PLANS FOR 56TH STREET N. AND MLK JR BLVD SIDEWALK IMPROVEMENTS

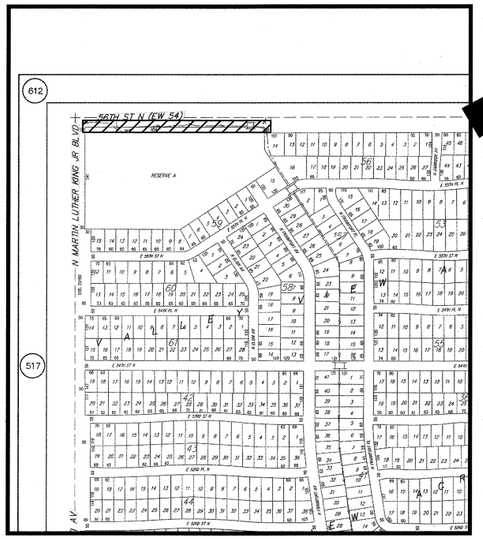
WATER AND SEWER DEPARTMENT
CITY OF TULSA, OKLAHOMA
PROJECT NO. 153120-C1-8

SURVEY CONTROL DATA

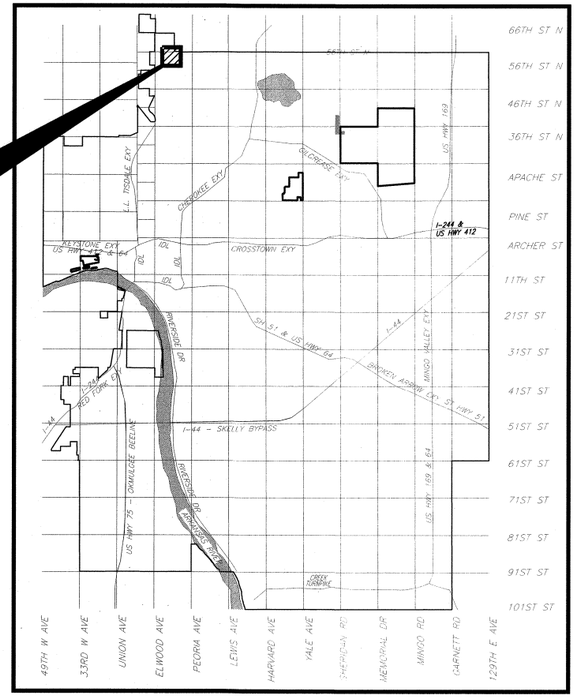
1. HORIZONTAL CONTROLS:
   A. HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON NAD 83(1993) OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE 3501.
   B. ACCURACY – 3RD ORDER OR BETTER
2. BEARINGS:
   THE BEARINGS SHOWN HEREIN OR HEREON ARE GRID BEARINGS DERIVED FROM THE USC & GS OKLAHOMA PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL. THE ANGLE OF VARIANCE BETWEEN GRID NORTH (GN) AND TRUE NORTH (TN) IS DEPICTED DIAGRAMMATICALLY.
3. VERTICAL CONTROLS:
   A. VERTICAL CONTROL FOR THIS PROJECT IS BASED ON NAVD 1988.
   B. ACCURACY – 3RD ORDER OR BETTER
4. ADS MONUMENT:
   TULSA BENCHMARK FROM CITY OF TULSA CONTROL DATA PREPARED BY AERIAL DATA SERVICE MONUMENTED JULY, 1992.
   STATION NAME: 503
   5/8" REBAR WITH 1 ½" ALUMINUM CAP
   N: 418940.668
   E: 2576549.927
   ELEV: 790.326
   LAT: 36°07'59.39325"
   LONG: 95°56'26.65820"

LEGEND

- PROPOSED ROADS
- SECTION LINES
- QUARTER SECTION LINES
- *FENCES (EXISTING)*
- *EXISTING GRADE*
- *EXISTING ROADS*
- *EXISTING INDEX CONTOURS*
- *EXISTING INTERMEDIATE CONTOURS*
- BASE LINE
- PROPOSED GRADE
- *COMMUNICATION LINES (EXISTING)*
- *POWER LINES (EXISTING)*
- *GAS LINE (EXISTING)*
- *SANITARY SEWER LINES (EXISTING)*
- *WATER LINES (EXISTING)*
- COMMUNICATION LINES (PROPOSED)
- POWER LINES (PROPOSED)
- GAS LINE (PROPOSED)
- SANITARY SEWER LINES (PROPOSED)
- WATER LINES (PROPOSED)
- *BUILDINGS (EXISTING)*
- *DRAINAGE STRUCTURES (EXISTING)*
- DRAINAGE STRUCTURES (PROPOSED)
- *RIGHT-OF-WAY LINES (EXISTING)*
- RIGHT-OF-WAY LINES (PROPOSED)
- RIGHT-OF-WAY FENCE
- *FLOWLINE (EXISTING)*
- FLOWLINE (PROPOSED)
- *TOE OF SLOPE (EXISTING)*



PROJECT LOCATION



VICINITY MAP
1" = 2 MILES

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UTILITY COORDINATION

	NUMBER	CONTACT	NOTIFIED	RESPONDED
COX COMMUNICATIONS	(918) 286-4716	BRANDON WADE		
AEP/PSO	(918) 250-6257	ADAM FIELDS		
OKLAHOMA NATURAL GAS CO.	(918) 831-8215	JONATHON MEADOWS		
AT&T	(918) 527-7309	WAYNE GROOM		
CITY OF TULSA	(918) 596-9245	TONY GLYNN		

ROADWAY
CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

WATER & SEWER
THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS. ENTIRE PROJECT IS WITHIN CORPORATE LIMITS OF CITY OF TULSA. CURRENT CITY OF TULSA ENGINEERING SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND STANDARD DETAILS SHALL GOVERN.

8/7/24
DIRECTOR, WATER AND SEWER DEPARTMENT DATE

8/16/2024
DIRECTOR, PUBLIC WORKS DEPARTMENT DATE

ADVERTISEMENT DATE:

ENGINEER'S CERTIFICATION:

4/30/24
SHANNON N. HANKS, P.E. NO. 21141 DATE

CEC
CEC CORPORATION
1300 S. Main Street
Tulsa, Oklahoma 74119
T: (918) 663-9401
F: (918) 663-9404
WWW.CONNECTCEC.COM
C.A. #32 EXPIRES 06/30/24

CITYWIDE DRAINAGE IMPROVEMENT T.O. 8, CITY OF TULSA PROJECT NO. 153120-C1-8

FINAL PAY ITEMS - ROADWAY AND DRAINAGE					
BID ITEM	ODOT SPEC	DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
1	201(A)	CLEARING AND GRUBBING	E-1, 2	AC	1
2	202(A)	UNCLASSIFIED EXCAVATION	E-3, 4, R-1	CY	22
3	202(D)	UNCLASSIFIED BORROW		CY	1388
4	220	(SP) SWPPP DOCUMENTATION AND MANAGEMENT	E-6	EA	1
5	221(C)	TEMPORARY SILT FENCE	E-7	LF	1100
6	221(D)	TEMPORARY SEDIMENT FILTER	E-7, 8, 9	EA	2
7	221(E)	TEMPORARY SILT DIKE	E-7	LF	154
8	230(A)	SOLID SLAB SODDING	E-10, 11	SY	2748
9	303(A)	AGGREGATE BASE TYPE A	S-1, 2	CY	9
10	310(B)	SUBGRADE METHOD B		SY	53
11	325	SEPARATOR FABRIC	S-3	SY	87
12	609(A)	CONCRETE CURB (6" BARRIER-INTEGRAL)	S-15	LF	60
13	610(A)	4" CONCRETE SIDEWALK	S-12, 13, 16, 17	SY	542
14	610(A)	4" STAMPED CONCRETE SIDEWALK	S-12, 13, 17, 18	SY	40
15	610(B)	CONCRETE DRIVEWAY	S-12, 13, 16, 17	SY	48
16	610(I)	TACTILE WARNING DEVICE		SF	10
17	611(A)	5' MANHOLE, COMPLETE IN PLACE	D-1, 2, 3, 4, 5	EA	1
18	611(G)	COT DROP INLET DESIGN NO. 2, COMPLETE IN PLACE	D-2, 3, 7, 8, 9, 10	EA	1
19	611(G)	INLET (SMD-TYPE 2B)	D-2, 3, 7, 8, 9, 10	EA	1
20	611(H)	ADDITIONAL DEPTH IN INLET SMD TYPE 2B	D-10	VF	1
21	613(A)	18" RCP, CLASS III	D-8, 12, 13	LF	19
22	613(A)	36" RCP, CLASS III	D-8, 12, 13	LF	165
23	619(A)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	R-1, 2, 3, 4, 5	EA	1
24	619(B)	REMOVAL OF SIDEWALK	R-1, 2, 5, 6	SY	52
25	619(B)	REMOVAL OF DRIVEWAY	R-1, 2, 5, 6	SY	48
26	624(E)	FENCE-STYLE CLF (5' HIGH, CLASS A)		LF	127
27	641	MOBILIZATION	G-2	EA	1
28	642(B)	CONSTRUCTION STAKING LEVEL II	G-3, 4	EA	1
29	805(D)	REMOVE AND RESET EXISTING SIGNS	100	EA	1
30	880(B)	CONSTRUCTION SIGNS 0 TO 6.25 SF	T-2, 4, 5	SD	500
31	880(B)	CONSTRUCTION SIGNS 6.26 TO 15.99 SF	T-2, 4, 5	SD	500
32	880(B)	CONSTRUCTION SIGNS 16.0 TO 32.99 SF	T-2, 4, 5	SD	500
33	880(C)	BARRICADES (TYPE III)	T-2, 4, 5	SD	60
34	880(E)	WARNING LIGHTS (TYPE A)	T-5	SD	120
35	880(E)	WARNING LIGHTS (TYPE C)	T-5	SD	600
36	880(F)	DRUMS	T-2, 4, 5	SD	600
37	COT 608	GROUND SIGN		SF	26
38	COT 608	1-3/4" SIGN POST		LF	43
39	COT 608	2" SIGN POST		LF	12
40	SPECIAL	ANCHORED REINFORCED VEGETATION SYSTEM (ARVS) WITH TYPE B ANCHORS		SY	750
41	SPECIAL	OWNER ALLOWANCE		EA	10,000
42	SPECIAL	QUICK SET FLOWABLE FILL	G-1, D-8	CY	10
43	SPECIAL	PROJECT SIGN (COT STD. 102)	T-7	EA	2
44	SPECIAL	URBAN RIGHT-OF-WAY RESTORATION	G-5, 6, 7, 8, 9, 10	EA	1
45	COT 334	CONSTRUCTION AS-BUILT		LSUM	1
46	COT 335	CONTRACTORS QUALITY CONTROL		LSUM	1
47	612(A)	ADJUST MANHOLE TO GRADE (PRIVATE)	S-12,R-2,D-1,2,6	EA	1

GENERAL NOTE

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

PAY ITEM NOTES (ROADWAY)

EARTHWORK/EROSION CONTROL/SITE PREPARATION

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 INCLUDES 2 TYPE B FILTERS.

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 NOT USED.

S-5 NOT USED.

S-6 NOT USED.

S-7 NOT USED.

S-8 NOT USED.

S-9 NOT USED.

S-10 NOT USED.

S-11 NOT USED.

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

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

S-14 NOT USED.

S-15 THIS ITEM SHALL BE MEASURED AT 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 ARES.

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.

S-19 NOT USED.

S-20 NOT USED.

S-21 NOT USED.

REMOVAL/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 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

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 # 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

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

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

D-3 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 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.

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, 5' EACH SIDE OF THE INLET, AND THE PC CONCRETE INLET APRON SHALL BE INCLUDED. GRATE AND FLOWLINE ELEVATIONS SHALL MATCH EXISTING CONDITIONS UNLESS OTHERWISE NOTED IN THE PLANS.

D-8 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.

REGISTERED PROFESSIONAL ENGINEER — SHANNON N. HANKS 21141 — OKLAHOMA — 6-7-24

BEFORE YOU DIG OKIE 811 CALL OKIE

PAY ITEMS & NOTES (1 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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PLAN SCALE: N/A
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BBC	9/24
FIELD MGR.		8/24

APPROVED: DESIGN MANAGER

DRAWING: 2 PAY ITEMS & NOTES.DWG — DATE

ATLAS PAGE NO: 517, 518, 612, 613 — SHEET 2 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\2 PAY ITEMS & NOTES.DWG

PAY ITEM NOTES (ROADWAY) (CONT.)

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 NOT USED.

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 NOT USED.

TRAFFIC

T–1 NOT USED.

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 NOT USED.

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

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

T–6 NOT USED.

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

100 EXISTING NEIGHBORHOOD ASSOCIATION SIGN TO BE PROTECTED, REMOVED, AND RESET.

REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
4-24

BEFORE YOU DIG 811 CALL OKIE

PAY ITEMS & NOTES (2 OF 2)

PROJECT NO. 153120–C1–8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663–9401

REVISION	BY	DATE
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PLAN SCALE: N/A
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BDC	7/24
FIELD MGR.		2/24

APPROVED:

DESIGN MANAGER

DRAWING: 2 PAY ITEMS & NOTES.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 3 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD – CITYWIDE DRAINAGE IMPROVEMENTS\TO–8\PROJECT DRAWINGS\2 PAY ITEMS & NOTES.DWG

PEDESTRIAN BRIDGE GENERAL NOTES

OVERALL NOTES

1. PRIOR TO BEGINNING ANY WORK OR ORDERING ANY MATERIALS, THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL DRAWINGS WITH THE DRAWINGS FROM THE ARCHITECT AND ALL OTHER TRADES. NOTIFY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF RECORD OF ANY DISCREPANCIES OR POSSIBLE DEFICIENCIES.
2. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL VERIFY THE EXISTING SITE CONDITIONS AND CONSTRAINTS AS WELL AS EXISTING BUILDING LOCATION, DIMENSIONS, AND ELEVATIONS, IF ANY.
3. THE CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. ALL TEMPORARY BRACING, SHORING, SUPPORTS, ETC. ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. NO FIELD REVISIONS OR MODIFICATIONS TO ANY STRUCTURAL COMPONENT SHALL BE PERFORMED WITHOUT PRIOR APPROVAL BY THE ENGINEER OF RECORD.
5. PLANS AND DETAILS SHALL NOT BE SCALED FOR DETERMINATION OF LENGTHS, QUANTITIES, OR CONFIGURATION OF MATERIALS.
6. THE CONTRACTOR SHALL SUPPLY ALL ITEMS FOR ATTACHING MECHANICAL AND ELECTRICAL EQUIPMENT TO THE STRUCTURE TO RESIST ALL LOADS, INCLUDING SEISMIC FORCES. COORDINATE THE LOCATION(S) AND REQUIRED ATTACHMENT(S) WITH THE STRUCTURE. REFER TO THE ELECTRICAL AND MECHANICAL DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
7. COORDINATE AND PROVIDE SLEEVE LAYOUTS FOR ALL PIPES, CONDUITS, OR ANY OTHER ITEMS PENETRATING THROUGH STRUCTURAL MEMBERS. LAYOUTS ARE TO BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

SHOP DRAWING NOTES

1. SHOP DRAWINGS SHALL BE ORIGINAL DRAWINGS PREPARED BY THE CONTRACTOR, SUBCONTRACTOR, OR COMPONENT MANUFACTURER. REPRODUCTION OF THE DRAWINGS FOR USE AS SHOP DRAWINGS IS NOT PERMITTED AND WILL BE REJECTED WITHOUT BEING REVIEWED. IF THE CONTRACTOR REQUESTS CEC'S ELECTRONIC FILES TO ASSIST IN THEIR PREPARATION OF SHOP DRAWINGS, THE CONTRACTOR SHALL FIRST BE REQUIRED TO SIGN AN AGREEMENT SUPPLIED BY CEC PROVIDING THE TERMS AND CONDITIONS OF THAT USE.
2. SHOP DRAWINGS SUBMITTED FOR REVIEW SHALL HAVE THE CONTRACTOR'S STAMP CERTIFYING THE GENERAL CONTRACTOR'S REVIEW OF THE SHOP DRAWINGS PRIOR TO SUBMITTING THE DOCUMENTS TO THE ENGINEER OF RECORD. AT A MINIMUM, THIS REVIEW SHALL CONSIST OF VERIFICATION OF ALL DIMENSIONS, FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, AND COORDINATION WITH OTHER TRADES. SHOP DRAWINGS SUBMITTED WITHOUT THE CONTRACTOR'S STAMP WILL BE REJECTED WITHOUT BEING REVIEWED.
3. SHOP DRAWINGS SHALL BE SUBMITTED ELECTRONICALLY AS PDF DOCUMENTS. ELECTRONIC SUBMITTALS WILL BE RETURNED TO THE CONTRACTOR IN A PDF FORMAT. HARD COPY SUBMITTALS, IF SUBMITTED, WILL BE SCANNED BY CEC AND REVIEW ELECTRONICALLY. NO HARD COPIES WILL BE MARKED UP BY CEC OR RETURNED TO THE CONTRACTOR.
4. EXPECTED SHOP DRAWINGS AND SUBMITTALS FOR REVIEW INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   a. CONCRETE MIX DESIGN(S) INCLUDING HISTORIC BREAK DATA
   b. CONCRETE REINFORCING SHOP DRAWINGS
   c. POST-INSTALLED ANCHOR INSTALLER CERTIFICATIONS

POST-INSTALLED ANCHOR NOTES

1. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. HOLES IN THE BASE MATERIAL SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
3. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
4. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED ON THE DOCUMENTS SHALL BE SUBMITTED BY THE CONTRACTOR AND SHALL BE APPROVED IN WRITING BY THE ENGINEER OF RECORD. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. ADDITIONALLY, SUBSTITUTIONS WILL BE EVALUATED BY THE ICC ESR REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
5. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR WITHIN THE BASE MATERIAL. EXISTING REINFORCING SHALL NOT BE DAMAGED OR DISTURBED. THE CONTRACTOR SHALL REVIEW THE DRAWINGS, SHOP DRAWINGS, OR OTHER DOCUMENTATION TO DETERMINE THE LOCATION OF EXISTING REINFORCING. IF REINFORCING CANNOT BE LOCATED IN THIS METHOD, UTILIZE NON-DESTRUCTIVE METHODS TO LOCATE AND AVOID REINFORCING. CHIPPING OF EXISTING BASE MATERIAL SHALL ONLY BE USED WITH WRITTEN AUTHORIZATION.
6. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
7. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

CONCRETE NOTES

1. ALL REINFORCED CONCRETE SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", LATEST EDITION INCLUDING AMENDMENTS, AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", EDITION REFERENCED IN THE DESIGN CRITERIA.
2. TOLERANCES FOR CONCRETE MEMBERS AND COMPONENTS SHALL CONFORM TO ACI 117 "SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS."
3. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
4. U.N.O., CONCRETE SHALL CONSIST OF TYPE I, II, OR I/II PORTLAND CEMENT MEETING THE REQUIREMENTS OF ASTM C150 OR TYPE 1L PORTLAND LIME CEMENT MEETING THE REQUIREMENTS OF C595, NORMAL WEIGHT COARSE AGGREGATE WITH CRUSHED STONE #57 GRADATION THAT MEETS THE REQUIREMENTS OF ASTM C33, AND FINE AGGREGATE CONSISTING OF SAND THAT MEETS THE REQUIREMENTS OF ASTM C33. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH, MAXIMUM WATER-TO-CEMENT RATIO, AND AIR CONTENT AS NOTED BELOW FOR EACH CONCRETE USE:

CONCRETE USE	F'c	W/C RATIO	AIR CONTENT	NOTES
FOUNDATIONS	4,000 PSI	0.50	-	-
BRIDGE	4,000 PSI	0.50	-	-

5. PROVIDE AIR ENTRAINMENT ADMIXTURES AS REQUIRED TO ACHIEVE AIR CONTENTS INDICATED. AIR ENTRAINMENT ADMIXTURES SHALL MEET THE REQUIREMENTS OF ASTMC260.
6. CONCRETE WITH AIR CONTENT GREATER THAN 3% SHALL NOT BE HARD TROWELED. COORDINATE CONCRETE FINISHES WITH ARCHITECT.
7. SLUMP OF CONCRETE SHALL NOT EXCEED 3" AT THE END OF THE TRUCK OR PUMP HOSE (PER ACI 211.1 TABLE 6.3.1). SLUMP LOSS DUE TO PUMPING SHALL BE ACCOMMODATED. IF A SUPERPLASTICIZER OR MID-RANGE WATER REDUCING ADMIXTURE IS USED IN THE MIX DESIGN, THE SLUMP SHALL NOT EXCEED 8" AFTER ADDITION OF THE ADMIXTURE. DO NOT ADD WATER TO CONCRETE AFTER ADDING WATER-REDUCING ADMIXTURES TO THE MIX.
8. CONTRACTOR SHALL SUBMIT CONCRETE PROPORTIONS AND SUFFICIENT DOCUMENTATION FROM TEST RESULTS TO ESTABLISH THE STANDARD DEVIATION OF THE PROPOSED MIXES OR TRIAL MIXTURES.
9. U.N.O., ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 AND BE OF DOMESTIC MANUFACTURE. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706, GRADE 60. WELDING OF REINFORCING NOT SPECIFICALLY SHOWN ON THE DRAWINGS IS PROHIBITED.
10. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A1064 AND SHALL BE SUPPLIED IN FLAT SHEETS.
11. U.N.O., WELDING TO REINFORCING BARS SHALL NOT BE PERMITTED. ELECTRICAL GROUNDING AND OTHER REQUIRED CONNECTIONS TO REINFORCING BARS SHALL BE ATTAINED VIA CLAMPS OR OTHER MANUFACTURED CONNECTIONS.
12. U.N.O., MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL ADHERE TO ACI 318 SECTION 20.6.1.1.
13. U.N.O., DEVELOPMENT LENGTHS, CLASS "B" LAP SPLICES, AND HOOK DEVELOPMENT LENGTHS SHALL CONFORM TO ACI 318. REFER TO "CONCRETE REINFORCEMENT DEVELOPMENT LENGTH TABLE" FOR ADDITIONAL INFORMATION.
14. SPLICES IN REINFORCING SHALL OCCUR AS SHOWN ON THE DRAWINGS. REINFORCEMENT DESIGNATED AS "CONTINUOUS REINFORCEMENT" MAY BE SPLICED AS REQUIRED WITH CLASS B LAP SPLICES. LAP SPLICES OF CONTINUOUS REINFORCEMENT SHALL OCCUR OVER SUPPORTS FOR BOTTOM BARS AND AT MID SPAN FOR TOP BARS.
15. REINFORCING SHALL BE SUPPORTED AND SECURED IN ITS PROPER LOCATION TO PREVENT DISPLACEMENT DURING PLACEMENT OF CONCRETE.
16. THE CONTRACTOR SHALL VERIFY WITH ALL DISCIPLINES THE LOCATIONS OF ALL REQUIRED OPENINGS, SLEEVES, CAST-IN-PLACE ANCHORS OR HANGERS, SLAB DEPRESSIONS, INSERTS AND ANY OTHER ITEM TO BE CAST INTO THE CONCRETE.
17. JOINTS IN CONCRETE MEMBERS NOT SHOWN SHALL BE MADE AND LOCATED TO LEAST IMPAIR THE STRENGTH OF THE MEMBER AND APPEARANCE OF THE STRUCTURE. JOINTS IN CONCRETE ELEMENTS EXPOSED TO VIEW SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER OF RECORD.
18. CONSTRUCTION JOINTS SHALL BE PREPARED BY ROUGHENING THE SURFACE OF THE CONCRETE IN AN APPROVED MANNER TO EXPOSE THE AGGREGATE UNIFORMLY LEAVING NO LAITANCE, LOOSENED PARTICLES, OR DAMAGED CONCRETE.
19. PROVIDE CHAMFERS AS DETAILED ON THE ARCHITECTURAL DRAWINGS.
20. ALL ANCHOR RODS SHALL MEET ASTM F1554, GR 36, U.N.O.
21. ALL HIGH-STRENGTH GROUT SHALL BE PREPACKAGED, NON-METALLIC, AND NON-GASEOUS. IT SHALL BE NON-SHRINK ACCORDING TO ASTM C-1107 OR CRD-C-621. GROUT SHALL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI IN 28 DAYS AND SHALL NOT BLEED. GROUT SHALL BE MOIST CURED FOR A MINIMUM OF 24 HOURS AFTER PLACEMENT. SUBMIT CERTIFIED, INDEPENDENT TEST DATA FOR APPROVAL.
22. CONTROLLED, LOW-STRENGTH MATERIAL (CLSM, OR FLOWABLE FILL) SHALL BE PROPORTIONED, MIXED, TRANSPORTED, AND PLACED ACCORDING TO ACI 229R, "CONTROLLED LOW-STRENGTH MATERIALS." THE MINIMUM COMPRESSIVE STRENGTH OF CLSM SHALL BE BETWEEN 50 PSI AND 100 PSI PER CHAPTER 7 OF ACI 229R.

STRUCTURAL STEEL NOTES

1. U.N.O., FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH ANSI/AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," EDITION REFERENCED IN THE DESIGN CRITERIA, AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," EDITION REFERENCED IN THE DESIGN CRITERIA, AND THE STANDARDS OF THE AMERICAN WELDING SOCIETY.
2. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED BY A FABRICATOR WITH EITHER AN AISC STD CERTIFICATION OR AN IAS AC172 CERTIFICATION. IF THE STEEL FABRICATOR DOES NOT HAVE THE REQUIRED CERTIFICATION, THE FABRICATOR SHALL PAY FOR THE "IN-PLANT" INSPECTIONS ASSOCIATED WITH THE SPECIAL INSPECTION REQUIREMENTS OF THE IBC CODE.
3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS, U.N.O.:

a. W SHAPES	ASTM A992	GRADE 50	Fy = 50 KSI
b. HSS TUBES	ASTM A500	GRADE C	Fy = 46 KSI
c. PIPE	ASTM A53	GRADE B, TYPE E	Fy = 35 KSI
d. ALL OTHER SHAPES	ASTM A36	---	Fy = 36 KSI

4. REFER TO THE SPECIFICATIONS FOR PAINTING AND SURFACE PREPARATION REQUIREMENTS. DO NOT PAINT DEFORMED BAR ANCHORS.
5. UNPAINTED STRUCTURAL STEEL MEMBERS PERMANENTLY EXPOSED TO THE ELEMENTS SHALL BE GALVANIZED. GALVANIZING SHALL CONFORM TO ASTM A123. ALL CONNECTIONS SHALL BE SEAL WELDED PRIOR TO GALVANIZING.
6. ALL BOLTED CONNECTIONS FOR STRUCTURAL STEEL MEMBERS SHALL CONSIST OF ASTM A325-N BOLTS, U.N.O.
7. ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARDS. ALL SHOP AND FIELD WELDS SHALL USE E70XX ELECTRODES. ALL WELDS SHALL BE PERFORMED BY A CERTIFIED WELDER AND CONFORM TO AISC AND AWS STANDARDS. ALL SHOP AND FULL PENETRATION BUTT WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING UNLESS PROHIBITED BY THE GEOMETRY OF THE CONNECTION. IF ULTRASONIC TESTING CANNOT BE PERFORMED, X-RAY TESTING SHALL BE USED AT THE APPROVAL OF THE ARCHITECT/ENGINEER OF RECORD. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8. STRUCTURAL STEEL CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE SELECTED FROM PART 10 TABLES 10-1, 10-2, OR 10-4 OF THE AISC MANUAL.
9. ALL CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE DESIGNED BY THE FABRICATOR FOR THE SHEAR LISTED ON THE DRAWINGS. WHEN NO SHEAR IS LISTED ON THE DOCUMENTS, THE BEAM IS NON-COMPOSITE, AND NO DETAIL IS PROVIDED, THE BEAM-TO-BEAM AND BEAM-TO-COLUMN CONNECTIONS SHALL BE DESIGNED FOR THE GREATER OF 6 KIPS SERVICE LOAD OR 10 KIPS FACTORED LOAD. NOTIFY THE ENGINEER OF RECORD OF ANY COMPOSITE BEAMS SHOWN WITHOUT A LISTED SHEAR.
10. THE FABRICATOR SHALL RETAIN AN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED WHO SHALL DESIGN AND DETAIL ALL CONNECTIONS NOT DETAILED OR PARTIALLY DETAILED ON THE DRAWINGS. FOR VERIFICATION OF THIS, THE FABRICATOR'S ENGINEER SHALL SUBMIT CONNECTION DRAWINGS WITH CORRESPONDING CALCULATIONS SEALED BY THE FABRICATOR'S ENGINEER AND SUBMITTED FOR REVIEW WITH THE STRUCTURAL STEEL SHOP DRAWINGS. THESE CALCULATIONS WILL BE RETAINED BY THE ARCHITECT/ENGINEER OF RECORD AND WILL NOT BE RETURNED. SHOP DRAWINGS WILL NOT BE REVIEWED UNTIL SEALED CONNECTION CALCULATIONS ARE RECEIVED.
11. STRUCTURAL STEEL SHOP DRAWINGS SUBMITTED WITHOUT CONNECTION CALCULATIONS WILL NOT BE REVIEWED AND WILL BE RETURNED AS INCOMPLETE.
12. WHERE STEEL BEAMS SUPPORT COLUMNS (TRANSFER GIRDERS), WELD 3/8" STIFFENER PLATES ON EACH SIDE OF THE BEAM WEB ALIGNED WITH BOTH COLUMN FLANGES.
13. STRUCTURAL STEEL SHALL NOT BE SPLICED OTHER THAN WHERE NOTED ON THE DRAWINGS WITHOUT APPROVAL OF THE ENGINEER OF RECORD.
14. STEEL BEAMS SHALL BE ERECTED WITH THEIR NATURAL CAMBER UP.

DESIGN CRITERIA

1. APPLICABLE CODES

IBC 2018	INTERNATIONAL BUILDING CODE
ASCE 7-16	MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 318-16	BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

2. DEAD LOAD

   SELF WEIGHT OF STRUCTURE EQUALS ACTUAL WEIGHT OF MATERIALS

3. LIVE LOAD

   PEDESTRIAN BRIDGE WITH NO VEHICLE ACCESS IS 250 PSF

SUMMARY OF PAY QUANTITIES

ITEM NO.	ODOT SPEC.	DESCRIPTION	UNIT	QUANTITY
48	504(F)	HAND RAILING	LF.	50
49	509(A)	CLASS AA CONCRETE	C.Y.	6.3
50	511(A)	REINFORCING STEEL	LB.	1044.5
51	619(B)	REMOVAL OF BRIDGE ITEMS	LSUM	1
52	631(A)	STATIONARY BOLLARD	EA.	2

LICENSED PROFESSIONAL ENGINEER — JOSHUA M. JOHNSON — OKLAHOMA — 4-22-24 — 24635

CA #32
EXP 06-30-2024

BEFORE YOU DIG — 811 — CALL OKIE

PAY ITEMS & NOTES (PEDESTRIAN BRIDGE)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC
CEC Corporation
1300 S. Main St., Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

PLAN SCALE: AS INDICATED
PROFILE SCALES: HORIZONTAL: AS INDICATED; VERTICAL: AS INDICATED

DRAWN	JJ	5/2024
DESIGNED	JJ	6/2024
SURVEY	B.B.	4/2018
PROJ. MGR.	–	
LEAD ENGR.		9/24
FIELD MGR.		8/24

APPROVED:

DESIGN MANAGER

DRAWING: BRIDGE GENERAL NOTES

DATE:

ATLAS PAGE NO: 517, 518, 612, 613

BRIDGE GENERAL CONSTRUCTION NOTES:

SPECIFICATIONS -

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

VERIFICATION OF EXISTING CONDITIONS -

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY UNDERSTANDING THE NATURE OF THE WORK AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED. ALL DIMENSIONS OF THE EXISTING BRIDGE COMPONENTS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS NECESSARY TO CONNECT THE NEW MATERIAL AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICE AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE EXISTING R.C.B. CULVERT OR ANY OTHER EXISTING STRUCTURES. ANY DAMAGE TO THE EXISTING R.C.B. CULVERT OR ANY OTHER EXISTING STRUCTURES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

FORMING AND PLACING CONCRETE -

ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.

REINFORCING -

UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60.

ALL REINFORCING STEEL SHALL HAVE A 2" MINIMUM CLEAR COVER UNLESS OTHERWISE NOTED.

HANDRAILING -

FABRICATE ALL ELEMENTS IN ACCORDANCE WITH ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE AND SUBSECTION 724.03 OF THE STANDARD SPECIFICATIONS. ALL SHOP AND FIELD WELDS SHALL HAVE A 70 K.S.I. MINIMUM TENSILE STRENGTH OF THE WELD METAL.

PIPE FOR PIPE RAIL SHALL CONFORM TO ASTM A53 GRADE B.

STEEL PLATES SHALL CONFORM TO ASTM A572, GRADE 50.

HEADED STUDS SHALL CONFORM TO ASTM A108, GRADE 1015, 1018 OR 1020.

ALL STEEL PIPE RAIL COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 732 OF THE STANDARD SPECIFICATIONS. PROVIDE HOLES IN PIPE RAIL AS NEEDED FOR GALVANIZING DRAINAGE AND VENTING.

ALL WELDED CONNECTIONS SHALL BE THOROUGHLY CLEANED OF ALL LOOSE SCALE AND GROUND SMOOTH.

EXPOSED EDGES OF PIPE RAIL AND PIPE RAIL POSTS SHALL BE ROUNDED OR CHAMFERED TO APPROXIMATELY $\frac{1}{16}$" BY GRINDING.

AFTER FIELD FABRICATION, REPAIR SURFACE DEFECTS AND WELDED CONNECTIONS OF THE STEEL PIPE RAILING IN ACCORDANCE WITH SECTIONS 512 AND 730 OF THE STANDARD SPECIFICATIONS. THE SURFACE TO BE REPAIRED SHALL BE PREPARED IN ACCORDANCE WITH SECTION 512 OF THE STANDARD SPECIFICATIONS. ENSURE SURFACES ARE COATED WITH TWO COATS OF ZINC-DUST ZINC-OXIDE PRIMER IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS. APPLY AT LEAST A 90 PERCENT ZINC RICH PAINT TO THE WELDED CONNECTIONS AND BASE PLATE. PERFORM ALTERNATE REPAIRS IN ACCORDANCE WITH ASTM A780.

SHOP DETAILS FOR ALL PIPE RAIL SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

SOFTWARE -

THE FOLLOWING COMPUTER SOFTWARE WAS USED IN THE ANALYSIS OF THE STRUCTURES DETAILED IN THE PLANS:

1. BRASS-CULVERT, VERSION 3.8.0.3001
2. ABUTMENT/RETAINING WALL DESIGN (VERSION 2.00, 10-19-07)

BRIDGE PAY ITEM NOTES:

(BR-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITIES ONLY. SEE SECTION 109.01(B) OF THE STANDARD SPECIFICATIONS.

(BR-2) ALL COSTS FOR PIPE RAIL INCLUDING PIPE RAIL, BASE PLATES, EXPANSION JOINTS, HEADED STUDS, WELDING, CLEANING, PAINTING, MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "HANDRAILING."

(BR-3) QUANTITY SHOWN FOR RIPRAP ESTIMATED AT 120 LB. PER CUBIC FOOT.

(BR-4) QUANTITY SHOWN FOR FILTER BLANKET ESTIMATED AT 105 LB. PER CUBIC FOOT.

(BR-5) AT THE SOUTH END OF THE EXISTING RCB, THE FOLLOWING EXISTING COMPONENTS SHALL BE DEMOLISHED AND REMOVED: CONCRETE APRON, BOTH EXISTING WINGWALLS, CURTAIN WALL, AND 1'-0" OF THE END OF THE EXISTING RCB AND HEADWALL. ALL WORK SHALL BE DONE IN ACCORDANCE WITH SUBSECTION 619.04.B OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. ALL DEMOLISHED ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND/OR DISPOSED OF IN A MANNER APPROVED BY THE CITY. ALL COSTS FOR DEMOLITION AND DISPOSAL OF ITEMS AS NOTED INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "REMOVAL OF BRIDGE ITEMS."

PROJECT NO. 153120-CI-8
0200 BRIDGE "A"

PAY QUANTITIES

56TH ST. N. & CINCINNATI SIDEWALK IMPROVEMENTS
10' x 6' x 10' LONG R.C.B. CULVERT EXTENSION WITH CONCRETE CHANNEL,
℄ STA.12+13.71 OFFSET 13' RIGHT

BID ITEM	ITEM NO.		DESCRIPTION		UNIT	QUANTITY
53	202(A)	2210	UNCLASSIFIED EXCAVATION	(BR-1)	C.Y.	100
54	501(A)	1210	STRUCTURAL EXCAVATION UNCLASSIFIED	(BR-1)	C.Y.	35
55	504(F)	5600	HANDRAILING	(BR-1)(BR-2)	L.F.	136
56	509(A)	0210	CLASS AA CONCRETE	(BR-1)	C.Y.	71.6
57	511(A)	2210	REINFORCING STEEL	(BR-1)	LB.	11,850
58	601(B)	1230	TYPE I-A PLAIN RIPRAP	(BR-3)	TON	180
59	601(C)	1310	TYPE I-A FILTER BLANKET	(BR-4)	TON	40
60	619(B)	6304	REMOVAL OF BRIDGE ITEMS	(BR-5)	L.SUM	1.0

AUGUSTINE F. WUERTZ 29197 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
4/24/24
CA 32 6-30-24

REVISION	BY	DATE

GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)

PROJECT NO. 153120-CI-8

56TH ST. N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

CEC CORPORATION
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: N/A	DRAWN	J.F.R.	09/2023
	DESIGNED	A.F.W.	09/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A	PROJ. MGR.	TW	4/24
	LEAD ENGR.	[illegible]	7/24
	FIELD MGR.	[illegible]	8/24

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DESIGN MANAGER

DRAWING: RCB NOTES.DWG
ATLAS PAGE NO: 517, 518, 612, 613
DATE
SHEET 5 OF 22

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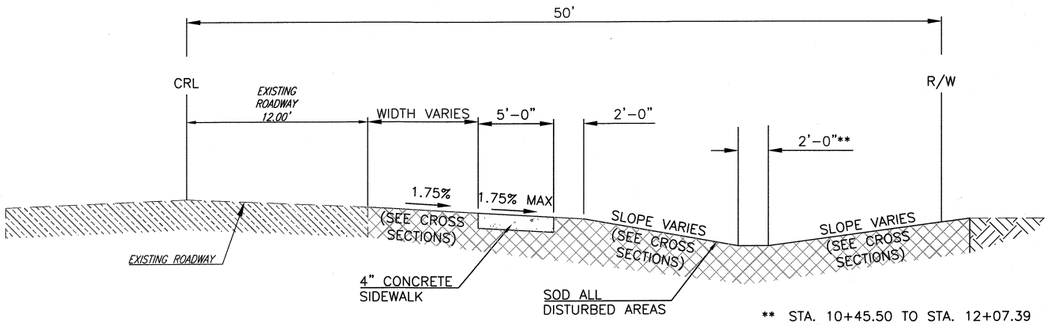
N:\OKC\Bridge\Bridge Projects\Production\4 City of Tulsa\16093.08 TO 8 56th St North and Cincinnati\Drawings\2023.9.22 Redesign\RCB NOTES.dwg
Save date: 3/18/2024 9:04:10 AM, JAMES RINEHART, Plot date: 3/18/2024 9:04:36 AM, JAMES RINEHART, DWG To PDF.pc3

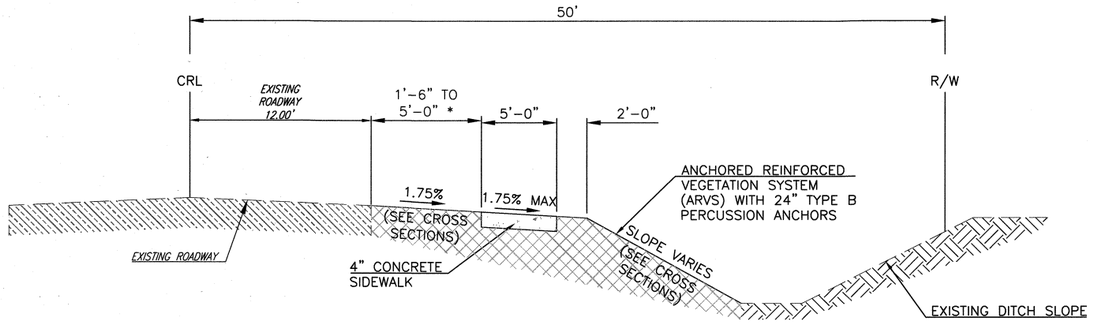


** STA. 10+45.50 TO STA. 12+07.39

TYPICAL SECTION 1
CONCRETE SIDEWALK AND DITCH TYPICAL SECTION

SEE CROSS SECTIONS

STA. 10+23.37 TO STA. 12+07.39

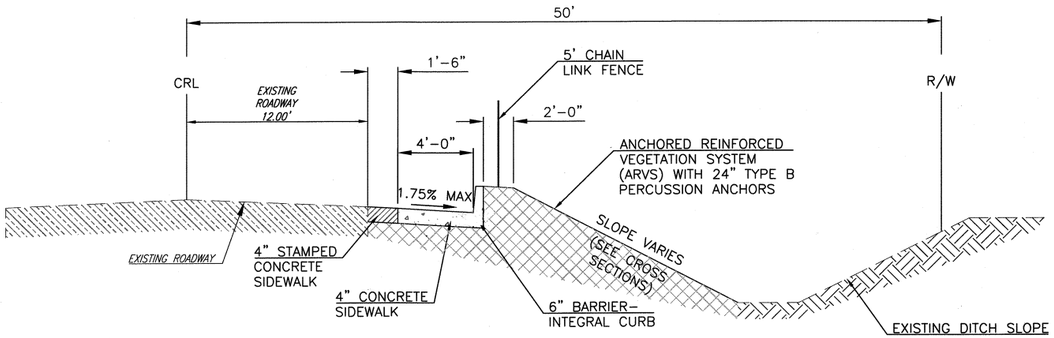


TYPICAL SECTION 2
CONCRETE SIDEWALK AND DITCH TYPICAL SECTION

SEE CROSS SECTIONS

STA. 12+07.39 TO STA. 13+14.81
STA. 13+75.34 TO STA. 19+05.17

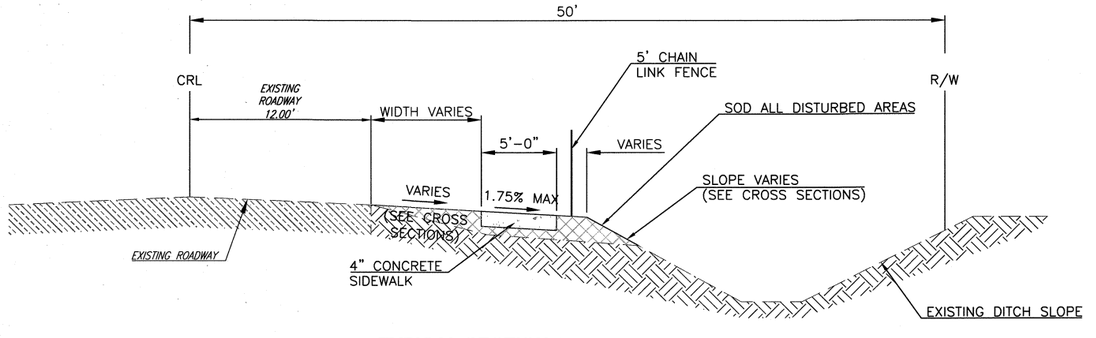
* FOR WIDTHS
1'-6" TO 3'-0" BRICK PATTERN CONCRETE
STA. 12+07.39 TO STA. 13+14.81
3'-0" TO 5'-0" SOLID SLAB SODDING
STA. 13+75.34 TO STA. 19+05.17



TYPICAL SECTION 3
CONCRETE SIDEWALK AND CURB TYPICAL SECTION

SEE CROSS SECTIONS

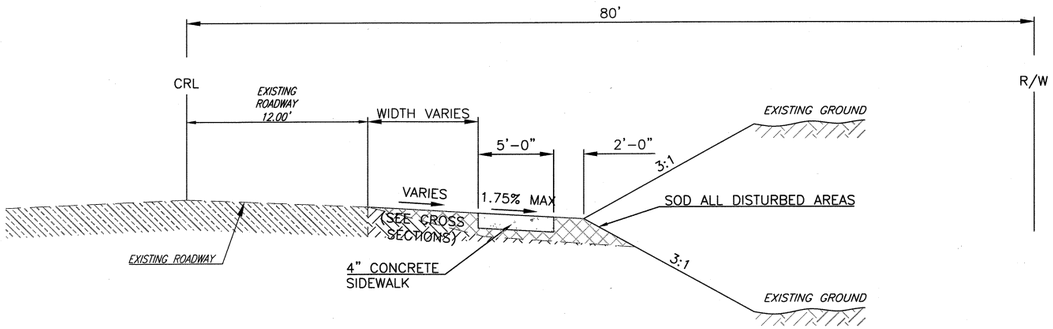
STA. 13+14.81 TO STA. 13+75.34



TYPICAL SECTION 4
CONCRETE SIDEWALK AND DITCH TYPICAL SECTION

SEE CROSS SECTIONS

STA. 19+39.10 TO STA. 20+04.42



TYPICAL SECTION 5
CONCRETE SIDEWALK TYPICAL SECTION

SEE CROSS SECTIONS

STA. 20+27.92 TO STA. 20+60.87

REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
STATE OF OKLAHOMA
7-26-24

811 BEFORE YOU DIG
CALL OKIE

TYPICAL SECTIONS

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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PLAN SCALE: N/A
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	7/24
LEAD ENGR.	BOC	7/24
FIELD MGR.	TW	8/24

APPROVED:

DESIGN MANAGER

DRAWING: 5 TYPICAL SECTIONS.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 6 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\5 TYPICAL SECTIONS.DWG

SUMMARY OF HYDROLOGIC DATA AND RUNOFF CALCULATIONS

D.A. NO.	AREA	INTENSITY	RUNOFF COEFF.	DESIGN YEAR RUNOFF	COLLECTING STR NO.	OVERLAND FLOW						SHALLOW CHANNELIZED FLOW					TOTAL TIME OF CONCENTRATION	DESIGN TIME OF CONCENTRATION (MAX = 10 MIN)
	A	I_{100}	C	Q_{100}		OVERLAND CLASS.	FLOWPATH LENGTH	DESIGN FLOWPATH LENGTH (MAX = 300 LF)	AVG SLOPE	VELOCITY	T_i	CHANNEL CLASS.	FLOWPATH LENGTH	AVG SLOPE	VELOCITY	T_t	$T_c = T_i + T_t$	DESIGN T_c
	ACRES	IN/HR		CFS			LF	LF	%	FPS	MIN		LF	%	FPS	MIN	MIN	MIN
A	13.21	9.5	0.62	77.83	EXIST. CULVERT	S	150	150	2.4	1.1	2.3	G	986	2.4	2.5	6.6	8.9	8.9
B	0.23	13	0.73	2.18	STR-1	P	33	32.99	6.1	5.0	0.1	G	244	6.0	3.9	1	1.1	1.1
C	0.32	12.6	0.47	1.90	STR-2	S	68	67.77	7.5	1.9	0.6	G	127	1.6	2.0	1.1	1.7	1.7

SUMMARY OF DRAINAGE STRUCTURES

DRAINAGE STRUCTURE NUMBER	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION	DESIGN	INLET TOP OF GRATE / MH TOP OF RIM	INVERT ELEVATION	INVERT ELEVATION DOWNSTREAM	INNER STR. HEIGHT	5' MANHOLE	COT D.I. DES. 2	SMD TYPE 2B	ADD'L DEPTH SMD TYPE 2B	18" RCP	36" RCP
							(FT)	(FT)	(FT)	(FT)	(EA)	(EA)	(EA)	(VF)	(LF)	(LF)
STR-1	10+26.28	38.5 RT	455621.53	2560220.82	CONSTRUCT INLET, STUB 18.15 LF 18" RCP INTO MH-1	STD. 770	679.43	675.43	675.35	4.00		1			19	
STR-2	11+79.48	28.7 RT	455635.23	2560373.69	CONSTRUCT INLET, STUB 27.15 LF 36" RCP INTO PROP. RCB		673.67	669.10	668.93	4.57			1	0.38		28
MH-1	10+39.04	21.2 RT	455639.11	2560233.13	CONSTRUCT 5' MH, STUB 136.28 LF 36" RCP INTO STR-2	STD. 775	679.24	673.85	669.20	5.39	1					137
										TOTALS	**1**	**1**	**1**	**0.38**	**19**	**165**

SUMMARY OF PIPE DESIGN

START NODE STR NO.	END NODE STR NO.	DIAM	LENGTH	SLOPE	INV UP	INV DN	T/G UP	T/G DN	HGL UP	HGL DN	EGL UP	EGL DN	Q_{100}	$Q_{CAPACITY}$	VELOCITY
		INCH	LF	%	FT	FT	FT	FT	FT	FT	FT	FT	CFS	CFS	FPS
1	MH1	18	18.15	0.44	675.43	675.35	679.43	679.24	677.99	677.99	678.02	678.01	2.18	6.97	1.23
MH1	2	36	136.28	3.41	673.85	669.20	679.24	673.67	676.62	672.88	678.76	674.87	80.01	123.20	18.55
2	OUT	36	27.15	0.63	669.10	668.93	673.67		672.49	671.93	675.31	674.76	95.37	52.78	13.49

REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
4/24

BEFORE YOU DIG 811 CALL OKIE

DRAINAGE SUMMARY TABLES

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

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

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BOC	7/24
FIELD MGR.		8/24

APPROVED:
DESIGN MANAGER
DATE

DRAWING: 6 DRAINAGE SUMMARY TABLES.DWG
ATLAS PAGE NO: 517, 518, 612, 613

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\6 DRAINAGE SUMMARY TABLES.DWG

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: 56TH ST. FROM MLK JR BLVD. TO FRANKFORT AVE.
TULSA, OKLAHOMA

PROJECT DESCRIPTION: SIDEWALK CONSTRUCTION WITH DRAINAGE IMPROVEMENTS

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. VEGETATIVE STRIPPING
2. UNDERCUT & STOCKPILE EXISTING TOPSOIL. PRESERVE AS MUCH NATIVE VEGETATION AS POSSIBLE
3. INSTALL SEDIMENT CONTROLS
4. INSTALL DRAINAGE STRUCTURES
5. PERFORM GRADING
6. INSTALL SIDEWALK
7. SPREAD TOPSOIL
8. INSTALL SOLID SLAB SOD

SOIL TYPE: SILT LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 0.78 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.78 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.15 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.25 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.53

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°14'5.70" N, 95°59'30.88" W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: VALLEY VIEW CREEK, FLAT ROCK CREEK

SENSITIVE WATERS OR WATERSHEDS:	YES [ ]	NO [X]
303(d) IMPAIRED WATERS:	YES [X]	NO [ ]
IF YES, LIST IMPAIRMENT:		
LOCATED IN A TMDL:	YES [ ]	NO [X]
LAKE THUNDERBIRD TMDL:	YES [ ]	NO [X]
MS4 ENTITY	YES [ ]	NO [X]
IF YES, LOCATION:		

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

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- [ ] TEMPORARY SEEDING
- [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:

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

OFFSITE VEHICLE TRACKING:

- [ ] HAUL ROADS DAMPENED FOR DUST CONTROL
- [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

REGISTERED PROFESSIONAL ENGINEER — SHANNON N. HANKS — 21141 — OKLAHOMA — 8/8/24

BEFORE YOU DIG OKLAHOMA 811 CALL OKIE

STORMWATER MANAGEMENT PLAN

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

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

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BDC	7/24
FIELD MGR.		8/24

APPROVED:
DESIGN MANAGER
DATE

DRAWING: 7 STORMWATER MANAGEMENT PLAN.DWG
ATLAS PAGE NO: 517, 518, 612, 613
SHEET 8 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\7 STORMWATER MANAGEMENT PLAN.DWG

AREA	T_c MIN	C	I_{100} IPH	Q_{100} CFS
A	8.9	0.62	9.50	77.83
B	1.1	0.73	13.00	2.18
C	1.7	0.47	12.60	1.90
FLOW FROM POND CULVERTS				13.46

REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
4-12-24

BEFORE YOU DIG 811 CALL OKIE

DRAINAGE AREA MAP

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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PLAN SCALE: 1" = 50'

PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BDC	4/24
FIELD MGR.	BDC	4/24

APPROVED:

DESIGN MANAGER

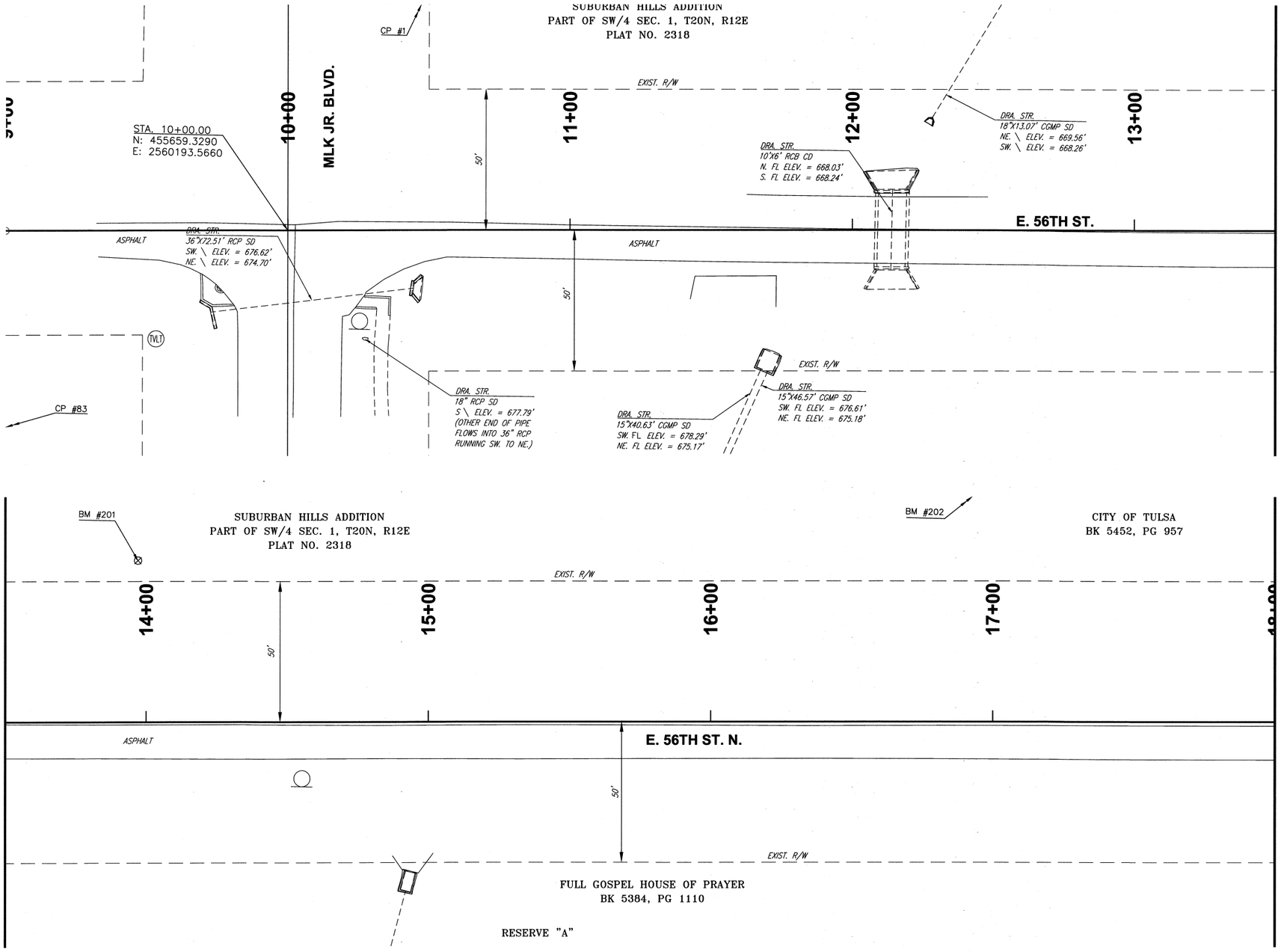
DRAWING: 8 DRAINAGE AREA MAP.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 9 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\8 DRAINAGE AREA MAP.DWG



BENCHMARK				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
201	455,726.9	2,560,589.0	675.19	SET 5/8" IRON PIN W/CEC CONTROL CAP
202	455,769.4	2,560,898.8	671.81	CUT X TOP OF CURB

CONTROL POINT				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
1	455,787.6418	2,560,259.8790	676.862	SET 5/8" IP W/CEC CP CAP
83	454,908.1940	2,557,910.2140	703.358	FND 5/8" IP W/COT ALUMINUM CAP

PREPARED BY:
CEC CORPORATION
4555 W. MEMORIAL ROAD
OKLAHOMA CITY, OK 73142-2013
(405) 753-4200

4/24/24 Darren M. Smith
DATE DARREN M. SMITH, P.L.S.
OKLAHOMA REG. NO. 1552

DARREN M. SMITH 1552 LICENSED PROFESSIONAL LAND SURVEYOR OKLAHOMA

SURVEYOR'S CERTIFICATION:
I HEREBY CERTIFY THAT THE HORIZONTAL AND VERTICAL CONTROL FOR THIS PROJECT WERE BASED UPON THE TULSA COUNTY ADS CONTROL NETWORK AND THAT THE VALUES SHOWN MEET SECOND ORDER CLASS II HORIZONTAL (1:20,000) AND THIRD ORDER VERTICAL (1:5,000) STANDARDS. AT A MINIMUM.

0 10' 20' 40'

BEFORE YOU DIG 811 CALL OKIE

SURVEY CONTROL (1 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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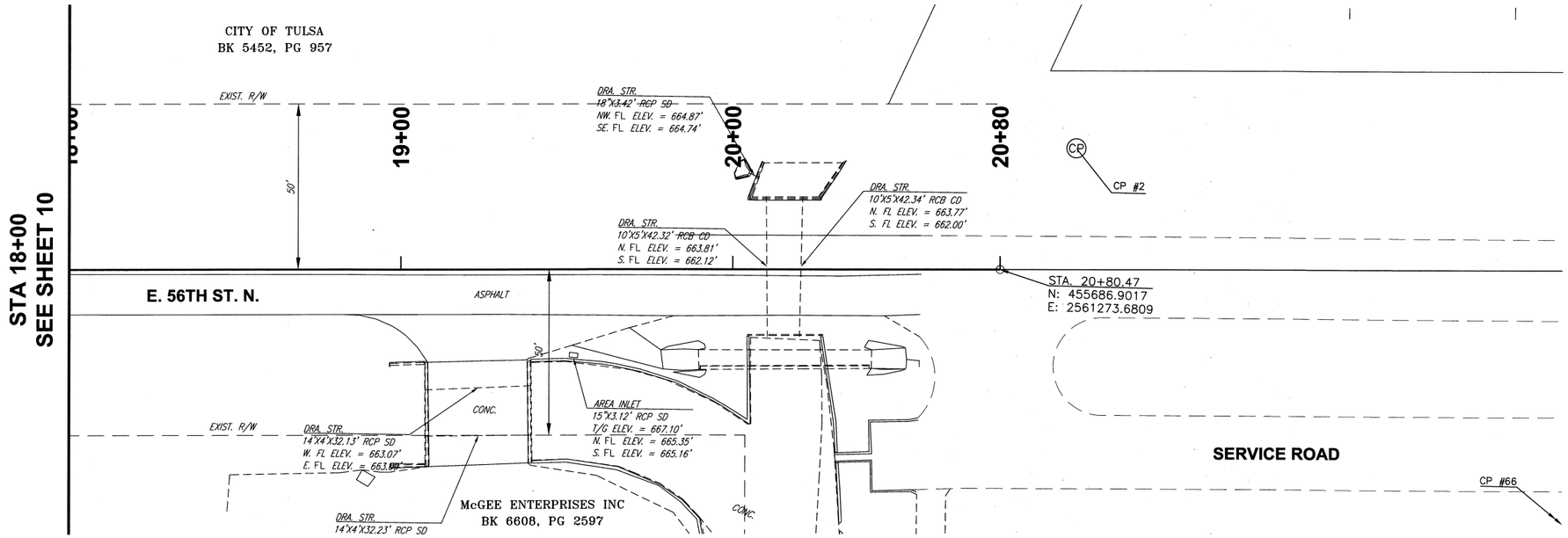
PLAN SCALE: 1" = 20'
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BDC	4/24
FIELD MGR.		8/24

APPROVED:
DESIGN MANAGER

DRAWING: 10 SURVEY CONTROL (2 OF 2).DWG
DATE
ATLAS PAGE NO: 517, 518, 612, 613
SHEET 10 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\10 SURVEY CONTROL (2 OF 2).DWG



CONTROL POINT				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
2	455,724.1356	2,561,295.6668	670.02	SET 5/8" IP W/CEC CP CAP
66	450,619.1150	2,567,698.4410	630.302	FND 5/8" IP W/COT ALUMINUM CAP

PREPARED BY:
CEC CORPORATION

4555 W. MEMORIAL ROAD
OKLAHOMA CITY, OK 73142-2013
(405) 753-4200

4/24/24 Darren M. Smith
DATE DARREN M. SMITH, P.L.S.
OKLAHOMA REG. NO. 1552

LICENSED PROFESSIONAL LAND SURVEYOR
DARREN M. SMITH
1552
OKLAHOMA

SURVEYOR'S CERTIFICATION:
I HEREBY CERTIFY THAT THE HORIZONTAL AND VERTICAL CONTROL FOR THIS PROJECT WERE BASED UPON THE TULSA COUNTY ADS CONTROL NETWORK AND THAT THE VALUES SHOWN MEET SECOND ORDER CLASS II HORIZONTAL (1:20,000) AND THIRD ORDER VERTICAL (1:5,000) STANDARDS. AT A MINIMUM.

BEFORE YOU DIG OKLAHOMA 811 CALL OKIE

0 10' 20' 40'

REVISION	BY	DATE
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PLAN SCALE: 1" = 20'
PROFILE SCALES:
HORIZONTAL: N/A
VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.	BBC	7/24
FIELD MGR.	TBA	8/24

APPROVED:
DESIGN MANAGER

SURVEY CONTROL (2 OF 2)

PROJECT NO. 153120-C1-8

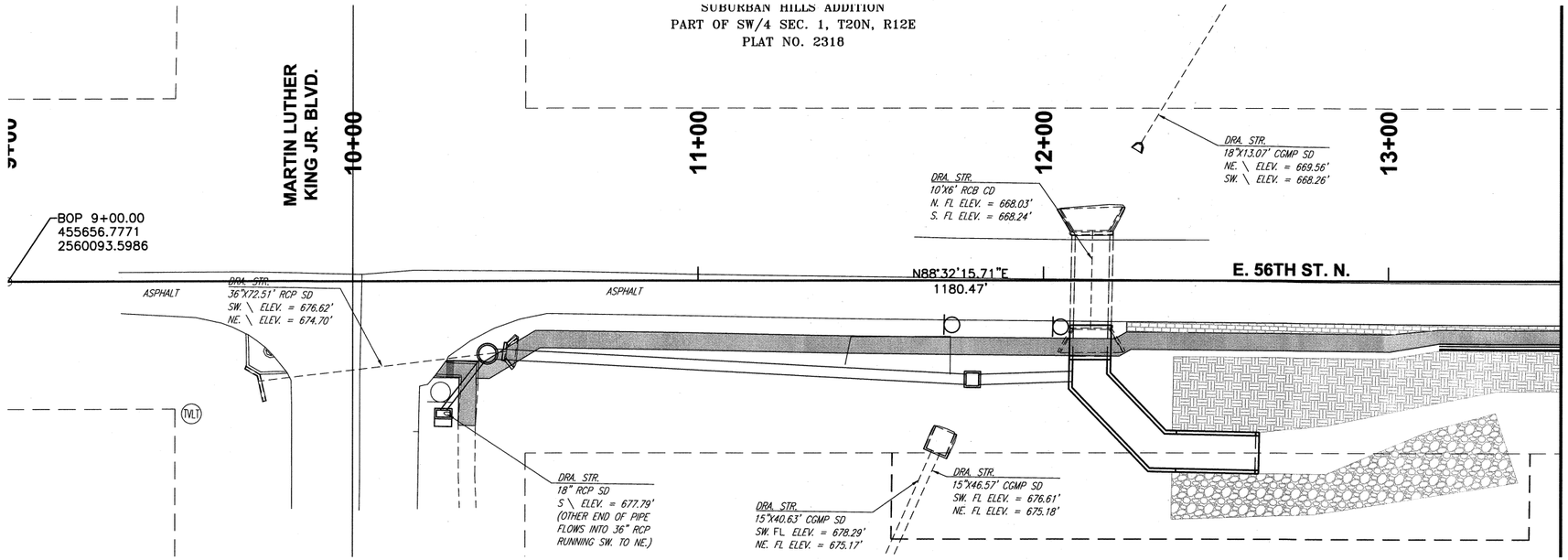
56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

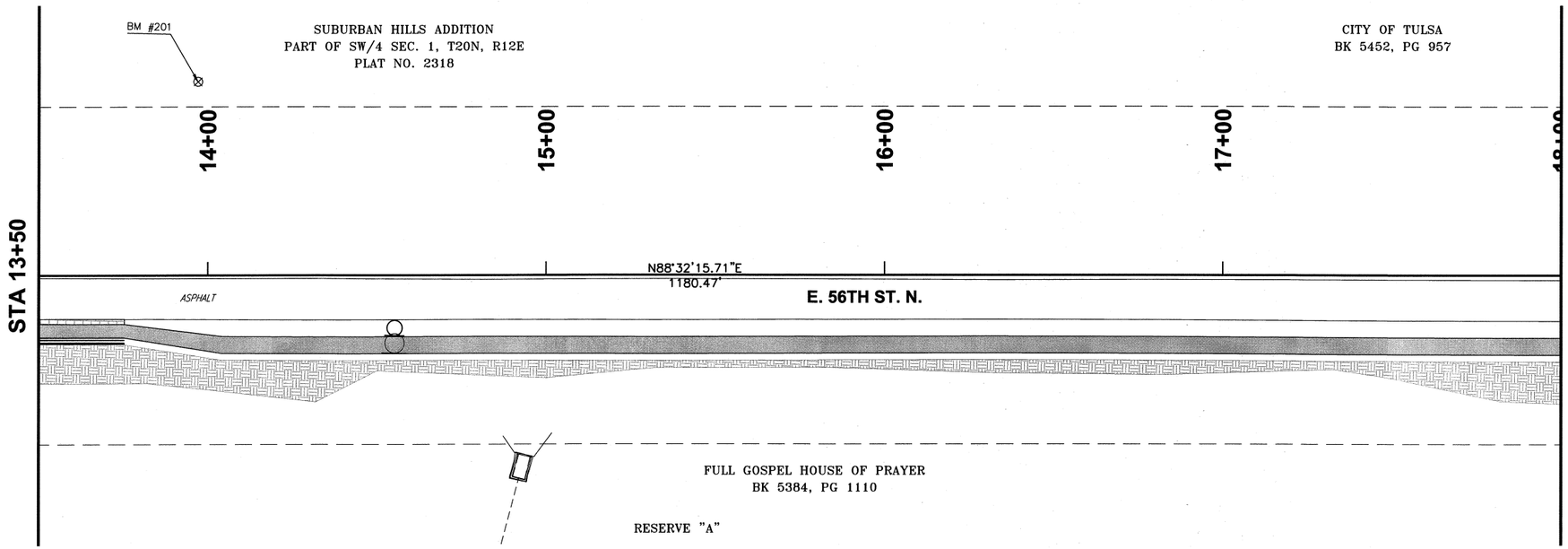
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

DRAWING: 10 SURVEY CONTROL (2 OF 2).DWG
DATE
ATLAS PAGE NO: 517, 518, 612, 613
SHEET 11 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\10 SURVEY CONTROL (2 OF 2).DWG





0 10' 20' 40'

REVISION	BY	DATE
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REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
11-30-24

BEFORE YOU DIG 811 CALL OKIE

GEOMETRIC DATA (1 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: 1" = 20'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.	BDC	3/24
	FIELD MGR.	BDC	8/24
VERTICAL N/A			

APPROVED:

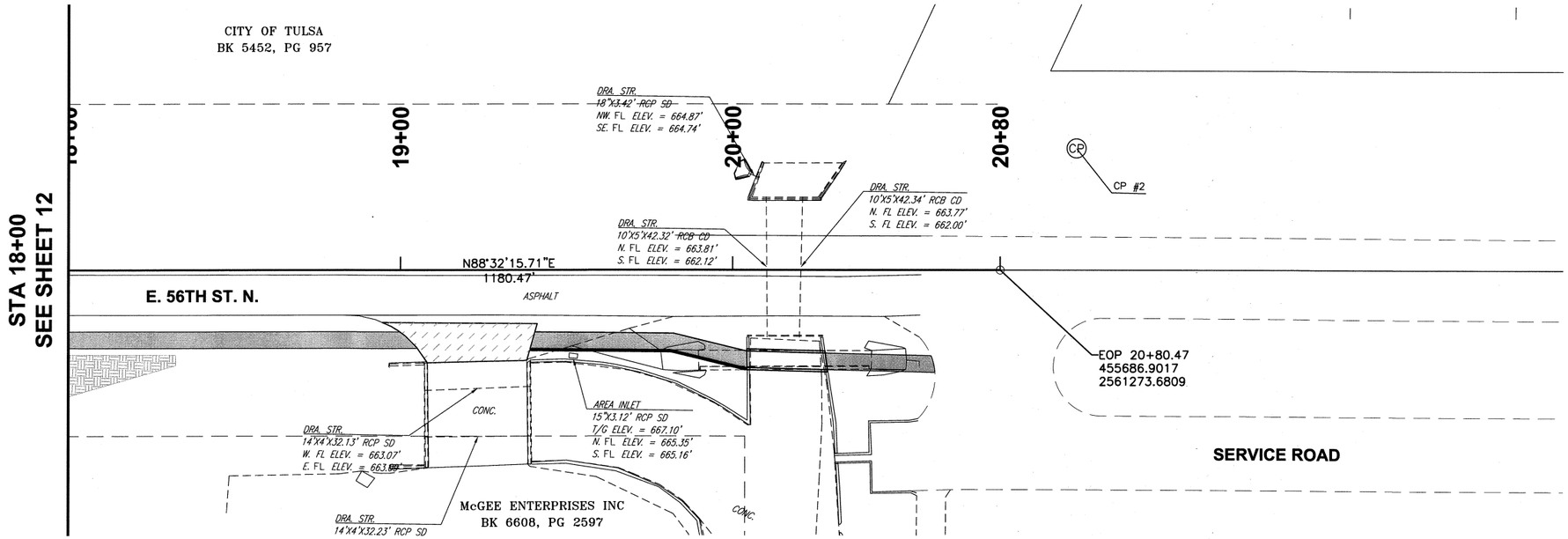
DESIGN MANAGER

DRAWING: 12 GEOMETRIC DATA (2 OF 2).DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 12 OF 22



PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\12 GEOMETRIC DATA (2 OF 2).DWG

0 10' 20' 40'

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SCISSLED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
4-12-24

BEFORE YOU DIG 811 CALL OKIE

GEOMETRIC DATA (2 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC
CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: 1" = 20'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.	BDC	7/24
	FIELD MGR.	[illegible]	8/24
VERTICAL N/A			

APPROVED:

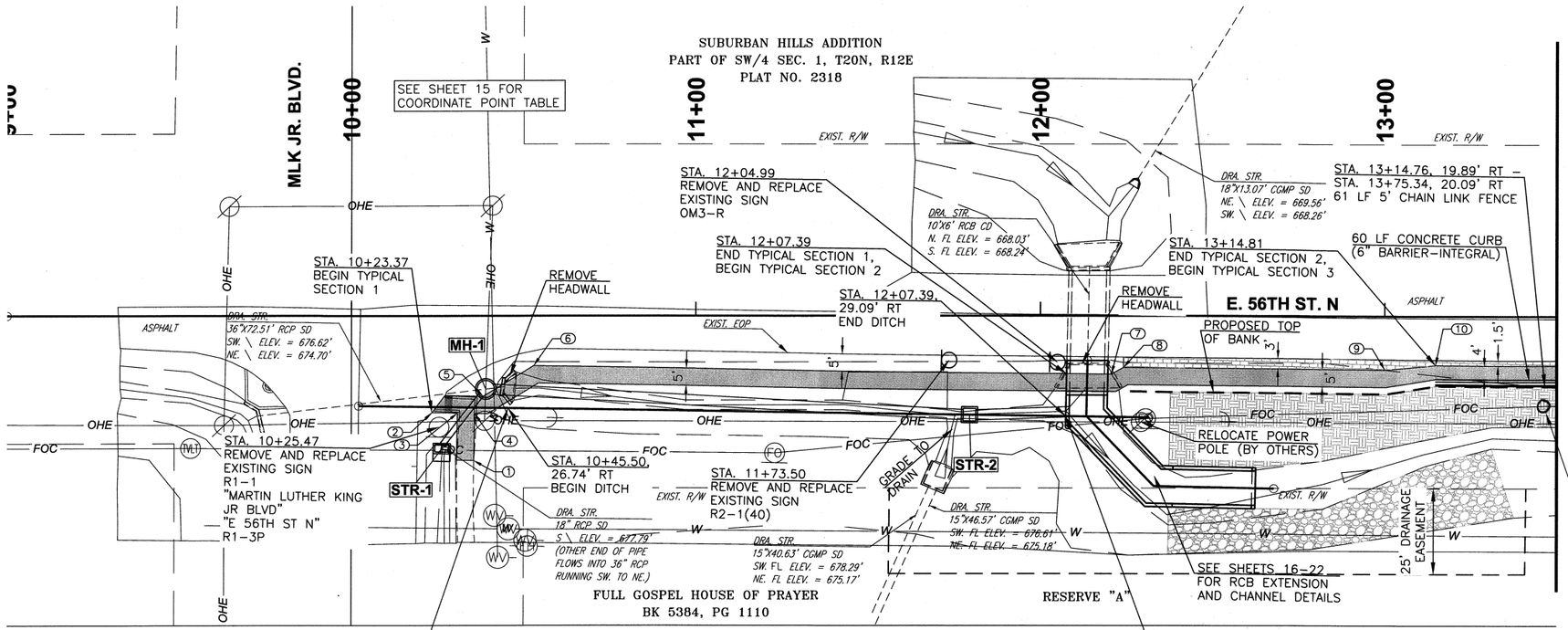
DESIGN MANAGER

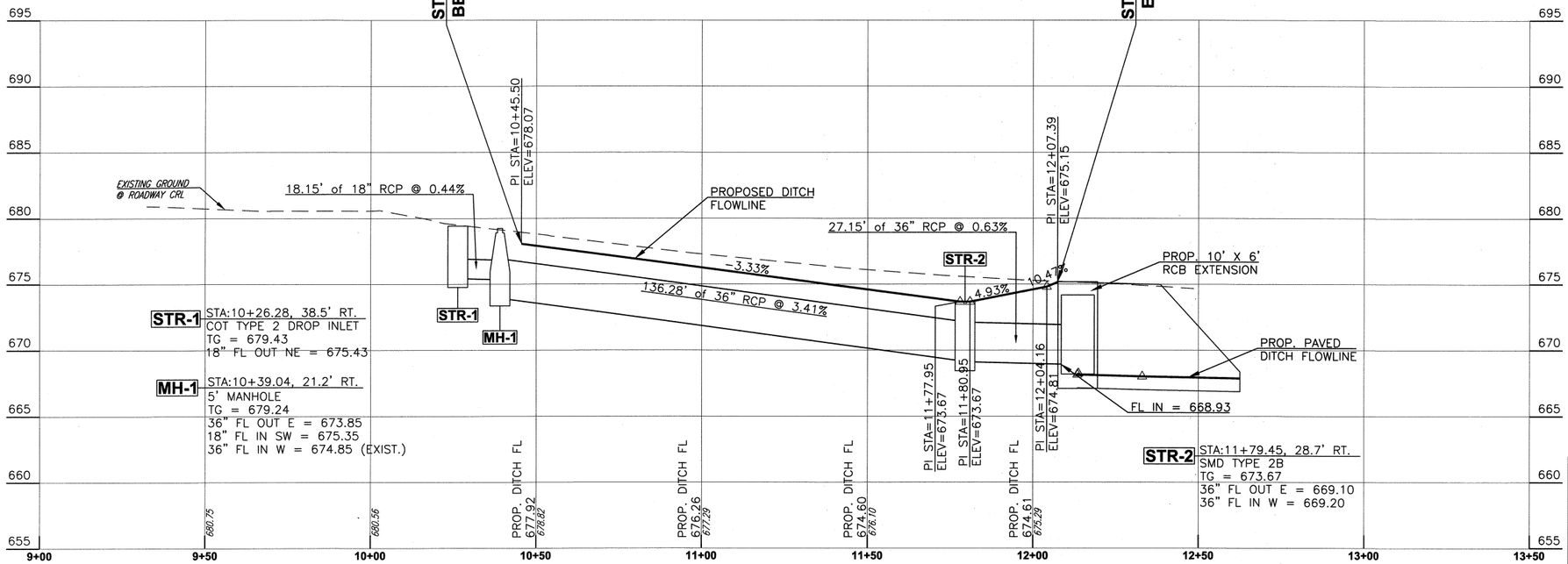
DRAWING: 12 GEOMETRIC DATA (2 OF 2).DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 13 OF 22





BENCHMARK				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
201	455,726.9	2,560,589.0	675.19	SET 5/8" IRON PIN W/CEC CONTROL CAP
202	455,769.4	2,560,898.8	671.81	CUT X TOP OF CURB

CONTROL POINT				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
1	455,787.6418	2,560,259.8790	676.862	SET 5/8" IP W/CEC CP CAP
83	454,908.1940	2,557,910.2140	703.358	FND 5/8" IP W/COT ALUMINUM CAP

LEGEND

- REMOVE AND REPLACE DRIVEWAY
- REMOVE AND REPLACE CURB
- PROPOSED SIDEWALK
- PROPOSED STAMPED SIDEWALK
- PROPOSED TYPE I-A PLAIN RIPRAP
- ANCHORED REINFORCED VEGETATION SYSTEM
- COORDINATE POINT (1)

EXISTING HORIZONTAL UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION

NOTE: CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN FLOODPLAIN

REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
4-12-24

BEFORE YOU DIG 811 CALL OKIE

0 10' 20' 40'

REVISION	BY	DATE
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SITE LAYOUT (1 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: 1" = 20'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES: HORIZONTAL: 1" = 20' VERTICAL 1" = 5'	PROJ. MGR.	TW	4/24
	LEAD ENGR.	BDC	7/24
	FIELD MGR.	BW	8/24

APPROVED:

DESIGN MANAGER

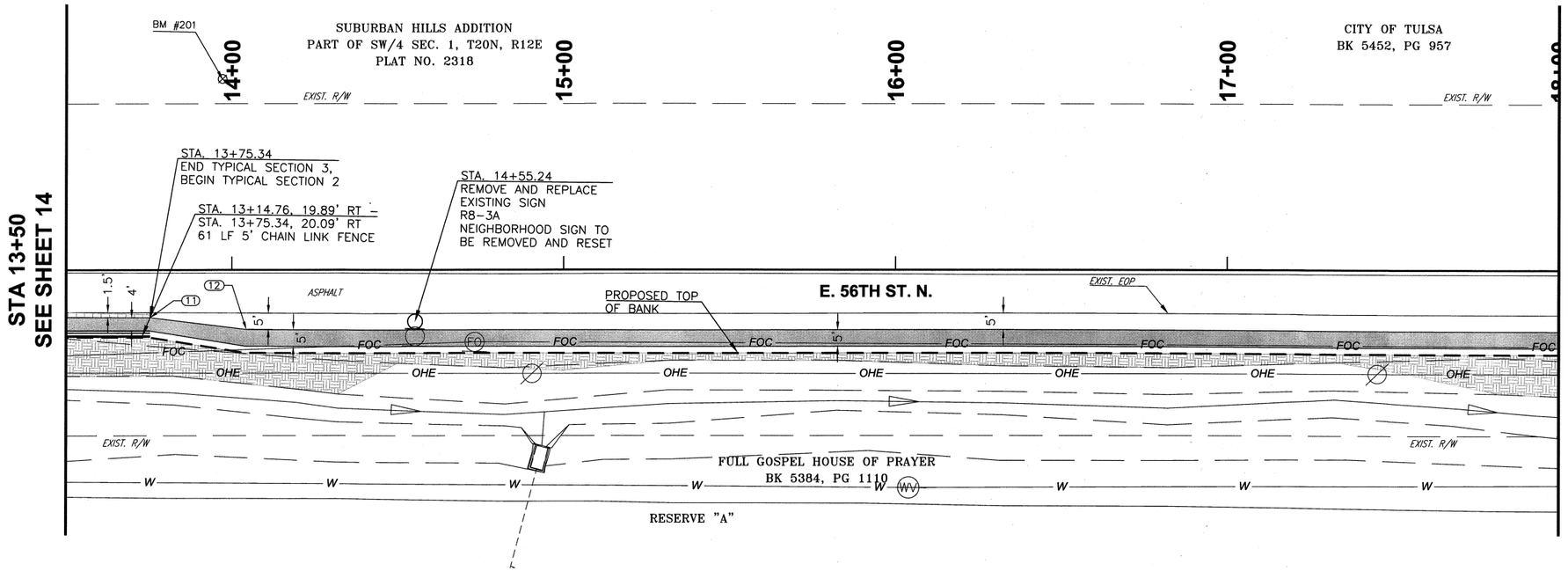
DRAWING: 14 SITE LAYOUT (2 OF 2).DWG

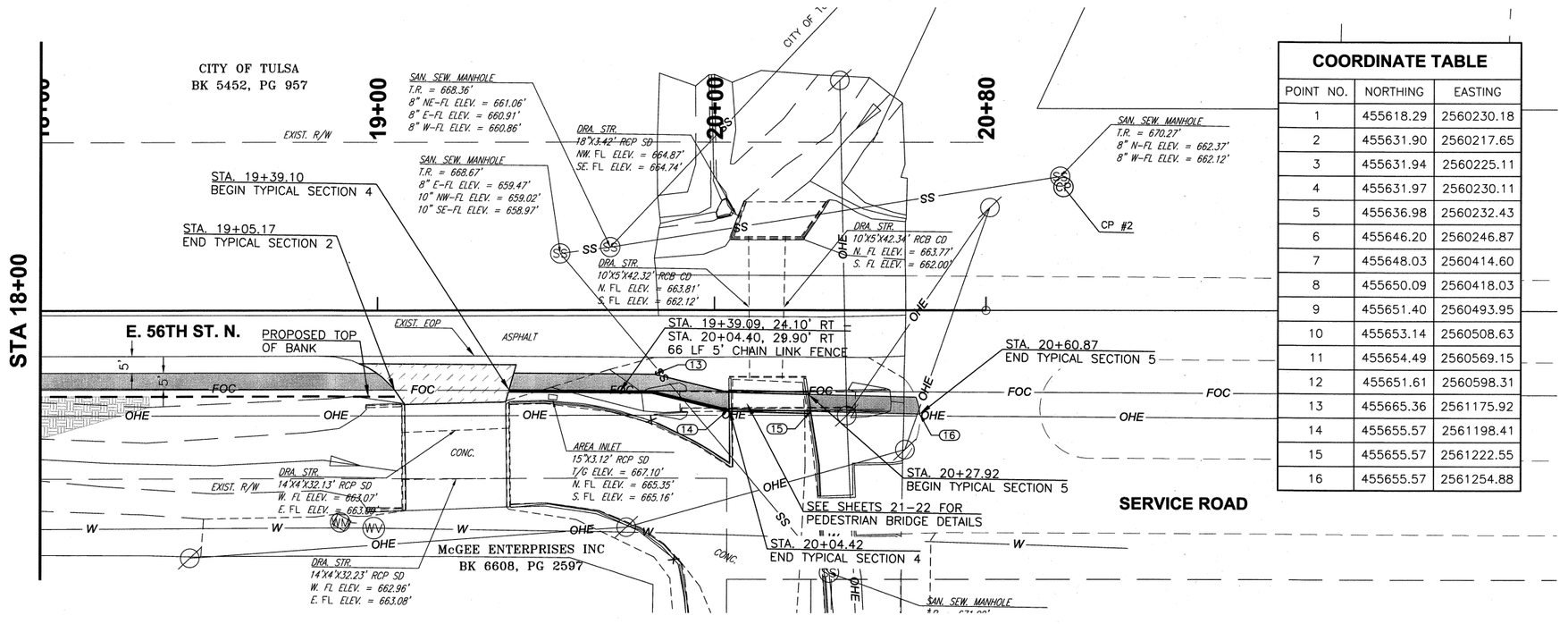
DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 14 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\14 SITE LAYOUT (2 OF 2).DWG





CONTROL POINT				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
2	455,724.1356	2,561,295.6668	670.02	SET 5/8" IP W/CEC CP CAP
66	450,619.1150	2,567,698.4410	630.302	FND 5/8" IP W/COT ALUMINUM CAP

LEGEND

- REMOVE AND REPLACE DRIVEWAY
- REMOVE AND REPLACE CURB
- PROPOSED SIDEWALK
- PROPOSED STAMPED SIDEWALK
- PROPOSED TYPE I-A PLAIN RIPRAP
- ANCHORED REINFORCED VEGETATION SYSTEM
- COORDINATE POINT (1)

EXISTING HORIZONTAL UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION

NOTE: CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN FLOODPLAIN

COORDINATE TABLE		
POINT NO.	NORTHING	EASTING
1	455618.29	2560230.18
2	455631.90	2560217.65
3	455631.94	2560225.11
4	455631.97	2560230.11
5	455636.98	2560232.43
6	455646.20	2560246.87
7	455648.03	2560414.60
8	455650.09	2560418.03
9	455651.40	2560493.95
10	455653.14	2560508.63
11	455654.49	2560569.15
12	455651.61	2560598.31
13	455665.36	2561175.92
14	455655.57	2561198.41
15	455655.57	2561222.55
16	455655.57	2561254.88

0 10' 20' 40'

REGISTERED PROFESSIONAL ENGINEER
SHANNON N. HANKS
21141
OKLAHOMA
4-12-24

BEFORE YOU DIG
811
CALL OKIE

SITE LAYOUT (2 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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PLAN SCALE: 1" = 20'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.	BDC	4/24
	FIELD MGR.	BDC	8/04
VERTICAL N/A			

APPROVED:

DESIGN MANAGER

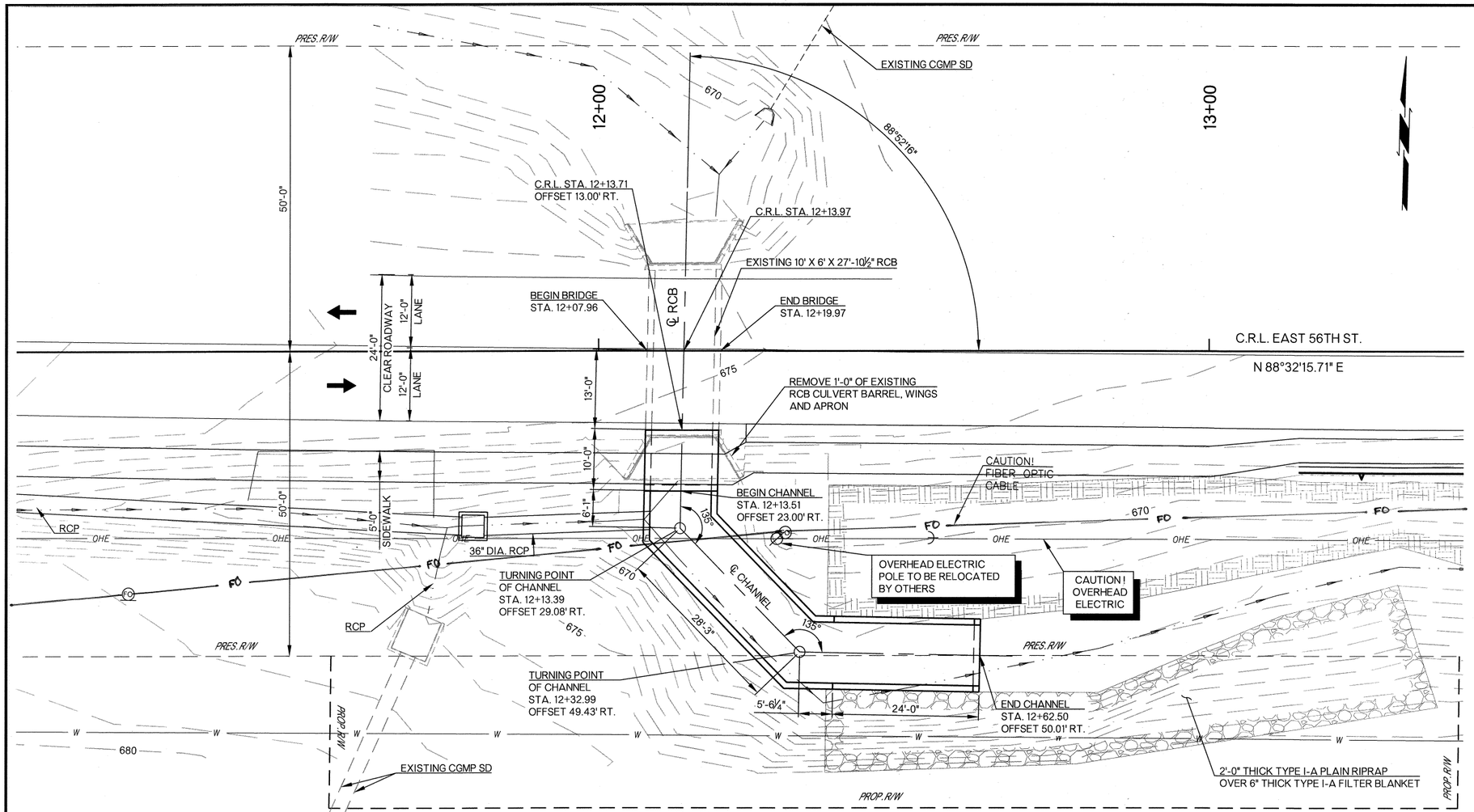
DRAWING: 14 SITE LAYOUT (2 OF 2).DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

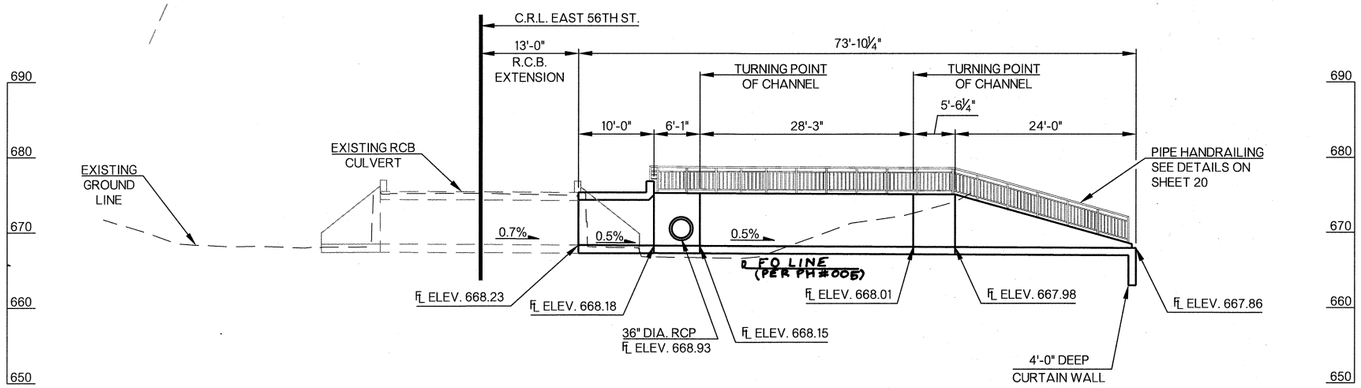
SHEET 15 OF 22

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\14 SITE LAYOUT (2 OF 2).DWG



PLAN

BM #201 SET 5/8" IRON PIN W/CEC CONTROL CAP
STA. 13+97.07 OFFSET 57.42' LT.
ELEV. 675.19



ELEVATION

ALL DIMENSIONS AND ELEVATIONS ARE ALONG THE CENTERLINE OF RCB.

NEW CONSTRUCTION DESIGN DATA (LOAD RESISTANCE FACTOR DESIGN)

CLASS AA CONCRETE f'c = 4 KSI
REINFORCING STEEL (GR. 60) fy = 60 KSI

LOADING:
HL-93

DESIGN:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION

ODOT STANDARDS

SBI-5-2

INDEX OF SHEETS

SUMMARY OF QUANTITIES

ITEM	UNIT	RCB EXTENSION	CHANNEL	TOTAL
UNCLASSIFIED EXCAVATION	C.Y.	40	60	100
STRUCTURAL EXCAVATION UNCLASSIFIED	C.Y.	6	29	35
HANDRAILING	L.F.	11	125	136
CLASS AA CONCRETE	C.Y.	14.3	57.3	71.6
REINFORCING STEEL	LB.	3,230	8,620	11,850
TYPE I-A PLAIN RIPRAP	TON	—	—	180
TYPE I-A FILTER BLANKET	TON	—	—	40
REMOVAL OF BRIDGE ITEMS	L.SUM	—	—	1.0

AUGUSTINE F. WUERTZ 29197 LICENSED PROFESSIONAL ENGINEER OKLAHOMA
4/24/24
CA 32 6-30-24

BEFORE YOU DIG 811 OKIE CALL OKIE

REVISION	BY	DATE

RCB CULVERT GENERAL PLAN AND ELEVATION

PROJECT NO. 153120-CI-8

56TH ST. N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

CEC CORPORATION
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

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

DRAWN	J.F.R.	09/2023
DESIGNED	A.F.W.	09/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TV	4/24
LEAD ENGR.	BDC	3/24
FIELD MGR.	BJM	8/24

APPROVED:
DESIGN MANAGER
DATE

DRAWING: RCB CULVERT GP&E.DWG
ATLAS PAGE NO: 517, 518, 612, 613

SHEET 16 OF 22

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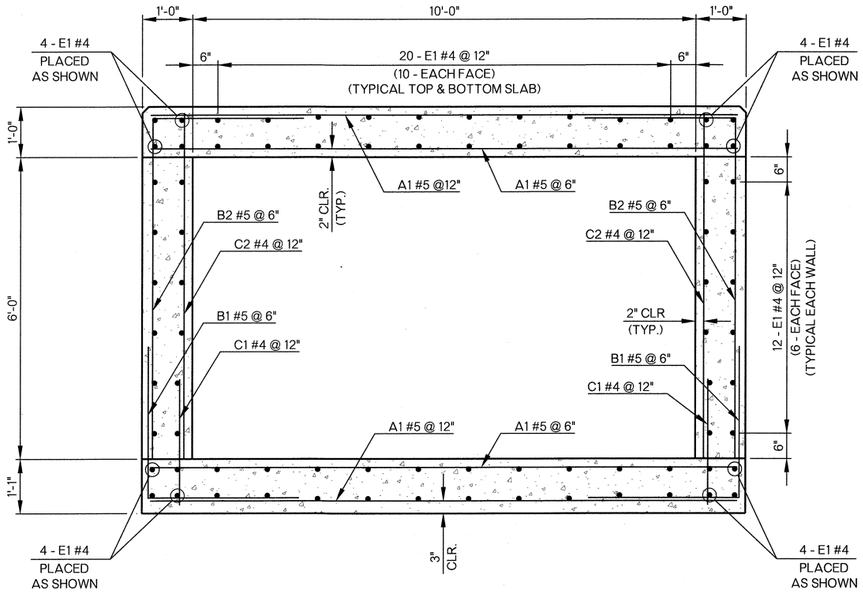
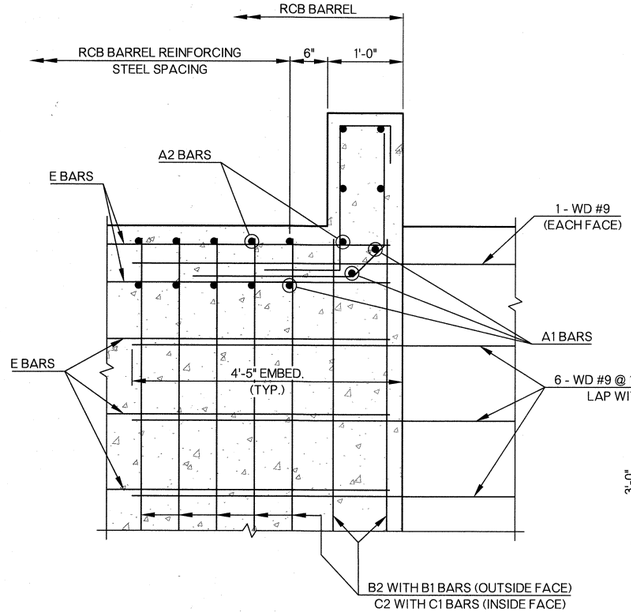
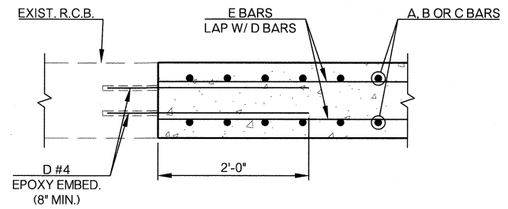


TYPICAL SECTION THRU BARREL

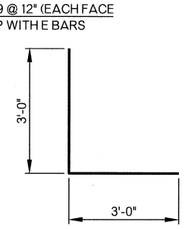


HEADWALL DETAIL AT EXTERIOR WALL

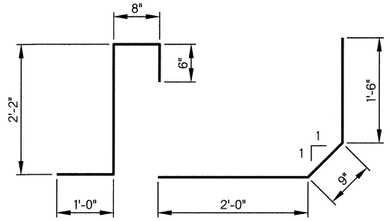


BARREL CONNECTION DETAIL

NOTE:
EPOXY-DOWELING OF D BARS INTO THE EXISTING RCB SHALL BE DONE IN ACCORDANCE WITH SECTION 509.04.D(3) OF THE ODOT STANDARD SPECIFICATIONS. ALL COSTS FOR EPOXY-DOWELING INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LB. OF "REINFORCING STEEL."

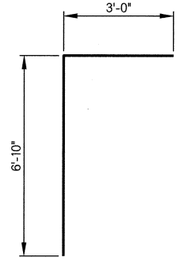


B1 #5 X 6'-0"



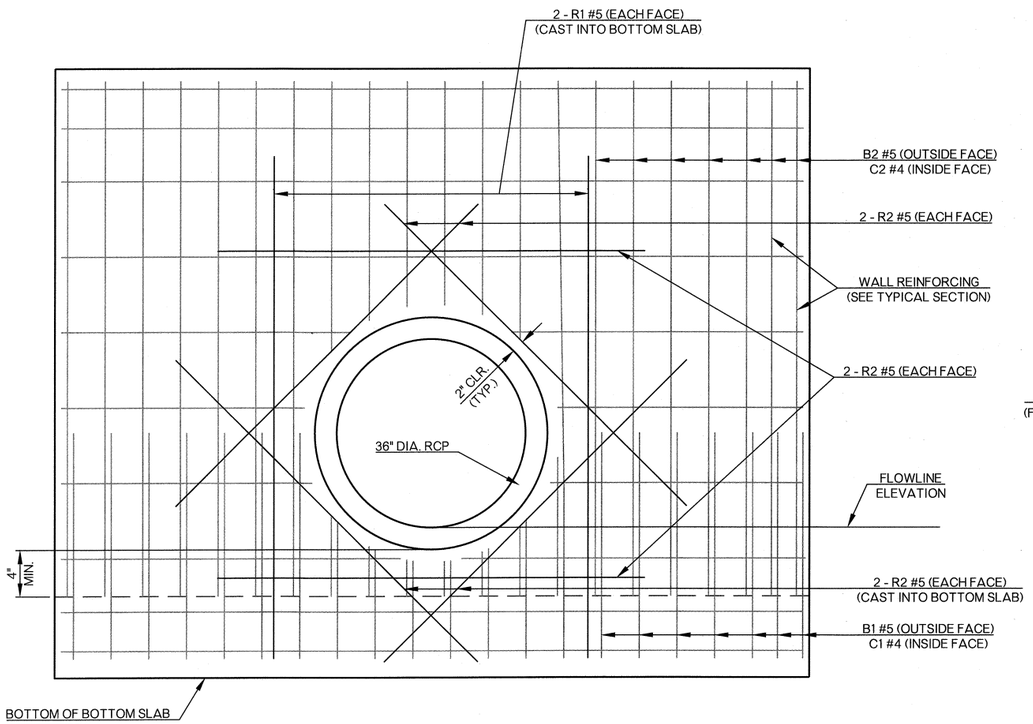
CL1 #4 X 4'-4"

CL2 #4 X 4'-3"



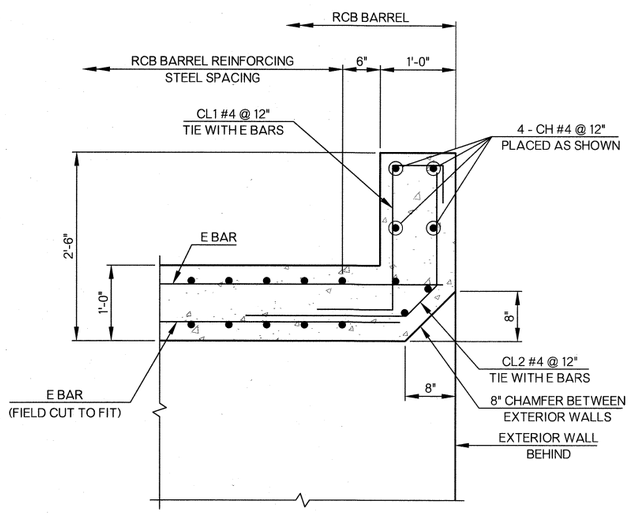
B2 #5 X 9'-10"

RCB EXTENSION BAR LIST				
PLAIN REINFORCING				
MARK	SIZE	NO.	FORM	LENGTH
A1	#5	64	STR.	11'-8"
B1	#5	42	BNT.	6'-0"
B2	#5	42	BNT.	9'-10"
C1	#4	22	STR.	2'-6"
C2	#4	22	STR.	6'-10"
CH	#4	4	STR.	11'-8"
CL1	#4	14	BNT.	4'-4"
CL2	#4	14	BNT.	4'-3"
D	#4	80	STR.	2'-8"
E1	#4	80	STR.	9'-8"
WD	#9	28	STR.	8'-10"



CHANNEL WALL OPENING REINFORCING DETAIL

NOTE:
FIELD CUT BARS TO MAINTAIN 2" CLEARANCE TYPICAL AROUND 36" DIA. RCP. DETERMINE EXACT LOCATION OF R.C.P. INTO CHANNEL WALL IN THE FIELD. SEE ROADWAY PLANS FOR R.C.P. INLET LOCATION.



HEADWALL DETAIL AT MIDSPAN

RCB EXTENSION QUANTITIES		
ITEM	UNIT	TOTAL
UNCLASSIFIED EXCAVATION	C.Y.	40
STRUCTURAL EXCAVATION UNCLASSIFIED	C.Y.	6
HANDRAILING	L.F.	11
CLASS AA CONCRETE	C.Y.	14.3
REINFORCING STEEL	LB.	3,230
REMOVAL OF BRIDGE ITEMS	L.SUM	1.0

REVISION	BY	DATE

RCB EXTENSION DETAILS

PROJECT NO. 153120-CI-8

56TH ST. N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

CEC
CEC CORPORATION
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: N/A	DRAWN	J.F.R.	09/2023
	DESIGNED	A.F.W.	09/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A	PROJ. MGR.	TW	4/24
	LEAD ENGR.	BDC	4/24
	FIELD MGR.	TW	8/23

APPROVED:

DESIGN MANAGER

DRAWING: RCB BARREL DETAILS 1.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 17 OF 22

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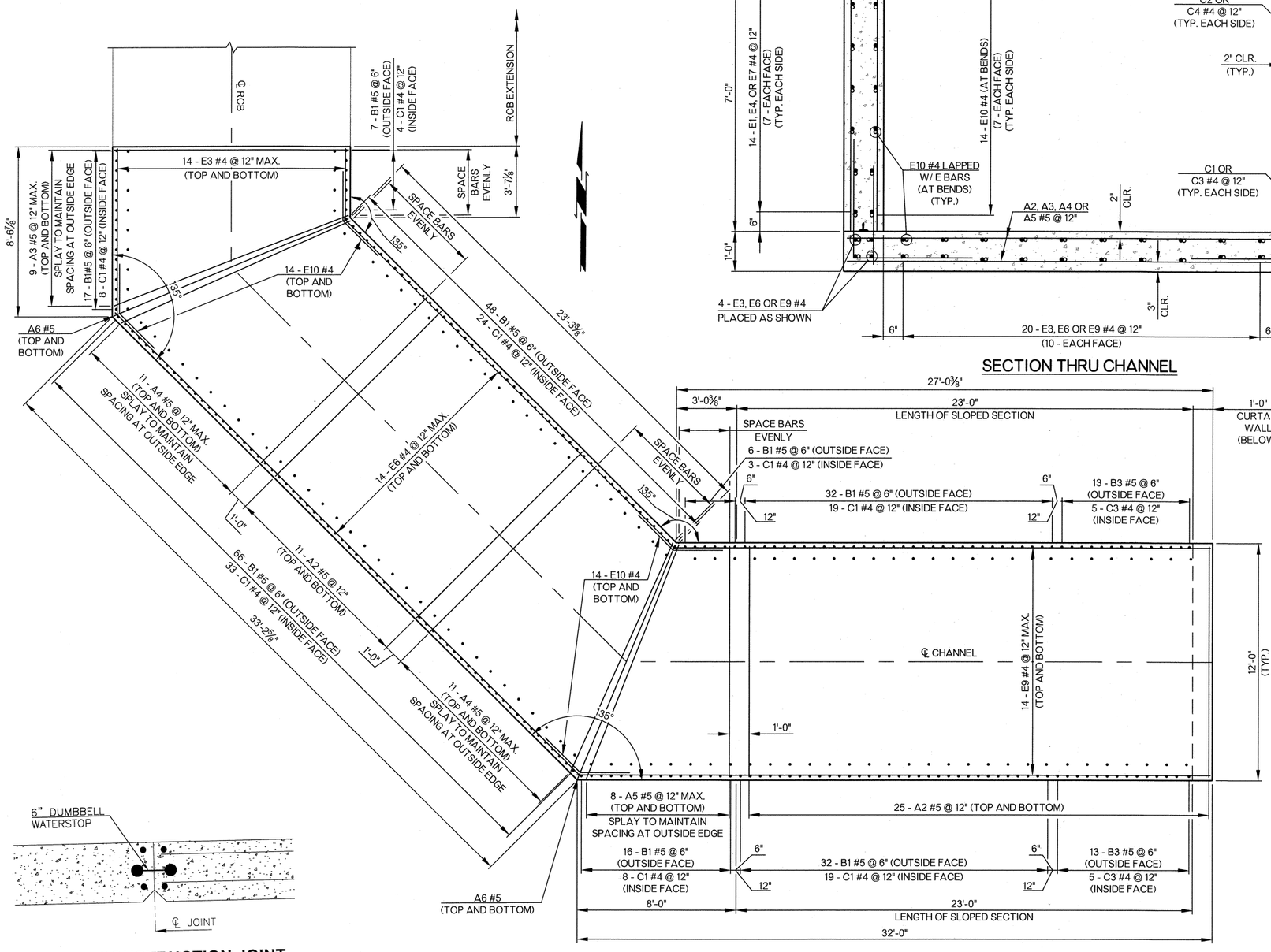
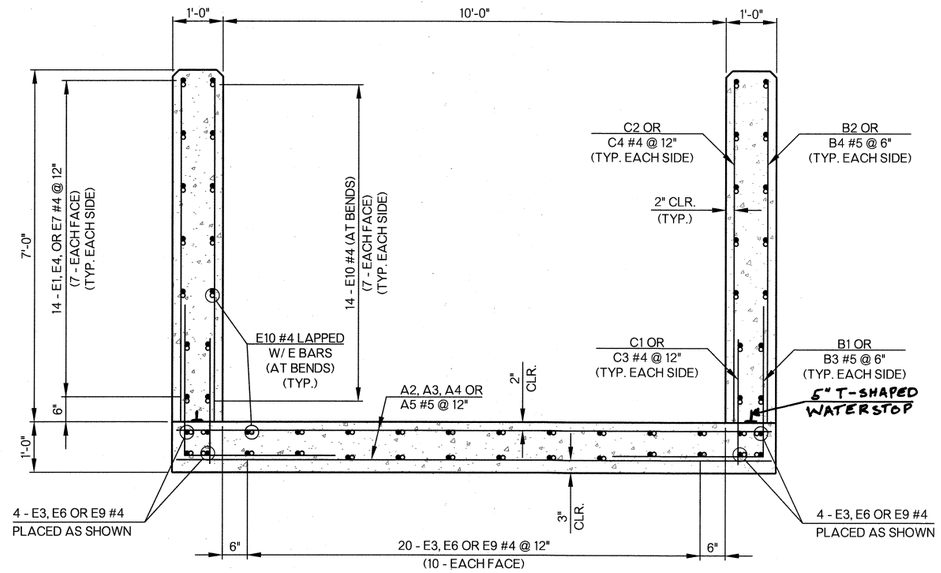
NOTE:
SEE CHANNEL WALL OPENING REINFORCING DETAIL ON SHEET 17
FOR ADDITIONAL BARS CAST INTO THE BOTTOM SLAB.



CHANNEL BOTTOM SLAB DETAIL
(ONLY BOTTOM SLAB REINFORCING SHOWN FOR CLARITY)



SECTION THRU CHANNEL

CHANNEL BAR LIST

PLAIN REINFORCING

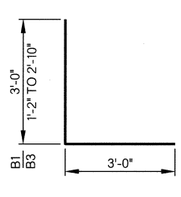
	MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
	A2	#5	72	STR.	11'-8"	
(1)	A3	#5	18	STR.	12'-1" AVG.	11'-8" TO 12'-6"
(2)	A4	#5	44	STR.	12'-1" AVG.	11'-8" TO 12'-6"
(3)	A5	#5	16	STR.	12'-1" AVG.	11'-8" TO 12'-6"
	A6	#5	2	STR.	12'-8"	
	B1	#5	224	BNT.	6'-0"	
	B2	#5	160	STR.	6'-10"	
(4)	B3	#5	26	BNT.	5'-0" AVG.	4'-2" TO 5'-10"
(5)	B4	#5	62	STR.	4'-6" AVG.	2'-4" TO 6'-8"
	C1	#4	114	STR.	2'-6"	
	C2	#4	114	STR.	6'-10"	
(6)	C3	#4	10	STR.	1'-7" AVG.	1'-1" TO 2'-1"
(7)	C4	#4	36	STR.	4'-4" AVG.	2'-0" TO 6'-8"
	CS1	#5	14	BNT.	5'-9"	
	CS2	#5	14	BNT.	7'-0"	
	CT1	#4	8	STR.	11'-8"	
	E1	#4	14	STR.	8'-4"	
	E2	#4	14	STR.	3'-10"	
(8)	E3	#4	28	STR.	5'-11" AVG.	3'-6" TO 8'-4"
	E4	#4	14	STR.	33'-2"	
	E5	#4	14	STR.	24'-0"	
(8)	E6	#4	28	STR.	28'-3" AVG.	23'-5" TO 33'-1"
(9)	E7	#4	14	STR.	19'-3" AVG.	8'-2" TO 30'-4"
(9)	E8	#4	14	STR.	14'-4" AVG.	3'-2" TO 25'-6"
(8)	E9	#4	28	STR.	29'-4" AVG.	26'-11" TO 31'-9"
	E10	#4	112	BNT.	5'-0"	
	E11	#4	4	STR.	23'-7"	
	R1	#5	4	STR.	6'-8"	
	R2	#5	12	STR.	5'-8"	

(1) TWO SETS OF 9 BARS.
(2) FOUR SETS OF 11 BARS.
(3) TWO SETS OF 8 BARS.
(4) TWO SETS OF 13 BARS.
(5) TWO SETS OF 31 BARS.
(6) TWO SETS OF 5 BARS.
(7) TWO SETS OF 18 BARS.
(8) TWO SETS OF 14 BARS.
(9) TWO SETS OF 7 BARS.

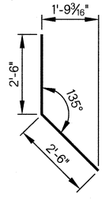
CHANNEL QUANTITIES

ITEM	UNIT	TOTAL
UNCLASSIFIED EXCAVATION	C.Y.	60
STRUCTURAL EXCAVATION UNCLASSIFIED	C.Y.	29
HANDRAILING	L.F.	125
CLASS AA CONCRETE	C.Y.	57.3
REINFORCING STEEL	LB.	8,620

CONSTRUCTION JOINT
WATERSTOP TO BE PLACED ALONG FULL LENGTH OF JOINT INCLUDING WALLS AND FLOOR. COST TO BE INCLUDED IN "CLASS AA CONCRETE"



B1 #5 X 6'-0"
B3 #5 X 5'-0" AVG.



E10 #4 X 5'-0"

CHANNEL DETAILS (SHEET 1 OF 2)
PROJECT NO. 153120-CI-8
56TH ST. N. & MLK JR BLVD SIDEWALK IMPROVEMENTS
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

CEC CORPORATION
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

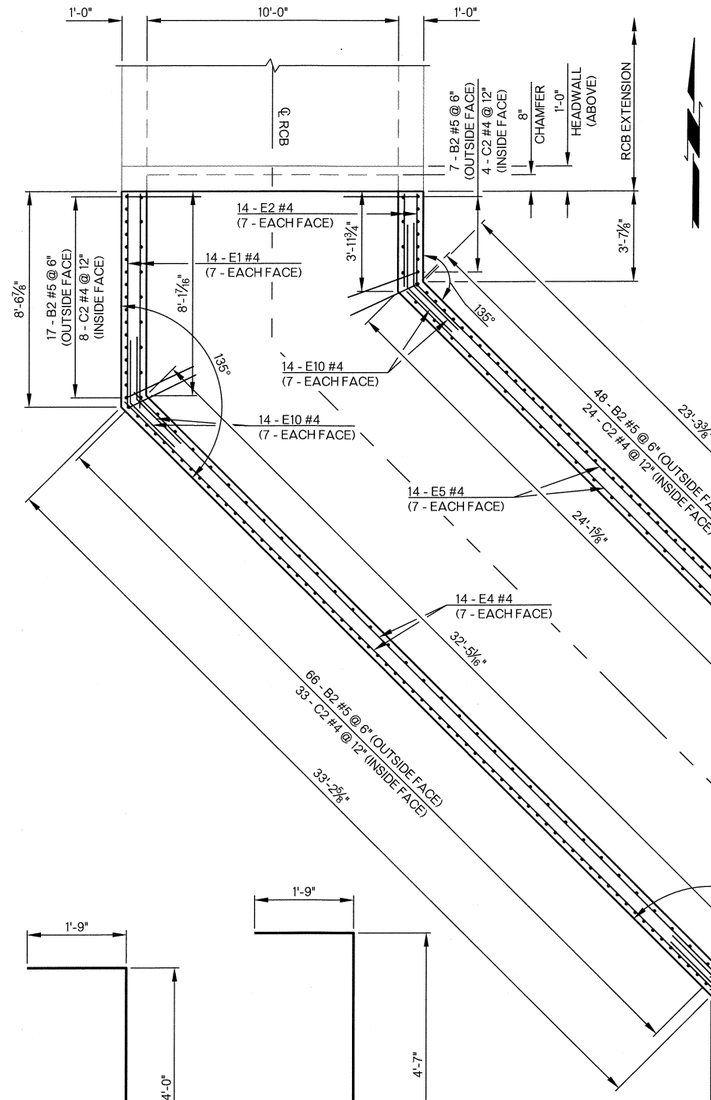
PLAN SCALE: N/A
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

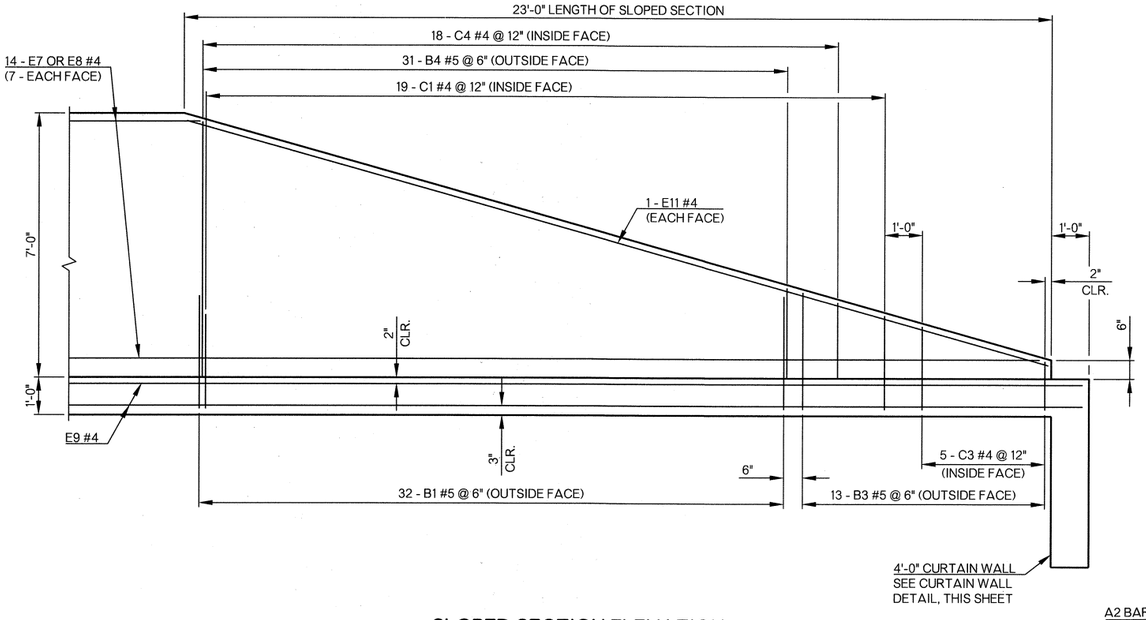
DRAWN	J.F.R.	09/2023
DESIGNED	A.F.W.	09/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TJ	4/24
LEAD ENGR.	BDC	4/24
FIELD MGR.		

APPROVED:
DESIGN MANAGER
DATE

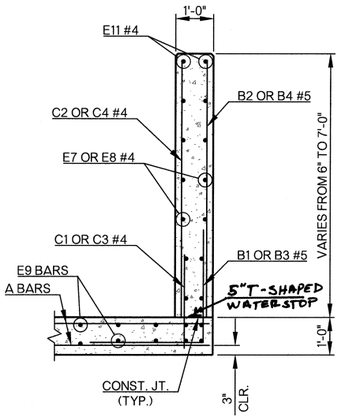
DRAWING: CHANNEL DETAILS 1.DWG
ATLAS PAGE NO: 517, 518, 612, 613
SHEET 18 OF 22

NOTE:
SEE CHANNEL WALL OPENING REINFORCING DETAIL ON SHEET 17 FOR ADDITIONAL BARS CAST INTO THE WALLS.

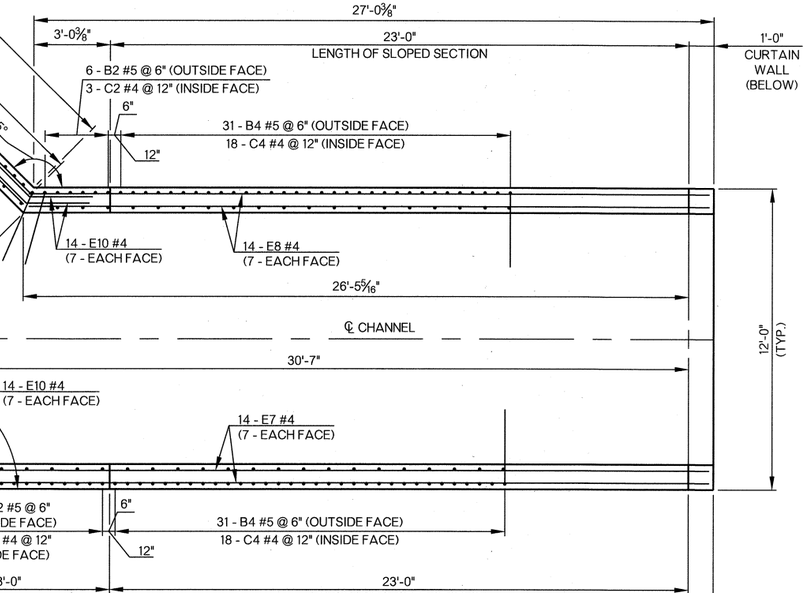




SLOPED SECTION ELEVATION

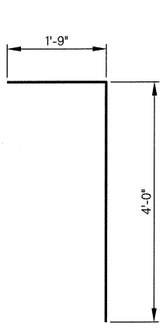


TYPICAL SECTION THRU SLOPED SECTION

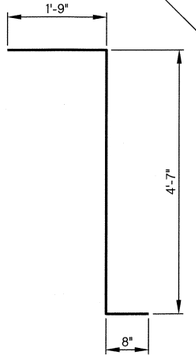


CHANNEL WALLS DETAIL

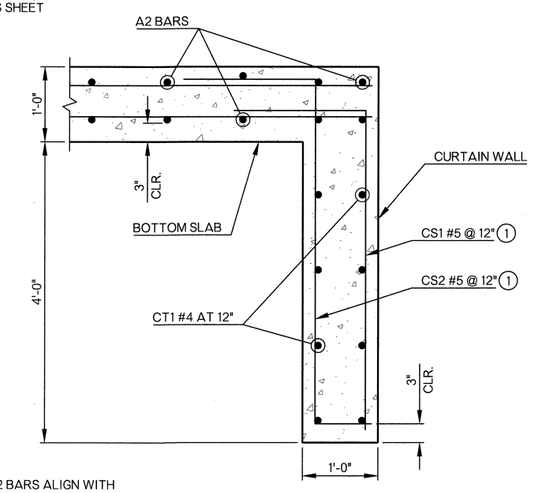
(ONLY WALL REINFORCING SHOWN FOR CLARITY)



CS1 #5 X 5'-9"



CS2 #5 X 7'-0"



① CS1 AND CS2 BARS ALIGN WITH AL BARS IN BOTTOM SLAB.

CURTAIN WALL DETAIL

AUGUSTINE F. WUERTZ 29197 LICENSED PROFESSIONAL ENGINEER OKLAHOMA CA 32 6-30-24
9/24/24

CHANNEL DETAILS (SHEET 2 OF 2)

PROJECT NO. 153120-CI-8

56TH ST. N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

CEC CORPORATION
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN	J.F.R.	09/2023
	DESIGNED	A.F.W.	09/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	9/24
HORIZONTAL: N/A	LEAD ENGR.	BSC	9/24
VERTICAL N/A	FIELD MGR.		9/24

APPROVED:

DESIGN MANAGER

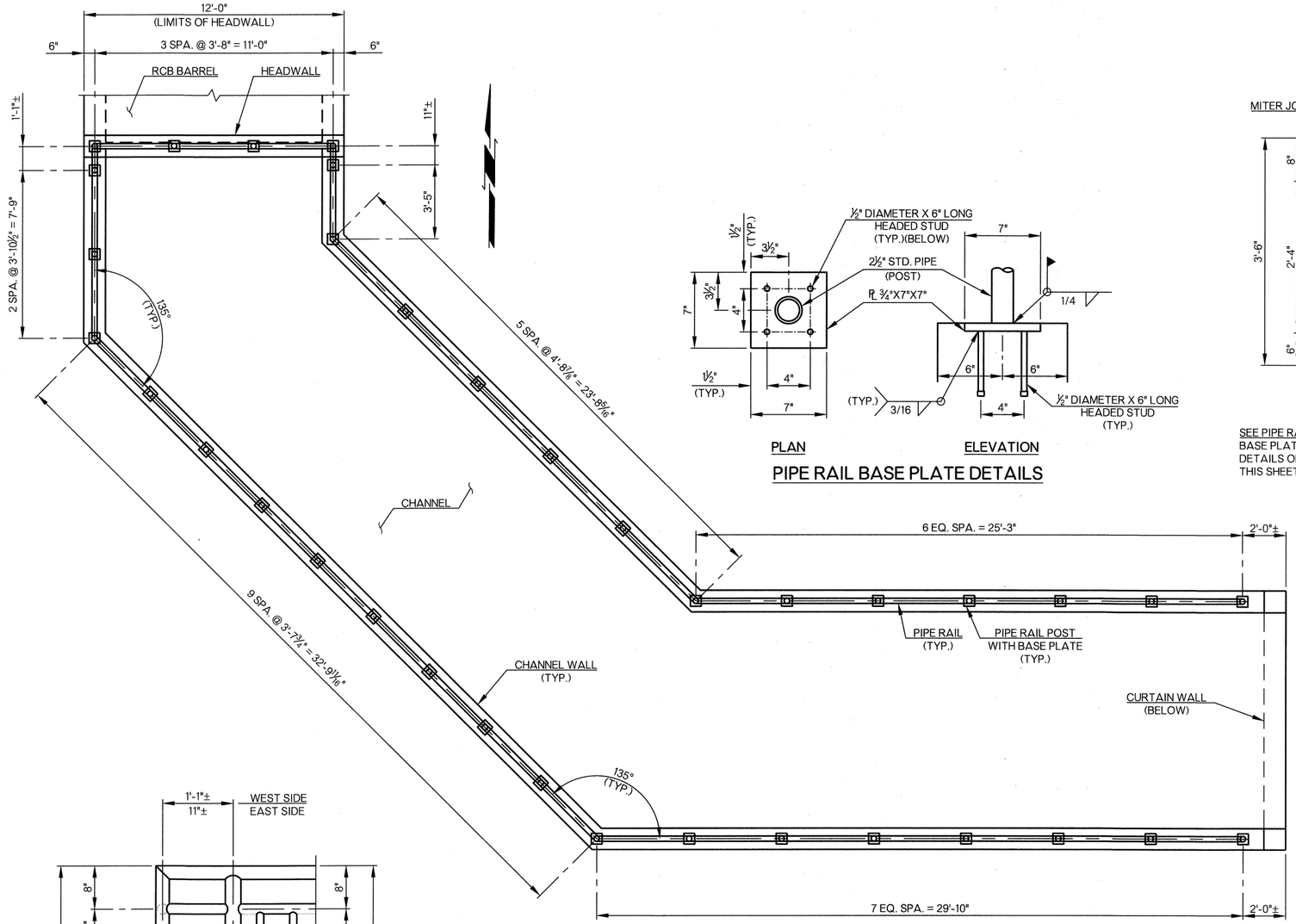
DRAWING: CHANNEL DETAILS 2.DWG

ATLAS PAGE NO: 517, 518, 612, 613

DATE

SHEET 19 OF 22

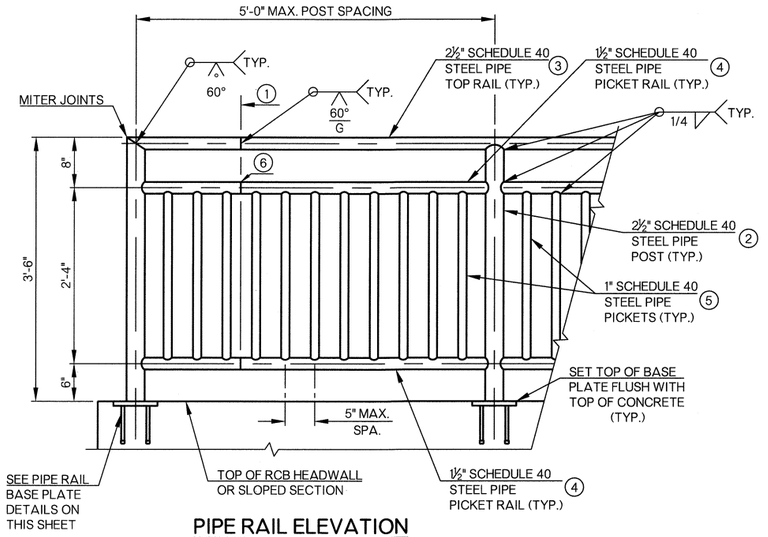
BEFORE YOU DIG 811 CALL OKIE



PLAN

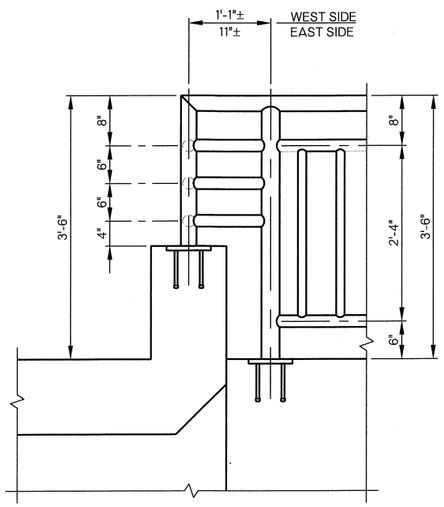
PLAN ELEVATION

PIPE RAIL BASE PLATE DETAILS



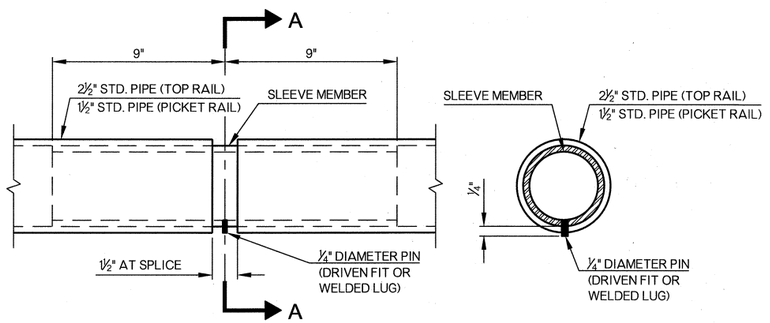
PIPE RAIL ELEVATION

1. ONE SHOP SPLICE PER PANEL IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE V-GROOVE. GRIND SMOOTH.
2. 2½" DIA. STANDARD PIPE (2.88" O.D., 0.203" WALL THICKNESS). PLUMB ALL POSTS.
3. 2½" DIA. STANDARD PIPE (2.88" O.D., 0.203" WALL THICKNESS). PARALLEL TO HEADWALL AND WINGWALL.
4. 1½" DIA. STANDARD PIPE (1.90" O.D., 0.145" WALL THICKNESS). PARALLEL TO HEADWALL AND WINGWALL.
5. 1" DIA. STANDARD PIPE (1.32" O.D., 0.133" WALL THICKNESS) EQUAL SPACING AT 5" MAX. PLUMB ALL PICKETS.
6. EXPANSION JOINT SHALL BE CENTERED BETWEEN PICKETS.



NOTE:
SEE PIPE RAIL ELEVATION
FOR HANDRAILING DETAILS.

PIPE RAIL DETAIL AT HEADWALL



AT SPLICE OR EXPANSION JOINT SECTION A-A

PIPE RAIL SPLICE DETAILS

NOTES:
FOR HANDRAILING QUANTITIES, SEE SHEETS 5 AND 16.

SEE HANDRAILING GENERAL NOTES ON SHEET 5 FOR ADDITIONAL PIPE RAIL INFORMATION.

REVISION	BY	DATE

PIPE RAIL DETAILS

PROJECT NO. 153120-CI-8

56TH ST. N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

CEC CORPORATION
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: N/A	DRAWN	J.F.R.	09/2023
	DESIGNED	A.F.W.	09/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A	PROJ. MGR.	TW	4/24
	LEAD ENGR.	BBC	3/24
	FIELD MGR.	[illegible]	8/24

APPROVED:

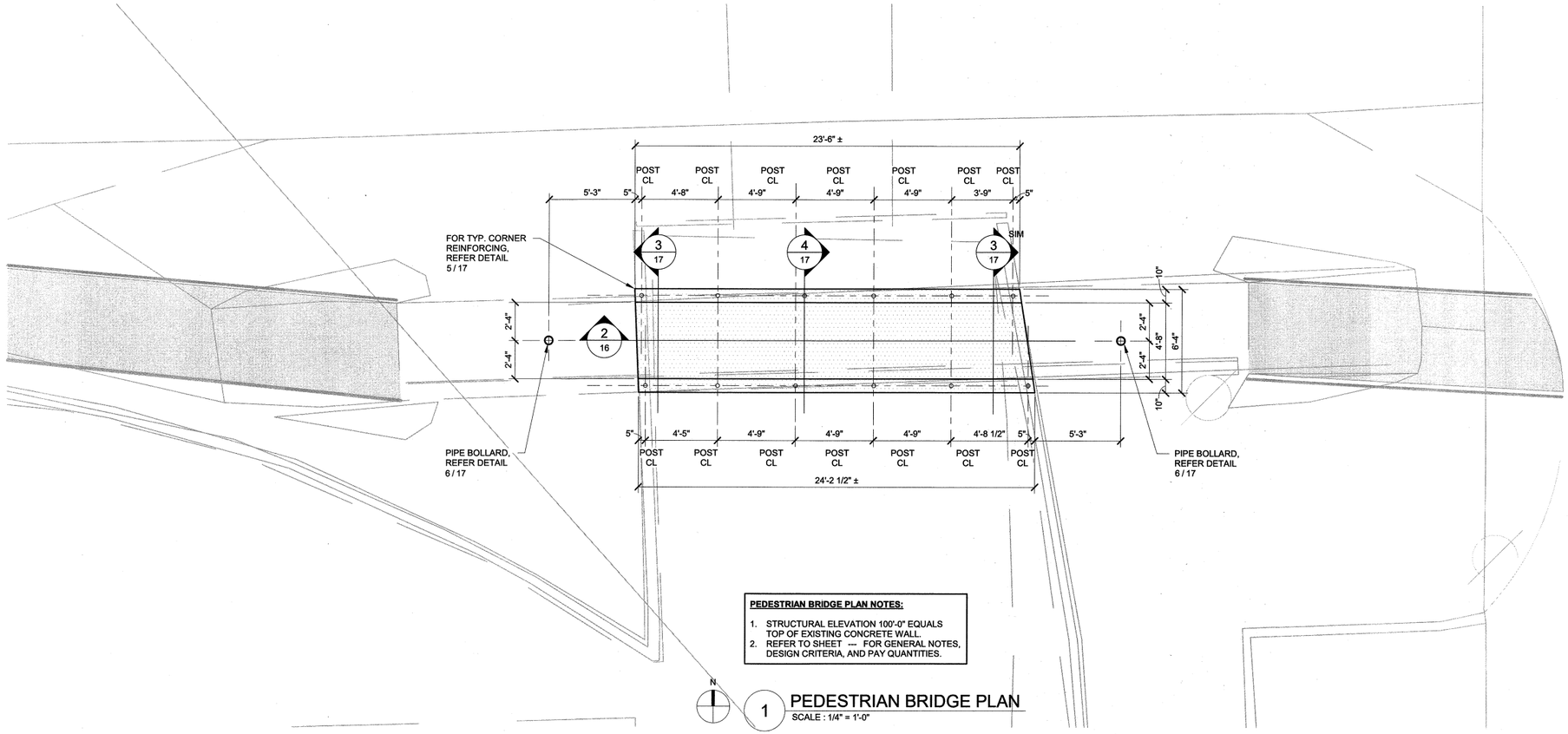
for Thomas M. Mz
DESIGN MANAGER

DRAWING: PIPE RAIL DETAILS.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET 20 OF 22

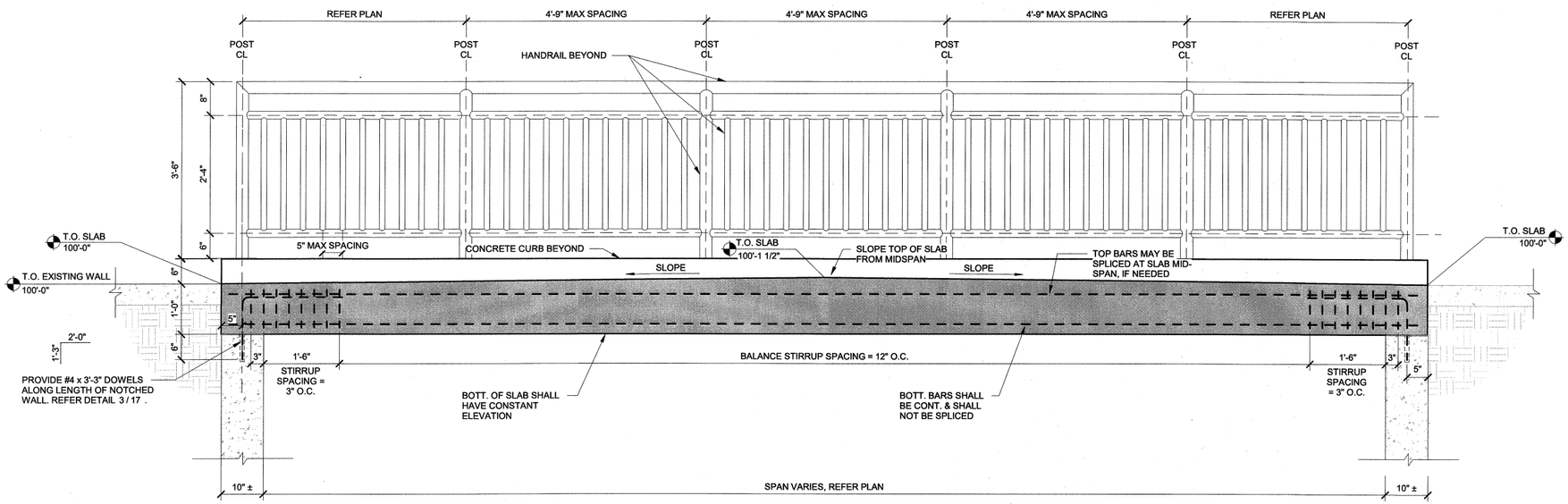


PEDESTRIAN BRIDGE PLAN NOTES:

1. STRUCTURAL ELEVATION 100'-0" EQUALS TOP OF EXISTING CONCRETE WALL.
2. REFER TO SHEET --- FOR GENERAL NOTES, DESIGN CRITERIA, AND PAY QUANTITIES.

1 PEDESTRIAN BRIDGE PLAN

SCALE : 1/4" = 1'-0"



2 PEDESTRIAN BRIDGE SECTION

SCALE : 3/4" = 1'-0"

1/ 16

CA #32
EXP 06-30-2024

BEFORE YOU DIG CALL OKIE

PEDESTRIAN BRIDGE DETAILS (1 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC
CEC Corporation
1300 S. Main St., Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

PLAN SCALE: AS INDICATED
PROFILE SCALES: HORIZONTAL: AS INDICATED VERTICAL: AS INDICATED

DRAWN	JJ	6/2024
DESIGNED	JJ	6/2024
SURVEY	B.B.	4/2018
PROJ. MGR.	--	
LEAD ENGR.		8/24
FIELD MGR.		8/24

APPROVED:

DESIGN MANAGER

DRAWING: BRIDGE PLAN & SECTIONS

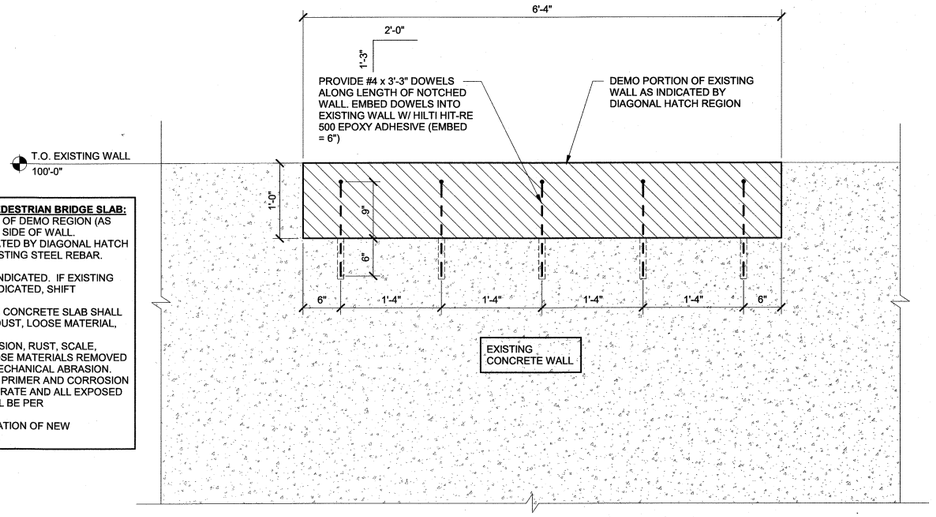
DATE:

ATLAS PAGE NO: 517, 518, 612, 613

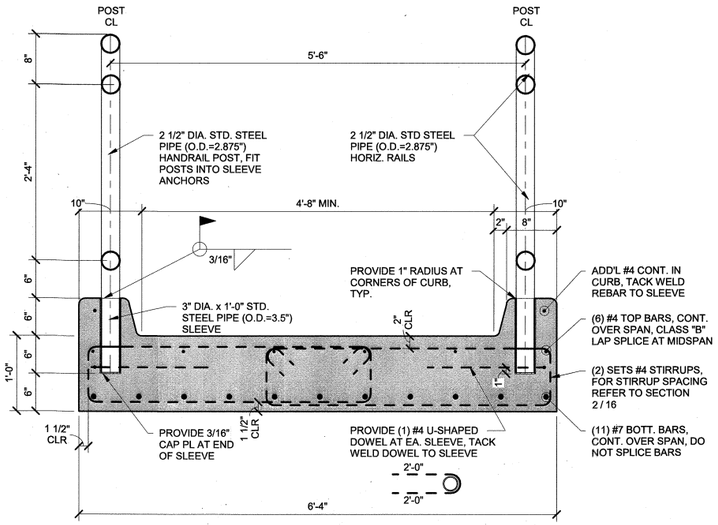
SHEET 21 OF 22

SEQUENCE FOR DEMO AND INSTALLATION OF PEDESTRIAN BRIDGE SLAB:

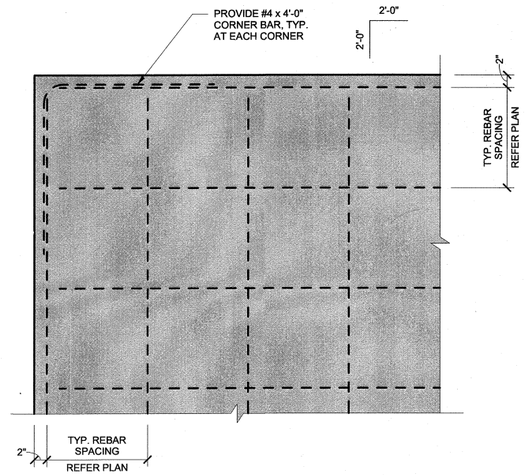
1. PROVIDE 1/2" DEEP SAWCUT AROUND EDGES OF DEMO REGION (AS INDICATED BY DIAGONAL HATCH REGION) EA. SIDE OF WALL.
2. DEMO PORTION OF EXISTING WALL AS INDICATED BY DIAGONAL HATCH REGION IN SUCH A WAY TO NOT DAMAGE EXISTING STEEL REBAR. EXISTING STEEL REBAR SHALL REMAIN.
3. INSTALL NEW STEEL DOWELS AT SPACINGS INDICATED. IF EXISTING STEEL REBAR CONFLICTS WITH SPACINGS INDICATED, SHIFT LOCATION OF DOWELS AS NEEDED.
4. CONCRETE THAT WILL BE ADJACENT TO NEW CONCRETE SLAB SHALL HAVE A ROUGHENED SURFACE FREE FROM DUST, LOOSE MATERIAL, AND SURFACE CONTAMINATION.
5. EXPOSED STEEL REBAR SHALL HAVE CORROSION, RUST, SCALE, MORTAR, CONCRETE, DUST, AND OTHER LOOSE MATERIALS REMOVED BY BLAST CLEANING OR OTHER MEANS OF MECHANICAL ABRASION.
6. APPLY SIKA ARMATEC-110 EPOCEM BONDING PRIMER AND CORROSION PROTECTION TO EXISTING CONCRETE SUBSTRATE AND ALL EXPOSED STEEL REBAR. APPLICATION METHODS SHALL BE PER MANUFACTURER'S WRITTEN INSTRUCTION.
7. ONCE BONDING PRIMER IS APPLIED, INSTALLATION OF NEW CONCRETE BRIDGE SLAB SHALL COMMENCE.



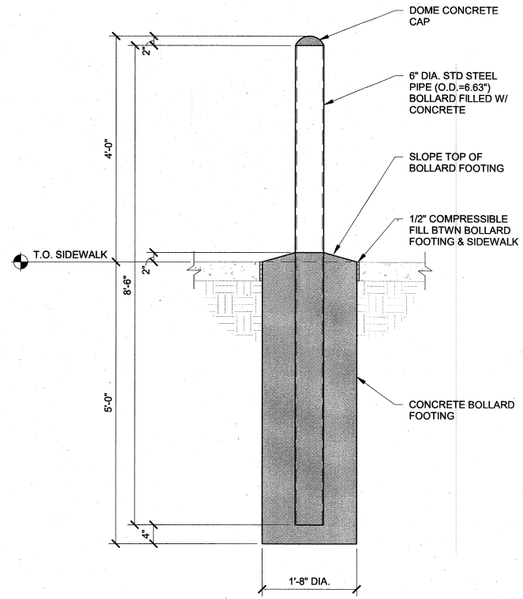
3 DEMO DETAIL AT EXISTING WALL
SCALE : 1" = 1'-0" 1/ 16



4 PEDESTRIAN BRIDGE DETAIL
SCALE : 1" = 1'-0" 1/ 16



5 PLAN DETAIL AT CORNER REINFORCING
SCALE :N.T.S.



6 BOLLARD DETAIL
SCALE : 3/4" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
OKLAHOMA
4-23-24
346357

CA #32
EXP 06-30-2024

BEFORE YOU DIG CALL OKIE

PEDESTRIAN BRIDGE DETAILS (2 OF 2)

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC
CEC Corporation
1300 S. Main St., Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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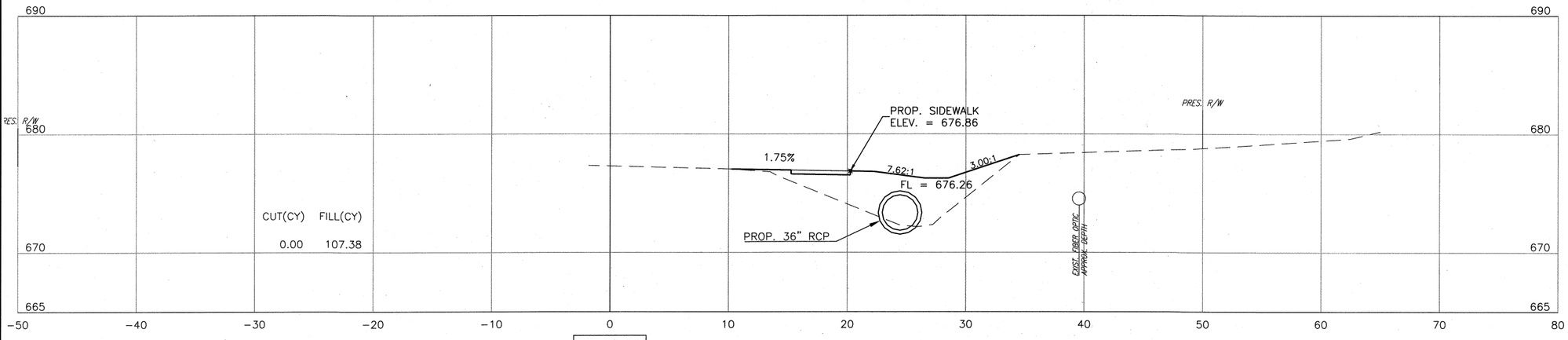
PLAN SCALE: AS INDICATED
PROFILE SCALES:
HORIZONTAL: AS INDICATED
VERTICAL: AS INDICATED

DRAWN	JJ	6/2024
DESIGNED	JJ	6/2024
SURVEY	B.B.	4/2018
PROJ. MGR.	--	
LEAD ENGR.	BOC	7/24
FIELD MGR.	BOC	8/24

APPROVED:
DESIGN MANAGER

DRAWING: BRIDGE SECTIONS
DATE:
ATLAS PAGE NO: 517, 518, 612, 613
SHEET 22 OF 22



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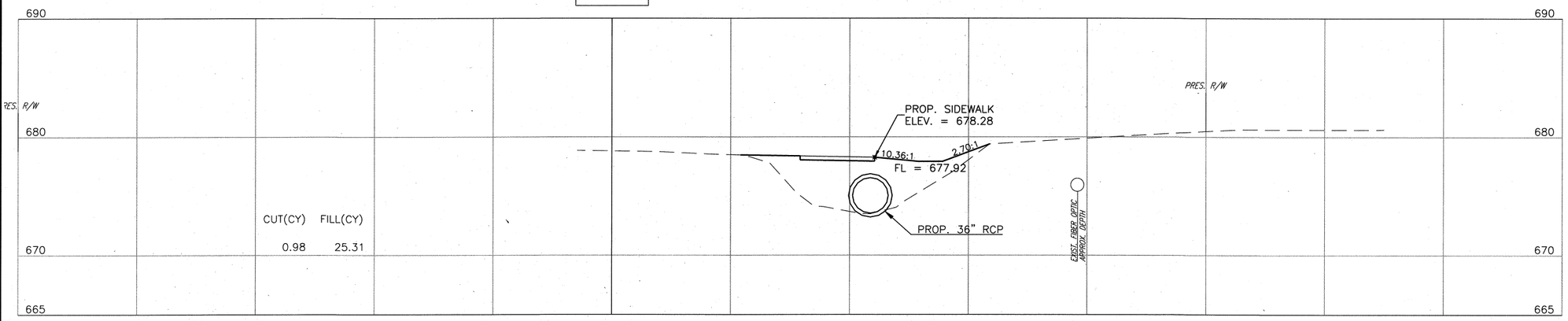

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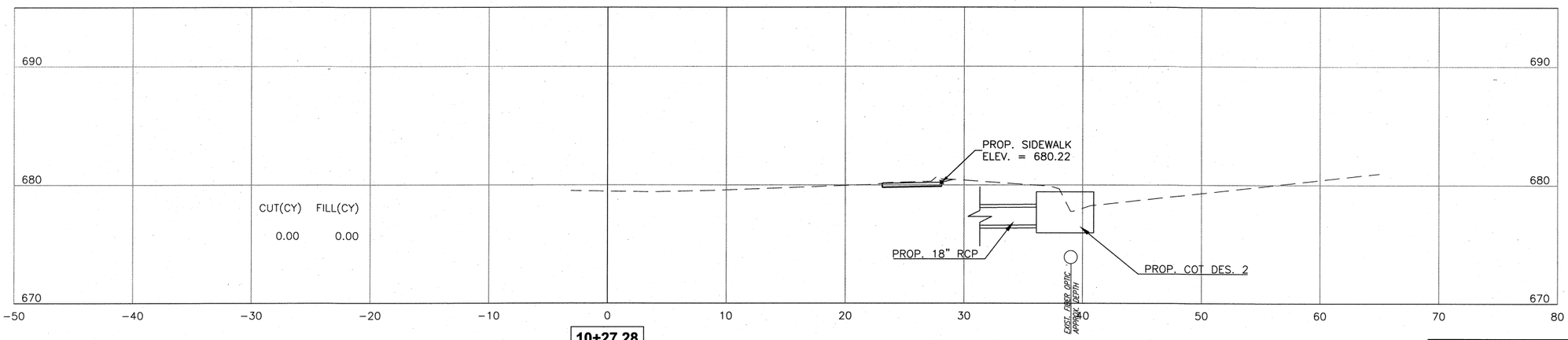

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PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\DESIGN\TO 8_CROSS SECTIONS.DWG

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

XS 1

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE

PLAN SCALE: 1" = 5'

PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.		
FIELD MGR.		

APPROVED:

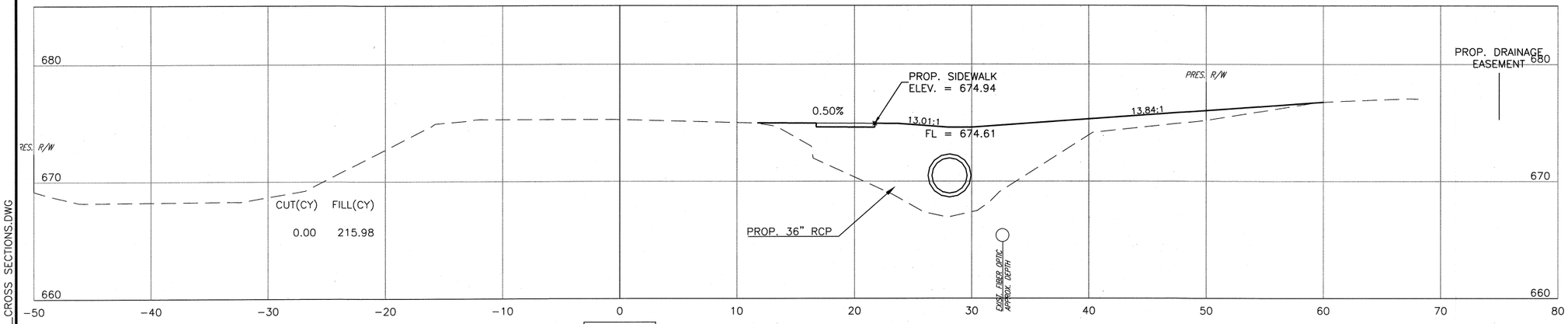
DESIGN MANAGER

DRAWING: TO 8_CROSS SECTIONS.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

SHEET XS 1 OF XS 8



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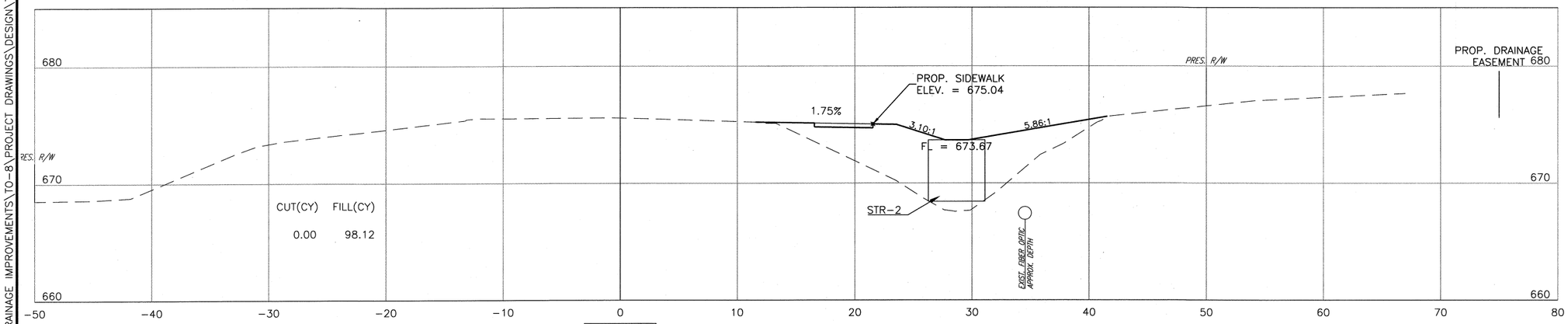

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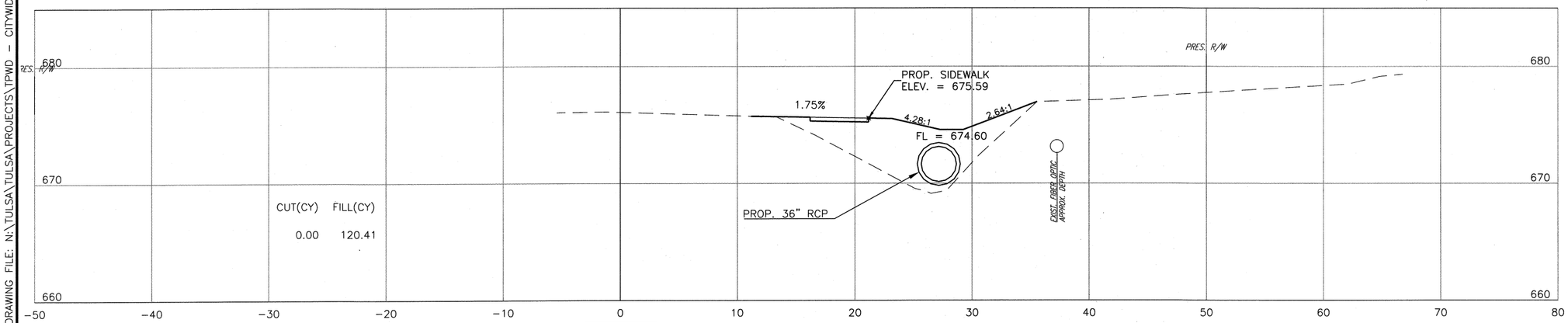

11+50.00

REVISION	BY	DATE
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PLAN SCALE: 1" = 5'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.		
VERTICAL N/A	FIELD MGR.		

APPROVED:

DESIGN MANAGER

DRAWING: TO 8_CROSS SECTIONS.DWG — DATE

ATLAS PAGE NO: 517, 518, 612, 613 — SHEET XS 2 OF XS 8

BEFORE YOU DIG 811 CALL OKIE

XS 2

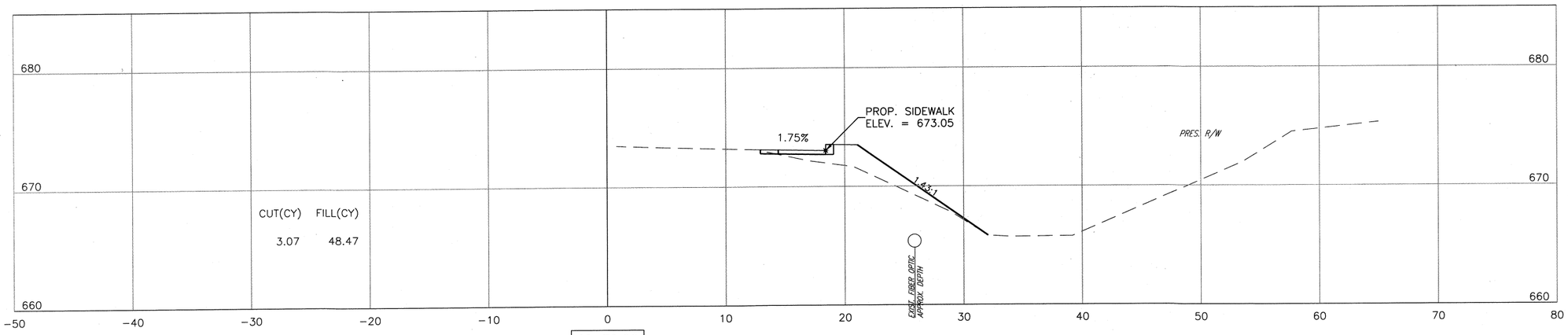
PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\DESIGN\TO 8_CROSS SECTIONS.DWG



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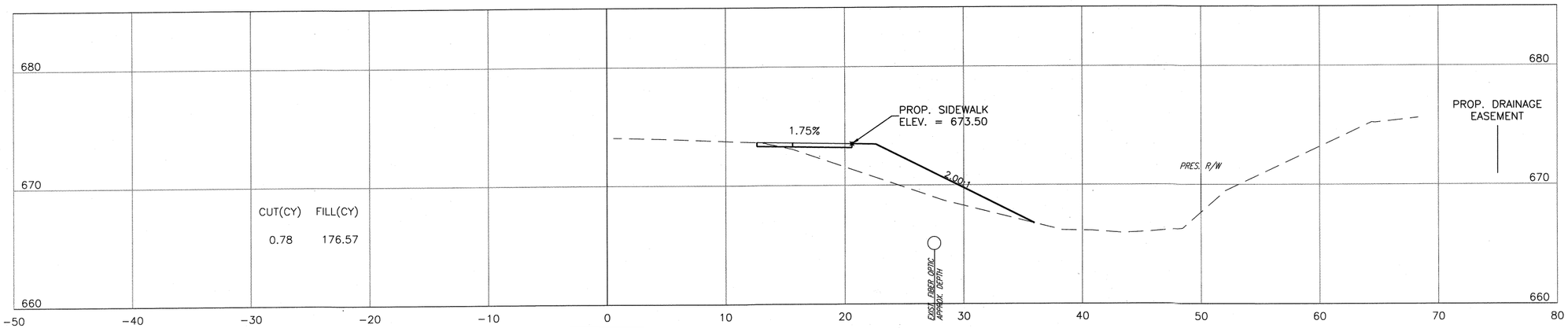

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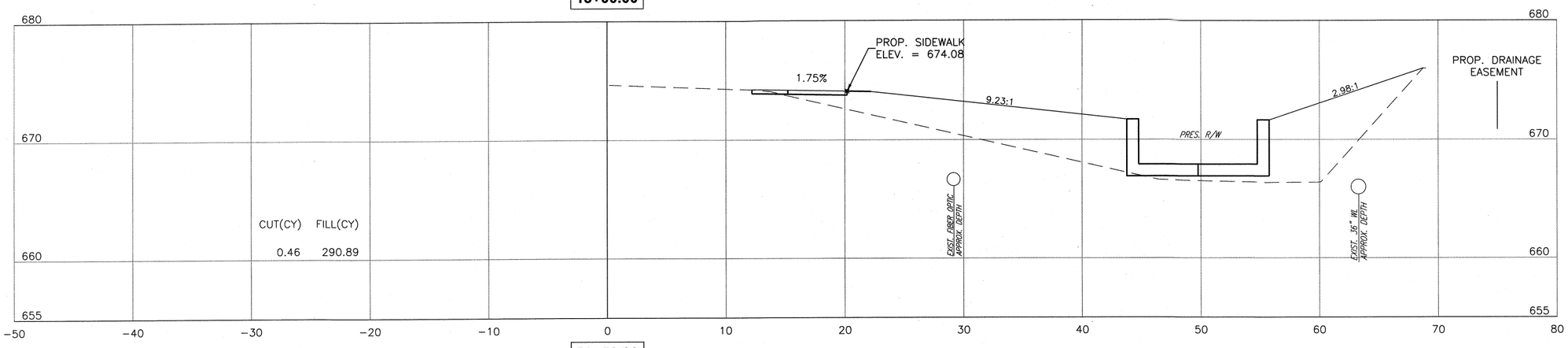

12+50.00

BEFORE YOU DIG
811
CALL OKIE

XS 3

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

REVISION	BY	DATE
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PLAN SCALE: 1" = 5'
PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
DESIGNED	S.N.H.	11/2023
SURVEY	B.B.	4/2018
PROJ. MGR.	TW	4/24
LEAD ENGR.		
FIELD MGR.		

APPROVED:
DESIGN MANAGER
DATE

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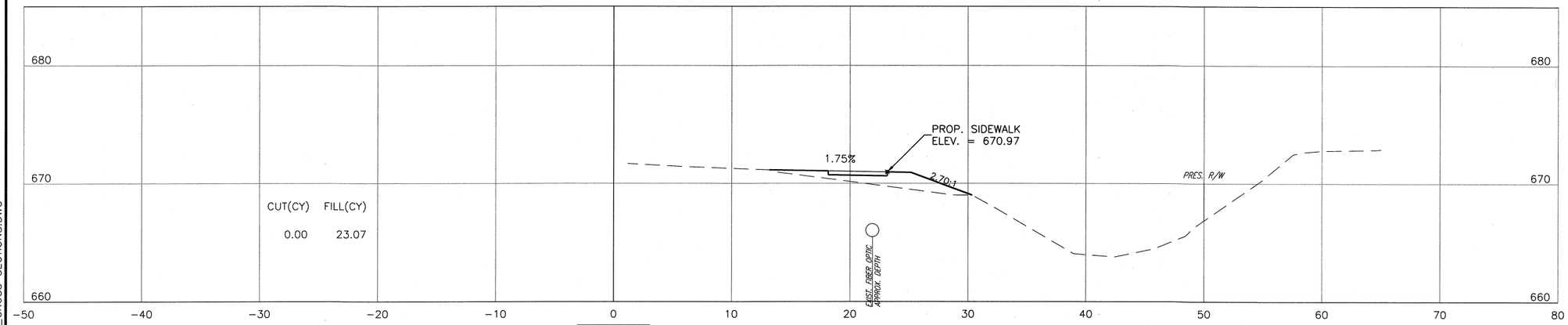
ATLAS PAGE NO: 517, 518, 612, 613
SHEET XS 3 OF XS 8

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\DESIGN\TO 8_CROSS SECTIONS.DWG



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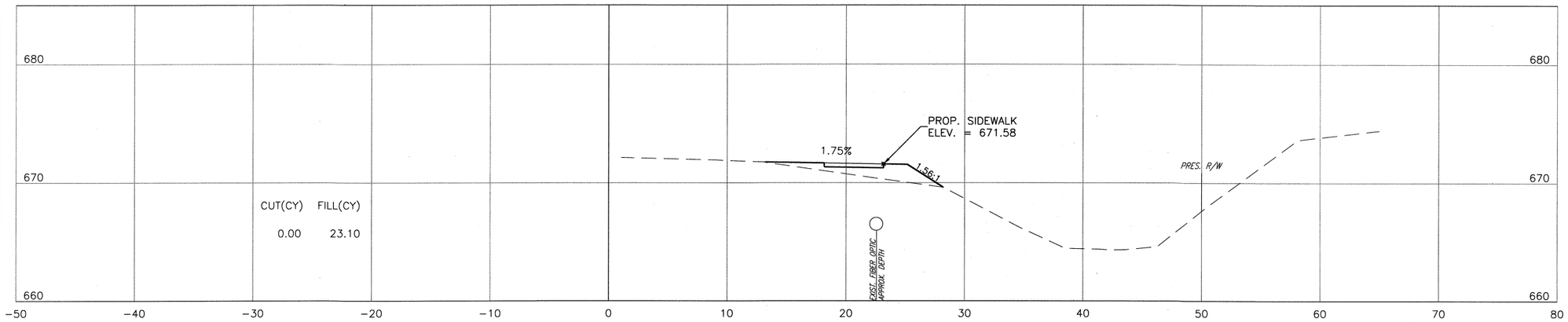

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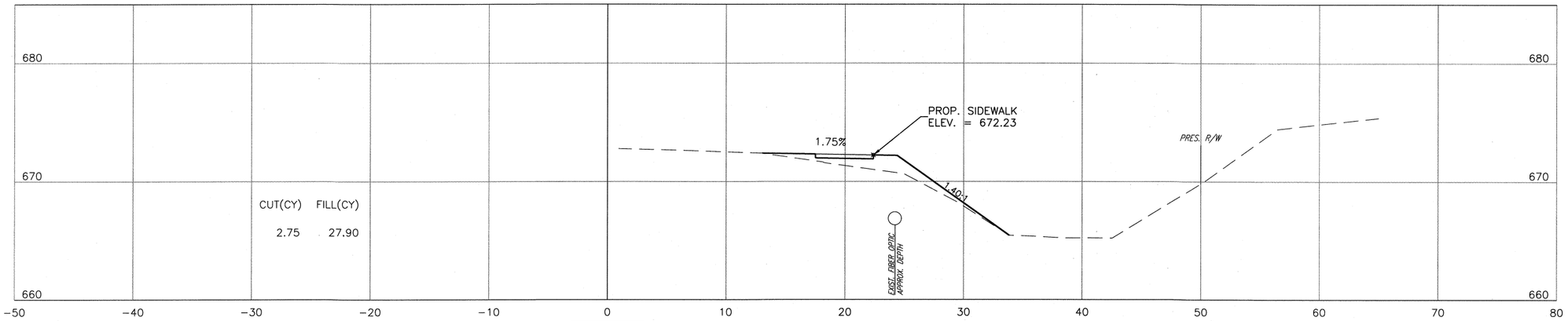

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XS 4

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: 1" = 5'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.		
VERTICAL N/A	FIELD MGR.		

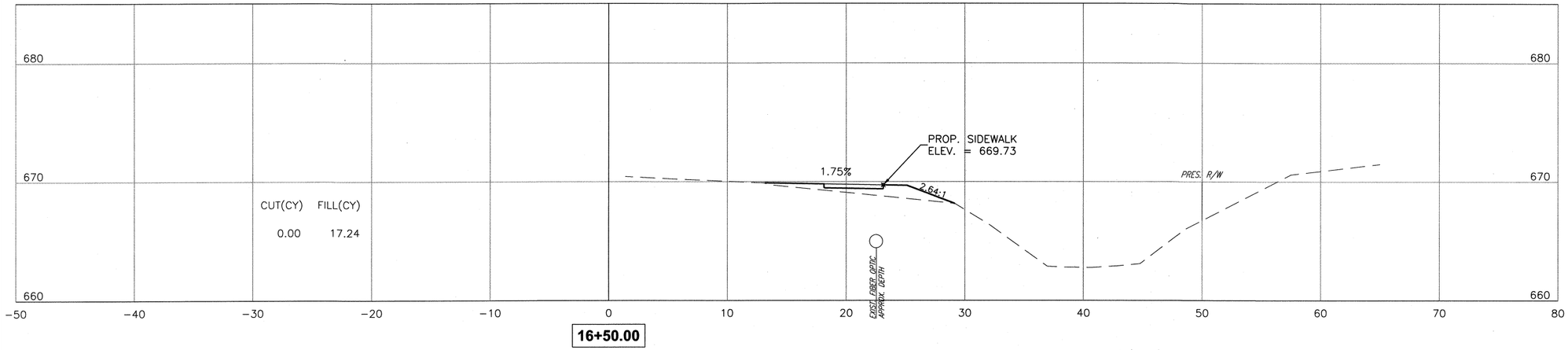
APPROVED:

DESIGN MANAGER

DRAWING: TO 8_CROSS SECTIONS.DWG — DATE

ATLAS PAGE NO: 517, 518, 612, 613 — SHEET XS 4 OF XS 8

PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\DESIGN\TO 8_CROSS SECTIONS.DWG



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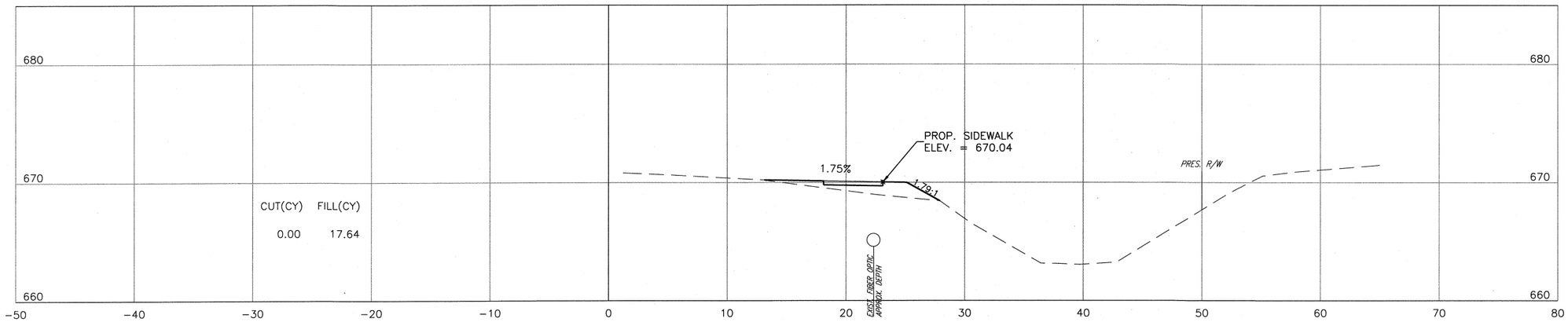

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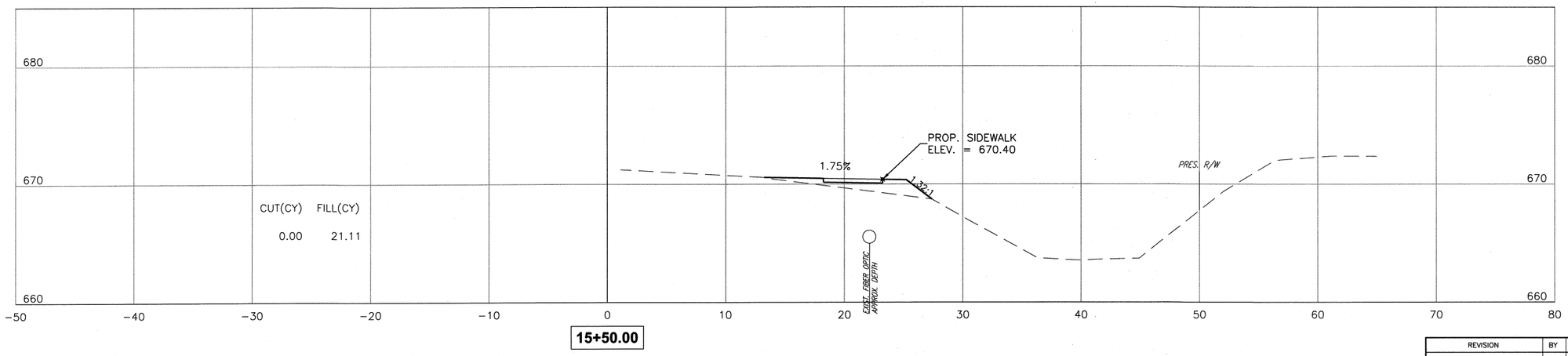

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XS 5

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: 1" = 5'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.		
	FIELD MGR.		
VERTICAL N/A			

APPROVED:

DESIGN MANAGER

DRAWING: TO 8_CROSS SECTIONS.DWG

DATE

ATLAS PAGE NO: 517, 518, 612, 613

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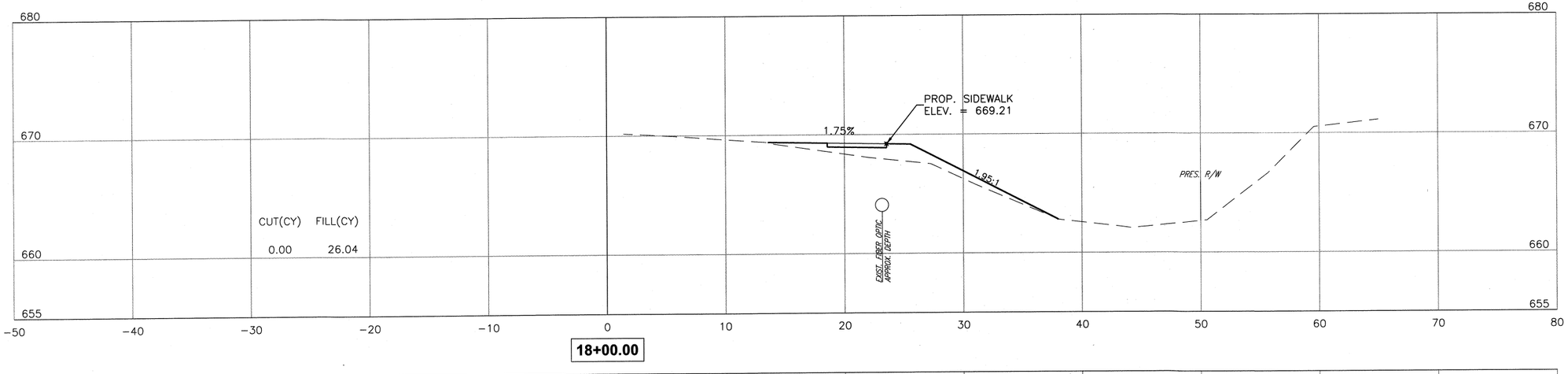
PLOT DATE: April 12, 2024, DRAWING FILE: N:\TULSA\TULSA\PROJECTS\TPWD - CITYWIDE DRAINAGE IMPROVEMENTS\TO-8\PROJECT DRAWINGS\DESIGN\TO 8_CROSS SECTIONS.DWG



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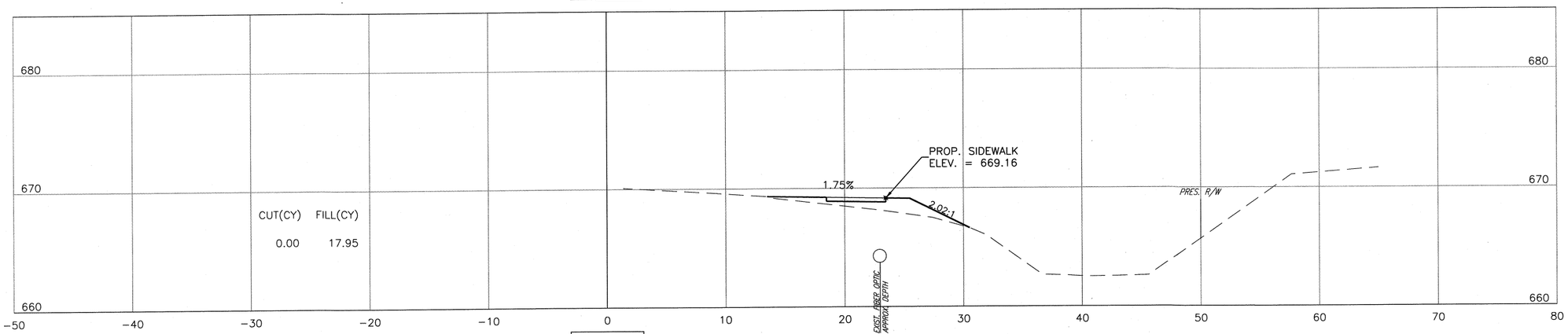

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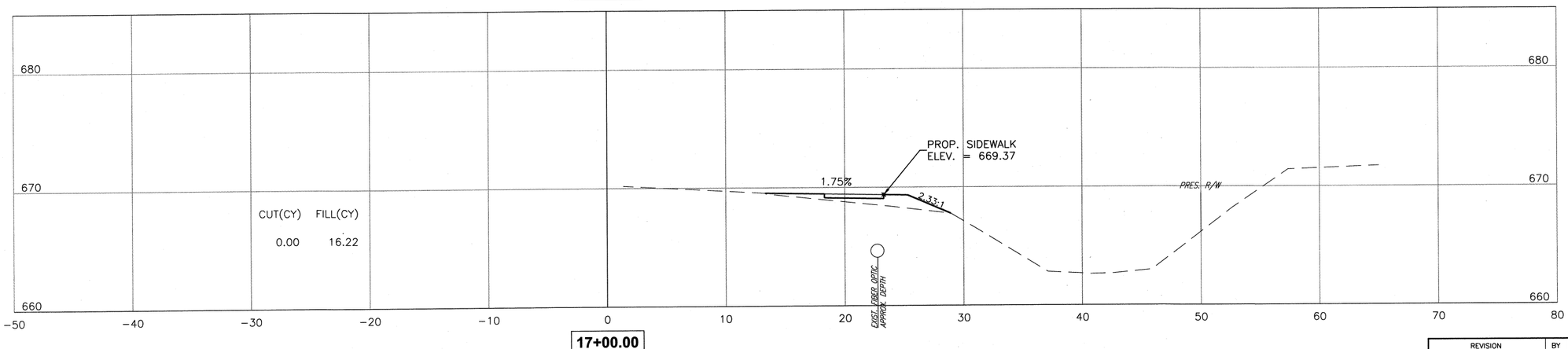

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XS 6

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD
SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

PLAN SCALE: 1" = 5'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TJ	4/24
HORIZONTAL: N/A	LEAD ENGR.		
VERTICAL N/A	FIELD MGR.		

APPROVED:

DESIGN MANAGER

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ATLAS PAGE NO: 517, 518, 612, 613

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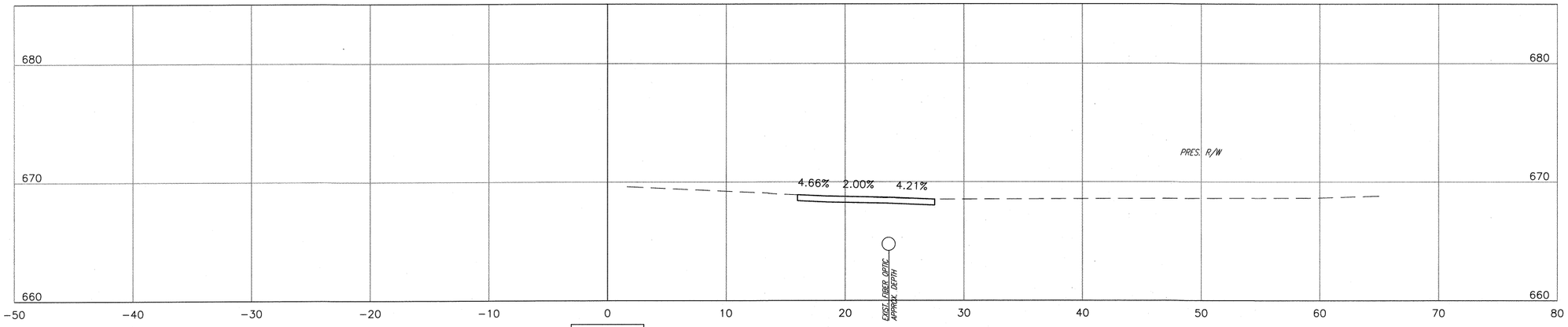

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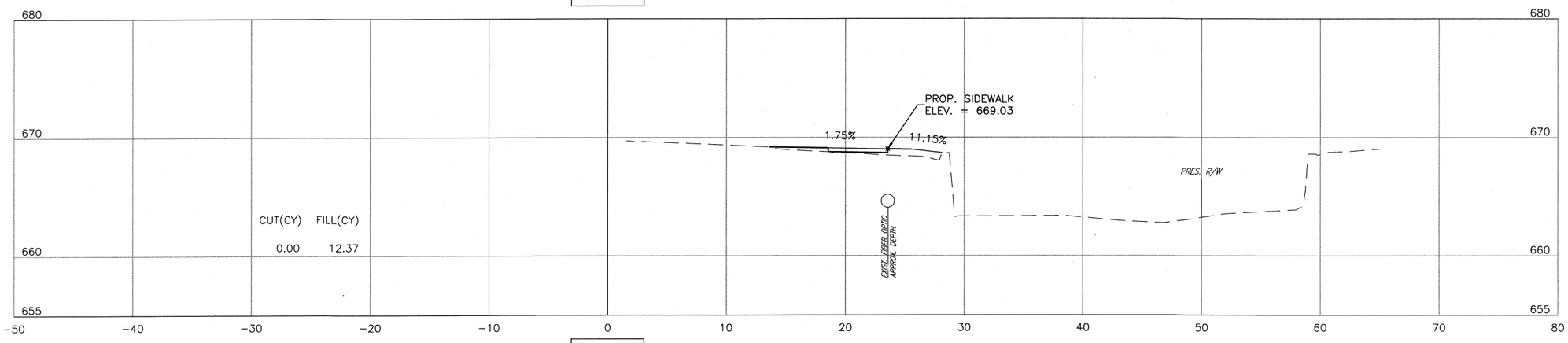

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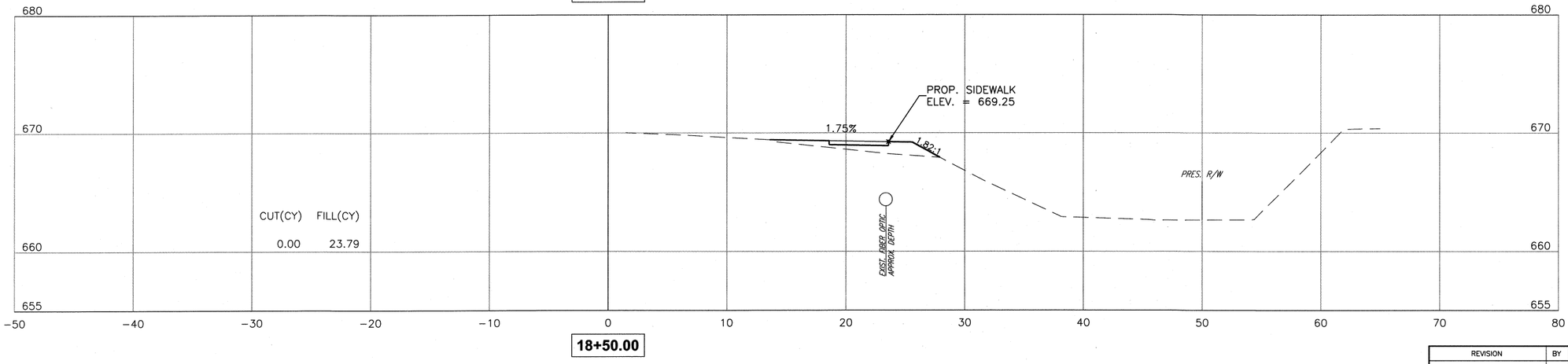

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BEFORE YOU DIG 811 OKIE CALL OKIE

XS 7

PROJECT NO. 153120-C1-8

56TH STREET N. & MLK JR BLVD SIDEWALK IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

CEC Corporation
CEC 1300 S. Main Street Tulsa, OK 74119
(918) 663-9401

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PLAN SCALE: 1" = 5'	DRAWN	J.L.C.	11/2023
	DESIGNED	S.N.H.	11/2023
	SURVEY	B.B.	4/2018
PROFILE SCALES:	PROJ. MGR.	TW	4/24
HORIZONTAL: N/A	LEAD ENGR.		
VERTICAL N/A	FIELD MGR.		

APPROVED:

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ATLAS PAGE NO: 517, 518, 612, 613

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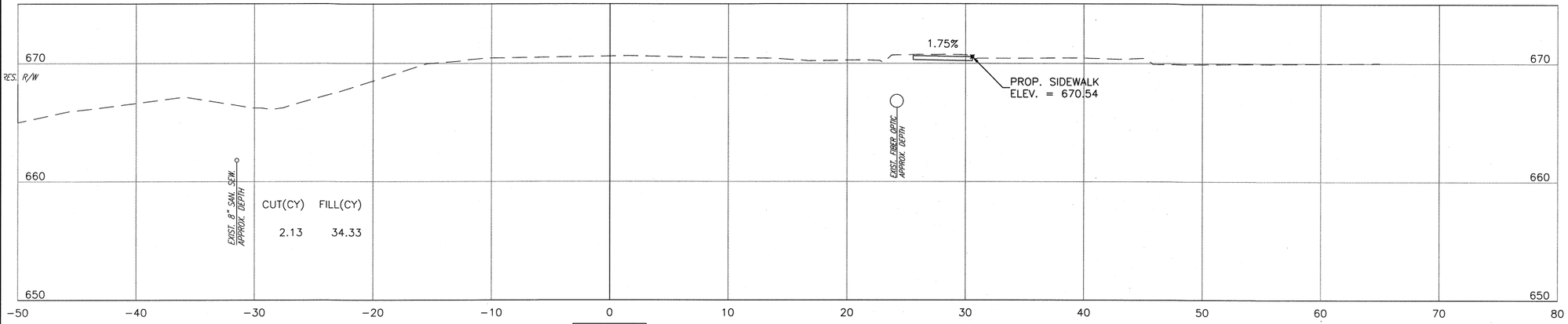

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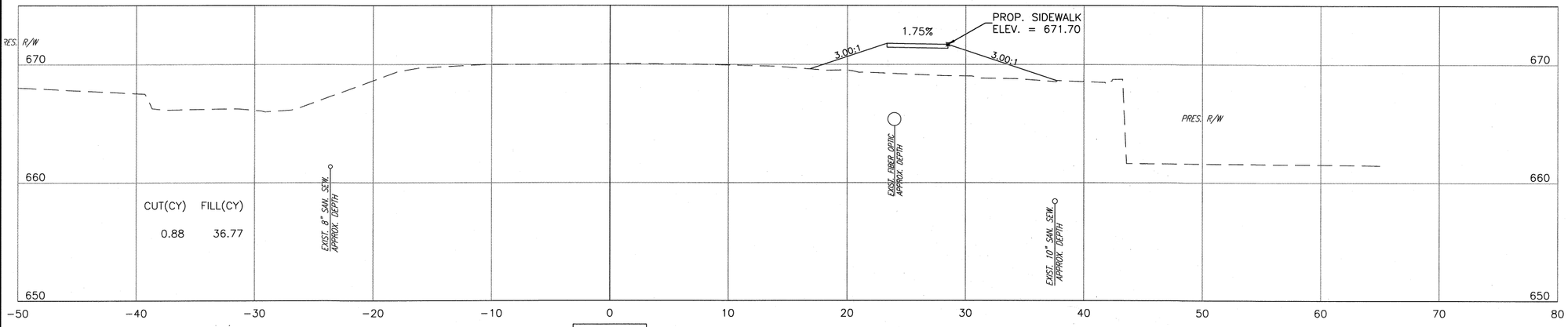

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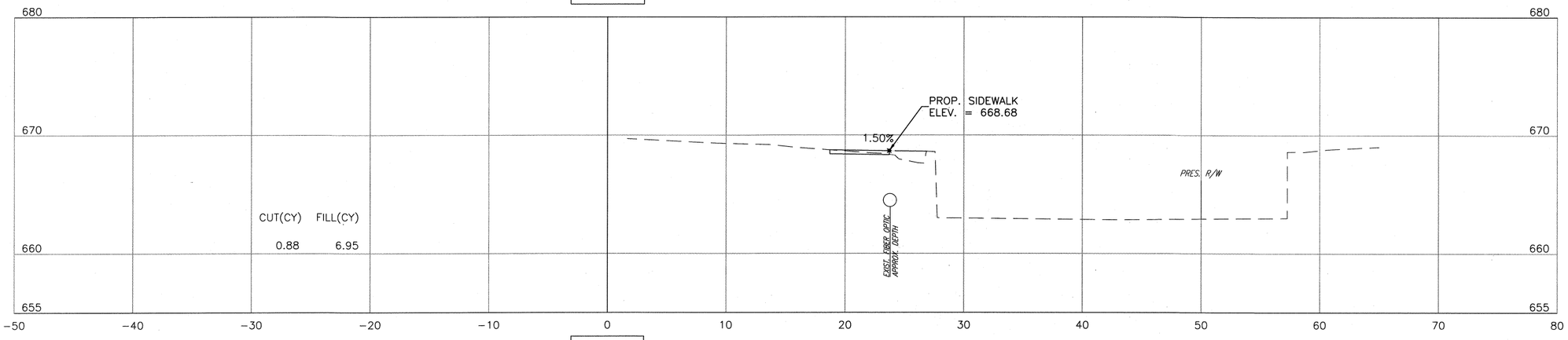

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BEFORE YOU DIG 811 OKIE CALL OKIE

XS 8

PROJECT NO. 153120-C1-8

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PLAN SCALE: 1" = 5'

PROFILE SCALES: HORIZONTAL: N/A VERTICAL N/A

DRAWN	J.L.C.	11/2023
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