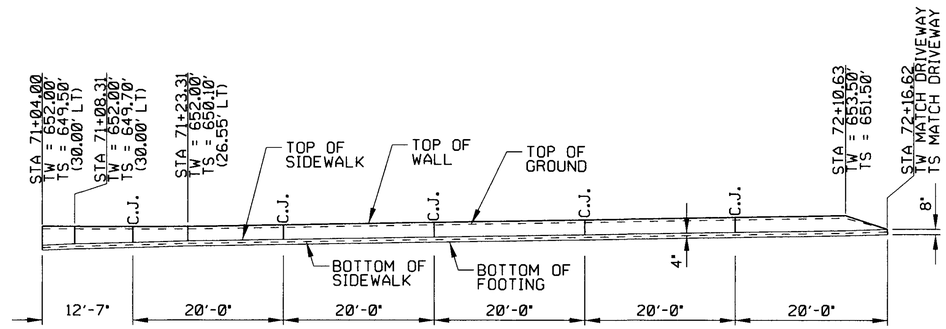
*INCLUDES 1.5 CY OF CONCRETE AND 27 LB OF STEEL FOR STEPS LOCATED AT STA. 67+81.66.



TYPE 3 - 8" RETAINING WALL
N.T.S.

UNION AVE.
STA 70+92.08 TO STA. 71+04.85 LT (WALL B)

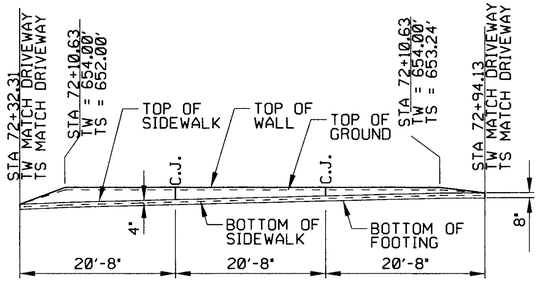
SUMMARY OF PAY QUANTITIES - WALL B			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	6.8	CY	CLASS A CONCRETE
511(A)	474	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION AVE.
STA 71+04.00 TO STA. 72+16.62 LT (WALL C)

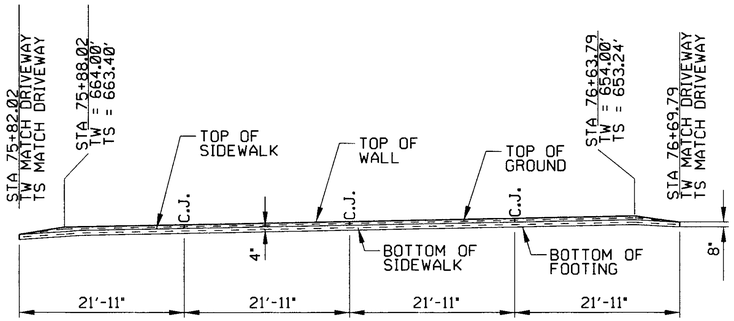
SUMMARY OF PAY QUANTITIES - WALL C			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	6.9	CY	CLASS A CONCRETE
511(A)	762	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION AVE. / UNION PL.
STA 72+32.31 TO STA. 72+94.13 LT (WALL D)

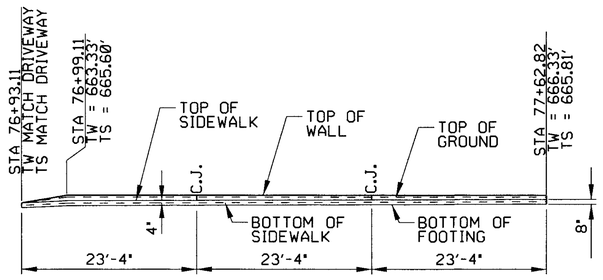
SUMMARY OF PAY QUANTITIES - WALL D			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	5.1	CY	CLASS A CONCRETE
511(A)	419	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION AVE. / UNION PL.
STA 75+82.02 TO STA. 76+69.79 LT (WALL E)

SUMMARY OF PAY QUANTITIES - WALL E			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	4.5	CY	CLASS A CONCRETE
511(A)	532	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 76+93.11 TO STA. 77+62.82 LT (WALL F)

SUMMARY OF PAY QUANTITIES - WALL F			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	3.6	CY	CLASS A CONCRETE
511(A)	412	LB	REINF. STEEL , GRADE 60

LEGEND FOR ELEVATIONS

TW - TOP OF WALL
TS - FINISHED GRADE OF SIDEWALK AT BASE OF RETAINING WALL
TF - TOP OF FOOTING



REVISION	BY	DATE

RETAINING WALL ELEVATIONS (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1352 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7263 - Fax 918.587.8071

PLAN SCALE: N/A
PROFILE SCALE HORIZONTAL: N/A
VERTICAL: N/A

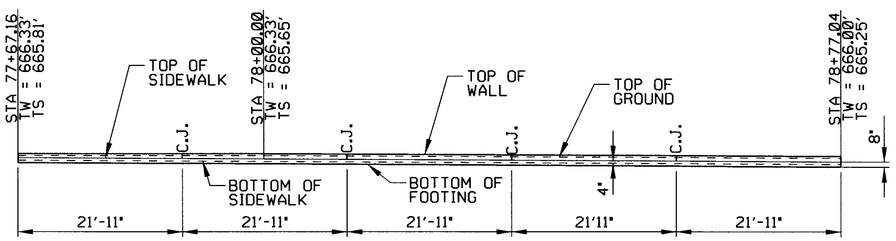
DRAWN	DEI	03/17
DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		01/2026
LEAD ENGR.		1/26
FIELD MGR.		1/26

RECOMMENDED
DESIGN MANAGER 1-26-26

APPROVED
CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 12 OF 59 SHEETS

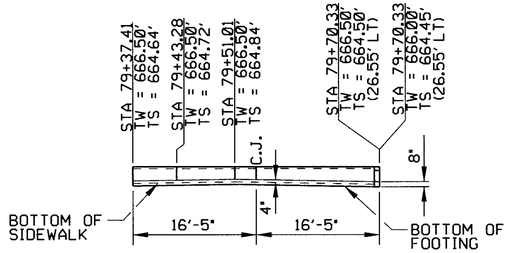
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TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 77+67.16 TO STA. 78+77.04 LT (WALL G)

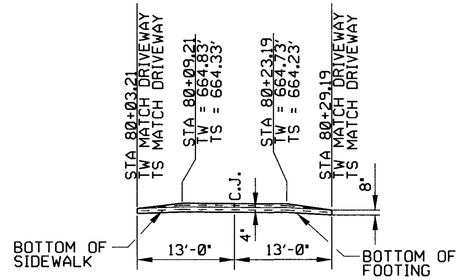
SUMMARY OF PAY QUANTITIES - WALL G			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	5.8	CY	CLASS A CONCRETE
511(A)	649	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 79+37.41 TO STA. 79+70.33 LT (WALL H)

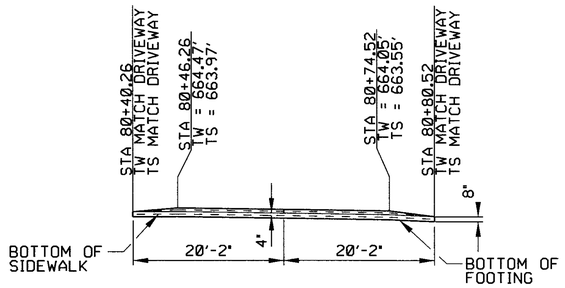
SUMMARY OF PAY QUANTITIES - WALL H			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	3.1	CY	CLASS A CONCRETE
511(A)	249	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 80+03.21 TO STA. 80+29.19 LT (WALL I)

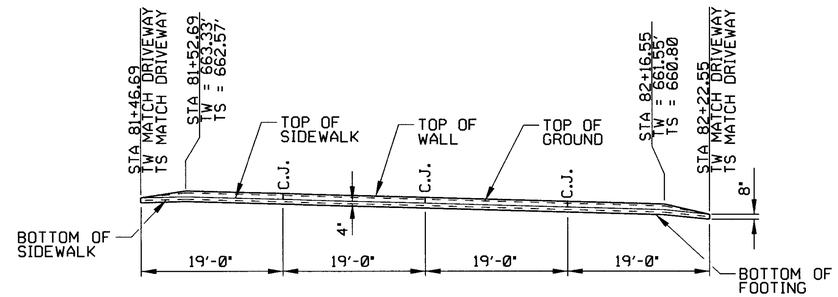
SUMMARY OF PAY QUANTITIES - WALL I			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	1.2	CY	CLASS A CONCRETE
511(A)	135	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 80+40.26 TO STA. 80+80.52 LT (WALL J)

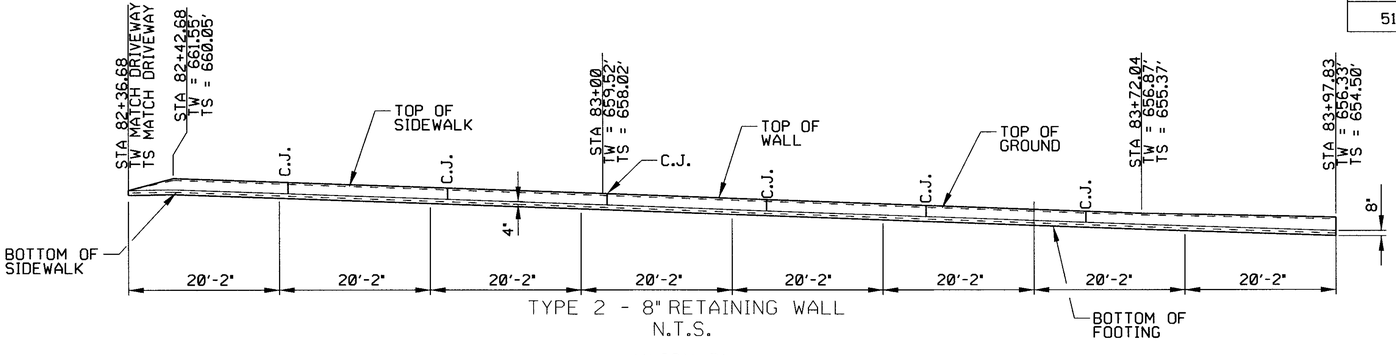
SUMMARY OF PAY QUANTITIES - WALL J			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	1.9	CY	CLASS A CONCRETE
511(A)	233	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 81+46.69 STA. 82+22.55 LT (WALL K)

SUMMARY OF PAY QUANTITIES - WALL K			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	4.1	CY	CLASS A CONCRETE
511(A)	459	LB	REINF. STEEL , GRADE 60



TYPE 2 - 8" RETAINING WALL
N.T.S.

UNION PL.
STA 82+36.68 STA. 83+97.83 LT (WALL L)

SUMMARY OF PAY QUANTITIES - WALL L			
SPEC NO.	QUANTITY	UNITS	DESCRIPTION
510(A)	12.2	CY	CLASS A CONCRETE
511(A)	1,115	LB	REINF. STEEL , GRADE 60

LEGEND FOR ELEVATIONS

TW – TOP OF WALL
TS – FINISHED GRADE OF SIDEWALK AT BASE OF RETAINING WALL
TF – TOP OF FOOTING

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/7/2026

REVISION	BY	DATE

RETAINING WALL ELEVATIONS (2)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 500
Tulsa, Oklahoma 74119 - 3215
918.587.7263 - Fax 918.587.2871

PLAN SCALE NA
PROFILE SCALE HORIZONTAL: NA
VERTICAL: NA

DRAWN	DEI	03/17	APPROVED
DESIGNED	DEI	03/17	
SURVEY	SWA	08/15	
PROJ. MGR.		5/2026	
LEAD ENGR.		5/26	
FIELD MGR.		6/26	
RECOMMENDED DESIGN MANAGER	HAS	6-26	CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 13 OF 59 SHEETS

$FILE$
$DATE$

SUMMARY OF REMOVALS

STREET LOCATION	STATION TO STATION	REMOVAL OF EXISTING ASPHALT PAVEMENT 619(B)	REMOVAL OF EXISTING APC PAVEMENT 619(B)	REMOVAL OF CONCRETE PAVEMENT 619(B)	REMOVAL OF CONCRETE CURB 619(B)	REMOVAL OF ASPHALT DRIVEWAY 619(B)	REMOVAL OF CONCRETE DRIVEWAY 619(B)	REMOVAL OF SIDEWALK 619(B)	REMOVAL OF TREES 619(B)	REMOVAL OF EXISTING RCP STORM SEWER PIPE 619(B)	REMOVAL OF EXISTING STORM SEWER INLET 619(B)	REMOVAL OF EXISTING MANHOLE 619(B)	REMOVAL OF EXISTING STAIR	REMOVAL OF EXISTING RETAINING WALL
		SY	SY	SY	LF	SY	SY	SY	EA	LF	EA	EA	EA	LF
S UNION AVE	STA 60+30 TO 63+80	-	-	-	49	-	119	85	-	39	5	-	-	-
S UNION AVE	STA 63+80 TO 68+40	-	-	-	204	21	11	1	3	39	2	-	1	73
S UNION AVE	STA 68+40 TO 73+00	-	-	-	22	30	306	-	-	-	-	-	-	21
S UNION AVE/S UNION PL	STA 73+00 TO 77+60	-	-	-	373	-	203	-	-	-	-	-	-	-
S UNION PL	STA 77+60 TO 82+20	-	-	8	634	-	68	53	-	-	-	-	-	18
S UNION PL	STA 82+20 TO 84+81.46	-	-	-	309	-	18	-	-	-	-	-	-	-
W 41ST STREET	STA 12+00 TO 14+60	-	-	-	352	-	71	128	-	-	2	-	-	-
W 41ST STREET	STA 14+60 TO 16+55	-	-	-	-	-	148	8	2	-	-	-	-	-
W 40TH STREET		-	8	40	14	-	-	-	-	-	2	-	-	-
W 39TH STREET S (LT)		93	-	-	69	-	-	-	-	-	-	-	-	-
W 39TH STREET S (RT)		88	-	-	46	-	-	-	-	-	-	-	-	-
W 38TH STREET S		-	117	-	65	-	-	-	-	-	-	-	-	-
W 37TH PL S		-	-	141	80	-	-	27	-	-	-	-	-	-
W 36TH PL S		20	22	-	38	-	-	-	-	-	-	-	-	-
	TOTALS	201	147	189	2,255	51	944	302	5	78	11	0	1	112

SUMMARY OF PAVEMENT REPAIR

STREET LOCATION	STATION TO STATION	UNCLASSIFIED EXCAVATION 202(A)	TYPE A AGGREGATE BASE 303	8" SUBGRADE METHOD B 310(B)	SEPARATOR FABRIC 325	TYPE I PC PATCH SPECIAL	TYPE I PC PATCH SPECIAL
		CY	CY	SY	SY	SY	CY
S UNION AVE	STA 60+30 TO 63+80	24	24	73	91	73	18
S UNION AVE	STA 63+80 TO 68+40	64	64	191	239	191	48
S UNION AVE	STA 68+40 TO 73+00	14	14	41	51	41	10
S UNION AVE/S UNION PL	STA 73+00 TO 77+60	171	171	513	641	513	128
S UNION PL	STA 77+60 TO 82+20	263	263	788	985	788	197
S UNION PL	STA 82+20 TO 84+81.46	49	49	147	184	147	37
W 41ST STREET	STA 12+00 TO 14+60	68	68	205	256	205	51
W 41ST STREET	STA 14+60 TO 16+55	-	-	-	-	-	-
	TOTALS	653	653	1958	2448	* 1958	490

* TOTAL SY SHOWN FOR INFORMATION ONLY
PAY ITEM QUANITITY IS MEASURED IN CY

SUMMARY OF EARTHWORK

PHASE/OPERATION	UNCLASSIFIED EXCAVATION (PAVEMENT RECONSTRUCTION, CURB AND GUTTER CONSTRUCTION, PCC PAVEMENT REPAIR, DRIVEWAYS)	UNCLASSIFIED EXCAVATION (AREAS BEHIND CURB)	EMBANKMENT +15% (AREAS BEHIND CURB)	EXCESS EXCAVATION
	CY	CY	CY	CY
ARTERIAL REHAB TOTALS	1,206	70	266	1,010

SUMMARY OF DRIVEWAY QUANTITIES

NUMBER	STATION	RIGHT/LEFT	TYPE	LENGTH	WIDTH	RADII	6" TYPE A AGGREGATE BASE 303(A)	6" CONCRETE DRIVEWAY 610(B)	EXISTING SLOPE	PROPOSED SLOPE
				FT	FT	FT	CY	SY	%	%
UNION AVE										
1	60+62.21	RT	CONC	15	19.5	-	5.42	32.49	7.86	10.30
2	61+06.79	RT	CONC	17.4	7.8	5	2.89	17.37	10.09	9.00
3	61+30.27	RT	CONC	17.3	26.3	5	8.81	52.87	10.09	8.67
4	61+61.92	RT	CONC	17.3	10.9	5	4.14	24.84	7.08	6.17
5	62+00.84	RT	CONC	12.7	31.7	5	8.05	48.33	10.72	8.30
6	67+40.10	RT	CONC	24.6	14.7	5	6.90	41.41	4.63	11.10
7	67+76.44	LT	CONC	14.9	11.8	-	3.26	19.53	7.40	5.90
8	68+31.45	RT	CONC	15.4	10.1	5	3.38	20.27	2.10	6.15
9	68+60.12	LT	CONC	15.8	17	-	4.93	29.60	1.89	4.42
10	68+70.17	RT	CONC	19.8	10.1	5	4.10	24.62	1.06	7.96
11	68+86.85	LT	CONC	15.5	16	-	4.57	27.44	10.80	4.84
12	69+24.90	RT	CONC	15.7	17	5	5.19	31.14	8.86	8.00
13	69+32.70	LT	CONC	14.2	10.5	-	2.61	15.68	5.34	8.00
14	69+70.17	RT	CONC	25.2	11.8	5	7.32	43.92	13.13	8.00
15	69+88.30	LT	CONC	28.3	11.7	-	6.63	39.76	10.28	10.00
16	70+24.85	RT	CONC	25.7	18.8	5	11.05	66.32	10.37	8.00
17	71+34.93	RT	CONC	16.9	11.9	5	4.03	24.19	1.15	6.50
18	72+24.41	LT	CONC	12.9	15.7	-	3.79	22.76	14.17	9.00
19	72+99.06	LT	CONC	18.1	9.9	-	3.30	19.82	13.14	13.94
20	73+19.10	RT	CONC	30.6	16.7	5	7.66	45.96	-17.84	-18.71
21	73+52.12	LT	CONC	13	13.2	-	3.14	18.85	10.92	9.00
22	74+27.93	RT	CONC	25.5	12.3	-	5.85	35.09	-26.00	-26.93
23	74+74.46	RT	CONC	20.2	19.5	-	7.30	43.79	-15.70	-21.47
24	75+28.39	LT	CONC	16	10.9	-	3.23	19.37	14.56	6.00
25	75+76.90	LT	CONC	10	10.4	-	1.84	11.02	11.58	2.50
26	76+80.64	LT	CONC	11.4	24	-	4.75	28.49	20.81	10.49
27	79+96.68	LT	CONC	11.8	13.1	-	2.72	16.29	20.65	19.08
28	80+33.33	LT	CONC	11.7	11.1	-	2.26	13.55	19.01	12.11
29	80+87.23	LT	CONC	11.9	13.4	-	2.64	15.84	13.55	13.04
30	81+37.56	LT	CONC	11.8	17.8	-	3.59	21.53	15.34	15.34
31	82+30.48	LT	CONC	11.9	14.1	-	2.88	17.29	9.42	10.00
W 41ST STREET										
32	15+06.98	RT	CONC	16.5	35.5	5	13.77	82.62	2.23	7.60
33	16+03.68	RT	CONC	23.6	30.7	5	13.98	83.87	7.70	8.51
						TOTALS	175.99	1055.93		

SUMMARY OF PAVEMENT AND SURFACES

STREET LOCATION	STATION TO STATION	TYPE A AGGREGATE BASE 303	8" SUBGRADE METHOD B 310(B)	SEPARATOR FABRIC 325	TACK COAT 407(B)	FABRIC REINFORCEMENT 409(A)	BITUMINOUS BINDER 409(B)	SUPERPAVE, TYPE S4 (PG 70-28 OK) 411(C)	SUPERPAVE, TYPE S6 (PG 64-22 OK) 411(C)	COLD MILLING PAVEMENT 412	8" PCC PAVEMENT (PLACEMENT) 414(B)	PC CONCRETE FOR PAVEMENT 414(G)	INTEGRAL CONCRETE CURB (6" BARRIER) 609(A)	COMBINED CURB AND GUTTER (6" BARRIER) 609(A)	4" CONCRETE SIDEWALK 610(A)	4" DECORATIVE SIDEWALK 610(E)	TACTILE WARNING DEVICE 610(I)	MANHOLES ADJUST TO GRADE 612(A)	VALVE BOXES ADJUST TO GRADE 612(E)	METER BOXES ADJUST TO GRADE 612(F)	INTEGRAL CURB REPAIR SPECIAL	CURB RAMP (TYPE A) SPECIAL	CURB RAMP (TYPE A-B) SPECIAL	CURB RAMP (TYPE B) SPECIAL	CURB RAMP (TYPE D) SPECIAL
		CY	SY	SY	GAL	SY	GAL	TON	TON	SY	SY	CY	LF	LF	SY	SY	SF	EA	EA	EA	LF	EA	EA	EA	EA
S UNION AVE	STA 60+30 TO 63+80	7	20	29	112	1,498	375	168	42	1,498	0	0	11	0	265	6	40	1	2	1	53	2	0	0	2
S UNION AVE	STA 63+80 TO 68+40	24	73	103	152	2,021	505	226	57	2,021	0	0	30	0	294	4	0	3	0	1	198	0	0	0	0
S UNION AVE	STA 68+40 TO 73+00	1	2	7	153	2,038	510	228	57	2,038	0	0	22	0	359	0	38	0	0	2	0	0	0	0	0
S UNION AVE/S UNION PL	STA 73+00 TO 77+60	28	83	130	138	1,835	459	206	51	1,835	0	0	120	194	435	0	0	2	0	2	3	0	0	0	0
S UNION PL	STA 77+60 TO 82+20	37	112	185	123	1,640	410	184	46	1,640	0	0	228	245	493	0	20	1	2	2	0	0	0	0	2
S UNION PL	STA 82+20 TO 84+81.46	23	68	106	70	936	234	105	26	936	0	0	95	163	230	0	20	0	0	2	11	0	0	2	0
W 41ST STREET	STA 12+00 TO 14+60	3	10	27	46	609	152	68	17	609	0	0	90	0	131	16	20	0	0	1	0	2	0	0	0
W 41ST STREET	STA 14+60 TO 16+55	15	44	59	0	0	0	0	0	0	0	0	0	0	69	0	20	0	0	2	125	0	0	0	2
W 40TH STREET		17	50	70	0	0	0	0	0	0	48	11	20	0	0	0	0	1	0	0	0	0	0	0	0
W 39TH STREET S (LT)		45	136	193	0	0	0	0	0	0	129	29	61	0	0	0	20	1	0	0	0	0	0	2	0
W 39TH STREET S (RT)		32	96	137	0	0	0	0	0	0	89	20	56	0	0	0	18	0	0	0	0	0	0	2	0
W 38TH STREET S		46	139	199	0	0	0	0	0	0	131	29	75	0	0	0	20	1	0	0	0	0	0	2	0
W 37TH PL S		41	123	171	0	0	0	0	0	0	120	27	31	0	0	0	50	0	0	0	0	0	1	1	2
W 36TH PL S		20	60	85	0	200	0	24	0	0	57	13	27	0	0	0	0	0	0	0	0	0	0	0	0
	TOTALS	339	1,016	1,501	793	10,778	2,644	1,209	296	10,578	574	128	866	602	2,276	26	266	10	4	13	390	4	1	9	8

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
3/7/2026

REVISION	BY	DATE

SUMMARY SHEET

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7383 - Fax 918.587.8071

PLAN SCALE: N/A	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE: HORIZONTAL: N/A	PROJ. MGR.		
	LEAD ENGR.		5/26
	FIELD MGR.		6/26
VERTICAL: N/A	RECOMMENDED DESIGN MANAGER	TAS	6-26

APPROVED

CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 14 OF 59 SHEETS

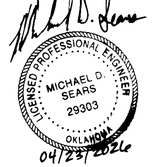
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SUMMARY OF SIGNING QUANTITIES

SIGN LOCATION NO.	APPROXIMATE STATION AND OFFSET	EXISTING SIGN	PROPOSED SIGN INFORMATION						SQUARE POST			REMARKS
			NOTATION	TYPE	STREET NAME	BLOCK	DIMENSIONS INCHES	AREA S.F.	2" L.F.	1 3/4" L.F.	1 1/2" L.F.	
	W 41ST ST											
1	12+66 (33'RT)	—	R3-7L	LEFT LANE MUST TURN LEFT	-----	----	30X30	6.25	3	10.67	----	NEW
2	11+56 (33'RT)	—	R3-7L	LEFT LANE MUST TURN LEFT	-----	----	30X30	6.25	3	10.67	----	NEW
3	12+52.91 (30.00' LT)	NO PARKING SIGN	R7-2	NO PARKING SIGN	-----	----	18 X 24	3	3	10.17	----	REMOVE AND REPLACE EXISTING SIGNS
4	13+98.90 (4.47' RT)	KEEP RIGHT SIGN	R4-7	KEEP RIGHT SIGN	-----	----	24 X 30	---	---	---	----	EXISTING SIGN TO REMAIN
5	14+51.51 (37.40' LT)	RIGHT TURN MUST TURN RIGHT	R3-7(R)	RIGHT LANE MUST TURN RIGHT	-----	----	30 X 30	---	---	---	---	REINSTALL EXISTING SIGN
6	14+71.57 (36.12' RT)	US HIGHWAY 75	M1-4(2)	US HIGHWAY 75	-----	----	24 X 24	4	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
7	14+71.57 (36.12' RT)	JUNCTION	M2-1	JUNCTION	-----	----	21 X 15	2.19				REMOVE AND REPLACE EXISTING SIGNS
8	15+74.56 (37.40' LT)	RIGHT TURN MUST TURN RIGHT	R3-7(R)	RIGHT LANE MUST TURN RIGHT	-----	----	30 X 30	---	---	---	---	REINSTALL EXISTING SIGN
	UNION AVENUE / UNION PLACE											
9	FIELD COORDINATE LOCATION	---	---	DUAL SIDED RRFB ASSEMBLY	-----	----	---	---	---	---	---	ASSEMBLY INCLUDES W11-2 AND W16-7P SIGNS
10	FIELD COORDINATE LOCATION	---	---	DUAL SIDED RRFB ASSEMBLY	-----	----	---	---	---	---	---	ASSEMBLY INCLUDES W11-2 AND W16-7P SIGNS
11	62+26.00 (27' LT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
12	62+26.00 (27' LT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
41A	75+60 (29' RT)	---	W11-2	PEDESTRIAN	-----	----	30X30	6.25	3	10.67		NEW
41B	75+60 (29' RT)	---	W16-9P	AHEAD	-----	----	24X12	2				NEW
15	64+00.00 (22.51' RT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
16	64+00.00 (22.51' RT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
17	64+95.26 (22.02' RT)	BUS STOP		METROLINK TULSA BUS STOP	-----	----	24 X 30	---	---	---	---	REMOVE AND RESET EXISTING SIGNS
18	65+35.11 (27' LT)	BUS STOP		METROLINK TULSA BUS STOP	-----	----	24 X 30	---	---	---	---	REMOVE AND RESET EXISTING SIGNS
19	66+03.30 (27' LT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
20	66+03.30 (27' LT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
21	66+18.23 (22.87' RT)	35 MPH	R2-1 (40)	35 MPH	-----	----	24 X 30	5	3	10.17		REMOVE AND REPLACE EXISTING SIGNS
22	66+43.07 (41.00' LT)	STREET NAME		STREET NAME	W 40TH ST (BLK 1700)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
23	66+43.07 (41.00' LT)	STREET NAME		STREET NAME	S UNION AVE (BLK 4000)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
24	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
25	67+15 (23.13' RT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
26	67+15 (23.13' RT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
27	70+23.37 (27' LT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
28	70+23.37 (27' LT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
29	70+60.17 (49.26' LT)	STREET NAME		STREET NAME	W 39TH ST (BLK 1700)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
30	70+60.17 (49.26' LT)	STREET NAME		STREET NAME	S UNION AVE (BLK 3900)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
31	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
32	70+92.25 (51.54' LT)	DEAD END	W14-1	DEAD END	-----	----	30 X 30	5.18	3	10.67		REMOVE AND REPLACE EXISTING SIGNS
33	71+56.79 (43.88' RT)	DEAD END	W14-1	DEAD END	-----	----	30 X 30	5.18	3	10.67		REMOVE AND REPLACE EXISTING SIGNS
34	71+95.93 (44.03' RT)	STREET NAME		STREET NAME	W 39TH ST (BLK 1600)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
35	71+95.93 (44.03' RT)	STREET NAME		STREET NAME	S UNION AVE (BLK 3800)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
36	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
37	72+13.04 (23.43' RT)	CURVE LEFT	W1-2(L)	CURVE LEFT	-----	----	30 X 30	6.25	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
38	74+20.62 (49.68' LT)	STREET NAME		STREET NAME	W 38TH ST (N/A)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
39	74+20.62 (49.68' LT)	STREET NAME		STREET NAME	S UNION AVE (BLK 3800)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
40	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
41	74+54.00 (45.00' LT)	DEAD END	W14-1	DEAD END	-----	----	30 X 30	5.18	3	10.67		REMOVE AND REPLACE EXISTING SIGNS
42	75+75.42 (30.00' RT)	CHEVRON	W1-8	CHEVRON	-----	----	18 X 24	3	3	11.67	---	REMOVE AND REPLACE EXISTING SIGNS
43	75+76.72 (30.12' RT)	CHEVRON	W1-8	CHEVRON	-----	----	18 X 24	3				REMOVE AND REPLACE EXISTING SIGNS
44	76+06.67 (30.00' RT)	CHEVRON	W1-8	CHEVRON	-----	----	18X 24	3	3	11.67	----	REMOVE AND REPLACE EXISTING SIGNS
45	76+07.95 (30.30' RT)	CHEVRON	W1-8	CHEVRON	-----	----	18 X 24	3				REMOVE AND REPLACE EXISTING SIGNS
46	76+37.92 (30.00' RT)	CHEVRON	W1-8	CHEVRON	-----	----	18 X 24	3	3	11.67	---	REMOVE AND REPLACE EXISTING SIGNS
47	76+39.35 (30.04' RT)	CHEVRON	W1-8	CHEVRON	-----	----	18 X 24	3				REMOVE AND REPLACE EXISTING SIGNS
48	76+55.04 (22.5' LT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
49	76+55.04 (22.5' LT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
50	72+50 (24' LT)	[redacted]	R3-17	BIKE LANE	-----	----	24X18	3		10.67	----	NEW
51	78+11.70 (22.5' LT)	CURVE RIGHT	W1-2(R)	CURVE RIGHT	-----	----	30 X 30	6.25	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
52	78+60.00 (22.5' LT)	BIKE LANE	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
53	78+60.00 (22.5' LT)	NO PARKING BIKE LANE	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
54	78+90.00 (36.91' LT)	STREET NAME		STREET NAME	W 37TH PL (BLK 1700)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
55	78+90.00 (36.91' LT)	STREET NAME		STREET NAME	S UNION PL (BLK 3700)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
56	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
57	78+12.00 (26.00' RT)	BUS STOP		METROLINK TULSA BUS STOP	-----	----	24 X 30	---	---	---	---	REMOVE AND RESET EXISTING SIGNS
58	79+50.00 (26' RT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
59	79+50.00 (26' RT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
60	79+60.00 (18' LT)	BUS STOP		METROLINK TULSA BUS STOP	-----	----	24 X 30	---	---	---	---	REMOVE AND RESET EXISTING SIGNS
61	80+50.73 (22.5'LT)	35 MPH	R2-1 (40)	35 MPH	-----	----	24 X 30	5	3	10.17	----	REMOVE AND REPLACE EXISTING SIGNS
62	81+06.08 (26.00' RT)	STOP AHEAD	W3-1	STOP AHEAD	-----	----	30 X 30	6.25	3	11.67	----	REMOVE AND REPLACE EXISTING SIGNS
50A	72+50 (24' LT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12X18	1		SEE SIGN 50	----	NEW
64	82+15.31 (26.00' RT)	RAILROAD ADVANCE WARNING	W10-1	RAILROAD ADVANCE WARNING	-----	----	36 DIA	7.07	3	10.67	----	REMOVE AND REPLACE EXISTING SIGNS
60A	80+16 (22' LT)	---	W11-2	PEDESTRIAN	---	---	30X30	6.25	3	10.67	----	NEW
66	83+87.55 (18.5' LT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
67	83+87.55 (18.5' LT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
68	84+04.46 (38.96' LT)	STREET NAME		STREET NAME	W 36TH PL (BLK 1700)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
69	84+04.46 (38.96' LT)	STREET NAME		STREET NAME	S UNION PL(BLK 3600)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
70	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
71	84+35.56 (37.89' LT)	DEAD END	W14-1	DEAD END	-----	----	30 X 30	5.18	3	10.67		REMOVE AND REPLACE EXISTING SIGNS
72	84+40.00 (26' RT)	[redacted]	R3-17	BIKE LANE	-----	----	24 X 18	3		10.67		NEW
73	84+40.00 (26' RT)	[redacted]	R7-9a	NO PARKING BIKE LANE	-----	----	12 X 18	1				NEW
74	84+67.54 (26.00' RT)	STREET NAME		STREET NAME	SOUTHWEST BLVD (BLK 1600)	----	36 X 9	4.5				REMOVE AND REPLACE EXISTING SIGNS
75	84+67.54 (26.00' RT)	STREET NAME		STREET NAME	S UNION PL (BLK 3600)	----	36 X 9	4.5	3	10.67	2	REMOVE AND REPLACE EXISTING SIGNS
76	MOUNTED ON STREET SIGNS	STOP	R1-1	STOP	-----	----	30 X 30	5.18				REMOVE AND REPLACE EXISTING SIGNS
77	84+75.64 (29.00' RT)	RAILROAD CROSSING	R15-1	RAILROAD CROSSING	-----	----	48 X 9	5.44	3	10.67		REMOVE AND REPLACE EXISTING SIGNS
60B	80+16 (22' LT)	---	W16-9P	AHEAD	---	---	24X12	2	SEE 60A	SEE 60A		NEW
							TOTALS	249	75	389	20	



DETAIL 1
PEDESTRIAN CROSSWALK
N.T.S.



DEWBERRY PROJECT NO. 50074766

SUMMARY OF SIGNS

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:

Dewberry®

Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7263 - fax 918.587.0071

REVISION	BY	DATE

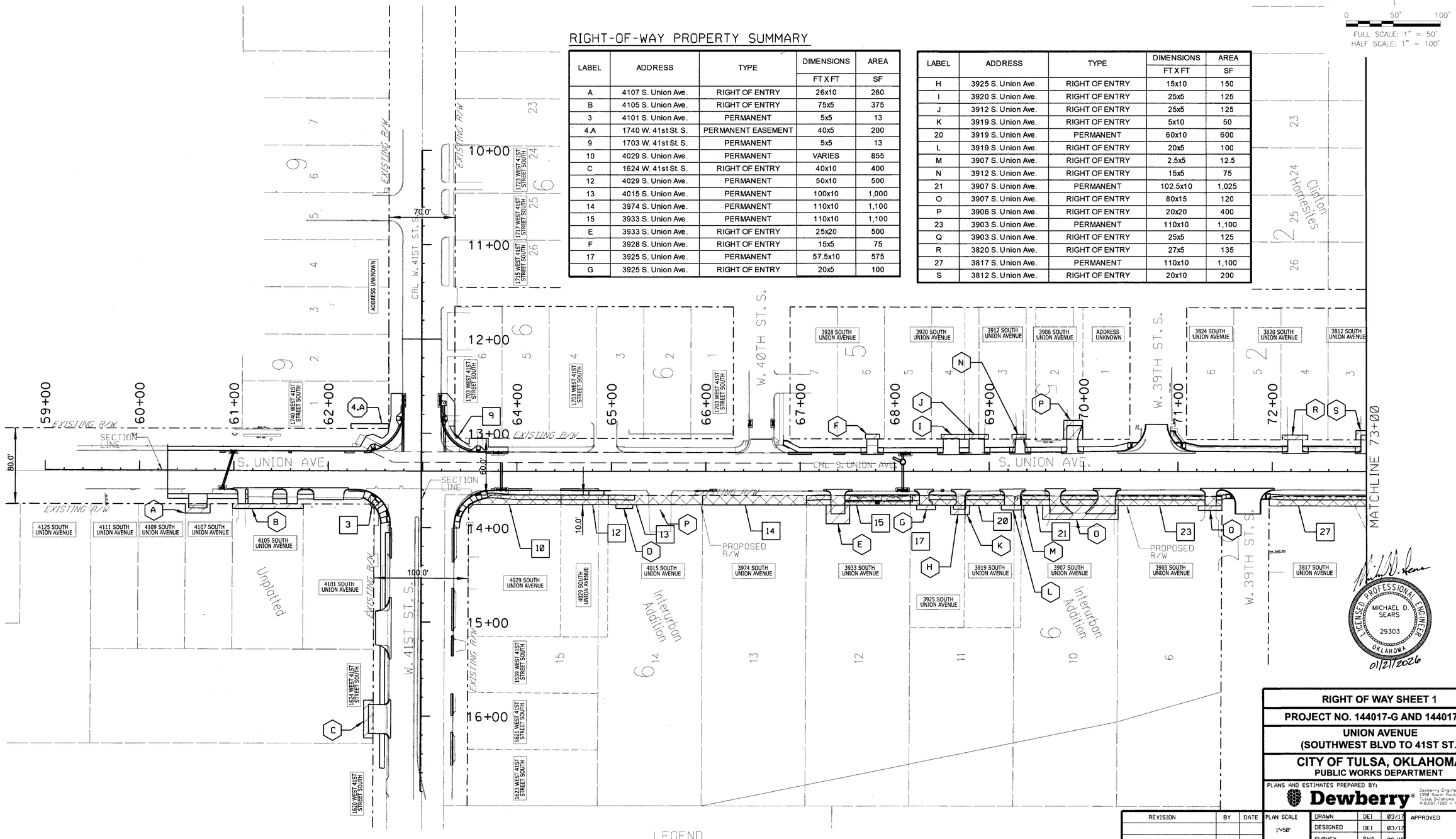
PLAN SCALE NA
PROFILE SCALE HORIZONTAL: NA
VERTICAL: NA

DRAWN	DEI	03/17	APPROVED
DESIGNED	DEI	03/17	
SURVEY	SWA	08/15	
PROJ. MGR.			
LEAD ENGR.			
FIELD MGR.			
RECOMMENDED DESIGN MANAGER		4.20	CITY ENGINEER

FILE: DRAWING: DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET 15 OF 59 SHEETS

9/26/2018 Q:\50074766\CAD\Civil\SHEETS\16_Summary of SIGNS.dgn



RIGHT-OF-WAY PROPERTY SUMMARY

LABEL	ADDRESS	TYPE	DIMENSIONS	AREA
			FT X FT	SF
A	4107 S. Union Ave.	RIGHT OF ENTRY	26x10	260
B	4105 S. Union Ave.	RIGHT OF ENTRY	75x5	375
3	4101 S. Union Ave.	PERMANENT	5x5	13
4.A	1740 W. 41st St. S.	PERMANENT EASEMENT	40x5	200
9	1703 W. 41st St. S.	PERMANENT	5x5	13
10	4029 S. Union Ave.	PERMANENT	VARIES	855
C	1624 W. 41st St. S.	RIGHT OF ENTRY	40x10	400
12	4029 S. Union Ave.	PERMANENT	50x10	500
13	4015 S. Union Ave.	PERMANENT	100x10	1,000
14	3974 S. Union Ave.	PERMANENT	110x10	1,100
15	3933 S. Union Ave.	PERMANENT	110x10	1,100
E	3933 S. Union Ave.	RIGHT OF ENTRY	25x20	500
F	3928 S. Union Ave.	RIGHT OF ENTRY	15x5	75
17	3925 S. Union Ave.	PERMANENT	57.5x10	575
G	3925 S. Union Ave.	RIGHT OF ENTRY	20x5	100

LABEL	ADDRESS	TYPE	DIMENSIONS	AREA
			FT X FT	SF
H	3925 S. Union Ave.	RIGHT OF ENTRY	15x10	150
I	3920 S. Union Ave.	RIGHT OF ENTRY	25x5	125
J	3912 S. Union Ave.	RIGHT OF ENTRY	25x5	125
K	3919 S. Union Ave.	RIGHT OF ENTRY	5x10	50
20	3919 S. Union Ave.	PERMANENT	60x10	600
L	3919 S. Union Ave.	RIGHT OF ENTRY	20x5	100
M	3907 S. Union Ave.	RIGHT OF ENTRY	2.5x5	12.5
N	3912 S. Union Ave.	RIGHT OF ENTRY	15x5	75
21	3907 S. Union Ave.	PERMANENT	102.5x10	1,025
O	3907 S. Union Ave.	RIGHT OF ENTRY	80x15	120
P	3906 S. Union Ave.	RIGHT OF ENTRY	20x20	400
23	3903 S. Union Ave.	PERMANENT	110x10	1,100
Q	3903 S. Union Ave.	RIGHT OF ENTRY	25x5	125
R	3820 S. Union Ave.	RIGHT OF ENTRY	27x5	135
27	3817 S. Union Ave.	PERMANENT	110x10	1,100
S	3812 S. Union Ave.	RIGHT OF ENTRY	20x10	200

LEGEND

X — PROPOSED RIGHT-OF-WAY

X.A — PERMANENT EASEMENT

XX — RIGHT OF ENTRY (R-O-E) (DRIVEWAY AND RETAINING WALLS)

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

REVISION	BY	DATE

RIGHT OF WAY SHEET 1

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

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Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.8071

PLAN SCALE 1"=50'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: NA	PROJ. MGR.	MSears	01/2026
	LEAD ENGR.		2/26
	FIELD MGR.	Dan	6/16
VERTICAL: NA	RECOMMENDED DESIGN MANAGER	HAS	6.21

APPROVED

CITY ENGINEER

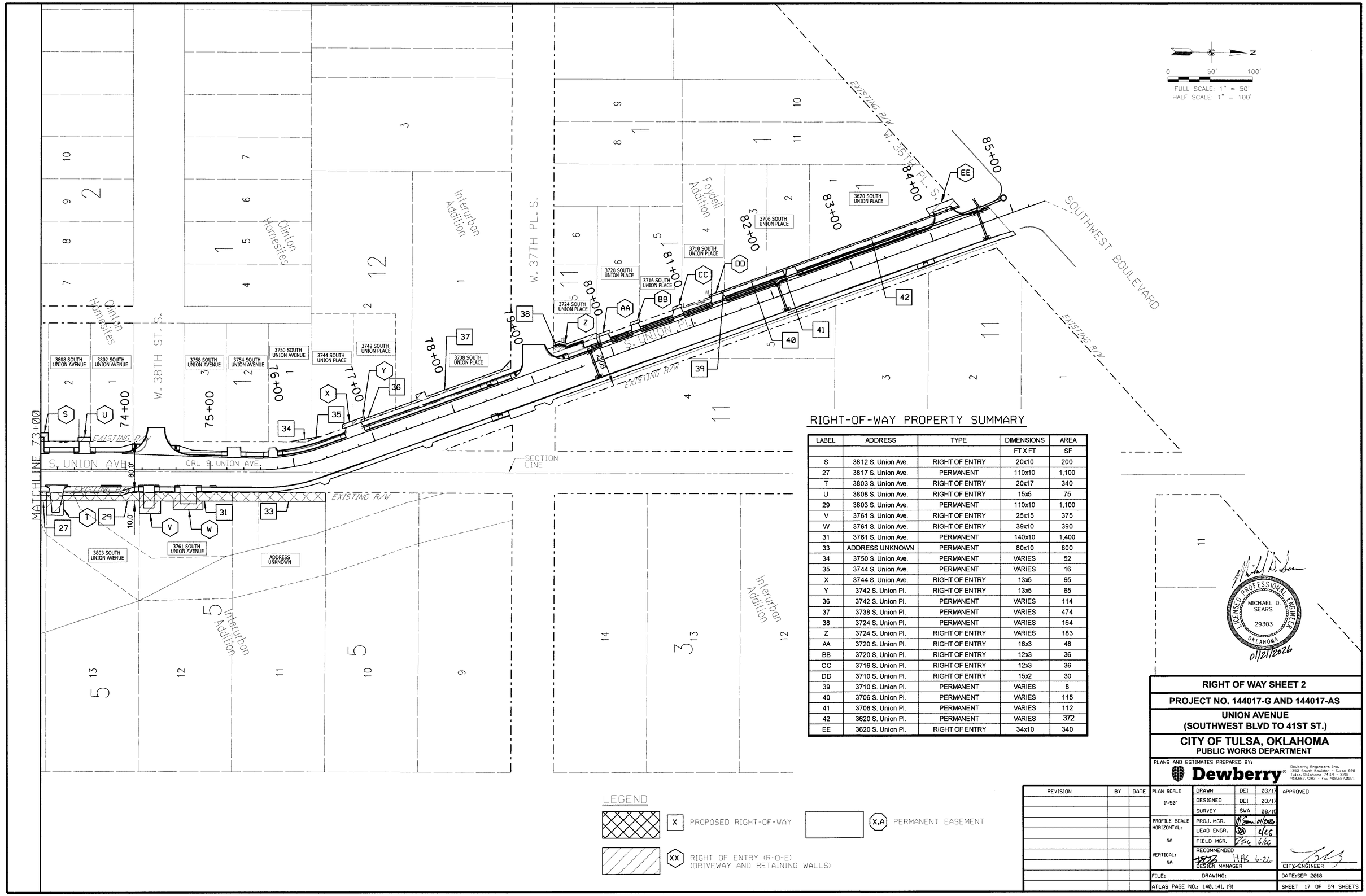
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DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 16 OF 59 SHEETS

$DATE$ $FILE$



RIGHT-OF-WAY PROPERTY SUMMARY

LABEL	ADDRESS	TYPE	DIMENSIONS	AREA
			FT X FT	SF
S	3812 S. Union Ave.	RIGHT OF ENTRY	20x10	200
27	3817 S. Union Ave.	PERMANENT	110x10	1,100
T	3803 S. Union Ave.	RIGHT OF ENTRY	20x17	340
U	3808 S. Union Ave.	RIGHT OF ENTRY	15x5	75
29	3803 S. Union Ave.	PERMANENT	110x10	1,100
V	3761 S. Union Ave.	RIGHT OF ENTRY	25x15	375
W	3761 S. Union Ave.	RIGHT OF ENTRY	39x10	390
31	3761 S. Union Ave.	PERMANENT	140x10	1,400
33	ADDRESS UNKNOWN	PERMANENT	80x10	800
34	3750 S. Union Ave.	PERMANENT	VARIES	52
35	3744 S. Union Ave.	PERMANENT	VARIES	16
X	3744 S. Union Ave.	RIGHT OF ENTRY	13x5	65
Y	3742 S. Union Pl.	RIGHT OF ENTRY	13x5	65
36	3742 S. Union Pl.	PERMANENT	VARIES	114
37	3738 S. Union Pl.	PERMANENT	VARIES	474
38	3724 S. Union Pl.	PERMANENT	VARIES	164
Z	3724 S. Union Pl.	RIGHT OF ENTRY	VARIES	183
AA	3720 S. Union Pl.	RIGHT OF ENTRY	16x3	48
BB	3720 S. Union Pl.	RIGHT OF ENTRY	12x3	36
CC	3716 S. Union Pl.	RIGHT OF ENTRY	12x3	36
DD	3710 S. Union Pl.	RIGHT OF ENTRY	15x2	30
39	3710 S. Union Pl.	PERMANENT	VARIES	8
40	3706 S. Union Pl.	PERMANENT	VARIES	115
41	3706 S. Union Pl.	PERMANENT	VARIES	112
42	3620 S. Union Pl.	PERMANENT	VARIES	372
EE	3620 S. Union Pl.	RIGHT OF ENTRY	34x10	340

LEGEND

X — PROPOSED RIGHT-OF-WAY

X.A — PERMANENT EASEMENT

XX — RIGHT OF ENTRY (R-O-E) (DRIVEWAY AND RETAINING WALLS)

MICHAEL D. SEARS
LICENSED PROFESSIONAL ENGINEER
29303
OKLAHOMA
01/21/2026

RIGHT OF WAY SHEET 2

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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1350 South Boulder Suite 600
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918.587.7283 - Fax 918.587.8871

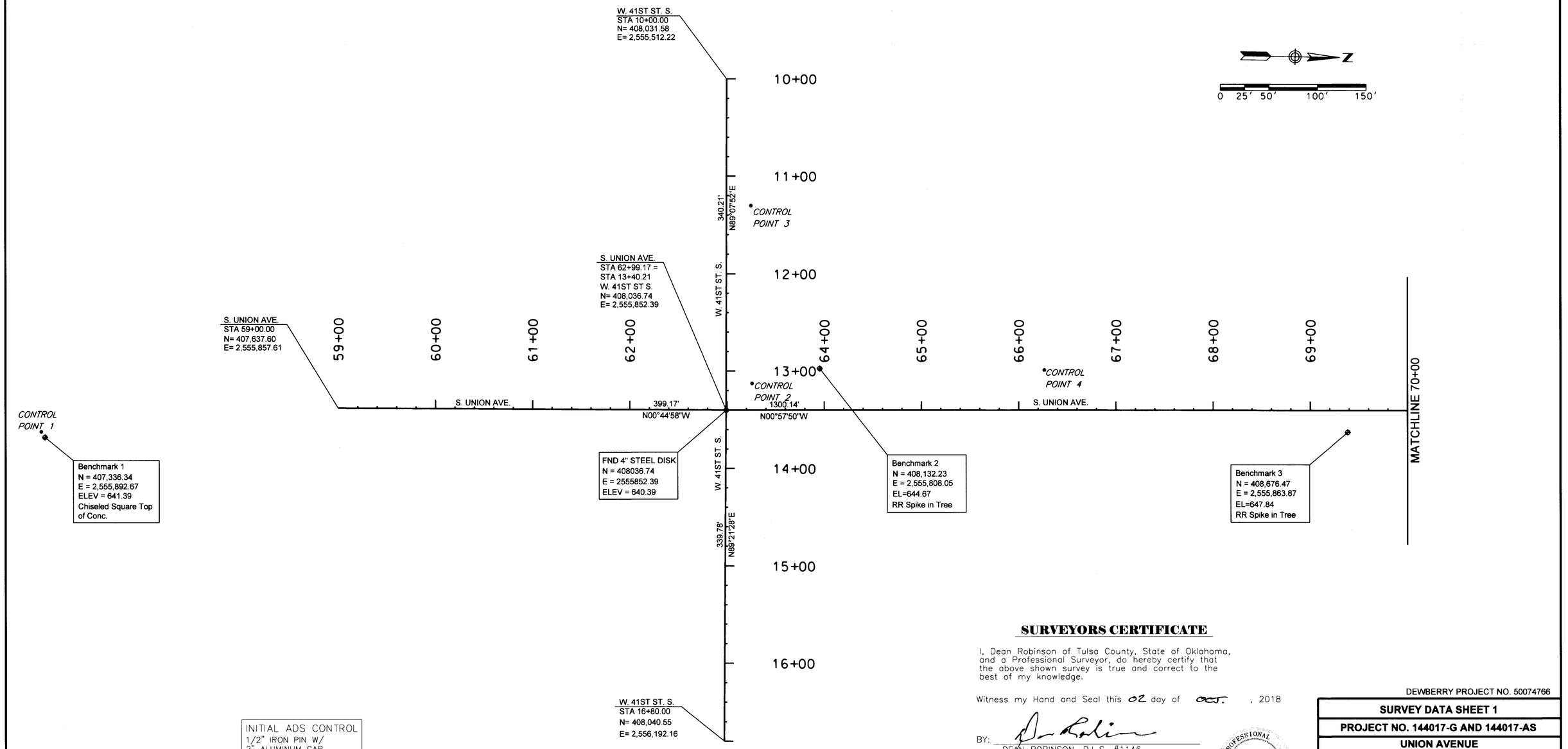
REVISION	BY	DATE

PLAN SCALE 1"=50'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: NA	PROJ. MGR.		01/2026
	LEAD ENGR.		4/26
	FIELD MGR.		6/26
VERTICAL: NA	RECOMMENDED DESIGN MANAGER	HB	6-26

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CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 17 OF 59 SHEETS

$DATE$ $FILE$



INITIAL ADS CONTROL
1/2" IRON PIN W/
2" ALUMINUM CAP
IN CONCRETE POST
STA. NAME: GPS 5
N=406159.78
E=2557422.56
ELEV=732.35 (1988 NAVD)

INITIAL ADS CONTROL
1/2" IRON PIN W/
2" ALUMINUM CAP
IN CONCRETE POST
STA. NAME: GPS 6
N=410237.15
E=2555770.13
ELEV=671.97

CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	407,332.42	2,555,886.97	641.49	PK NAIL W/ I.D. PLATE
2	408,062.82	2,555,824.48	641.00	3/8" IRON PIN
3	408,058.56	2,555,642.10	644.42	60d NAIL
4	408,363.25	2,555,805.52	643.39	PK NAIL W/ I.D. PLATE

SURVEYORS CERTIFICATE

I, Dean Robinson of Tulsa County, State of Oklahoma, and a Professional Surveyor, do hereby certify that the above shown survey is true and correct to the best of my knowledge.

Witness my Hand and Seal this 02 day of Oct., 2018

BY: _____
DEAN ROBINSON, P.L.S. #1146
EMAIL: drobinson@sw-assoc.com

PROFESSIONAL SURVEYOR — DEAN ROBINSON 1146

DEWBERRY PROJECT NO. 50074766

SURVEY DATA SHEET 1

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DIVISION

PLANS AND ESTIMATES PREPARED BY:
Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3215
918.587.7283 - fax 918.587.0071

REVISION	BY	DATE

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

DRAWN	SWA	08/15
DESIGNED	SWA	08/15
SURVEY	SWA	08/15
PROJ. MGR.		9/19
LEAD ENGR.		9/19
FIELD MGR.		9/19

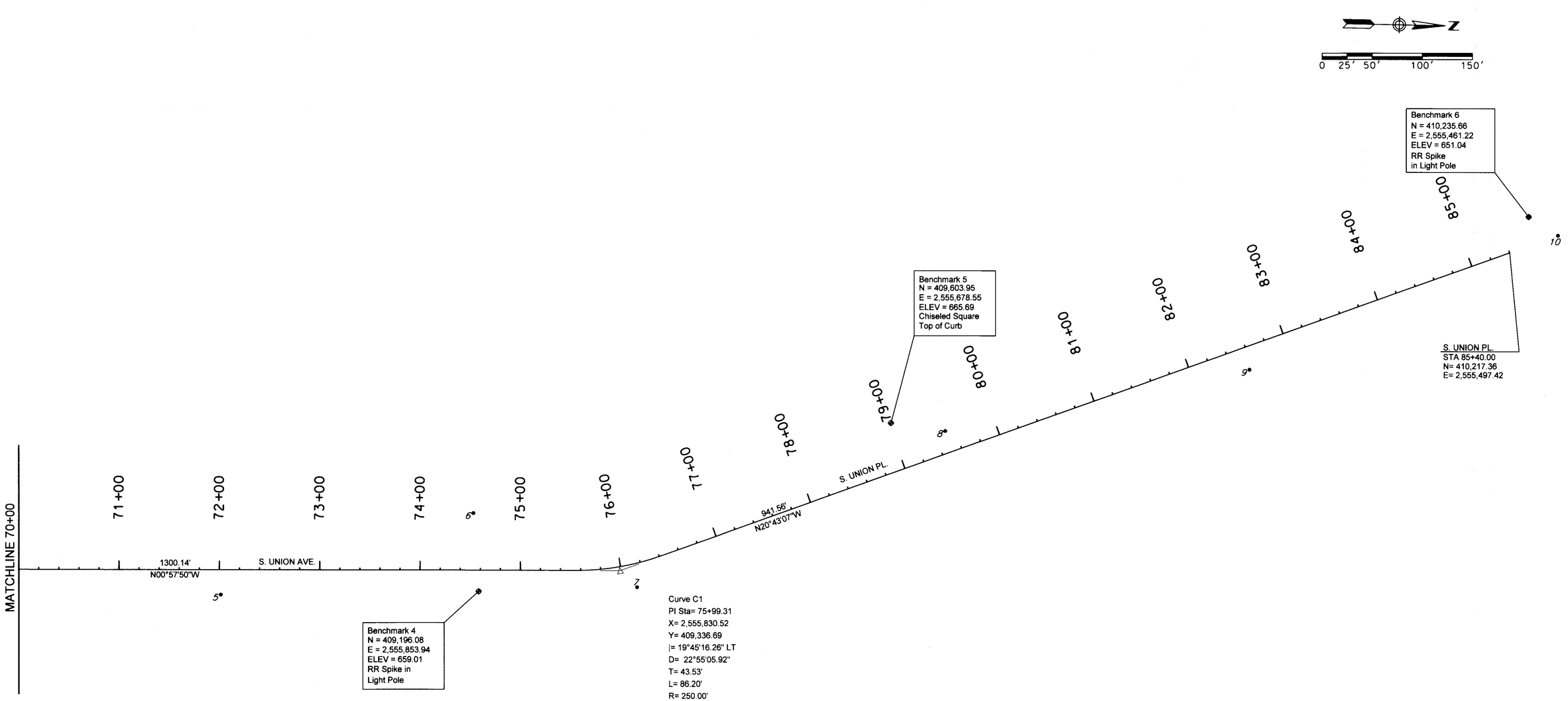
RECOMMENDED
DESIGN MANAGER 4.10

APPROVED
CITY ENGINEER

FILE: DRAWING: DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET 18 OF 59 SHEETS

9/27/2018 Q:\50074766\CAD\Civil\SHEETS\19_Survey Data 1.dgn



Curve C1
PI Sta= 75+99.31
X= 2,555,830.52
Y= 409,336.69
|= 19°45'16.26" LT
D= 22°55'05.92"
T= 43.53'
L= 86.20'
R= 250.00'
E= 3.76'

INITIAL ADS CONTROL
1/2" IRON PIN W/
2" ALUMINUM CAP
IN CONCRETE POST
STA. NAME: GPS 5
N=406159.78
E=2557422.56
ELEV=732.35 (1988 NAVD)

INITIAL ADS CONTROL
1/2" IRON PIN W/
2" ALUMINUM CAP
IN CONCRETE POST
STA. NAME: GPS 6
N=410237.15
E=2555770.13
ELEV=671.97

CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
5	408,939.30	2,555,862.02	651.63	3/8" IRON PIN
6	409,189.48	2,555,775.00	658.85	60d NAIL
7	409,353.94	2,555,846.85	664.07	3/8" IRON PIN
8	409,658.21	2,555,685.58	664.26	3/8" IRON PIN
9	409,960.08	2,555,618.72	659.29	3/8" IRON PIN
10	410,265.13	2,555,479.16	648.60	PK NAIL W/ I.D. PLATE

SURVEYORS CERTIFICATE

I, Dean Robinson of Tulsa County, State of Oklahoma, and a Professional Surveyor, do hereby certify that the above shown survey is true and correct to the best of my knowledge.

Witness my Hand and Seal this 02 day of OCT. , 2018

BY: _____
DEAN ROBINSON, P.L.S. #1146
EMAIL: drobinson@sw-assoc.com

PROFESSIONAL SURVEYOR — DEAN ROBINSON 1146

DEWBERRY PROJECT NO. 50074766

SURVEY DATA SHEET 2

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DIVISION

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REVISION	BY	DATE

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

DRAWN	SWA	08/15
DESIGNED	SWA	08/15
SURVEY	SWA	08/15
PROJ. MGR.		
LEAD ENGR.		
FIELD MGR.		
RECOMMENDED DESIGN MANAGER		4.20

APPROVED
CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 19 OF 59 SHEETS

9/27/2018 Q:\50074766\CAD\Civil\SHEETS\20_Survey Data 2.dgn

SUMMARY OF DRAINAGE STRUCTURES

STRUCTURE NUMBER	CRL	STATION AND OFFSET	STRUCTURE DESCRIPTION	TOP OF GRATE/RIM ELEVATION	STRUCTURE FLOWLINE	INNER STRUCTURE HEIGHT	INLETS							MANHOLES		REINFORCED CONCRETE PIPE			END SECTION	CASING		
							CICI DES 2 (STD)	CICI DES 2 W/ SMALL JUNCTION BOX	CICI DES 4 (STD)	CICI DES 4 W/ SMALL JUNCTION BOX	ADDITIONAL DEPTH OF INLET CICI DES 2 (STD)	ADDITIONAL DEPTH OF INLET CICI DES 2 W/ SMALL JUNCTION BOX	ADDITIONAL DEPTH OF INLET CICI DES 4 W/ SMALL JUNCTION BOX	5 FT DIAMETER MANHOLE	MANHOLE FRAME AND COVER	15" REINFORCED CONCRETE PIPE	18" REINFORCED CONCRETE PIPE	24" REINFORCED CONCRETE PIPE	18" PREFABRICATED CONCRETE END SECTION	42" DIAMETER STEEL CASING	TRENCH EXCAVATION	STANDARD BEDDING MATERIAL
						VF	EA	EA	EA	EA	VF	VF	VF	EA	EA	LF	LF	LF	EA	LF	CY	CY
CI-1	UNION AVE	60+99.73 (20.45' LT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), CONNECT TO EXIST 15" RCP	640.00	636.23	3.77	1	-	-	-	0.06	-	-	-	-	-	-	-	-	-	-	-
CI-2	UNION AVE	60+88.07 (19.40' RT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), 39 LF 15" RCP TO CI-1	640.14	637.60	2.54	1	-	-	-	-	-	-	-	-	39	-	-	-	-	16.3	13.1
CI-4	W 41ST ST	12+65.32 (20.08' RT)	CONSTRUCT CITY OF TULSA CICI DES 4 (STD), 50 LF 18" RCP TO TO EXISTING 10' X 2' RCB	640.58	637.88	2.70	-	-	1	-	-	-	-	-	-	-	50	-	-	-	27.0	22.1
CI-8	W 41ST ST	12+65.25 (21.11' LT)	CONSTRUCT CITY OF TULSA CICI DES 4 W/ SMALL JUNCT BOX, 50 LF 18" RCP TO TO EXISTING 10' X 2' RCB	640.58	637.88	2.70	-	-	-	1	-	-	-	-	1	-	50	-	-	-	27.0	22.1
CI-9	UNION AVE	63+80.15 (20.00' LT)	CONSTRUCT CITY OF TULSA CICI DES 4 (STD), CONNECT TO EXISTING 10' X 2' RCB	640.62	637.33	3.29	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CI-10	UNION AVE	63+83.63 (19.88' RT)	CONSTRUCT CITY OF TULSA CICI DES 4 (STD), 28 LF 18" RCP TO EXISTING 10' X 2' RCB	640.78	638.00	2.78	-	-	1	-	-	-	-	-	-	-	28	-	-	-	15.1	12.4
CI-13	UNION AVE	66+46.30 (51.00' LT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), CONNECT TO EXIST 15" RCP	640.34	637.78	2.56	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CI-14	UNION AVE	66+72.03 (50.91' LT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), CONNECT TO EXIST 15" RCP	640.34	638.39	1.95	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EX-MH1	UNION AVE	67+98.46 (14.45' LT)	ADJUST EXISTING MH LID AND RING AT EXISTING 10' X 2' RCB	643.33	638.43	4.90	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
CI-15	UNION AVE	68+11.38 (19.45' LT)	CONSTRUCT CITY OF TULSA CICI DES 4 (STD), 6 LF 18" RCP TO TO MH-3	643.27	639.92	3.35	-	-	1	-	-	-	-	-	-	-	6	-	-	-	4.6	4.0
MH-3	UNION AVE	68+08.78 (10.00' LT)	CONSTRUCT 5' DIA MANHOLE, 10 LF 24" RCP TO EXISTING 10' X 2' RCB	643.30	638.78	4.52	-	-	-	-	-	-	-	1	1	-	-	10	-	-	5.8	4.8
C1-16	UNION AVE	68+08.84 (20.45' RT)	CONSTRUCT CITY OF TULSA CICI DES 4 (STD),27 LF 18" RCP TO TO MH-3	643.27	639.92	3.35	-	-	1	-	-	-	-	-	-	-	27	-	-	-	-	-
CI-20	UNION PL	79+75.00 (18.80' RT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), 31 LF 18" RCP TO CI-21	663.74	661.07	2.67	1	-	-	-	-	-	-	-	-	-	31	-	-	-	-	-
CI-21	UNION PL	79+75.00 (14.96' LT)	CONSTRUCT CITY OF TULSA CICI DES 2 W/ SMALL JUNCT BOX, 232 LF 24" RCP TO CI-23	663.81	660.00	3.81	-	1	-	-	-	0.1	-	-	1	-	-	232	-	-	174.0	131.8
C1-22	UNION PL	82+10.00 (18.97'RT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), 32 LF 18" RCP TO CI-23	660.32	657.65	2.67	1	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-
CI-23	UNION PL	82+10.00 (14.96' LT)	CONSTRUCT CITY OF TULSA CICI DES 2 W/ SMALL JUNCT BOX, 250 LF 24" RCP TO CI-25	660.60	656.50	4.10	-	1	-	-	-	0.39	-	-	1	-	-	250	-	-	187.5	142.1
CI-24	UNION PL	84+60.70 (19.11' RT)	CONSTRUCT CITY OF TULSA CICI DES 2 (STD), 31 LF 18" RCP TO CI-25	651.80	649.13	2.67	1	-	-	-	-	-	-	-	-	-	31	-	-	-	-	-
CI-25	UNION PL	84+60.76 (14.99' LT)	CONSTRUCT CITY OF TULSA CICI DES 4 W/ SMALL JUNCT BOX, 26 LF 24" RCP TO EX-MH2	652.00	646.00	6.00	-	-	-	1	-	-	2.29	-	1	-	-	-	-	16	14.4	6.3
O-2	UNION PL	84+61.85 (28.47' LT)	CONSTRUCT 18" PREFABRICATED CONCRETE END SECTION, 10 LF 18" RCP TO CI-25	-	649.35	-	-	-	-	-	-	-	-	-	-	-	10	-	1	-	5.4	4.4
EX-MH2	UNION PL	84+95.16 (20' LT)	TIE 24" RCP FROM CI-25 INTO EXISTING 6' DIAMETER MANHOLE	651.15	645.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			TOTALS				7	2	5	2	0.06	0.49	2.29	1	6	39	265	492	1	-	* 477.2	* 363.2

* FOR CONTRACTORS INFORMATION

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

SUMMARY OF DRAINAGE STRUCTURES

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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REVISION	BY	DATE

PLAN SCALE/NA
PROFILE SCALE HORIZONTAL/NA
VERTICAL/NA

DRAWN	DEI	03/17
DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		01/2026
LEAD ENGR.		1/26
FIELD MGR.		6/16
RECOMMENDED DESIGN MANAGER		6-21-26

APPROVED
CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 20 OF 59 SHEETS

$DATE$ $FILE$

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: S. UNION AVE FROM W. 41ST STREET TO SOUTHWEST BLVD AND INTERSECTION AT S. UNION AVE AND W. 41ST STREET

PROJECT DESCRIPTION: ARTERIAL STREET REHABILITATION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:
1) AS DEMOLITION AND GRADING OPERATIONS PROCEED, INSTALL TEMPORARY CONTROL DEVICES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THESE DEVICES WALL BE MAINTAINED AS REQUIRED BY THE CITY OF TULSA STANDARD SPECIFICATION AND THE WEEKLY INSPECTION REPORTS PER PHASE.
2) PLACE PERMANENT SOLID SLAB SODDING PER PHASE.

SOIL TYPE: LEAN CLAY, LEAN CLAY WITH SAND, SANDY SILT

TOTAL AREA OF THE CONSTRUCTION SITE: 4.3 AC

ESTIMATED AREA TO BE DISTURBED: EX PVMNT=2.5 AC, NEW PVMNT=0.5 AC, NON PVMNT=1.3 AC

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 2.5 AC

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 3.0 AC

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.90

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°06'25"N 96°00'42"S

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: RED FORK CREEK, CHERRY CREEK

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

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

IF YES, LIST IMPAIRMENT: MACROINVEREBRATE BIO

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

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [X] NO [ ]

IF YES, LOCATION: CITY OF TULSA

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

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

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

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

STRUCTURAL PRACTICES:

- [X] STABILIZED CONSTRUCTION EXIT
- [X] TEMPORARY SILT FENCE
- [X] 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
- [X] TEMPORARY SEDIMENT FILTERS
- [X] TEMPORARY SEDIMENT REMOVAL
- [ ] RIP RAP
- [X] INLET PROTECTION
- [ ] TEMPORARY BRUSH SEDIMENT BARRIERS
- [ ] SANDBAG BERMS
- [ ] TEMPORARY STREAM CROSSINGS
- [ ] FLEXAMAT / ARTICULATED CONCRETE BLOCK
- [ ] COMPOST FILTER SOCKS
- [ ] EROSION CONTROL MATS AND BLANKETS

OFFSITE VEHICLE TRACKING:

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

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

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

WASTE MATERIALS:

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

HAZARDOUS MATERIALS:

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

GENERAL NOTES:

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

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

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

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

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

REVISION	BY	DATE

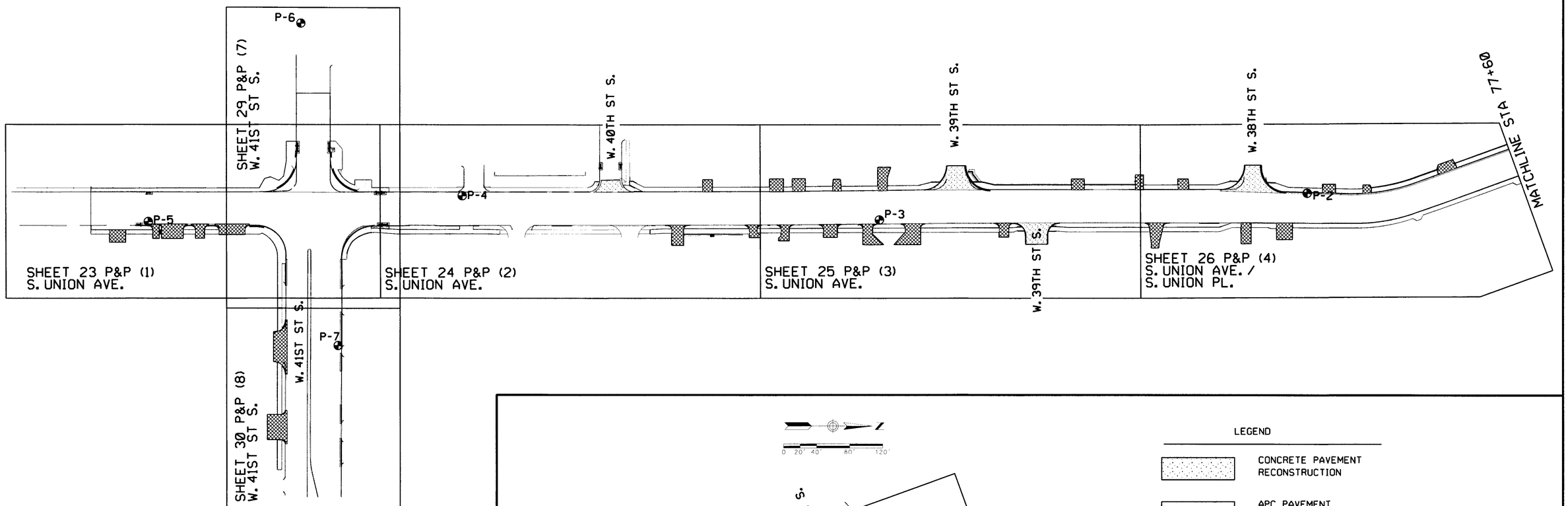
STORMWATER MANAGEMENT PLAN
PROJECT NO. 144017-G AND 144017-AS
UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)
CITY OF TULSA, OKLAHOMA
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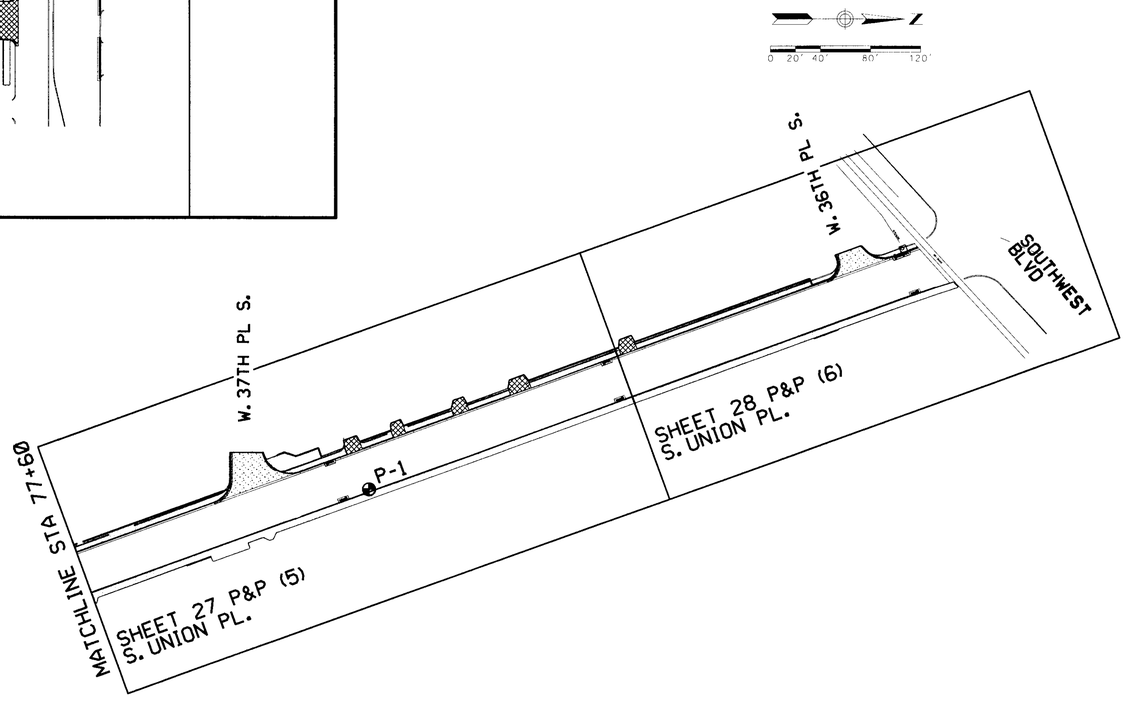
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PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		6/26
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER	HAS 6.2.6	APPROVED CITY ENGINEER
FILE:	DRAWING:		DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191			SHEET 21 OF 59 SHEETS

$DATE$ $FILE$

REVISED 8-1-2022





LEGEND

- CONCRETE PAVEMENT RECONSTRUCTION
- APC PAVEMENT MILL & OVERLAY
- BORING LOCATIONS
- SIDEWALK
- DRIVEWAY

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

SHEET LOCATION MAP

PROJECT NO. 144017-G AND 144017-AS

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SURVEY	SWA	08/15
PROJ. MGR.	MDS	01/2026
LEAD ENGR.		6/16
FIELD MGR.		6/16
RECOMMENDED DESIGN MANAGER	HAS	6-26

APPROVED
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SHEET 22 OF 59 SHEETS

$DATE$ $FILE$

STA 60+30.00
CONCRETE PAVEMENT
MILL AND OVERLAY

60+00 61+00 62+00 63+00

1740 WEST 41ST STREET SOUTH

Clinton Homesites

INSTALL 91 LF OF VINYL COATED CHAIN LINK FENCE

PROPOSED UTILITY EASEMENT

40' TYP. R

DECORATIVE SIDEWALK (TYP.)

EXISTING R/W

MEET AND MATCH COT PROJECT NO. 104017-T

CI-1 CI-2 CI-4 CI-8

PLACE TYPE "A" RAMP

REMOVE EXIST. 15" RCP AND INLETS

11'X19' (209 S.F.)

16'X19' (304 S.F.)

12'X12' (144 S.F.)

(466 S.F.)

(410 S.F.)

(554 S.F.)

(632 S.F.)

POWER POLE CONFLICT

REMOVE EXIST. RCP AND INLET

ABANDON EXIST. RCP

REMOVE EXIST. RCP AND INLETS

PROPOSED R/W 40' TYP. R

13+00

14+00

CI-9 SEE ROADWAY DETAILS SHEET

MATCHLINE STA 63+80

S. UNION AVE.

W. 41ST ST. S.

4111 SOUTH UNION AVENUE
4109 SOUTH UNION AVENUE
4107 SOUTH UNION AVENUE
4105 SOUTH UNION AVENUE
4101 SOUTH UNION AVENUE

Unplatted

R-0-E

STA. 60+62.21
STA. 61+06.79
STA. 61+30.27
STA. 61+61.92
STA. 62+00.84

PLACE TYPE "D" RAMP

PROPOSED R/W 35' TYP. R

CONC CURB
ASPHALT
GRAVEL
TRAFFIC SIGNAL
GUARDRAIL
KNOX WALL
FLOWLINE

SCALE: 1" = 20'
FULL SCALE: 1" = 20'
HALF SCALE: 1" = 40'

LEGEND

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	
(5) ADJUST WATER VALVE BOX/METER TO GRADE	WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

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

PRIOR TO PERFORMING ANY GRADING OR EXCAVATING WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS OR "CALL OKIE (OKLAHOMA ONE-CALL)" NOT LESS THAN 48 HOURS IN ADVANCE AND SHALL VERIFY OR ESTABLISH THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND LINES.

CI-2 CI-1 CI-4 CI-8

EXIST GRADE

EXIST GAS LINE
EXIST 15" STORM DRAIN
EXIST SEWER LINE
EXIST GAS LINE
EXIST 12" WL
EXIST SEWER LINE
EXIST 10' X 2' RCB SD TO REMAIN
EXIST 15" STORM DRAIN TO BE REMOVED
EXIST 24" STORM DRAIN TO BE REMOVED

MATCHLINE STA 63+80

650 645 640 635 630 625 620 615 610 605

640.61 640.62 640.63 640.64 640.65 640.66 640.67 640.67 640.67 640.68 640.69 640.71 640.72 640.73 640.74 640.75 640.75 640.74 640.74 640.81 640.88 640.98 641.08

59+00 60+00 61+00 62+00 63+00

CI-1
STA. 60+99.73 (20.45' LT)
N 407837.05
E 2555834.55
CONSTRUCT CITY OF TULSA
CICI DES 2 (STD)
CONNECT TO EXIST 15" RCP
TR=640.00
FL W EX 15"=636.23
FL SE 15"=636.33

CI-2
STA. 60+88.07 (19.40' RT)
N 407825.91
E 2555874.55
CONSTRUCT CITY OF TULSA
CICI DES 2 (STD)
39 LF 15" RCP TO CI-1
TG=640.14
FL NW 15"=637.60

CI-4
SEE W. 41ST ST. S.-P&P (7)

CI-8
SEE W. 41ST ST. S.-P&P (7)

Existing:
Proposed:

$DATES $FILES

LICENSED PROFESSIONAL ENGINEER
MICHAEL D SEARS
29303
OKLAHOMA
5/1/2026

S. UNION AVE.-P&P (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 500
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.8071

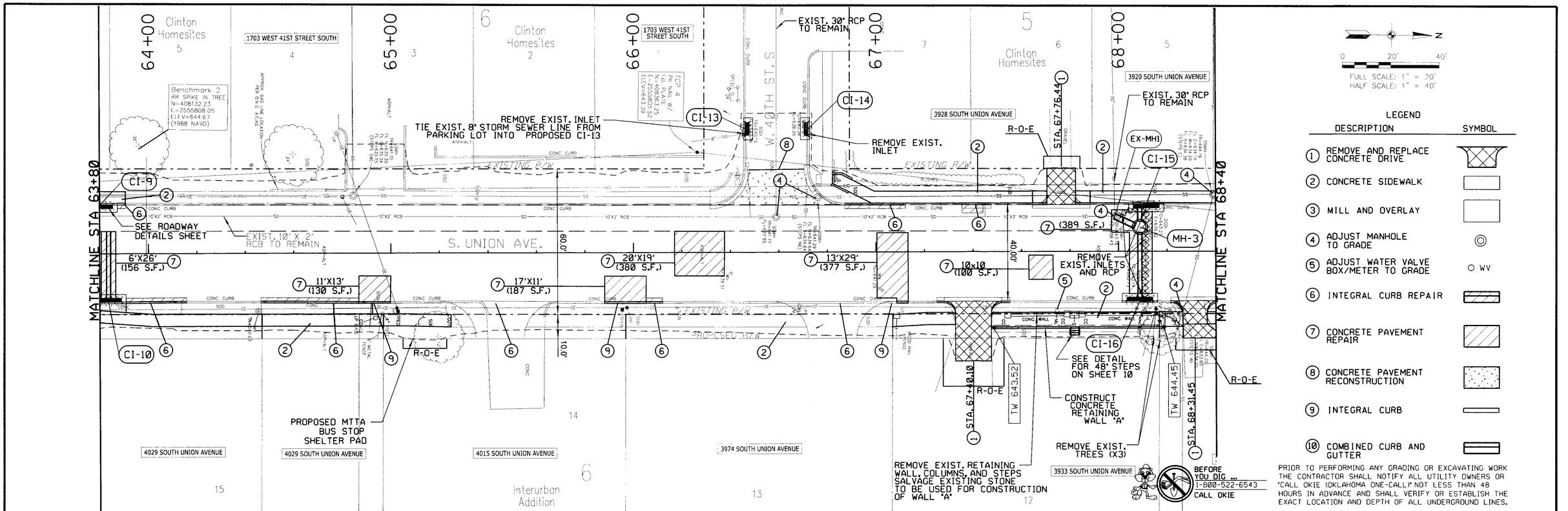
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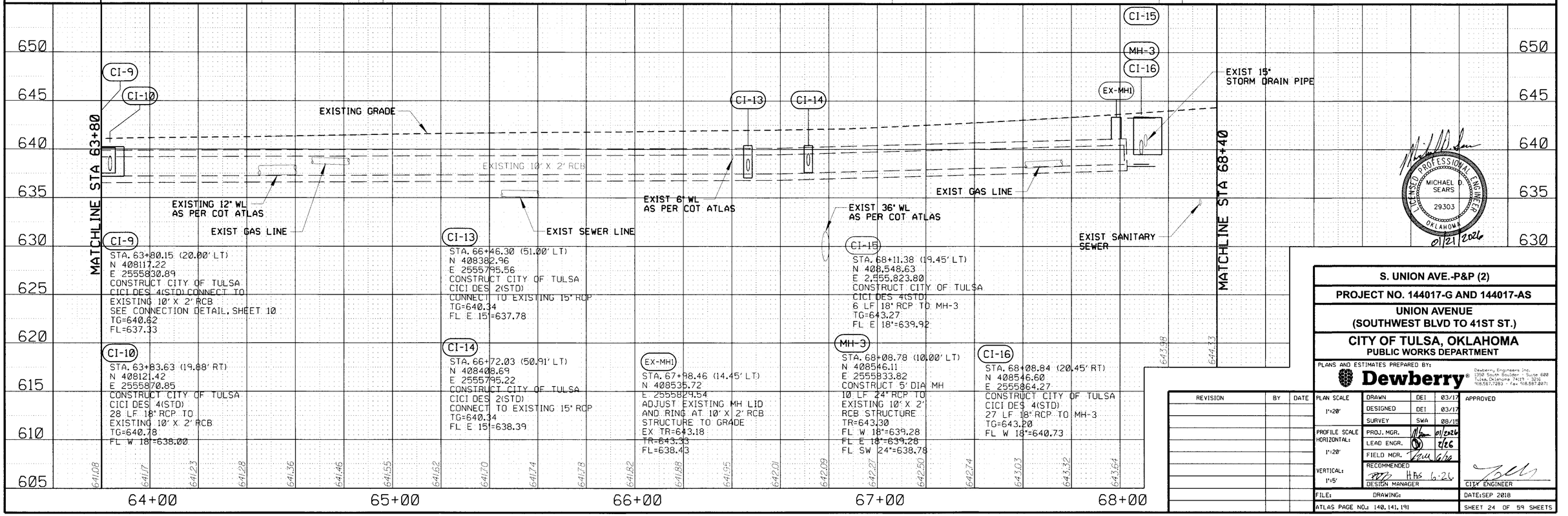
PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		5/2026
	LEAD ENGR.		5/26
	FIELD MGR.		6/26
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER		6-26

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CITY ENGINEER

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ATLAS PAGE NO.: 140, 141, 191 SHEET 23 OF 59 SHEETS





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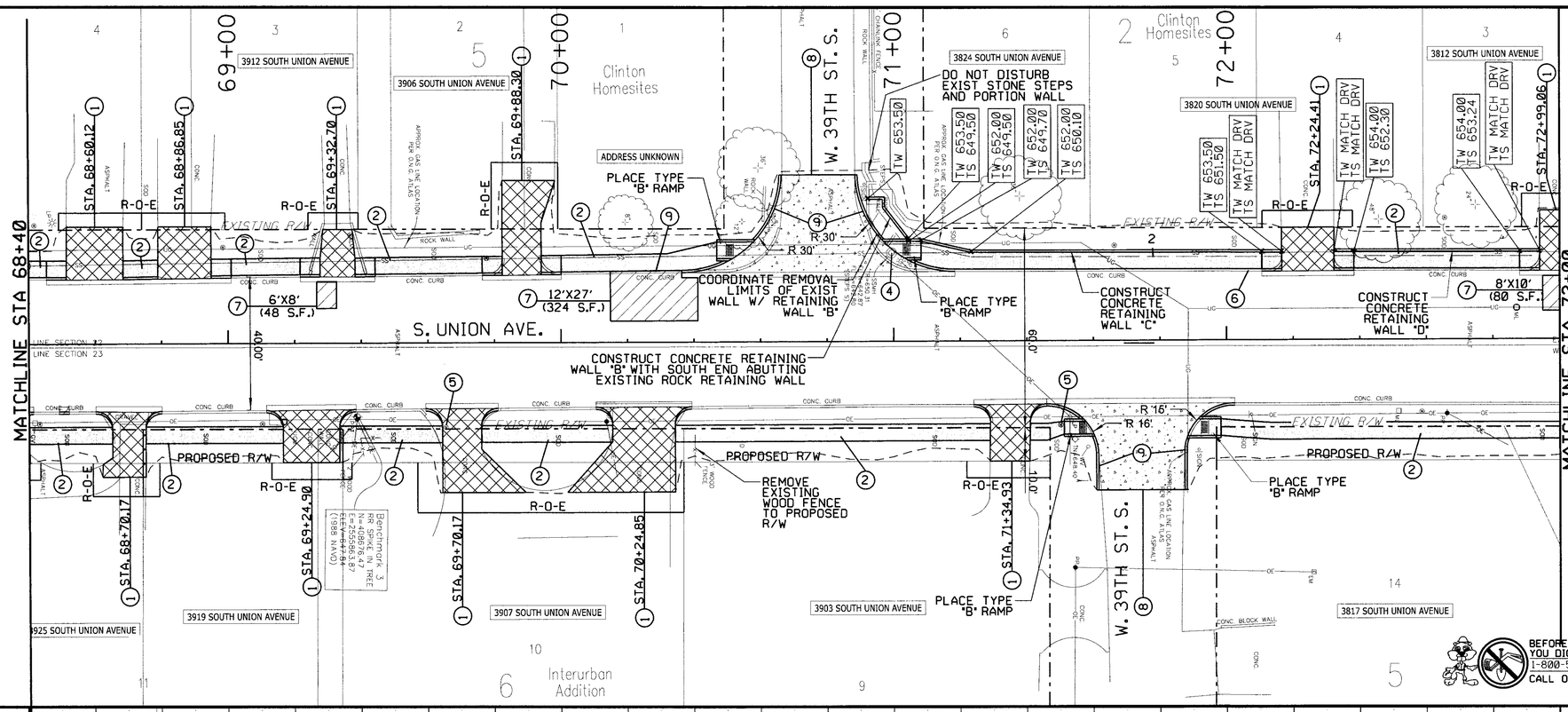
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	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		6/26
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER		

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CITY ENGINEER

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DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
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S. UNION AVE.-P&P (2)
PROJECT NO. 144017-G AND 144017-AS
UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

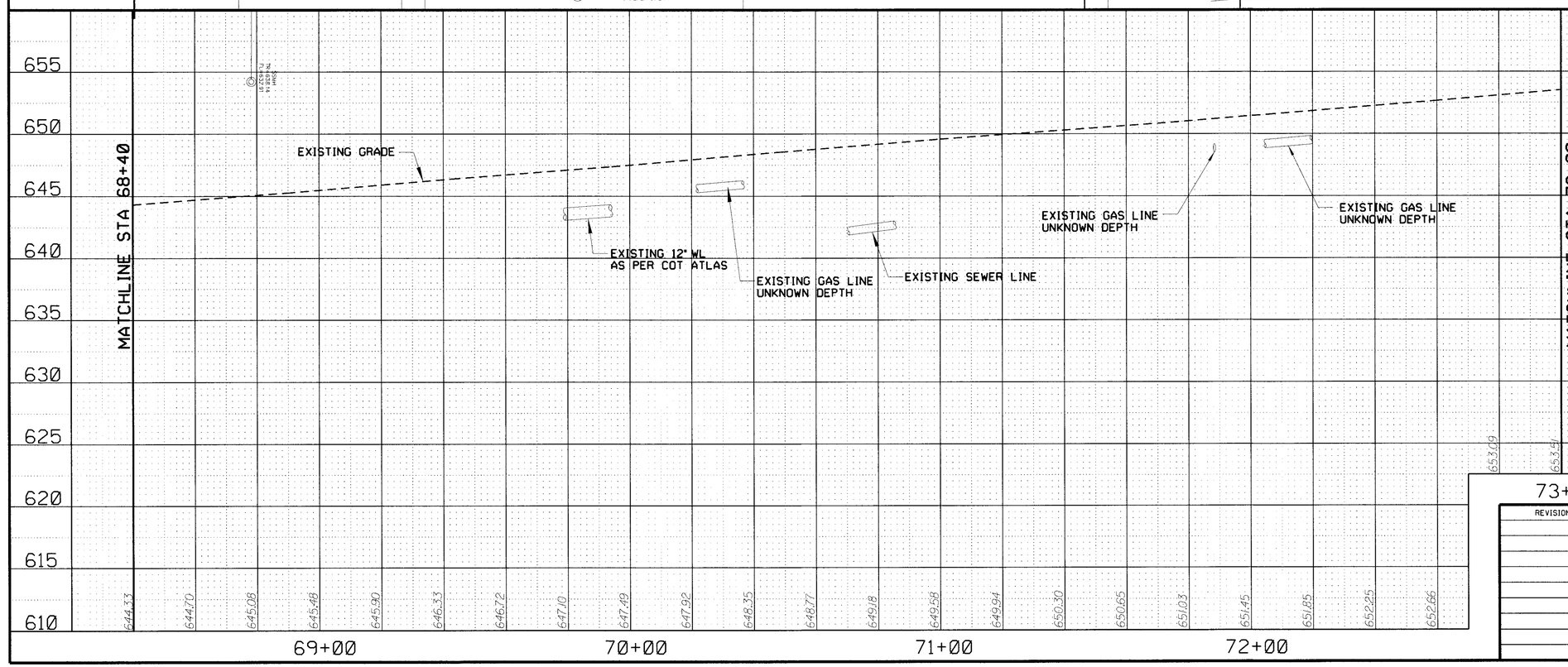


LEGEND

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	◎
(5) ADJUST WATER VALVE BOX/METER TO GRADE	○ WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

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

PRIOR TO PERFORMING ANY GRADING OR EXCAVATING WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS OR "CALL OKIE (OKLAHOMA ONE-CALL)" NOT LESS THAN 48 HOURS IN ADVANCE AND SHALL VERIFY OR ESTABLISH THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND LINES.



REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

REVISION	BY	DATE

S. UNION AVE.-P&P (3)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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Dewberry Engineers Inc. 1350 South Boulder - Suite 600 Tulsa, Oklahoma 74119 - 3216 918.587.7263 - Fax 918.587.2671

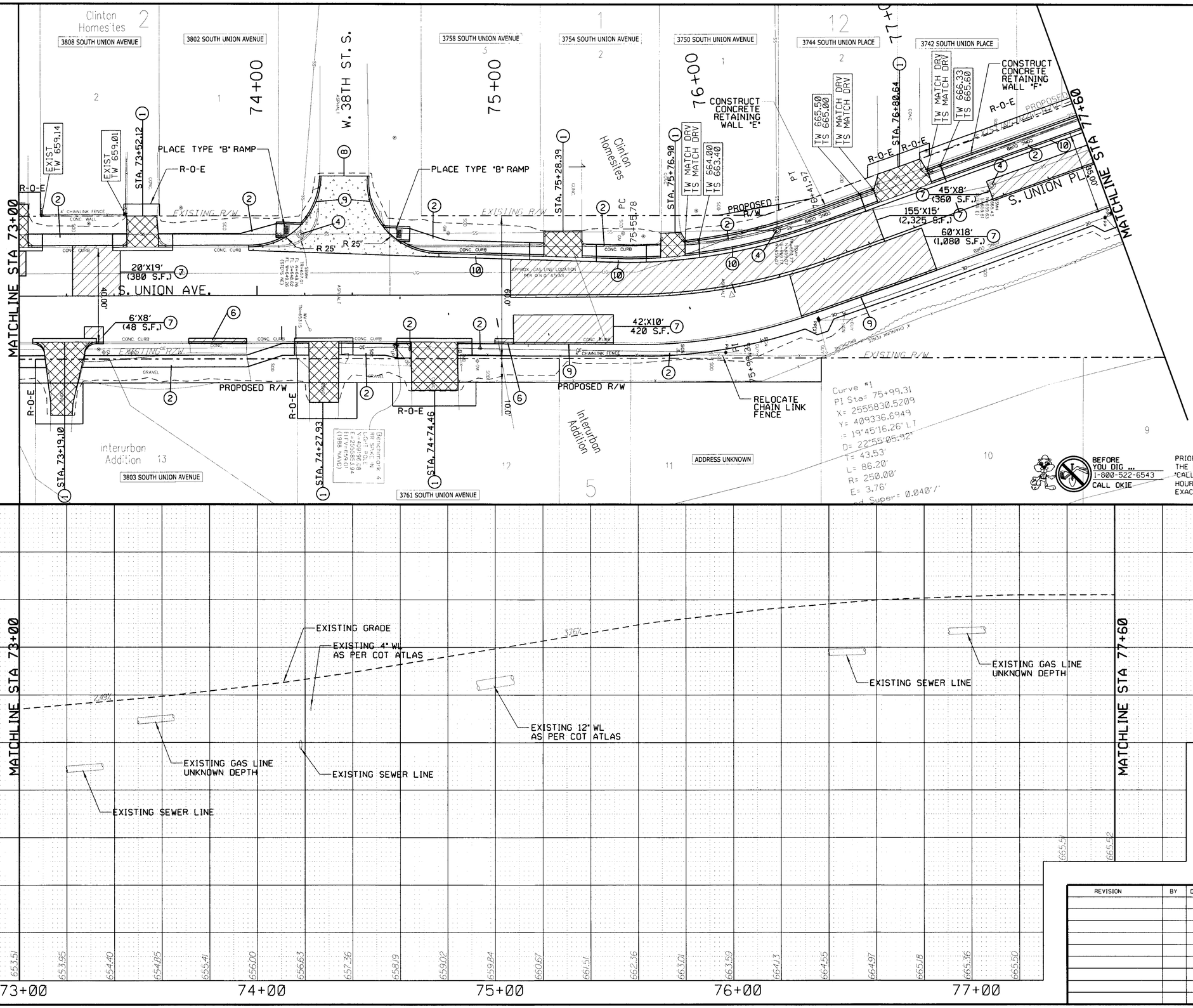
PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20' VERTICAL: 1"=5'	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		6/26
	RECOMMENDED DESIGN MANAGER	HB	6-26

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$DATE$



S. UNION AVE. / S. UNION PL. -P&P (4)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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Dewberry Engineers Inc.
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Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.8871

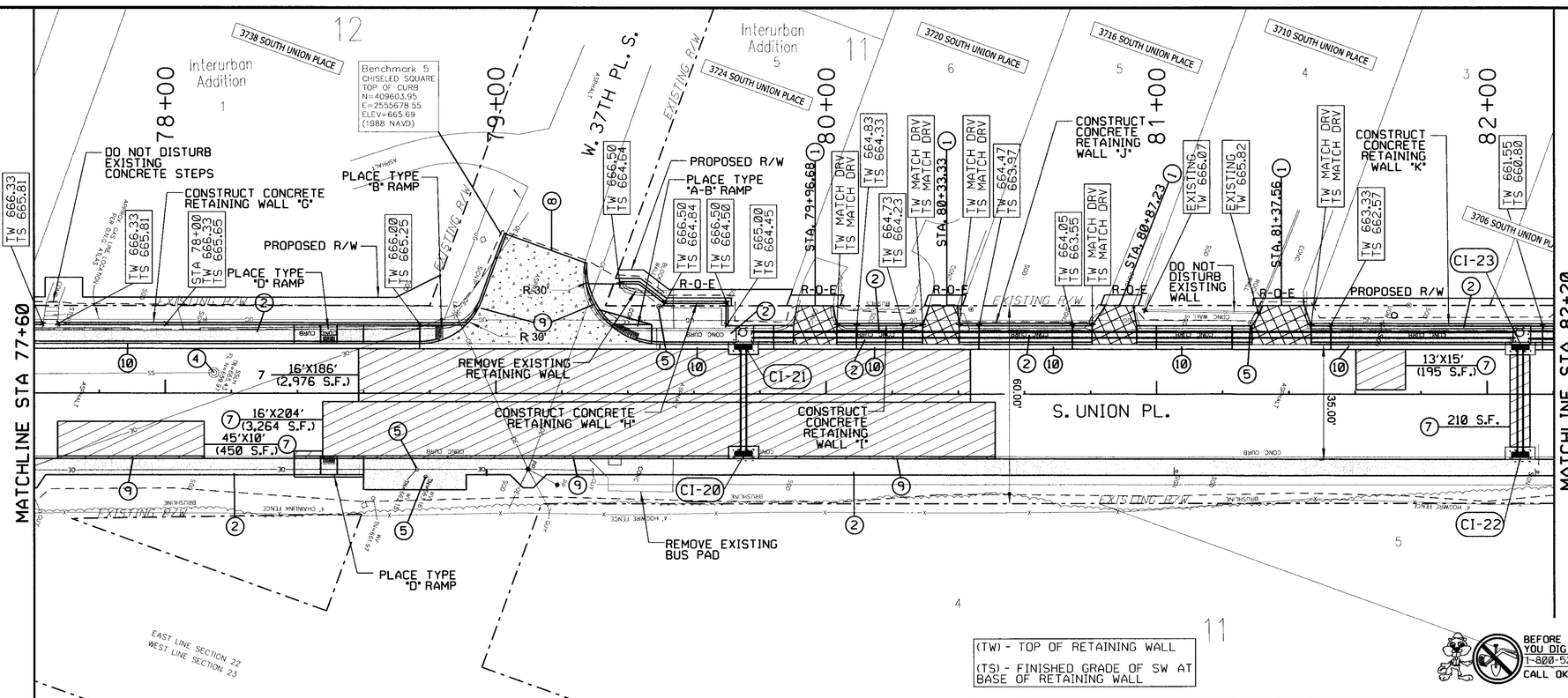
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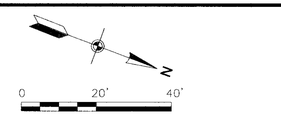
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	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER		1/26/26

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DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 26 OF 59 SHEETS

$DATE$ $FILE$



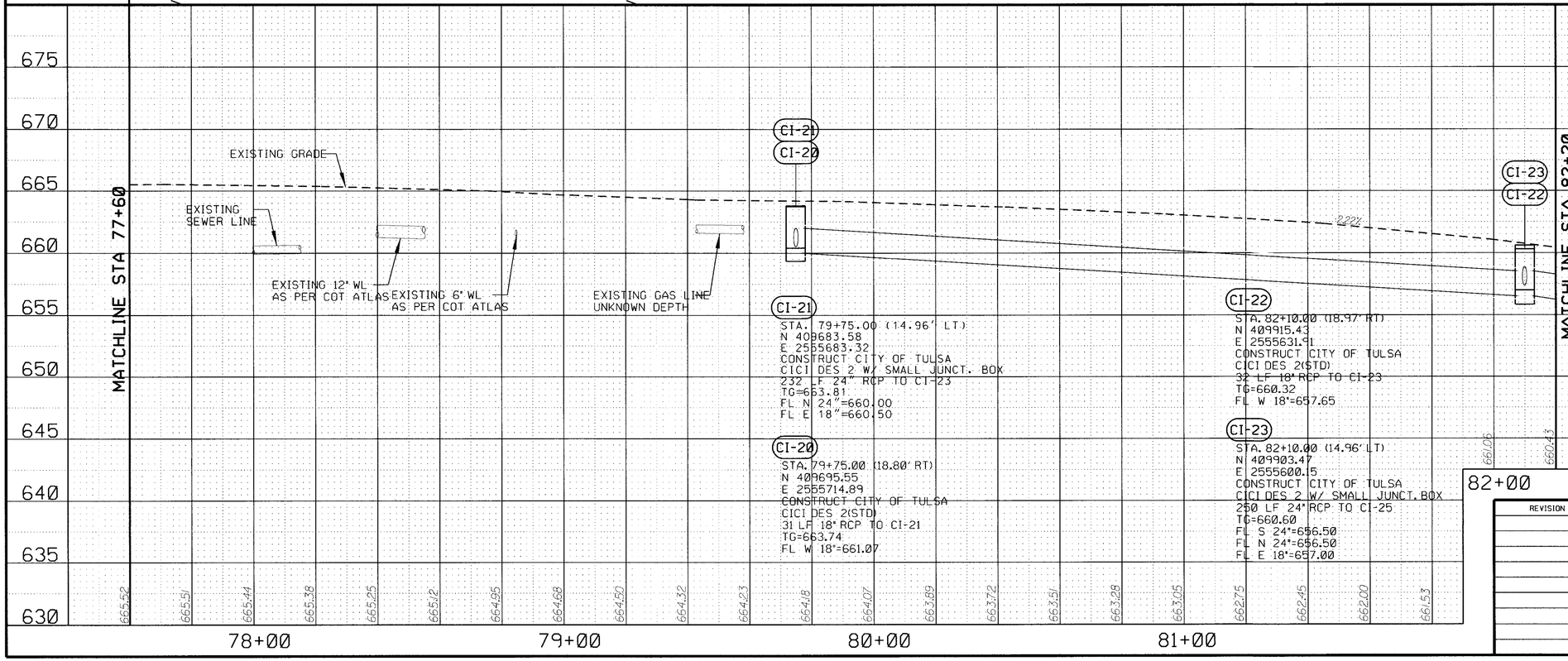


LEGEND

DESCRIPTION	SYMBOL
① REMOVE AND REPLACE CONCRETE DRIVE	
② CONCRETE SIDEWALK	
③ MILL AND OVERLAY	
④ ADJUST MANHOLE TO GRADE	◎
⑤ ADJUST WATER VALVE BOX/METER TO GRADE	○ WV
⑥ INTEGRAL CURB REPAIR	
⑦ CONCRETE PAVEMENT REPAIR	
⑧ CONCRETE PAVEMENT RECONSTRUCTION	
⑨ INTEGRAL CURB	
⑩ COMBINED CURB AND GUTTER	

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CI-21
STA. 79+75.00 (14.96' LT)
N 409683.58
E 2555683.32
CONSTRUCT CITY OF TULSA
CICI DES 2 W/ SMALL JUNCT. BOX
232 LF 24" RCP TO CI-23
TG=663.81
FL N 24"=660.00
FL E 18"=660.50

CI-20
STA. 79+75.00 (18.80' RT)
N 409695.55
E 2555714.89
CONSTRUCT CITY OF TULSA
CICI DES 2(STD)
31 LF 18" RCP TO CI-21
TG=663.74
FL W 18"=661.07

CI-22
STA. 82+10.00 (18.97' RT)
N 409915.43
E 2555631.91
CONSTRUCT CITY OF TULSA
CICI DES 2(STD)
32 LF 18" RCP TO CI-23
TG=660.32
FL W 18"=657.65

CI-23
STA. 82+10.00 (14.96' LT)
N 409903.47
E 2555600.15
CONSTRUCT CITY OF TULSA
CICI DES 2 W/ SMALL JUNCT. BOX
250 LF 24" RCP TO CI-25
TG=660.60
FL S 24"=656.50
FL N 24"=656.50
FL E 18"=657.00

LICENSED PROFESSIONAL ENGINEER
MICHAEL D SEARS
29303
OKLAHOMA
5/7/2026

REVISION	BY	DATE

S. UNION PL.-P&P (5)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

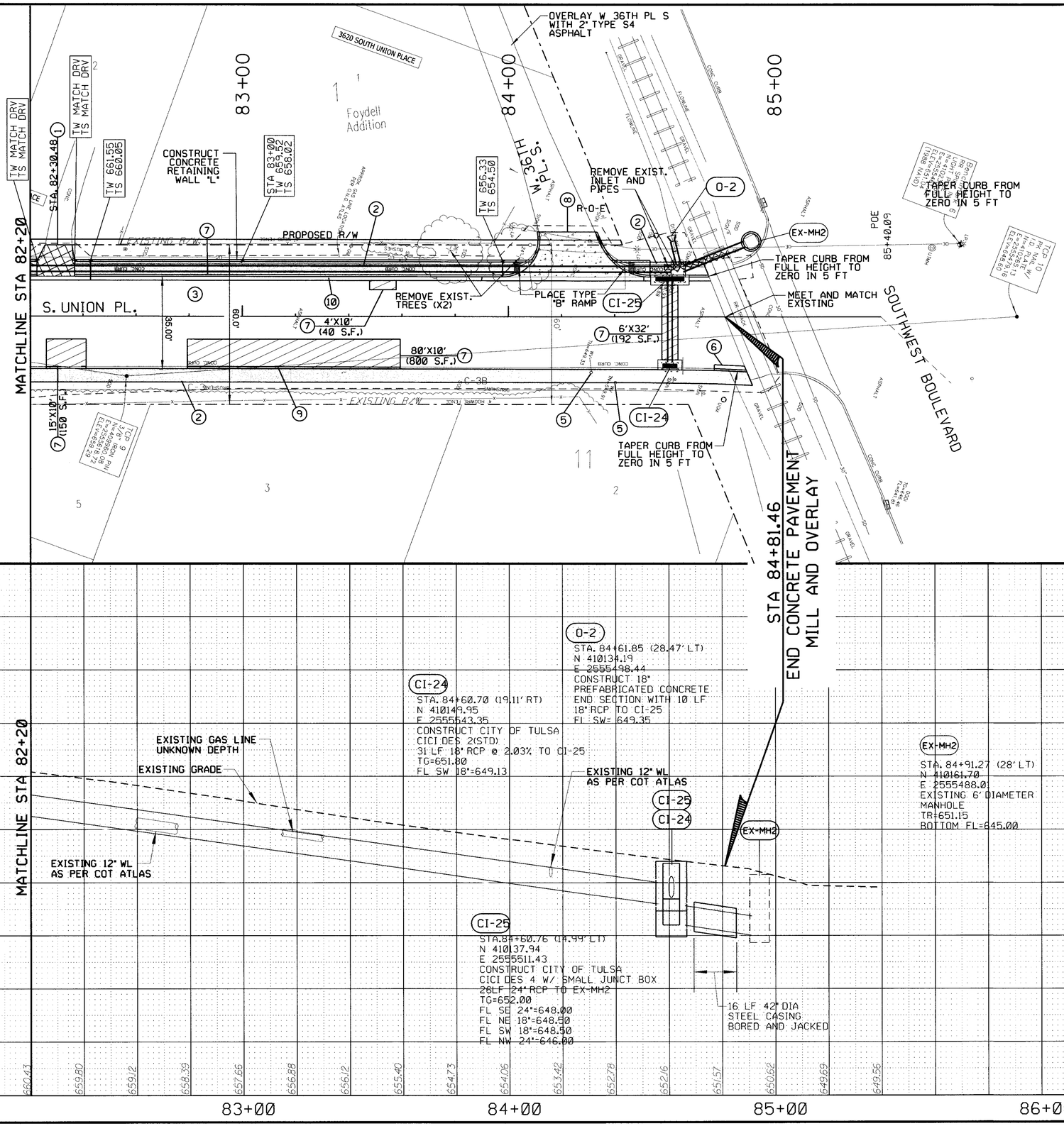
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Dewberry Engineers Inc. 1350 South Boulder - Suite 600 Tulsa, Oklahoma 74119 - 3216 918.587.7283 - fax 918.587.8077

PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20' VERTICAL: 1"=5'	PROJ. MGR.		5/2026
	LEAD ENGR.		5/26
	FIELD MGR.		6/26
	RECOMMENDED DESIGN MANAGER		6-26

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CITY ENGINEER

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DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 27 OF 59 SHEETS

$DATE$ $FILE$



LEGEND

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	◎
(5) ADJUST WATER VALVE BOX/METER TO GRADE	○ WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

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LICENSED PROFESSIONAL ENGINEER MICHAEL D. SEARS 29303 OKLAHOMA 5/12/26

REVISION	BY	DATE

S. UNION PL.-P&P (6)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
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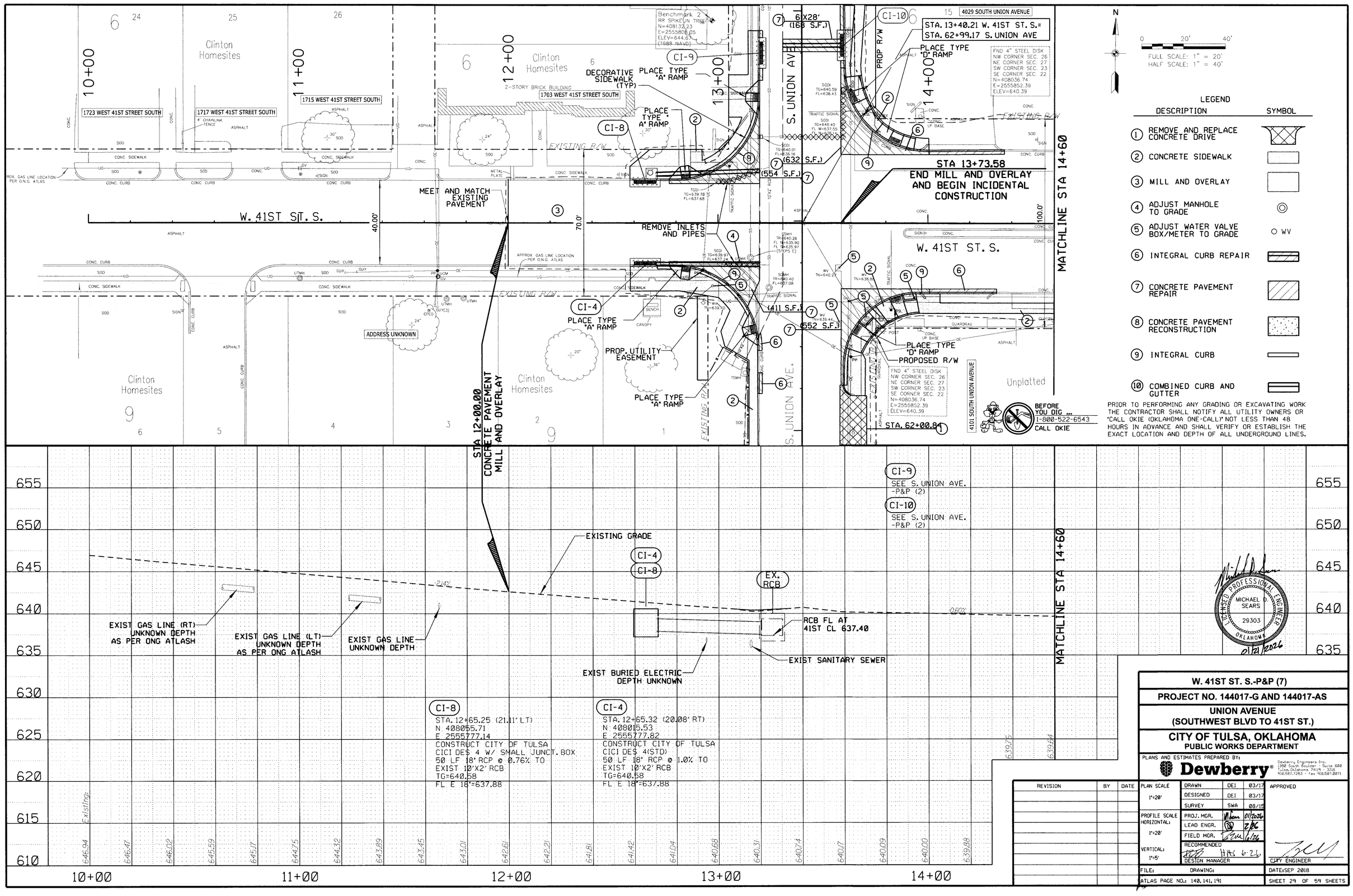
PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20' VERTICAL: 1"=5'	PROJ. MGR.		5/26/26
	LEAD ENGR.		5/26
	FIELD MGR.		6/26
	RECOMMENDED DESIGN MANAGER	HAS	6-26

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CITY ENGINEER

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ATLAS PAGE NO.: 140, 141, 191

DATE: SEP 2018
SHEET 28 OF 59 SHEETS

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REVISION	BY	DATE

W. 41ST ST. S.-P&P (7)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

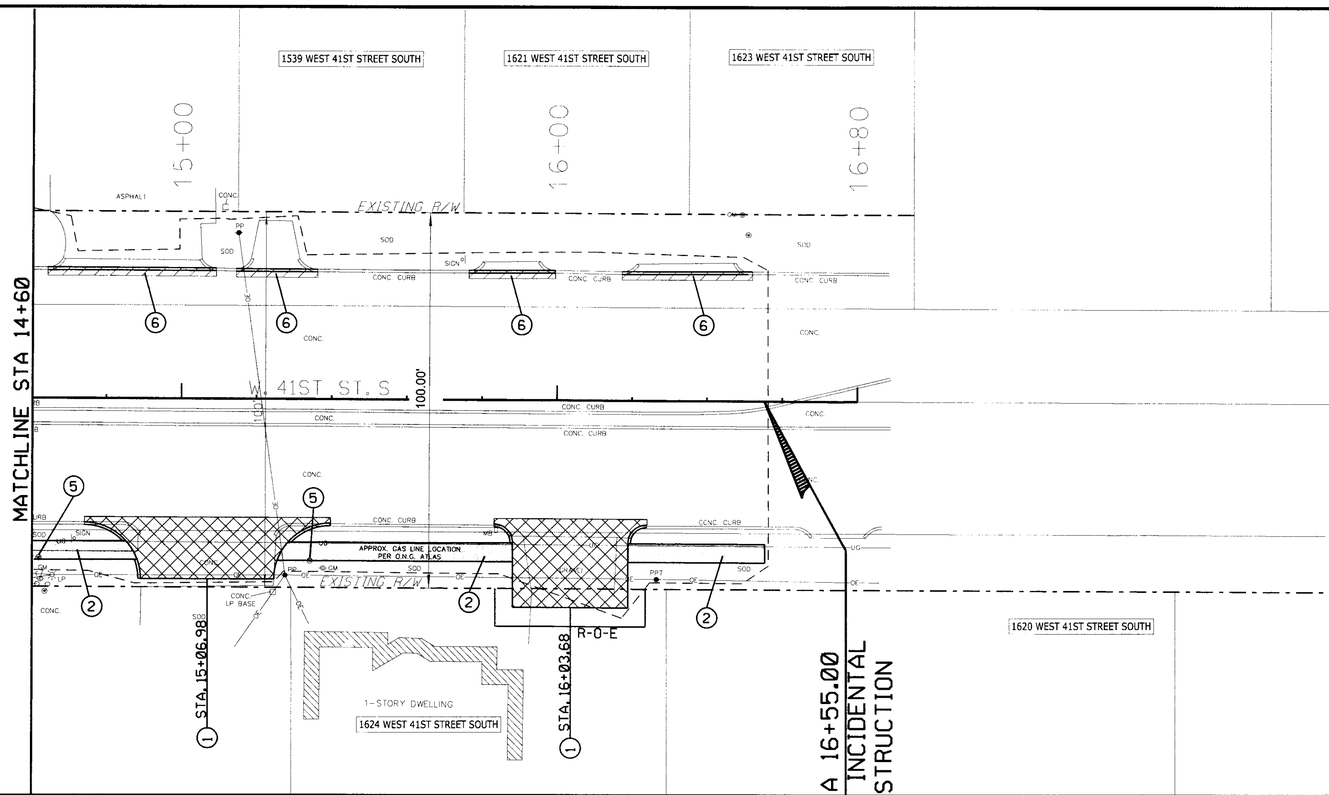
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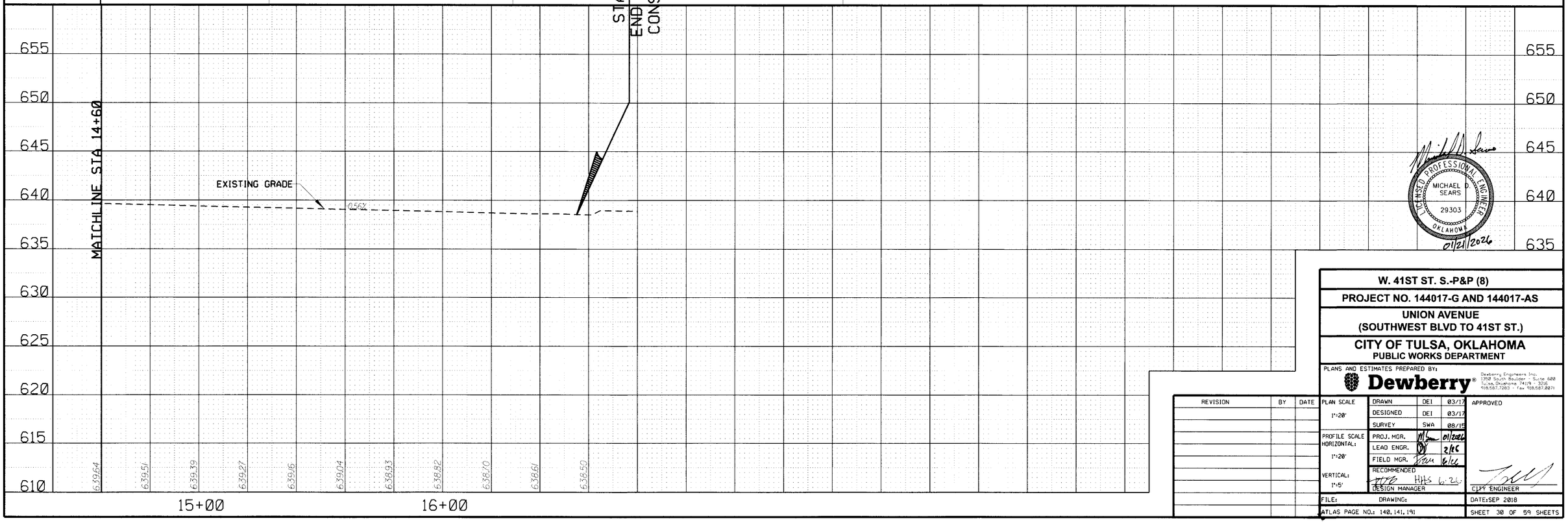
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	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20' VERTICAL: 1"=5'	PROJ. MGR.		01/2026
	LEAD ENGR.		2/26
	FIELD MGR.		6/26
	RECOMMENDED DESIGN MANAGER		

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FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 29 OF 59 SHEETS

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026





N

0 20' 40'

FULL SCALE: 1" = 20'
HALF SCALE: 1" = 40'

LEGEND

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	◎
(5) ADJUST WATER VALVE BOX/METER TO GRADE	○ WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

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

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LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

REVISION	BY	DATE

W. 41ST ST. S.-P&P (8)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry

Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7263 - fax 918.587.8071

PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.	MDS	01/2026
	LEAD ENGR.	DEI	2/26
	FIELD MGR.	[illegible]	6/16
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER	HHS	6.26

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CITY ENGINEER

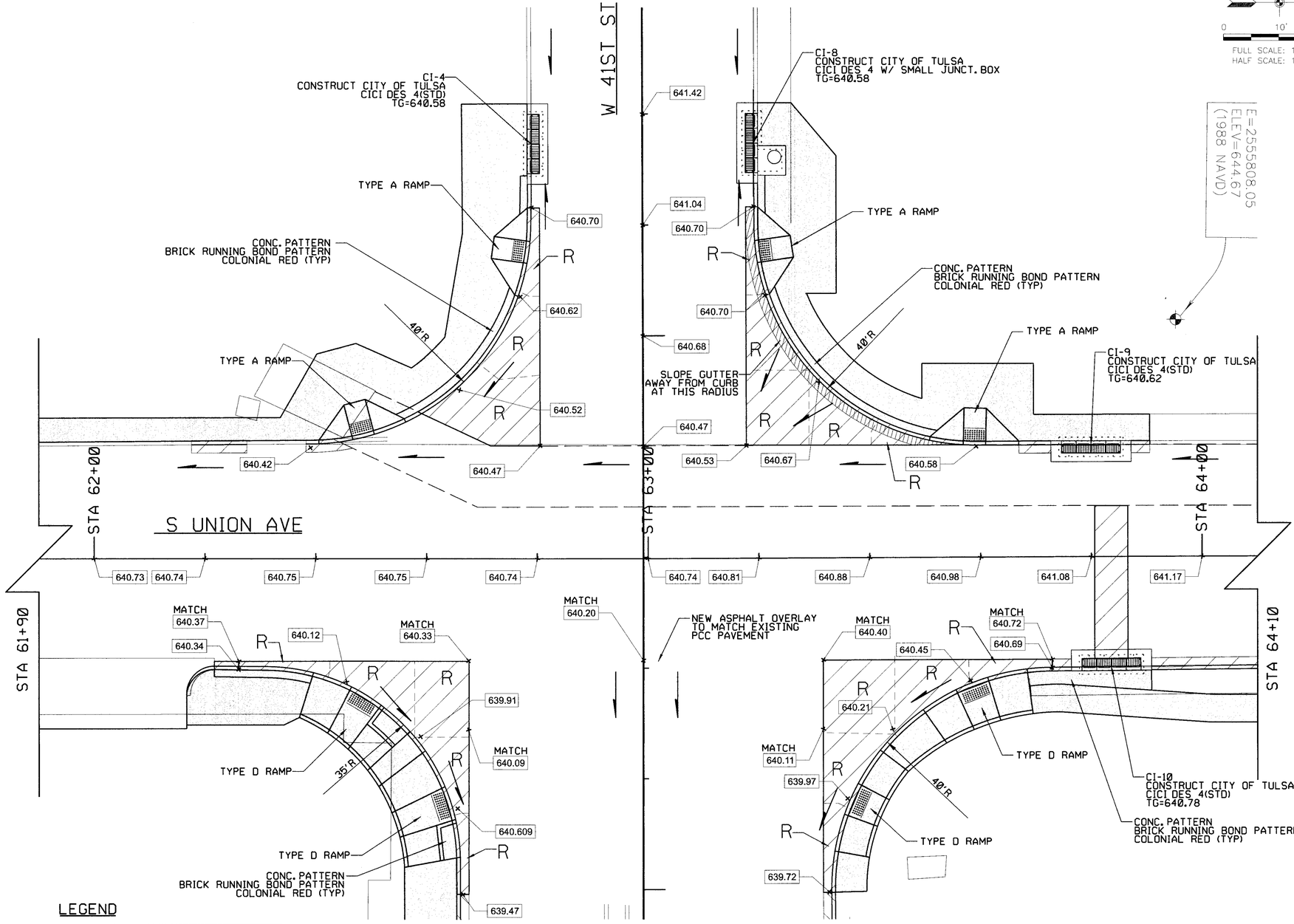
FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 30 OF 59 SHEETS

$DATE$ $FILE$



N

0 10' 20'

FULL SCALE: 1" = 10'
HALF SCALE: 1" = 20'

LEGEND

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	◎
(5) ADJUST WATER VALVE BOX/METER TO GRADE	○ WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

LEGEND

— E — ·	DOWELED EXPANSION JOINT (TYPE AA COT STD 729)
- - - - - -	DOWELED CONTRACTION JOINT (REF ODOT DETAIL LTU-4-0)
———	TIED BUTT JOINT OR LONGITUDINAL JOINT (REF ODOT DETAIL LTU LECS-4)
R	REINFORCED CONCRETE PANEL (SEE NOTE 4 THIS SHEET)
▨	FALL AWAY CURB AND GUTTER (SEE ROADWAY DETAILS)

NOTES:

1. ALL ELEVATIONS SHOWN ARE TO TOP OF PAVEMENT OR GUTTER
2. THE JOINT LAYOUT IS PROVIDED FOR THE CONTRACTOR'S USE. THE CONTRACTOR WILL BE ALLOWED TO MAKE MODIFICATIONS TO FIT FIELD AND OPERATIONAL CONDITIONS AS APPROVED BY THE ENGINEER. HOWEVER, THE MAXIMUM SPACING SHALL BE 15 FT. BETWEEN JOINTS.
3. SEE COT STANDARD DETAILS 727 AND 729 FOR JOINT TYPE AND LAYOUT. FOR DOWELED CONTRACTION JOINTS REF ODOT DETAIL LTU-4-0.
4. REINFORCED CONCRETE PANEL SHALL BE # 4 BARS @ 18" C/C EACH DIRECTION. #4 BARS SHALL EXTEND 18" INTO ADJACENT PANELS. COST SHALL BE CONSIDERED INCIDENTAL TO CONCRETE PLACEMENT. NO ADDITIONAL PAYMENT SHALL BE MADE.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/21/2026

INTERSECTION DETAIL (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®

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1350 South Boulder • Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.2071

REVISION	BY	DATE

PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		6/16
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER		1/26

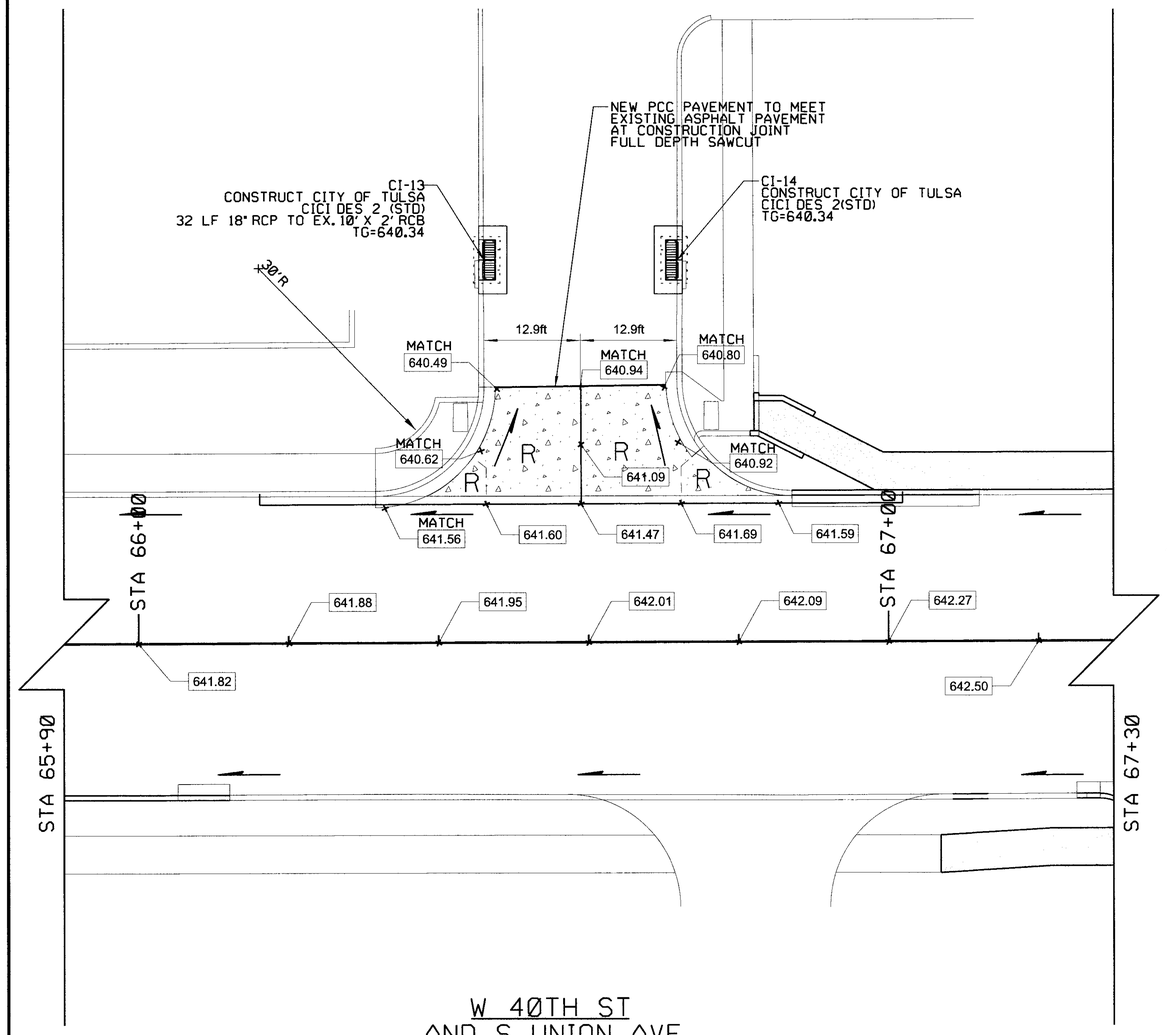
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CITY ENGINEER

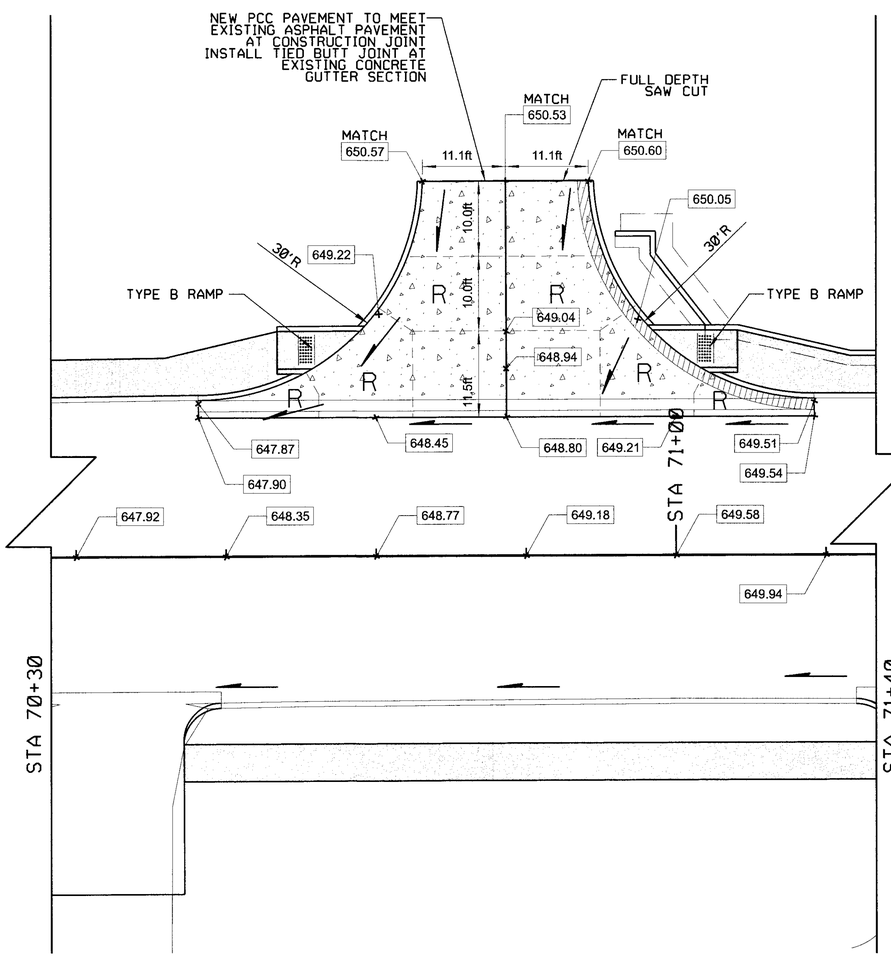
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ATLAS PAGE NO.: 140, 141, 191 SHEET 31 OF 59 SHEETS

$DATE$ $FILE$



W 40TH ST
AND S UNION AVE



W 39TH ST
AND S UNION AVE

N

0 10' 20'

FULL SCALE: 1" = 10'
HALF SCALE: 1" = 20'

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	
(5) ADJUST WATER VALVE BOX/METER TO GRADE	WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

LEGEND

— E — ·	DOWELED EXPANSION JOINT (TYPE AA COT STD 729)
- - - - - -	SAWCUT CONTRACTION JOINT
———	TIED BUTT JOINT OR LONGITUDINAL JOINT (SEE DETAIL ON SHEET 9)
R	REINFORCED CONCRETE PANEL (SEE NOTE 4 THIS SHEET)
▨	FALL AWAY CURB AND GUTTER (SEE ROADWAY DETAILS)

NOTES:

1. ALL ELEVATIONS SHOWN ARE TO TOP OF PAVEMENT OR GUTTER.
2. THE JOINT LAYOUT IS PROVIDED FOR THE CONTRACTOR'S USE. THE CONTRACTOR WILL BE ALLOWED TO MAKE MODIFICATIONS TO FIT FIELD AND OPERATIONAL CONDITIONS AS APPROVED BY THE ENGINEER. HOWEVER, THE MAXIMUM SPACING SHALL BE 15 FT. BETWEEN JOINTS.
3. SEE COT STANDARD DETAIL 729 AND DETAIL ON SHEET 9 FOR JOINT TYPE AND LAYOUT.
4. REINFORCED CONCRETE PANEL SHALL BE # 4 BARS @ 18" C/C EACH DIRECTION. #4 BARS SHALL EXTEND 18" INTO ADJACENT PANELS. COST SHALL BE CONSIDERED INCIDENTAL TO CONCRETE PLACEMENT. NO ADDITIONAL PAYMENT SHALL BE MADE.

MICHAEL D. SEARS
LICENSED PROFESSIONAL ENGINEER
29303
OKLAHOMA
01/21/2026

INTERSECTION DETAIL (2)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
13150 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - Fax 918.587.2071

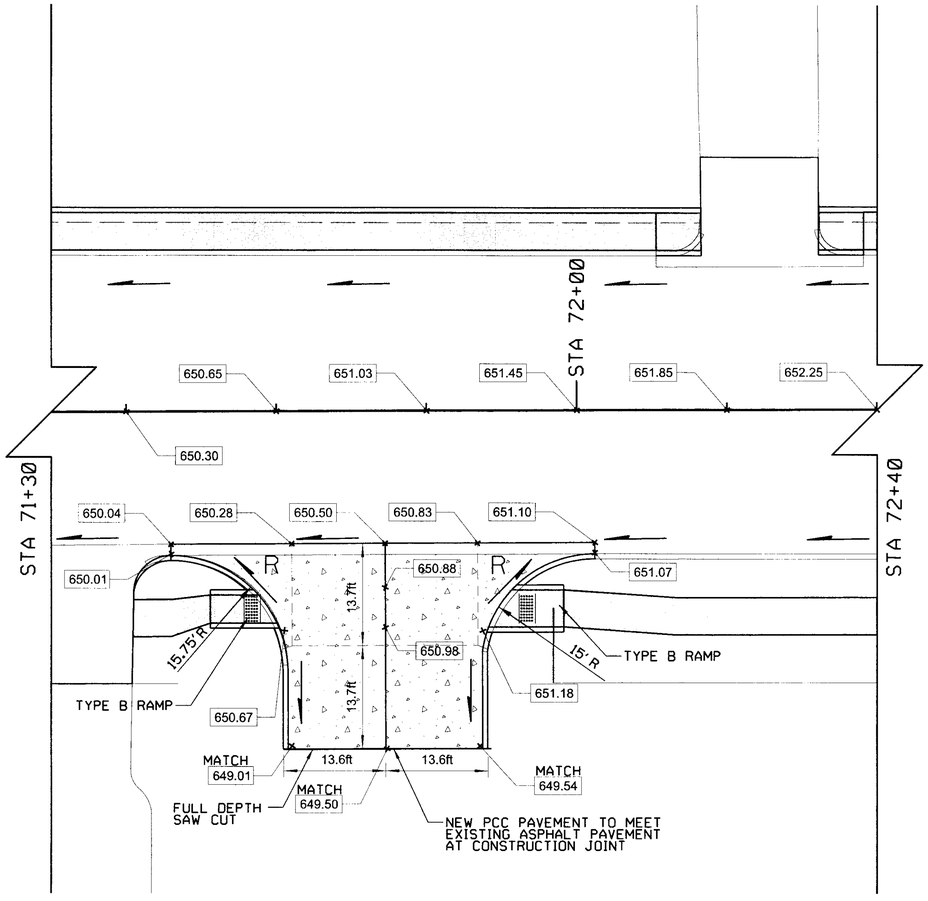
REVISION	BY	DATE

PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		01/2026
	LEAD ENGR.		1/26
	FIELD MGR.		6/16
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER		1.26

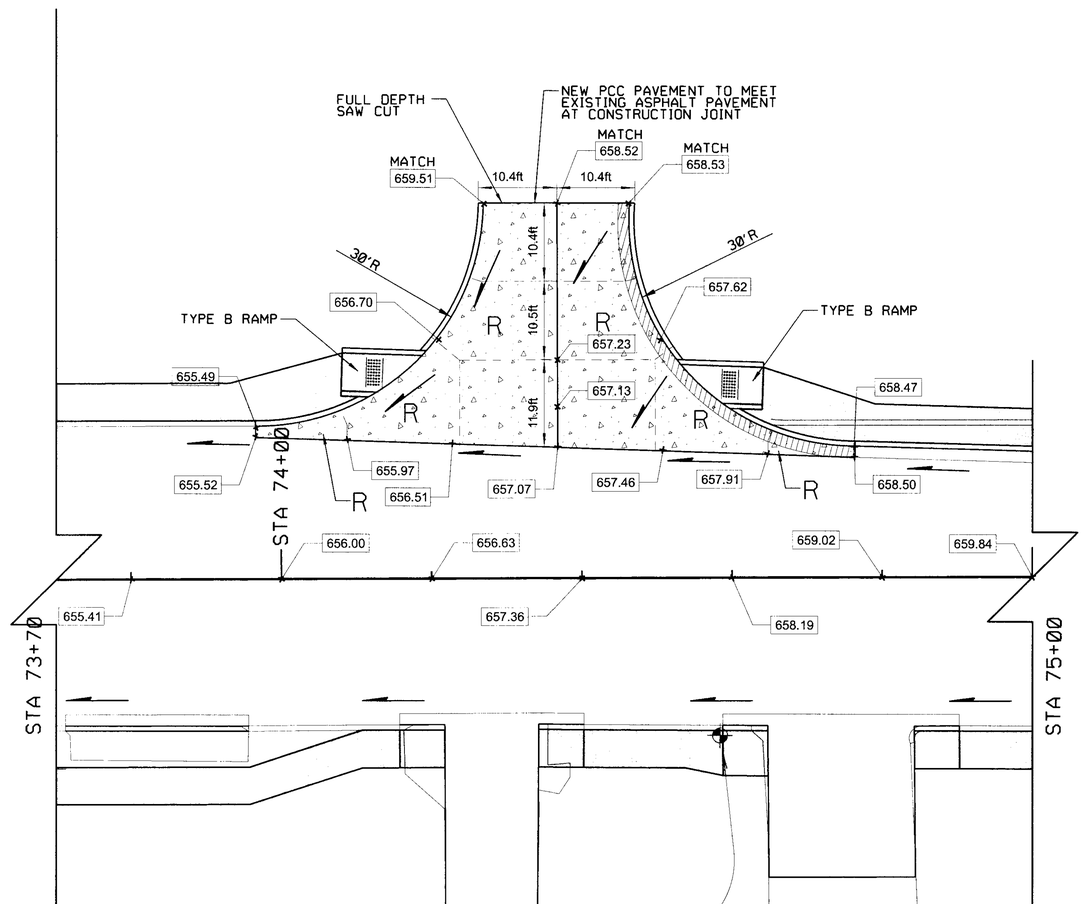
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FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 32 OF 59 SHEETS

$DATE$ $FILE$



W 39TH ST
AND S UNION AVE



W 38TH ST
AND S UNION AVE

N

0 10' 20'

FULL SCALE: 1" = 10'
HALF SCALE: 1" = 20'

DESCRIPTION	SYMBOL
(1) REMOVE AND REPLACE CONCRETE DRIVE	
(2) CONCRETE SIDEWALK	
(3) MILL AND OVERLAY	
(4) ADJUST MANHOLE TO GRADE	
(5) ADJUST WATER VALVE BOX/METER TO GRADE	WV
(6) INTEGRAL CURB REPAIR	
(7) CONCRETE PAVEMENT REPAIR	
(8) CONCRETE PAVEMENT RECONSTRUCTION	
(9) INTEGRAL CURB	
(10) COMBINED CURB AND GUTTER	

LEGEND

— E — ·	DOWELED EXPANSION JOINT (TYPE AA COT STD 729)
- - - - - -	SAWCUT CONTRACTION JOINT
———	TIED BUTT JOINT OR LONGITUDINAL JOINT (SEE DETAIL ON SHEET 9)
R	REINFORCED CONCRETE PANEL (SEE NOTE 4 THIS SHEET)
▨	FALL AWAY CURB AND GUTTER (SEE ROADWAY DETAILS)

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LICENSED PROFESSIONAL ENGINEER
MICHAEL D SEARS
29303
OKLAHOMA
01/21/2026

INTERSECTION DETAIL (3)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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918.587.7263 - fax 918.587.8871

REVISION	BY	DATE

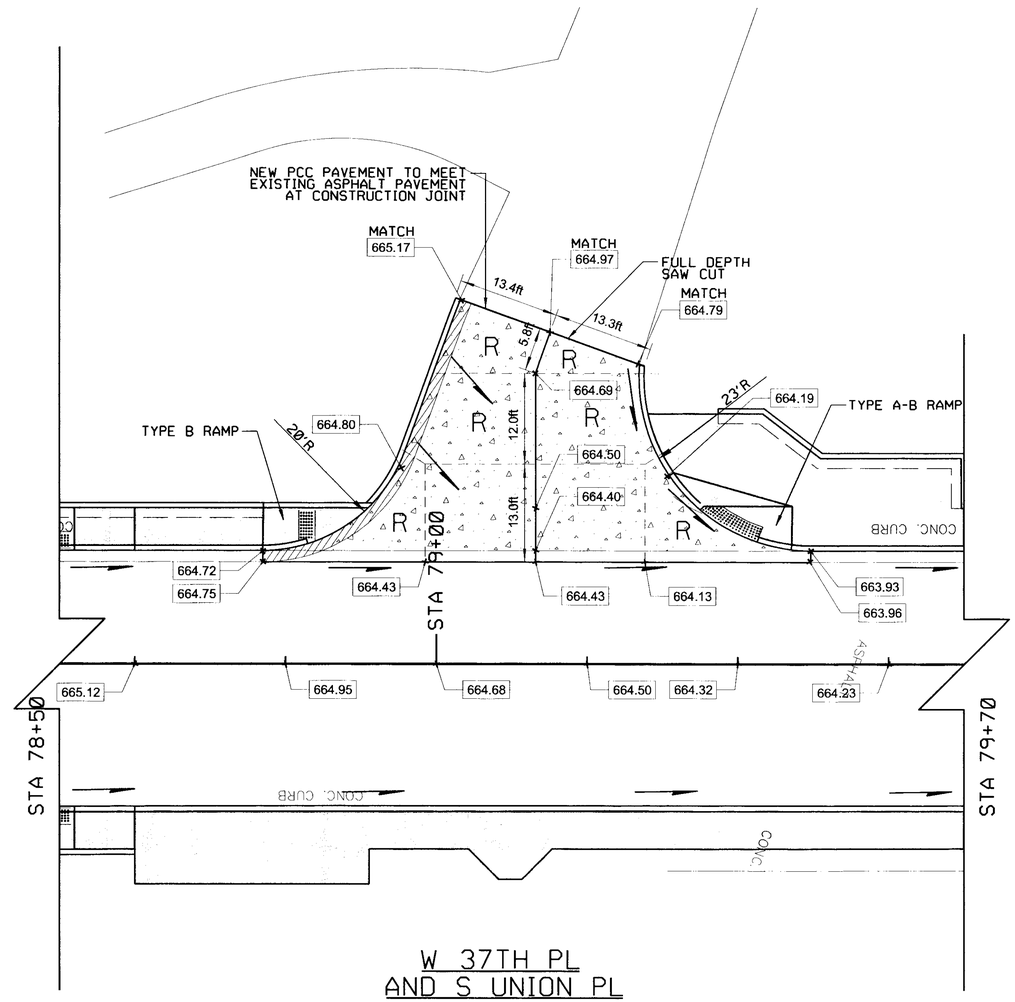
PLAN SCALE 1"=20'
PROFILE SCALE HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

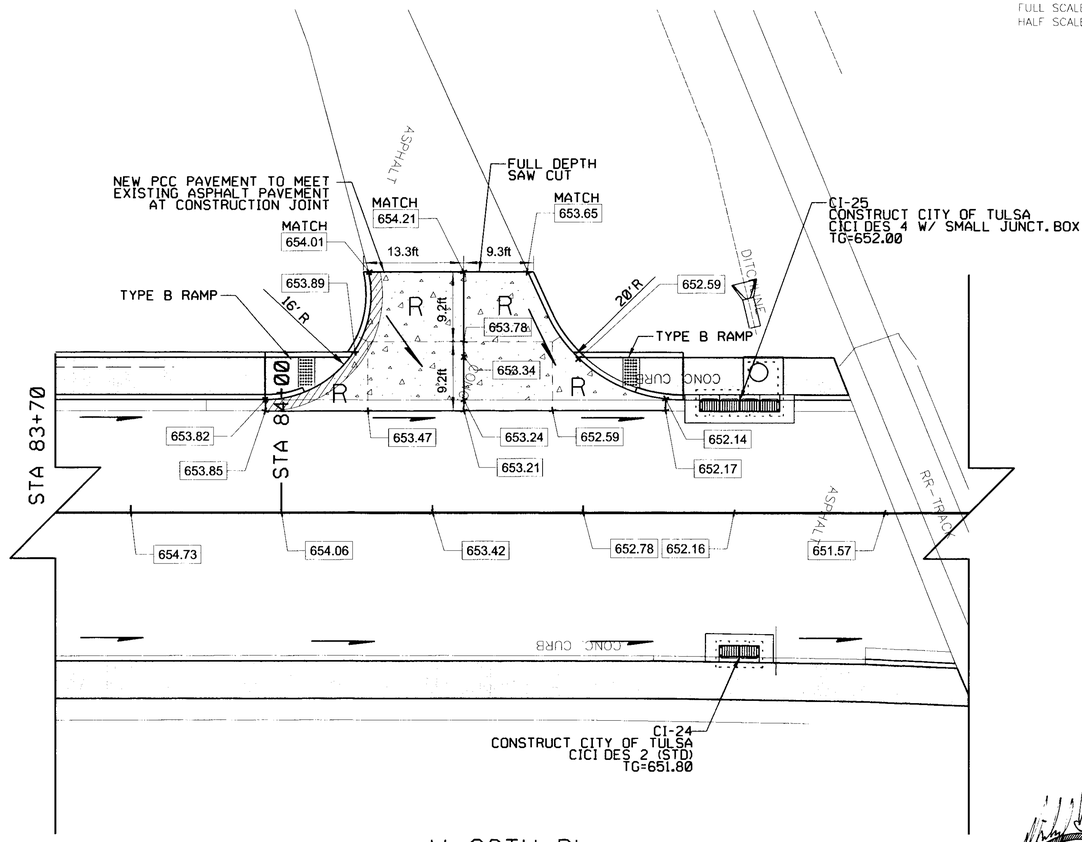
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DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		01/2026
LEAD ENGR.		1/26
FIELD MGR.		6/16
RECOMMENDED DESIGN MANAGER		1/26

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DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 33 OF 59 SHEETS

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LEGEND

— E —	DOWELED EXPANSION JOINT (TYPE AA COT STD 729)
- - - - - -	SAWCUT CONTRACTION JOINT
———	TIED BUTT JOINT OR LONGITUDINAL JOINT (SEE DETAIL ON SHEET 9)
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NOTES:

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LEGEND

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
① REMOVE AND REPLACE CONCRETE DRIVE	▽	⑦ CONCRETE PAVEMENT REPAIR	▨
② CONCRETE SIDEWALK	▭	⑧ CONCRETE PAVEMENT RECONSTRUCTION	▨
③ MILL AND OVERLAY	▭	⑨ INTEGRAL CURB	▭
④ ADJUST MANHOLE TO GRADE	◎	⑩ COMBINED CURB AND GUTTER	▭
⑤ ADJUST WATER VALVE BOX/METER TO GRADE	○ WV		
⑥ INTEGRAL CURB REPAIR	▨		

REVISION	BY	DATE

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/7/2026

INTERSECTION DETAIL (4)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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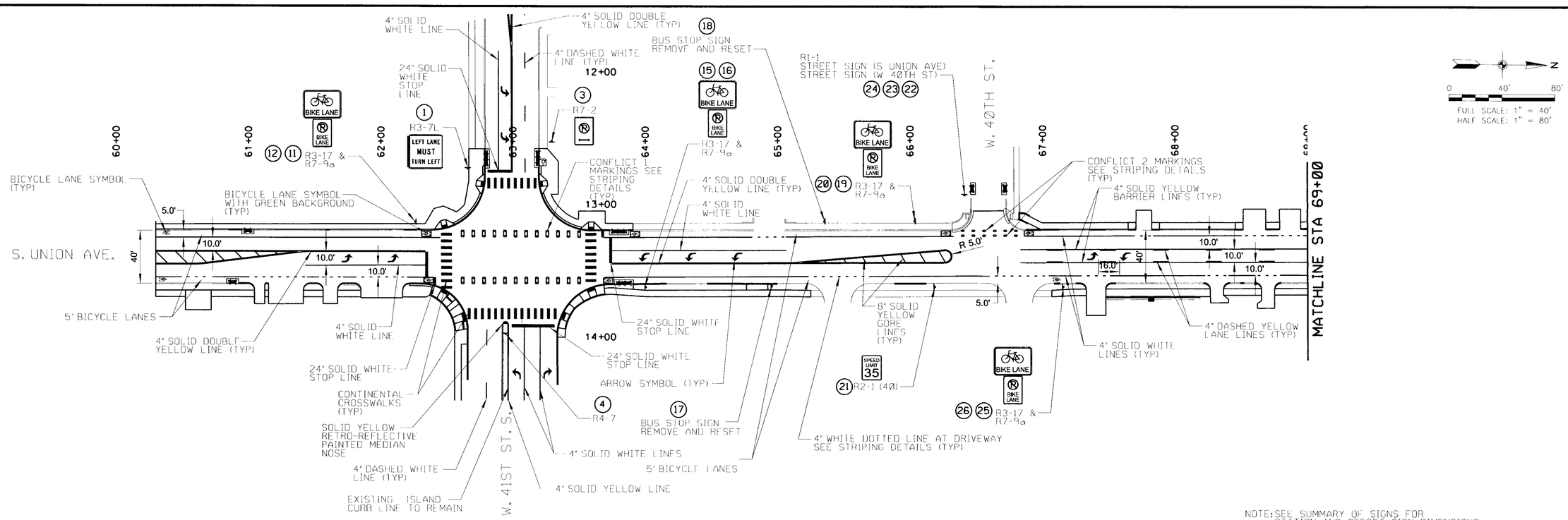
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	SURVEY	SWA	08/15
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	LEAD ENGR.		5/26
	FIELD MGR.		6/26
	RECOMMENDED DESIGN MANAGER	HAS	6-26

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CITY ENGINEER

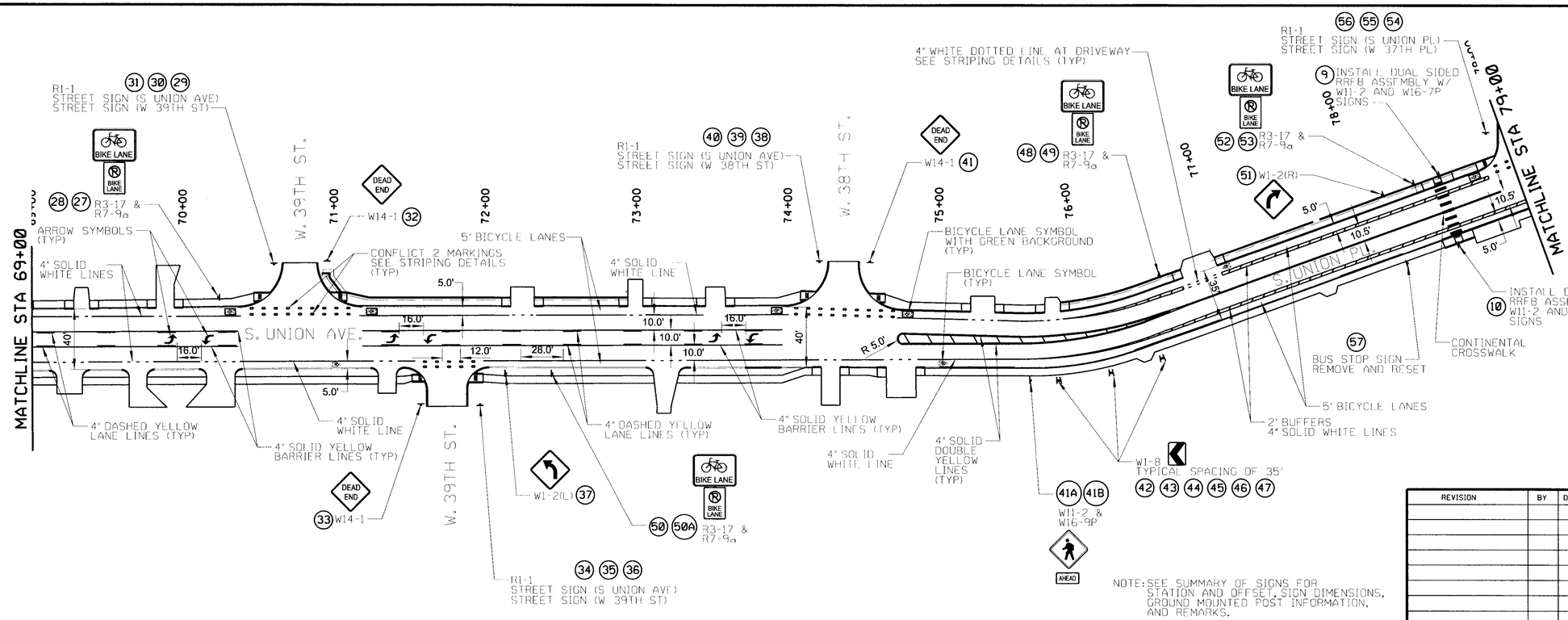
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ATLAS PAGE NO.: 140, 141, 191 SHEET 34 OF 59 SHEETS

SDATES SFILES



NOTE: SEE SUMMARY OF SIGNS FOR STATION AND OFFSET, SIGN DIMENSIONS, GROUND MOUNTED POST INFORMATION, AND REMARKS.



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LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/28/2026

REVISION	BY	DATE

SIGNING AND STRIPING (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

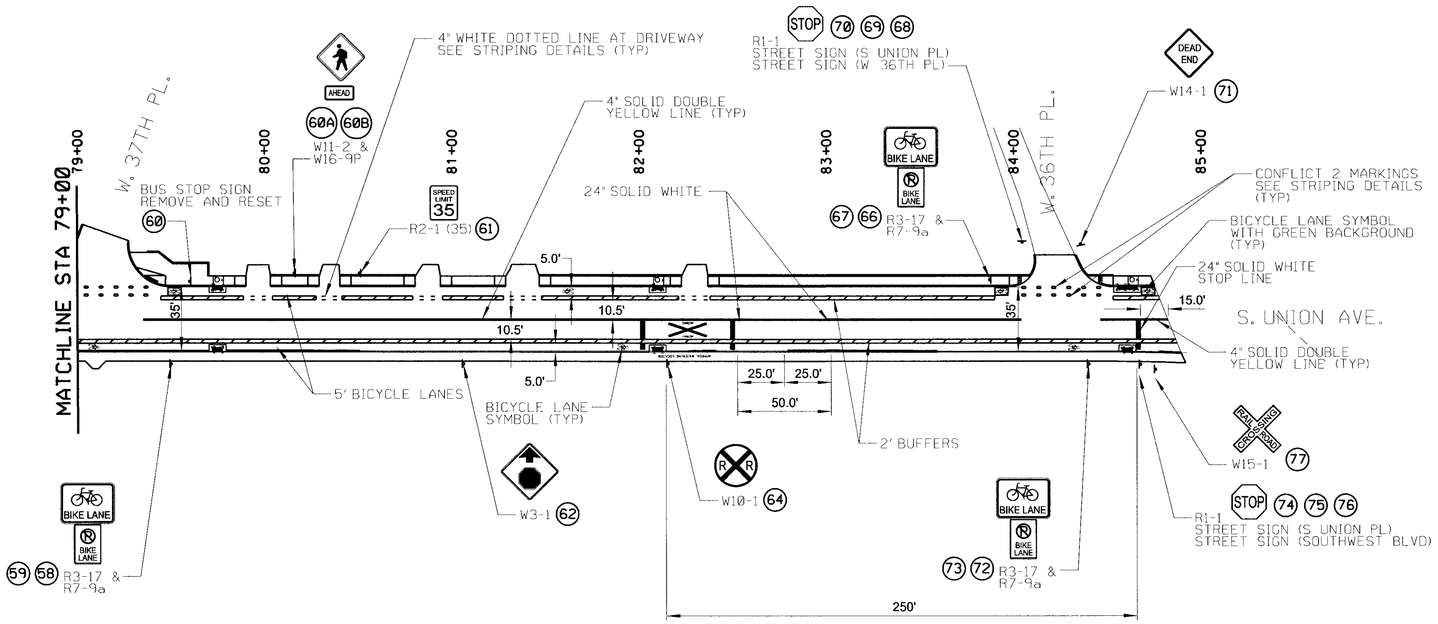
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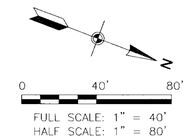
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	SURVEY	SWA	08/15	
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FILE: DRAWING: DATE: SEP 2018

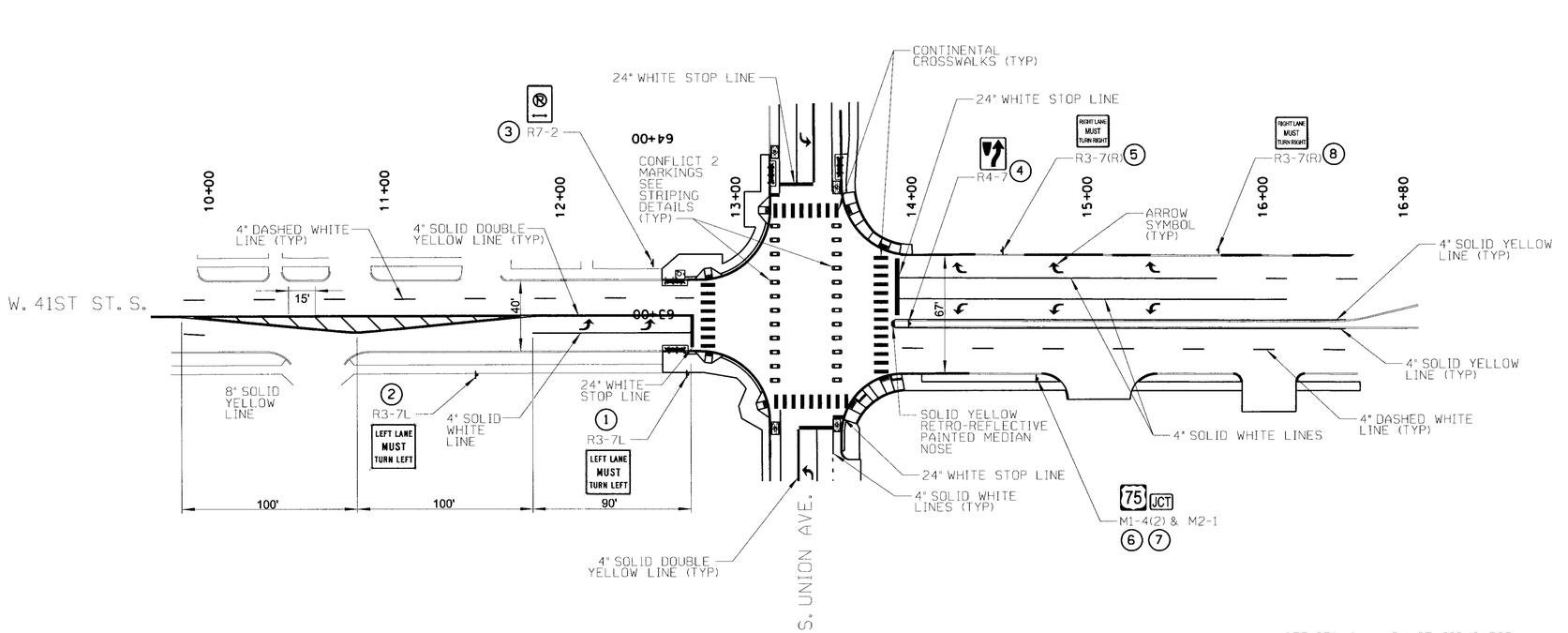
ATLAS PAGE NO.: 140, 141, 191 SHEET 35 OF 59 SHEETS

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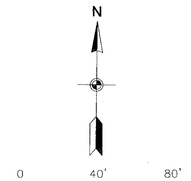




NOTE: SEE SUMMARY OF SIGNS FOR STATION AND OFFSET, SIGN DIMENSIONS, GROUND MOUNTED POST INFORMATION, AND REMARKS.



NOTE: SEE SUMMARY OF SIGNS FOR STATION AND OFFSET, SIGN DIMENSIONS, GROUND MOUNTED POST INFORMATION, AND REMARKS.





SIGNING AND STRIPING (2)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: NA	PROJ. MGR.	MDS	5/28/26
	LEAD ENGR.	RSD	05/28/26
	FIELD MGR.	TDM	6/26
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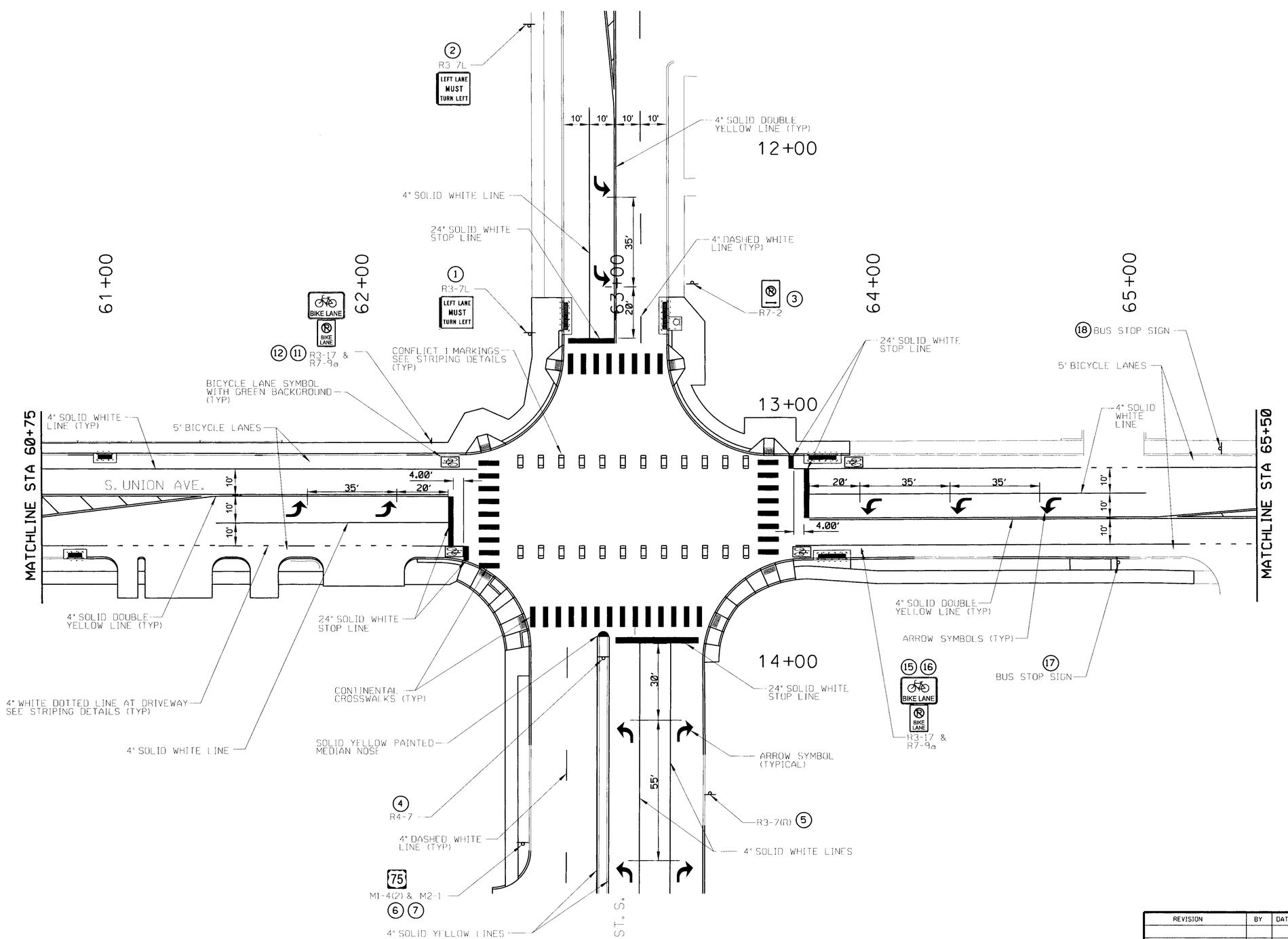
FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 36 OF 59 SHEETS

$DATE$ $FILE$



NOTE: SEE SUMMARY OF SIGNS FOR STATION AND OFFSET, SIGN DIMENSIONS, GROUND MOUNTED POST INFORMATION, AND REMARKS.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/20/2026

SIGNING AND STRIPING DETAILS (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
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PROFILE SCALE HORIZONTAL: 1"=20'
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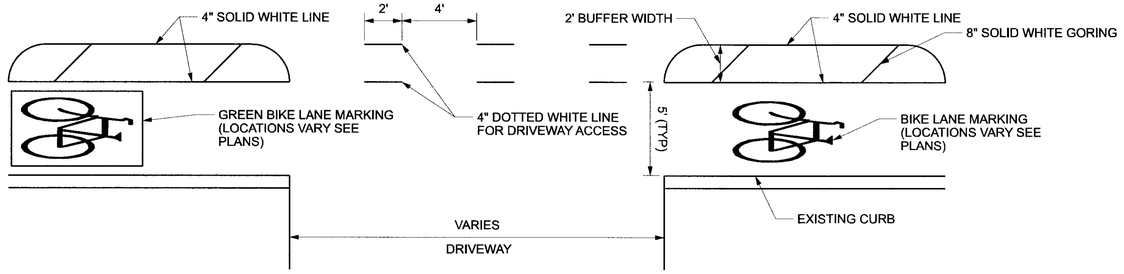
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PROJ. MGR.		5/2026
LEAD ENGR.		5/20/2026
FIELD MGR.		6/16
RECOMMENDED DESIGN MANAGER		6-26

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CITY ENGINEER

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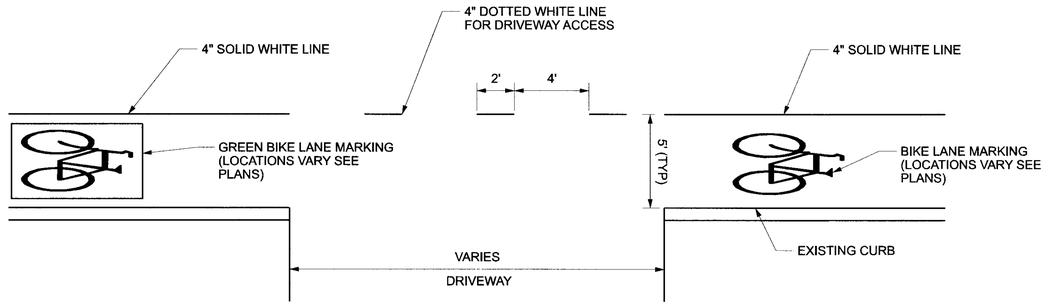
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$DATE$ $FILE$



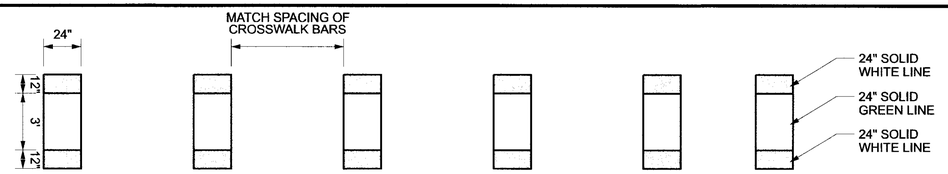
BIKE LANE DETAIL WITH BUFFER

NOT TO SCALE



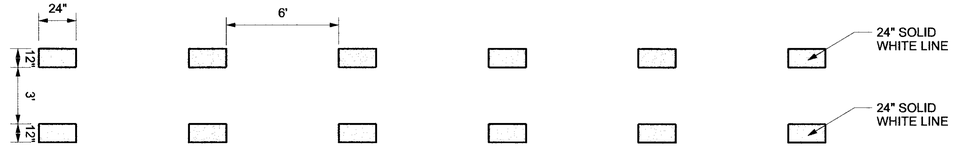
BIKE LANE DETAIL WITHOUT BUFFER

NOT TO SCALE



CONFLICT MARKING 1 (THRU SIGNALIZED INTERSECTION)

NOT TO SCALE

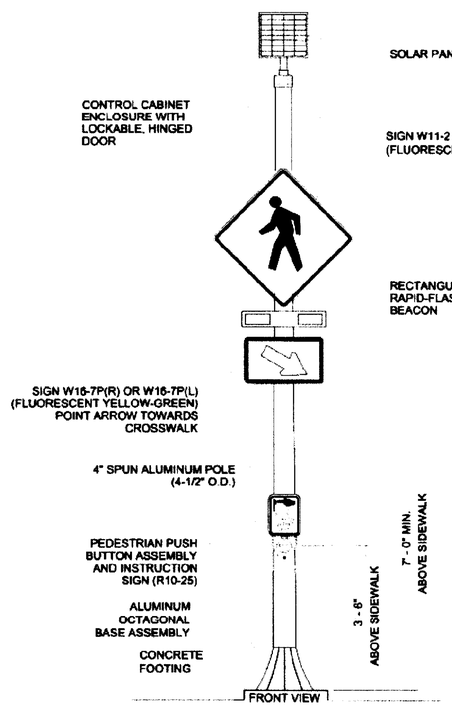


CONFLICT MARKING 2 (THRU NON-SIGNALIZED INTERSECTION)

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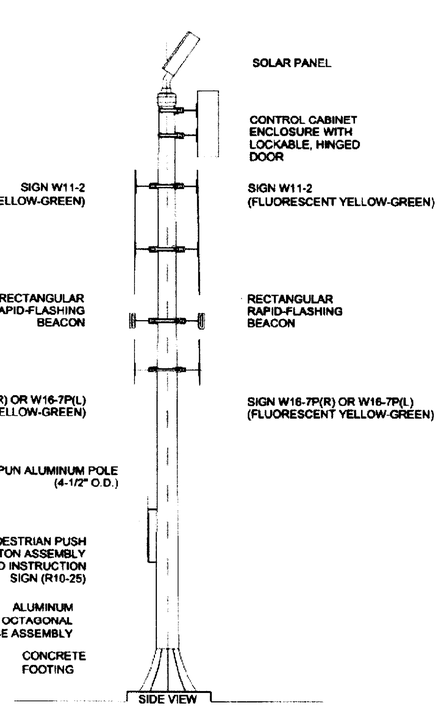


RRFB PUSH BUTTON SIGN



RECTANGULAR RAPID-FLASHING BEACON (TYPICAL)

NOT TO SCALE



RECTANGULAR RAPID-FLASHING BEACON (TYPICAL)

NOT TO SCALE

NOTES:

1. EACH RRFB FULL ASSEMBLY SHALL BE A COMPLETE ASSEMBLY, CONSISTING OF SUPPORTING STRUCTURE (POLE, ALL MOUNTING BRACKETS FOR ALL COMPONENTS OF THE ASSEMBLY, AND FOUNDATION), INDICATIONS, SIGNAGE, POWER ELEMENTS, ETC.
2. ALL DOWNWARD POINTING ARROWS SHALL BE ORIENTED TOWARDS THE CROSSWALK
3. RRFB SHALL CONSIST OF TWO (2) RAPIDLY AND ALTERNATELY FLASHING RECTANGULAR YELLOW INDICATIONS HAVING LED ARRAY BASED PULSING LIGHT SOURCES. WHEN ACTIVATED, THE TWO YELLOW INDICATIONS SHALL FLASH IN A RAPIDLY ALTERNATING WIG-WAG FLASHING SEQUENCE.
4. EACH RRFB SHALL BE EQUIPPED WITH AUDIBLE PUSH BUTTON SYSTEMS.
5. RRFB INDICATION SHALL BE A MINIMUM OF 5-IN WIDE BY 2-IN HIGH.
6. THE TWO RRFB INDICATIONS SHALL BE ALIGNED HORIZONTALLY, WITH THE LONGER DIMENSION HORIZONTAL AND A MINIMUM SPACE OF 7-IN BETWEEN THE TWO INDICATIONS WHEN MEASURED INSIDE EDGE TO INSIDE EDGE.
7. THE OUTSIDE EDGES OF THE RRFB INDICATIONS SHALL NOT PROJECT BEYOND EDGES OF THE W11-2 FLUORESCENT YELLOW-GREEN SIGN.
8. EACH OF THE TWO YELLOW INDICATIONS OF AN RRFB SHALL HAVE 70 PERIODS OF FLASHING PER MINUTE AND SHALL HAVE ALTERNATING BUT APPROXIMATELY EQUAL PERIODS OF RAPID PULSING LIGHT EMISSIONS AND DARK OPERATION. DURING EACH OF ITS 70 FLASHING PERIODS PER MINUTE, ONE OF THE YELLOW INDICATIONS SHALL EMIT TWO RAPID PULSES OF LIGHT AND THE OTHER YELLOW INDICATION SHALL EMIT THREE RAPID PULSES OF LIGHT.
9. THE FLASH RATE OF EACH INDIVIDUAL YELLOW INDICATION, AS APPLIED OVER THE FULL ON-OFF SEQUENCE OF A FLASHING PERIOD OF THE INDICATION, SHALL NOT BE BETWEEN 5 AND 30 FLASHES PER SECOND.
10. THE LIGHT INTENSITY OF THE YELLOW INDICATIONS SHALL MEET THE MINIMUM SPECIFICATION OF THE SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J595 (DIRECTIONAL FLASHING OPTICAL WARNING DEVICES FOR AUTHORIZED EMERGENCY, MAINTENANCE, AND SERVICE VEHICLES, LATEST EDITION)
11. THE RRFB SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AFTER A PROGRAMMABLE PREDETERMINED TIME. THE SYSTEM SHALL BE INSTALLED WITH AN INITIAL CROSSING DURATION OF 20 SECONDS. THE TIME MAY BE ADJUSTED AFTER OBSERVING CROSSING BEHAVIOR AT THE LOCATION.
12. ALL RRFBS ASSOCIATED WITH THE CROSSWALK SHALL, WHEN ACTIVATED, COMMENCE FLASHING OPERATION SIMULTANEOUSLY AND SHALL CEASE OPERATION SIMULTANEOUSLY.
13. THE PEDESTRIAN INSTRUCTION SIGN R10-25 SHALL BE MOUNTED INTEGRAL WITH EACH PUSH BUTTON ASSEMBLY.
14. EACH RRFB FULL ASSEMBLY SHALL BE SOLAR POWERED. SYSTEM SHALL INCLUDE ALL NECESSARY CONTROLLERS, POLE MOUNTED CABINETS WITH LOCKABLE, HINGED DOORS, BATTERIES, SOLAR PANELS, AND ANY OTHER HARDWARE NECESSARY FOR OPERATION. RRFB SHALL BE CARMANAH SC315-G SOLAR RRFB OR APPROVED EQUAL.
15. ALL RRFBS AT THE CROSSWALK LOCATION SHALL BE CONNECTED VIA WIRELESS COMMUNICATION SYSTEM. ASSOCIATED COSTS TO BE INCLUDED IN PRICE BID FOR RRFB ASSEMBLY.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
5/7/2026

REVISION	BY	DATE

SIGNING AND STRIPING DETAILS (2)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.		5/2026
	LEAD ENGR.		05/26
	FIELD MGR.		6/26
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER	HAS	6-26

APPROVED

CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 38 OF 59 SHEETS

$DATE$ $FILE$

VIDEO DETECTION NOTE:
VIDEO DETECTION WILL BE PROVIDED FOR THIS INTERSECTION. THE DETECTOR LOOPS SHOWN ON THE PAVEMENT ARE SHOWN TO DEPICT THE VIDEO DETECTION AREAS ALONG WITH THE PHASES THAT EACH DETECTOR SHALL CALL.

PUSH BUTTON NOTE:
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 TO BE INSTALLED 10 INCHES MAXIMUM FROM THE EDGE OF THE LEVEL, ALL-WEATHER SURFACE (SIDEWALK) AND 10 FEET MAXIMUM FROM THE FACE OF THE CURB AT THE RAMP. THE PUSH BUTTONS ARE TO BE MOUNTED ON THE SIDE OF THE POLE CLOSEST TO THE CORRESPONDING CROSSWALK.

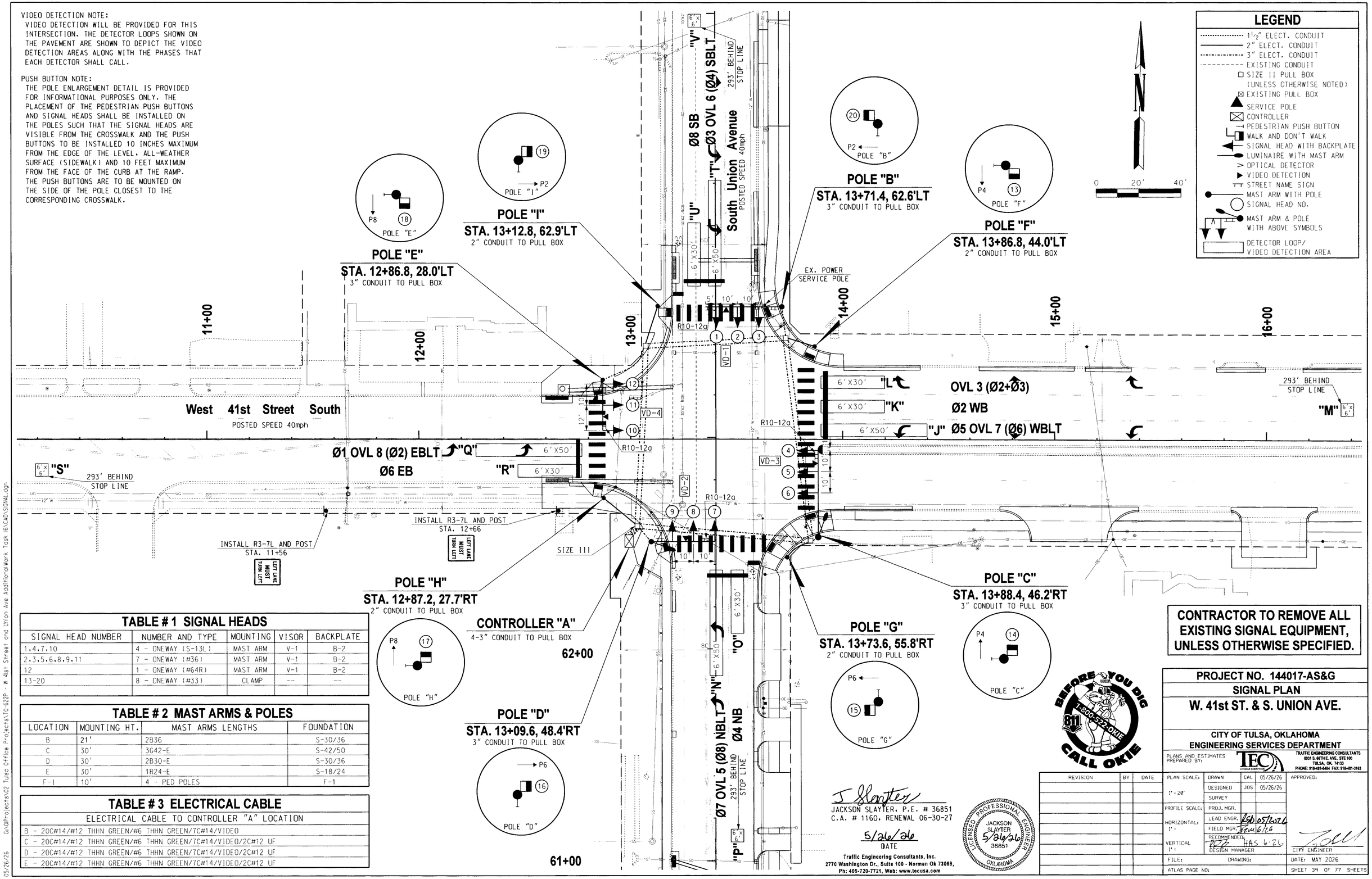


TABLE # 1 SIGNAL HEADS

SIGNAL HEAD NUMBER	NUMBER AND TYPE	MOUNTING	VISOR	BACKPLATE
1,4,7,10	4 - ONEWAY (S-13L)	MAST ARM	V-1	B-2
2,3,5,6,8,9,11	7 - ONEWAY (#36)	MAST ARM	V-1	B-2
12	1 - ONEWAY (#64R)	MAST ARM	V-1	B-2
13-20	8 - ONEWAY (#33)	CLAMP	--	--

TABLE # 2 MAST ARMS & POLES

LOCATION	MOUNTING HT.	MAST ARMS LENGTHS	FOUNDATION
B	21'	2B36	S-30/36
C	30'	3G42-E	S-42/50
D	30'	2B30-E	S-30/36
E	30'	1R24-E	S-18/24
F-I	10'	4 - 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
C - 20C#14/#12 THHN GREEN/#6 THHN GREEN/7C#14/VIDEO/2C#12 UF
D - 20C#14/#12 THHN GREEN/#6 THHN GREEN/7C#14/VIDEO/2C#12 UF
E - 20C#14/#12 THHN GREEN/#6 THHN GREEN/7C#14/VIDEO/2C#12 UF

CONTRACTOR TO REMOVE ALL EXISTING SIGNAL EQUIPMENT, UNLESS OTHERWISE SPECIFIED.

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

PROJECT NO. 144017-AS&G
SIGNAL PLAN
W. 41st ST. & S. UNION AVE.

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
TEC
TRAFFIC ENGINEERING CONSULTANTS
8931 S. 68TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-3484 FAX: 918-481-3163

REVISION	BY	DATE

PLAN SCALE: 1" = 20'
PROFILE SCALE: HORIZONTAL: 1" = VERTICAL 1" =

DRAWN	CAL	05/26/26
DESIGNED	JDS	05/26/26
SURVEY		
PROJ. MGR.		
LEAD ENGR.		5/26/2026
FIELD MGR.		5/26/26
RECOMMENDED: DESIGN MANAGER		HAS 5-26

APPROVED:
CITY ENGINEER

FILE: DRAWING:
DATE: MAY 2026
ATLAS PAGE NO:
SHEET 39 OF 77 SHEETS

J Slayter
JACKSON SLAYTER, P.E. # 36851
C.A. # 1160, RENEWAL 06-30-27
5/26/26
DATE

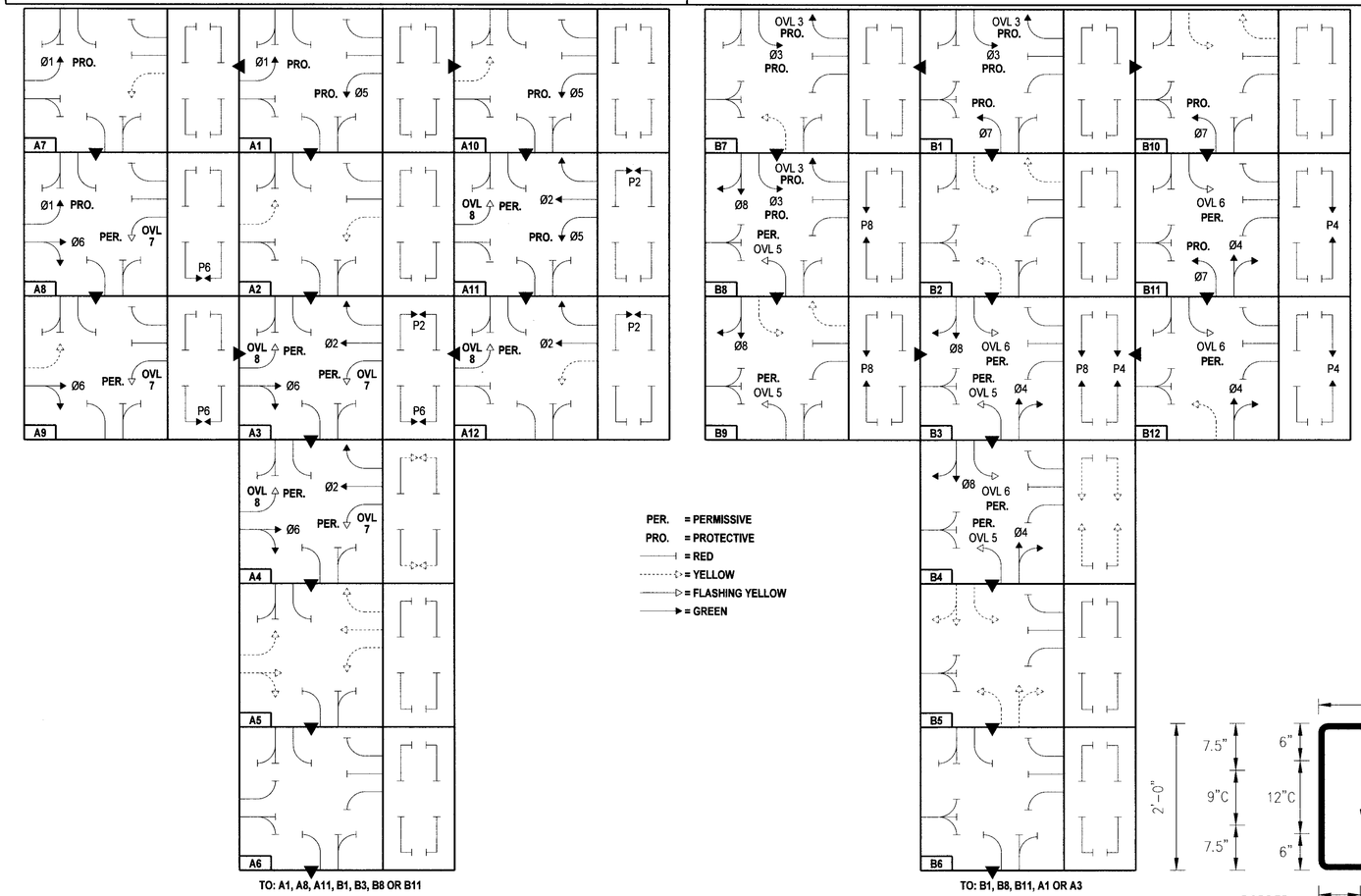
Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman Ok 73069,
Ph: 405-720-7721, Web: www.tecusa.com

LICENSED PROFESSIONAL ENGINEER JACKSON SLAYTER 5/26/2026 36851 OKLAHOMA

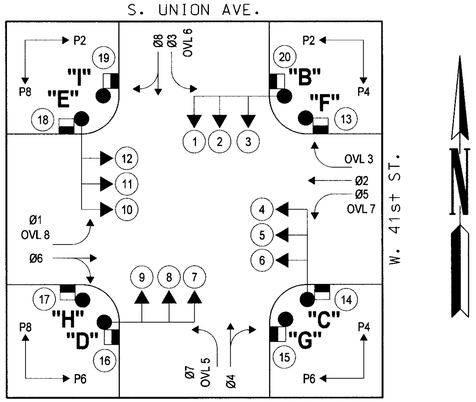
05/26/26 G:\Projects\02 Tulsa Office Projects\10-622P - W 41st Street and Union Ave Additional Work Task 6\CAD\SIGNAL.dgn

PHASING DIAGRAM

PHASE "A"	PHASE "B"
W. 41st ST.	S. UNION AVE.



INTERSECTION PHASING & SIGNAL HEAD NO.'S



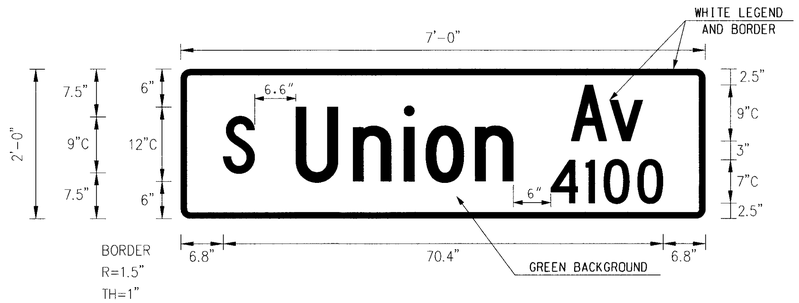
SUMMARY OF MAST ARM MOUNTED SIGNS

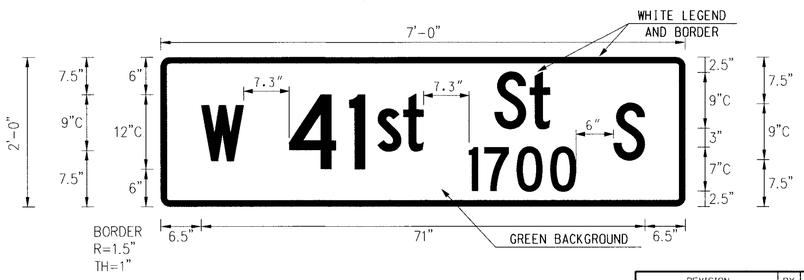
MESSAGE	POLE LOCATION	NO. OF SIGN	LENGTH	HEIGHT	SQ. FT. SIGN AREA	TOTAL AREA SQ. FT.
S Union Av	C,E	2	84"	24"	14.00	28.00
W 41st St S	B,D	2	84"	24"	14.00	28.00
R10-12a	B,C,D,E	4	30"	36"	7.50	30.00
					TOTAL	86.00

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)

SEQUENCE CHART

DIRECTION	BLOCK NO.	PHASE Ø7 OVL 5	Ø4	Ø1 OVL 8	Ø6	Ø3 OVL 6	Ø8	Ø5 OVL 7	Ø2	Ø2 OVL 3	P4	P6	P8	P2
		SIGNAL HEAD NO. 1	2,3	4	5,6	7	8,9	10	11	12	13,14	15,16	17,18	19,20
Ø1, Ø5 ROW	A1	◄R	R	◄G	R	◄R	R	◄G	R	R	DW	DW	DW	DW
Ø1, Ø5 CL	A2	◄R	R	◄Y	R	◄R	R	◄Y	R	R	DW	DW	DW	DW
Ø2, Ø6, OVL 7, OVL 8, P2, P6 ROW	A3	◄R	R	◁F Y	G	◄R	R	◁F Y	G	G	DW	W	DW	W
Ø2, Ø6, OVL 7, OVL 8 ROW & P2, P6 CL	A4	◄R	R	◁F Y	G	◄R	R	◁F Y	G	G	DW	FDW	DW	FDW
Ø2, Ø6, OVL 7, OVL 8 CL	A5	◄R	R	◄Y	Y	◄R	R	◄Y	Y	Y	DW	DW	DW	DW
ALL RED	A6	◄R	R	◄R	R	◄R	R	◄R	R	R	DW	DW	DW	DW
Ø1 ROW & Ø5 CL	A7	◄R	R	◄G	R	◄R	R	◄Y	R	R	DW	DW	DW	DW
Ø1, Ø6, OVL 7, P6 ROW	A8	◄R	R	◄G	G	◄R	R	◁F Y	R	R	DW	W	DW	DW
Ø6, OVL 7, P6 ROW & Ø1 CL	A9	◄R	R	◄Y	G	◄R	R	◁F Y	R	R	DW	W	DW	DW
Ø5 ROW & Ø1 CL	A10	◄R	R	◄Y	R	◄R	R	◄G	R	R	DW	DW	DW	DW
Ø2, Ø5, OVL 8, P2 ROW	A11	◄R	R	◁F Y	R	◄R	R	◄G	G	G	DW	DW	DW	W
Ø2, OVL 8, P2 ROW & Ø5 CL	A12	◄R	R	◁F Y	R	◄R	R	◄Y	G	G	DW	DW	DW	W
Ø3, Ø7, OVL 3 ROW	B1	◄G	R	◄R	R	◄G	R	◄R	R	R G►	DW	DW	DW	DW
Ø3, Ø7, OVL 3 CL	B2	◄Y	R	◄R	R	◄Y	R	◄R	R	R Y►	DW	DW	DW	DW
Ø4, Ø8, OVL 5, OVL 6, P4, P8 ROW	B3	◁F Y	G	◄R	R	◁F Y	G	◄R	R	R	W	DW	W	DW
Ø4, Ø8, OVL 5, OVL 6 ROW & P4, P8 CL	B4	◁F Y	G	◄R	R	◁F Y	G	◄R	R	R	FDW	DW	FDW	DW
Ø4, Ø8, OVL 5, OVL 6 CL	B5	◄Y	Y	◄R	R	◄Y	Y	◄R	R	R	DW	DW	DW	DW
ALL RED	B6	◄R	R	◄R	R	◄R	R	◄R	R	R	DW	DW	DW	DW
Ø3, OVL 3 ROW & Ø7 CL	B7	◄Y	R	◄R	R	◄G	R	◄R	R	R G►	DW	DW	DW	DW
Ø3, Ø8, OVL 3, OVL 5, P8 ROW	B8	◁F Y	R	◄R	R	◄G	G	◄R	R	R G►	DW	DW	W	DW
Ø8, OVL 5, P8 ROW & Ø3, OVL 3 CL	B9	◁F Y	R	◄R	R	◄Y	G	◄R	R	R Y►	DW	DW	W	DW
Ø7 ROW & Ø3, OVL 3 CL	B10	◄G	R	◄R	R	◄Y	R	◄R	R	R Y►	DW	DW	DW	DW
Ø4, Ø7, OVL 6, P4 ROW	B11	◄G	G	◄R	R	◁F Y	R	◄R	R	R	W	DW	DW	DW
Ø4, OVL 6, P4 ROW & Ø7 CL	B12	◄Y	G	◄R	R	◁F Y	R	◄R	R	R	W	DW	DW	DW
FLASHING OPERATION	–	◄FR	FR	◄FR	FR	◄FR	FR	◄FR	FR	FR►	–	–	–	–





J Slayter
JACKSON SLAYTER, P.E. # 36851
C.A. # 1160, RENEWAL 06-30-27
5/26/26
DATE

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

LICENSED PROFESSIONAL ENGINEER OKLAHOMA JACKSON SLAYTER 5/26/26 36851

REVISION	BY	DATE

PROJECT NO. 144017-AS&G
SIGNAL DETAIL
W. 41st ST. & S. UNION AVE.
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: TEC

TRAFFIC ENGINEERING CONSULTANTS
8801 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-8444 FAX: 918-481-3163

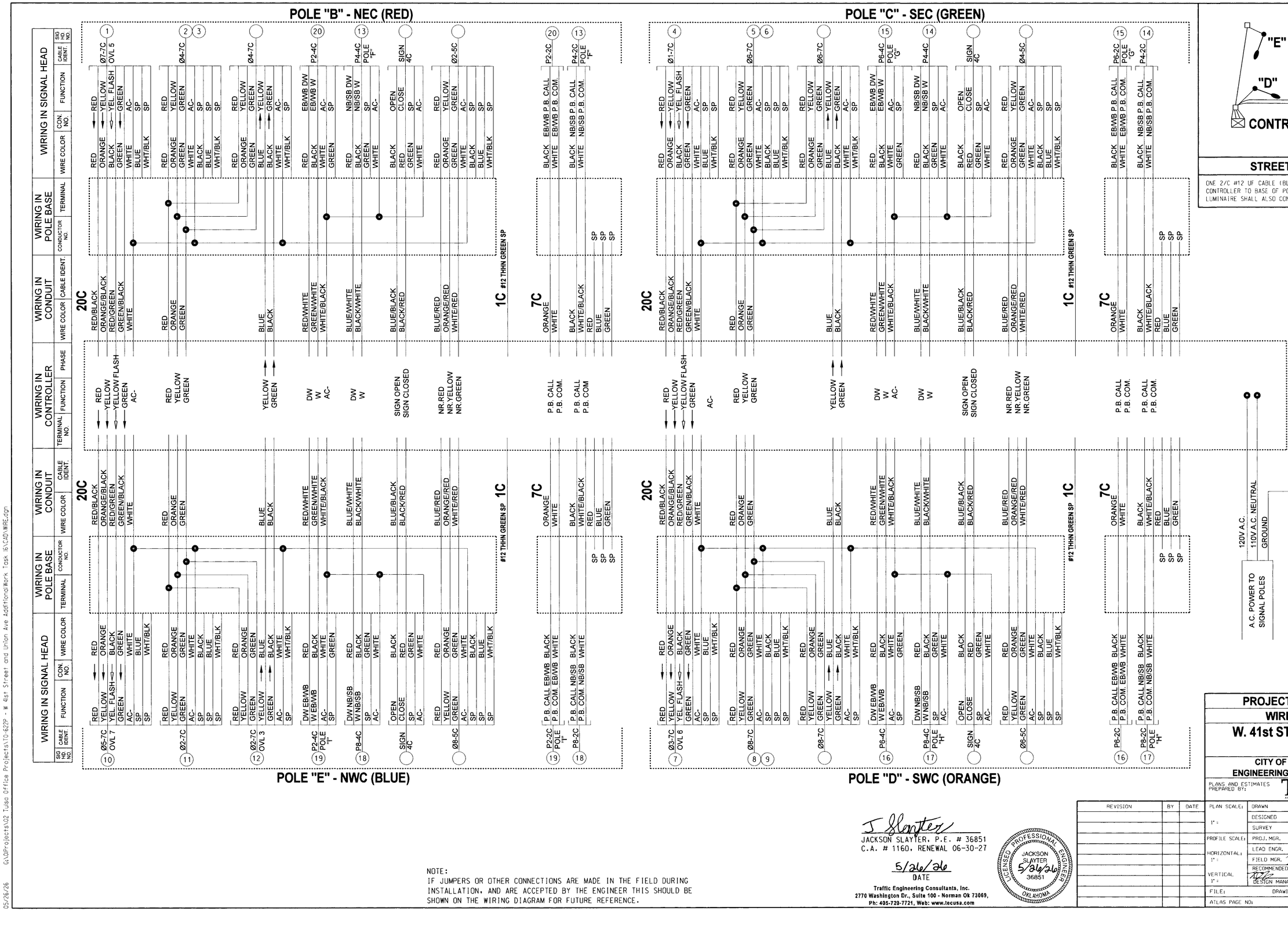
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	DESIGNED	JOS	05/26/26
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" = NA	LEAD ENGR.	KB	6/1/26
	FIELD MGR.		6/1/26
VERTICAL 1" = NA	RECOMMENDED: DESIGN MANAGER	HAS	6-2-26

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: MAY 2026

ATLAS PAGE NO: SHEET 48 OF 77 SHEETS

05/26/26 G:\0Projects\02 Tulsa Office Projects\10-622P - W 41st Street and Union Ave Additional Work Task 6\CAD\DETAIL.dgn



STREET LIGHT WIRING

ONE 2/C #12 UF CABLE (BLACK & WHITE) SHALL RUN FROM CONTROLLER TO BASE OF POLE. CONDUCTOR FROM POLE BASE TO LUMINAIRE SHALL ALSO CONSIST OF ONE 2/C #12 UF CABLE.

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.

PROJECT NO. 144017-AS&G

WIRING DIAGRAM

W. 41st ST. & S. UNION AVE.

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
TEC — A CLEAN DIRECTION
TRAFFIC ENGINEERING CONSULTANTS
6331 S. 66TH E. AVE., STE 100
TULSA, OK. 74133
PHONE: 918-481-3484 FAX: 918-481-3163

JACKSON SLAYTER, P.E. # 36851
C.A. # 1160, RENEWAL 06-30-27
5/26/26
DATE
Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100 - Norman Ok 73069,
Ph: 405-720-7721, Web: www.tecusa.com

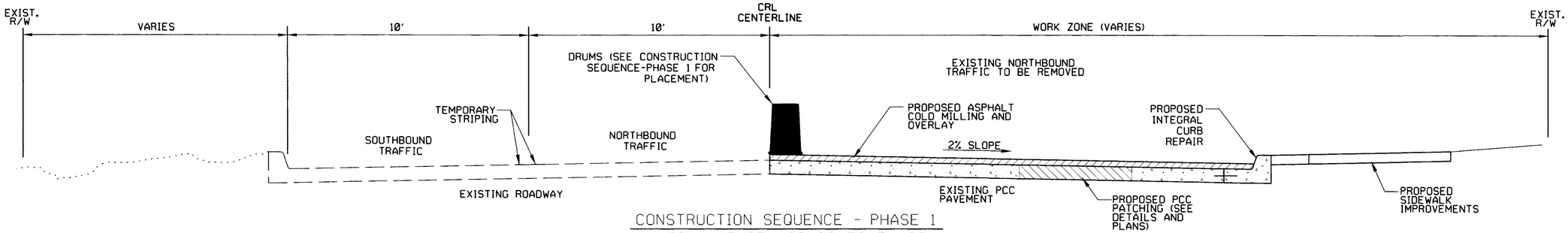
LICENSED PROFESSIONAL ENGINEER — JACKSON SLAYTER 5/26/26 36851 — OKLAHOMA

REVISION	BY	DATE

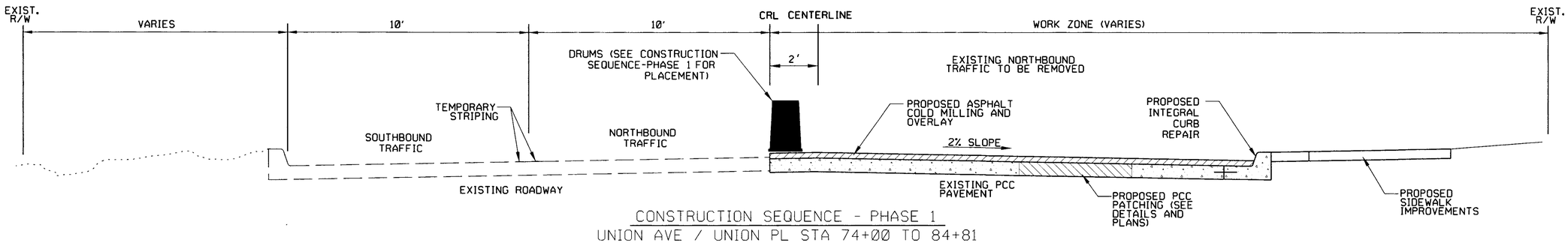
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	DESIGNED	JOS	05/26/26
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1" =	LEAD ENGR.	JOS	05/26/26
	FIELD MGR.		
VERTICAL 1" =	RECOMMENDED: DESIGN MANAGER	HBS	6.26
			CITY ENGINEER
FILE:	DRAWING:	DATE: MAY 2026	
ATLAS PAGE NO:		SHEET 41 OF 77 SHEETS	

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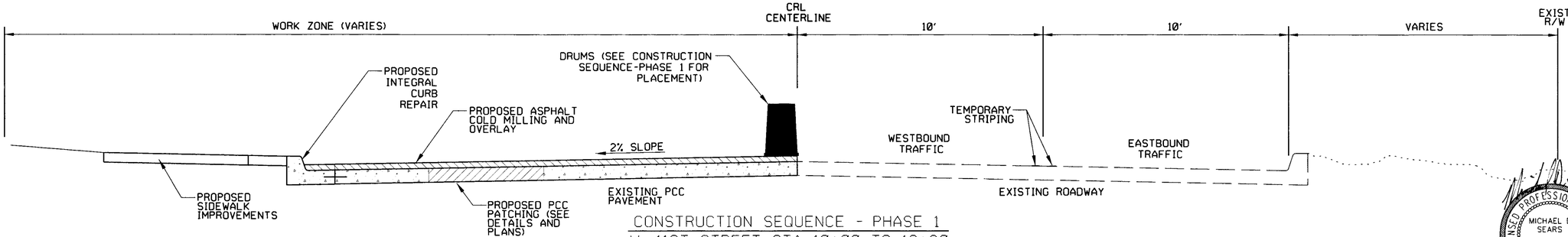
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CONSTRUCTION SEQUENCE - PHASE 1
UNION AVE STA 60+30 TO 74+00
N.T.S.



CONSTRUCTION SEQUENCE - PHASE 1
UNION AVE / UNION PL STA 74+00 TO 84+81
N.T.S.



CONSTRUCTION SEQUENCE - PHASE 1
W 41ST STREET STA 10+00 TO 13+80
N.T.S.

LICENSED PROFESSIONAL ENGINEER
MICHAEL D. SEARS
29303
OKLAHOMA
01/27/2026

TYPICAL SEQUENCE OF CONSTRUCTION DURING PHASE 1

1. INSTALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. INSTALL EROSION CONTROL MEASURES AND REMOVE EXISTING SIGNS AS NECESSARY.
3. CONSTRUCT NEW STORM SEWER SYSTEM. TEMPORARILY PLUG STORM SEWER SYSTEM AT THE END OF PHASE.
4. COLD MILL EXISTING ASPHALT OVERLAY AND MAKE PCC PAVEMENT AND INTEGRAL CURB REPAIRS.
5. CONSTRUCT COMBINED CURB AND GUTTER, DRIVEWAYS, RETAINING WALLS SIDEWALK, RECONSTRUCT PAVEMENT AT SIDE STREETS, AND PLACE ASPHALT OVERLAY.
6. PERFORM FINAL GRADING, SOD INSTALLATION, CLEAN UP, PERMANENT SIGN INSTALLATION, ETC. OPEN COMPLETED PHASE TO LOCAL TRAFFIC & PARKING WITH APPLICATOIN OF TEMPORARY TRAFFIC CONTROL DEVICES.

GENERAL CONSTRUCTION PHASING NOTES

1. THE CONTRACTOR SHALL INCORPORATE THE PROPOSED SEQUENCE OF CONSTRUCTION ITEMS FROM THESE NOTES INTO A CONSTRUCTION SCHEDULE AND PHASING PLAN ADDRESSING THE CONTRACTOR'S APPROACH TO THE PROJECT. CONTRACTOR IS TO FOLLOW PHASING THAT IS OUTLINED IN PLANS. EACH PHASE IS TO BE COMPLETED BEFORE THE NEXT PHASE BEGINS.
2. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO EXCAVATION.
3. DURING PAVEMENT CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE HOME OWNERS AFFECTED BY EACH PHASE OF WORK FOR THE PURPOSE OF PROVIDING TEMPORARY ROUTES OF ACCESS.
4. CONTRACTOR SHALL PROVIDE A CONTINUOUS WORK EFFORT TOWARDS TOTAL COMPLETION OF EACH WORK ACTIVITY OR PHASE BEFORE BEGINNING THE NEXT SUCCESSIVE PHASE OR SECTION OF WORK.
5. ALL REFFRENCES IN THESE NOTES REGARDING THE INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL INFER THAT SUCH INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
6. ROADSIDE HAZARDS SHALL BE COMPLETELY BARRICADED AROUND THE PERIMETER FOR THE SAFETY OF PEDESTRIANS AS WELL AS VEHICLES.
7. NO BARRICADES SHALL BE PLACED WITHIN THE ROADWAY UNTIL ALL ADVANCE SIGNAGE IS IN PLACE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL CONSTRUCTION SIGNAGE AND BARRICADING INCLUDING BUT NOT LIMITED TO WASHING REPLACING AND REPOSITIONING THE DEVICES. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL ALL TRAFFIC CONTROL DEVICES DEEMED NECESSARY BY THE CITY OF TULSA, DUE TO CHANGING TRAFFIC CONDITIONS.
9. THE CONTRACTOR SHALL WORK WITH THE CITY OF TULSA TO ESTABLISH AND MAINTAIN SAFE AND EFFECTIVE TRAFFIC CONTROL THROUGHOUT THE DURATION OF THE PROJECT.

CONSTRUCTION SEQUENCE DETAILS (1)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - Fax 918.587.8071

REVISION	BY	DATE

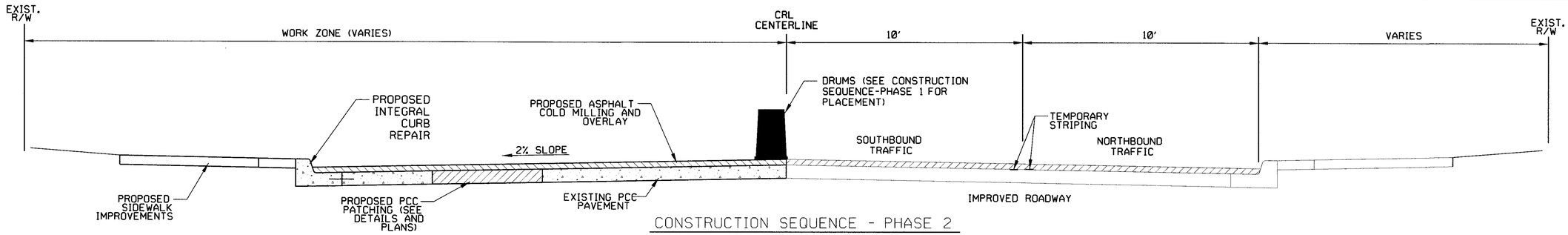
PLAN SCALE NA
PROFILE SCALE HORIZONTAL: NA
VERTICAL: NA

DRAWN	DEI	03/17
DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		01/2026
LEAD ENGR.		1/26
FIELD MGR.		1/26
RECOMMENDED DESIGN MANAGER		1/26

APPROVED
CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 42 OF 59 SHEETS

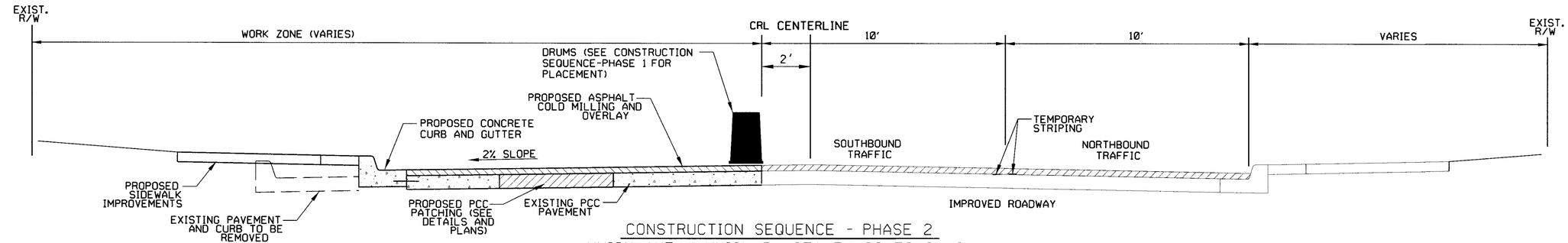
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CONSTRUCTION SEQUENCE - PHASE 2

UNION AVE STA 60+30 TO 74+00

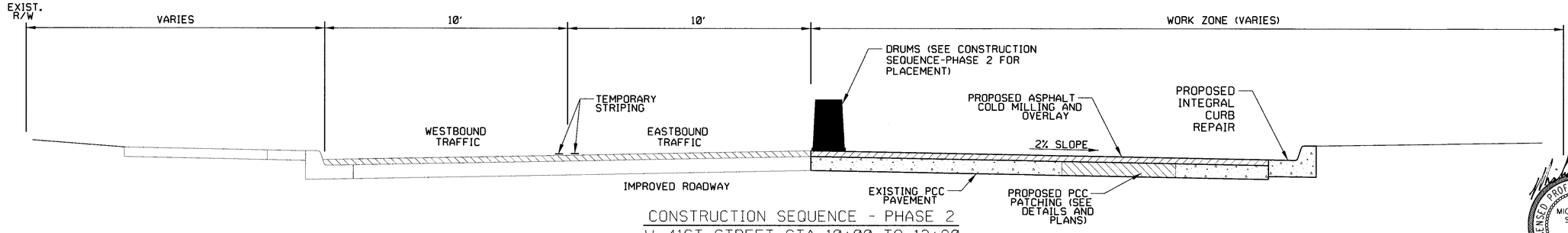
N.T.S.



CONSTRUCTION SEQUENCE - PHASE 2

UNION AVE / UNION PL STA 74+00 TO 84+81

N.T.S.



CONSTRUCTION SEQUENCE - PHASE 2

W 41ST STREET STA 10+00 TO 13+80

N.T.S.

TYPICAL SEQUENCE OF CONSTRUCTION DURING PHASE 2

1. INSTALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. INSTALL EROSION CONTROL MEASURES AND REMOVE EXISTING SIGNS AS NECESSARY.
3. INSTALL TEMPORARY STRIPING AND SWITCH TRAFFIC TO PAVEMENT CONSTRUCTED DURING PHASE 1.
4. CONSTRUCT NEW STORM SEWER SYSTEM. TEMPORARILY PLUG STORM SEWER SYSTEM.
5. COLD MILL EXISTING ASPHALT OVERLAY AND MAKE PCC PAVEMENT AND INTEGRAL CURB REPAIRS.
6. CONSTRUCT COMBINED CURB AND GUTTER, DRIVEWAYS, SIDEWALKS, RETAINING WALLS, RECONSTRUCT PAVEMENT AT SIDESTREETS, AND PLACE ASPHALT OVERLAY.
7. PERFORM FINAL GRADING, SOD INSTALLATION, CLEAN UP, PERMANENT SIGN INSTALLATION, PERMANENT STRIPING, PAVEMENT MARKINGS, ETC. OPEN COMPLETED PHASE TO LOCAL TRAFFIC.

GENERAL CONSTRUCTION PHASING NOTES

1. THE CONTRACTOR SHALL INCORPORATE THE PROPOSED SEQUENCE OF CONSTRUCTION ITEMS FROM THESE NOTES INTO A CONSTRUCTION SCHEDULE AND PHASING PLAN ADDRESSING THE CONTRACTOR'S APPROACH TO THE PROJECT. CONTRACTOR IS TO FOLLOW PHASING THAT IS OUTLINED IN PLANS. EACH PHASE IS TO BE COMPLETED BEFORE THE NEXT PHASE BEGINS.
2. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO EXCAVATION.
3. DURING PAVEMENT CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE HOME OWNERS AFFECTED BY EACH PHASE OF WORK FOR THE PURPOSE OF PROVIDING TEMPORARY ROUTES OF ACCESS.
4. CONTRACTOR SHALL PROVIDE A CONTINUOUS WORK EFFORT TOWARDS TOTAL COMPLETION OF EACH WORK ACTIVITY OR PHASE BEFORE BEGINNING THE NEXT SUCCESSIVE PHASE OR SECTION OF WORK.
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6. ROADSIDE HAZARDS SHALL BE COMPLETELY BARRICADED AROUND THE PERIMETER FOR THE SAFETY OF PEDESTRIANS AS WELL AS VEHICLES.
7. NO BARRICADES SHALL BE PLACED WITHIN THE ROADWAY UNTIL ALL ADVANCE SIGNAGE IS IN PLACE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL CONSTRUCTION SIGNAGE AND BARRICADING INCLUDING BUT NOT LIMITED TO WASHING REPLACING AND REPOSITIONING THE DEVICES. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL ALL TRAFFIC CONTROL DEVICES DEEMED NECESSARY BY THE CITY OF TULSA, DUE TO CHANGING TRAFFIC CONDITIONS.
9. THE CONTRACTOR SHALL WORK WITH THE CITY OF TULSA TO ESTABLISH AND MAINTAIN SAFE AND EFFECTIVE TRAFFIC CONTROL THROUGHOUT THE DURATION OF THE PROJECT.

$DATE$ $FILE$

REVISION	BY	DATE

PLAN SCALE: NA

PROFILE SCALE HORIZONTAL: NA

VERTICAL: NA

DRAWN	DEI	03/17
DESIGNED	DEI	03/17
SURVEY	SWA	08/15
PROJ. MGR.		01/2026
LEAD ENGR.		2/26
FIELD MGR.		6/26
RECOMMENDED DESIGN MANAGER	HJS	1-26

APPROVED

CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET 43 OF 59 SHEETS

CONSTRUCTION SEQUENCE DETAILS (2)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

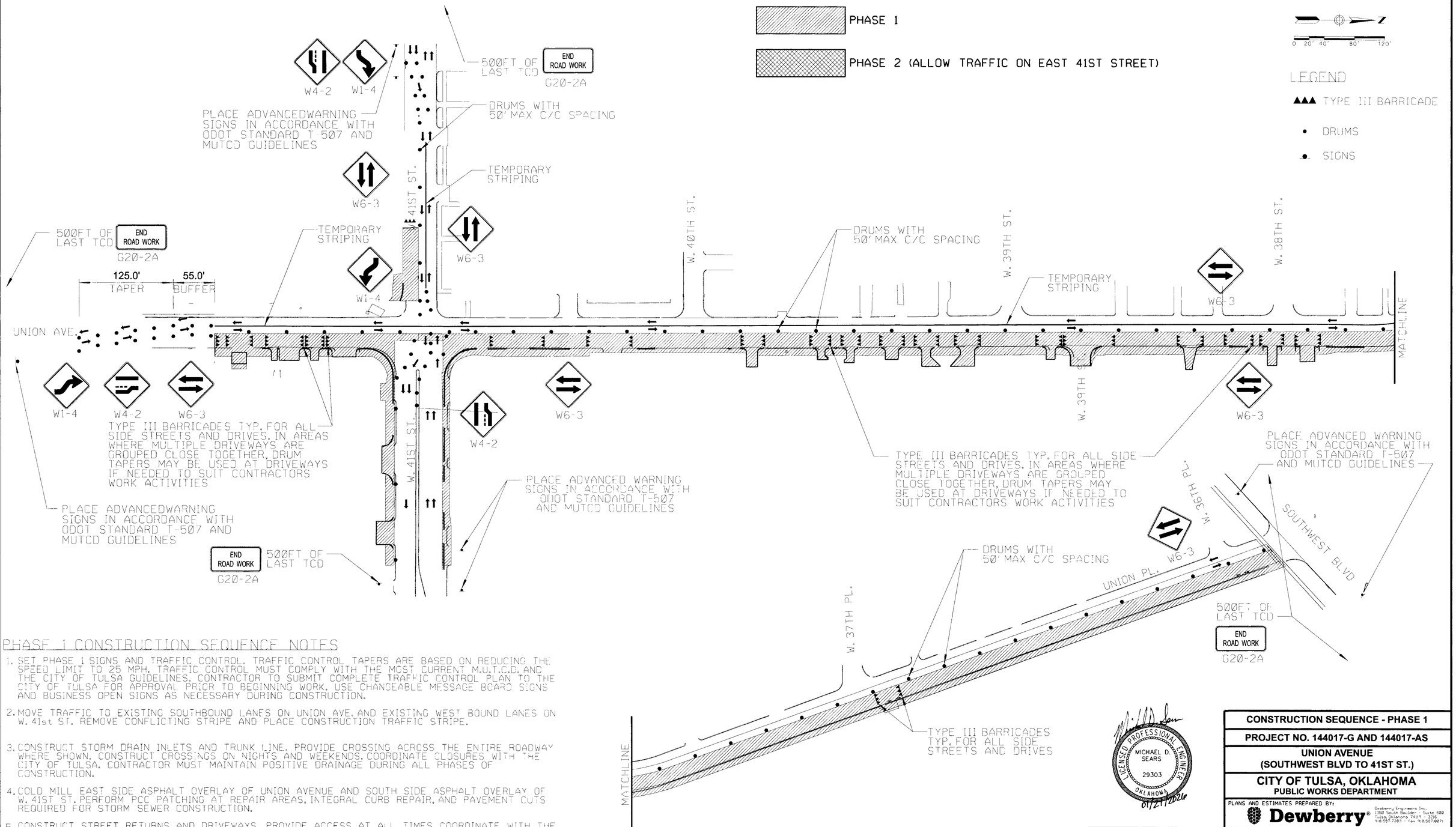
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®

Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3218
918.587.7283 - Fax 918.587.8271





PHASE 1 CONSTRUCTION SEQUENCE NOTES

1. SET PHASE 1 SIGNS AND TRAFFIC CONTROL. TRAFFIC CONTROL TAPERS ARE BASED ON REDUCING THE SPEED LIMIT TO 25 MPH. TRAFFIC CONTROL MUST COMPLY WITH THE MOST CURRENT M.U.T.C.D. AND THE CITY OF TULSA GUIDELINES. CONTRACTOR TO SUBMIT COMPLETE TRAFFIC CONTROL PLAN TO THE CITY OF TULSA FOR APPROVAL PRIOR TO BEGINNING WORK. USE CHANGEABLE MESSAGE BOARD SIGNS AND BUSINESS OPEN SIGNS AS NECESSARY DURING CONSTRUCTION.
2. MOVE TRAFFIC TO EXISTING SOUTHBOUND LANES ON UNION AVE. AND EXISTING WEST BOUND LANES ON W. 41st ST. REMOVE CONFLICTING STRIPE AND PLACE CONSTRUCTION TRAFFIC STRIPE.
3. CONSTRUCT STORM DRAIN INLETS AND TRUNK LINE. PROVIDE CROSSING ACROSS THE ENTIRE ROADWAY WHERE SHOWN. CONSTRUCT CROSSINGS ON NIGHTS AND WEEKENDS. COORDINATE CLOSURES WITH THE CITY OF TULSA. CONTRACTOR MUST MAINTAIN POSITIVE DRAINAGE DURING ALL PHASES OF CONSTRUCTION.
4. COLD MILL EAST SIDE ASPHALT OVERLAY OF UNION AVENUE AND SOUTH SIDE ASPHALT OVERLAY OF W. 41ST ST. PERFORM PCC PATCHING AT REPAIR AREAS, INTEGRAL CURB REPAIR, AND PAVEMENT CUTS REQUIRED FOR STORM SEWER CONSTRUCTION.
5. CONSTRUCT STREET RETURNS AND DRIVEWAYS. PROVIDE ACCESS AT ALL TIMES. COORDINATE WITH THE CITY FOR SIDE STREET CLOSURES. SIDE STREET MAY BE CLOSED TEMPORARILY PROVIDED OTHER ACCESS TO STREET IS AVAILABLE.
6. PLACE ASPHALT OVERLAY AT EAST SIDE OF UNION AVE. AND SOUTH SIDE OF W. 41ST ST.
7. BACKFILL, CONSTRUCT RETAINING WALLS, CONSTRUCT SIDEWALKS, AND INSTALL PERMANENT EROSION CONTROL.
8. PLACE TEMPORARY PAVEMENT MARKINGS.

$DATE$ $FILE$

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

PRIOR TO PERFORMING ANY GRADING OR EXCAVATING WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS OR "CALL OKIE (OKLAHOMA ONE-CALL)" NOT LESS THAN 48 HOURS IN ADVANCE AND SHALL VERIFY OR ESTABLISH THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND LINES.

LICENSED PROFESSIONAL ENGINEER — MICHAEL D. SEARS — 29303 — OKLAHOMA — 01/27/2026

REVISION	BY	DATE

CONSTRUCTION SEQUENCE - PHASE 1

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

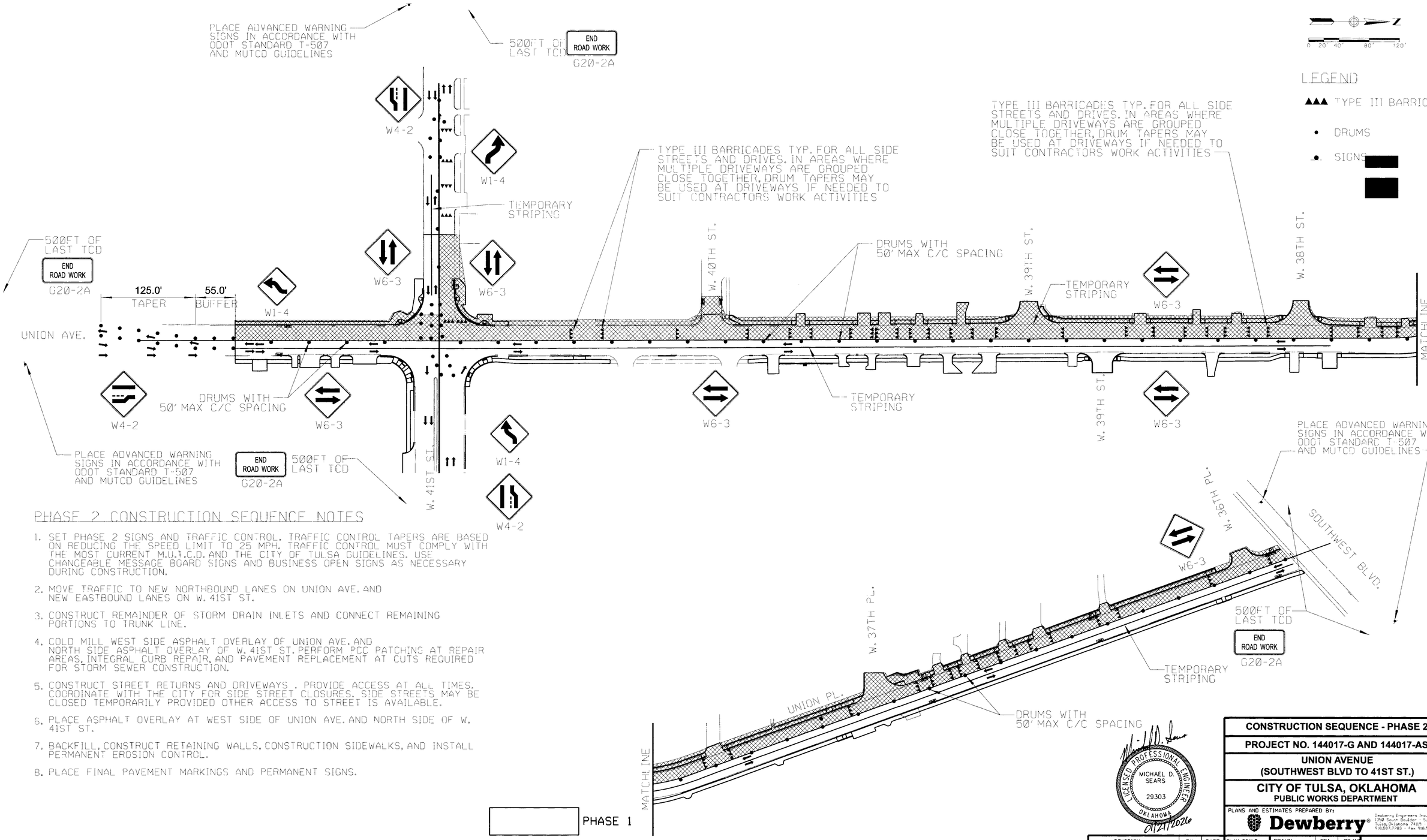
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
Dewberry®
Dewberry Engineers Inc. 1350 South Boulder Suite 600 Tulsa, Oklahoma 74119-3216 918.587.7201 fax 918.587.8071

PLAN SCALE 1"=20'	DRAWN	DEI	03/17
	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20' VERTICAL: 1"=5'	PROJ. MGR.		01/2026
	LEAD ENGR.		2/26
	FIELD MGR.		2/26
	RECOMMENDED DESIGN MANAGER		2/26

APPROVED
CITY ENGINEER

FILE: DRAWING:
DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191
SHEET 44 OF 59 SHEETS



PHASE 2 CONSTRUCTION SEQUENCE NOTES

1. SET PHASE 2 SIGNS AND TRAFFIC CONTROL. TRAFFIC CONTROL TAPERS ARE BASED ON REDUCING THE SPEED LIMIT TO 25 MPH. TRAFFIC CONTROL MUST COMPLY WITH THE MOST CURRENT M.U.T.C.D. AND THE CITY OF TULSA GUIDELINES. USE CHANGEABLE MESSAGE BOARD SIGNS AND BUSINESS OPEN SIGNS AS NECESSARY DURING CONSTRUCTION.
2. MOVE TRAFFIC TO NEW NORTHBOUND LANES ON UNION AVE. AND NEW EASTBOUND LANES ON W. 41ST ST.
3. CONSTRUCT REMAINDER OF STORM DRAIN INLETS AND CONNECT REMAINING PORTIONS TO TRUNK LINE.
4. COLD MILL WEST SIDE ASPHALT OVERLAY OF UNION AVE. AND NORTH SIDE ASPHALT OVERLAY OF W. 41ST ST. PERFORM PCC PATCHING AT REPAIR AREAS, INTEGRAL CURB REPAIR, AND PAVEMENT REPLACEMENT AT CUTS REQUIRED FOR STORM SEWER CONSTRUCTION.
5. CONSTRUCT STREET RETURNS AND DRIVEWAYS . PROVIDE ACCESS AT ALL TIMES. COORDINATE WITH THE CITY FOR SIDE STREET CLOSURES. SIDE STREETS MAY BE CLOSED TEMPORARILY PROVIDED OTHER ACCESS TO STREET IS AVAILABLE.
6. PLACE ASPHALT OVERLAY AT WEST SIDE OF UNION AVE. AND NORTH SIDE OF W. 41ST ST.
7. BACKFILL, CONSTRUCT RETAINING WALLS, CONSTRUCTION SIDEWALKS, AND INSTALL PERMANENT EROSION CONTROL.
8. PLACE FINAL PAVEMENT MARKINGS AND PERMANENT SIGNS.

PHASE 1

PHASE 2

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

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LICENSED PROFESSIONAL ENGINEER — MICHAEL D. SEARS — 29303 — OKLAHOMA — 01/21/2026

REVISION	BY	DATE

CONSTRUCTION SEQUENCE - PHASE 2

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE (SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
Dewberry®
Dewberry Engineers Inc. 1712 South Boulder - Suite 602 Tulsa, Oklahoma 74119 - 3216 918.587.7783 - fax 918.587.2071

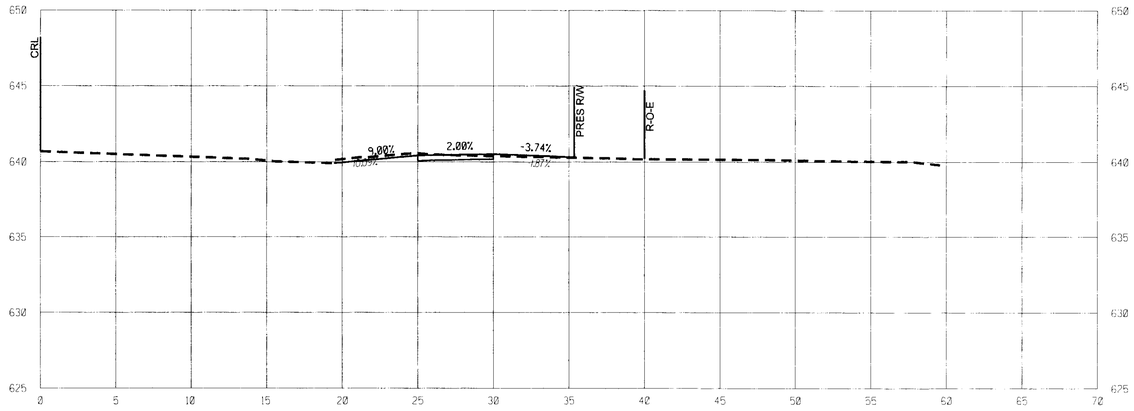
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	DESIGNED	DEI	03/17
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=20'	PROJ. MGR.	MDS	01/2026
	LEAD ENGR.	DEI	2/26
	FIELD MGR.	[illegible]	3/26
VERTICAL: 1"=5'	RECOMMENDED DESIGN MANAGER	HAS	6-26

APPROVED
CITY ENGINEER

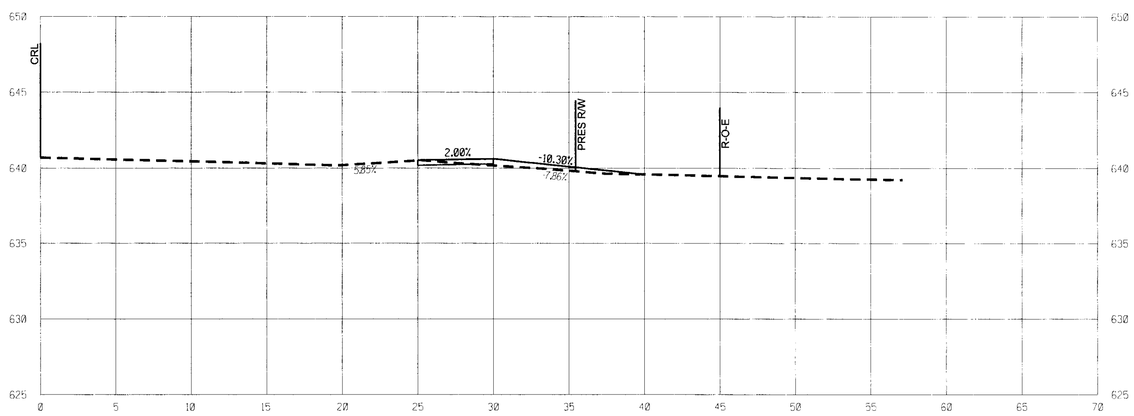
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ATLAS PAGE NO.: 140, 141, 191 SHEET 45 OF 59 SHEETS

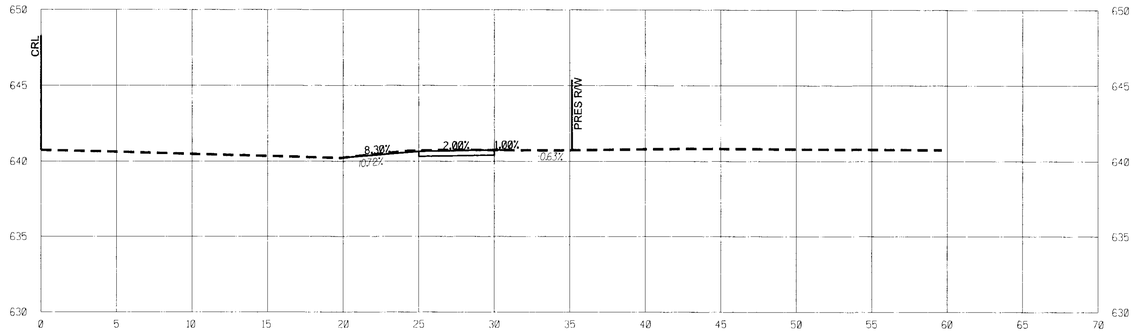
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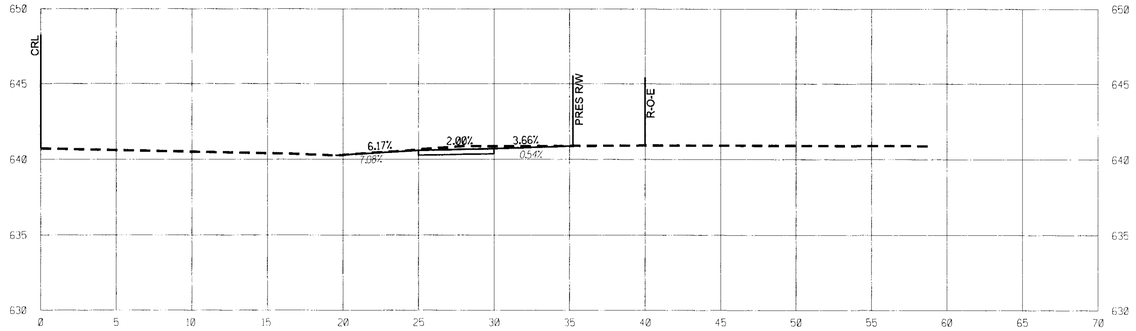
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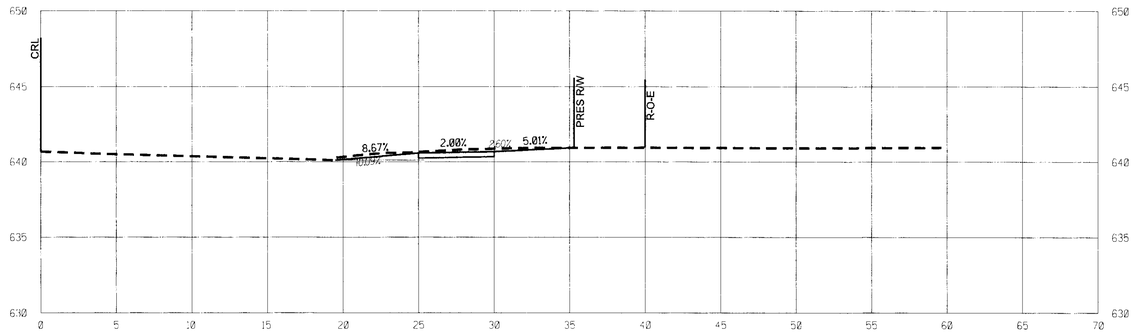
60+62.21 (RT.)



62+00.84 (RT.)



61+61.92 (RT.)



61+30.27 (RT.)

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1250 South Boulder - Suite 602
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.2071

REVISION	BY	DATE

PLAN SCALE: N/A

PROFILE SCALE
HORIZONTAL: 1"=5'
VERTICAL: 1"=5'

DRAWN	DEI	11/16
DESIGNED	DEI	11/16
SURVEY	SWA	08/15
PROJ. MGR.		
LEAD ENGR.		
FIELD MGR.		

RECOMMENDED
DESIGN MANAGER

APPROVED
CITY ENGINEER

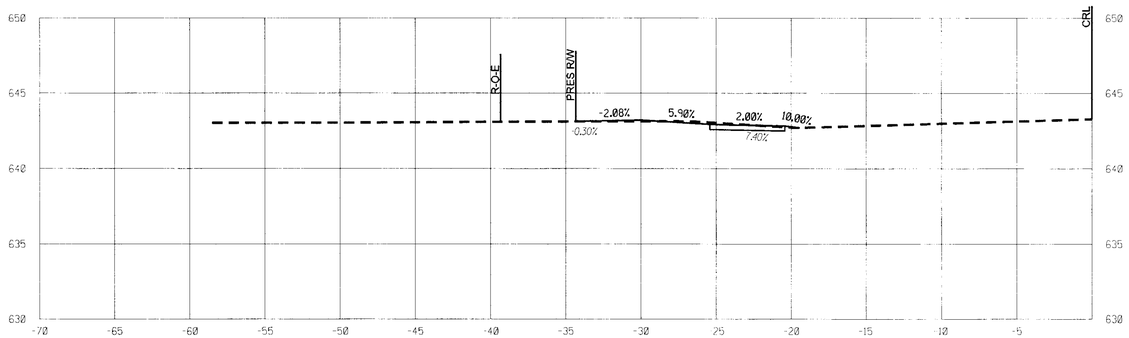
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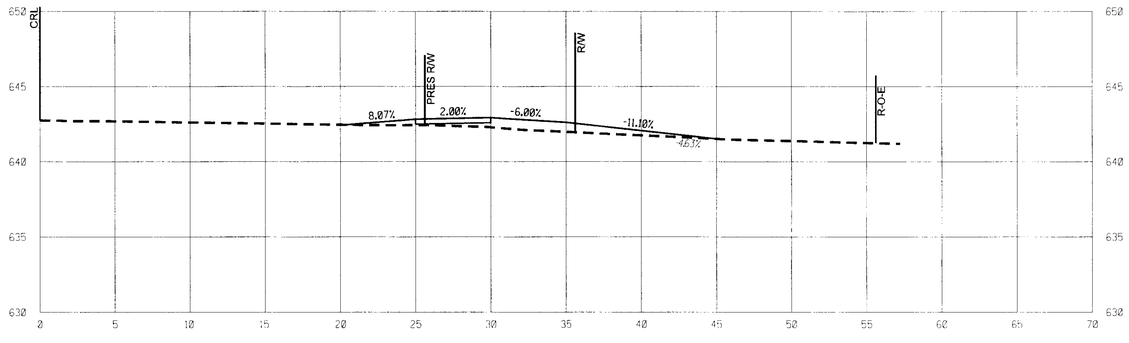
ATLAS PAGE NO.: 140, 141, 191

SHEET DP1 OF 59 SHEETS

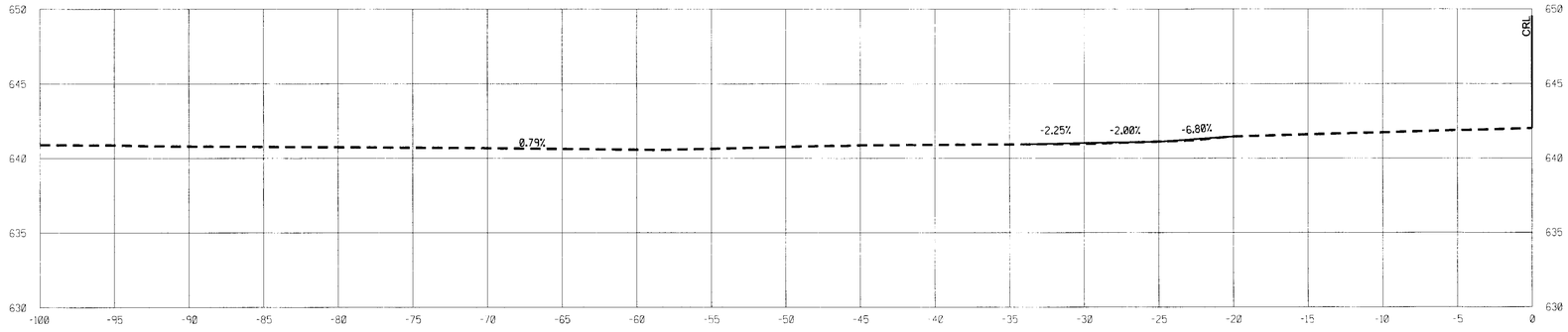
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67+76.44 (LT.)



67+40.10 (RT.)



66+59.10 (LT.)
(W. 40TH ST.)

$DATE$ $FILE$

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
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Tulsa, Oklahoma 74119 - 3216
918.587.7283 - Fax 918.587.2071

REVISION	BY	DATE

PLAN SCALE: N/A

PROFILE SCALE
HORIZONTAL: 1"=5'
VERTICAL: 1"=5'

DRAWN	DEI	11/16
DESIGNED	DEI	11/16
SURVEY	SWA	08/15
PROJ. MGR.		
LEAD ENGR.		
FIELD MGR.		

RECOMMENDED
DESIGN MANAGER

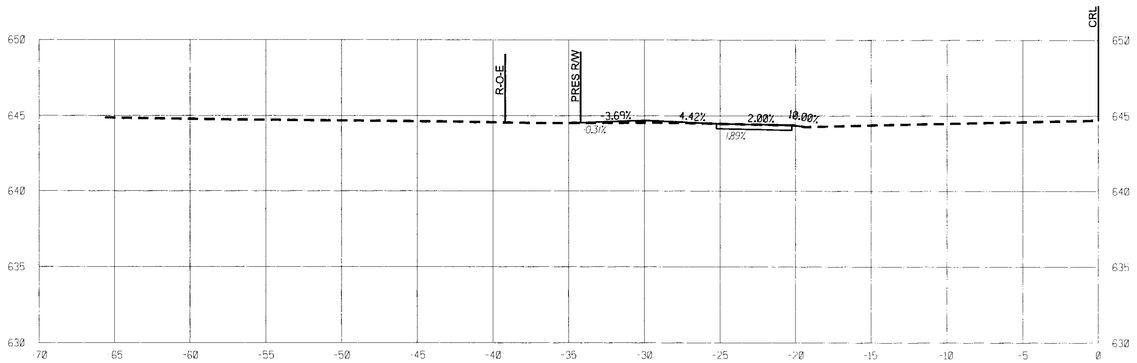
APPROVED
CITY ENGINEER

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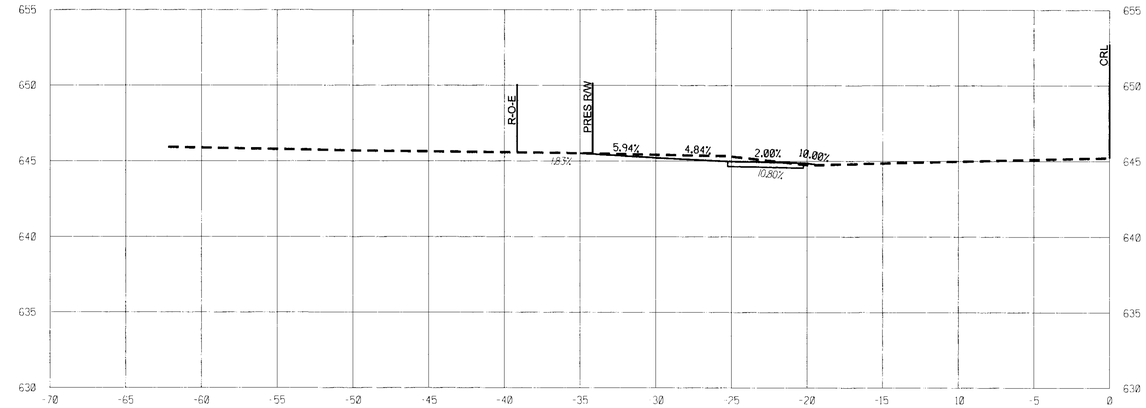
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ATLAS PAGE NO.: 140, 141, 191

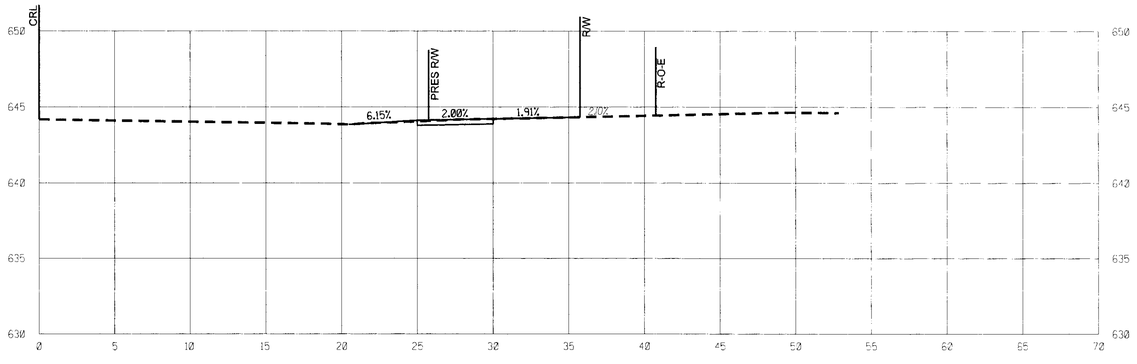
SHEET DP2 OF 59 SHEETS



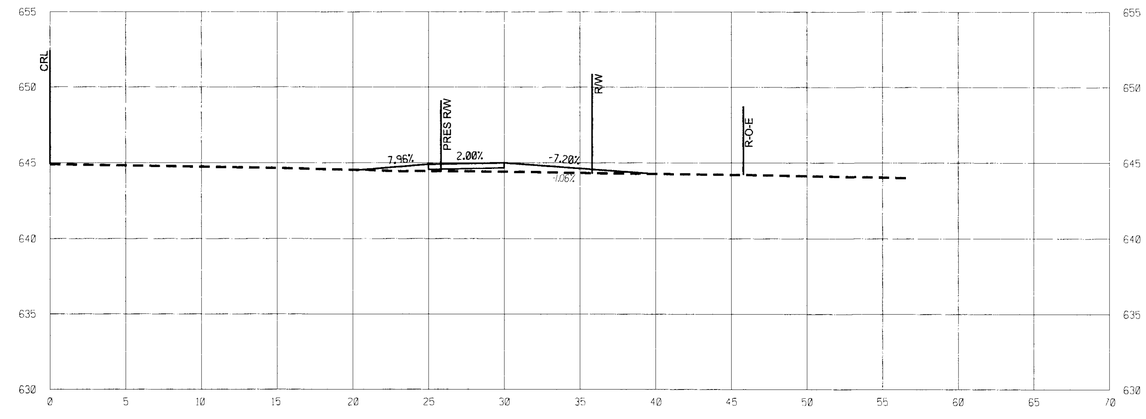
68+60.12 (LT.)



68+86.85 (LT.)



68+31.45 (RT.)



68+70.17 (RT.)

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.8071

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5' VERTICAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		

APPROVED

RECOMMENDED

DESIGN MANAGER

CITY ENGINEER

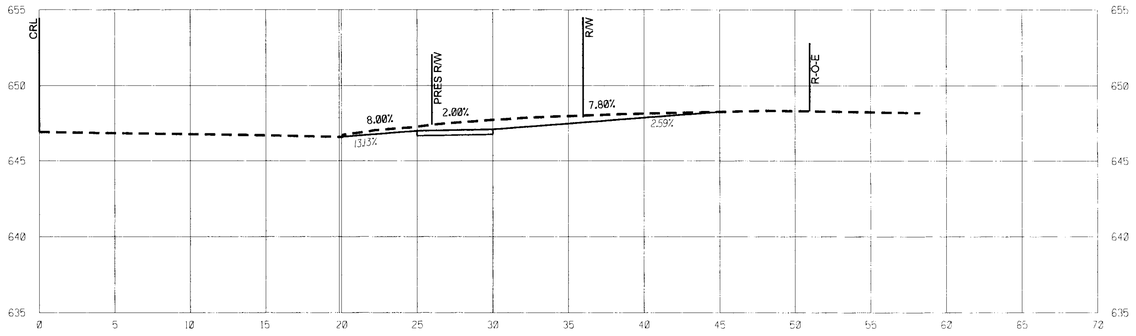
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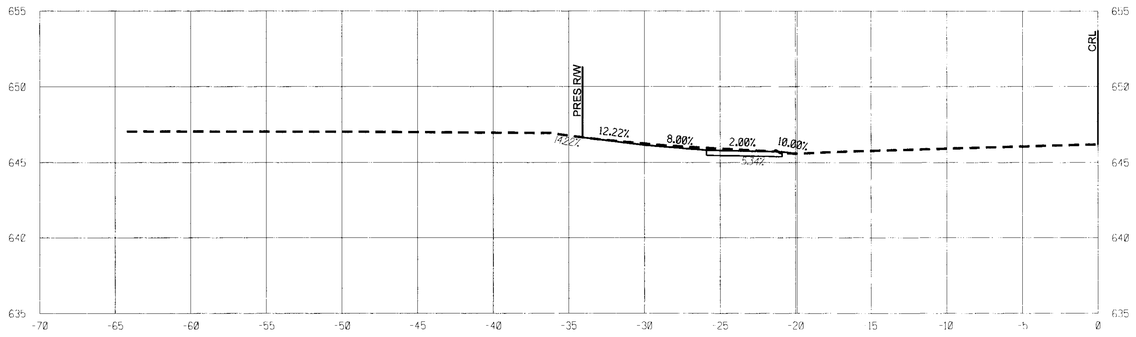
ATLAS PAGE NO.: 140, 141, 191

SHEET DP3 OF 59 SHEETS

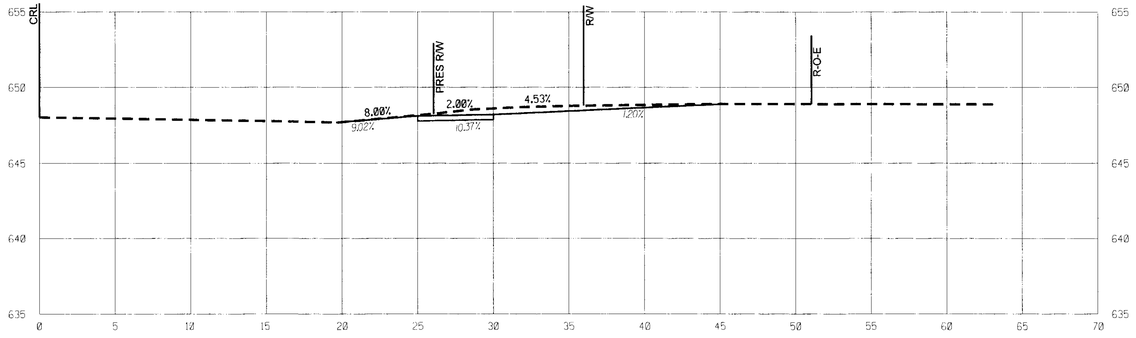
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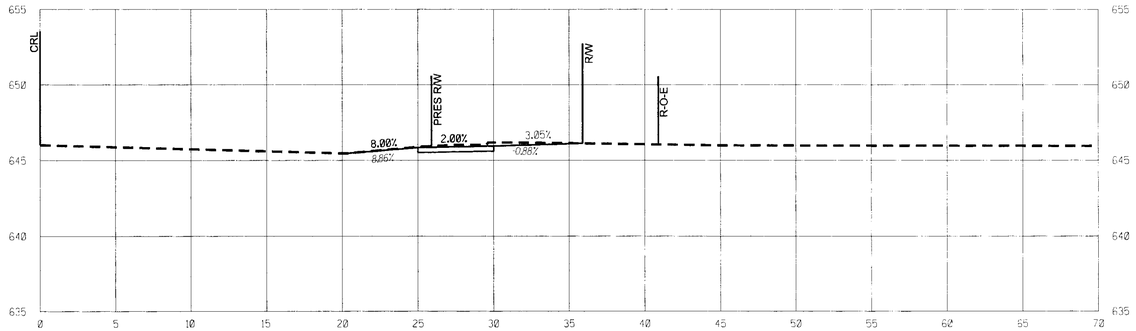
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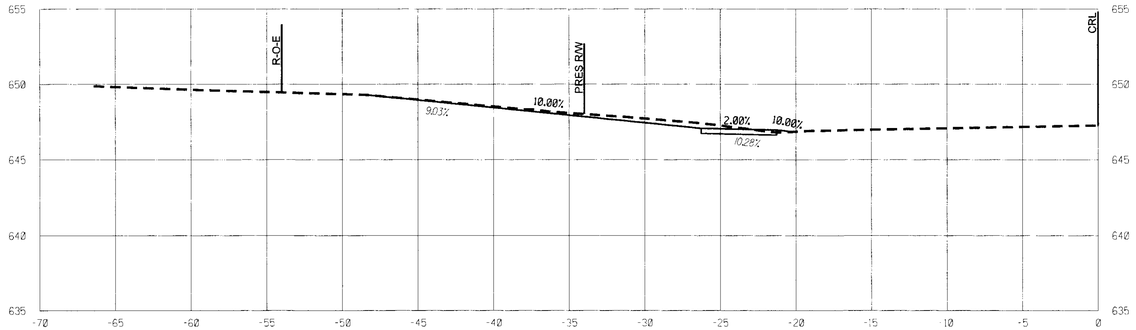
69+32.70 (LT.)



70+24.85 (RT.)



69+24.90 (RT.)



69+88.30 (LT.)

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®
Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3218
918.587.7283 - fax 918.587.0271

REVISION	BY	DATE

PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: 1"=5'	RECOMMENDED		
	DESIGN MANAGER		

APPROVED

CITY ENGINEER

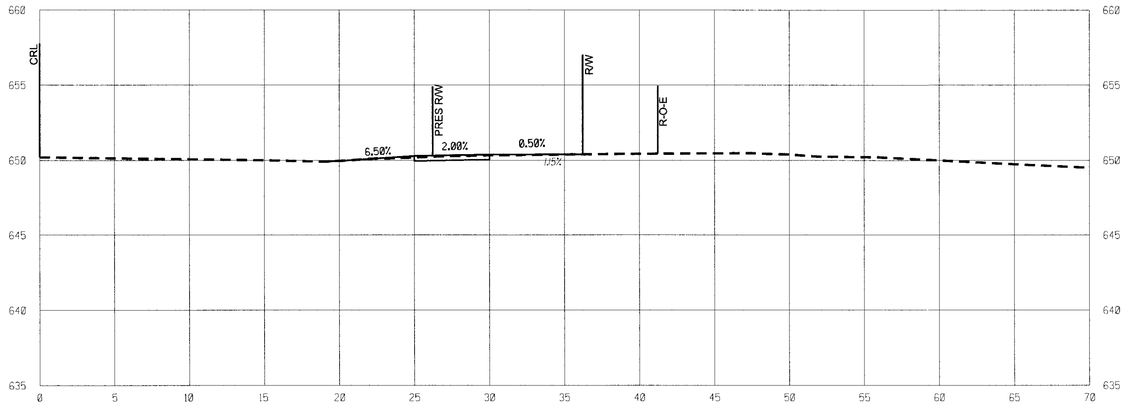
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DATE: SEP 2018

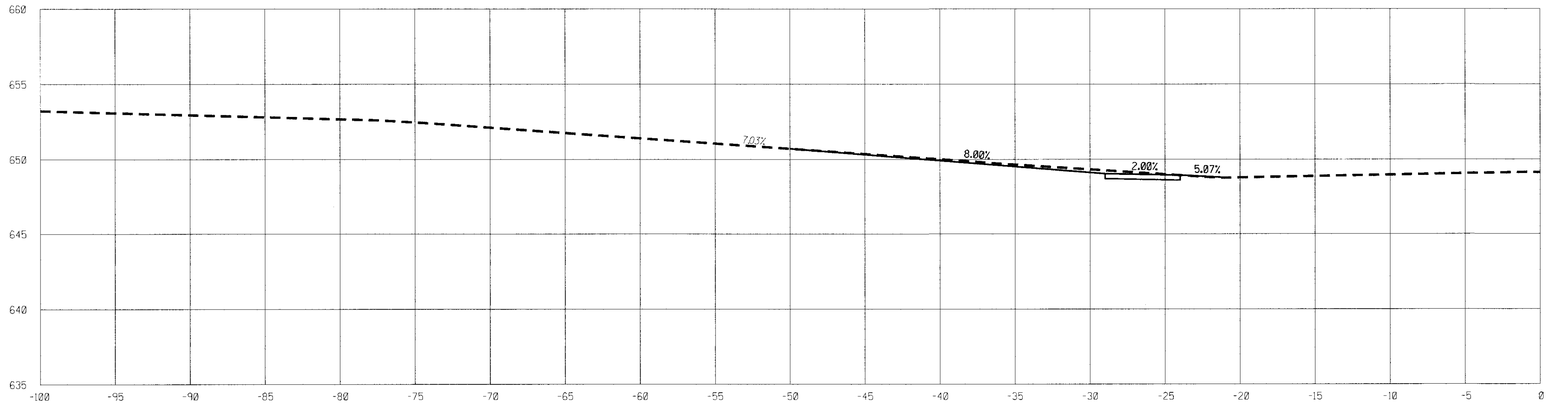
ATLAS PAGE NO.: 140, 141, 191

SHEET DP4 OF 59 SHEETS

$DATE$ $FILE$



71+34.93 (RT.)



70+77.44 (LT.)
(W. 39TH ST.)

$DATE$ $FILE$

REVISION	BY	DATE

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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Dewberry Engineers Inc.
1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.2871

PLAN SCALE: N/A

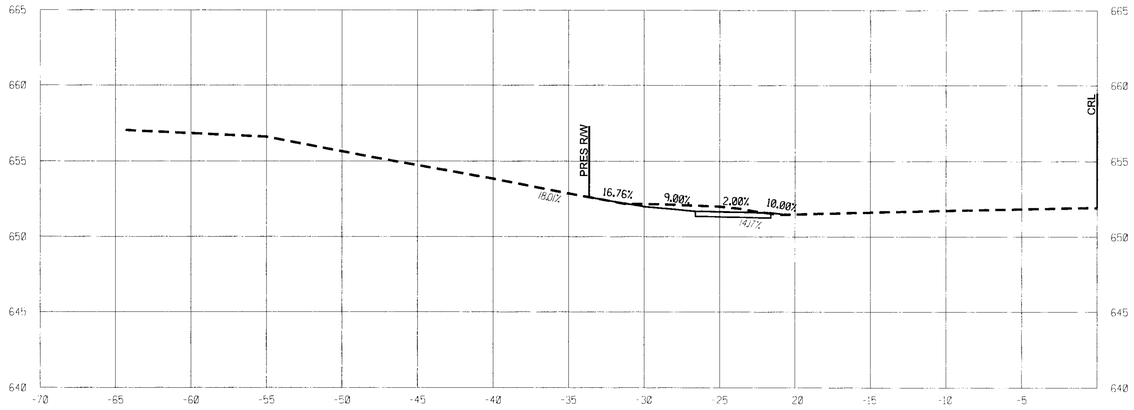
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HORIZONTAL: 1"=5'
VERTICAL: 1"=5'

DRAWN	DEI	11/16	APPROVED
DESIGNED	DEI	11/16	
SURVEY	SWA	08/15	
PROJ. MGR.			
LEAD ENGR.			
FIELD MGR.			
RECOMMENDED			
DESIGN MANAGER			CITY ENGINEER

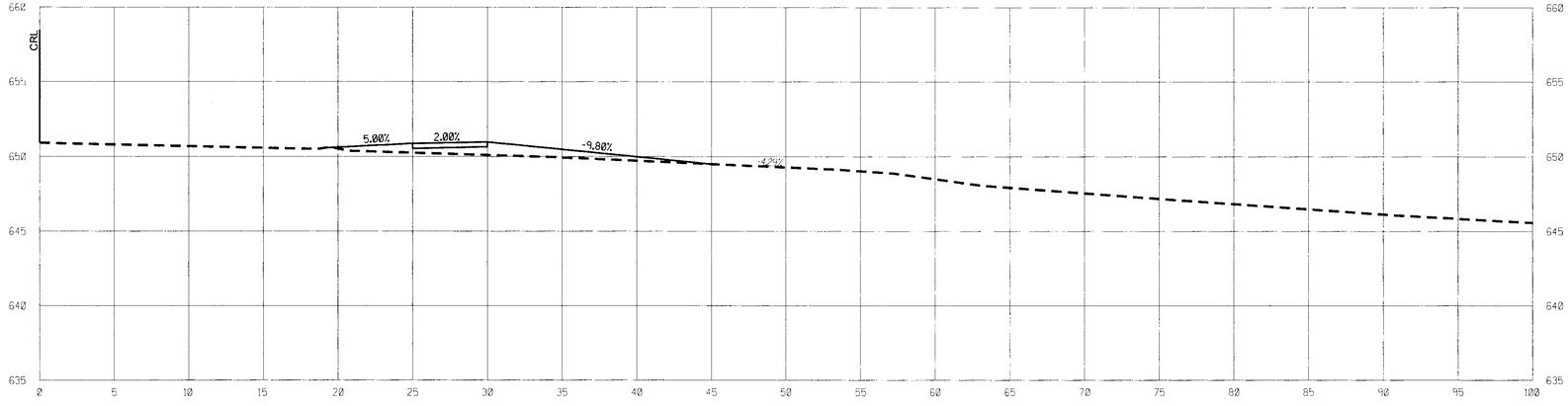
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ATLAS PAGE NO.: 140, 141, 191

SHEET DP5 OF 59 SHEETS



72+24.47 (LT.)



71+74.61 (RT.)
(W. 39TH ST.)

REVISION	BY	DATE

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

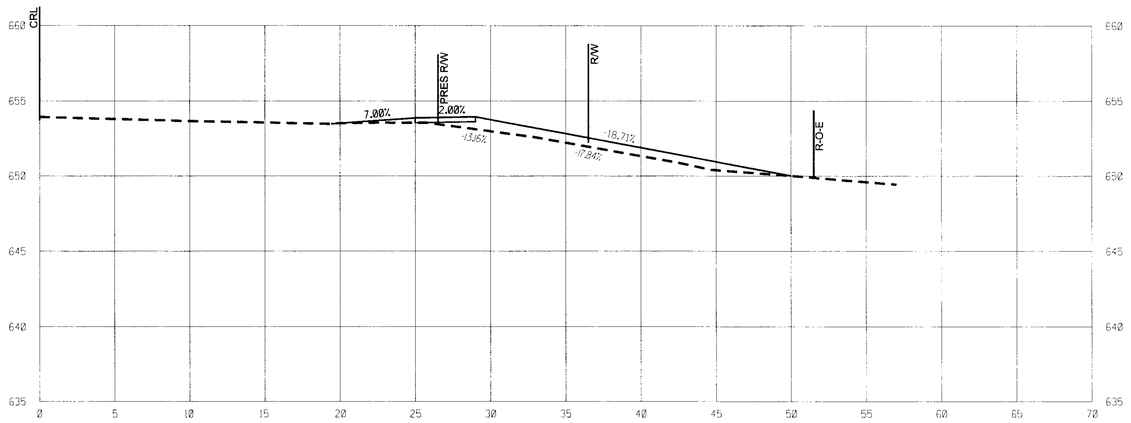
PLANS AND ESTIMATES PREPARED BY:

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Dewberry Engineers Inc.
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Tulsa, Oklahoma 74119 - 3216
918.587.7283 - fax 918.587.2071

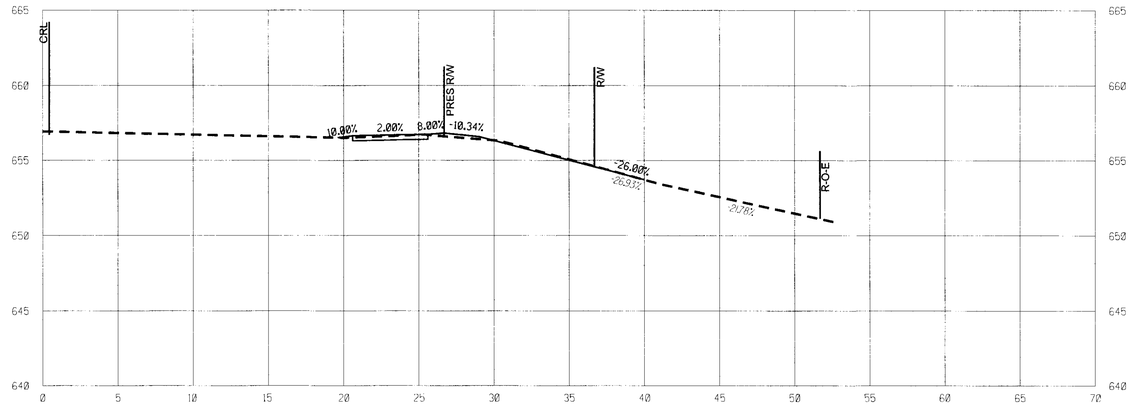
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	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: 1"=5'	RECOMMENDED		
	DESIGN MANAGER		CITY ENGINEER
FILE:	DRAWING:		DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191			SHEET DP6 OF 59 SHEETS

APPROVED

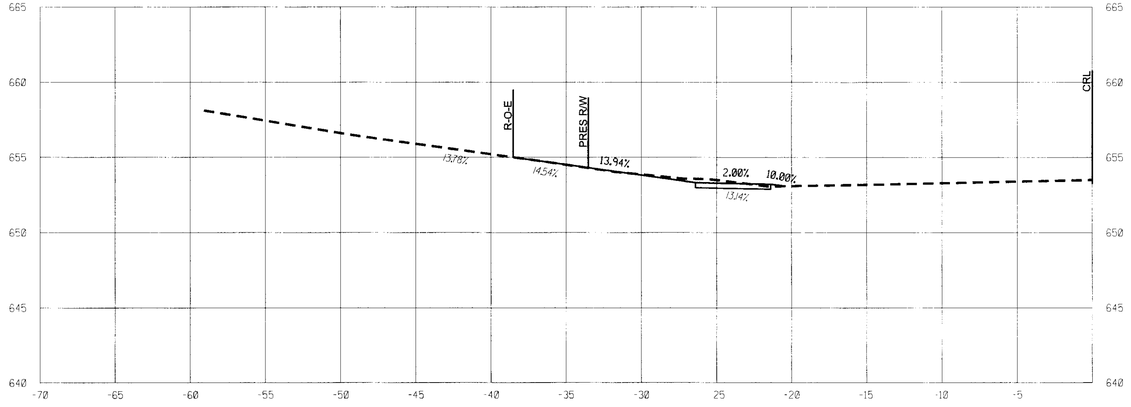
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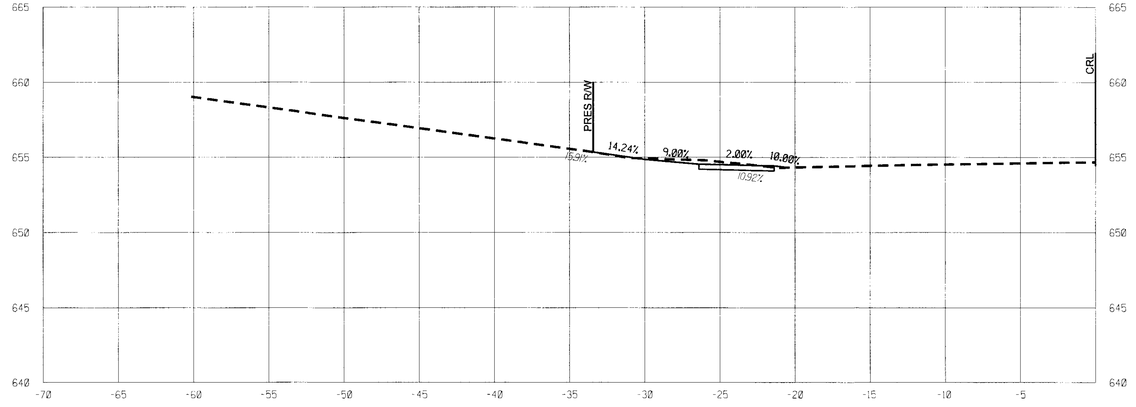
73+19.10 (RT.)



74+27.93 (RT.)



72+99.06 (LT.)



73+52.12 (LT.)

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

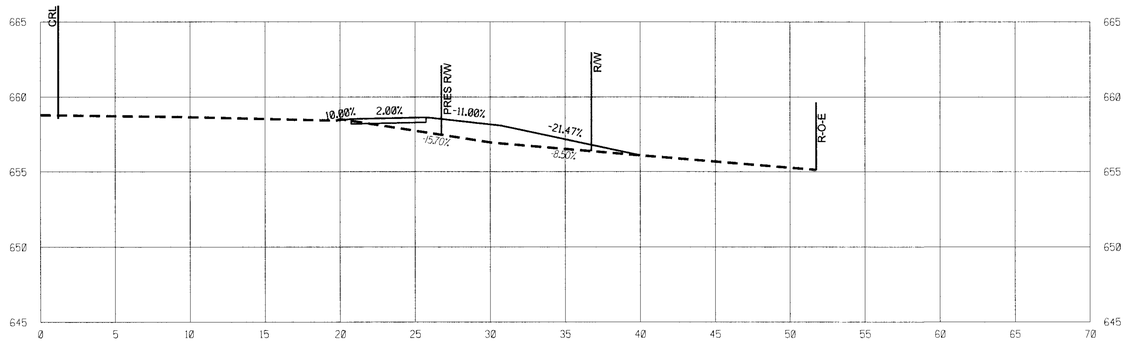
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918.587.7293 - fax 918.587.8071

REVISION	BY	DATE

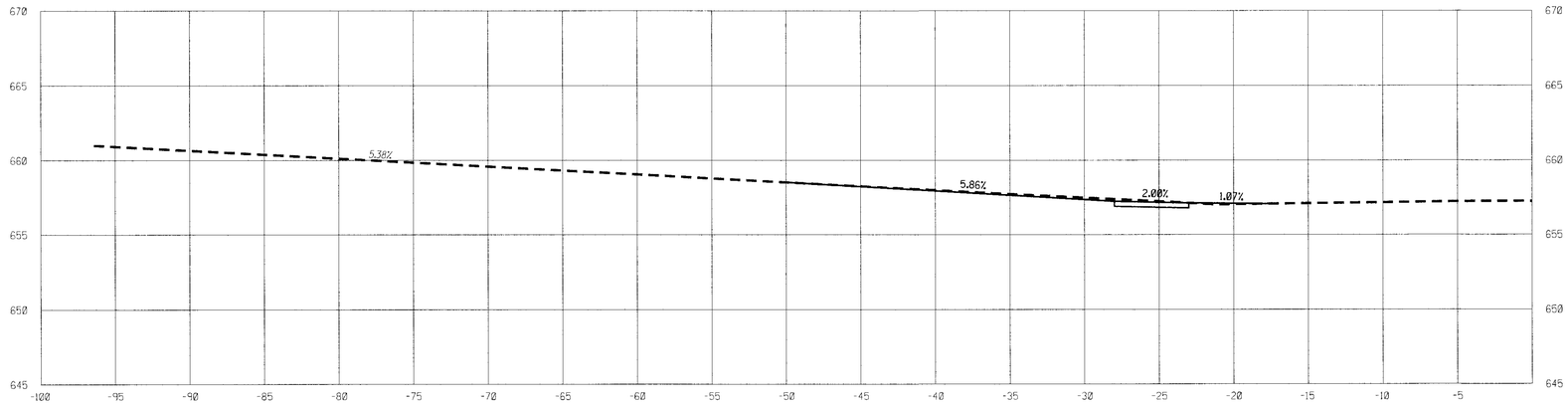
PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5' VERTICAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
	RECOMMENDED		
	DESIGN MANAGER		CITY ENGINEER
FILE:	DRAWING:		DATE: SEP 2018
ATLAS PAGE NO.: 140, 141, 191			SHEET DP7 OF 59 SHEETS

APPROVED

$DATE$ $FILE$



74+74.46 (RT.)



74+36.81 (LT.)
(W. 38TH ST.)

$DATE$ $FILE$

REVISION	BY	DATE

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

Dewberry®

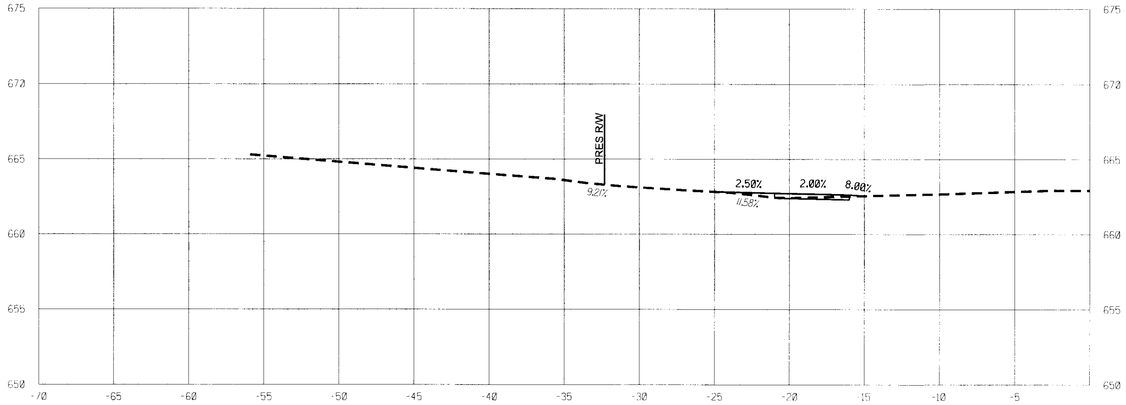
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918.587.7283 - Fax 918.587.2071

PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: 1"=5'	RECOMMENDED		
	DESIGN MANAGER		CITY ENGINEER

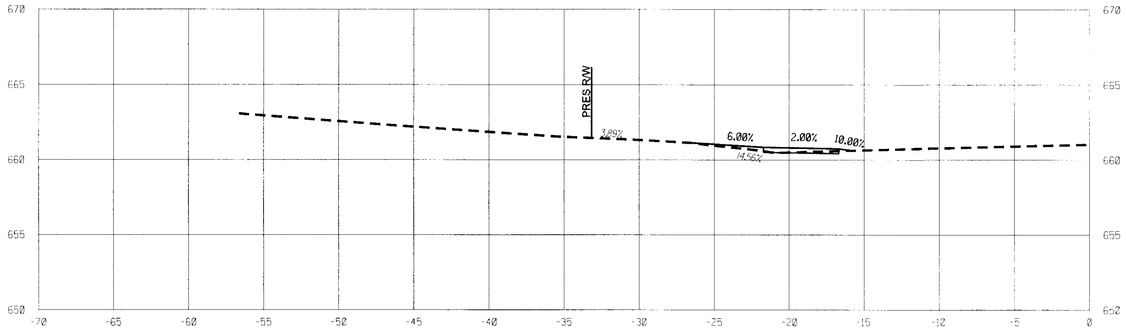
APPROVED

FILE: DRAWING: DATE:SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET DP8 OF 59 SHEETS



75+76.90 (LT.)



75+28.39 (LT.)

76+80.64 (LT.)

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

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REVISION	BY	DATE

PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: 1"=5'	RECOMMENDED		
	DESIGN MANAGER		

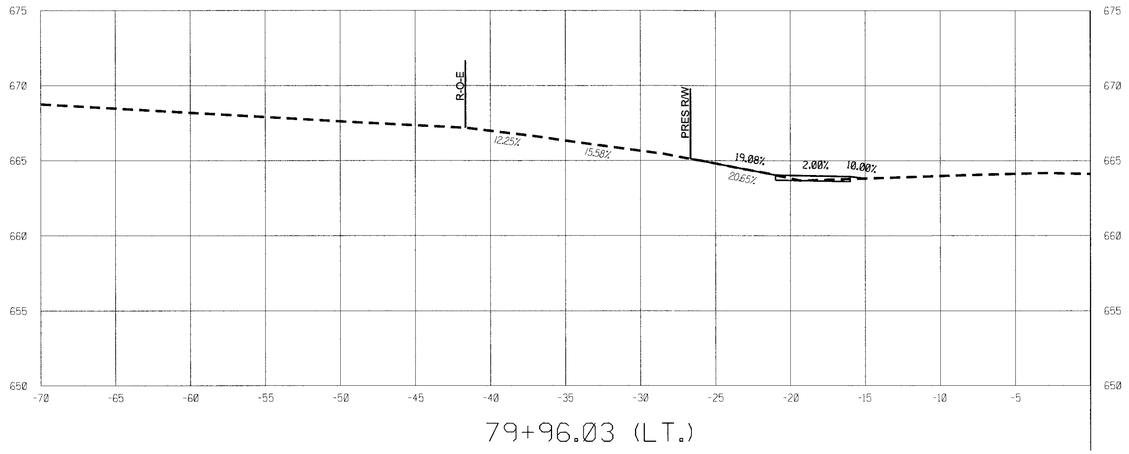
APPROVED

CITY ENGINEER

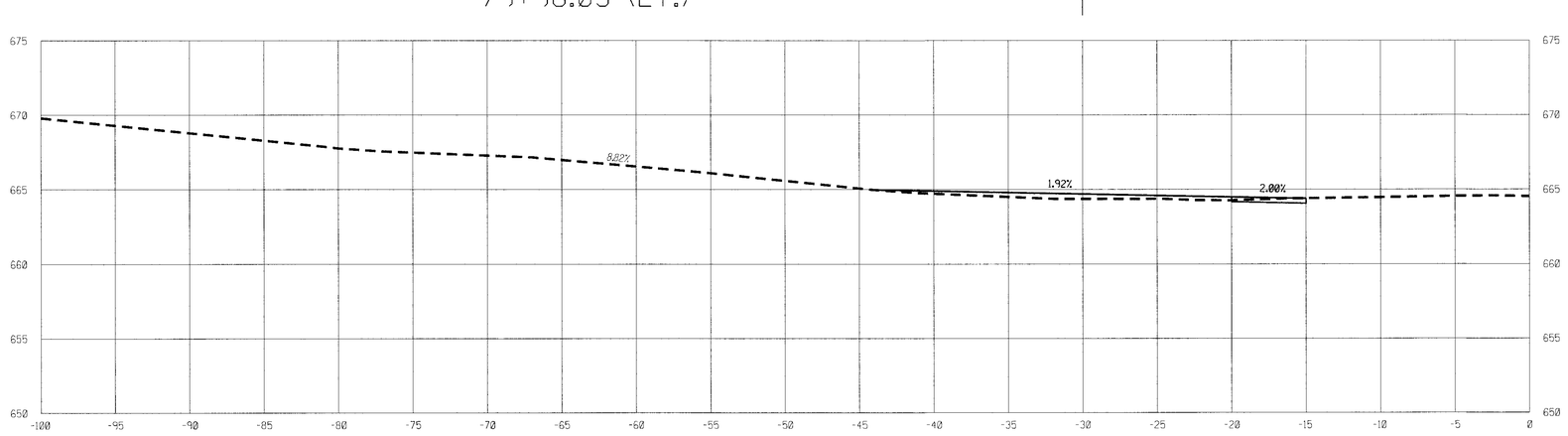
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ATLAS PAGE NO.: 140, 141, 191 SHEET DP9 OF 59 SHEETS

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79+96.03 (LT.)



79+15.03 (LT.)
(W. 37TH PL.)

$DATE$ $FILE$

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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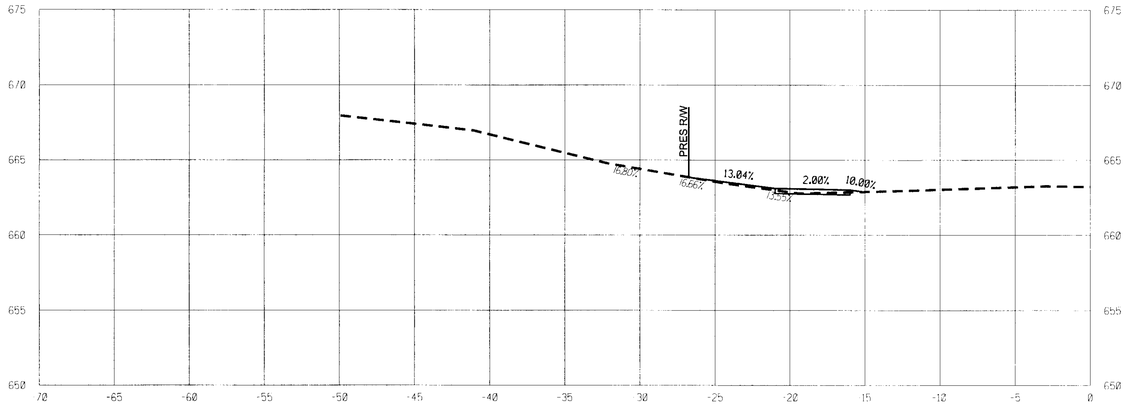
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	SURVEY	SWA	08/15
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	RECOMMENDED		
	DESIGN MANAGER		CITY ENGINEER

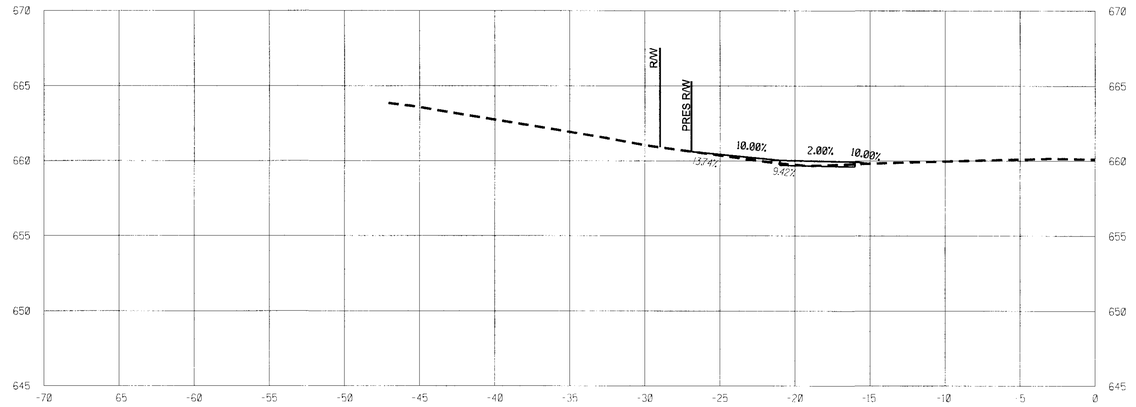
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FILE: DRAWING: DATE: SEP 2018

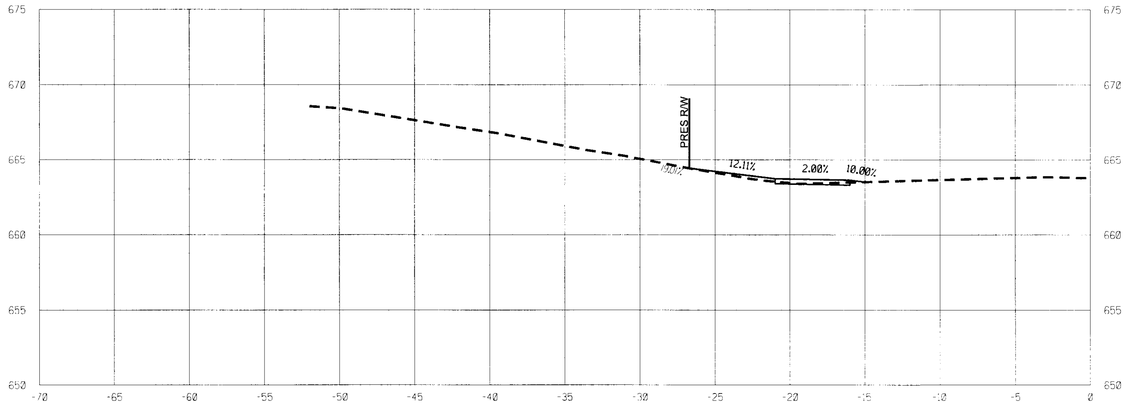
ATLAS PAGE NO.: 140, 141, 191 SHEET DP10 OF 59 SHEETS



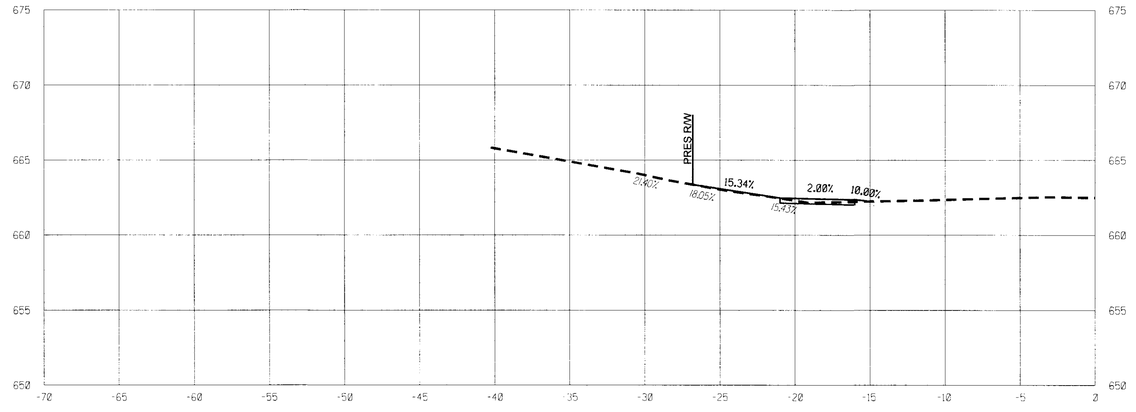
80+87.23 (LT.)



82+30.48 (LT.)



80+33.33 (LT.)



81+37.56 (LT.)

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

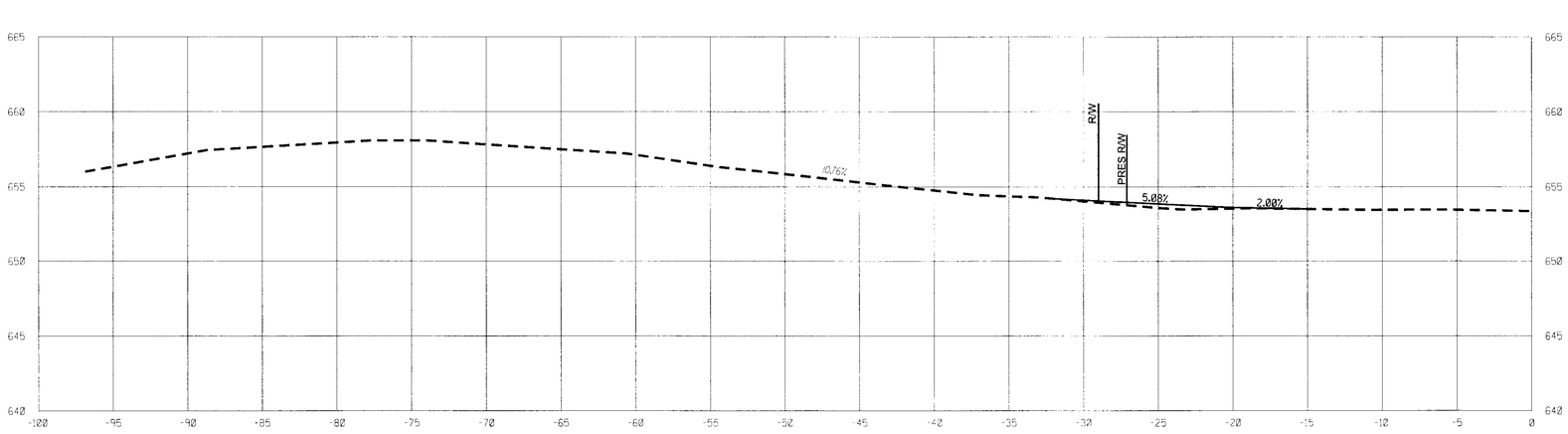
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REVISION	BY	DATE

PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5' VERTICAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
	RECOMMENDED		
	DESIGN MANAGER		CITY ENGINEER
FILE:	DRAWING:		DATE:SEP 2018
ATLAS PAGE NO.: 140, 141, 191			SHEET DP11 OF 59 SHEETS

APPROVED

$DATE$ $FILE$



84+21.64 (LT.)
(W. 36TH PL.)

$DATE$ $FILE$

DRIVEWAY AND STREET PROFILES (UNION)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

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918.587.7263 - fax 918.587.2071

REVISION	BY	DATE

PLAN SCALE: N/A

PROFILE SCALE
HORIZONTAL: 1"=5'
VERTICAL: 1"=5'

DRAWN	DEI	11/16	APPROVED
DESIGNED	DEI	11/16	
SURVEY	SWA	08/15	
PROJ. MGR.			
LEAD ENGR.			
FIELD MGR.			

RECOMMENDED
DESIGN MANAGER

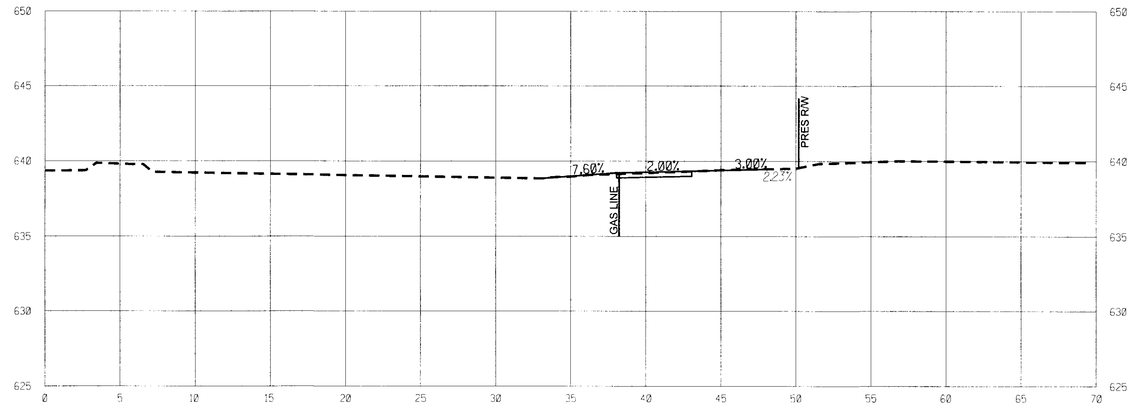
CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET DP12 OF 59 SHEETS



15+06.98 (RT.)

$DATE$ $FILE$

REVISION	BY	DATE

DRIVEWAY AND STREET PROFILES (41ST ST.)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

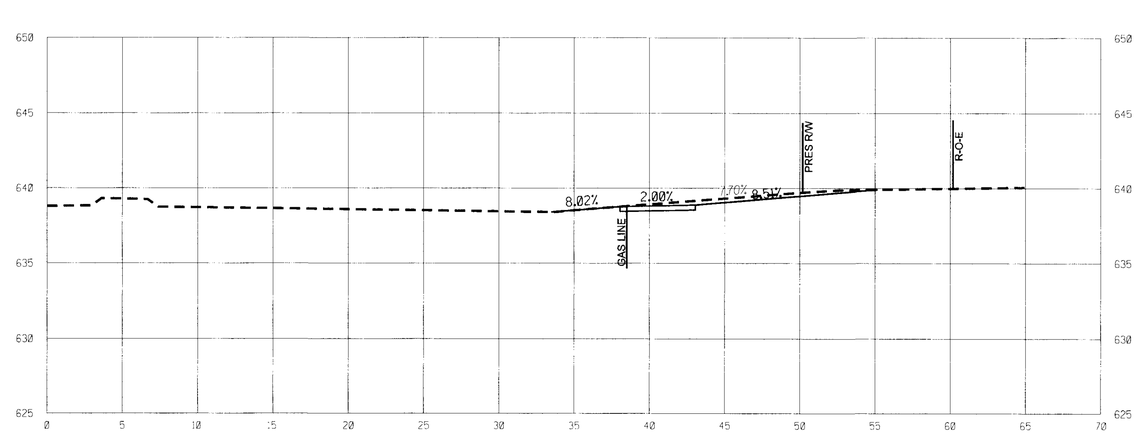
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918.587.7263 - fax 918.587.2871

PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: 1"=5'	RECOMMENDED		
	DESIGN MANAGER		CITY ENGINEER

APPROVED

FILE: DRAWING: DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191 SHEET DP13 OF 59 SHEETS



16+03.68 (RT.)

DRIVEWAY AND STREET PROFILES (41ST ST.)

PROJECT NO. 144017-G AND 144017-AS

UNION AVENUE
(SOUTHWEST BLVD TO 41ST ST.)

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

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1350 South Boulder - Suite 600
Tulsa, Oklahoma 74119 - 3216
918.587.7293 - fax 918.587.8071

REVISION	BY	DATE

PLAN SCALE N/A	DRAWN	DEI	11/16
	DESIGNED	DEI	11/16
	SURVEY	SWA	08/15
PROFILE SCALE HORIZONTAL: 1"=5' VERTICAL: 1"=5'	PROJ. MGR.		
	LEAD ENGR.		
	FIELD MGR.		
	RECOMMENDED		
	DESIGN MANAGER		

APPROVED

CITY ENGINEER

FILE: DRAWING:

DATE: SEP 2018

ATLAS PAGE NO.: 140, 141, 191

SHEET DP14 OF 59 SHEETS

$DATE$ $FILE$

UTILITY COORDINATION		
UTILITY	CONTACT	PHONE NO.
CITY OF TULSA	CHRIS KOVAC	918-596-9649
AEP/PSO	ADAM FIELDS	918-250-6257
ONG	JONATHON MEADOWS	918-831-8215
AT&T	AL NICHOLS	918-596-4237
COX COMMUNICATIONS	BRANDON WADE	918-286-4716
MTTA	ERIC SMITH	918-830-0024

CITY OF TULSA, OKLAHOMA
ARTERIAL STREET REHAB OF
W. 41ST STREET S.
UNION AVE TO ELWOOD AVE & W 41st S.
& ELWOOD AVE INTERSECTION
PROJECT NO. 2036A0025Z-2036A0035Z
PUBLIC WORKS DEPARTMENT
TULSA, OKLAHOMA

INDEX OF SHEETS

1	TITLE SHEET
2-3	PAY QUANTITIES & NOTES
4	TYPICAL SECTION
5	STORMWATER MANAGEMENT PLAN
6	ROADWAY KEY & BORING LOCATION MAP
7-12	E. 41ST STREET PLAN
13	CONCRETE DITCH PLAN & PROFILE
14-19	SIGNING & STRIPING PLAN
20	SUMMARIES
21	DETOUR PLAN
22-25	TRAFFIC CONTROL PHASE 1
26-29	TRAFFIC CONTROL PHASE 2
30	TRAFFIC CONTROL (ELWOOD AVE.)

SYMBOL LEGEND

ASPHALT
CONCRETE
GRAVEL
UT — UNDERGROUND TELEPHONE
SS — UNDERGROUND SANITARY SEWER
UG — UNDERGROUND GAS
UC — UNDERGROUND CABLE
WTR — UNDERGROUND WATER
STM — UNDERGROUND STORM SEWER
OHE — OVERHEAD ELECTRIC
X — FENCE
FO — UNDERGROUND FIBER OPTIC
WV — WATER VALVE
WM — WATER METER
FH — FIRE HYDRANT
SHRUB
DECIDUOUS TREE
CONIFEROUS TREE
GUY WIRE
TELEPHONE UNDERGROUND MARKER
TELEPHONE PEDESTAL
SIGN
MAIL BOX
GAS METER
FOP — FIBER OPTIC PEDESTAL
TSP — TRAFFIC SIGNAL POLE
ELECTRIC METER
LP — LIGHT POLE
TJB — TRAFFIC JUNCTION BOX
CATV — CABLE TV UNDERGROUND MARKER
BOLLARD/FENCE POST
SANITARY SEWER MANHOLE
GAS VALVE
STORM SEWER MANHOLE
FOUND MONUMENTS
SET MONUMENTS
PP — POWER POLE

CITY OF TULSA STANDARDS

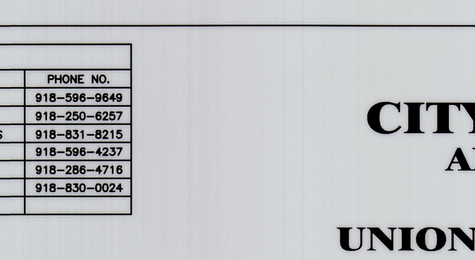
102	PROJECT SIGN
126	STANDARD SILT FENCE, AND CONSTRUCTION ENTRANCE
608A	STREET NAME SIGNS
608B	TRAFFIC SIGNS
714	PAVEMENT CUTS
725	STANDARD PAVEMENT PATCH AND REPAIR
790	STANDARD SIDEWALK RAMP

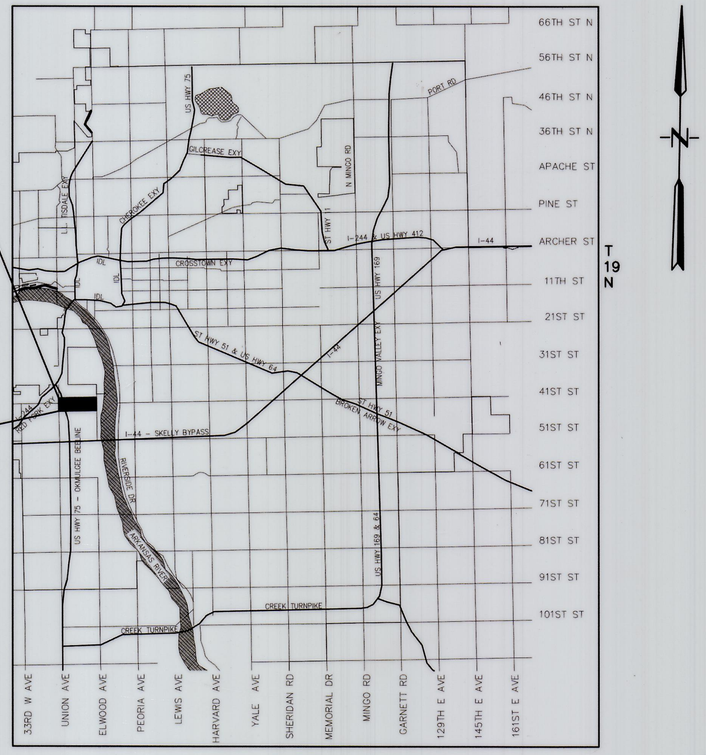
NOTE:
THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS.

CITY OF TULSA PERMANANT BENCHMARKS
BENCH MARKS: SOURCE BENCH MARK IS C.O.T.

BM#42 5/8" IRON PIN w/1 1/2" ALUMINUM CAP STAMPED "42" SET IN CONCRETE ON THE NORTH SIDE OF 11th ST, AND EAST OF S. HUDSON AVE. APPROXIMATELY 150'. NAVD 1988 ELEV=733.673

BM#41 3" BRASS CAP SET IN CONCRETE POST FLUSH SET SOUTH OF THE INTERSECTION OF 21ST ST., AND S. HUDSON AVE.
NAVD 1988 ELEV=768.359





LOCATION MAP
N.T.S.
Note: Entire project is within the Corporate and City Limits of Tulsa, Oklahoma

DESIGN DATA
V=35 MPH
ADT(2016) = 10,000 VPD
ADT(2036) = 26,750 VPD
FLEX ESALs 6.4 X 10^6
Kmin = NA (CREST) Kmin = NA (SAG)

IN ACCORDANCE WITH ODOT SECTION 105.14, THE CITY OF TULSA 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 EXPECTATION OF PERFORMING PATCHING AND CONCRETE WORK PRIOR TO MILLING OPERATIONS TO MINIMIZE CONSTRUCTION TRAFFIC LOADINGS TO REDUCED CAPACITY STREET SECTIONS. FURTHER~~, THE ANTICIPATED CONSTRUCTION PHASING WILL MINIMIZE THE TIME BETWEEN MILLING AND NEW ASPHALT PLACEMENT. LEAVING OPEN MILLED SECTIONS WILL BE AT THE CONTRACTOR'S RISK IN THE EVENT THAT LOCAL OR CONSTRUCTION TRAFFIC CAUSES DAMAGE TO PREVIOUSLY UNDAMAGED AREA. CURRENT CITY OF TULSA CONSTRUCTION BUDGETS DO NOT ALLOW FOR GROWTH OF THE PROJECT.

VERTICAL CONTROL
NAVD 1988

HORIZONTAL CONTROL
OKLAHOMA STATE PLANE COORDINATE SYSTEM
NAD 1983 (1993)

NOTE:
CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS ADOPTED BY CITY OF TULSA

OKIE 811 Know what's below 811 before you dig.

PROJECT LENGTH = 5018.68 FT = 0.950 MILES
TOTAL PROJECT LENGTH = 5018.68 FT = 0.950 MILES

ODOT STANDARDS

ROADWAY		TRAFFIC		
TESCA-0	DC-4-1	PM1-1-03	TCS4-1-01	TCS14-1-00
TSD-0		PM3-1-02	TCS5-1-00	TCS19-1-01
TFL-0		PM8-1-01	TCS6-1-02	
SSS-2-1		TCS1-1-01	TCS8-1-00	
ASCD6-1		TCS2-1-00	TCS9-1-01	

APPROVED BY:

CITY ENGINEER — DATE 4/28/2025

JUNE 19, 2026
ADVERTISE DATE

BKL ARCHITECTS ENGINEERS
CA. 262 (PE) 6-30-2026
1623 E 6TH STREET TULSA, OKLAHOMA 74120
TEL:918-835-9588
FAX:918-835-9119
MAIL@BKLINC.COM

PREPARED BY:

DANIEL E. POLASEK, PE
PROJECT MANAGER
BKL, INCORPORATED

LICENSED PROFESSIONAL ENGINEER — Daniel E. Polasek — 24920 — OKLAHOMA

2/24/2024
SHEET 1 OF 30

CITY OF TULSA
ARTERIAL STREET REHAB OF E. 41ST ST. S.–UNION AVE. TO ELWOOD AVE. AND 41ST STREET S. & ELWOOD INTERSECTION – PROJ. NO. 2036A0025Z–2036A0035Z

BKL
1623 E. 6TH STREET TULSA, OKLAHOMA 74120
TEL:918-835-9588
FAX:918-835-9119
MAIL@BKLINC.COM

X:\Projects\817-cot-41st west-union to elwood\DWG\Sheets\817-TT01.dwg, 250224 - 8:31 AM, DEP

PAY QUANTITIES

ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY
2001	202(A)	UNCLASSIFIED EXCAVATION	E-3,4, R-1	CY	183
2002	205(A)	TYPE A SALVAGED TOPSOIL		CY	65
2003	220	SWPPP DOCUMENTATION	E-6, E-7	LSUM	1
2004	230(A)	SOLID SLAB SODDING	E-10,11	SY	840
2005	303(A)	AGGREGATE BASE (TYPE A)	S-1,2	CY	964
2006	310(B)	SUBGRADE METHOD B		SY	2,893
2007	325	SEPARATOR FABRIC	S-3	SY	3,617
2008	COT 334	CONSTRUCTION AS-BUILT		LSUM	1
2009	COT 335	CONTRACTOR'S QUALITY CONTROL		LSUM	1
2010	409	FABRIC REINFORCEMENT	S-4	SY	13,388
2011	411(C)	SUPERPAVE, TYPE S4 (PG 70-28)	S-5,6,7,8,23	TON	1,500
2012	411(D)	SUPERPAVE, TYPE S6 (PG 70-28)	S-5,6,7,8	TON	376
2013	412	COLD MILL PAVEMENT	S-9,22	SY	13,388
2014	502(A)	ENGINEERED FALSEWORK		LSUM	1
2015	509(D)	CLASS C CONCRETE	S-12	CY	19
2016	COT 608	GROUND SIGN		SF	224
2017	COT 608	1-1/2" SIGN POST		LF	24
2018	COT 608	1-3/4" SIGN POST		LF	186
2019	COT 608	2" SIGN POST		LF	57
2020	COT 609(A)	CONCRETE CURB (INTEGRAL)	S-15	LF	30
2021	610(A)	4" CONCRETE SIDEWALK	S-12, 13, 16, 17	SY	313
2022	610(I)	TACTILE WARNING DEVICE-NEW		SF	60
2023	611(G)	INLET CDI RCP DES. 1		EA	1
2024	641	MOBILIZATION	G-2	LSUM	1
2025	642(A)	CONSTRUCTION STAKING LEVEL II	G-3,4	EA	1
2026	855(A)	TRAFFIC STRIPE (4")(PLASTIC)	T-3	LF	20,793
2027	855(A)	TRAFFIC STRIPE (12")(PLASTIC) ~~(MULTI-POLYMER)~~]	T-3	LF	84
2028	855(A)	TRAFFIC STRIPE (24")(PLASTIC) ~~(MULTI-POLYMER)~~]	T-3	LF	615
2029	855(A)	TRAFFIC STRIPE (PLASTIC) (MULTIPOLYMER)] [(ARROWS)	T-3	EA	5
2030	880(B)	CONSTRUCTION SIGNS 0.00 TO 6.25 SF	T-4,5	SD	2,610
2031	880(B)	CONSTRUCTION SIGNS 6.26 TO 15.99 SF	T-4,5	SD	7,300
2032	SPECIAL	OWNER, ALLOWANCE		EA	20,000
2033	880(C)	BARRICADES (TYPE III)	T-4,5	SD	16,470
2034	880(E)	TYPE "A" WARNING LIGHT	T-4,5	SD	34,740
2035	880(F)	DRUMS	T-4,5	SD	11,250
2036	880(G)	TUBE CHANNELIZERS	T-4,5	SD	9,000
2037	880(I)	FLAGGER	T-6	FD	50
2038	882(B)	REMOTE CONTROLLED CHANGEABLE MESSAGE SIGN	T-4	SD	100
2039	SPECIAL	PROJECT SIGN (CITY OF TULSA)	T-7	EA	2
2040	SPECIAL	TYPE I AC PATCH	S-21,G-1	CY	639
2041	SPECIAL	TYPE 1 PCC PATCH	S-21,G-1	CY	6
2042	SPECIAL	CURB RAMP		EA	9
2043	SPECIAL	URBAN RIGHT-OF-WAY RESTORATION	G-5,6,7,8,9,10	EA	1
2044	COT 202	QUICK SET FLOWABLE FILL	G-1, D-8	CY	12
2045	SPECIAL	RAILROAD FLAGMAN		EA	5,000
2046	SPECIAL	COORDINATION WITH RAILROAD		EA	10,000
2047	SPECIAL	INSURANCE FOR WORK WITHIN RAILROAD RIGHT-OF-WAY		EA	10,000

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.

ENGINEERING SERVICES - TRANSPORTATION DESIGN

PAY ITEM NOTES (VERSION: 11/14/2018)

EARTHWORK / EROSION CONTROL / SITE PREPARATION

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 FOLLOWS:
A) AROUND INLETS TO PREVENT INFLOW OF ERODED MATERIAL INTO STORM SEWER SYSTEM;
B) IN LOCATIONS THROUGHOUT PROJECT SITE, AS DETERMINED BY THE ENGINEER, TO PREVENT WASH OF ERODED MATERIAL ONTO ADJACENT PROPERTY;
C) FOR ENTIRE DURATION OF PROJECT, WITH MAINTENANCE AND REPLACEMENTS, AS DIRECTED BY THE ENGINEER;
D) WITH PERIODIC REMOVAL OF SEDIMENT IN ACCORDANCE WITH STORMWATER MANAGEMENT PLAN.
ALL COST FOR ITEMS A-D ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

E-8: NOT USED.

E-9: NOT USED.

EARTHWORK / EROSION CONTROL / SITE PREPARATION (CONT.)

E-10: ESTIMATED QUANTITY IS BASED ON SODDING OF ALL DISTURBED AREAS OUTSIDE THE FINAL PAVING LIMITS AND WITHIN THE FINAL GRADING 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 INCLUDES 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 CONTRACTOR'S SOLE 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.

SURFACING / STRUCTURES

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 IS INDICATED ON THE PLANS MAY BE USED, BUT AT NO ADDITIONAL COST TO THE CITY.

S-8 (TABLE):

NOTE S8 (50) TABLE

BINDER[2] GRADE	MESALs	ADT[1]	NOTES
PG 64-22 OK	< 3	< 5,000	USE WHEN MORE THAN 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 PG 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.

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: NOT USED.

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: NOT USED.

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: REPLACE AC PAVEMENT ON CONCRETE DRIVEWAYS APRONS AND GUTTERS DURING EDGE MILLING AND COLD MILLING OPERATIONS

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

REMOVAL AND ADJUSTMENT

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: NOT USED.

R-3: NOT USED.

R-4: NOT USED.

R-5: NOT USED.

R-6: NOT USED.

GENERAL

G-1: LOCATIONS TO BE DETERMINED IN THE FIELD AND WORK TO BE PERFORMED 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 PAYMENTS SHALL BE IN ACCORDANCE 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: SHALL INCLUDE THREE ROW BARBED WIRE ON TOP OF FENCE AND GATES.

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. NO NEW CURB OUTLETS SHALL BE CONSTRUCTED WITHOUT APPROVAL OF THE ENGINEER.

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

G-8: TREE GRATES ARE NOT ACCEPTABLE PER CITY ARBORIST. CONCRETE PAVERS ARE TO BE USED AS NECESSARY AROUND TREES.

G-9: CONTRACTOR SHALL COORDINATED HOMEOWNERS TO RESET ALL PAVERS, LANDSCAPE STONE, PRIVATE SIDEWALKS AND FENCES THAT ARE DISTURBED DURING CONSTRICTION 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

DRAINAGE

D-1: NOT USED

D-2: NOT USED.

D-3: NOT USED.

D-4: NOT USED.

D-5: NOT USED.

D-6: NOT USED.

D-7: NOT USED.

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

D-9: NOT USED.

D-10: NOT USED.

D-11: NOT USED.

D-12: NOT USED.

D-13: NOT USED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

2/24/2024

PAY QUANTITIES & NOTES (1 OF 2)

PROJ. 2036A0025Z-2036A0035Z

41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

PLAN SCALE:	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.		3/25
HORIZONTAL:	LEAD ENGR.		3/25
	FIELD MGR.		3/25
VERTICAL:	RECOMMENDED		3-25

DESIGN MANAGER

APPROVED:

CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 2 OF 30 SHEETS

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ENGINEERING SERVICES - TRANSPORTATION DESIGN (CONT.)

PAY ITEM NOTES (VERSION: 11/14/2018)

TRAFFIC

T-1: NOT USED.

T-2: NOT USED.

T-3: ALL PLASTIC PAVEMENT MARKINGS SHALL BE:

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

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

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

T-6: THE PAY ITEM FOR FLAGGER SHALL BE PAID FOR ON A FLAG DAY (F.D.) BASIS. ONE F.D. IS ONE COMPLETE WORKDAY 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.

T-8: NOT USED.

GENERAL CONSTRUCTION NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE CURRENT CITY OF TULSA ENGINEERING SERVICES DEPARTMENT'S STANDARD SPECIFICATIONS AND STANDARD DETAILS AND STANDARD DRAWINGS AND CITY OF TULSA SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTION ON AS HIS OWN RESPONSIBILITY OR AS THE ENGINEER MAY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
3. PAY ITEMS SHALL BE AS SPECIFIED ON THE CITY OF TULSA OR ON THE ODOT STANDARD DRAWINGS EXCEPT AS MODIFIED BY THE CONTRACT.
4. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
5. THE LOCATIONS OF THE UTILITIES ARE SHOWN ACCORDING TO ALL AVAILABLE INFORMATION. THE CONTRACTOR SHALL NOTIFY EACH UTILITY OWNER PRIOR TO COMMENCEMENT OF WORK TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATIONS. THE FOLLOWING IS A LIST OF UTILITY OWNERS; AT&T, PUBLIC SERVICE COMPANY OF OKLAHOMA (AEP), OKLAHOMA NATURAL GAS (ONG), COX COMMUNICATIONS, MCI/VERIZON, EASYTEL COMMUNICATIONS, WELLSCO VALLOR TELECOM, CITY OF TULSA-WATER AND SEWER, CITY OF TULSA-TRAFFIC OPERATIONS. SEE TITLE SHEET FOR CONTACT INFORMATION.
6. THE CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF OKLAHOMA ONE-CALL SYSTEM, INC. NOTICE OF ANY EXCAVATION NO SOONER THAN TEN DAYS NOR LATER THAN 48 HOURS , EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO THE COMMENCEMENT OF WORK. PHONE 1-800-522-6543.
7. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PREVENT EXCESS MOISTURE FROM INCLEMENT WEATHER OR OTHER SOURCES FROM ENTERING ANY STREET EXCAVATION. IF EXCESS MOISTURE DOES ENTER THE EXCAVATION THROUGH THE NEGLIGENCE OF THE CONTRACTOR AND THE ADJOINING PAVEMENT IS ADVERSELY EFFECTED BY THE EXCESS MOISTURE, THE CONTRACTOR SHALL REPLACE THE ADJOINING PAVEMENT AND SUBBASE AT HIS SOLE EXPENSE.
8. THE CONTRACTOR SHALL PRESERVE THE INTEGRITY OF THE SANITARY SEWER STRUCTURES AND ALL OTHER UTILITY STRUCTURES WITHIN THE PROJECT EXTENTS.
9. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. ALL FLAGMEN, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE FIELD ENGINEERING REPRESENTATIVE.
10. CONSTRUCTION SIGNAGE WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT ADDITION, AND APPLICABLE ODOT STANDARD DRAWINGS. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK.
11. THE CONTRACTOR SHALL NOTIFY THE CITY OF TULSA FIELD ENGINEERING, 918-596-9404, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK OR PRIOR TO REMOVING TRAFFIC SIGNS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS LISTED IN THE SIGNAGE SCHEDULE FOR THE PROJECT. ALL SIGNS AND POLES PROVIDED SHALL BE NEW AND UNDAMAGED AND SHALL MEET THE REQUIREMENTS OF COT SPECIFICATION 608 TRAFFIC SIGNS. ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARATION AND DISTRIBUTION OF A WRITTEN NOTICE TO RESIDENTS 48 HOURS PRIOR TO BEGINNING PAVEMENT REMOVAL AND MILLING AND OVERLAY OPERATIONS.
14. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AT ALL TIMES.
15. ALL PUBLIC AND PRIVATE STREETS AND DRIVES SHALL BE ACCESSIBLE AT ALL TIMES.
16. ALL BROKEN CONCRETE, WASTE MATERIAL, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.
17. ALL EXCAVATED MATERIAL NOT REQUIRED IN THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY MATERIAL IS STORED ON THE PROJECT SITE AND/OR DISPOSED OF WITHIN THE CITY LIMITS.
18. ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER IS TO BE CLEANED OUT TO THE RIGHT-OF-WAY LINE IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK. TREES OUTSIDE THE FILL SLOPES AND THE TOP OF CUT SLOPES SHALL NOT BE DISTURBED EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.
19. WHERE MATERIALS ARE TRANSPORTED IN THE PROSECUTION OF WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE CAPACITY RECOMMENDED BY THE VEHICLE MANUFACTURER OR AS PRESCRIBED BY ANY FEDERAL, STATE OR LOCAL LAW OR REGULATION.
20. ANY DAMAGE TO THE ROADWAY PAVEMENT, CURB, DRIVEWAYS OR SIDEWALK CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S SOLE EXPENSE. ALL DISTURBED ITEMS SHALL BE REPAIRED TO MATCH EXISTING MATERIALS AND PATTERNING.
21. IF THE CONTRACTOR ENCOUNTERS VOIDS WHEN PATCHING STREETS, THE CONTRACTOR SHALL CALL FIELD ENGINEERING AT 918-596-7814 FOR AN INSPECTION BEFORE PROCEEDING WITH WORK.
22. THE PROJECT SHALL BE CONSTRUCTED WITH CONTINUOUS FLOW OF MATERIAL SUPPLIED TO THE PROJECT SUCH THAT THE LAYDOWN MACHINE WILL REMAIN IN MOTION. ANY DELAY IN FORWARD PROGRESSION OF THE LAYDOWN MACHINE MAY REQUIRE A TRANSVERSE JOINT AS DIRECTED BY THE ENGINEER.
23. NO FLY ASH IS ALLOWED TO BE USED ON THIS PROJECT.
24. PHYSICAL TESTING FOR QUALITY ASSURANCE SHALL BE FURNISHED BY THE CITY.
25. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY QUALITY CONTROL TESTING TO ENSURE THAT PROJECT REQUIREMENTS ARE MET.
26. MASONRY STRUCTURES SHALL NOT BE CONSTRUCTED WITHIN THE STREET RIGHT-OF-WAY.
27. ALL CONCRETE CURB AND GUTTERS SHALL BE MONOLITHIC POURS. DOWELED-ON CURBS WILL NOT BE ALLOWED.
28. NO LIFTING HOLES WILL BE ALLOWED ON ANY REINFORCED CONCRETE PIPES OR REINFORCED CONCRETE BOXES.
29. CURB RAMP CONSTRUCTION SHALL COMPLY WITH THE CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
30. REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.
31. ALL SANITARY AND STORM SEWER MANHOLE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW LIDS AND CASTINGS AND THE OLD ONES SHALL BE SALVAGED AND DELIVERED TO THE METAL RECYCLE BINS IN THE STOCKROOM AREA AT SEWER OPERATIONS AND MAINTENANCE, 9319 E. 42ND STREET NORTH, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.
32. THE SIGN PLACEMENT STATIONING AND LOCATIONS SHOWN ON THE PLAN SHEETS AND SUMMARY SHEETS ARE APPROXIMATE. EXACT STATIONING AND LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH CITY OF TULSA STANDARDS, CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES, OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.
33. POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE. EXACT LENGTHS SHALL BE DETERMINED BY A FIELD SURVEY CONDUCTED BY THE CONTRACTOR.
34. ALL ASPHALT STREETS THAT ARE TO BE RECONSTRUCTED SHALL BE LEFT WITH A DRIVABLE SURFACE AT ALL TIMES. THE CONTRACTOR WILL NOT BE ALLOWED TO MILL OFF ALL THE ASPHALT BEFORE EXCAVATION BEGINS.
35. THE CONTRACTOR SHALL REPLACE ANY SECTION CORNERS OR OTHER PERMANENT RIGHT OF WAY MARKERS REMOVED OR DISTURBED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT. REPLACEMENT OF SECTION CORNERS OR ANY OTHER MONUMENTS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR AUTHORIZED TO PERFORM WORK IN THE STATE OF OKLAHOMA.
36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND MAINTENANCE OF THE STORMWATER DRAINAGE. STORMWATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED.
37. STRAW OR HAY BALES AS STORMWATER BEST MANAGEMENT PRACTICES ARE NO LONGER ALLOWED ON CONSTRUCTION PROJECTS.
38. THE CONTRACTOR MUST CALL 1-800-458-4251 IMMEDIATELY IF A NATURAL GAS PIPELINE IS CUT, DAMAGED, OR OTHERWISE DISTURBED.
39. PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL 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 AUGUST 8, 2023 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 METROPOLITAN TULSA TRANSIT AUTHORITY (MTTA), ERIC SMITH 918-830-0024, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK, LANE CLOSURES OR PRIOR TO DETOURING TRAFFIC.
43. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN.
44. EACH PHASE MUST BE COMPLETED BEFORE BEGINNING NEXT PHASE.

OKLAHOMA PROFESSIONAL ENGINEER Daniel E. Polasek 24920

2/24/2024

REVISION	BY	DATE

PAY QUANTITIES & NOTES (2 OF 2)

PROJ. 2036A0025Z-2036A0035Z

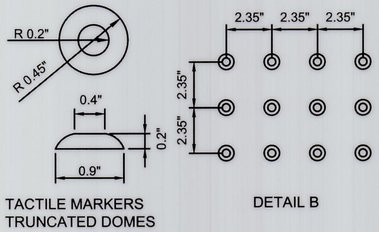
41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

PLAN SCALE:	DRAWN BY:	FLK	9/23	APPROVED:
	DESIGNED BY:	DEP	9/23	
	SURVEY BY:	TLS	4/23	
PROFILE SCALE	PROJ. MGR.	RF	3/25	
HORIZONTAL:	LEAD ENGR.	DEP	3/25	
	FIELD MGR.	TLS	4/25	
VERTICAL:	RECOMMENDED:	EBS	3-25	CITY ENGINEER
	DESIGN MANAGER			
FILE:	DRAWING:			DATE: 4/28/2025
ATLAS PAGE NO: 140, 191				SHEET 3 OF 30 SHEETS

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TACTILE MARKERS
TRUNCATED DOMES

DETAIL B

TACTILE MARKERS TRUNCATED DOMES

N.T.S.

TACTILE WARNING DETAILS INSTALLATION NOTES

THE YELLOW TRUNCATED DOME SURFACE SHALL CONTRAST VISUALLY WITH THE ADJOINING WALKING SURFACES.

THE TRUNCATED DOMES SHALL BE:

- PRECAST CONCRETE PANELS WITH A NOMINAL THICKNESS OF 7/8 INCH TO 2 INCHES, AND A MINIMUM OF 12" X 16". THEY SHALL BE CONSTRUCTED WITH A MINIMUM OF 4000 PSI CONCRETE. THEY SHALL BE YELLOW IN COLOR AND MEET ALL ADA REQUIREMENTS FOR COLOR CONTRAST AND DIMENSIONS.

OR

- FLANGED CAST IN PLACE GLASS AND CARBON REINFORCED COMPOSITE PANEL AS MANUFACTURED BY ADA SOLUTIONS

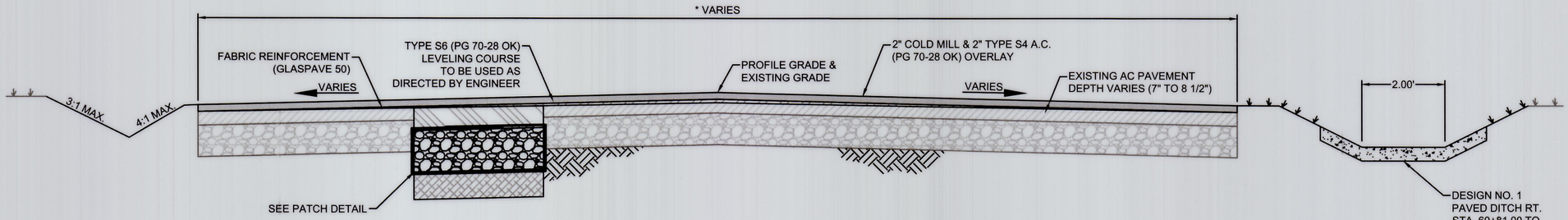
OR

- DUCTILE IRON

OR

- CAST IRON

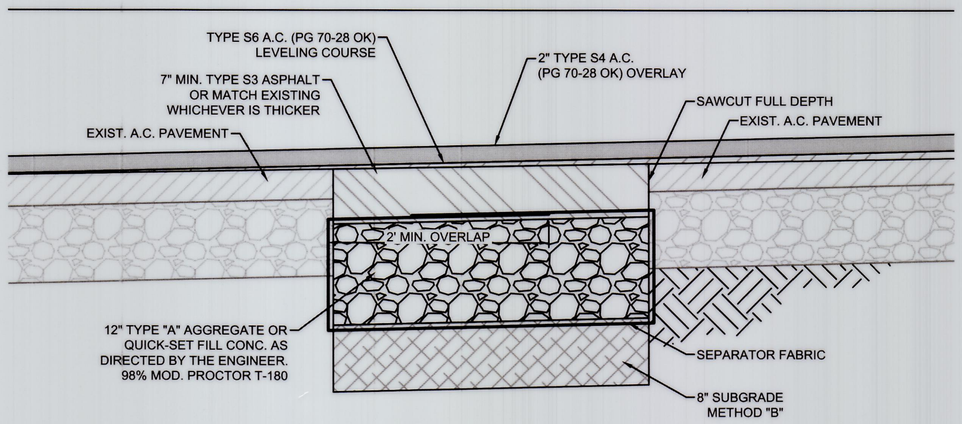
RETROFIT INSTALLATION WILL NOT REQUIRE EXISTING DEPRESSED CURBING TO BE REPLACED. A NOMINAL 6 TO 8 INCH SETBACK FROM FACE OF CURB SHALL BE ENFORCED FOR NEAR EDGE OF TACTILE DOMES.



TYPICAL SECTION NO. 1 COLD MILL AND A.C. OVERLAY

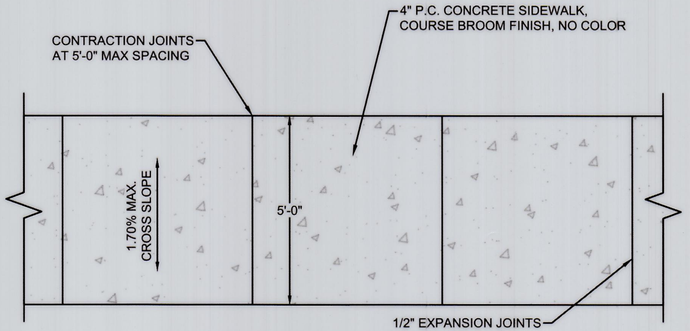
N.T.S.

* STA. 20+62.84 TO STA. 23+76.24 VARIES 64'-3" TO 25'-0"
* STA. 23+76.24 TO STA. 62+50.00 25'-0"
* STA. 62+50.00 TO STA. 63+91.56 VARIES 25'-0" TO 127'-5"



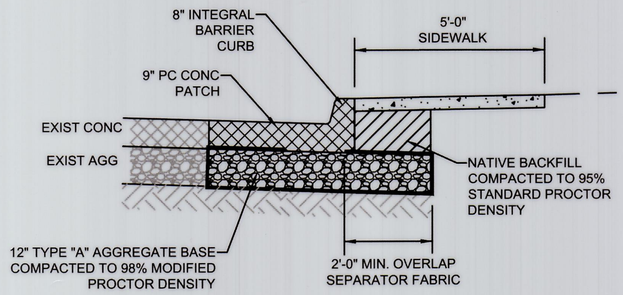
TYPE 1 A.C. PATCH ARTERIAL

N.T.S.



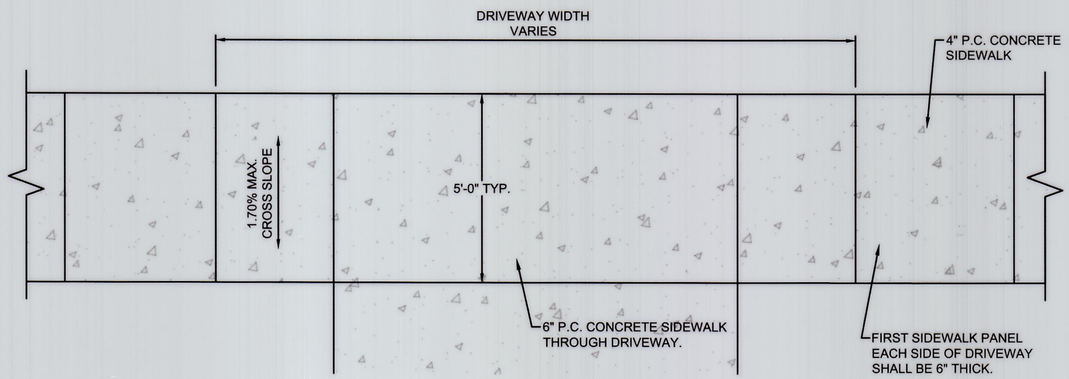
SIDEWALK DETAIL

N.T.S.



PC CONC PATCH DETAIL

N.T.S.



DRIVEWAY DETAIL

N.T.S.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

TYPICAL SECTION				
PROJ. 2036A0025Z-2036A0035Z				
41ST ST. S. - UNION AVE. TO ELWOOD AVE.				
CITY OF TULSA, OKLAHOMA PUBLIC WORKS DEPARTMENT				
PLANS & ESTIMATES PREPARED BY: BKL, INCORPORATED 1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588				
REVISION	BY	DATE	PLAN SCALE: NTS	DRAWN BY: FLK 9/23
				DESIGNED BY: DEP 9/23
				SURVEY BY: TLS 4/23
			PROFILE SCALE	PROJ. MGR. DF 3/25
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				FIELD MGR. TLS 4/23
			VERTICAL: NA	RECOMMENDED: HBS 3-25 DESIGN MANAGER
				APPROVED: CITY ENGINEER
			FILE:	DRAWING: DATE: 4/28/2025
			ATLAS PAGE NO: 140, 191	SHEET 4 OF 30 SHEETS

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STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: 41ST - UNION AVE. TO ELWOOD AVE.

PROJECT DESCRIPTION: ARTERIAL REHABILITATION. PAVEMENT REHABILITATION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING. REPLACE SALVAGED TOPSOIL AND DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATE OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: CHOSKA-SEVERN-URBAN LAND COMPLEX

TOTAL AREA OF THE CONSTRUCTION SITE: 2.77 ACRES

ESTIMATED AREA TO BE DISTURBED: 2.77 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 2.77 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 2.77 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.6

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°06'16" N, 96°00'10" W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: ARKANSAS RIVER

SENSITIVE WATERS OR WATERSHEDS: YES ☐ NO ☒

303 (d) IMPAIRED WATERS: YES ☒ NO ☐

IF YES, LIST IMPAIRMENT: TURBIDITY 5a

LOCATED IN A TMDL: YES ☐ NO ☒

LAKE THUNDERBIRD TMDL: YES ☐ NO ☒

MS4 ENTITY YES ☒ NO ☐

IF YES, LOCATION: CITY OF TULSA

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH THE PAY ITEMS, & NOTES.

REVISED 10-15-2020

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

OFFSITE VEHICLE TRACKING:

- ____ HAUL ROADS DAMPENED FOR DUST CONTROL
- _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
221	TEMPORARY SEDIMENT CONTROL

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

LICENSED PROFESSIONAL ENGINEER Daniel B. Polasek 24920 OKLAHOMA

2/24/2024

STORMWATER MANAGEMENT PLAN
PROJ. 2036A0025Z-2036A0035Z
41ST ST. S. -
UNION AVE. TO ELWOOD AVE.
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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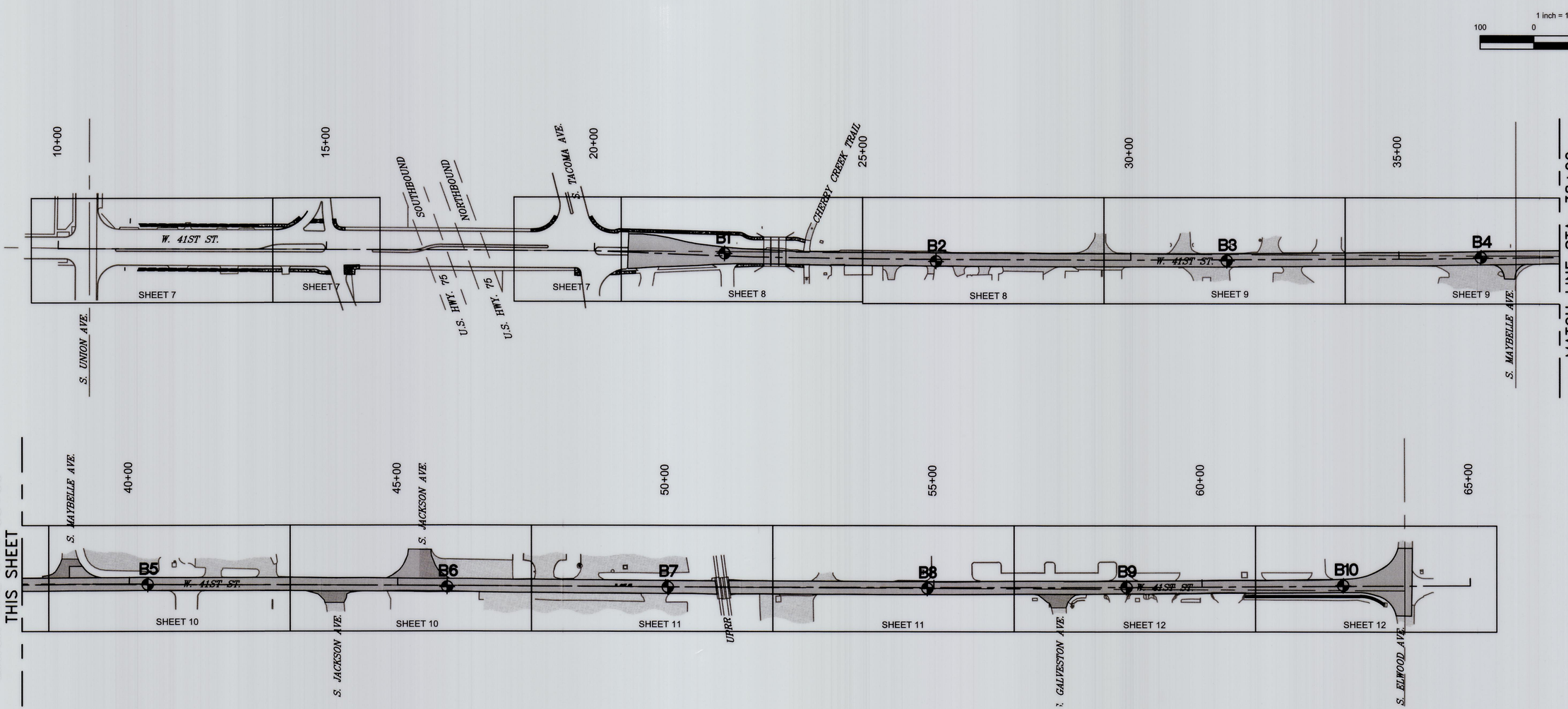
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PROFILE SCALE
HORIZONTAL:
VERTICAL:

DRAWN BY:	FLK	9/23
DESIGNED BY:	DEP	9/23
SURVEY BY:	TLS	4/23
PROJ. MGR.	RF	3/25
LEAD ENGR.		3/25
FIELD MGR.		3/25
RECOMMENDED: DESIGN MANAGER	HBS	3-25

APPROVED: CITY ENGINEER

FILE: DRAWING:
DATE: 4/28/2025
ATLAS PAGE NO: 140, 191
SHEET 5 OF 30 SHEETS

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LEGEND:

- PROPOSED MILL AND ASPHALT OVERLAY
- PROPOSED SIDEWALK
- B8 BORING NUMBER
- BORING LOCATION

OKIE 811 Know what's below 811 before you dig.

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LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

4/24/2024

ROADWAY KEY & BORING LOCATION MAP

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
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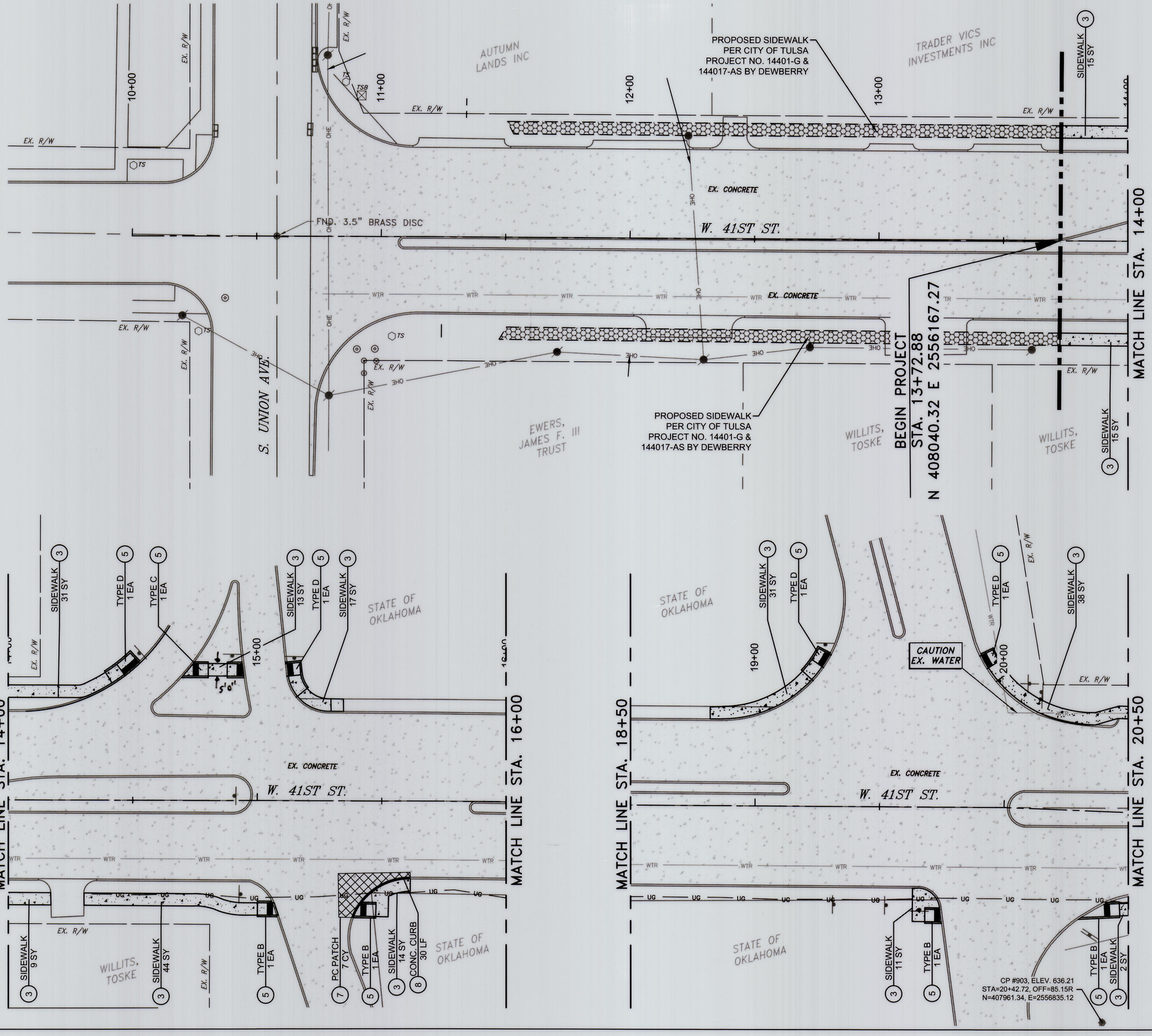
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	FIELD MGR.		5/05
VERTICAL: 1"=5'	RECOMMENDED: DESIGN MANAGER	HAS 3-25	

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 6 OF 30 SHEETS

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1 inch = 20 ft.

20 0 20 40

CONTROL POINTS

PNT. No.	Northing	Easting	Elevation	Description
903	407961.34	2556835.12	636.21	SETCP*3REBAR TLS RPC

LEGEND:

- PROPOSED MILL AND ASPHALT OVERLAY
- PROPOSED AC-PATCH
- PROPOSED SIDEWALK
- PROPOSED PC PATCH
- PROJECT LIMITS
- (1) ASPHALT OVERLAY
- (2) FULL DEPTH TYPE 1 A.C. PATCH
- (3) CONCRETE SIDEWALK
- (4) ADJUST TO GRADE
- (5) SIDEWALK RAMP
- (6) PROPOSED AREA INLET
- (7) FULL DEPTH P.C. PATCH
- (8) CONCRETE CURB

LICENSED PROFESSIONAL ENGINEER — Daniel E. Polasek — 24920 — OKLAHOMA

2/24/2024

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E 41st STREET PLAN (1 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

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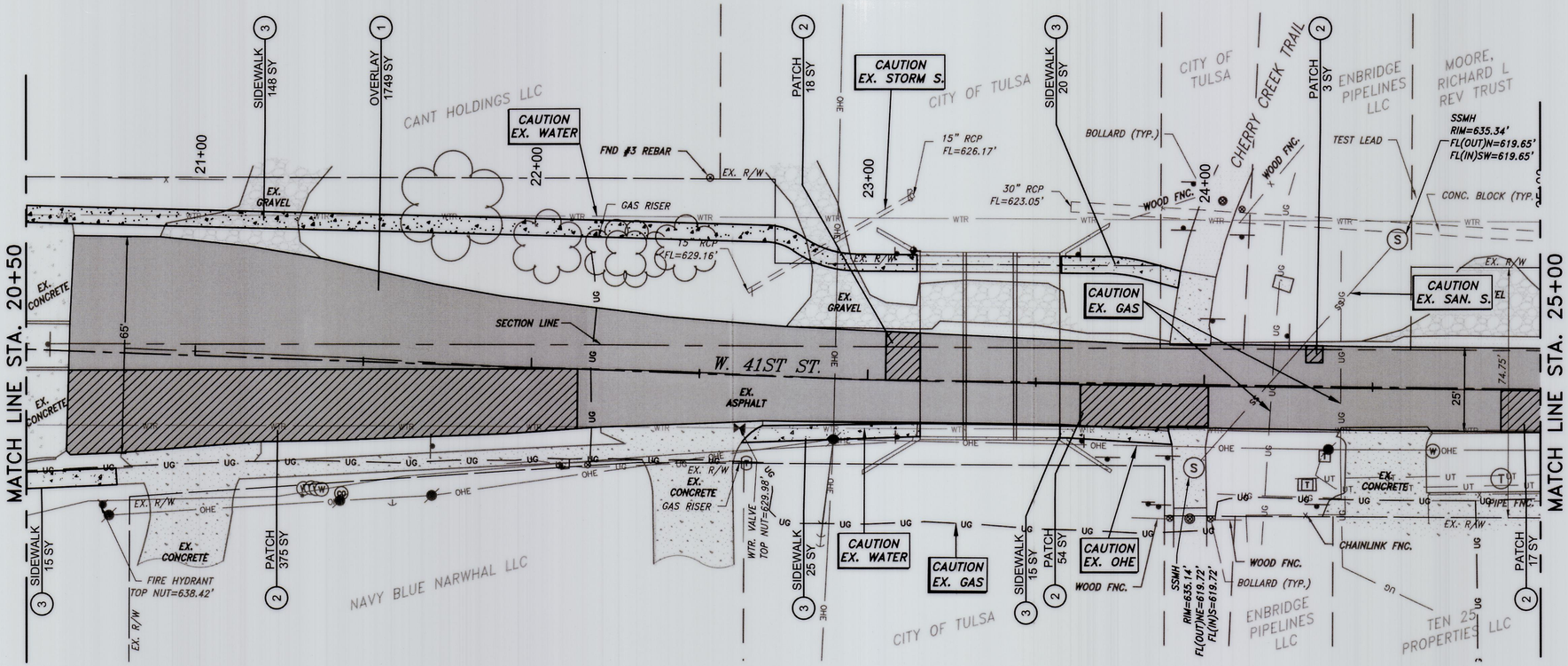
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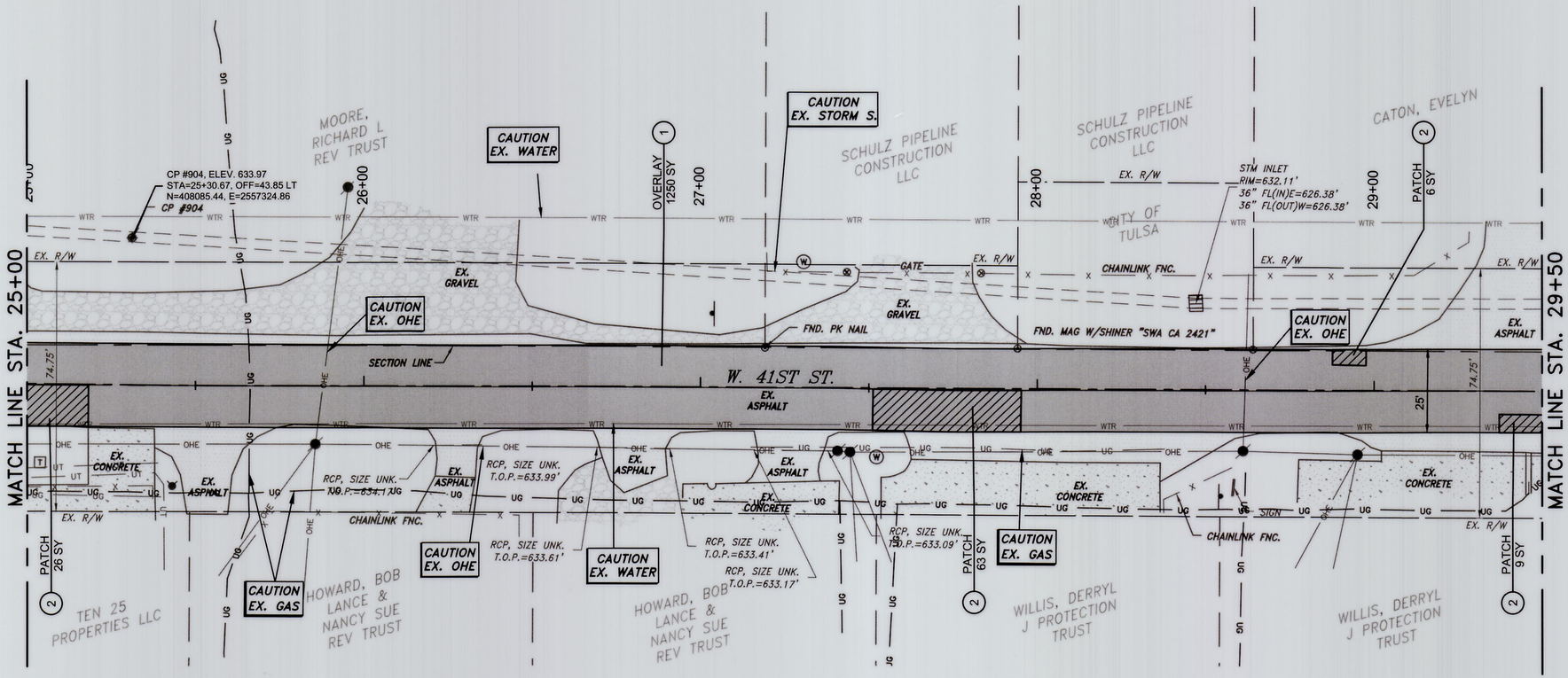
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1 inch = 20 ft.

20 0 20 40

CONTROL POINTS				
PNT. No.	Northing	Easting	Elevation	Description
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LEGEND:

- PROPOSED MILL AND ASPHALT OVERLAY
- PROPOSED AC-PATCH
- PROPOSED SIDEWALK
- PROPOSED PC PATCH
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- (8) CONCRETE CURB

LICENSED PROFESSIONAL ENGINEER Daniel F. Polasek 24920 OKLAHOMA

12/24/2024

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E 41st STREET PLAN (2 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
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	FIELD MGR.		
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER		

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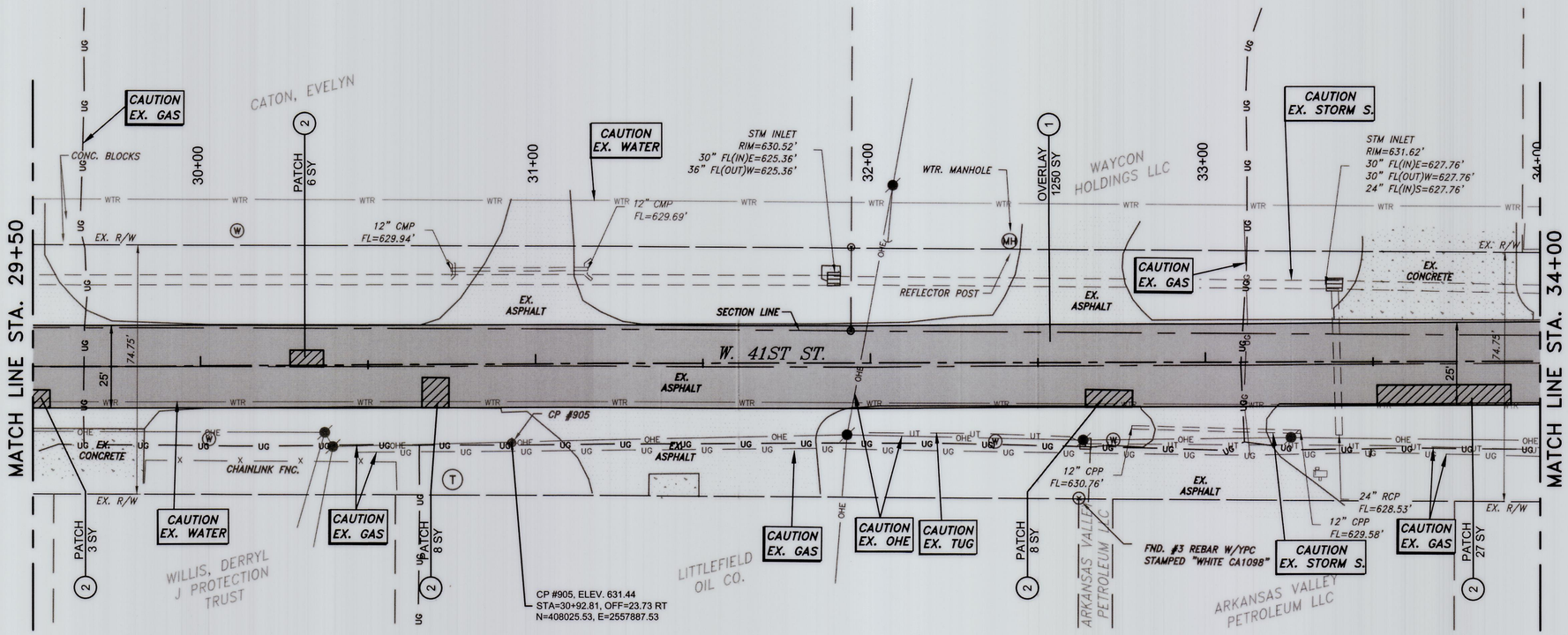
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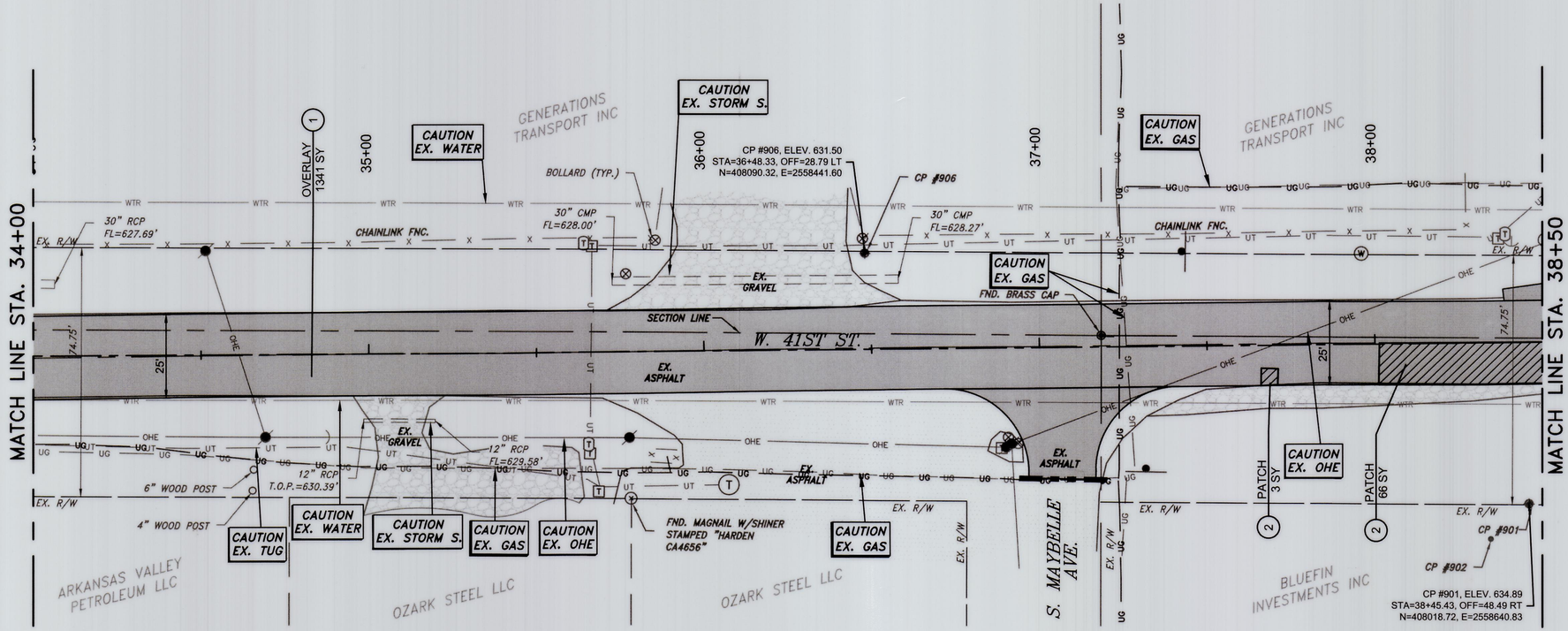
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ATLAS PAGE NO: 140, 191

SHEET 8 OF 30 SHEETS

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1 inch = 20 ft.

20 0 20 40

CONTROL POINTS

PNT. No.	Northing	Easting	Elevation	Description
901	408018.72	2558640.83	634.89	SETCP*3REBAR TLS RPC
905	408025.53	2557887.53	631.44	SETCP*3REBAR TLS RPC
906	408090.32	2558441.60	631.50	SETCP*3REBAR TLS RPC

LEGEND:

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	FIELD MGR.		
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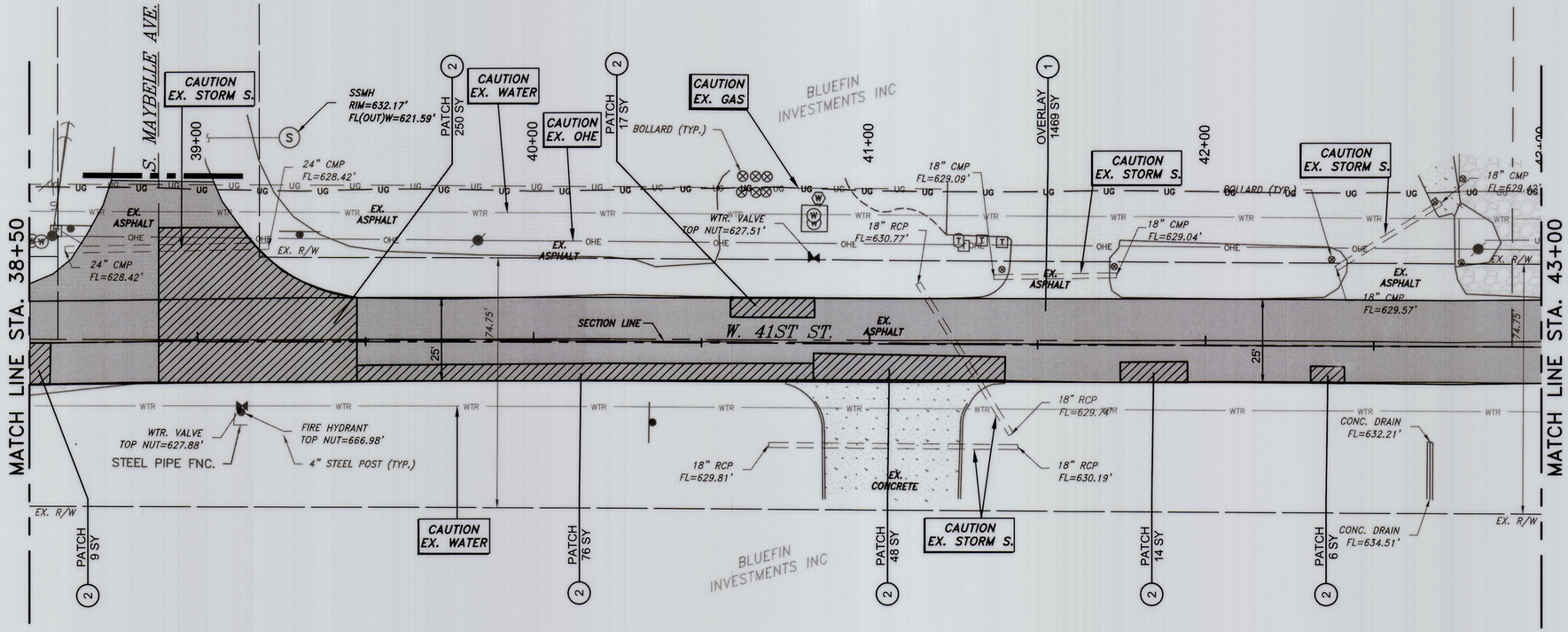
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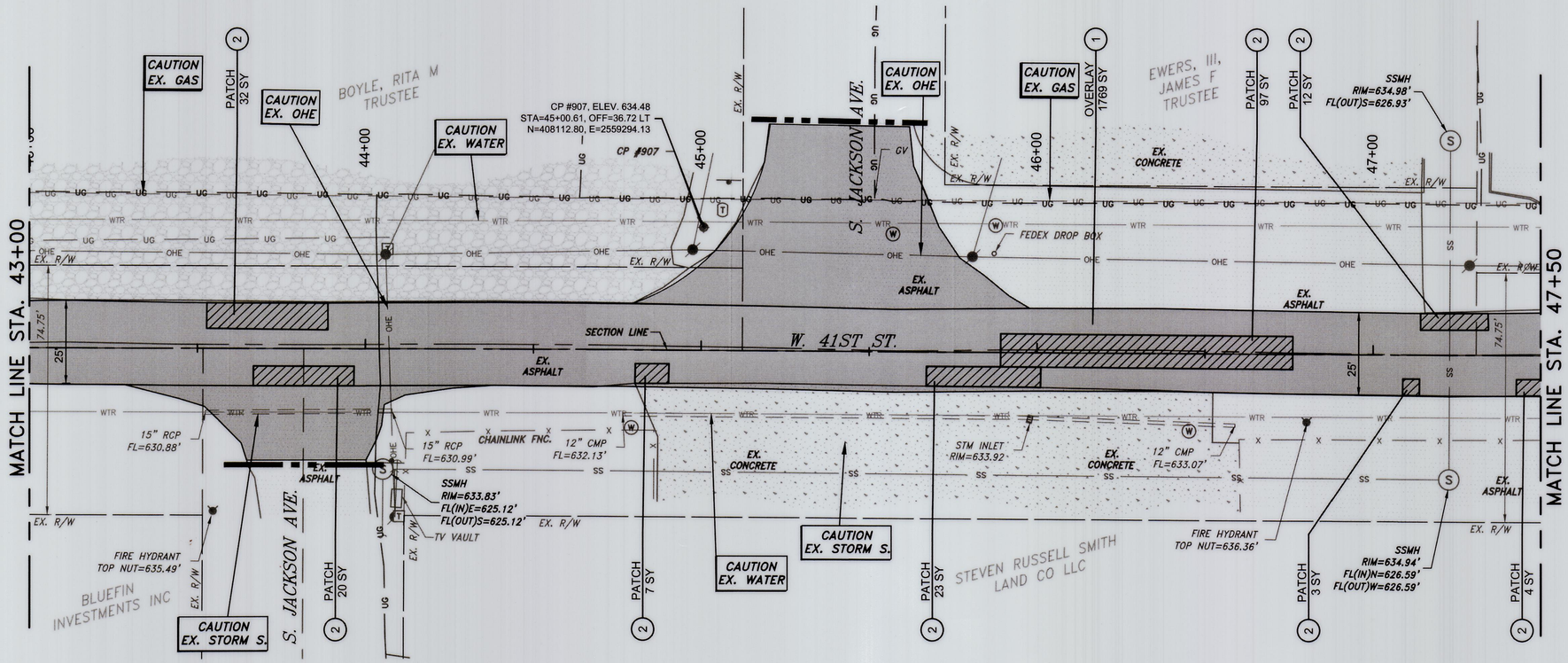
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ATLAS PAGE NO: 140, 191
SHEET 9 OF 30 SHEETS

E 41st STREET PLAN (3 OF 6)
PROJ. 2036A0025Z-2036A0035Z
W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.
CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PROFESSIONAL ENGINEER Daniel E. Polasek 24920 OKLAHOMA
12/24/2024

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1 inch = 20 ft.

20 0 20 40

CONTROL POINTS

PNT. No.	Northing	Easting	Elevation	Description
907	408112.80	2559294.13	634.48	SETCP*3REBAR TLS RPC

LEGEND:

- PROPOSED MILL AND ASPHALT OVERLAY
- PROPOSED AC-PATCH
- PROPOSED SIDEWALK
- PROPOSED PC PATCH
- PROJECT LIMITS
- (1) ASPHALT OVERLAY
- (2) FULL DEPTH TYPE 1 A.C. PATCH
- (3) CONCRETE SIDEWALK
- (4) ADJUST TO GRADE
- (5) SIDEWALK RAMP
- (6) PROPOSED AREA INLET
- (7) FULL DEPTH P.C. PATCH
- (8) CONCRETE CURB

LICENSED PROFESSIONAL ENGINEER — Daniel P. Polasek — 24920 — OKLAHOMA

2/24/2024

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E 41st STREET PLAN (4 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

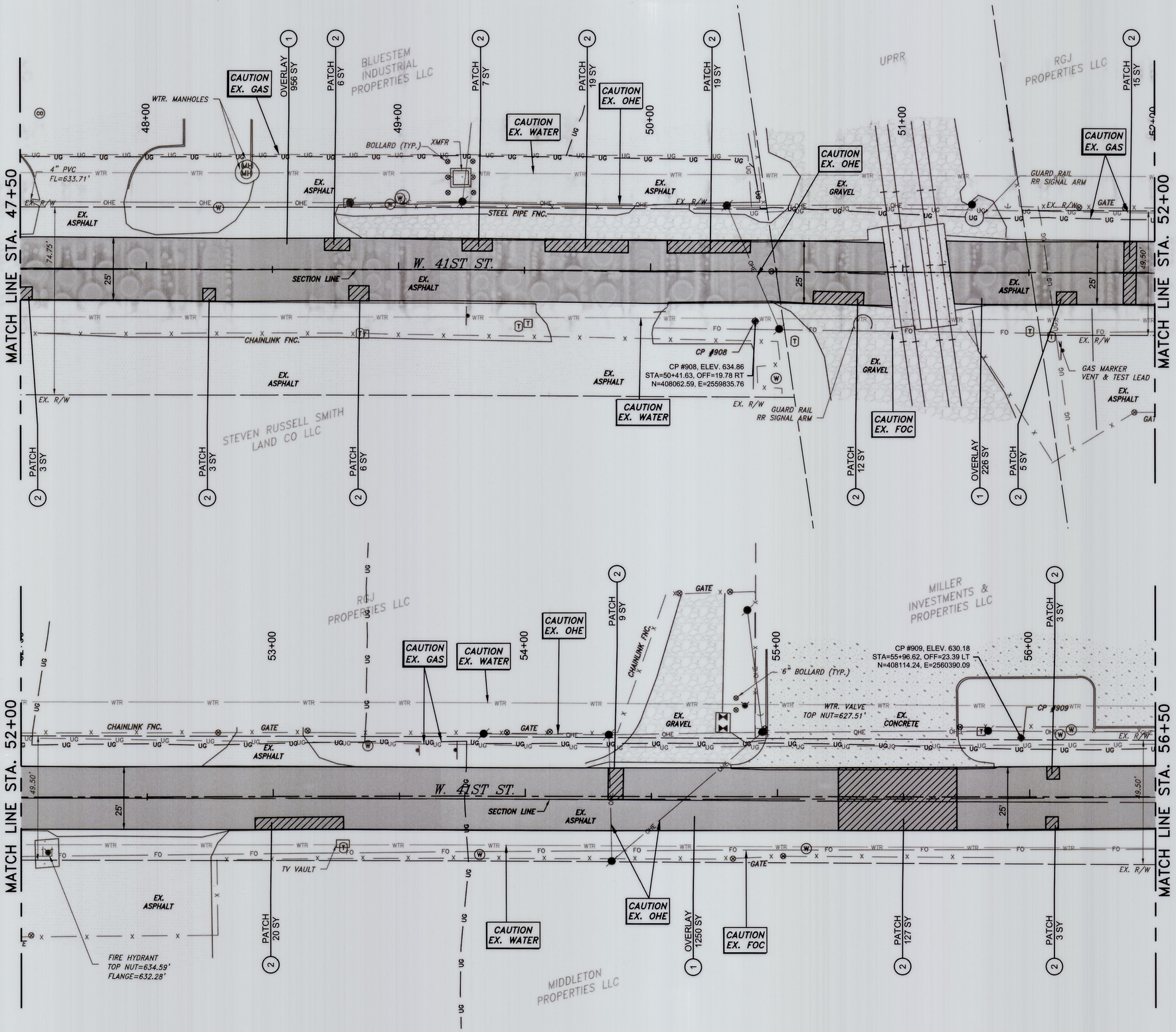
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	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.		3/25
HORIZONTAL: NA	LEAD ENGR.		3/25
	FIELD MGR.		3/25
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER		3-25

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 10 OF 30 SHEETS

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1 inch = 20 ft.

20 0 20 40

CONTROL POINTS

PNT. No.	Northing	Easting	Elevation	Description
908	408062.59	2559835.77	634.86	SETCP*3REBAR TLS RPC
909	408114.24	2560390.09	630.18	SETCP*3REBAR TLS RPC

LEGEND:

- PROPOSED MILL AND ASPHALT OVERLAY
- PROPOSED AC-PATCH
- PROPOSED SIDEWALK
- PROPOSED PC PATCH
- PROJECT LIMITS
- (1) ASPHALT OVERLAY
- (2) FULL DEPTH TYPE 1 A.C. PATCH
- (3) CONCRETE SIDEWALK
- (4) ADJUST TO GRADE
- (5) SIDEWALK RAMP
- (6) PROPOSED AREA INLET
- (7) FULL DEPTH P.C. PATCH
- (8) CONCRETE CURB

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

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E 41st STREET PLAN (5 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
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REVISION	BY	DATE

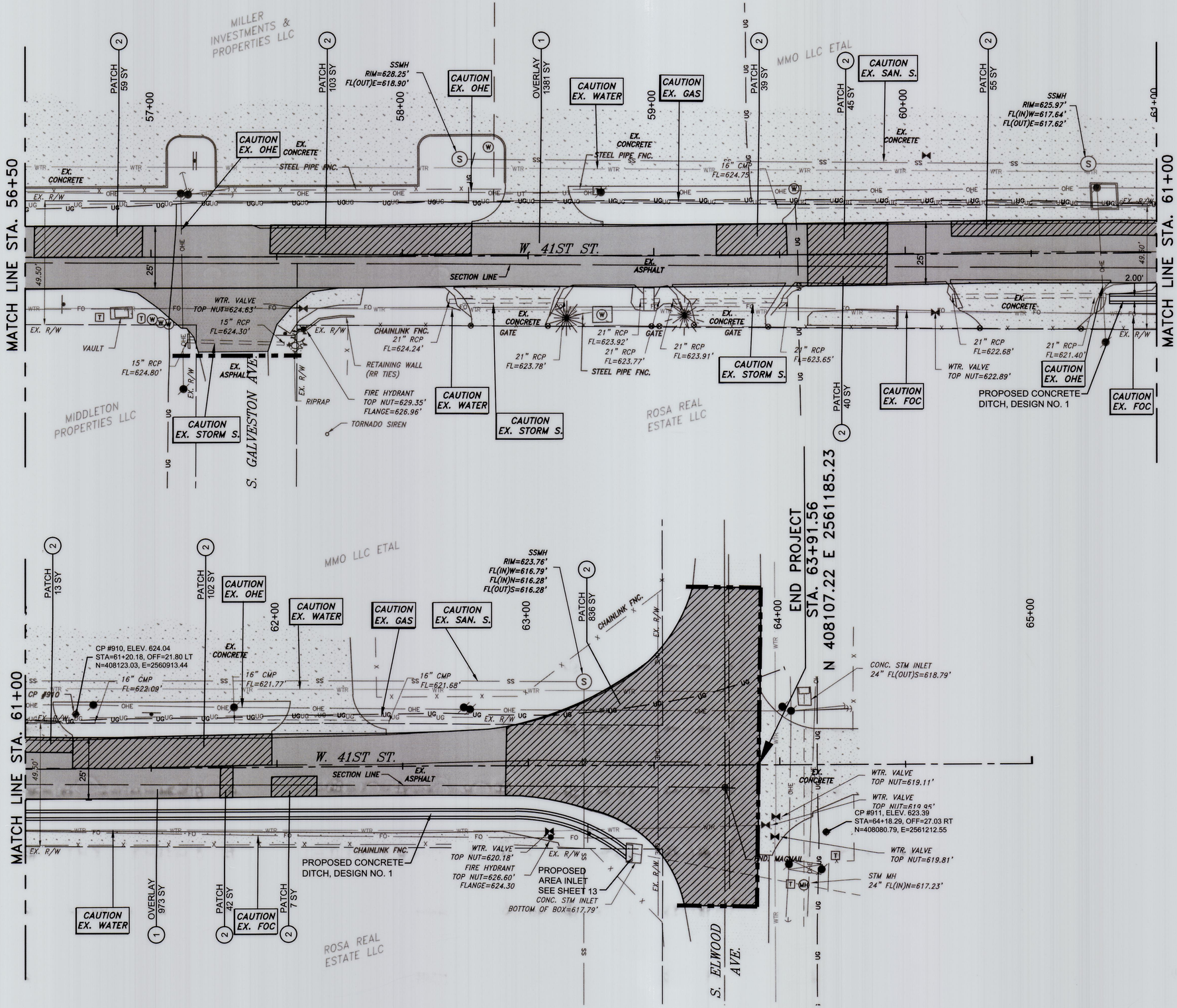
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VERTICAL: NA

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DESIGNED BY:	DEP	9/23
SURVEY BY:	TLS	4/23
PROJ. MGR.	RC	3/25
LEAD ENGR.		3/25
FIELD MGR.		3/25
RECOMMENDED:	HBS 3/25	
DESIGN MANAGER		

APPROVED:
CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025
ATLAS PAGE NO: 140, 191 SHEET 11 OF 30 SHEETS

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1 inch = 20 ft.

20 0 20 40

CONTROL POINTS

PNT. No.	Northing	Easting	Elevation	Description
910	408123.03	2560913.44	624.04	SETCP*3REBAR TLS RPC
911	408080.79	2561212.55	623.39	SETCP*3REBAR TLS RPC

LEGEND:

- PROPOSED MILL AND ASPHALT OVERLAY
- PROPOSED AC-PATCH
- PROPOSED SIDEWALK
- PROPOSED PC PATCH
- PROJECT LIMITS
- (1) ASPHALT OVERLAY
- (2) FULL DEPTH TYPE 1 A.C. PATCH
- (3) CONCRETE SIDEWALK
- (4) ADJUST TO GRADE
- (5) SIDEWALK RAMP
- (6) PROPOSED AREA INLET
- (7) FULL DEPTH P.C. PATCH
- (8) CONCRETE CURB

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Daniel E. Polasek 24920 LICENSED PROFESSIONAL ENGINEER OKLAHOMA

2/24/2024

E 41st STREET PLAN (6 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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REVISION	BY	DATE

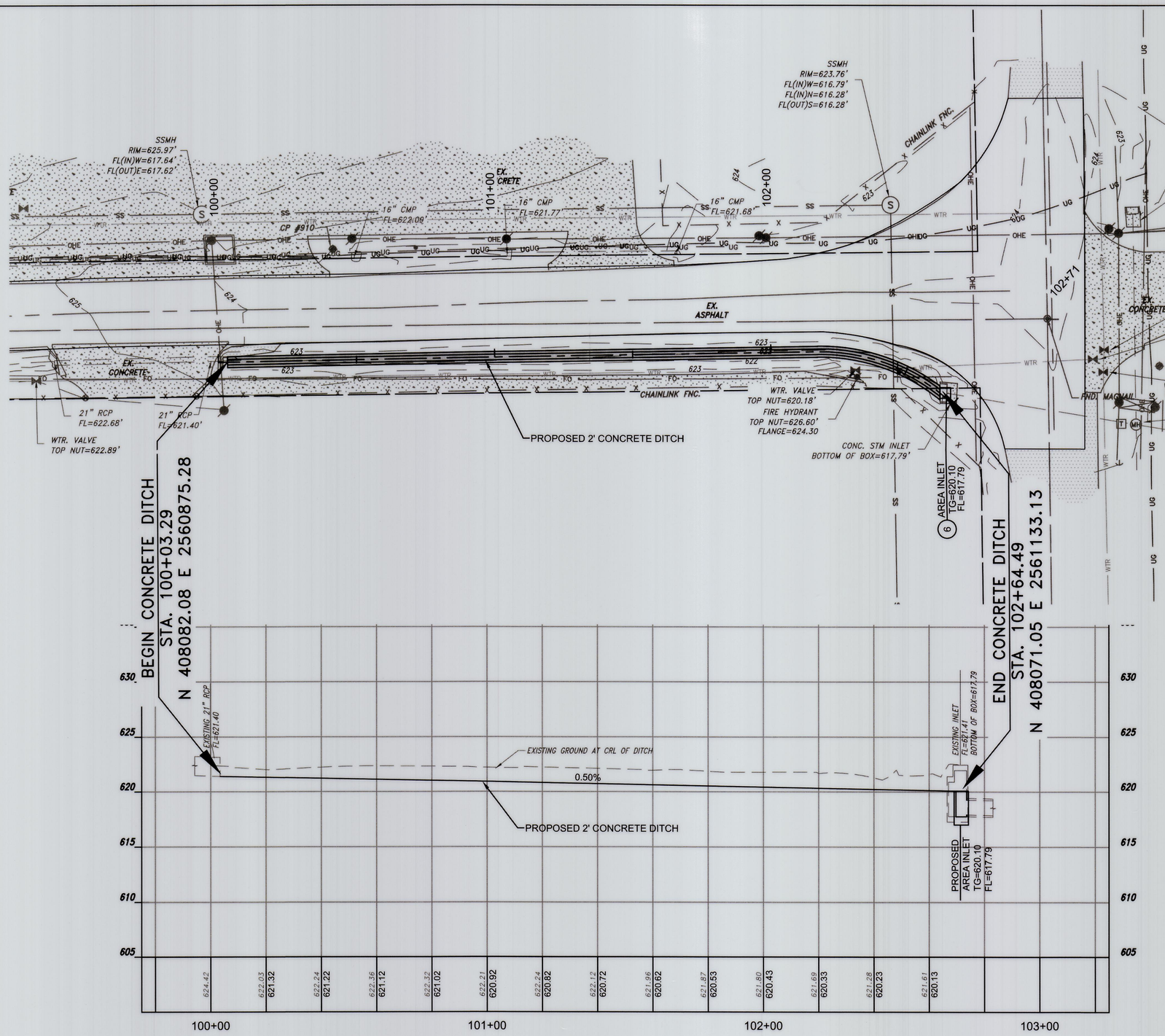
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PROFILE SCALE HORIZONTAL: NA VERTICAL: NA	PROJ. MGR.		3/25
	LEAD ENGR.		3/25
	FIELD MGR.		3/25
	RECOMMENDED: DESIGN MANAGER		3.25

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 12 OF 30 SHEETS

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CONTROL POINTS

PNT. No.	Northing	Easting	Elevation	Description
910	408123.03	2560913.44	624.04	SETCP*3REBAR TLS RPC
911	408080.79	2561212.55	623.39	SETCP*3REBAR TLS RPC

1 inch = 20 ft.

20 0 20 40

LEGEND:

- PROPOSED CONCRETE DITCH
- PROPOSED AC-PATCH
- PROPOSED SIDEWALK
- PROPOSED PC PATCH
- PROJECT LIMITS

1. ASPHALT OVERLAY
2. FULL DEPTH TYPE 1 A.C. PATCH
3. CONCRETE SIDEWALK
4. ADJUST TO GRADE
5. SIDEWALK RAMP
6. PROPOSED AREA INLET
7. FULL DEPTH P.C. PATCH
8. CONCRETE CURB

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

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REVISION	BY	DATE

CONCRETE DITCH PLAN & PROFILE

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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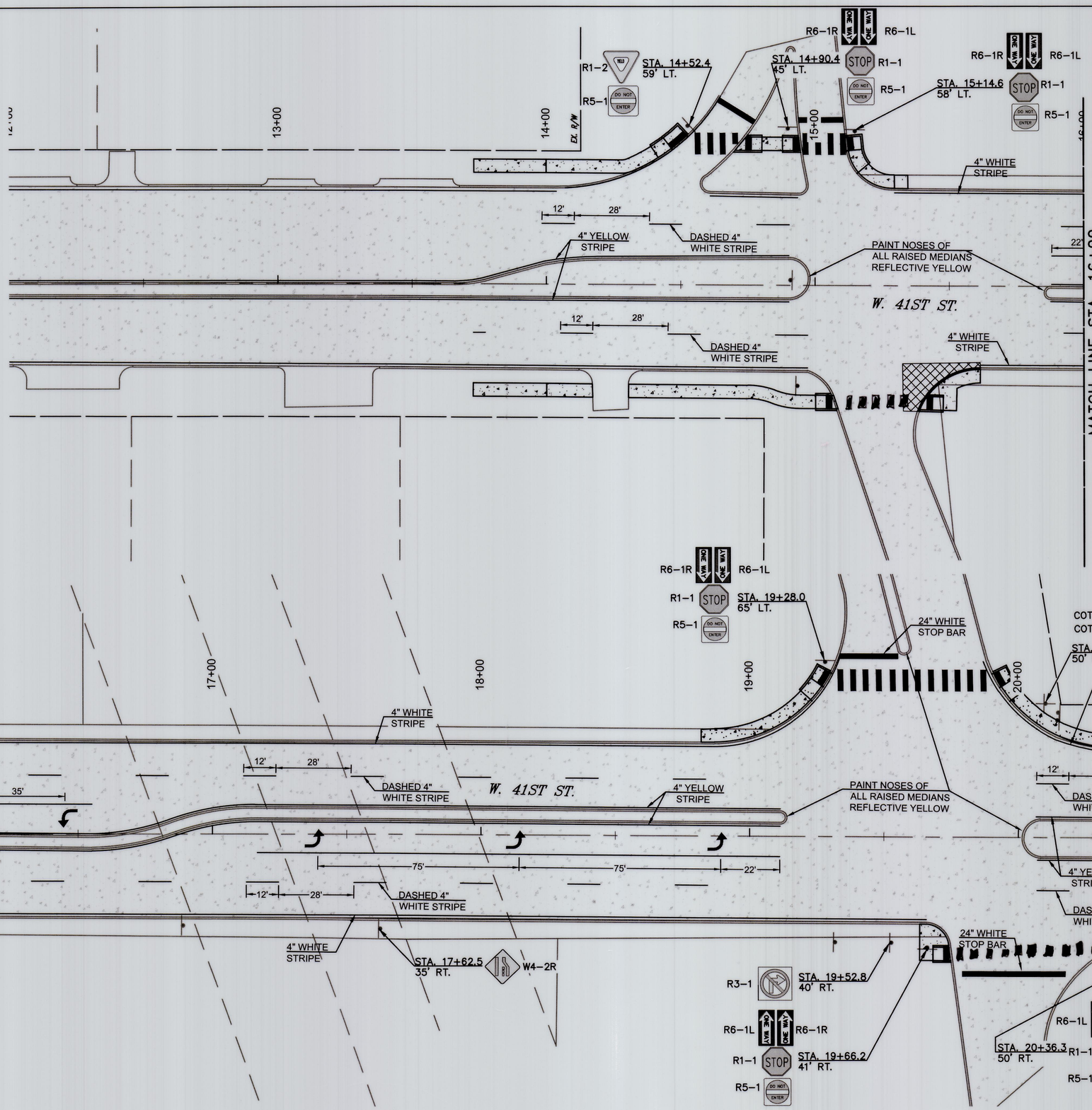
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	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.		
HORIZONTAL: 1"=20'	LEAD ENGR.		
VERTICAL: 1"=5'	FIELD MGR.		
	RECOMMENDED: DESIGN MANAGER		

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 1/28/2025

ATLAS PAGE NO: 140, 191 SHEET 13 OF 30 SHEETS

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TRAIL CROSSWALK DETAIL
NTS

NOTES: ALL SIGNS SHALL BE NEW AND UNDAMAGED

ALL SIGNS NOT IDENTIFIED SHALL NOT BE DISTURBED.

ALL COSTS FOR REMOVING, SALVAGING, STORING, AND RESETTING EXISTING SIGNS AND POSTS SHALL BE INCLUDED IN PRICE BID "REMOVE AND RESET SIGN".

ALL COSTS FOR FURNISHING AND INSTALLING THERMOPLASTIC CROSSWALK IMPRINTS SHALL BE INCLUDED IN PRICE BID FOR "THERMOPLASTIC CROSSWALK IMPRINTS". CONTRACTOR SHALL MATCH PATTERN AND COLOR OF EXISTING IMPRINTS.



2/24/2024

SIGNING & STRIPING PLAN (1 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

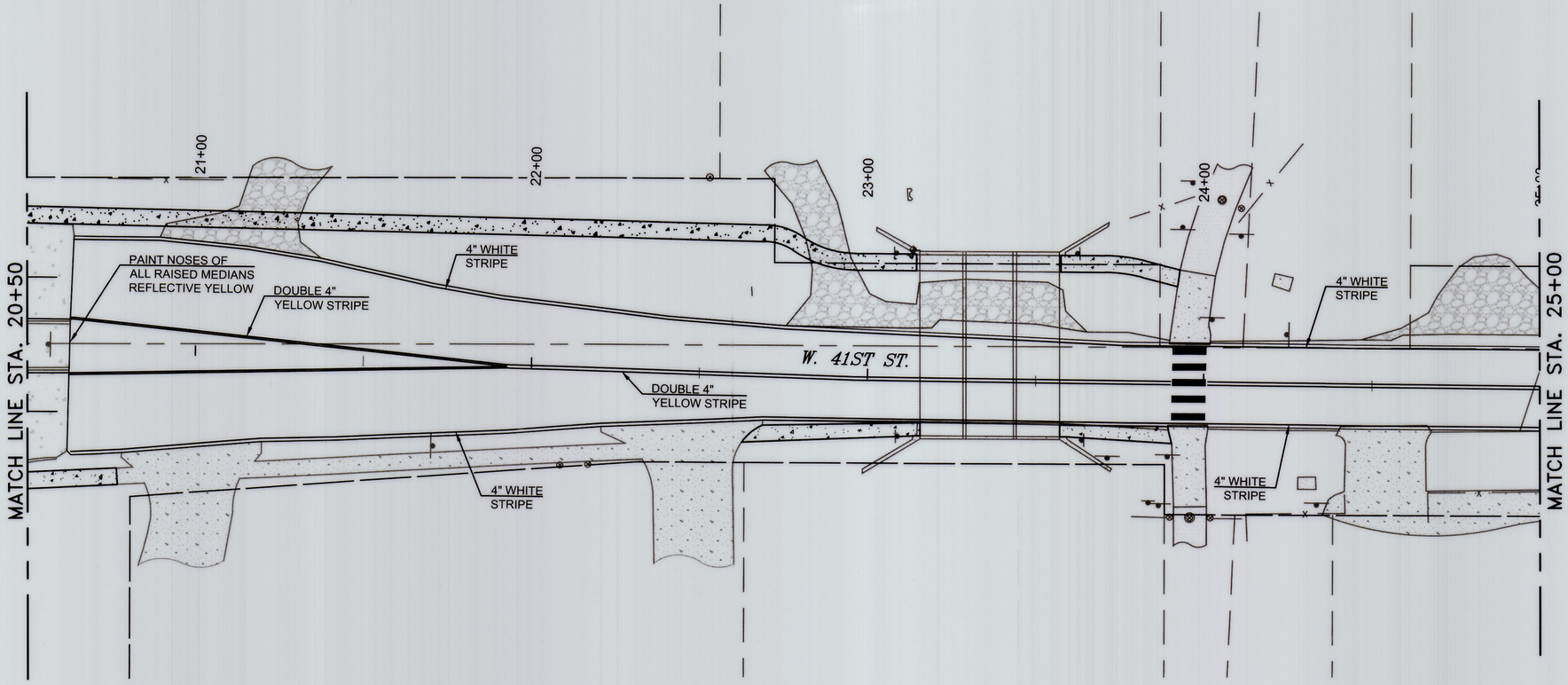
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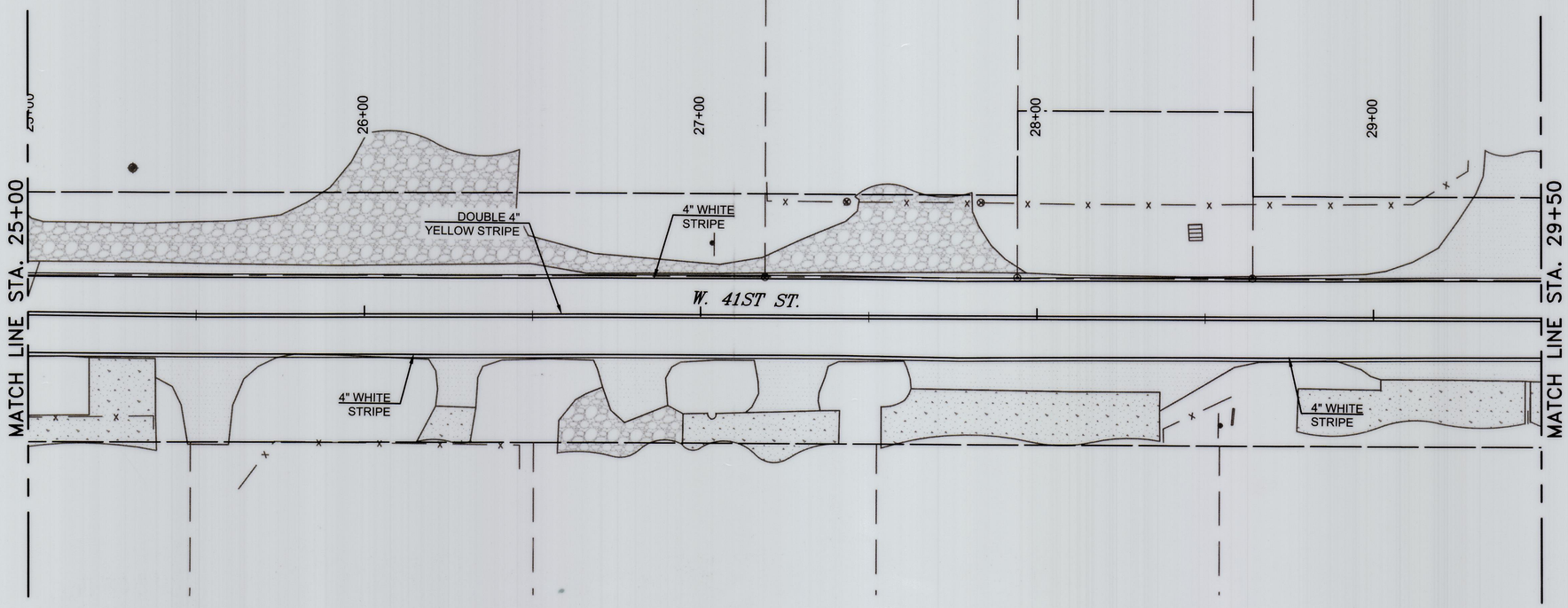
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PROFILE SCALE HORIZONTAL: NA VERTICAL: NA	PROJ. MGR.	RF	3/25
	LEAD ENGR.		
	FIELD MGR.		5/25
	RECOMMENDED: DESIGN MANAGER	AS	3.25

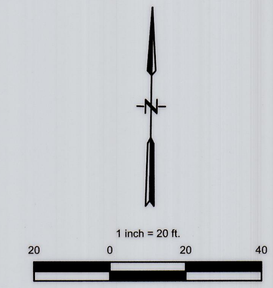
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DATE: 4/28/2025
SHEET 14 OF 30 SHEETS

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* CROSSWALK BARS ARE TO BE PLACED IN LINE WITH THE LANE LINES AND AT THE CENTERLINE OF EACH LANE. ALL CROSS WALK BARS SHALL BE EVENLY SPACED.

TRAIL CROSSWALK DETAIL
NTS

NOTES: ALL SIGNS SHALL BE NEW AND UNDAMAGED

ALL SIGNS NOT IDENTIFIED SHALL NOT BE DISTURBED.

ALL COSTS FOR REMOVING, SALVAGING, STORING, AND RESETTING EXISTING SIGNS AND POSTS SHALL BE INCLUDED IN PRICE BID "REMOVE AND RESET SIGN".

ALL COSTS FOR FURNISHING AND INSTALLING THERMOPLASTIC CROSSWALK IMPRINTS SHALL BE INCLUDED IN PRICE BID FOR "THERMOPLASTIC CROSSWALK IMPRINTS". CONTRACTOR SHALL MATCH PATTERN AND COLOR OF EXISTING IMPRINTS.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

2/24/2024

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SIGNING & STRIPING PLAN (2 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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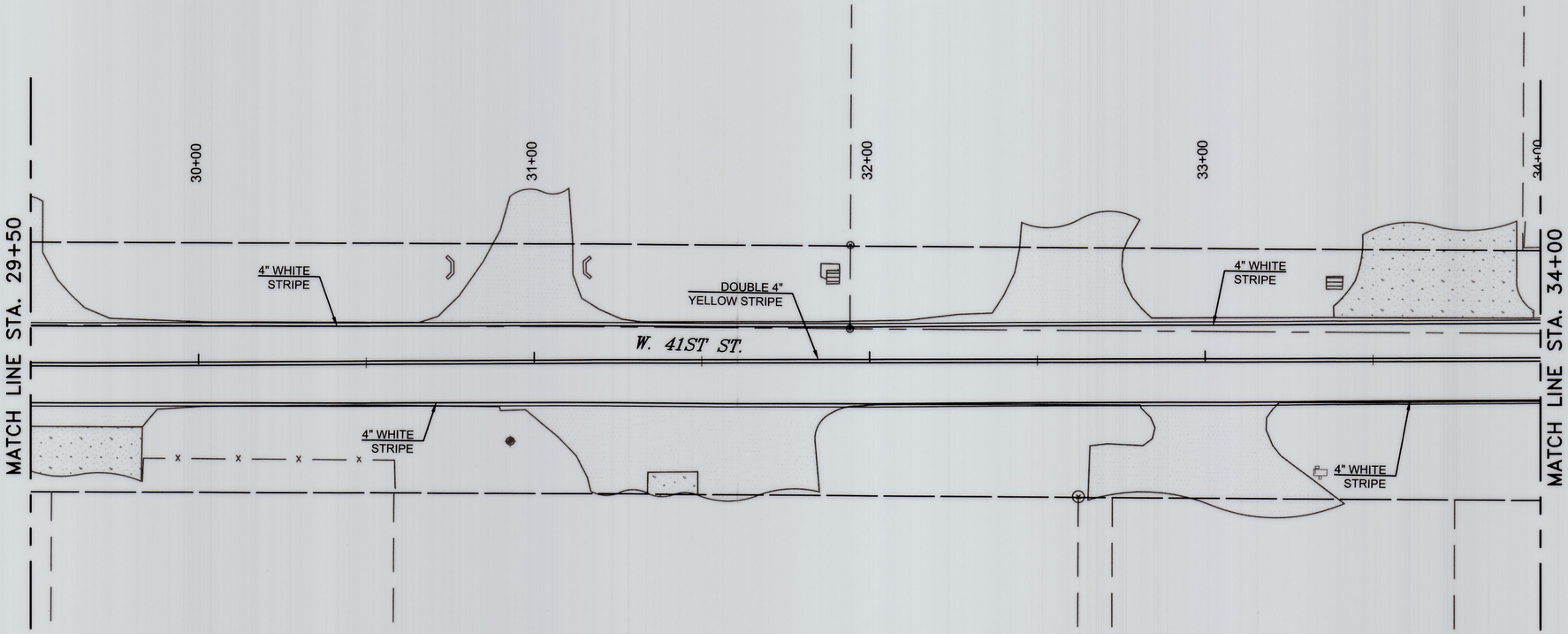
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	FIELD MGR.		
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER		3-25

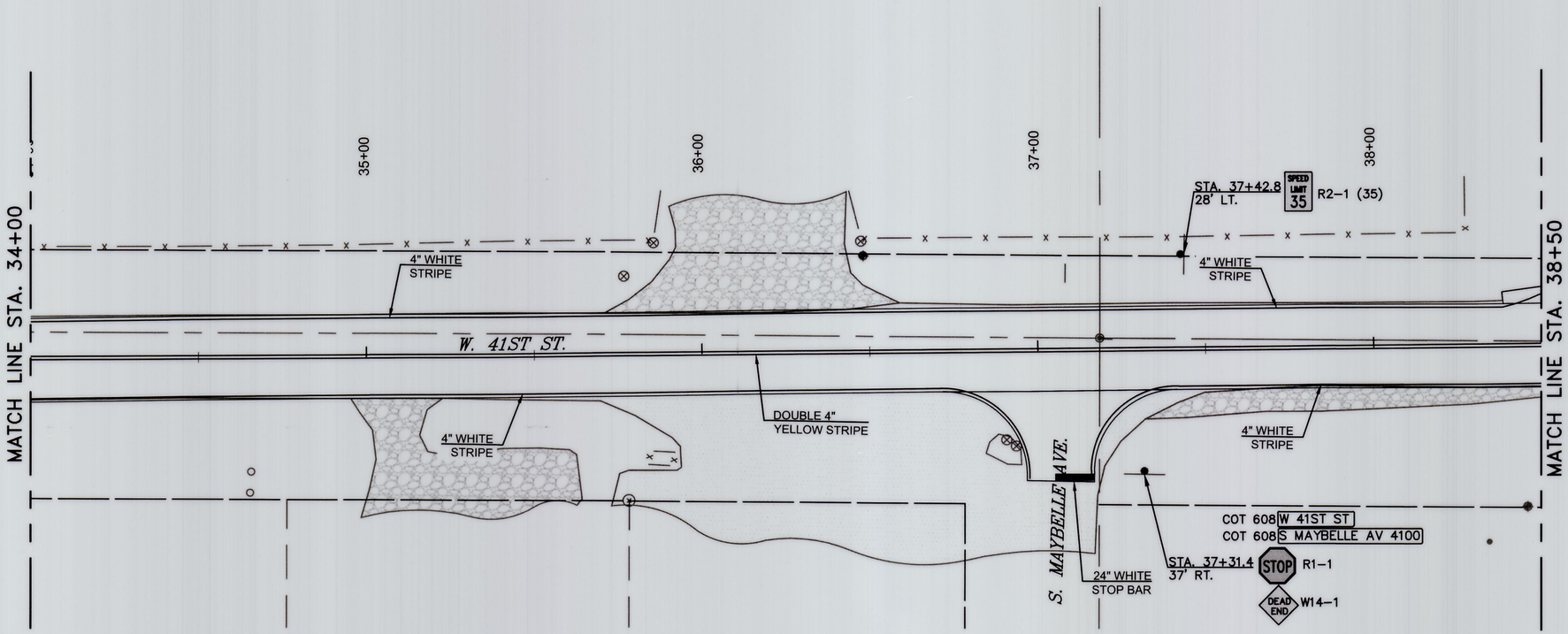
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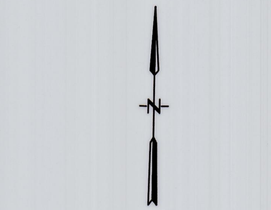
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ATLAS PAGE NO: 140, 191 SHEET 15 OF 30 SHEETS

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* CROSSWALK BARS ARE TO BE PLACED IN LINE WITH THE LANE LINES AND AT THE CENTERLINE OF EACH LANE. ALL CROSS WALK BARS SHALL BE EVENLY SPACED.

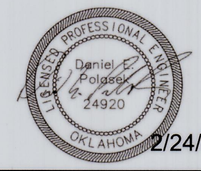
TRAIL CROSSWALK DETAIL
NTS

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2/24/2024

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SIGNING & STRIPING PLAN (3 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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REVISION	BY	DATE

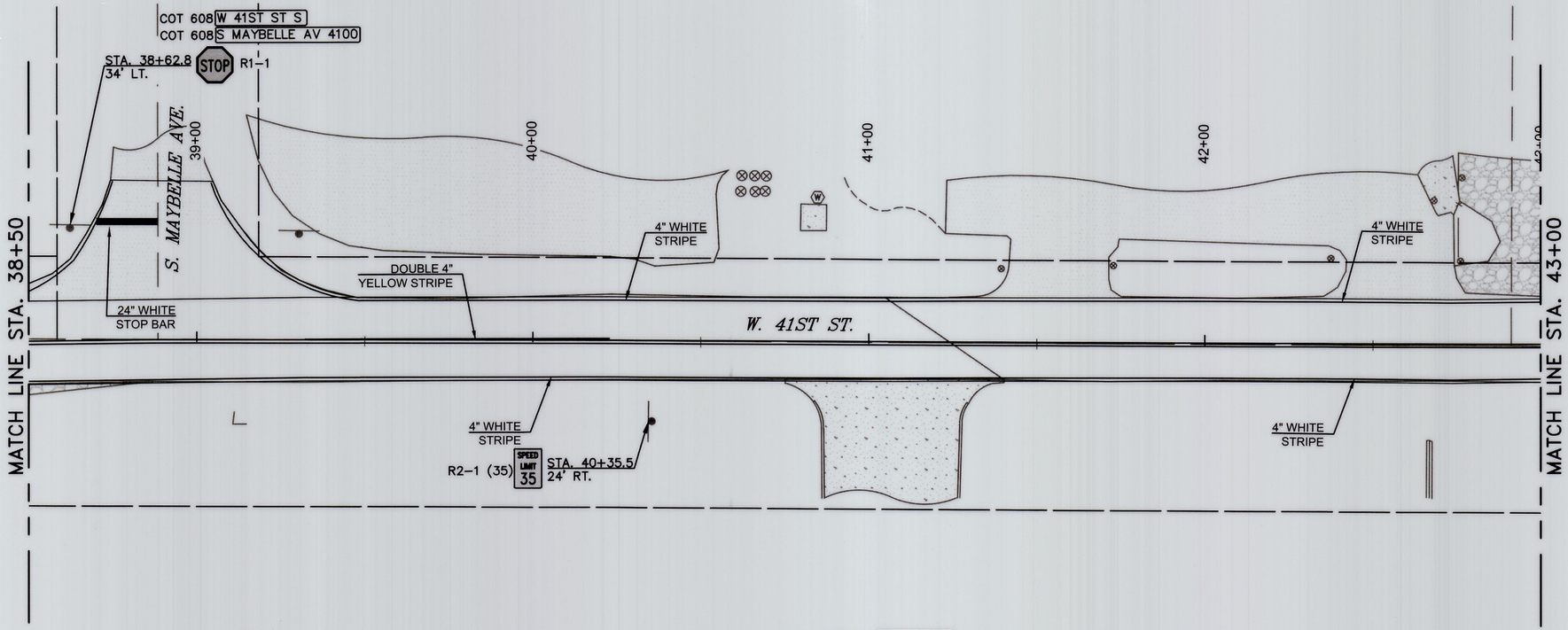
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	FIELD MGR.		5/25
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER		3-25

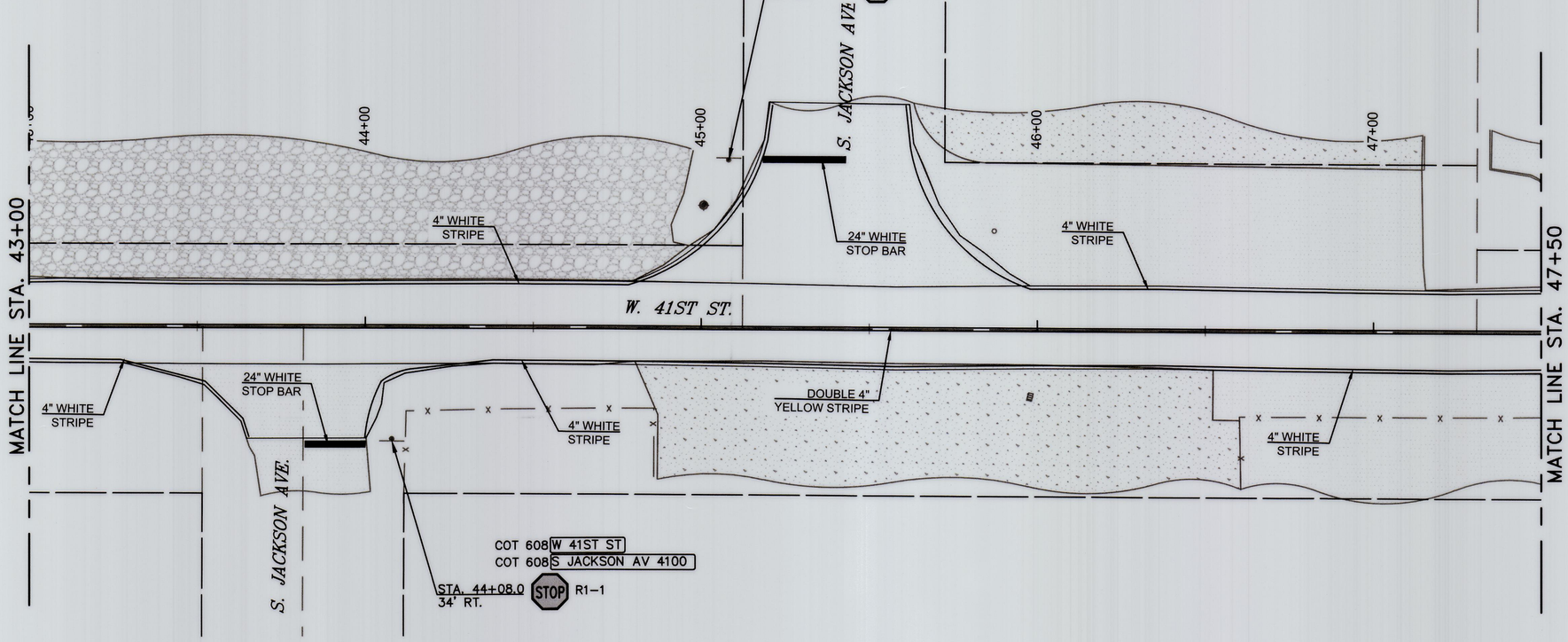
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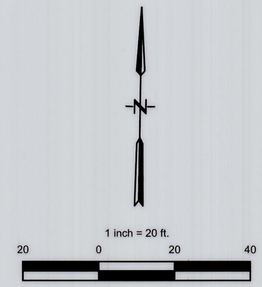
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ATLAS PAGE NO: 140, 191 SHEET 16 OF 30 SHEETS

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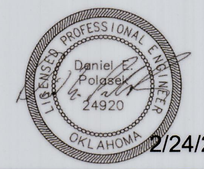
TRAIL CROSSWALK DETAIL
NTS

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2/24/2024

SIGNING & STRIPING PLAN (4 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

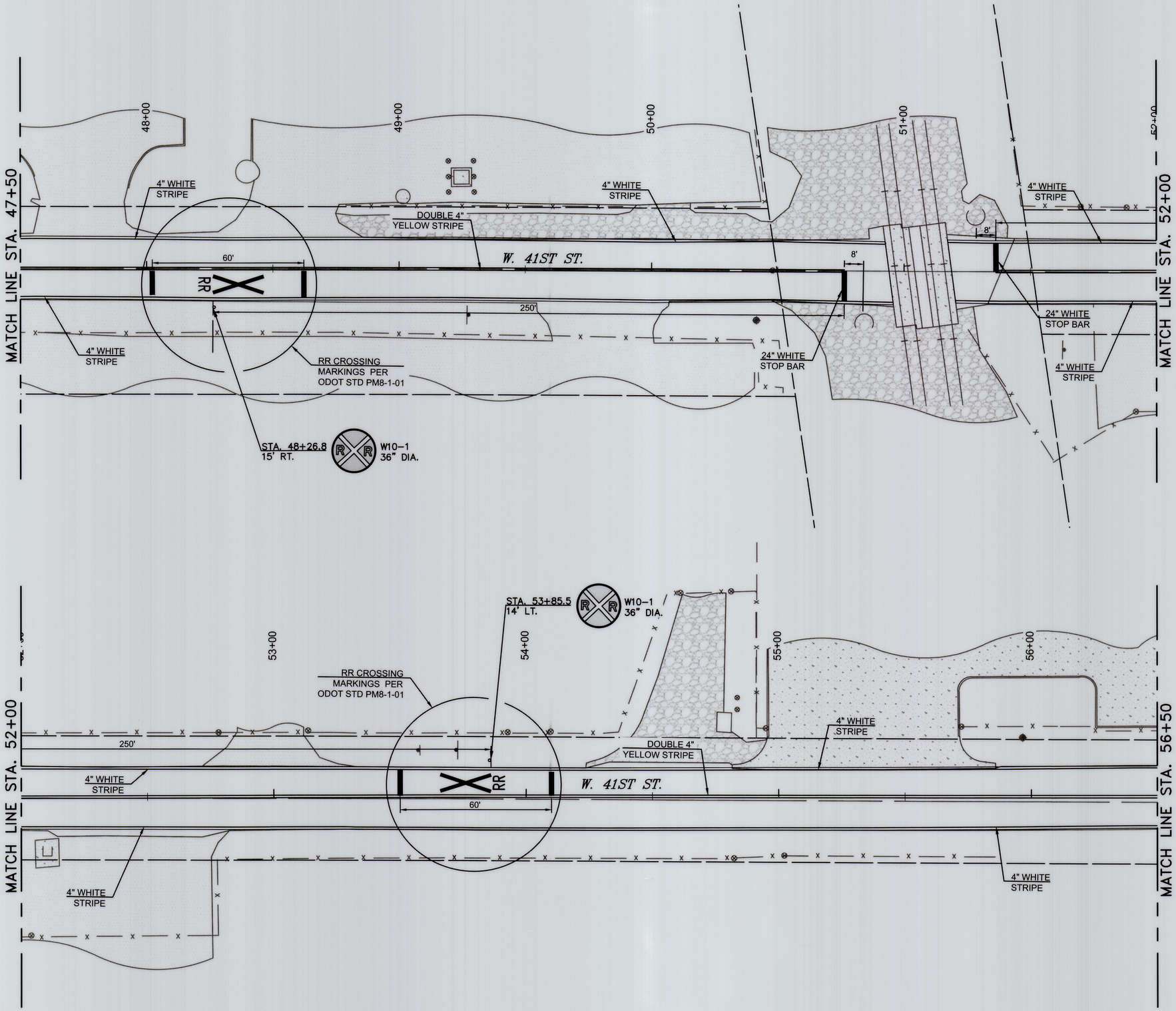
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HORIZONTAL: NA	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER	AAJ 3.25	

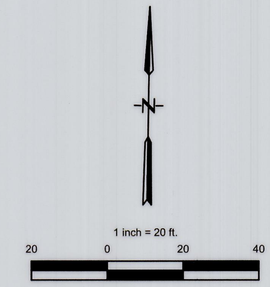
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ATLAS PAGE NO: 140, 191 SHEET 17 OF 30 SHEETS

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★ CROSSWALK BARS ARE TO BE PLACED IN LINE WITH THE LANE LINES AND AT THE CENTERLINE OF EACH LANE. ALL CROSS WALK BARS SHALL BE EVENLY SPACED.

TRAIL CROSSWALK DETAIL
NTS

NOTES: ALL SIGNS SHALL BE NEW AND UNDAMAGED

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PROFESSIONAL ENGINEER Daniel E. Polasek 24920 OKLAHOMA
2/24/2024

SIGNING & STRIPING PLAN (5 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
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1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

OKIE 811 Know what's below 811 before you dig.

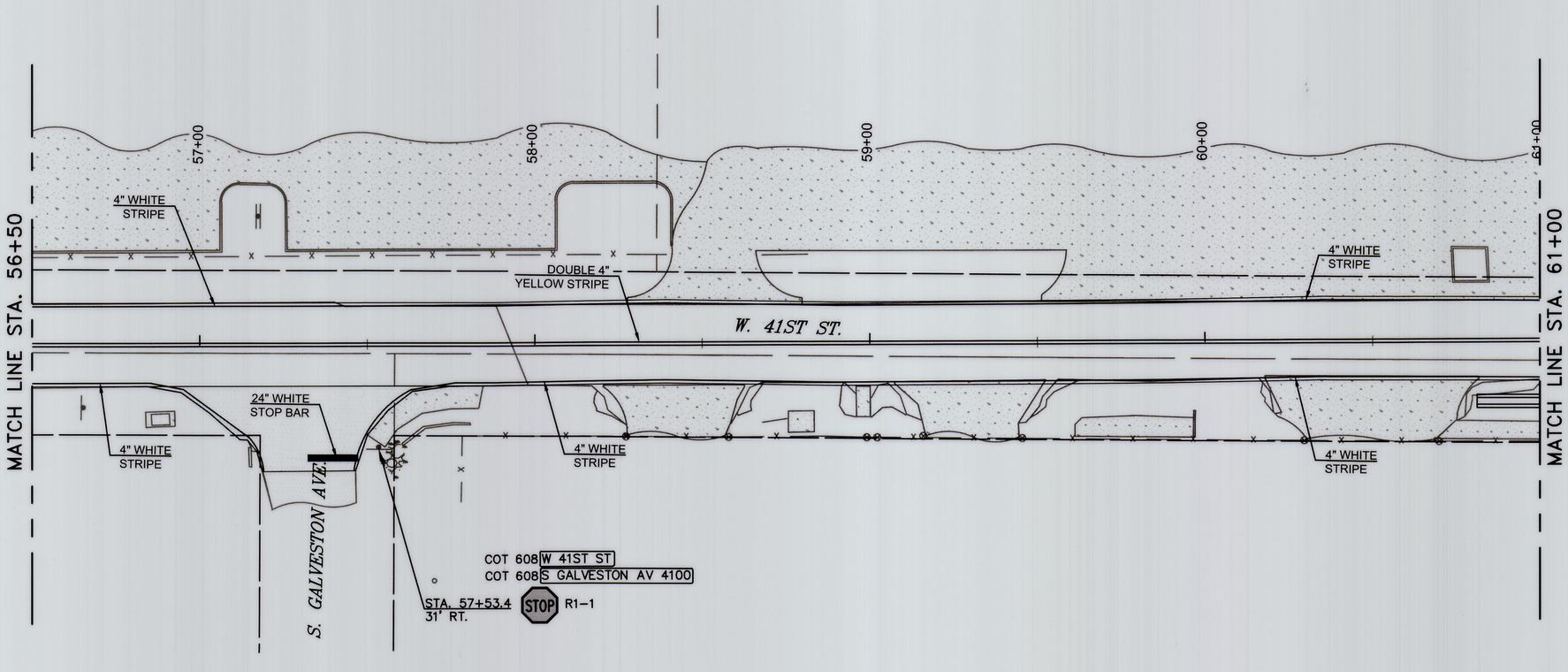
REVISION	BY	DATE

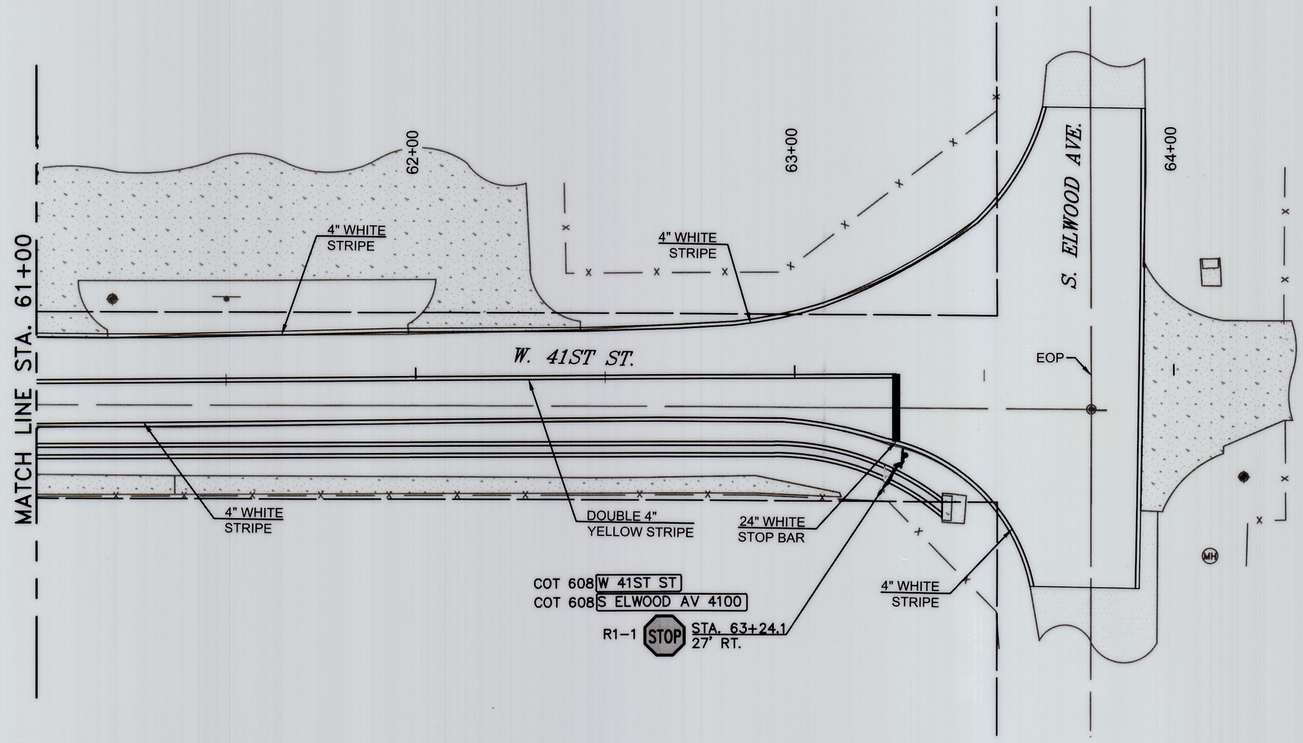
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PROFILE SCALE HORIZONTAL: NA VERTICAL: NA

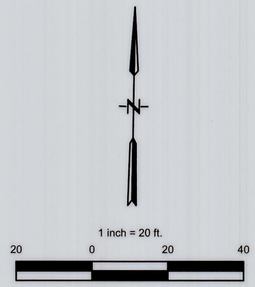
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DESIGNED BY:	DEP	9/23	
SURVEY BY:	TLS	4/23	
PROJ. MGR.			
LEAD ENGR.			
FIELD MGR.			
RECOMMENDED: DESIGN MANAGER			CITY ENGINEER

FILE: DRAWING:
DATE: 4/28/2025
ATLAS PAGE NO: 140, 191
SHEET 18 OF 30 SHEETS

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* CROSSWALK BARS ARE TO BE PLACED IN LINE WITH THE LANE LINES AND AT THE CENTERLINE OF EACH LANE. ALL CROSS WALK BARS SHALL BE EVENLY SPACED.

TRAIL CROSSWALK DETAIL
NTS

NOTES: ALL SIGNS SHALL BE NEW AND UNDAMAGED

ALL SIGNS NOT IDENTIFIED SHALL NOT BE DISTURBED.

ALL COSTS FOR REMOVING, SALVAGING, STORING, AND RESETTING EXISTING SIGNS AND POSTS SHALL BE INCLUDED IN PRICE BID "REMOVE AND RESET SIGN".

ALL COSTS FOR FURNISHING AND INSTALLING THERMOPLASTIC CROSSWALK IMPRINTS SHALL BE INCLUDED IN PRICE BID FOR "THERMOPLASTIC CROSSWALK IMPRINTS". CONTRACTOR SHALL MATCH PATTERN AND COLOR OF EXISTING IMPRINTS.

LICENSED PROFESSIONAL ENGINEER
Daniel P. Polgser
24920
OKLAHOMA
2/24/2024

OKIE 811 Know what's below 811 before you dig.

REVISION	BY	DATE

SIGNING & STRIPING PLAN (6 OF 6)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

PLAN SCALE: 1"=20'	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE HORIZONTAL: NA VERTICAL: NA	PROJ. MGR.		3/25
	LEAD ENGR.		
	FIELD MGR.		
	RECOMMENDED		

DESIGN MANAGER

APPROVED:

CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 19 OF 30 SHEETS

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SIGN SUMMARY - 41ST AVE. - UNION TO ELWOOD

ACTION	STA.	OFFSET	SIGN DESCRIPTION		AREA (SF)	QUANTITIES	POST LENGTH (FT) 1.5"	1.75"	2"
REPLACE	14+52.4	59' L	YIELD (R1-2)	36X36	3.90	1.00	2	9.5	3
			DO NOT ENTER (R5-1)	30X30	6.25	1.00			
REPLACE	14+90.4	45'	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			DO NOT ENTER (R5-1)	30X30	6.25	1.00			
			ONE WAY (R6-1R)	36X12	3.00	1.00			
			ONE WAY (R6-1L)	36X12	3.00	1.00			
REPLACE	15+14.6	58' L	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			DO NOT ENTER (R5-1)	30X30	6.25	1.00			
			ONE WAY (R6-1R)	36X12	3.00	1.00			
			ONE WAY (R6-1L)	36X12	3.00	1.00			
REPLACE	17+62.5	35' R	RIGHT LANE ENDS (W4-2R)	36X36	9.00	1.00		9.5	3
REPLACE	19+28.00	65' L	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			DO NOT ENTER (R5-1)	30X30	6.25	1.00			
			ONE WAY (R6-1R)	36X12	3.00	1.00			
			ONE WAY (R6-1L)	36X12	3.00	1.00			
REPLACE	19+52.8	40' R	NO RIGHT TURN (R3-1)	24X24	4.00	1.00		9.5	3
REPLACE	19+66.2	41' R	STOP (R1-1)	30X30	5.18	1.00		9.5	3
			DO NOT ENTER (R5-1)	30X30	6.25	1.00			
			ONE WAY (R6-1R)	36X12	3.00	1.00			
			ONE WAY (R6-1L)	36X12	3.00	1.00			
REPLACE	20+08.3	50' L	W 41ST ST (2 EACH)	30X6	3.76	2.00	2	9.5	3
			S TACOMA AV 4000 (2 EACH)	30X6	3.76	2.00			
REPLACE	20+36.3	50' R	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			DO NOT ENTER (R5-1)	30X30	6.25	1.00			
			ONE WAY (R6-1R)	36X12	3.00	1.00			
			ONE WAY (R6-1L)	36X12	3.00	1.00			
REPLACE	37+31.4	37' R	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			DEAD END (W14-1)	30X30	6.25	1.00			
			W 41ST ST (2 EACH)	30X6	3.76	2.00			
			S MAYBELLE AV 4100 (2 EACH)	30X6	3.76	2.00			
		28' L	SPEED LIMIT 35 (R2-1E(35))	24X30	5.00	1.00		12	3
REPLACE	38+62.8	34' L	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			W 41ST ST (2 EACH)	30X6	3.76	2.00			
			S MAYBELLE AV 4100 (2 EACH)	30X6	3.76	2.00			
REPLACE	40+35.5	24' R	SPEED LIMIT 35 (R2-1E(35))	24X30	5.00	1.00		12	3
REPLACE	44+08.0	34' R	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			W 41ST ST (2 EACH)	30X6	3.76	2.00			
			S JACKSON AV 4100 (2 EACH)	30X6	3.76	2.00			
REPLACE	45+08.0	50' L	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			W 41ST ST (2 EACH)	30X6	3.76	2.00			
			S JACKSON AV 4000 (2 EACH)	30X6	3.76	2.00			
REPLACE	48+26.8	15' R	RAILROAD CROSSING (W10-1)	36" DIA.	7.07	1.00		9.5	3
REPLACE	53+85.5	14' L	RAILROAD CROSSING (W10-1)	36" DIA.	7.07	1.00		9.5	3
REPLACE	57+53.4	31' R	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			W 41ST ST (2 EACH)	30X6	3.76	2.00			
			S GALVESTON AV 4100 (2 EACH)	30X6	3.76	2.00			
REPLACE	63+24.1	27' R	STOP (R1-1)	30X30	5.18	1.00	2	9.5	3
			W 41ST ST (2 EACH)	30X6	3.76	2.00			
			S ELWOOD 4100 (2 EACH)	30X6	3.76	2.00			
TOTAL =					224.41		24.00	185.50	57.00

SUMMARY OF ROADWAY QUANTITIES

ITEM	SPEC. NO.	DESCRIPTION	UNIT	QTY	(W. 41ST STREET S.) P&P SHEETS SHT 7	SHT 8	SHT 9	SHT 10	SHT 11	SHT 12
1	202(A)	UNCLASSIFIED EXCAVATION	CY	183	0	183				
2	205(A)	TYPE A SALVAGED TOPSOIL	CY	65	-	-	-	-	-	-
3	220	SWPPP DOCUMENTATION	LSUM	1	-	-	-	-	-	-
4	230(A)	SOLID SLAB SODDING	SY	840	-	-	-	-	-	-
5	303(A)	AGGREGATE BASE (TYPE A)	CY	964	9	183	41	205	84	442
6	310(B)	SUBGRADE METHOD B	SY	2893	27	549	123	615	252	1327
7	325	SEPARATOR FABRIC	SY	3617	34	686	154	769	315	1659
8	COT 334	CONSTRUCTION AS-BUILT	LSUM	1	-	-	-	-	-	-
9	COT 335	CONTRACTOR'S QUALITY CONTROL	LSUM	1	-	-	-	-	-	-
10	409	FABRIC REINFORCEMENT	SY	13388	0	2999	2591	3238	2206	2354
11	411(C)	SUPERPAVE, TYPE S4 (PG 70-28)	TON	1500	0	336	290	363	247	264
12	411(D)	SUPERPAVE, TYPE S6 (PG 70-28)	TON	376	0	84	73	91	62	66
13	412	COLD MILL PAVEMENT	SY	13388	0	2999	2591	3238	2206	2354
14	502(A)	ENGINEERED FALSEWORK	LSUM	1	-	-	-	-	-	-
15	509(D)	CLASS C CONCRETE	CY	19	0	0	0	0	0	19
16	COT 608	GROUND SIGN	SF	224	-	-	-	-	-	-
17	COT 608	1-1/2" SIGN POST	LF	24	-	-	-	-	-	-
18	COT 608	1-3/4" SIGN POST	LF	186	-	-	-	-	-	-
19	COT 608	2" SIGN POST	LF	57	-	-	-	-	-	-
20	COT 609(A)	CONCRETE CURB (INTEGRAL)	LF	30	30	-	-	-	-	-
21	610(A)	4" CONCRETE SIDEWALK	SY	313	145	168	0	0	0	0
22	610(I)	TACTILE WARNING DEVICE-NEW	SF	60	60	-	-	-	-	-
23	611(G)	INLET CDI RCP DES. 1	EA	1	-	-	-	-	-	1
24	641	MOBILIZATION	EA	1	-	-	-	-	-	-
25	642(A)	CONSTRUCTION STAKING LEVEL II	EA	1	-	-	-	-	-	-
26	855(A)	TRAFFIC STRIPE [(4")(PLASTIC)/(~~MULTI-POLYMER~~)]	LF	20793	3338	3838	3616	3616	3431	2954
27	855(A)	TRAFFIC STRIPE [(12")(PLASTIC)/(~~MULTI-POLYMER~~)]	LF	84	0	0	0	0	84	0
28	855(A)	TRAFFIC STRIPE [(24")(PLASTIC)/(~~MULTI-POLYMER~~)]	LF	~~615~~ 331	~~331~~	50	14	67	63	40
29	855(A)	TRAFFIC STRIPE [(PLASTIC)/(MULTIPOLYMER)] [(ARROWS)	EA	5	5	-	-	-	-	-
30	880(B)	CONSTRUCTION SIGNS 0.00 TO 6.25 SF	SD	2610	-	-	-	-	-	-
31	880(B)	CONSTRUCTION SIGNS 6.26 TO 15.99 SF	SD	5130	-	-	-	-	-	-
32	880(B)	CONSTRUCTION SIGNS 16.00 AND UP	SD	3060	-	-	-	-	-	-
33	880(C)	BARRICADES (TYPE III)	SD	16470	-	-	-	-	-	-
34	880(E)	TYPE "A" WARNING LIGHT	SD	34740	-	-	-	-	-	-
35	880(F)	DRUMS	SD	11250	-	-	-	-	-	-
36	880(G)	TUBE CHANNELIZERS	SD	9000	-	-	-	-	-	-
37	880(I)	FLAGGER	FD	50	-	-	-	-	-	-
38	882(B)	REMOTE CONTROLLED CHANGEABLE MESSAGE SIGN	SD	100	-	-	-	-	-	-
39	SPECIAL	PROJECT SIGN (CITY OF TULSA)	EA	2	-	-	-	-	-	-
40	SPECIAL	TYPE I AC PATCH	CY	639	0	123	27	137	56	296
41	SPECIAL	TYPE 1 PCC PATCH	CY	6	6	-	-	-	-	-
42	SPECIAL	CURB RAMP	EA	9	9	-	-	-	-	-
43	SPECIAL	URBAN RIGHT-OF-WAY RESTORATION	EA	1	-	-	-	-	-	-
44	SPECIAL	QUICK SET FLOWABLE FILL	CY	12	2	2	2	2	2	2
45	SPECIAL	FLAGGER (RAILROAD)	FD	30	-	-	-	-	-	-
46	SPECIAL	RAILROAD COORDINATION	LSUM	1	-	-	-	-	-	-
47	SPECIAL	OWNER'S ALLOWANCE	EA	25,000	-	-	-	-	-	-

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

2/24/2024

SUMMARIES

PROJ. 2036A0025Z-2036A0035Z

41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

PLAN SCALE:
PROFILE SCALE
HORIZONTAL:
VERTICAL:

DRAWN BY:	FLK	9/23
DESIGNED BY:	DEP	9/23
SURVEY BY:	TLS	4/23
PROJ. MGR.	DEP	9/25
LEAD ENGR.		9/25
FIELD MGR.		9/25
RECOMMENDED:		

DESIGN MANAGER

APPROVED:

CITY ENGINEER

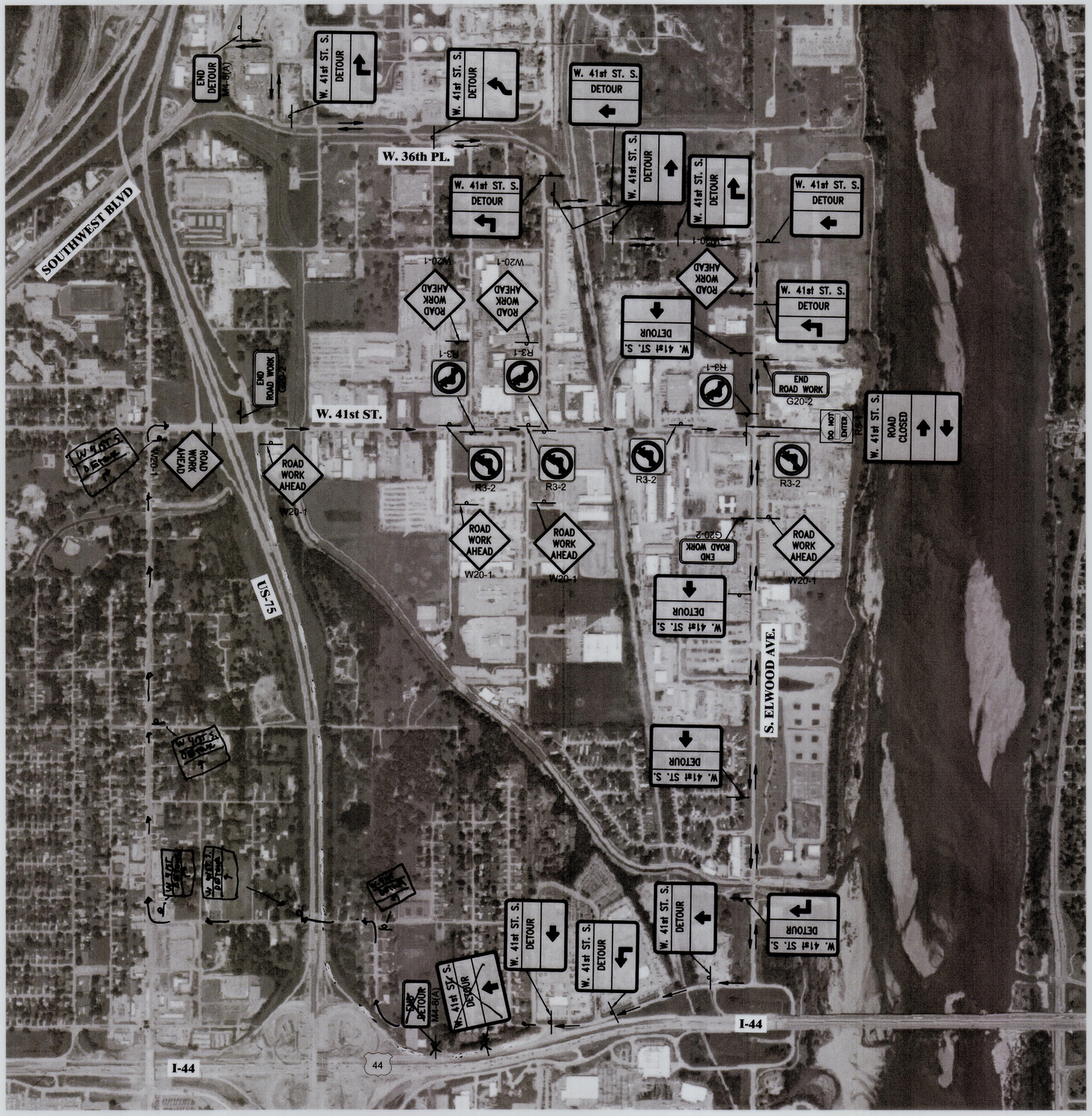
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DATE: 9/28/2025

ATLAS PAGE NO: 140, 191

SHEET 20 OF 30 SHEETS

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1 inch = 500 ft.

500 0 500 1000

LEGEND

DIRECTION OF TRAFFIC

SIGN

LICENSED PROFESSIONAL ENGINEER
Daniel F. Polaski
24920
OKLAHOMA

2/24/2024

OKIE 811 Know what's below 811 before you dig.

DETOUR PLAN

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

PLAN SCALE: 1"=500'
PROFILE SCALE HORIZONTAL: NA VERTICAL: NA

DRAWN BY:	FLK	9/23
DESIGNED BY:	DEP	9/23
SURVEY BY:	TLS	4/23
PROJ. MGR.	AC	01/25
LEAD ENGR.	DP	3/25
FIELD MGR.	TLS	5/25
RECOMMENDED: DESIGN MANAGER	HAS	3.25

APPROVED: CITY ENGINEER

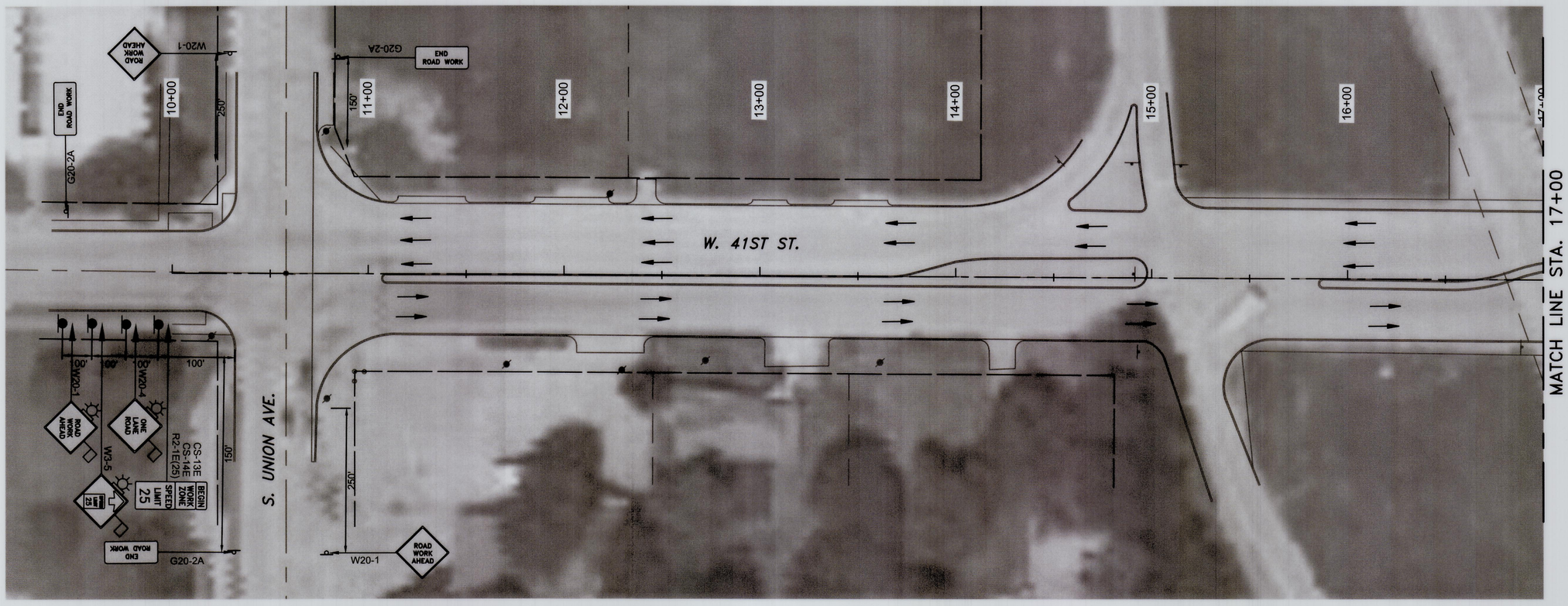
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DATE: 1/28/2025

ATLAS PAGE NO: 140, 191

SHEET 21 OF 30 SHEETS

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1 inch = 30 ft.

30 0 30 60

LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

OKIE 811 Know what's below 811 before you dig.

REVISION	BY	DATE

TRAFFIC CONTROL PHASE 1 (1)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

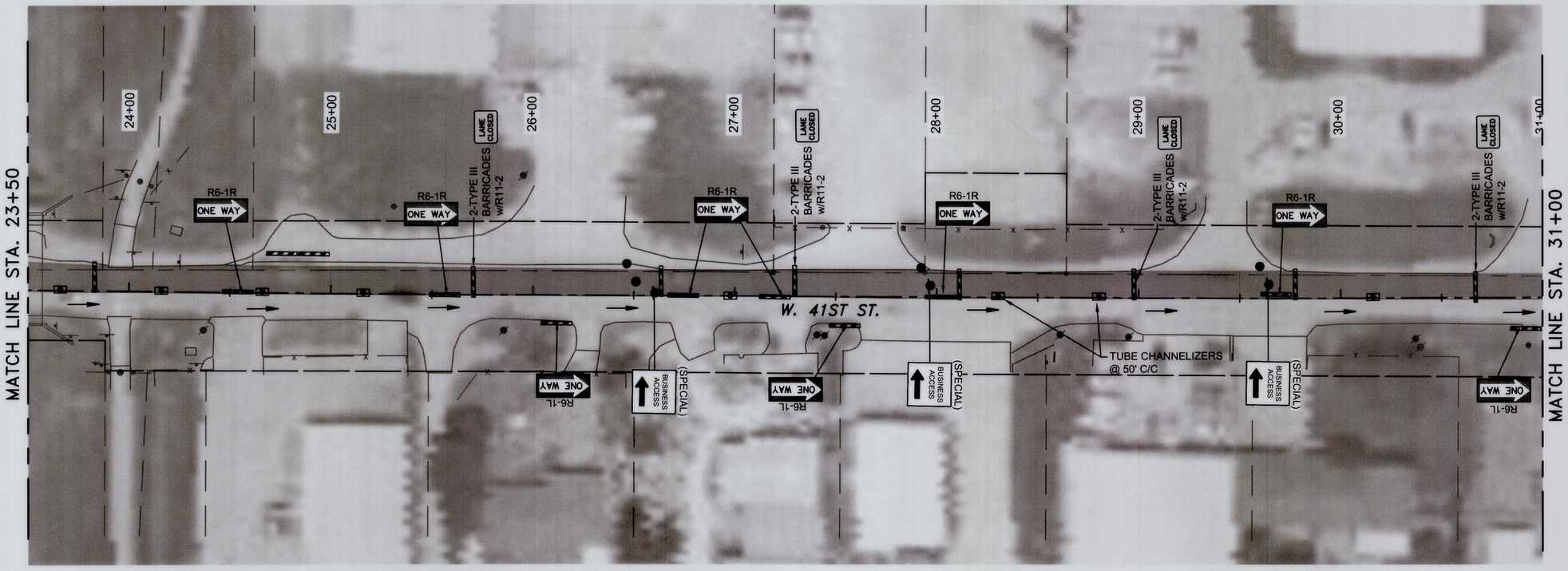
PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

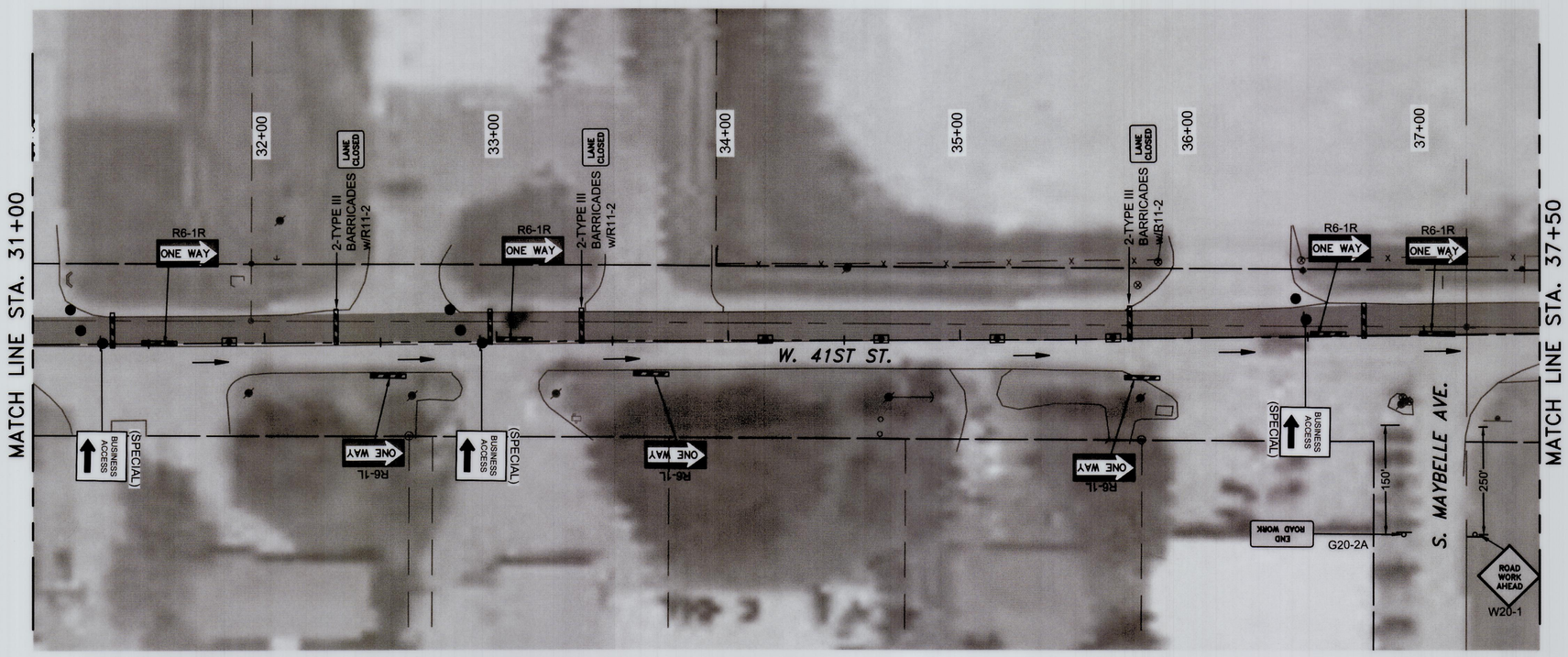
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	DESIGNED BY:	DEP	9/23	
	SURVEY BY:	TLS	4/23	
PROFILE SCALE	PROJ. MGR.	DF	3/25	
HORIZONTAL: NA	LEAD ENGR.		3/25	
	FIELD MGR.		5/23	
VERTICAL: NA	RECOMMENDED:	HAS 3-25		CITY ENGINEER
	DESIGN MANAGER			

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 22 OF 30 SHEETS

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1 inch = 30 ft.

30 0 30 60

LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

4/24/2024

OKIE 811 Know what's below 811 before you dig.

TRAFFIC CONTROL PHASE 1 (2)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

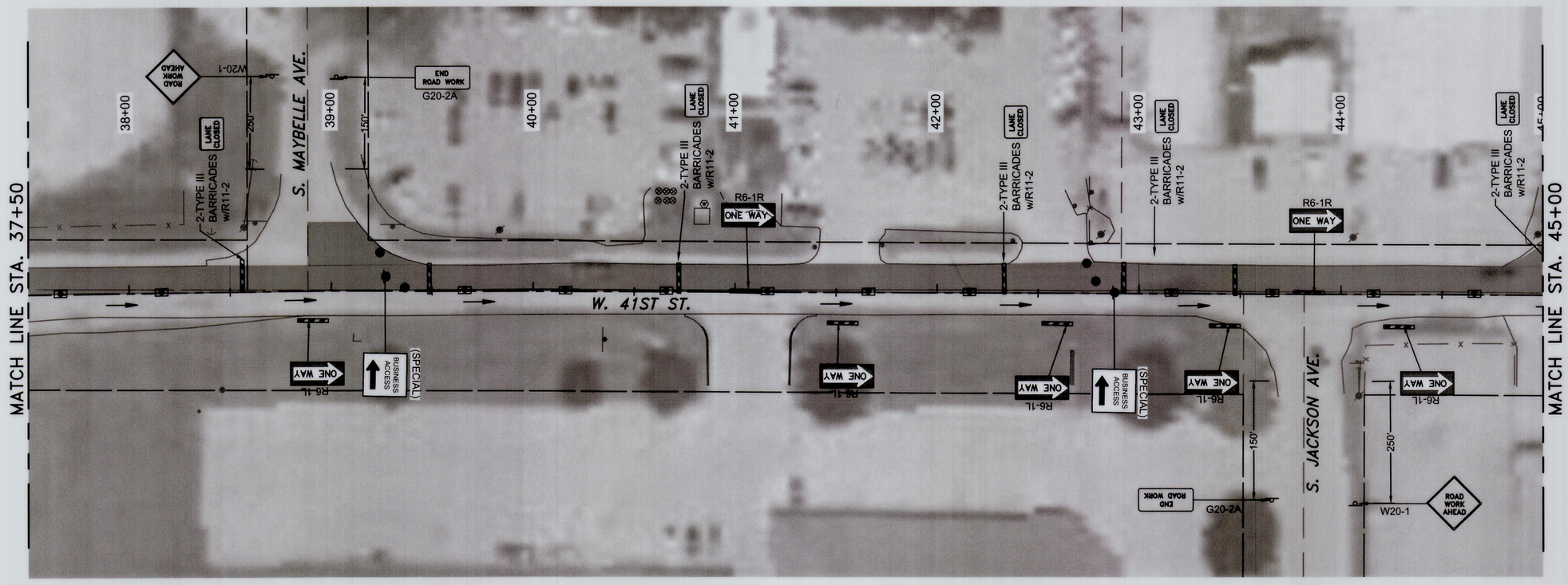
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	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE HORIZONTAL: NA VERTICAL: NA	PROJ. MGR.	AF	3/25
	LEAD ENGR.		3/25
	FIELD MGR.		5/25
	RECOMMENDED: DESIGN MANAGER	HAS 3.25	

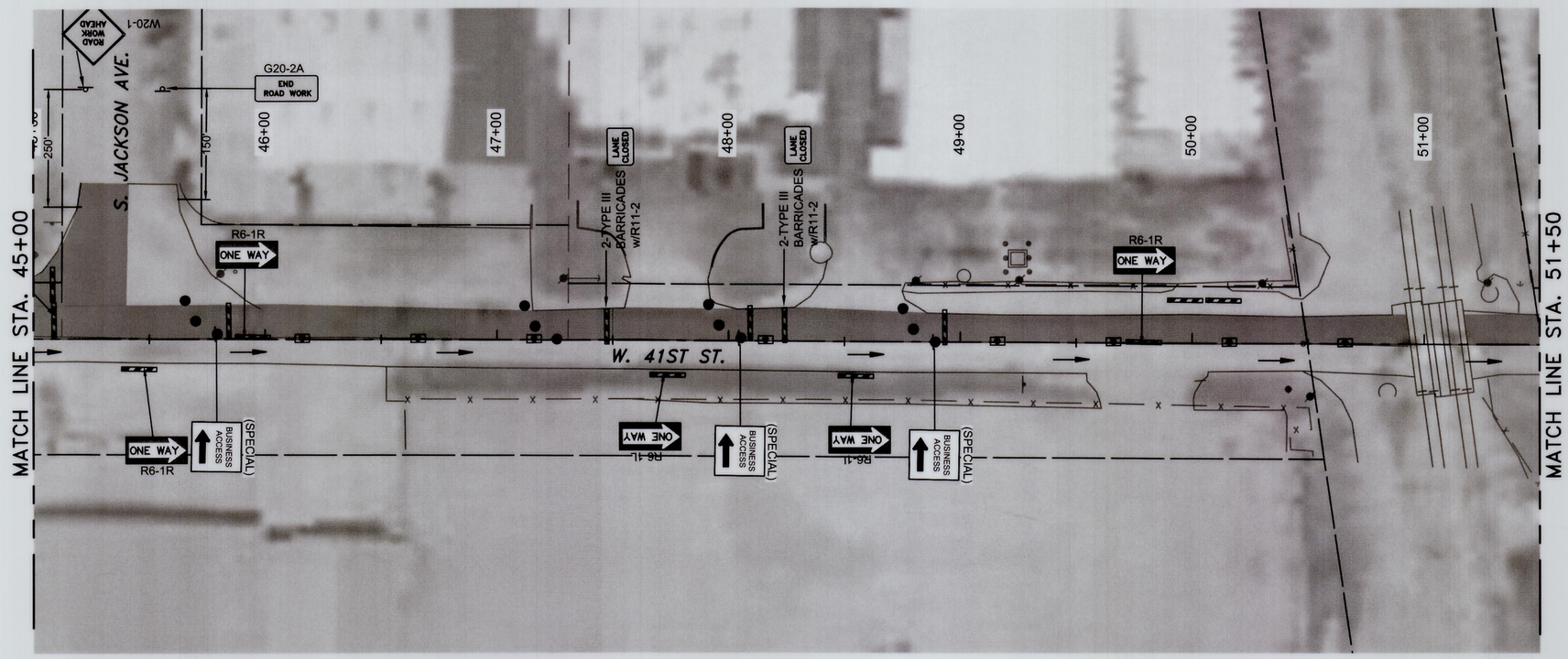
APPROVED: CITY ENGINEER

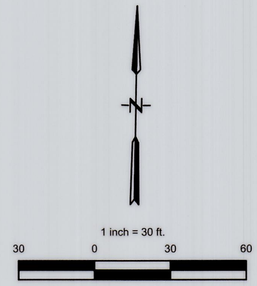
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ATLAS PAGE NO: 140, 191 SHEET 23 OF 30 SHEETS

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LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

OKIE 811 Know what's below 811 before you dig.

REVISION	BY	DATE

TRAFFIC CONTROL PHASE 1 (3)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

PLAN SCALE: 1"=30'	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.	AF	3/25
HORIZONTAL: NA	LEAD ENGR.	DP	3/25
	FIELD MGR.		3/25
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER	HAS	3.25

APPROVED: CITY ENGINEER

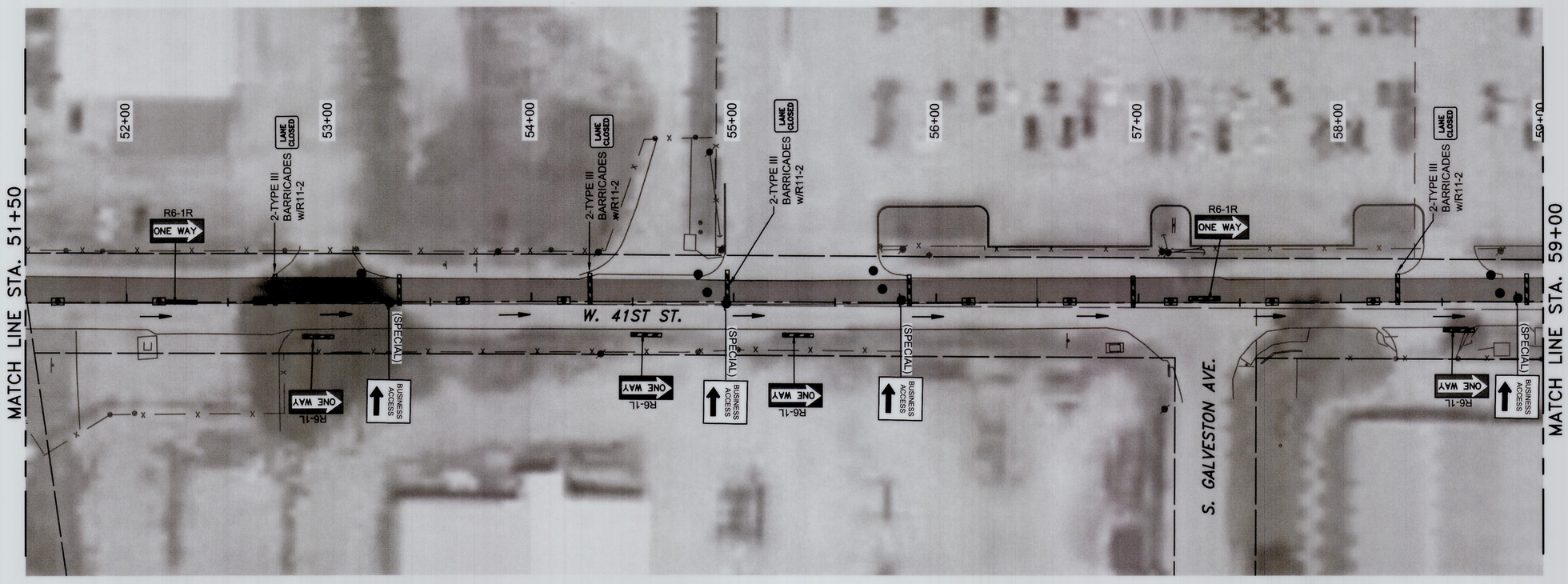
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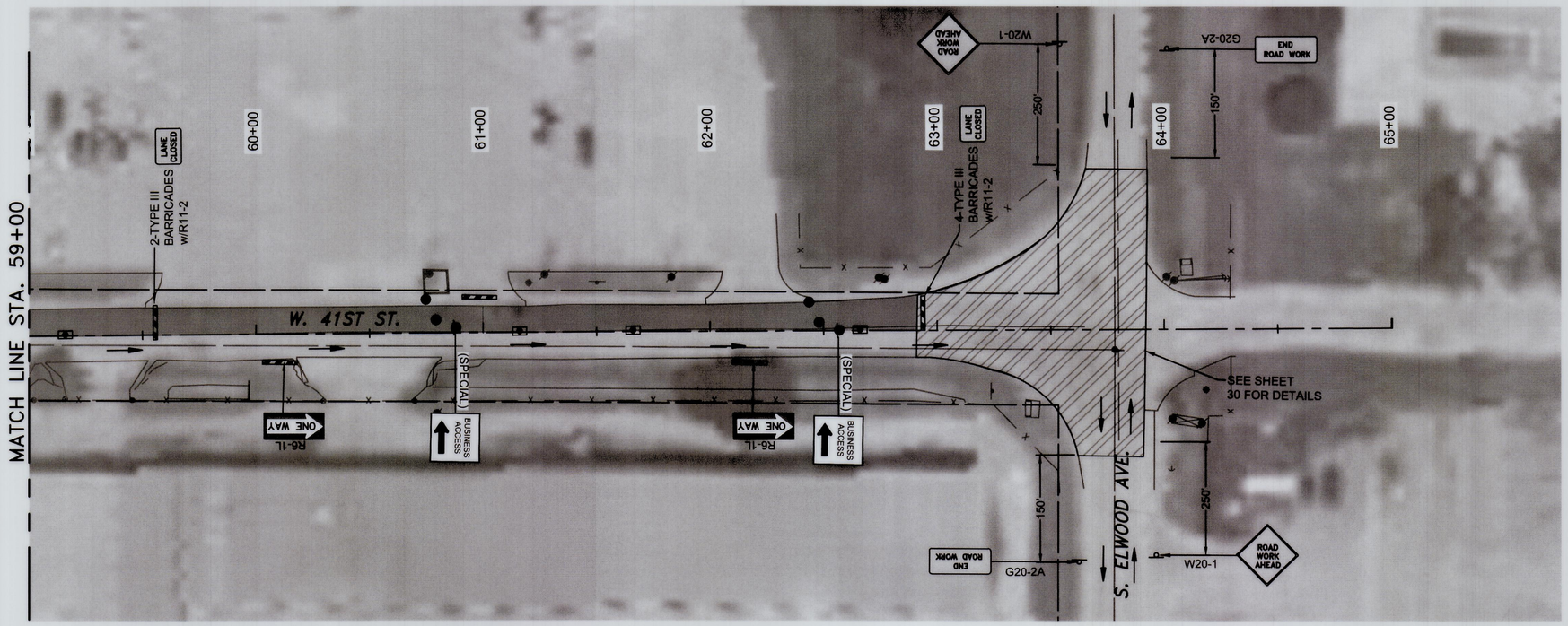
DATE: 4/28/2025

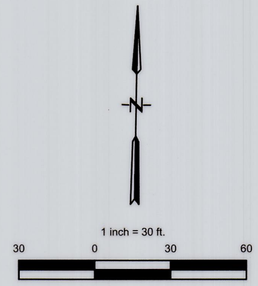
ATLAS PAGE NO: 140, 191

SHEET 24 OF 30 SHEETS

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LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

OKIE 811 Know what's below 811 before you dig.

REVISION	BY	DATE

TRAFFIC CONTROL PHASE 1 (4)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

PLAN SCALE: 1"=30'	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.		3/25
HORIZONTAL: NA	LEAD ENGR.		3/25
	FIELD MGR.		5/25
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER	HAS	3.25

APPROVED: CITY ENGINEER

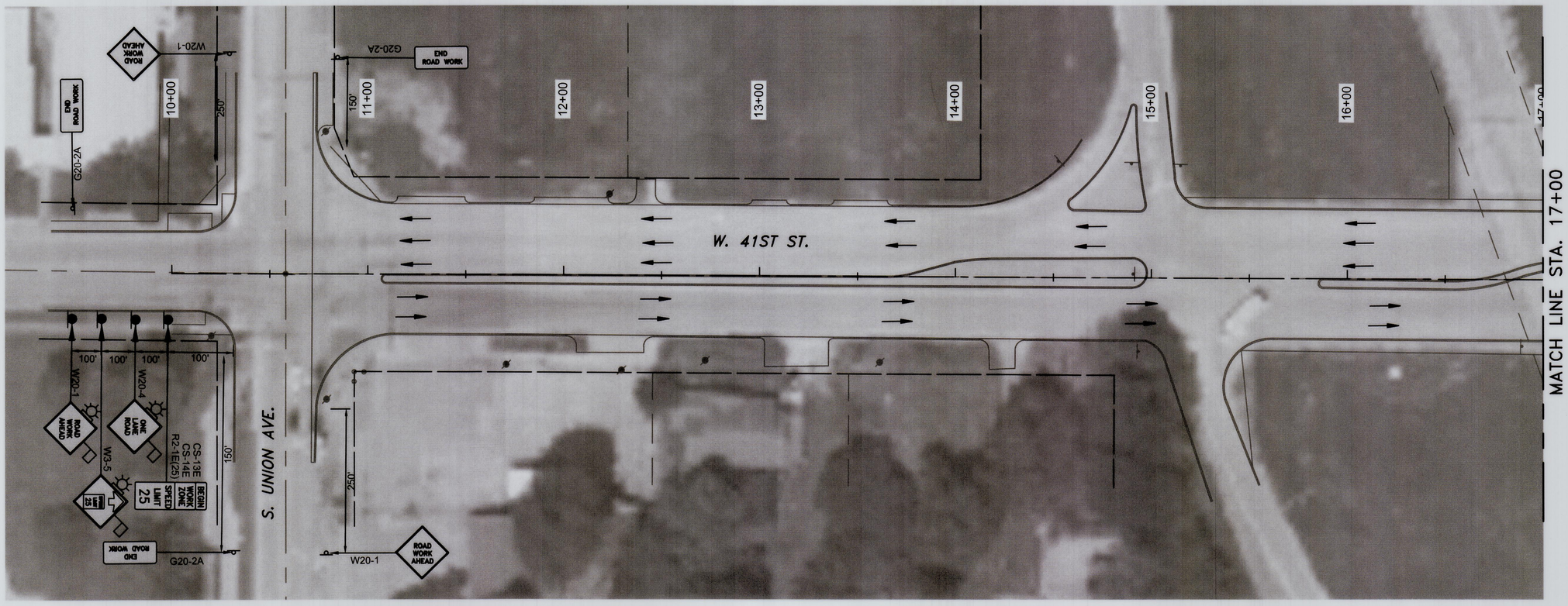
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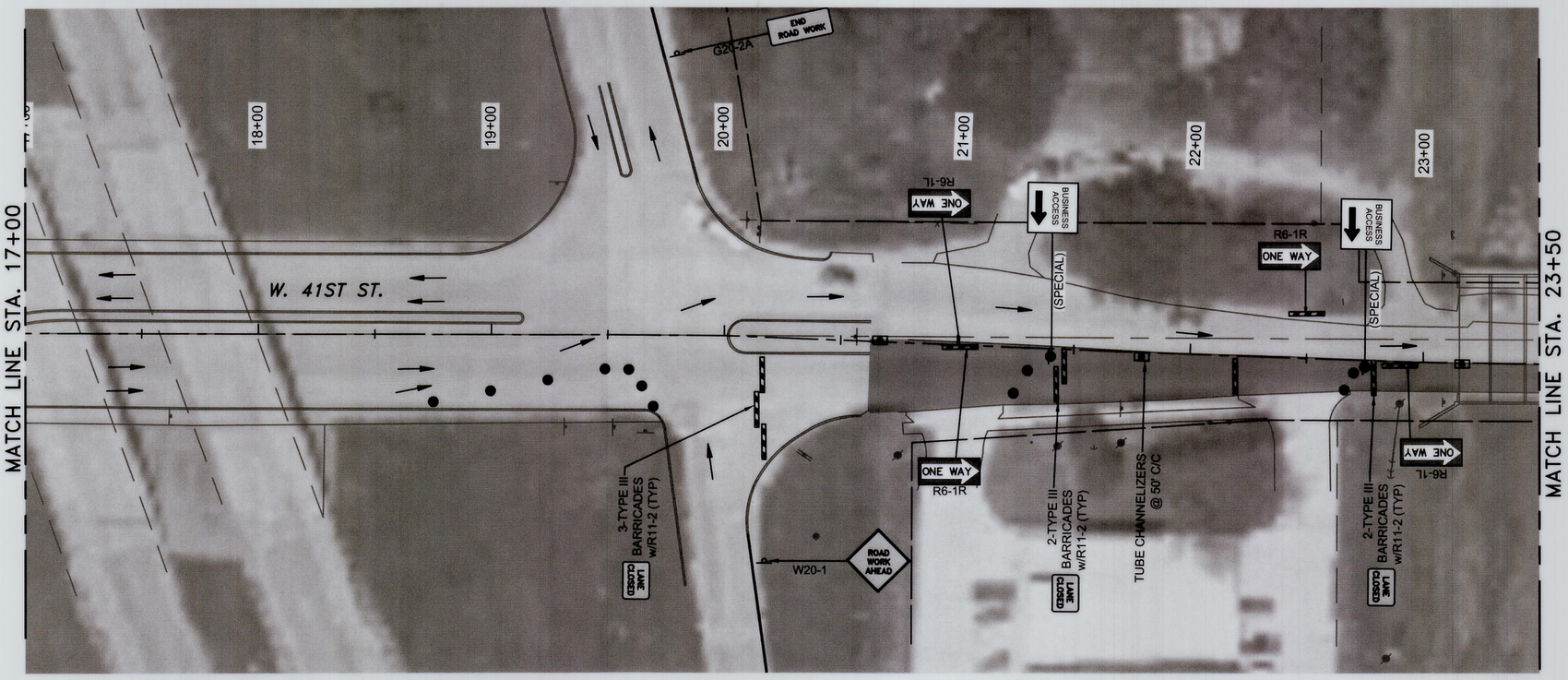
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ATLAS PAGE NO: 140, 191

SHEET 25 OF 30 SHEETS

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1 inch = 30 ft.

30 0 30 60

LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

2/24/2024

OKIE 811 Know what's below 811 before you dig.

REVISION	BY	DATE

TRAFFIC CONTROL PHASE 2 (1)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

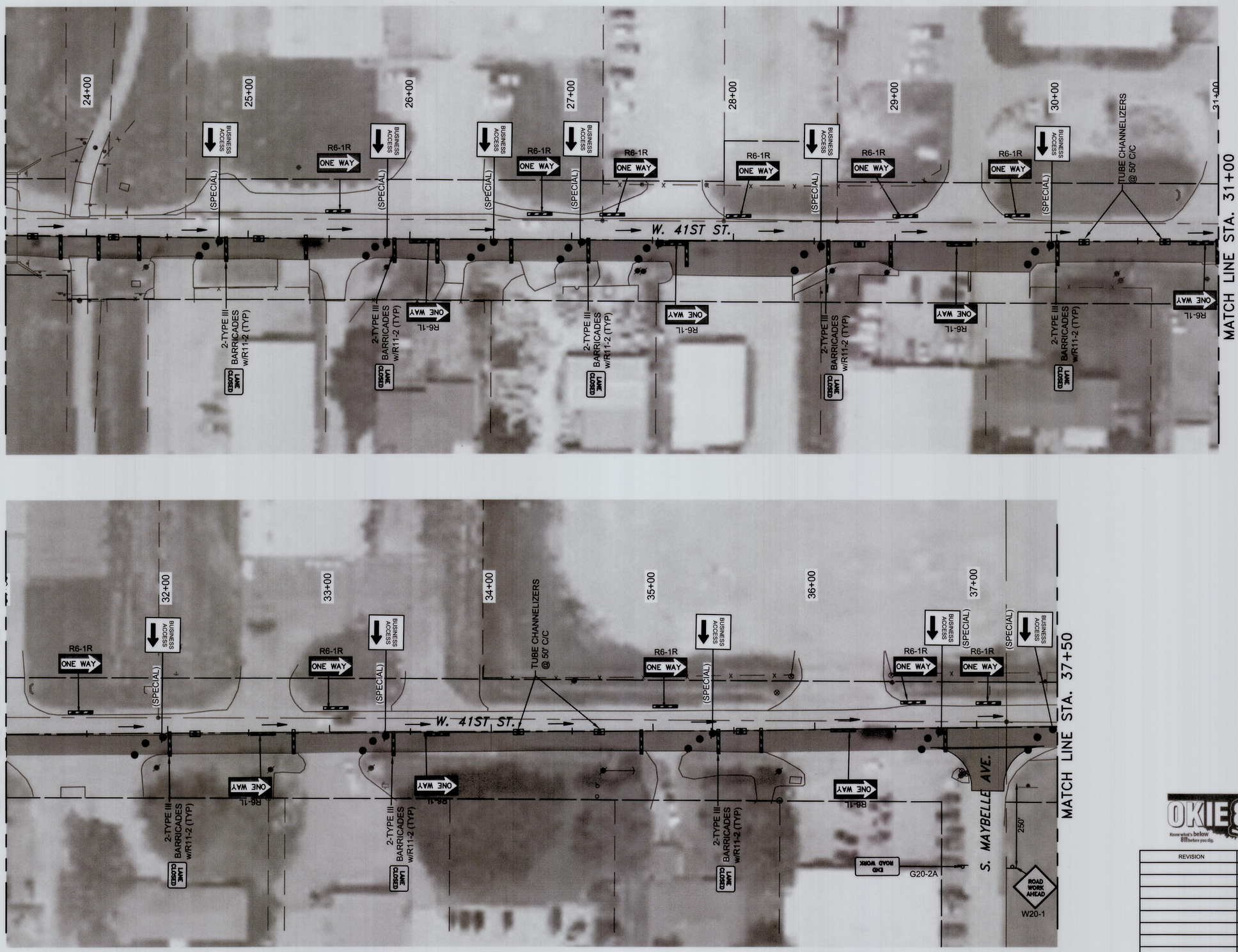
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	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.	AF	3/25
HORIZONTAL: NA	LEAD ENGR.	DEP	3/25
	FIELD MGR.	TLS	5/05
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER	BK	3.25

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 26 OF 30 SHEETS

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1 inch = 30 ft.

30 0 30 60

LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

2/24/2024

OKIE 811 Know what's below 811 before you dig.

TRAFFIC CONTROL PHASE 2 (2)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

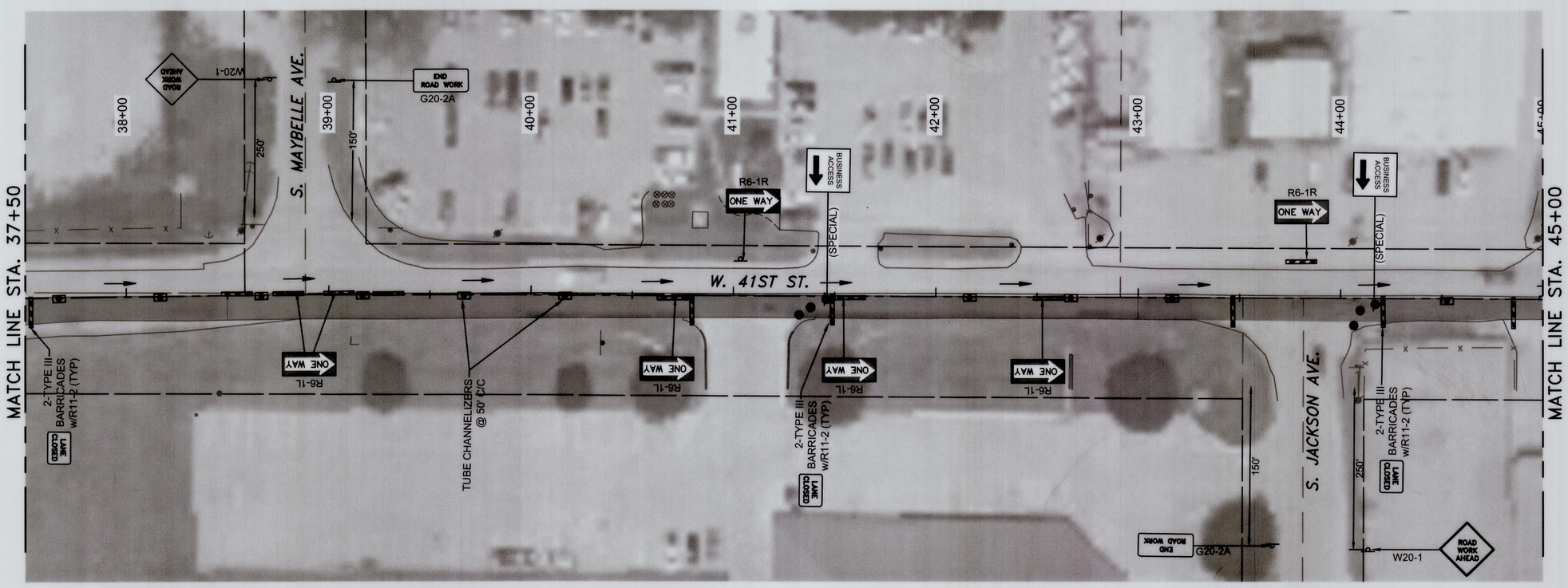
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	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.	RE	3/25
HORIZONTAL: NA	LEAD ENGR.		3/25
	FIELD MGR.		3/25
VERTICAL: NA	RECOMMENDED: HAS 3-25 DESIGN MANAGER		

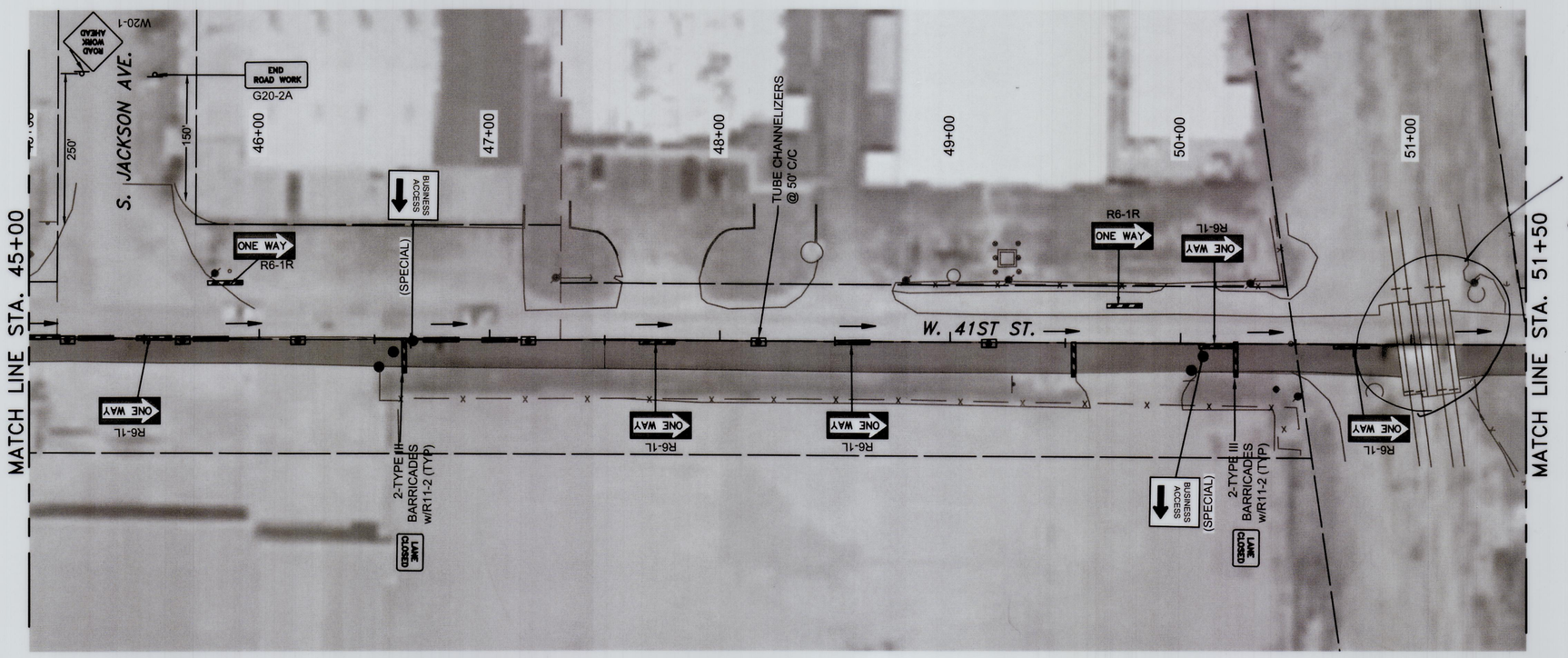
APPROVED: CITY ENGINEER

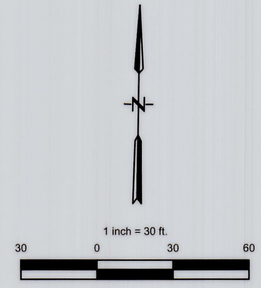
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ATLAS PAGE NO: 140, 191 SHEET 27 OF 30 SHEETS

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LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA

4/24/2024

OKIE 811
Know what's below 811before you dig.

TRAFFIC CONTROL PHASE 2 (3)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. -
UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

PLAN SCALE: 1"=30'	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.		3/25
HORIZONTAL: NA	LEAD ENGR.		3/25
	FIELD MGR.		5/25
VERTICAL: NA	RECOMMENDED:	HAS	3.25
	DESIGN MANAGER		

APPROVED:

CITY ENGINEER

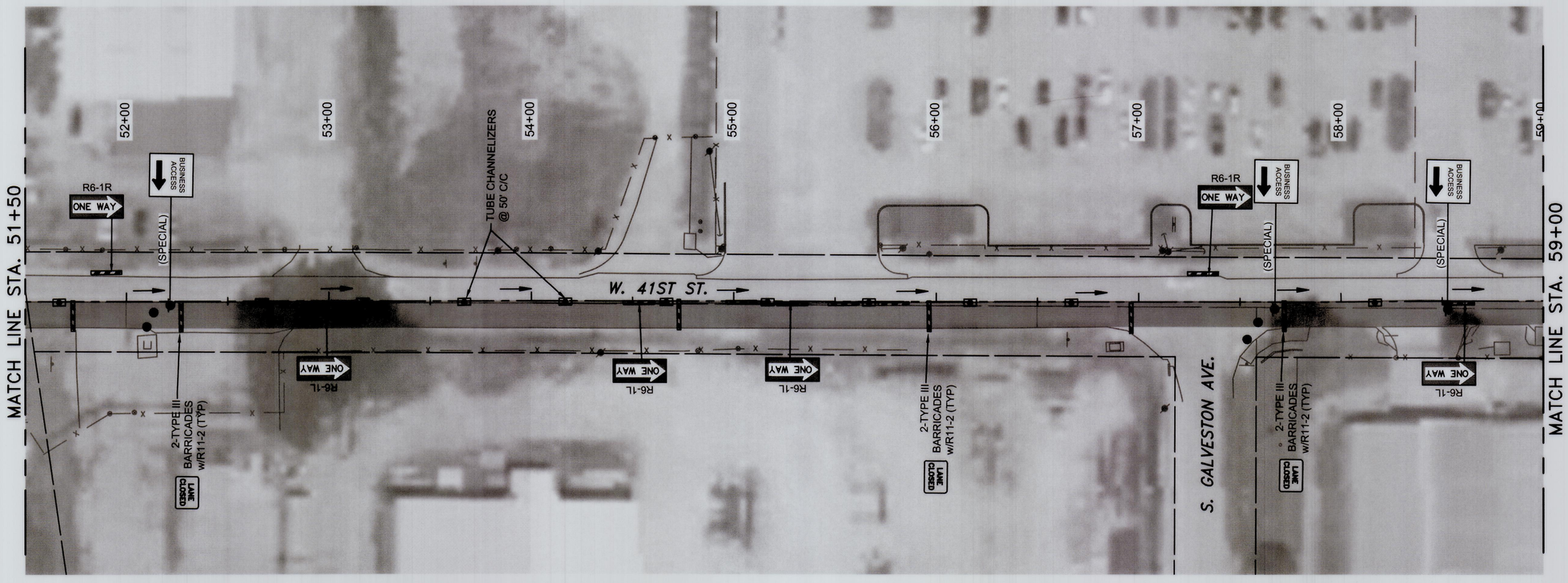
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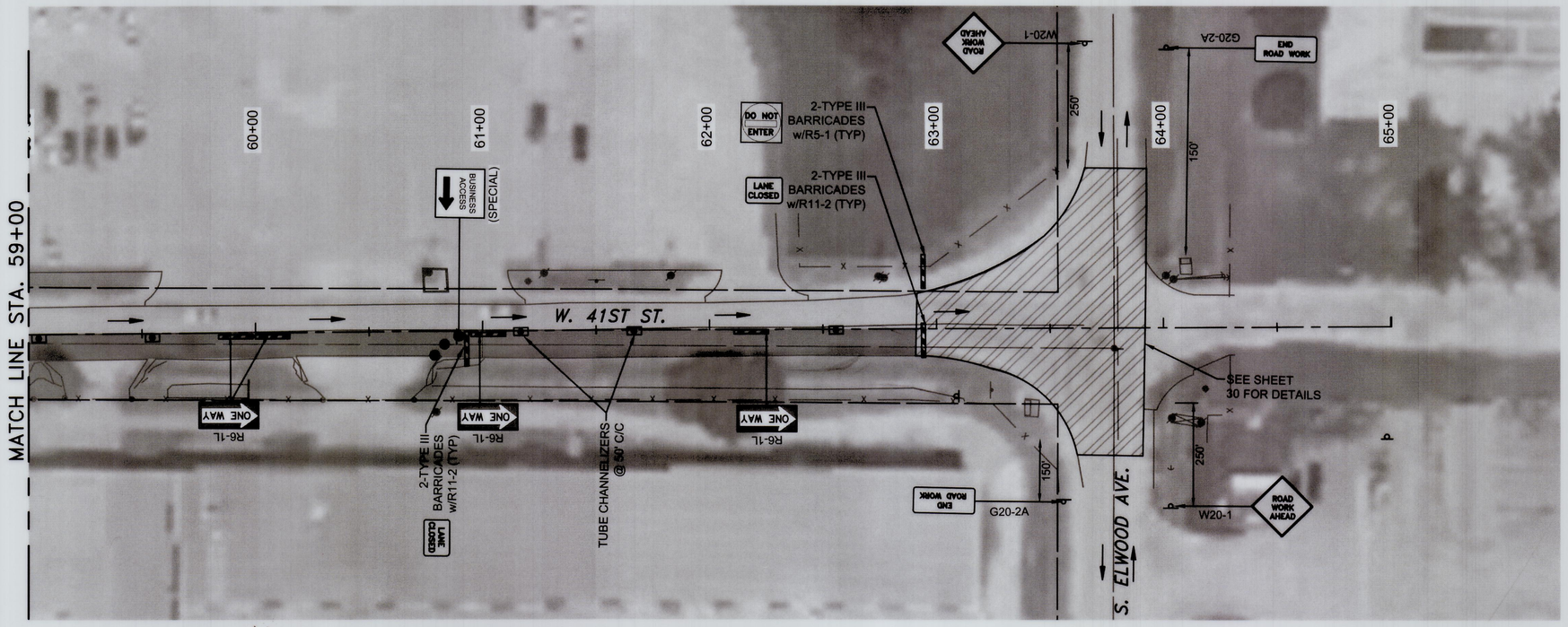
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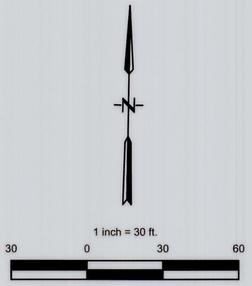
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SHEET 28 OF 30 SHEETS

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LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

LICENSED PROFESSIONAL ENGINEER
Daniel E. Polasek
24920
OKLAHOMA
2/24/2024

OKIE 811 Know what's below 811 before you dig.

TRAFFIC CONTROL PHASE 2 (4)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

REVISION	BY	DATE

PLAN SCALE: 1"=30'	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.		3/25
HORIZONTAL: NA	LEAD ENGR.		3/25
	FIELD MGR.		3/25
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER	HBS	3.25

APPROVED: CITY ENGINEER

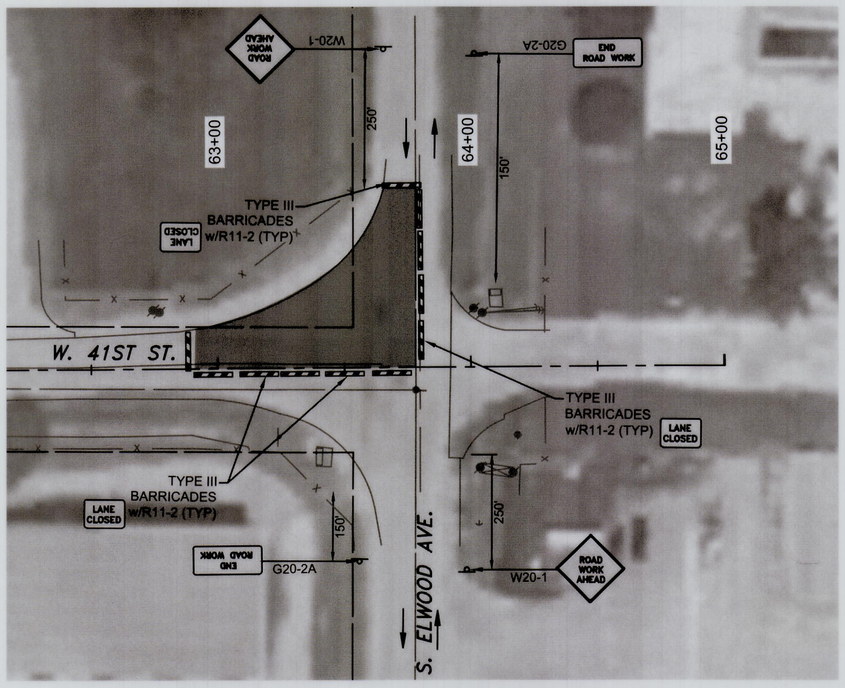
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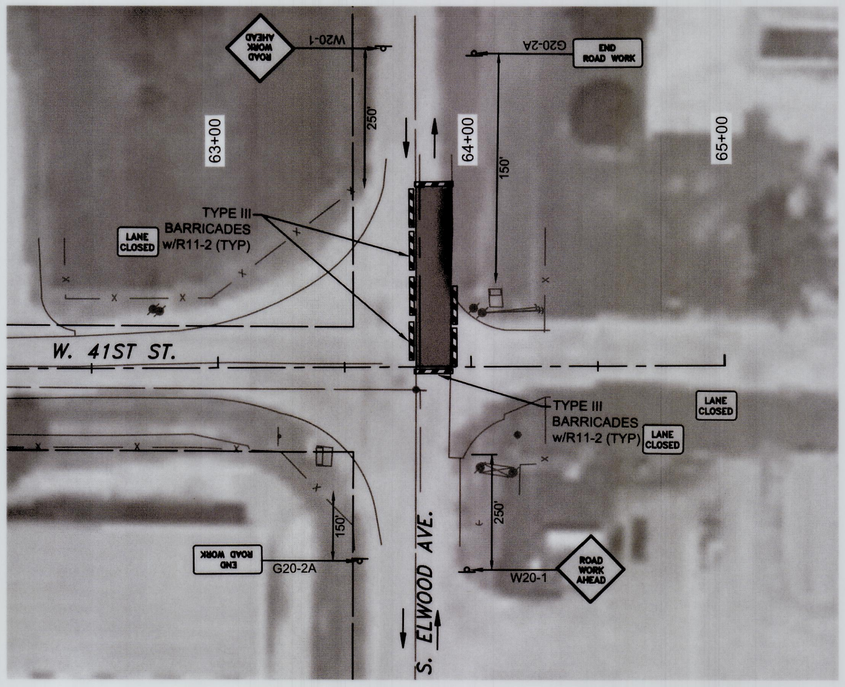
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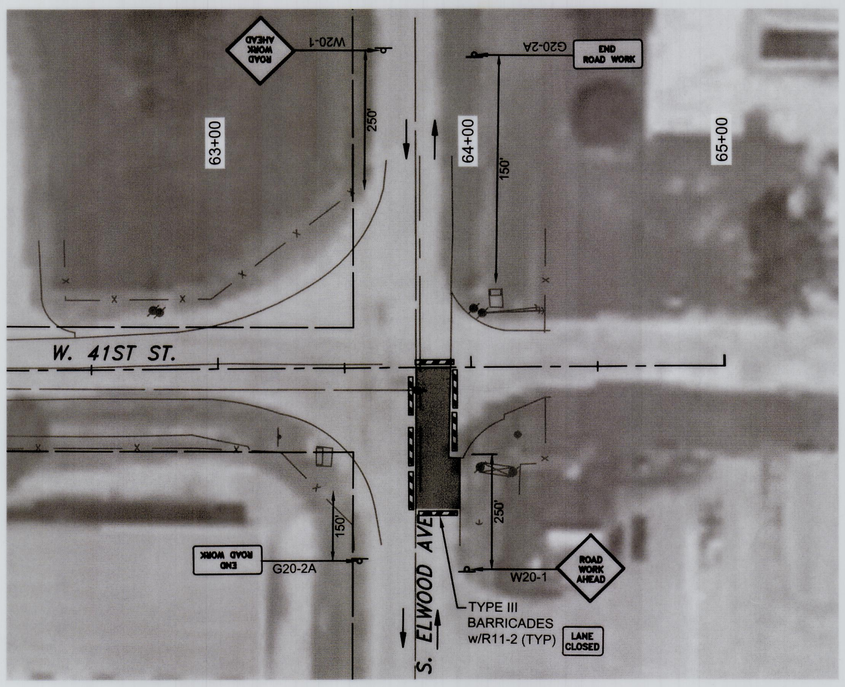
ATLAS PAGE NO: 140, 191

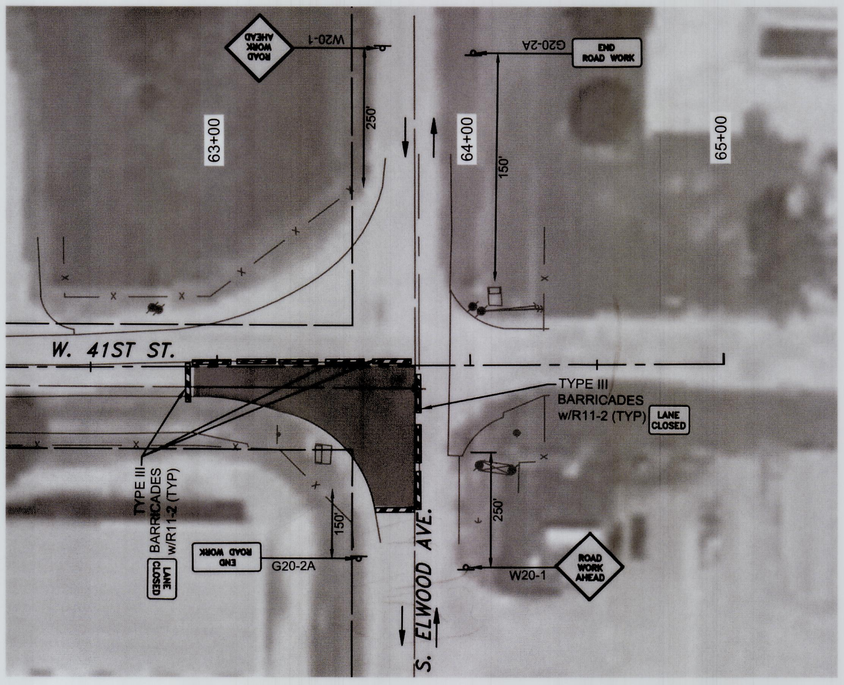
SHEET 29 OF 30 SHEETS

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1 inch = 30 ft.

30 0 30 60

LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DRUMS
- TUBE CHANNELIZER
- CONSTRUCTION AREA
- TRAFFIC DIRECTION

NOTE:

DRUM AND TUBE CHANNELIZER SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.

OKIE 811 Know what's below 811 before you dig.

REVISION	BY	DATE

PROFESSIONAL ENGINEER — Daniel E. Polasek — 24920 — OKLAHOMA — 2/24/2024

TRAFFIC CONTROL (ELWOOD AVE.)

PROJ. 2036A0025Z-2036A0035Z

W. 41ST ST. S. - UNION AVE. TO ELWOOD AVE.

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS & ESTIMATES PREPARED BY:
BKL, INCORPORATED
1623 E. 6TH STREET TULSA, OKLA. 74120 918-835-9588

PLAN SCALE: 1"=20'	DRAWN BY:	FLK	9/23
	DESIGNED BY:	DEP	9/23
	SURVEY BY:	TLS	4/23
PROFILE SCALE	PROJ. MGR.	AF	3/25
HORIZONTAL: NA	LEAD ENGR.	DJ	3/25
	FIELD MGR.	[illegible]	5/25
VERTICAL: NA	RECOMMENDED: DESIGN MANAGER	HAS	3-25

APPROVED: CITY ENGINEER

FILE: DRAWING: DATE: 4/28/2025

ATLAS PAGE NO: 140, 191 SHEET 30 OF 30 SHEETS

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