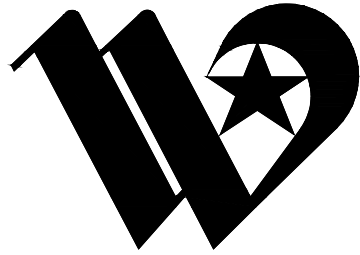




Know what's below.
Call before you dig.

AUSTIN AVENUE SIDEWALK IMPROVEMENTS (FROM 11TH ST. TO 3RD ST.)

PROJECT XXXXXXXXXX - STREETS
PROJECT XXXXXXXXXX - UTILITIES



REGISTERED ACCESSIBILITY SPECIALIST (RAS)
INSPECTION REQUIRED
TDLR NO. _____

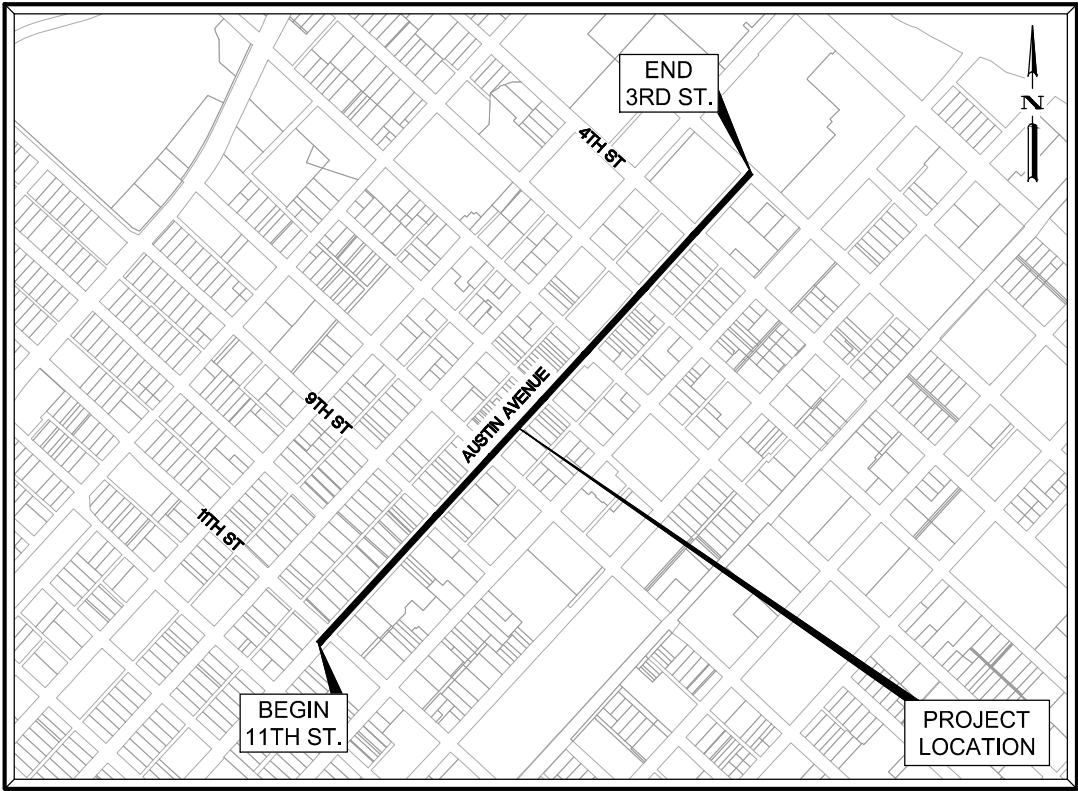
CITY OF WACO PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION (STREET, WATER, SANITARY SEWER, DRAINAGE, RETAINING WALL)

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW

MAYOR
DILLON MEEK

CITY COUNCIL
ANDREA J. BAREFIELD - COUNCIL DIST. 1
ALICE RODRIGUEZ - COUNCIL DIST. 2
JOSH BORDERUD - COUNCIL DIST. 3
DAVID HORNER - COUNCIL DIST. 4
JIM HOLMES - COUNCIL DIST. 5

CITY MANAGER
BRADLEY FORD



LOCATION MAP
AUSTIN AVENUE STREET CLASSIFICATION
11TH TO 3RD: URBAN COLLECTOR
2010 ADT: 5066

MAY 2023



BGE, Inc.
3925 IH 35 South, Waco, TX 76706
Tel: 972-464-4800 • www.bgeinc.com
TBPE Registration No. F-1046

THESE PLANS ARE ISSUED FOR
THE PURPOSE OF PRELIMINARY
REVIEW AND ARE NOT INTENDED
FOR CONSTRUCTION.
WHEN ISSUED IN
FINAL FORM THEY WILL BE
SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CARL J. KROGNESS, P.E.
TEXAS REGISTRATION NO. 91869
May 15, 2023



Clark W. Jan P.E. 12/16/2022
BGE, Inc.
F-1046

PROJECT ENGINEER (COMPLETE & CORRECT)	DATE
UTILITIES DIRECTOR (APPROVED FOR BIDDING)	DATE
PUBLIC WORKS DEPARTMENT DIRECTOR (APPROVED FOR BIDDING)	DATE

BGE, Inc.
C:\Users\BGE\OneDrive\Projects\City_Waco\11264-00-Austin_Avenue_Sidewalk_Improvements\PM\01_CADD\01_Shts\INDEX.dwg May 15, 2023 - 12:17pm ermgj

SHEET INDEX

C COVER SHEET

000 - GENERAL

- 001 SHEET INDEX
- 002 GENERAL NOTES & UTILITY CONTACTS
- 003 CONSTRUCTION NOTES
- 004 ESTIMATED QUANTITIES
- 005 SPECIAL PROVISIONS - SHEET 1 OF 8
- 006 SPECIAL PROVISIONS - SHEET 2 OF 8
- 007 SPECIAL PROVISIONS - SHEET 3 OF 8
- 008 SPECIAL PROVISIONS - SHEET 4 OF 8
- 009 SPECIAL PROVISIONS - SHEET 5 OF 8
- 010 SPECIAL PROVISIONS - SHEET 6 OF 8
- 011 SPECIAL PROVISIONS - SHEET 7 OF 8
- 012 SPECIAL PROVISIONS - SHEET 8 OF 8
- 013 OVERALL PROJECT MAP

100 - PLAN SHEETS

- 101 PLAN SHEET - BEGIN TO STA 4+00
- 102 PLAN SHEET - STA 4+00 TO STA 6+00
- 103 PLAN SHEET - STA 6+00 TO STA 8+00
- 104 PLAN SHEET - STA 8+00 TO STA 10+00
- 105 PLAN SHEET - STA 10+00 TO STA 12+00
- 106 PLAN SHEET - STA 12+00 TO STA 14+00
- 107 PLAN SHEET - STA 14+00 TO STA 16+00
- 108 PLAN SHEET - STA 16+00 TO STA 18+00
- 109 PLAN SHEET - STA 18+00 TO STA 20+00
- 110 PLAN SHEET - STA 20+00 TO STA 22+00
- 111 PLAN SHEET - STA 22+00 TO STA 24+00
- 112 PLAN SHEET - STA 24+00 TO STA 26+00
- 113 PLAN SHEET - STA 26+00 TO STA 28+00
- 114 PLAN SHEET - STA 28+00 TO STA 30+00
- 115 PLAN SHEET - STA 30+00 TO STA 32+00
- 116 PLAN SHEET - STA 32+00 TO STA 34+00
- 117 PLAN SHEET - STA 34+00 TO STA END

200 - DETAILS

- 201 STANDARD DETAILS - GENERAL - SHEET 1 OF 4
- 202 STANDARD DETAILS - GENERAL - SHEET 2 OF 4
- 203 STANDARD DETAILS - GENERAL - SHEET 3 OF 4
- 204 STANDARD DETAILS - GENERAL - SHEET 4 OF 4
- 205 STANDARD DETAILS - SANITARY SEWER
- 206 STANDARD DETAILS - SIDEWALK - SHEET 1 OF 5
- 207 STANDARD DETAILS - SIDEWALK - SHEET 2 OF 5
- 208 STANDARD DETAILS - SIDEWALK - SHEET 3 OF 5
- 209 STANDARD DETAILS - SIDEWALK - SHEET 4 OF 5
- 210 STANDARD DETAILS - SIDEWALK - SHEET 5 OF 5
- 211 STANDARD DETAILS - TRAFFIC CONTROL - SHEET 1 OF 2
- 212 STANDARD DETAILS - TRAFFIC CONTROL - SHEET 2 OF 2
- 213 STANDARD DETAILS - WATER
- 214 STANDARD DETAILS - WATERSHED PROTECTION - SHEET 1 OF 2
- 215 STANDARD DETAILS - WATERSHED PROTECTION - SHEET 2 OF 2
- 216 MODIFIED DETAILS - SIDEWALK - SHEET 1 OF 3
- 217 MODIFIED DETAILS - SIDEWALK - SHEET 2 OF 3
- 218 MODIFIED DETAILS - SIDEWALK - SHEET 3 OF 3
- 219 MODIFIED DETAILS - STREET
- 220 PROJECT SPECIFIC DETAILS - TREE REMOVAL AND PRUNNING
- 221 PROJECT SPECIFIC DETAILS - PAVEMENT MARKING - SHEET 1 OF 2
- 222 PROJECT SPECIFIC DETAILS - PAVEMENT MARKING - SHEET 2 OF 2
- 223 TMUTCD DETAILS - SHEET 1 OF 3
- 224 TMUTCD DETAILS - SHEET 2 OF 3
- 225 TMUTCD DETAILS - SHEET 3 OF 3

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.


RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

SHEET INDEX



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264-00	001
CHECKED: BGE			

BGE, Inc.
C:\Users\jw\OneDrive\Projects\City_Waco\1264-00-Austin_Avenue_Sidewalk_Improvements\PM\01_GA00\01_Site\G_GENERAL_NOTES.dwg, May 15, 2023-12:13pm, example

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION (THE CURRENT VERSION) AND APPLICABLE CITY OF WACO MANUAL OF STANDARD DETAILS (WMSD) UNLESS OTHERWISE NOTED.

CONTRACT ADMINISTRATION

THE CONTRACT IS A WRITTEN AGREEMENT BY WHICH THE CONTRACTOR HAS COMMITTED TO COMPLETE THE SPECIFIC SCOPE OF WORK, IN COMPLIANCE WITH THE DRAWINGS, SPECIFICATIONS, SCHEDULE, AND ALL APPLICABLE LAWS, RULES AND REGULATIONS. COMPENSATION FOR SAID WORK SHALL BE MADE AS DESCRIBED IN THE AGREED-UPON PROPOSAL. ANY REQUEST FOR CHANGE TO THE DESIGN, SCHEDULE, OR PROJECT COST MUST BE MADE IN WRITING AND APPROVED PRIOR TO IMPLEMENTATION.

SUBMITTALS

THE CONTRACTOR SHALL SUBMIT, WITHIN 10 DAYS OF THE EFFECTIVE DATE OF THE NOTICE TO PROCEED, THE FOLLOWING:

- THE NAME AND CONTACT INFORMATION OF THE PROJECT SUPERINTENDENT;
- THE NAME AND CONTACT INFORMATION OF THE EMERGENCY CONTACT;
- THE NAME, QUALIFICATIONS, AND CONTACT INFORMATION OF THE DESIGNATED SAFETY REPRESENTATIVE(S);
- THE NAME AND CONTACT INFORMATION FOR THE DESIGNATED PROJECT MANAGER FOR THIS CONTRACT.

ENVIRONMENTAL AND SAFETY PLANS

THE CONTRACTOR SHALL SUBMIT FOR REVIEW ALL REQUIRED ENVIRONMENTAL AND SAFETY PLANS FOR THE COMPLETION OF THE WORK. THE WORK WILL NOT BE PERMITTED TO BEGIN UNTIL ALL RELATED PLANS HAVE BEEN REVIEWED BY THE APPROPRIATE PARTY(IES).

TRAFFIC CONTROL PLAN (TCP)

WHEN REQUIRED, THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A TRAFFIC CONTROL PLAN FOR REVIEW. THE PLAN SHALL BE BASED UPON APPLICABLE CITY AND STATE REQUIREMENTS AND ESTABLISHED STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING THE PLAN AS THE WORK PROGRESSES AND SUBMITTING MODIFICATIONS FOR REVIEW AS NEEDED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ENSURING THE INSPECTOR IS PROVIDED A COPY OF THE SIGNED PLAN 15 DAYS PRIOR TO BEGINNING WORK.

TRENCH SAFETY PLANS

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS. WHEN REQUIRED BY THE WORK, THE CONTRACTOR SHALL SUBMIT A TRENCH SAFETY PLAN FOR REVIEW. THE PLAN SHALL INCLUDE THE RECOMMENDED SAFETY PROTECTION MEASURES WITH THE APPROPRIATE LOADING REQUIREMENTS.

THE CONTRACTOR SHALL ENSURE THAT THE PROTECTIVE MEASURES LOCATED ON SITE AND ALL PROCEDURES ON THE PROJECT ARE IN COMPLIANCE WITH ALL ASPECTS OF THE PLAN.

ALL RELATED DOCUMENTATION WILL BE MADE AVAILABLE TO THE INSPECTOR ON A DAILY BASIS. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL RELATED DOCUMENTATION TO THE OWNER UPON REQUEST.

CONFINED SPACE PLANS

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS. WHEN REQUIRED BY THE WORK, THE CONTRACTOR SHALL SUBMIT A CONFINED SPACE PLAN FOR REVIEW. THE CONTRACTOR SHALL ENSURE THAT ALL PROCEDURES EMPLOYED ON THE PROJECT ARE IN COMPLIANCE WITH ALL ASPECTS OF THE PLAN.

ALL RELATED DOCUMENTATION WILL BE MADE AVAILABLE TO THE INSPECTOR ON A DAILY BASIS. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL RELATED DOCUMENTATION TO THE OWNER UPON REQUEST.

WATER LINES

SHALL HAVE A MINIMUM COVER OF 3.5 FT. BELOW FINISHED STREET GRADE UNLESS OTHERWISE SPECIFIED. EXISTING FIRE HYDRANTS THAT ARE TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE CITY OF WACO, AND SHALL BE DELIVERED IN WHOLE TO THE CITY OF WACO STORAGE YARD AT 4TH AND COLCORD.

WASTEWATER

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE EACH SANITARY SEWER SERVICE AFFECTED BY THE PROJECT AND REPLACE EACH WITH AN EQUAL SIZE NEW SERVICE (4 IN. MIN.), COMPLETE WITH 2-WAY CLEANOUT UNLESS OTHERWISE SPECIFIED.

ALL SANITARY SEWER MANHOLES SHOWN TO BE ABANDONED SHALL HAVE THE RING AND COVER REMOVED AND DELIVERED TO THE CITY OF WACO STORAGE YARD AT 4TH AND COLCORD. ALL PIPES INSIDE THE MANHOLE SHALL BE PLUGGED WITH CONCRETE, THE MANHOLE BACKFILLED WITH FLOWABLE FILL, FOLLOWED BY THE APPROPRIATE SURFACE REPLACEMENT. THE TOP OF THE MANHOLE SHALL BE BROKEN DOWN TO A POINT AT LEAST 12 IN. BELOW NATURAL GROUND OR FINISHED PAVEMENT GRADE, OR 12 IN. BELOW LIMITS OF CONSTRUCTION.

UTILITIES

EXISTING UTILITIES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED FROM UTILITY COMPANY RECORDS AND INVESTIGATION. THE UTILITY LINE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND ARE FURNISHED AS A GUIDE FOR THE CONTRACTOR. THE CONTRACTOR WILL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES BEFORE BEGINNING EXCAVATION.

GAS LINES TO BE RELOCATED OR ADJUSTED BY OTHERS. TELEPHONE LINES TO BE RELOCATED OR ADJUSTED BY OTHERS. UTILITY POLES TO BE RELOCATED BY OTHERS.

THE CONTRACTOR SHALL NOTIFY, (SEE LIST THIS SHEET), PRIOR TO STARTING CONSTRUCTION ON ANY STREET IN THE VICINITY OF ANY EXISTING UTILITIES SO THAT ANY ADJUSTMENTS OF EXISTING UTILITIES THAT HAVE NOT PREVIOUSLY BEEN MADE CAN BE MADE PRIOR TO CONSTRUCTION.

STORM WATER POLLUTION PREVENTION PLAN

THE EROSION CONTROL PLAN PROVIDED IN THE PLAN SET SHALL BE CONSIDERED THE MINIMUM EROSION CONTROL MEASURES FOR THE PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY "TO DEVELOP AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH TCEQ GENERAL PERMIT TXR150000 PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITY", AS DESCRIBED IN SECTION 1.10: STORM WATER POLLUTION PREVENTION IN THE CITY OF WACO'S 2013 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE CITY OF WACO CODE OF ORDINANCES, CHAPTER 26 ARTICLE VIII - STORM WATER REGULATIONS SEC. 26-325 THRU SEC. 26-330, IF REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING THE PLAN AS THE WORK PROGRESSES AND SUBMITTING MODIFICATIONS FOR REVIEW AS NEEDED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ENSURING THE INSPECTOR IS PROVIDED A COPY OF THE APPROVED AND SIGNED PLAN PRIOR TO BEGINNING WORK. THE TABLE BELOW IS FOR INFORMATIONAL PURPOSES ONLY.

ACTION REQUIRED	≥ 5 ACRES	≥ 5 ACRES	≥ 5 ACRES
IMPLEMENT BMPs AS SHOWN IN PLAN SET *	✓	✓	✓
PREPARE & IMPLEMENT SWP3	—	✓	✓
POST SITE NOTICE	—	✓	✓
SUBMIT COPY OF SITE NOTICE TO MS4 OPERATOR	—	✓	✓
SUBMIT NOI TO TCEQ & MS4 OPERATOR	—	—	✓
SUBMIT NOT TO TCEQ & MS4 OPERATOR	—	—	✓

* AN EROSION CONTROL PLAN IS REQUIRED, IF NOT INCLUDED IN PLAN SET

STREET CONSTRUCTION

WHERE NEW CURB AND GUTTER IS PLACED NEXT TO EXISTING CURB AND GUTTER, THE GUTTER GRADES SHALL MATCH, AND A 1/2 IN. EXPANSION JOINT SHALL BE ADDED BETWEEN THE OLD AND NEW CURB AND GUTTER, WITH 5/8 IN. x 24 IN. SMOOTH DOWELS, ONE SIDE WRAPPED, PLACED SIMILARLY TO LONGITUDINAL REINFORCING STEEL.

EXISTING PAVEMENT SHALL BE SAWED TO A SMOOTH STRAIGHT LINE AT THE BEGINNING AND END OF STREET CONSTRUCTION WHERE SHOWN AND AT ALL CONSTRUCTION LIMITS WHERE SHOWN.

IN THE CASE OF A STREET BEING LIME STABILIZED AND CURB & GUTTER BEING REPLACED, OR NEW CURB & GUTTER BEING CONSTRUCTED, EACH EXISTING WATER METER THAT IS NOT AT LEAST 2 FT. BEHIND THE PROPOSED BACK OF CURB SHALL BE RELOCATED TO AT LEAST 2 FT. BEHIND THE PROPOSED BACK OF CURB. EACH NEW WATER SERVICE IN THIS CASE SHALL BE CONSTRUCTED SUCH THAT THE METER IS AT LEAST 2 FT. BEHIND THE PROPOSED BACK OF CURB.

INSTALLATION OF ANY PIPE WITHIN THE RIGHT-OF-WAY PROPOSED OR EXISTING STREET SHALL REQUIRE THE SAME EMBEDMENT AS FOR INSTALLATION IN STREETS.

STORM SEWER

MEASURE FOR PAYMENT FOR REINFORCED CONCRETE PIPE SHALL EXTEND ONLY TO THE INSIDE FACE OF MANHOLE WALLS AND SHALL EXCLUDE THE INSIDE MANHOLE DIMENSION.

EXISTING R.C.P. SHALL BECOME THE PROPERTY OF THE CONTRACTOR UPON REMOVAL FROM THE PROJECT.

SIDEWALKS

WHEN OPERATIONS REQUIRE A SIDEWALK CLOSURE, THE CONTRACTOR SHALL USE "SIDEWALK CLOSED" SIGNS AND TRAFFIC CONTROL DEVICES CONTROLLING PEDESTRIAN FLOWS AS NECESSARY TO ROUTE PEDESTRIANS SAFELY AROUND THE CLOSED SIDEWALK.

IF A SIDEWALK IS TO BE CONSTRUCTED NEAR A BUILDING OR STRUCTURE, THE CONTRACTOR SHALL REFER TO THE TXDOT DETAIL: BUILDINGS AND STRUCTURES PROTECTION PLAN. THIS DETAIL INCLUDES NOTES REGARDING PROTECTION OF BUILDINGS AND STRUCTURES DURING THE ENTIRE CONSTRUCTION PROJECT (INCLUDING HISTORICAL BUILDINGS).

SURVEY DATA

DRAWINGS IN THIS PLAN SET DO NOT REPRESENT BOUNDARY OR PROPERTY SURVEYS. ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. ALL COORDINATES GIVEN ARE IN REFERENCE TO TEXAS STATE PLANE NAD 83 CENTRAL 4203 IN GRID COORDINATES. ELEVATIONS ARE RELATIVE TO VERTICAL DATUM NAVD 88.

UTILITY CONTACTS

AT&T

CALVIN PEWITT
(254) 757-7810 (O)
(254) 715-7869 (M)

ATMOS ENERGY

GARRETT HARBERT
(254) 451-9866

GRANDE COMMUNICATIONS

JOHNNY HUTYRA
(254) 235-2072

CENTURYLINK NATIONAL

HUGH NIELSEN
(512) 656-4763

WINDSREAM KDLTX

JOSH MORSE
JOSH.MORSE@WINDSTREAM.COM

SPECTRUM/CHARTER (TWC)

SHAUN WHITEHEAD
SHAUN.WHITEHEAD@CHARTER.COM
(254) 644-7608 (C)
(254) 770-5215 (F)

CCI

BRIAN STORY
(254) 232-7119

MCI

ED HILL
(972) 560-1599
(469) 992-3813

FIBER LIGHT

MIKE BITSCHKE
(346) 802-7370

CITY OF WACO WATERSHED PROTECTION

MS4 COMPLIANCE

MARK KEELEY
(254) 750-5440
stormwater@wacotx.gov

CITY OF WACO WATER DISTRIBUTION AND

SANITARY SEWER

DANA JOHNSTON
(254) 749-7835
AFTER HOURS/EMERGENCY:
(254) 299-2489

CITY OF WACO OPERATIONS DIVISION

FRANK BUTLER (STREETS AND DRAINAGE)
(254) 750-8690

CITY OF WACO TRAFFIC MANAGER

JAMES BAILEY
(254) 750-6639

*CITY OF WACO TRAFFIC SECTION:

ELECTRICAL CONDUIT & TRAFFIC SIGNALS

CONTACT 24 HOURS IN ADVANCE IF WORKING NEAR SIGNALIZED INTERSECTIONS.
BILLY DEHART
(254) 749-4087

CITY OF WACO TRANSIT

JOSEPH DVORSKY
(254) 750-1744

CITY OF WACO SOLID WASTE

JOHN SETTLEMYER
(OPERATIONS MANAGER)
(254) 379-1790

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW

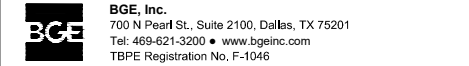
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS



DESIGNED:	DATE	PROJECT NO.	Sheet
DRAWN:	MAY 2023	11264--00	
CHECKED:			

BGE, Inc.
C:\Y\Projects\City_Waco\11264-00-Austin_Avenue_Sidewalk_Improvements\PM\01_CADD\01_Site\01_CONSTRUCTION_NOTES.dwg May 15, 2023-12:13pm erangel

60%
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TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

CONSTRUCTION NOTES



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE			003
CHECKED: BGE	MAY 2023	11264-00	

BGE, Inc.
C:\Projects\City_Waco\1264-00-Austin_Avenue_Sidewalks_Improvements\PM\01_CADD\01_Shts\G_EST_QUANTITIES.dwg May 15, 2023-12:13pm erangel

SUMMARY OF ESTIMATED QUANTITIES																						
	Specification / Detail	Bid Item Description	Total Quantity All SHTs	Measure	11th SHT 101	SHT 102	SHT 103	SHT 104	9th SHT 105	SHT 106	8th SHT 107	SHT 108	7th SHT 109	SHT 110	6th SHT 111	SHT 112	5th SHT 113	SHT 114	4th SHT 115	SHT 116	3rd SHT 117	
1.00		SIDEWALK																				
1.01	COW 6.4	MOBILIZATION & PROJECT INCIDENTALS (EST @ 8%)	1	LS	1																	
1.02	DETAIL G-4	BETTER STREETS WACO SIGN ASSEMBLY,	2	EA	2																	
1.03	COW 1.1	PREPARING RIGHT OF WAY	1	LS	1																	
1.04	TxDOT 354	PLANE ASPH CONC PAV (2"-3")	600	SY	200	-	-	-	200	-	-	-	-	-	-	-	-	-	200	-	-	
1.05	TxDOT Spcl Spec 3076 / SP 3.3-001	2-INCH HOT MIX ASPHALTIC CONCRETE (TYPE D) SURFACE COURSE (64-22)	600	SY	200	-	-	-	200	-	-	-	-	-	-	-	-	-	200	-	-	
1.06	Spcl Provision to 2.5-001	PRIME COAT	140	GAL	60	-	-	-	20	-	-	-	-	-	-	-	-	-	60	-	-	
1.07	COW 5.3/Sheet 219	REMOVE AND REPLACE CURB AND GUTTER	410	LF	100	-	-	-	140	-	25	-	25	-	75	-	-	-	25	-	20	
1.08	DETAIL Sheet 216	REMOVE AND REPLACE CONCRETE SIDEWALK	11,400	SF	450	775	275	-	675	2,650	1,425	500	225	2,100	925	250	250	580	50	230	40	
1.09	DETAIL Sheet 216	REMOVE AND RELAY PEDESTRIAN BRICK PAVER PATH	7,275	SF	-	-	-	-	325	325	675	700	500	300	300	1,325	720	990	430	175	510	
1.10	DETAIL Sheet 218	CURB RAMP (SPECIAL)(ADA): TO INCLUDE REMOVING EXISTING RAMP, SIDEWALK, GUTTER, ETC.	15	EA	-	-	-	-	-	-	4	-	4	-	4	-	-	-	3	-	-	
1.11	DETAIL SW-7	PERPENDICULAR CURB RAMP (TYPE 1): TO INCLUDE REMOVING EXISTING RAMP, SIDEWALK, GUTTER, ETC.	10	EA	2	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	
1.12	DETAIL G-3	ROOT BARRIER	150	LF	-	-	-	-	-	30	-	30	-	30	-	30	-	30	-	-	-	
1.13	Spcl Proj Provisions	REMOVE, REFURBISH AND RESET TRASH RECEPTABLE	6	EA					-	-	-	-	1	1	1	-	1	-	-	2	-	
1.14	Spcl Proj Provisions / DETAIL Sheet 220	REMOVE EXISTING TREE	14	EA					1	-	2	-	2	1	3	-	1	2	1	1	-	
1.15	DETAIL Sheet 220	TREE PRUNING / TRIMMING	1	LS	1																	
1.16	DETAIL Sheet 220	INSTALL TREE (1 1/2" CALIPER)	14	EA					1	-	2	-	2	1	3	-	1	2	1	1	-	
1.17	DETAIL Sheet 217	TREE WELL RETROFIT (TYPE A)	46	EA					2	6	2	6	4	6	4	6	2	6	2	-	-	
1.18	DETAIL Sheet 217	TREE WELL RETROFIT (TYPE B)	19	EA					2	-	4	-	2	-	4	-	4	-	3	-	-	
1.19	Spcl Proj Provisions	LANDSCAPE ALLOWANCE	1	LS	1																	
1.20	Spcl Proj Provisions	POWER WASH CONCRETE/PAVER SURFACE	118,800	SF	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	3,600	7,200	7,200	7,200	7,200	
1.21	Spcl Proj Provisions	IRRIGATION SERVICE REPAIR	1	LS	1																	
1.22	DETAIL T-1	TRAFFIC CONTROL PLAN	1	LS	1																	
1.23	DETAIL T-1	TRAFFIC CONTROL IMPLEMENTATION	1	LS	1																	
1.24	COW 1.10 / WP-1	STORM WATER POLLUTION PREVENTION PLAN (LESS THAN 1 ACRE)	1	LS	1																	
1.25	COW 1.10 / WP-1	STORM WATER POLLUTION PREVENTION IMPLEMENTATION (LESS THAN 1 ACRE)	1	LS	1																	
1.26	DETAIL SP-1 / T-6, T-7	SIGN POST INSTALLATION	5	EA	1	-	-	-	1	-	-	-	1	-	-	1	-	-	1	-	-	
1.27	Spcl Proj Provisions	REMOVE EXISTING SIGN POST	5	EA	1	-	-	-	1	-	-	-	1	-	-	1	-	-	1	-	-	
1.28	TxDOT 666 / SP 8.7-001	REFL PAV MRK TY 1 (Y)4"(SLD)(100 MIL)	1,600	LF	-	200	-	200	-	200	-	200	-	200	-	200	-	200	-	200	-	
1.29	TxDOT 666 / SP 8.7-001	REFL PAV MRK TY 1 (W)8"(SLD)(100 MIL)	1,960	LF	280	-	280	-	280	-	280	-	280	-	280	-	-	-	280	-	-	
1.30	TxDOT 666 / SP 8.7-001	REFL PAV MRK TY 1 (W)24"(SLD)(100 MIL)	140	LF	40	-	-	-	20	-	-	-	-	-	-	-	-	-	80	-	-	
1.31	TxDOT 666 / SP 8.7-001	REFL PAV MRK TY 1 (W) CROSSWALK	6	EA	1	-	-	-	1	-	-	-	-	-	-	-	4	-	-	-	-	
1.32	TxDOT 668 / SP 8.7-001	PREFABRICATED PAV MRK (W) ARROW (100 MIL)	2	EA	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	
1.33	TxDOT 668 / SP 8.7-001	PREFABRICATED PAV MRK (W) WORD (100 MIL)	2	EA	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	
1.34	TxDOT 672	RAIS PAV MRKR TY I-C	0	EA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.35	TxDOT 672	RAIS PAV MRKR TY II-B-B	9	EA	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	
1.36	TxDOT 672	RAIS PAV MRKR TY II-A-A	120	EA	-	15	-	15	-	15	-	15	-	15	-	15	-	15	-	15	-	
1.37	SP 4.7-003/4.9.A.1.6/W- 2, W-2A	RELOCATE FIRE HYDRANT ASSEMBLY	5	EA	1	-	-	-	1	-	-	-	1	-	1	-	-	-	1	-	-	
1.38	COW 4.9.A.1.8/W-12	ADJUST WATER METER & BOX (COMMERCIAL SERVICE)	30	EA	3	3	2	2	2	6	2	3	-	3	-	-	-	2	1	1	-	
1.39	Spcl Proj Provisions	3/4-INCH TYPE K, CLASS 1 COPPER SERVICE TUBING TO CONNECT TO COMMERCIAL SERVICE	0	LF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.40	DETAIL S-2	ADJUST SANITARY SEWER CLEANOUT (COMMERCIAL SERVICE)	0	EA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.41	TBD	AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS	5	EA	1	-	-	-	-	-	1	-	-	-	1	-	1	-	1	-	-	
1.41	COW 4.3 / G-9	CLASS B SURFACE REPLACEMENT	0	LF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SUBTOTAL SIDEWALK																						

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

ESTIMATED QUANTITIES

BGE

BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE
DRAWN: BGE
CHECKED: BGE

DATE
MAY 2023

PROJECT NO.
11264--00

Sheet
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Special Project Provisions

1. GENERAL

- 1.1. **Project Specifications** – In addition to the project’s Special Project Provisions and the instructions provided in the drawings, the following specifications shall be followed as noted:
- 1.1.1. **City of Waco Standard Specifications for Construction (2013) and City of Waco Standard Details (2022):** The *City of Waco Standard Specifications for Construction* (2013) and the *City of Waco Standard Details* (2022) are incorporated herein by reference for all intents and purposes. If a standard specified in the *City of Waco Standard Specifications* and/or *City of Waco Standard Details* conflicts with a standard included within the project’s Special Project Provisions and/or drawings, the project’s Special Project Provisions and/or drawings control. If the standard is unclear, the City Engineer for the City of Waco will determine which standard controls and their determination shall be final. Copies of the *City of Waco Standard Specifications for Construction*, the *Special Provisions to Standard Specifications for Construction* and the *City of Waco Standard Details* may be obtained by accessing the City of Waco’s website (<https://www.waco-texas.com/Departments/Public-Works/Engineering/Specification-and-Details>).
- 1.1.2. The following Special Provisions to the Standard Specifications for Construction (2013) are incorporated into project. These are found on the City’s website:
- SP to GP 2 2.9-001(Surveying)
 - SP to GP 7 7.8-001(Liquidated Damages)
 - SP to GP 9 9.3-001(Measurement and Payment)
 - SP to 2.3C-001(Portland Cement Treatment (Pug Base))
 - SP to 2.4-001(Lime Treatment)
 - SP to 2.5-001(Prime Coat)
 - SP to 3.3-001(Hot-Mix Asphalt Concrete Pavement)
 - SP to 4.2-002(Excavation and Backfill)
 - SP to 4.2-003(Excavation and Backfill)
 - SP to 4.7-001(Piping Materials)
 - SP to 4.7-002(Piping Materials)
 - SP to 4.7-003(Piping Materials)
 - SP to 5.1-001(Concrete and Reinforcement)
 - SP to 5.3-001(Concrete Curb & Gutter)
 - SP to 5.4-001(Concrete Sidewalks and Driveway Approaches)

- 1.1.3. **Texas Department of Transportation Specifications and Special Provisions:** Portions of this project require the Contractor to follow *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges* adopted by the Texas Department of Transportation (November 2014). A copy of these specifications may be found on the Texas Department of Transportation’s (TxDOT) website:
<https://ftp.txdot.gov/pub/txdot-info/cmd/cserve/specs/2014/standard/specbook-2014.pdf>.

Any TxDOT Special Provisions to Specifications and Special Specifications referenced in this project and published on their website:
(<http://www.dot.state.tx.us/apps-cg/specs/toc.asp?year=4&type=SP&list=sd>) shall be followed. TxDOT Specifications and Special Provisions utilized for this project include, but are not limited to:

ITEM	TITLE
270	ROLLING
360	CONCRETE PAVEMENT
421	HYDRAULIC CEMENT CONCRETE
462	CONCRETE BOX CULVERTS AND DRAINS
466	HEADWALLS AND WINGWALLS
666	RETROREFLECTORIZED PAVEMENT MARKINGS
668	PREFABRICATED PAVEMENT MARKINGS
672	RAISED PAVEMENT MARKERS
677	ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS
678	PAVEMENT SURFACE PREPARATION FOR MARKINGS
3076	DENSE-GRADED HOT-MIX ASPHALT

- 1.2. General Contractor shall **self-perform 30%** of this project.
- 1.3. TxDOT Pre-Qualification is required for this project.
- 1.4. **Construction Surveying** - Construction staking shall be provided by the Contractor and is subsidiary to work. Refer to Special Provision GP 2 2.9-001 (2013).
- 1.5. **Protection of Facilities in Right of Way** - The Contractor shall be responsible for adequately protecting all facilities (mailboxes, trees, bushes, sprinkler/irrigation systems, sidewalks, handicap ramps, etc.) not designated for removal. Any facilities that sustain damage shall be restored to existing or better condition, and the cost of the restoration shall be subsidiary to the work.
- 1.6. **Underground Utilities** - The attention of the Bidder is drawn to requirements in State law regarding location of underground utilities prior to excavation and the reporting of damage to any gas line.
- 1.7. **Above Ground Utilities** - Contractor is responsible for coordinating with the appropriate utilities owning any poles or signs that may be impacted during the work of this contract. Bracing and protective measures per the requirements of the signs’ owners shall be provided by the Contractor and shall be considered subsidiary to the work.
- 1.8. If the Contractor chooses to utilize a private lot(s) as a staging area, the Contractor shall provide the City written permission from the property owner(s). The project shall not be finalized until the Contractor provides a written letter from the property owner(s) saying that the property owner is satisfied with the said lot(s) once the Contractor demobilizes.
- 1.9. Material on hand shall not be considered for payment.

- 1.10. **Projectmates**
- 1.10.1. The City has set up an Internet-based project management system called Projectmates for managing design and construction projects. The Contractor will be required to utilize Projectmates as follows:
- 1.10.2. Contract management related processes including RFIs, submittals, field reports, meeting minutes, change orders, pay application, punch lists, and close-out documents shall be submitted, tracked, and responded to, by the Contractor, City, and Project

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

SPECIAL PROVISIONS
SHEET 1 OF 8



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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Austin Avenue Sidewalk Improvements

Engineer through Projectmates over the Internet. Paper copies shall not be accepted unless specifically requested.

- 1.10.3. The City of Waco Projectmates software portal is:
<https://cityofwaco.projectmates.com>
- 1.10.4. One (1) Projectmates user license will be provided to the Contractor by the City without charge. The City will recover the license upon project completion.
- 1.10.5. The Contractor shall be familiar with Projectmates prior to the pre-construction meeting. Training can be arranged by contacting software vendor Systemates Inc. Training expenses shall be borne by the Contractor. Contact Systemates, Inc., Richardson, Texas 214-217-4100 or email info@systemates.com.
- 1.10.6. See “Submittals” section for detailed instructions regarding submittals.

2. CHANGE MANAGEMENT

- 2.1. See Section 4 in the General Provisions of the City of Waco Standard Specifications for Construction.

3. COMMUNICATION

- 3.1. Contractor shall contact the Inspector a minimum of seventy-two (72) hours and a maximum of ninety-six (96) hours prior to beginning (or recommencing after a hiatus) work; and notify the Inspector immediately upon any change in schedule.
- 3.2. All homeowners and businesses affected by the construction shall be notified by the Contractor **a minimum of seventy-two (72) hours and a maximum of ninety-six (96) hours** in advance of any street/construction work. Reference Sheet 4 for flier examples. Should the work not occur on the specified day, new notification will be distributed when required. The notification shall be in a form of written posting, with the contractor’s representative’s local cellular telephone number and stating the time and date the work will take place. Flier shall be submitted for approval prior to distribution.
- 3.3. The Contractor shall coordinate all work with the following:
- 3.3.1. Kendrick Elementary / Waco Transit – Contractor shall maintain communication until final acceptance. Coordination required when bus routes are affected. (Kendrick Elementary 254-752-3316). (Waco Transit 254-750-1900).
- 3.3.2. City of Waco’s Parks and Recreation Department (Tom Balk, Program Manager – Park Planning and Assets, 254-750-8471; tomb@wacotx.gov) should construction impact Kendrick Park.
- 3.3.3. City of Waco’s Waste Management Division (John Settlemeyer, Operations Manager) to avoid interruption of service on trash pickup days.

4. HOUSEKEEPING

- 4.1. Contractor shall keep all the premises (including the roadway, drive approaches, sidewalks, as well as any staging areas) free from accumulation of all waste materials (mud, sand, rock, etc.), rubbish, and other debris.
- 4.2. Equipment and material shall not be stored on the street or within the right-of-way overnight unless approval is granted by the City. If approved, the Contractor shall clearly mark by warning lights and barricades.
- 4.3. At the completion of the Work, Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the site clean and ready for the

Austin Avenue Sidewalk Improvements

Owner prior to initiating project completion process (requesting punch list, etc.). At the end of the project (prior to project acceptance), Contractor shall cleanup the right of way from the edge of approximate right-of-way on each side of the street (including portions of intersecting streets on which work was performed). Contractor shall leave the entire right of way clean. Activities shall include, but not be limited to the following:

- Remove all trash, sediment and debris
- Remove all trees, tree limbs, and brush piles
- Mow grass/vegetation to 3-inch height
- Edge grass at back of curb, pavement, sidewalk, and curb ramps
- Remove vegetation from curb and gutter, sidewalk, and curb ramps
- Remove BMP’s (inlet protection,

5. ENVIRONMENTAL AND SAFETY PLANS

5.1. **Traffic Control Plans (TCP)** – Refer to General Provision 3.6A and General Notes.

5.1.1. TCP’s shall be compiled by licensed or certified personnel (Texas Licensed Professional Engineer; IMSA Certified Work Zone – Work Zone Traffic Control Safety Certification; TEEEX, Texas A&M Engineering Extension Services, American Traffic Safety Service Association (ATSSA) Traffic Control Design Specialist (TCDS); or Work Zone Traffic Control Certification, HWS002). Documentation of current certification shall be submitted with all TCPs. The TCP’s shall be drawn in AutoCAD and provided to the City in PDF format.

5.1.2. TCPs shall be provided during the submittal phase.

5.1.3. Each TCP must be developed to address the specific conditions of the planned construction work zone location. Each Phase will require a separate TCP

5.1.4. Functional Classification:

5.1.4.1. Collector: Bagby Avenue, Richter Avenue, and Irving Lee

5.1.4.2. Local: all other side streets

5.1.5. Refer to Sheet 301: Separate Bid Items established for Black Phase, Orange Phase, Blue Phase, Green Phase and Yellow Phase.

5.1.6. Work shall be limited to working hours between 7:00 a.m. and 6:00 p.m.

5.1.7. Contractor shall submit phasing plans including request(s) for night work for approval prior to construction. The contractor will pay a fee for any work outside normal working hours per the Fee Schedule as approved by City Council in effect at time of work.

5.1.8. Temporary pavement markings are subsidiary to the various TCP Implementation bid items. Temporary pavement markings shall meet TMUTCD requirements and may be waterborne paint (Type II).

5.1.9. Any Traffic Control Plan that impacts South Valley Mills will require TxDOT approval. Contractor is required to submit proposed plan to the TxDOT Waco Area Office (254-772-2890) and obtain approval prior to proceeding with work.

5.1.10. Bid Item 4.11 Portable Changeable Message Sign (PCMS) – Contractor shall provide two portable changeable message signs, which shall remain on site for the duration of the project. Signs shall be placed at locations that will inform the travelling public during the current Phase. As construction phasing progresses, sign wording and locations to be agreed upon between City and Contractor. The required changes shall be made at least seven (7) days before the Phase change (any

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

SPECIAL PROVISIONS
SHEET 2 OF 8

 BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		DATE	PROJECT NO.	Sheet
DESIGNED: BGE	BGE	MAY 2023	11264--00	006
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CHECKED: BGE	BGE			

BGE, Inc.
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major traffic pattern shift.) Should Contractor request (and receive City approval) to pursue work in multiple Phases concurrently, additional PCMS's may be required. The associated cost of additional PCMS's will be considered subsidiary to the various bid items, and not be paid for additionally.

- 5.2. **Trench Safety Plan** – Refer to General Provision 3.6B and General Notes.
- 5.3. **Confined Space Plan** – Not Used.
- 5.4. **Stormwater Pollution Prevention Plan** – Refer to General Provision 3.6D and General Notes.
 - 5.4.1. Disturbance area "over 5 acres" for Bid Items 4.12 and 4.13.
 - 5.4.2. Use Best Management Practices (BMPs) to provide erosion control measures for the "Stormwater Pollution Prevention Plan (Over 5 Acres)" and "Stormwater Pollution Prevention Plan Implementation (Over 5 Acres)" bid items. Additional erosion control measures beyond what is shown in the drawings may be required and shall be subsidiary to the Stormwater Pollution Prevention Plan (SWPPP) Implementation bid item.

6. SCHEDULE

- 6.1. The construction schedule for this project is set at XXX working days, beginning on the Notice to Proceed date and ending on the date of final acceptance. The Notice to Proceed will be issued after completion of the pre-construction meeting.
- 6.2. City of Waco staff will schedule a pre-construction meeting.
- 6.3. A Working Day is defined as any day of the week, not including Saturdays, Sundays, or Legal Holidays during which conditions under the CONTRACTOR's control will permit work for a continuous period of not less than seven (7) hours between 7:00 a.m. and 6:00 p.m. Upon agreement with the Owner's Representative, work on Saturdays, Sundays and/or Legal Holidays may be allowed and will be considered a Working Day.
- 6.4. The project schedule includes time to:
 - 6.4.1. Develop, submit, review, approve and implement the SWP3/erosion control plan;
 - 6.4.2. Develop, submit, review, and approve safety and material submittals;
 - 6.4.3. Attend all meetings including but not limited to:
 - 6.4.3.1. Preconstruction
 - 6.4.3.2. Construction Progress
 - 6.4.3.3. Pre-paving
 - 6.4.4. Complete and commission the Work;
 - 6.4.5. Complete the project closure activities and paperwork.
- 6.5. The Contractor shall maintain a work force adequate to accomplish the work within the contract time. The Contractor agrees to employ only orderly, competent, and knowledgeable workers, skillful in performance of the type of work required under this contract.
- 6.6. Contractor's representative (*City of Waco Standard Specifications for Construction, General Provisions, Section 8.7, page 58*) - "Before starting work, the Contractor shall designate in writing a representative who shall have complete authority to act for it. . . The representative or alternate shall be present at the Work site whenever work is in progress . . ."
- 6.7. The Contractor shall provide an approved baseline construction schedule within two weeks following the notice to proceed date. The schedule shall be in a Gantt, CPM, or PERT format suitable to depict the project work plan.
- 6.8. The Contractor shall supply the Project Engineer with a tentative schedule at least ten (10) days in advance of placement, along with weekly schedule.
- 6.9. The Contractor shall provide monthly updated schedules or as requested by the City of Waco.

- 6.10. Work in conflict with special events or ongoing utility work may be suspended, delayed, or redirected when determined by the City at no additional expense to the City.

7. PROJECT COMPLETION

- 7.1. It is expected that the Contractor shall complete the "final" phase of the project in no more than ten (10) working days after completion of pay items, within the constraints of the "Schedule" section of these provisions.
- 7.2. When Contractor completes all work or pay items, the Contractor shall submit a written request for a punch list. At the time this is submitted, contract days will temporarily cease accruing.
- 7.3. The Inspector will coordinate a "walk of the project" with the Contractor and other City representatives and soon after will issue the punch list. At the time of issuance, the contract days will resume accruing.
- 7.4. When Contractor deems all punch list items are complete, the Contractor shall submit a written request for a final inspection.
- 7.5. When the Inspector finds all items complete to their satisfaction the Inspector shall submit a letter of final acceptance. At this time, contract time will stop. The letter will request the Contractor submit a one-year guarantee and an all bills paid affidavit, both notarized.
 - 7.5.1. The final acceptance letter will include an accurate description of the Work being accepted.
 - 7.5.2. If private property is used the Contractor shall provide a copy of a written release from the property owner accepting the condition of their property.
 - 7.5.3. Once the guarantee and affidavit are received the project will be deemed final.
- 7.6. **Warranty** – (City of Waco Standard Specifications for Construction, General Provisions, Section 7.7, page 51). The Inspector will schedule a warranty walk approximately eleven (11) months after project completion. If any issues arise during the warranty period, the Inspector will send written request to the Contractor to remedy the issue(s).

8. SUBMITTALS

- 8.1. All submittals shall be complete shop drawings and design data, providing the information necessary to document compliance with all specifications. See section 2.6 C in the General Provisions of the City of Waco Standard Specifications for Construction. Contractor shall submit all submittals through Projectmates.
- 8.2. Within 10 working days of the Notice to Proceed, the Contractor shall provide a complete list of submittals for the project. The list shall include all materials and products required on the project.
- 8.3. **Projectmates Instructions:** When uploading submittals to Projectmates, the Contractor shall do so using the following format:
 - **Submit each item separately** (i.e. do not submit concrete mix and HMAC mix together in one submittal)
 - **Description:** Include a brief description of the submittal contents (i.e., Submittal includes mix design and test reports for SS 3076 HMAC Type D.)
 - Upon clicking **Add Submittal Items**:
 - Under Category:
 - Do not select anything for Division or Section
 - For Type Number, type 1 for the first submittal, 2 for the second submittal, etc.

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CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

SPECIAL PROVISIONS
SHEET 3 OF 8



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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BGE, Inc.
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- For *Description Below*, include the title of the submittal provided in the approved list of submittals (i.e., SS 3076 HMAC Type D).
- Under Submittal Type, select the option that best matches the submittal.
- Save and close the Add Submittal Items window.
- Leave **Reference #** blank, fill in remaining sections as needed, and click **Save & Finalize**.
- **Resubmittals:** If review of the initial submittal requires a resubmittal, Contractor shall click on the original submittal in Projectmates, click on **Resubmit** at the bottom, and follow the same steps as above.
- Failure to follow the instructions above may result in rejection of the submittal.

9. STREET (ROADWAY)

9.1. Miscellaneous

9.1.1. No asphalt treatments will be applied just prior to a rain event that could result in chemical asphalt or any asphalt by-product pollutant being washed into a stream or stormwater collection system.

9.1.2. Contractor shall arrange construction operations to minimize the hauling of materials through local (residential) streets.

9.1.3. Any tracking of asphalt material will be the responsibility of the Contractor to mitigate at no additional expense to the City.

9.1.4. Any signs removed shall be replaced the same day.

9.2. Preparing Right of Way (Bid Item 2.01)

9.2.1. Quantities provided within the Roadway Plan and Profile and Intersection Layout tables are for Contractors Information Only.

9.2.2. Remove sidewalk, remove asphalt pavement, remove concrete pavement, remove curb and gutter, remove ramp, remove storm line, remove signs, remove driveways, and remove fire hydrants are all included as part of the Lump Sum price for bid item 2.01. All materials shall be properly disposed of.

9.2.3. Clear the right of way of trees, shrubs, and other vegetative growth as needed for equipment clearance, construction of street components, and any other work required for this Project, and in areas specifically identified on the drawings. Reference Tree Removal and Pruning detail (Sheet 758) for additional requirements. Remove and dispose of all vegetation within five (5) calendar days after cutting. Material will be disposed of in accordance with federal, state, and local regulations. Do not cut outside the approximate right-of-way lines. Stump removal is subsidiary. This work and all associated materials will not be paid for directly but will be subsidiary to bid item – Preparing Right of Way.

9.3. **Street Excavation / Earthen Fill:** Material from the existing roadway shall be excavated and hauled off. Excavate to the depth and width necessary to construct pavement section per the cross sections.

9.4. Curb and Gutter Replacement (Bid Item 2.32)

9.4.1. The unit price bid will be full compensation for the removal of existing items, compacting subgrade, Portland cement treated base, curb and gutter, CLSM, topsoil, sodding (and watering/required care until project acceptance), and 2” HMAC (as needed if Contractor

timing does not allow to be overlaid concurrently with the milling and overlaying of the lanes), to the limits shown on Detail 3 Sheet 755.

9.4.2. Any irrigation heads/lines damaged shall be replaced at the Contractor’s expense.

9.5. Cement Treated Base (CTB) (Pug Base):

9.5.1. Place, compact and grade CTB as shown on Traffic Control Typical Sections.

9.5.1.1. If blue tops are used (preferred), set at cross section stations.

9.5.1.2. Grading will only be allowed on the day the CTB is placed. Light trimming/skimming/burning off imperfections will be permitted the day following the installation, but any damage to the base shall be repaired to the Engineer’s approval at the Contractor’s expense.

9.5.1.3. Once the base is shaped across the travel lanes, verify grades to the approval of the Inspector.

9.5.2. **Initial base wetting:** Contractor shall begin wetting the base immediately after shaping, and shall keep it moist until microcracking is performed and prime coat is placed.

9.5.3. Microcracking

9.5.3.1. After the CTB is placed, not sooner than twenty-four (24) hours nor after seventy-two (72) hours, contractor shall roll the finished course with a vibratory roller to induce microcracking. Notify the Project Engineer 24 hours before the microcracking begins.

9.5.3.2. The vibratory roller shall be performed in accordance with TXDOT Item 270, “Rolling,” with a static weight equal to or more than 12 tons and the vibratory drum must be not less than 20 in. wide. The roller must travel at a speed of 2 mph, vibrating at maximum amplitude, and make 2 to 4 passes with 100% coverage exclusive of the outside 1 ft. of the surface crown, unless otherwise directed by the Project Engineer. Additional passes may be required to achieve the desired crack pattern as directed. Rolling shall be subsidiary to the Portland Cement Treatment (Pug Base) bid items.

9.5.4. Continuation of wetting

9.5.4.1. After the cement treated course final grading is complete, the surface shall be protected against rapid drying and maintained in a thorough and continuously moist condition by sprinkling daily, including weekends, until: (a) for the period before the course is covered up, but in no case less than 7 days or (b) until the microcracking process is completed and the prime coat is applied.

9.6. Prime Coat (Bid item 2.11)

9.6.1. Immediately prior to application of the prime coat, the new road base shall be wetted so that voids in the surface are filled with water, but no free water remains standing on the surface. Asphalt shall be applied as a solid and uniform coat over the entire area.

9.6.2. Before the prime coat is applied the surface shall be cleaned thoroughly to the satisfaction of the Engineer or Inspector.

9.6.3. Prime Oil on Pug Base shall be AE-P or approved equal applied at the rate of 0.16 GAL/SY of residual asphalt.

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

SPECIAL PROVISIONS
SHEET 4 OF 8



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700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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9.7. Tack Coat (Subsidiary to HMAC bid items)

9.7.1. Two different tack conditions apply:

- 9.7.1.1. Prior to first Type B HMAC course (if needed; determined by Engineer): SS-1 residual rate is estimated at 0.06 GAL/SY (application rate shall be approved by City prior to application).
- 9.7.1.2. Between the Type B and Type D HMAC surface courses: product type shall be used at the rate of 0.08 to 0.10 GAL/SY (application rate shall be approved by City prior to application). The following product manufactures are acceptable for use, without exception:
- UltraTack – Trackless Tack (NTSS-1HM) by Blacklidge
 - NTQS-1HH by Asphalt Products Unlimited
 - CBC-1H by Ergon Asphalt and Emulsions
 - CATT-TR Emulsified Asphalt by Wright Asphalt Products Co
 - BC-1HT by Ergon Asphalt and Emulsions

9.7.2 Before the tack is applied the surface shall be thoroughly cleaned. Contractor shall also apply a uniform coat to all contact surfaces including curbs and gutters, castings, structures, and joints to provide a closely bonded, watertight joint.

9.7.3 Paving operations may be suspended until satisfactory tack has been applied.

9.8. Driveways

- 9.8.1. Driveway reconstruction consists of the following: excavate and haul off existing driveway materials, final grading, form, and pour new approaches and aprons.
- 9.8.2. Contractor shall coordinate with property owners when working on or near driveways to ensure that access is maintained.
- 9.8.3. Aprons shall typically extend to Approximate R.O.W. line
- 9.8.4. Residential driveways are paid by the each (EA). Bid items 2.16 and 2.18. Table on Sheet 9 provides estimated quantities “for Contractors Information Only”.
- 9.8.5. Commercial driveways are paid by the square foot (SF). Bid items 2.17 and 2.19.

9.9. Curb, Gutter, Ramp and Sidewalk Work

- 9.9.1. All curb and gutter and other tie-ins shall meet existing grades as shown in the drawings and described in all details and notes.
- 9.9.2. Contractor shall coordinate with property owners when working on or near lead sidewalks to ensure that adequate access is maintained.
- 9.9.3. Bid Item 2.26 Type 7 Ramp – The unit price bid will be full compensation for materials, tools, labor, and incidentals to construct the ramps, curbs, upper and lower landings, detectable warning surface, and flares as shown on the drawings.

9.10. Side Streets (Intersection Layouts)

- 9.10.1. In locations where the lip of gutter is displaced along the street and matching these points proves difficult, the Contractor shall maintain a “smooth ride” and attempt to follow the lip of gutter while still maintaining a 2” minimum depth of asphalt along the lip.
- 9.10.2. At various locations, hot mix that currently exists in the gutter shall be removed to the gutter level.

9.11. Concrete Pavement


9.11.1. HES Concrete shall meet the requirements of TxDOT Items 360 Concrete Pavement and 421 Hydraulic Cement Concrete. Submit Concrete Mix Design from a batch plant that is currently certified by the national Ready Mixed Concrete Association. The Mix Designer shall be a licensed professional engineer registered in the State of Texas or a TxDOT approved Mix Designer. Concrete mix design shall be no older than 12 months from current date (unless approval by City) from the Waco TxDOT District and shall identify aggregate size, mix ingredients and proportions, including admixtures.

9.12. Hot-Mix Asphalt Concrete (HMAC)

- 9.12.1. Final Surface Course (Type D) joints shall be limited to the centerline of Bagby Avenue or to 12’ East or 12’ West of the centerline.
- 9.12.2. TxDOT SS 3076 Dense-Graded Hot-Mix Asphalt Type D and Type B. No QC/QA bonus shall be given. Both the Contractor and Inspector shall calculate the yield during (and at end of each day’s) production and placement to ensure intended volume of HMAC is being placed.
- 9.12.3. Bid items 2.09 and 2.10 shall be paid by the square yard (SY) of the depth specified.
- 9.12.4. Contractor shall use a laydown machine for placement of the second Type B lift and the final Type D lift.
- 9.12.5. Contractor may pave any time (during established working hours) the roadway has no standing water on the roadway surface and the temperature conditions meet the requirements set for in TxDOT 3076. Place mixtures only when the Inspector determines the roadway surface weather and moisture conditions are suitable.
- 9.12.6. The roadway surface shall be swept clean and remove all dirt and debris accumulated in the curb and gutter sections prior to placement operations starting.
- 9.12.7. Contractor shall provide results from the mix prior to construction.
- 9.12.8. A City of Waco representative shall inspect the stockpile prior to paving operations.

9.12.9. HMAC Pavement Thickness Testing

- 9.12.9.1. HMAC pavement placed shall be subject to the following testing requirements, which supersede those provided in the City of Waco Standard Specifications for Construction.
- 9.12.9.2. The number and location of pavement thickness tests shall be at the discretion of the City but will typically be not more than every 1,000 LF (in each direction).
- 9.12.9.3. Pavement Thickness, Deficiencies, and Payment
- 9.12.9.3.1. For The Type D course, the pavement shall be removed and replaced at the Contractor’s expense if the tested depth of the new pavement is less than 1.5 inches.
- 9.12.9.3.2. For specified total thicknesses greater than 1.5 inches in all areas of this project, the following table shall be used to determine payment for deficiency in thickness for the Type D HMAC:

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Deficiency in Thickness Determined by Cores (inches)	Proportional Part of Contract Price Allowed
0.0-0.20	80 percent
0.20-0.30	70 percent
0.30-0.50	60 percent

If the pavement thickness deficiency is greater than 0.5 inches, the Contractor will be required to remove and replace the entire HMAC pavement thickness the full width of the street and 100 feet longitudinally in each direction of the deficient sample at their own expense. With the City's approval, the Contractor may conduct, at their expense, subsequent tests to isolate the deficiency to less than 100 feet longitudinally. These additional tests shall be scheduled with the Inspector and completed by a City-approved laboratory.

9.12.9.3.3. No additional payment over the contract unit price shall be made for any pavement thickness exceeding that required by the plans.

9.13. Chain Link Fence

9.13.1 Bid Item 2.04 3-Foot (Height) Chain Link Fence: per details on Sheet 762. The unit price is full compensation for removal of existing fence and the furnishing and installing the new fencing, except gates; any cleaning, grading, backfilling; removing and disposing of surplus material; and equipment, labor, tools, and incidentals.

9.14. Mailboxes

9.14.1. Mailboxes will be kept in a position accessible to the carrier's vehicle along the travel way except when performance of grading operations necessitates the moving of mailboxes. When grading operations necessitate the moving of mailboxes, the Contractor will place them at a nearby location which will be accessible to the carrier's vehicle. Mailboxes will be returned to a position accessible to the carrier's vehicle along the travel way when grading operations are not in progress. This work will be paid as part of bid items 2.27, 2.28, 2.29, and 2.30. Additional locations will not be paid for directly but will be subsidiary to the various bid items.

9.14.2. Contractor shall obtain property owners approval or proposed stone/brick, prior to installation of stone/brick mailbox.

9.15. Site Restoration

9.15.1. All vegetated areas disturbed by the work of this contract shall be restored to pre-project or better condition. Payment for sod, topsoil, vegetative watering, fertilizer, and all other work required will be considered subsidiary to bid items 4.14, 4.15, 4.16 or 4.17 unless otherwise provided. Contractor is responsible for all required care until project acceptance.

9.15.2. Topsoil –Topsoil within the project limits shall not be stored in windrows on private properties. Contractor may stockpile salvaged topsoil at approved staging areas. Additional Topsoil may come from approved sources outside of the ROW (from locations within six (6) inches of the natural ground surface to ensure it contains nutrients and is not sterile soil). Off ROW topsoil will contain a minimum organic content of 3.5% percent, based on soil test results provided by the Contractor and approved by the City prior to installation.

9.15.3. Sodding – Contractor shall adhere to Section 1.7 of Standard Specifications and endeavor to match existing type of grass. Project Superintendent and Inspector shall agree up quantity of St. Augustine and Bermuda to be delivered for each Phase of the work. Fertilizer shall adhere to Section 1.9 of Standard Specifications. Coverage at time of acceptance must be a minimum of 80% of living or growing grass with no large bare areas.

9.12.4 Vegetative watering – if using a City fire hydrant as the water source, Contractor shall pay the deposit fee, meter set fee, minimum monthly demand charge, fire hydrant meter monthly charge, and current water rates to the City. Contact the City's Water Utilities Department for a current fee schedule. Watering shall adhere to Section 1.7 of Standard Specification.

10. UTILITY WORK (WATER AND SANITARY SEWER)

10.1. Miscellaneous

10.1.1. Utility Identification - The Contractor shall place the appropriate utility identification tape on top of the embedment. In the event the color of the piping does not comply with the AWWA standards, the Contractor shall also spirally wrap the pipe being installed with the appropriate identification tape, 1' on center. These costs shall be subsidiary to linear foot of pipeline being installed.

10.1.2. Embedment - If the bedding under existing storm drain, water, or sanitary sewer pipes is impacted during this construction, such bedding shall be restored in accordance with current City of Waco standard details. Restoration of such bedding is subsidiary to the work.

10.1.3. Tracer Wire is required on all non-metallic water line per General Notes on Standard Details W-1 and W-34. This shall be paid for subsidiary to the piping and trenching bid item(s) in the project.

10.1.4. Polyethylene Wrap is required on all ductile iron pipes and fittings. This shall be paid for subsidiary to the piping and trenching bid item(s) in the project.

10.1.5. Notice of Utility Service Interruption - All property owners and businesses potentially affected by the interruption of water service shall be notified by the Contractor a minimum of 48 hours and a maximum of 96 hours in advance of the planned service interruption on a city provided template. The Contractor shall use a "Notice of Water and Wastewater Service Interruption" flier, see Page 5. Should the work not occur on the specified day, new notifications will be distributed as directed by the City's project representative.

10.1.6. Utility Services: Sewer – Sewer pipe where service connection must be re-tapped while the alignment is still under construction will not be able to be pressure tested. Manholes along this alignment will be subject to pressure testing.

10.1.7. Installation of New Water Services - Remove existing service to meter. Install new service in accordance with applicable detail(s). Connect new service to existing meter. Provide necessary surface replacement and curb and gutter removal and replacement, which will be incidental to the cost of the water service.

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SPECIAL PROVISIONS
SHEET 6 OF 8



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- 10.1.8. **Plumbing on Private Property** – any plumbing services or water services identified that are located on private property will require a no-fee plumbing permit for each address.
- 10.1.9. **Bid Item 3.34: 3/4-Inch Type K, Class 1 Copper Service Tubing to Connect to Residential Service:** unit price bid shall include taps, pipe, restoration of vegetation/grass, repair of any damaged irrigation heads/lines, and any additional items needed to install the line in accordance with the 2009 International Plumbing Code by a licensed plumber.
- 10.1.10. **Bid Item 3.36: 4-inch Sch. 40 P.V.C. Sanitary Sewer Residential Yard Line From City C.O. to Residents Drain:** unit price bid shall include taps, pipe, restoration of vegetation/grass, repair of any damaged irrigation heads/lines, and any additional items needed to install the line in accordance with the 2009 International Plumbing Code by a licensed plumber.
- 10.1.11. **Additional Fittings** - More bends have been included in the bid proposal than are shown on the drawings. If unexpected conflicts are discovered during construction, the Inspector may direct the Contractor to use some of these additional bends. Bends in addition to those shown on the plans may only be used with specific permission from the Inspector. No adjustment to the unit prices in the contract will be made because of reduced quantities if the additional fittings are not used.
- 10.1.12. All valve covers removed during water line construction shall be salvaged. Contractor to coordinate with the Inspector for arrangements to return them to the City of Waco Utilities Department on Colcord Avenue.
- 10.1.13. Pipe embedment and trench backfill may be either Type A Backfill material or Flowable Backfill Material.
- 10.1.14. Contractor shall open the pavement to traffic each night.

10.2. **Water Work**

- 10.2.1. Valve Boxes: A diamond in accordance with Details W-35 and W-36 shall be included as part of the valve bid items 3.13, 3.14 and 3.15.
- 10.2.2. Contractor may shut down water service during the day within the following constraints:
- a. Temporary potable water service (utilizing NSF-61 piping and fitting) shall be provided to all commercial customers
 - b. Shutdown of service to residential customers shall be limited to 8 hours each day
 - c. Shutdown period shall be after 8:00 a.m. and before 4:00 p.m.
 - d. Customers and businesses that require potable water for medical reasons shall not have their service interrupted without prior written approval and scheduling
 - e. Notify all property owners per Section 10.1.5.

10.3. **Sanitary Sewer Work**

- 10.3.1. **Manhole Protection** - Coat the inside and outside surfaces of all sanitary sewer manholes per COW Standard Specifications Section 4.8 and Detail S-11. In lieu of coating the new manholes for this project, the manholes may be cast with concrete containing ConShield (or a pre-approved equal) added at a rate of 1 gallon per cubic yard of concrete replacing 1 gallon of water. If ConShield is chosen to be utilized, then Con Tint concrete colorant, or an approved equal, shall be added at the manufacturer’s recommended dosage. Additionally, Con^{mic}Shield Joint Set, or an approved equal, shall be used. A letter from ConShield must be submitted confirming compliance with manufacturer’s recommendations. In the event the contractor elects to utilize the Conshield design for manholes, the Conshield additive and tint must be used for the concrete “donuts”.
- 10.3.1.1.1. All materials, manpower, machinery, etc. related to removal, abandonment and installation of manholes shall be on site before any manhole work begins.
- 10.3.1.1.2. Once work has begun, the Contractor shall work expeditiously without interruption until the manhole and sewer can be placed back in service.
- 10.3.2. Manholes: A diamond in accordance with Details S-21 and S-22 shall be included as part of manhole bid items 3.01, 3.02, 3.04, and 3.05.
- 10.3.3. **Sanitary Sewer Temporary By-Pass Pumping (Bid Item 3.42)**
- 10.3.4. The By-Pass Pumping bid item is to be used for payment on all sequences of construction and shall cover all planning, design, sequencing, materials, equipment, and manpower needed to maintain temporary sewer service to all customers.
- 10.3.5. A “By-Pass Pumping Plan” shall be submitted (at least 14 calendar days prior to initiating construction) for approval by the City. This pumping plan will detail how the flows will be controlled during construction. Provide for the flow of wastewater around the segment to be replaced. Create the by-pass by bypassing the line at an existing upstream manhole location and pumping the flow into a downstream manhole location or adjacent system. Use a pump and by-pass lines of adequate capacity to handle the flow.
- 10.3.6. Bypass flow information: for 15-inch line (Howard to Sunnydale) an estimated average dry day flow of 170 GPM flows into the manhole at Station 22+42. During rainfall events, this could increase to 1,100 - 1,800 GPM (peak wet weather flow). Contractor shall have bypass contingency measures in place to account for these flows.

10.4. **STEEL PLATES**

- 10.4.1. Contractor will be allowed to use steel plates and pins, secured to the street, if work is to resume within 24 hours. In the event work will not be resumed within 24 hours, the Contractor shall backfill the trench.
- 10.4.2. Contractor shall comply with Section 23-31 of the City of Waco Code of Ordinances.

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- 10.4.3. When the Contractor elects to use a steel plate a cold asphalt mix ramp will be provided to feather around the plate.
- 10.4.4. The thickness of plates for trench widths exceeding 72 inches shall be established in an analysis completed by a Licensed Professional Engineer Registered in the State of Texas.
- 10.4.5. Steel plates must extend a minimum of 24 inches beyond the edges of excavation.
- 10.4.6. In the event of improper installation of the steel plates that presents a nuisance or a public safety problem, the Contractor shall respond to all excavation restoration requests by the City immediately upon notification. Non-responses will result in the required restoration work being done by the City, with all expenses to be paid by the Contractor.
- 10.4.7. It is the responsibility of the Contractor to perform and document daily inspections of all active plate(s) or unattended plate(s) location(s), and where necessary take appropriate measures to protect the public safety until work is completed. This documentation shall be available to the EI upon request. No un-plated excavation shall be left unattended overnight.
- 10.4.8. All steel plates shall be properly marked with the Contractor’s name and Contractor’s after-hours contact phone number in the event the plates need to be secured.

11. PAVEMENT MARKINGS AND SIGNAGE

- 11.1. Markings shall meet the requirements of TxDOT Item 666, “Retroreflectorized Pavement Markings”, Item 668, “Prefabricated Pavement Markings”, and Item 672, “Raised Pavement Markers.” This shall include any non-overlaid concrete sections within the street limits.
- 11.1.1. Contractor shall complete the retroreflectivity testing in accordance with TxDOT Item 666 and shall provide written report with test results confirming conformance the required retroreflectivity values.
- 11.1.2. Surface preparation shall be subsidiary to the associated pavement marking bid items.
- 11.1.3. Application of Pavement Sealers shall be subsidiary to the associated pavement marking bid items.
- 11.2. As practical with new construction, leave the existing sign assemblies in place until the proposed sign assemblies are installed, and then remove the old sign assemblies.
- 11.3. Bid Item 7.02: Remove Existing Signpost: shall be paid for by the each. Existing signpost anchors shall be salvaged and delivered by the Contractor to the City’s storage facility on Monkey Run Rd. Coordinate drop-off with City of Waco Operation Division, 254-749-8481.
- 11.4. Bid Item 7.10: Raised Pav Markers TY II-B-B. Install blue raised reflective markers for all fire hydrants within the work limits.
- 11.5. **Sign Temporary Relocation and Signpost Replacement**
- 11.5.1. In areas where work requires temporarily relocating roadside signs, Contractor shall receive approval from the City regarding relocation placement.
- 11.5.2. Contractor shall remove and replace signpost anchors for all roadside signs where grading changes the ground surface final elevation at the signpost.

- 11.5.3. Contractor is responsible for damage to signs and signposts until substantial completion milestone. Any signs and signposts damaged during construction will be replaced by the contractor at no cost to the owner.

12. STORM DRAIN (DRAINAGE)

- 12.1. **Embedment** - If the bedding under existing storm drain, water, or sanitary sewer pipes is impacted during this construction, such bedding shall be restored in accordance with current City of Waco standard details. Restoration of bedding is subsidiary to the pipe installation. Type A backfill is subsidiary to pipe installation.
- 12.2. Removal of existing storm drains is subsidiary to bid item 2.01 Preparing Right of Way.
- 12.3. **Bid Item 5.02: Remove Existing Culvert Structure:** This item will be measured by the Each. Will be paid for at the unit price bid for loading, hauling, disposal, removing, excavation and backfill, equipment, labor, tools, and incidentals.
- 12.4. Trenching, backfill, and surface restoration required for installation of storm sewer installation shall be completed as shown on the plans, and in accordance with the following special project provisions.
- 12.4.1. Type A Backfill – note that Type A Backfill requirements were modified and new requirements are outlined in the City of Waco Standard Specifications for Construction SP 4.2-003 published February 22, 2022.
- 12.4.2. Flowable Backfill Material - Project-specific trench backfill requirements utilizing flowable backfill are shown on the plans. The details shown shall be used in conjunction with those shown in the standard embedment and trench backfill details. Flowable backfill shall be Controlled Low-Strength Material (CLSM) meeting the City of Waco Standard Specifications for Construction SP 4.2-002 published November 19, 2020. This item is subsidiary to the pipe installation.

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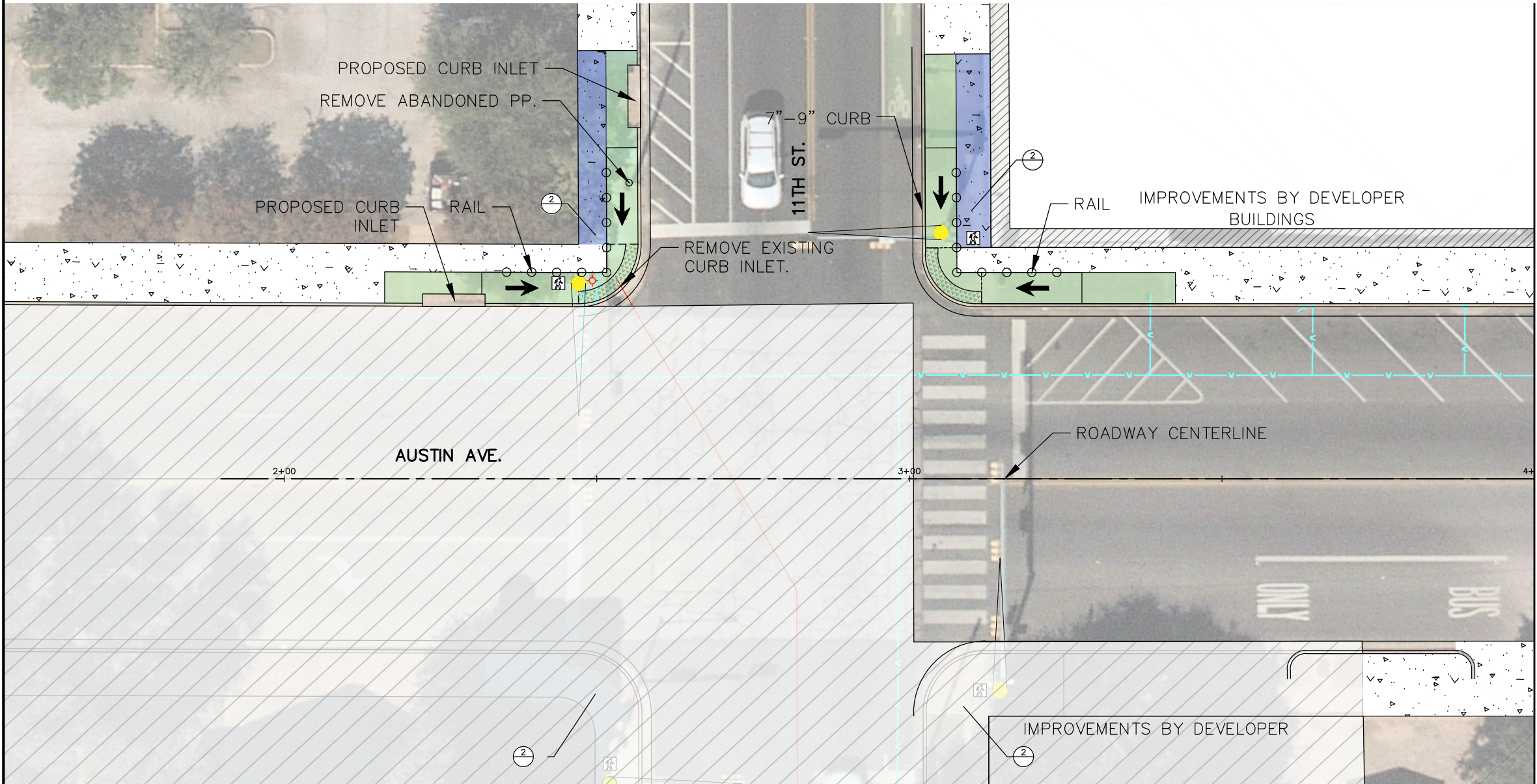
OVERALL PROJECT MAP

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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
2	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
3	NON ADA COMPLIANT AT/NEAR TREE WELL	REMOVE/REPLACE TO MAKE ADA COMPLIANT
4	POOR PEDESTRIAN CROSSING MARKINGS	INSTALL VISIBLE CROSSWALK MARKINGS
5	TREE/TREEWELL IN CONFLICT WITH RAMP	REMOVE TREE/TREE WELL
6	JOINTS BETWEEN SIDEWALK PANELS > 1/2" OPENING AND/OR ARE NOT PERPENDICULAR TO DOMINANT DIRECTION OF TRAVEL	INSTALL ADA COMPLIANT SIDEWALK

- LEGEND**
- EXISTING BRICK PAVERS TO REMAIN
 - REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
 - CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)
 - REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
 - CURB RAMP LANDING/TURNING SPACE (RE. DETAIL SW-7)
 - EXISTING SIDEWALK TO REMAIN
 - REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)
 - AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
 - STORM DRAIN (EXISTING)
 - WASTEWATER LINE (EXISTING)
 - WATERLINE (EXISTING)
 - EXISTING LUMINARE ON METAL POLE
 - EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
 - EXISTING SIGNAL
 - EXISTING TRASHCAN
 - EXISTING FIRE HYDRANT

- SIDEWALK**
- 1 REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
 - 2 TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
 - 3 TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
 - 4 REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
 - 5 REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW

0 5 10 20

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

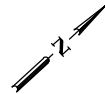
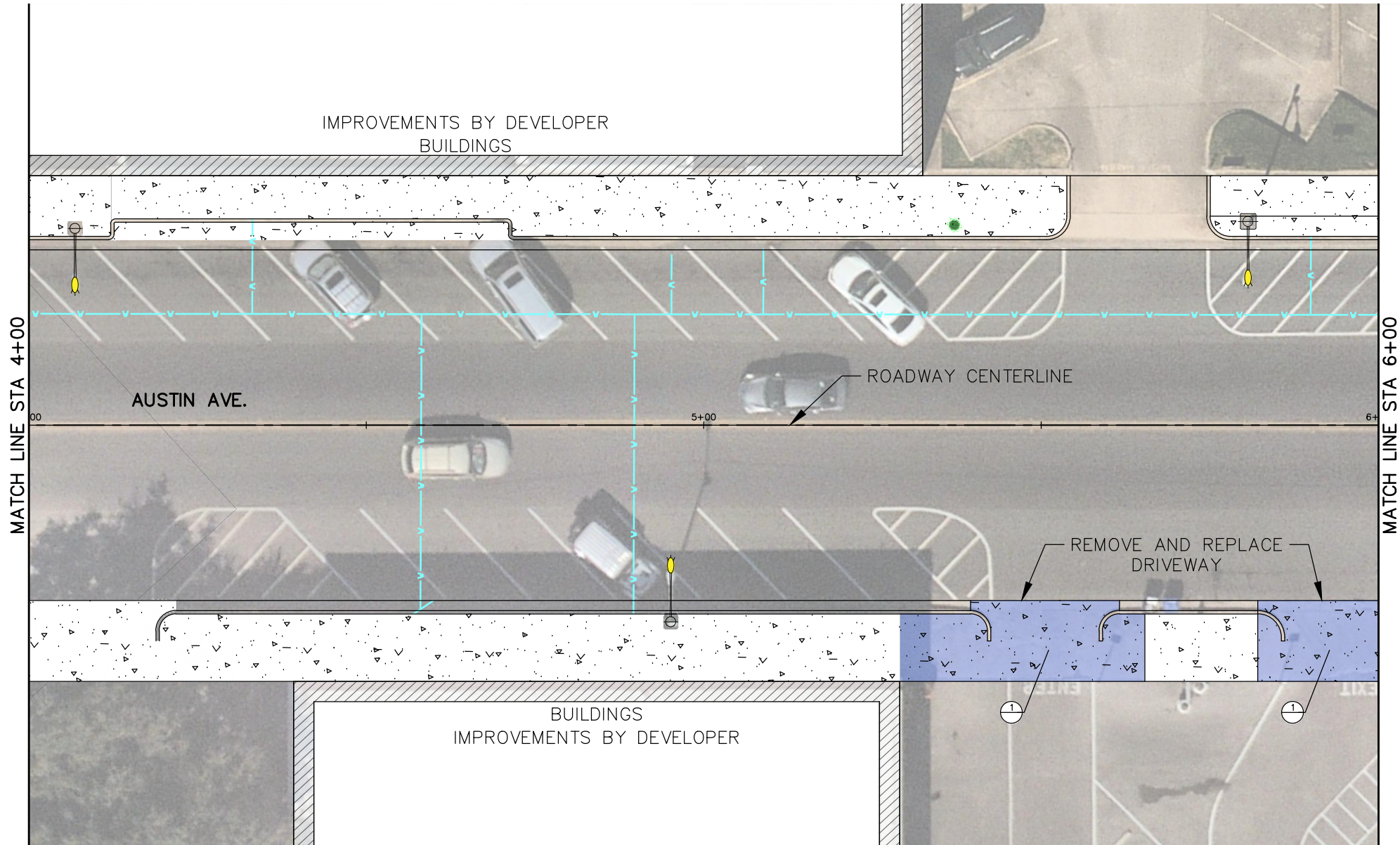
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

**PLAN SHEET
BEGIN TO STA 4+00**

	BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046			
	DESIGNED: BGE	DATE	PROJECT NO.	Sheet 101
	DRAWN: BGE	MAY 2023	11264--00	
CHECKED: BGE				

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
①	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
②	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
③	NON ADA COMPLIANT AT/NEAR TREE WELL	REMOVE/REPLACE TO MAKE ADA COMPLIANT
④	POOR PEDESTRIAN CROSSING MARKINGS	INSTALL VISIBLE CROSSWALK MARKINGS
⑤	TREE/TREEWELL IN CONFLICT WITH RAMP	REMOVE TREE/TREE WELL
⑥	JOINTS BETWEEN SIDEWALK PANELS > 1/2" OPENING AND/OR ARE NOT PERPENDICULAR TO DOMINANT DIRECTION OF TRAVEL	INSTALL ADA COMPLIANT SIDEWALK



LEGEND	
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	EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
①	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
②	TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
③	TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

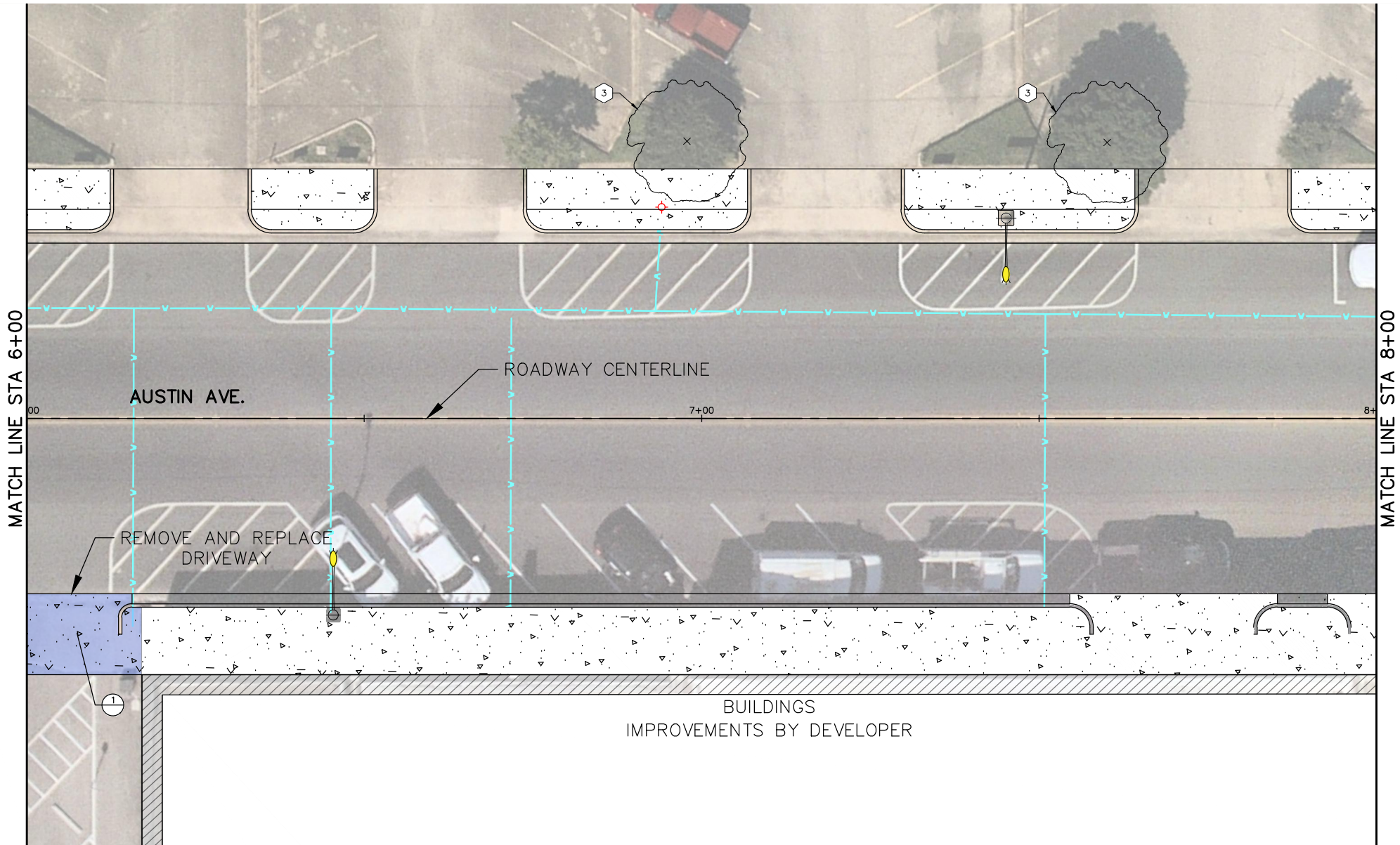
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 4+00 TO STA 6+00

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE		CHECKED: BGE	MAY 2023	11264-00	102

BGE, Inc.
C:\Users\BGE\OneDrive\Projects\City_Waco\11264-00-Austin_Avenue_Sidewalk_Improvements\PM\01_0400\01_Shts\PLAN2.dwg, May 15, 2023-12:17pm, arangel

	SAFETY HAZARD	COUNTERMEASURE
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	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

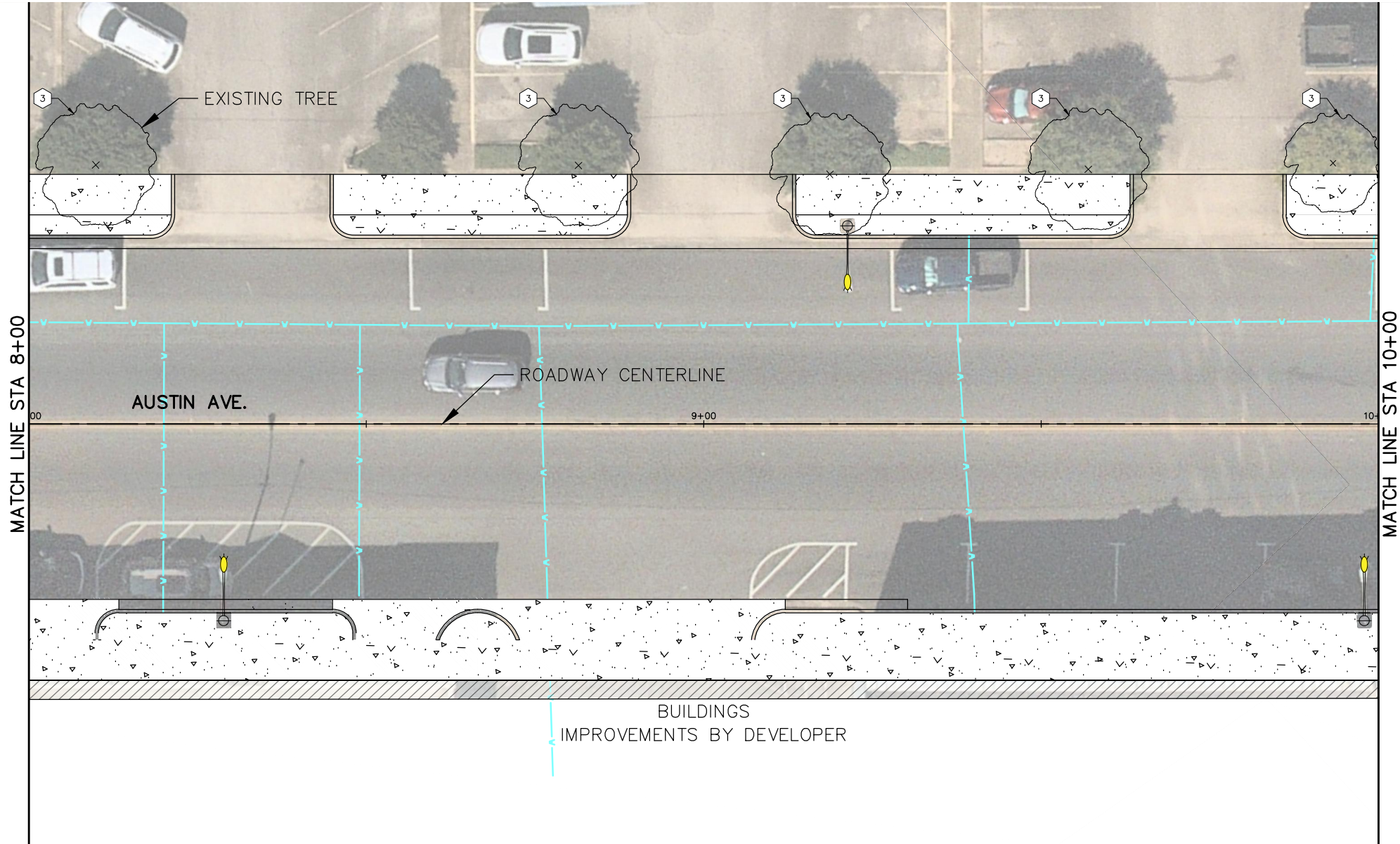
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 6+00 TO STA 8+00

	BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		
	DESIGNED: BGE	DATE	PROJECT NO.
	DRAWN: BGE	MAY 2023	11264-00
CHECKED: BGE			
			Sheet 103

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
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	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

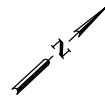
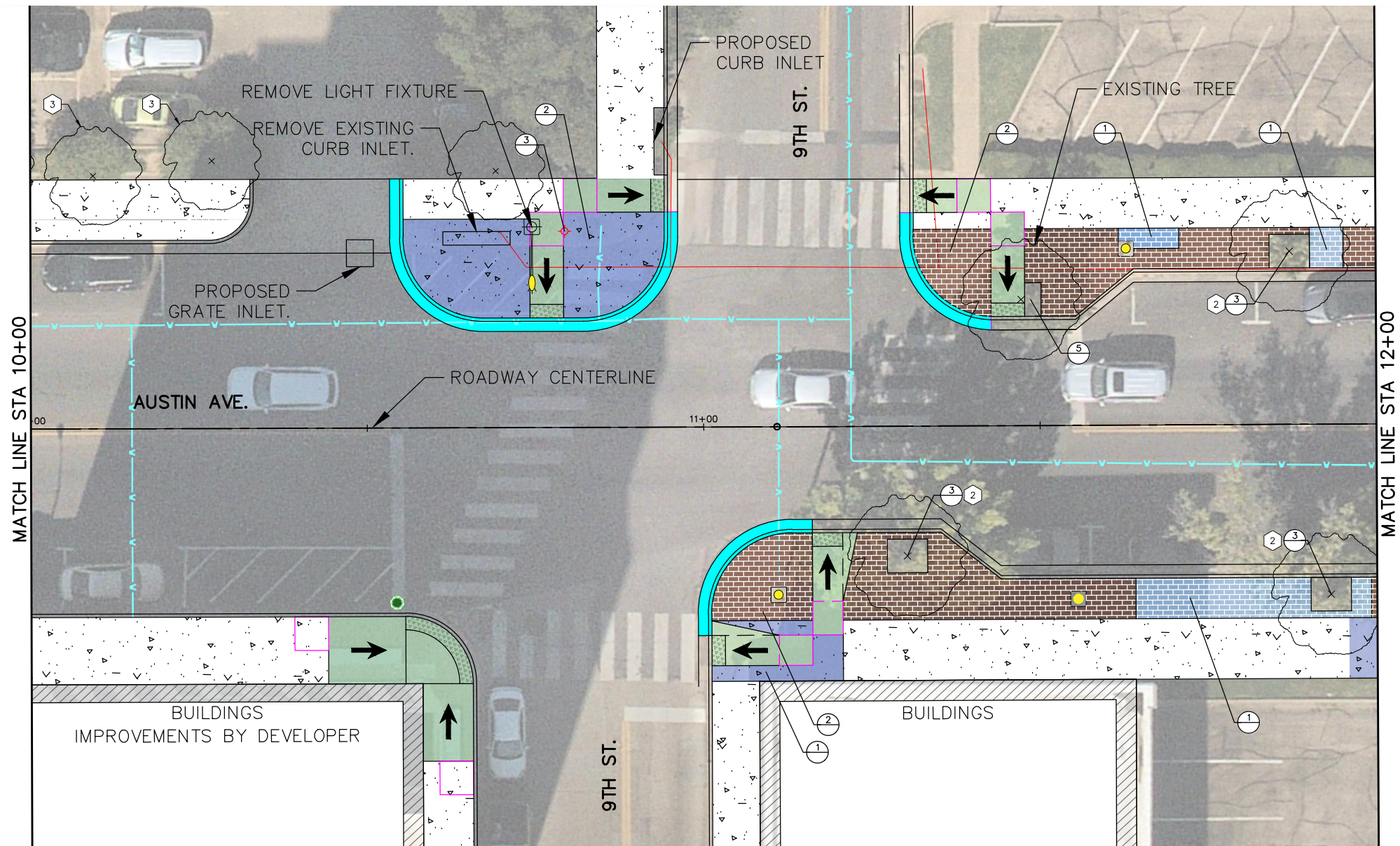
CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 8+00 TO STA 10+00

<div></div> <div>BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046</div>				
DESIGNED: BGE	DATE	PROJECT NO.	Sheet 104	
DRAWN: BGE				
CHECKED: BGE	MAY 2023	11264--00		

BGE, Inc.
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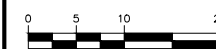
LEGEND

- EXISTING BRICK PAVERS TO REMAIN
- REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
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- EXISTING SIGNAL
- EXISTING TRASHCAN
- EXISTING FIRE HYDRANT

SIDEWALK

- 1 REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
- 2 TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
- 3 TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
- 4 REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 10+00 TO STA 12+00

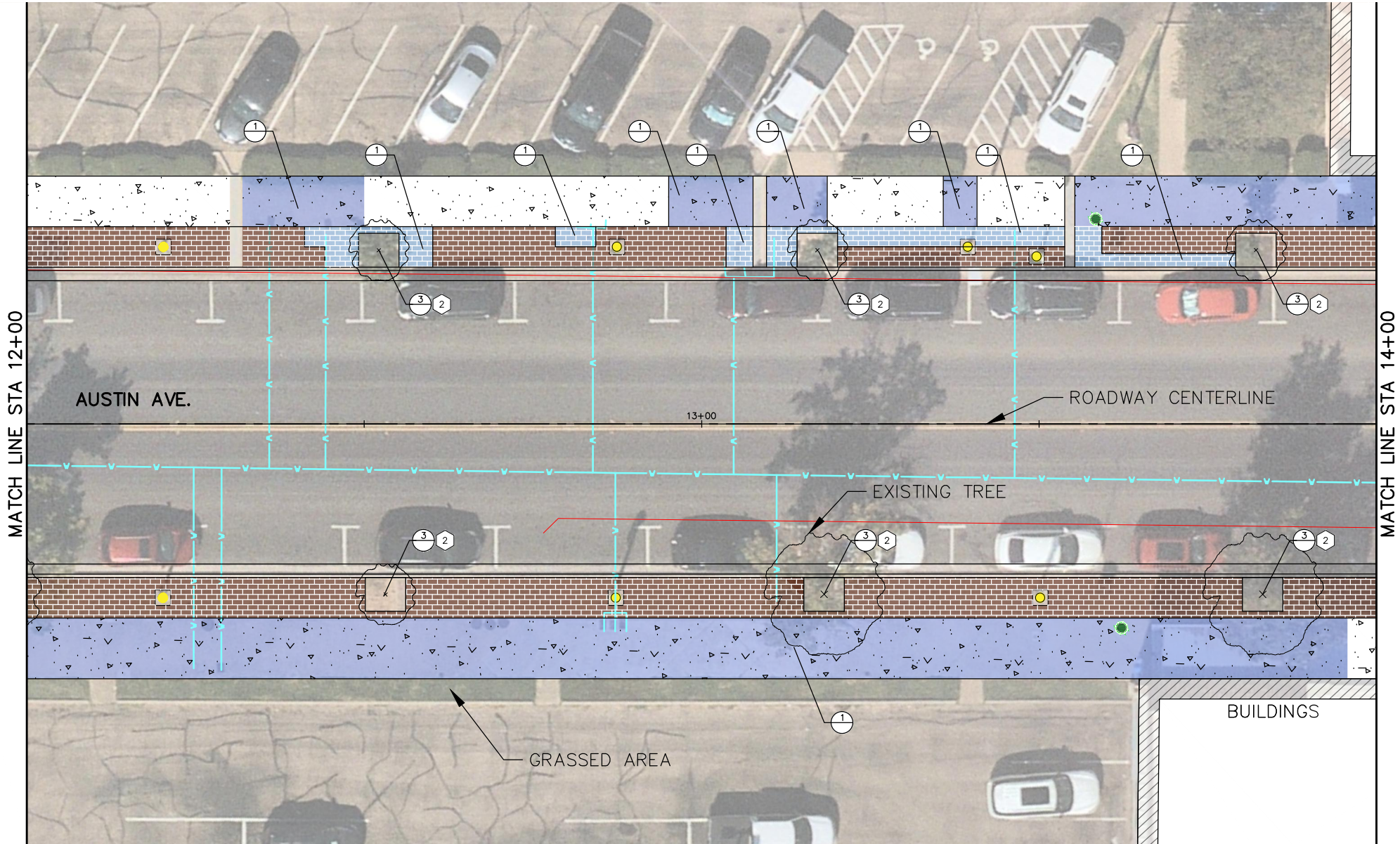
BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264-00	105
CHECKED: BGE			

	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
2	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
3	NON ADA COMPLIANT AT/NEAR TREE WELL	REMOVE/REPLACE TO MAKE ADA COMPLIANT
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BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
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SIDEWALK

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 12+00 TO STA 14+00

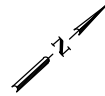
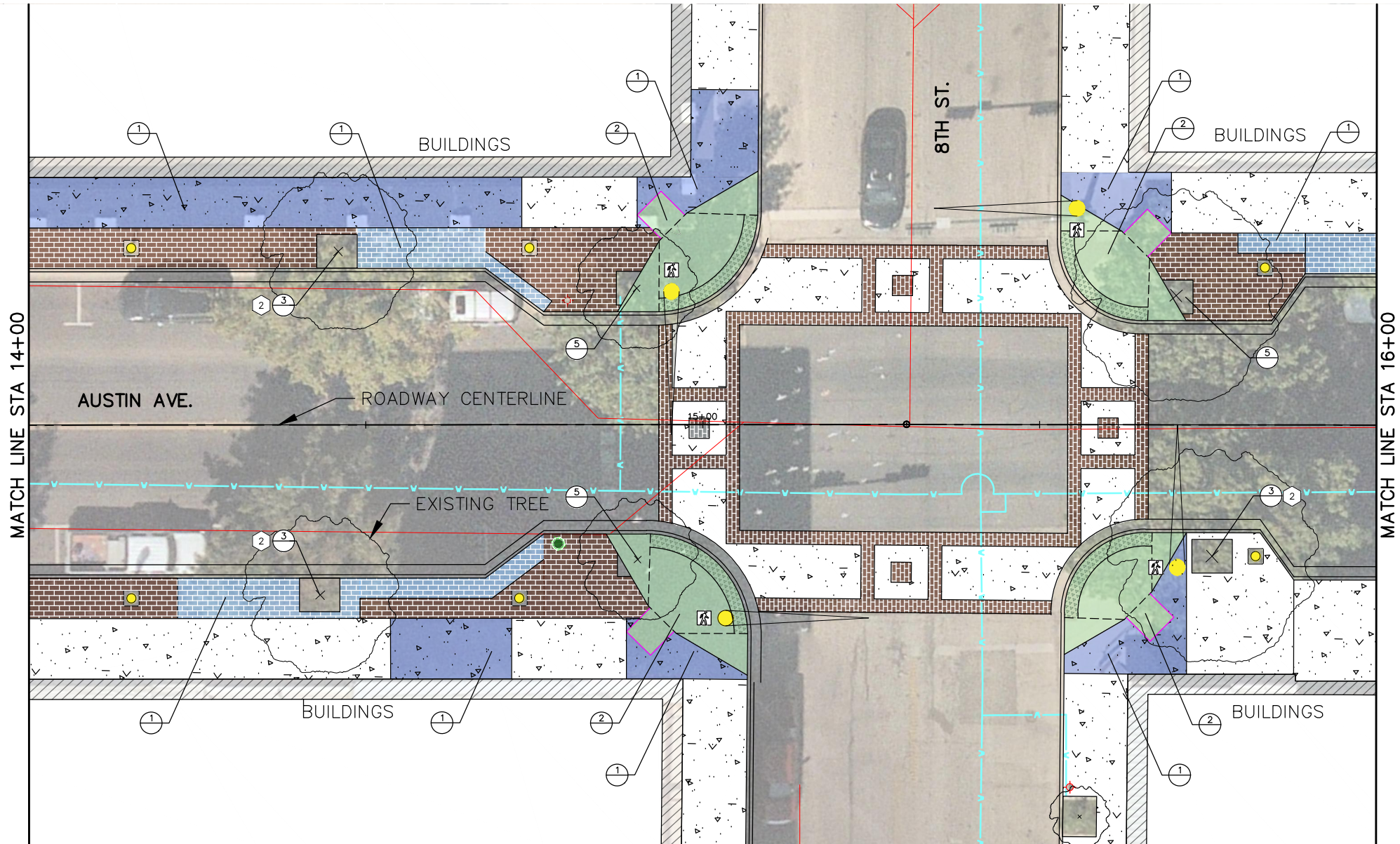


BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264-00	106
CHECKED: BGE			

BGE, Inc.
C:\Users\BGE\OneDrive\Projects\City_Waco\11264-00-Austin_Avenue_Sidewalk_Improvements\PM\01_CADD\01_Shts\PLAN2.dwg, May 15, 2023-12:17pm, areangel

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REV.	DESCRIPTION	BY	DATE

CITY OF WACO

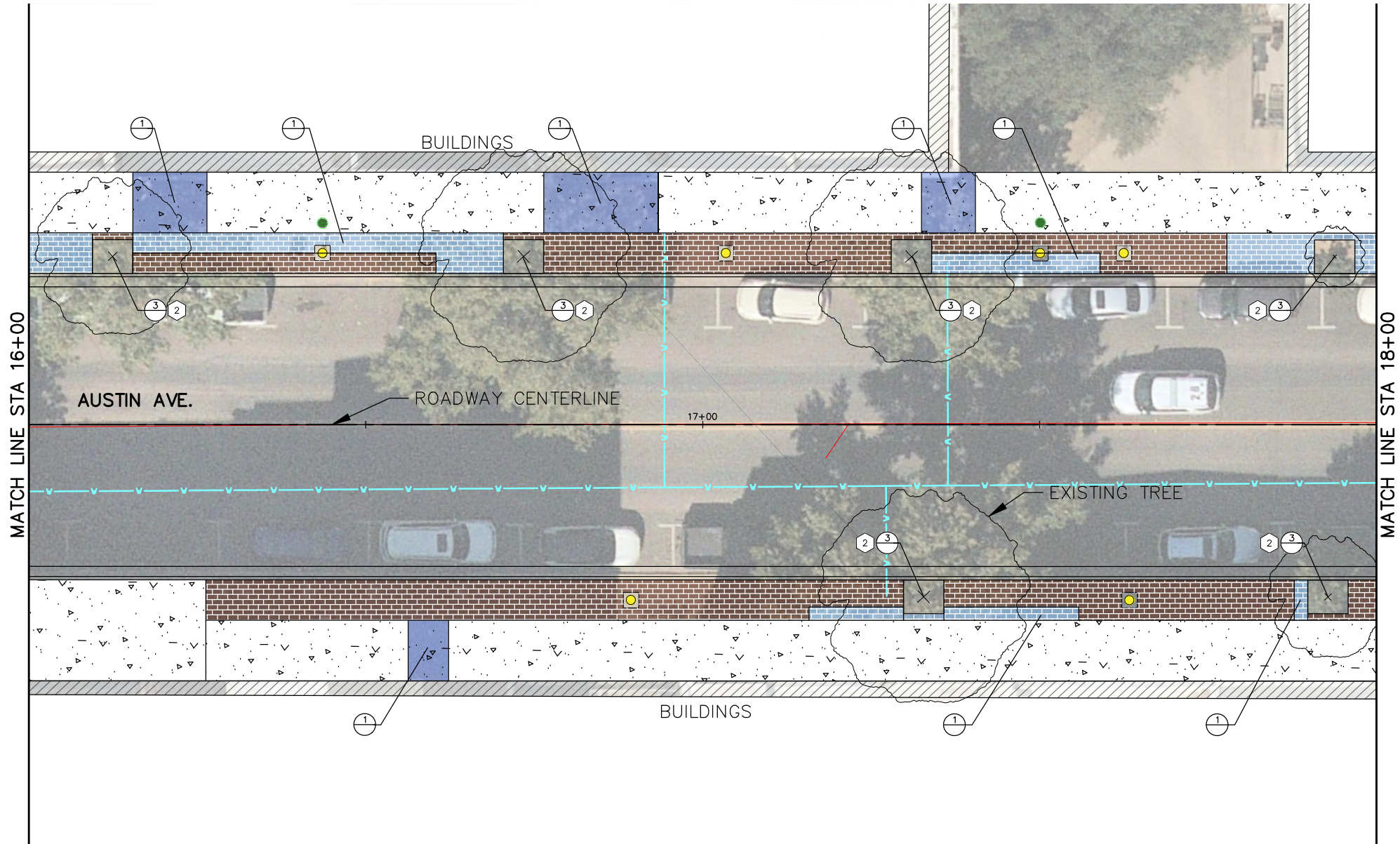
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 14+00 TO STA 16+00

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046	DESIGNED: BGE	DATE	PROJECT NO.	Sheet 107
	DRAWN: BGE	MAY 2023	11264-00	
	CHECKED: BGE			

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
2	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
3	NON ADA COMPLIANT AT/NEAR TREE WELL	REMOVE/REPLACE TO MAKE ADA COMPLIANT
4	POOR PEDESTRIAN CROSSING MARKINGS	INSTALL VISIBLE CROSSWALK MARKINGS
5	TREE/TREEWELL IN CONFLICT WITH RAMP	REMOVE TREE/TREE WELL
6	JOINTS BETWEEN SIDEWALK PANELS > 1/2" OPENING AND/OR ARE NOT PERPENDICULAR TO DOMINANT DIRECTION OF TRAVEL	INSTALL ADA COMPLIANT SIDEWALK



LEGEND

EXISTING BRICK PAVERS TO REMAIN

REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)

CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)

REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)

CURB RAMP LANDING/TURNING SPACE (RE. DETAIL SW-7)

EXISTING SIDEWALK TO REMAIN

REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)

AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)

STORM DRAIN (EXISTING)

WASTEWATER LINE (EXISTING)

WATERLINE (EXISTING)

EXISTING LUMINARE ON METAL POLE

EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES

EXISTING SIGNAL

EXISTING TRASHCAN

EXISTING FIRE HYDRANT

SIDEWALK

1

REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)

2

TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)

3

TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)

4

REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)

5

REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW

051020

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 16+00 TO STA 18+00

BGE, Inc.

700 N Pearl St., Suite 2100, Dallas, TX 75201

Tel: 469-621-3200 • www.bgeinc.com

TBPE Registration No. F-1046

DESIGNED: BGE

DATE

PROJECT NO.

Sheet

DRAWN: BGE

MAY 2023

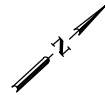
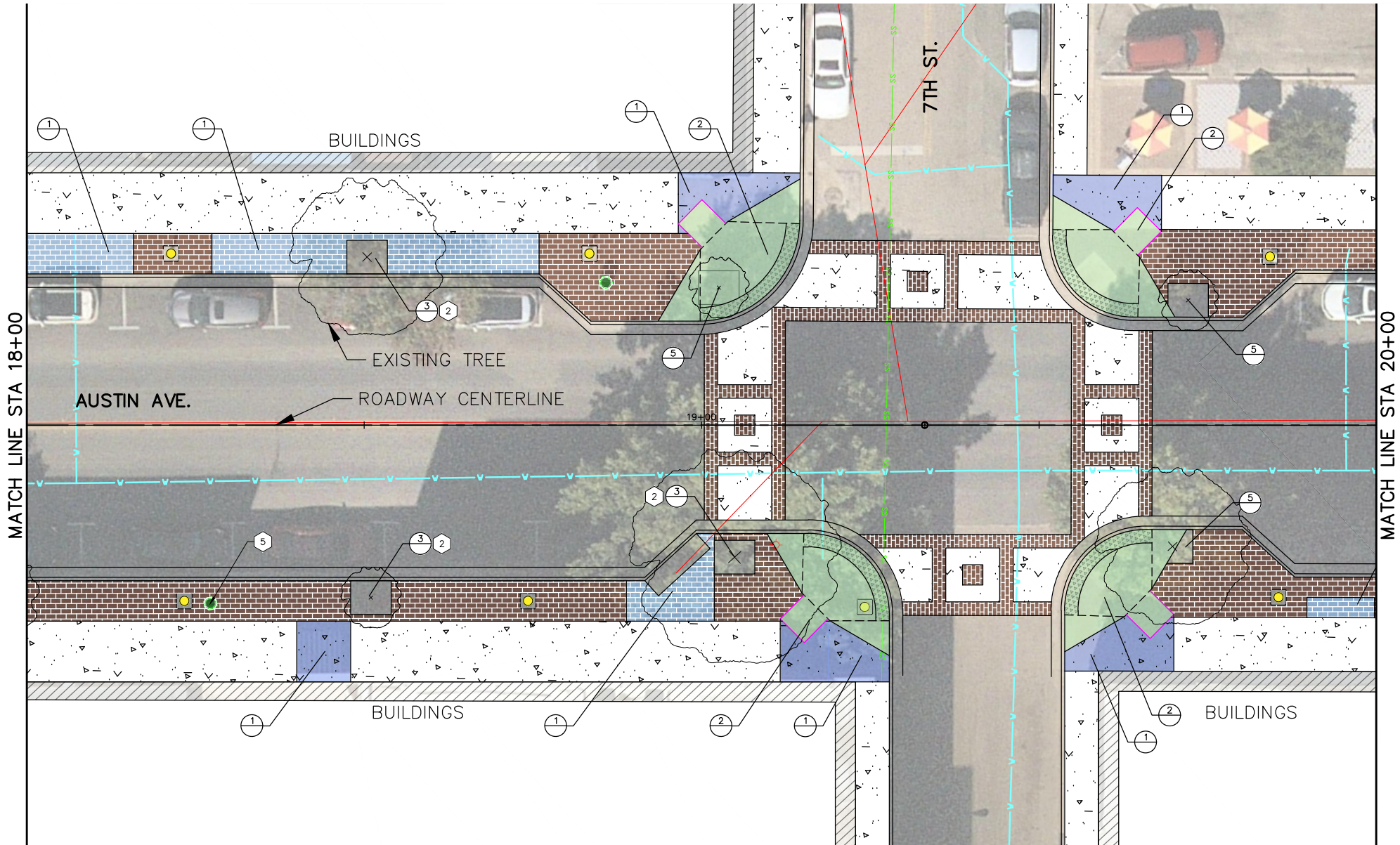
11264-00

108

CHECKED: BGE

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
2	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
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LEGEND	
	EXISTING BRICK PAVERS TO REMAIN
	REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
	CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)
	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
	CURB RAMP LANDING/TURNING SPACE (RE. DETAIL SW-7)
	EXISTING SIDEWALK TO REMAIN
	REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)
	AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
	STORM DRAIN (EXISTING)
	WASTEWATER LINE (EXISTING)
	WATERLINE (EXISTING)
	EXISTING LUMINARE ON METAL POLE
	EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
1	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
2	TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
3	TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
4	REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
5	REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

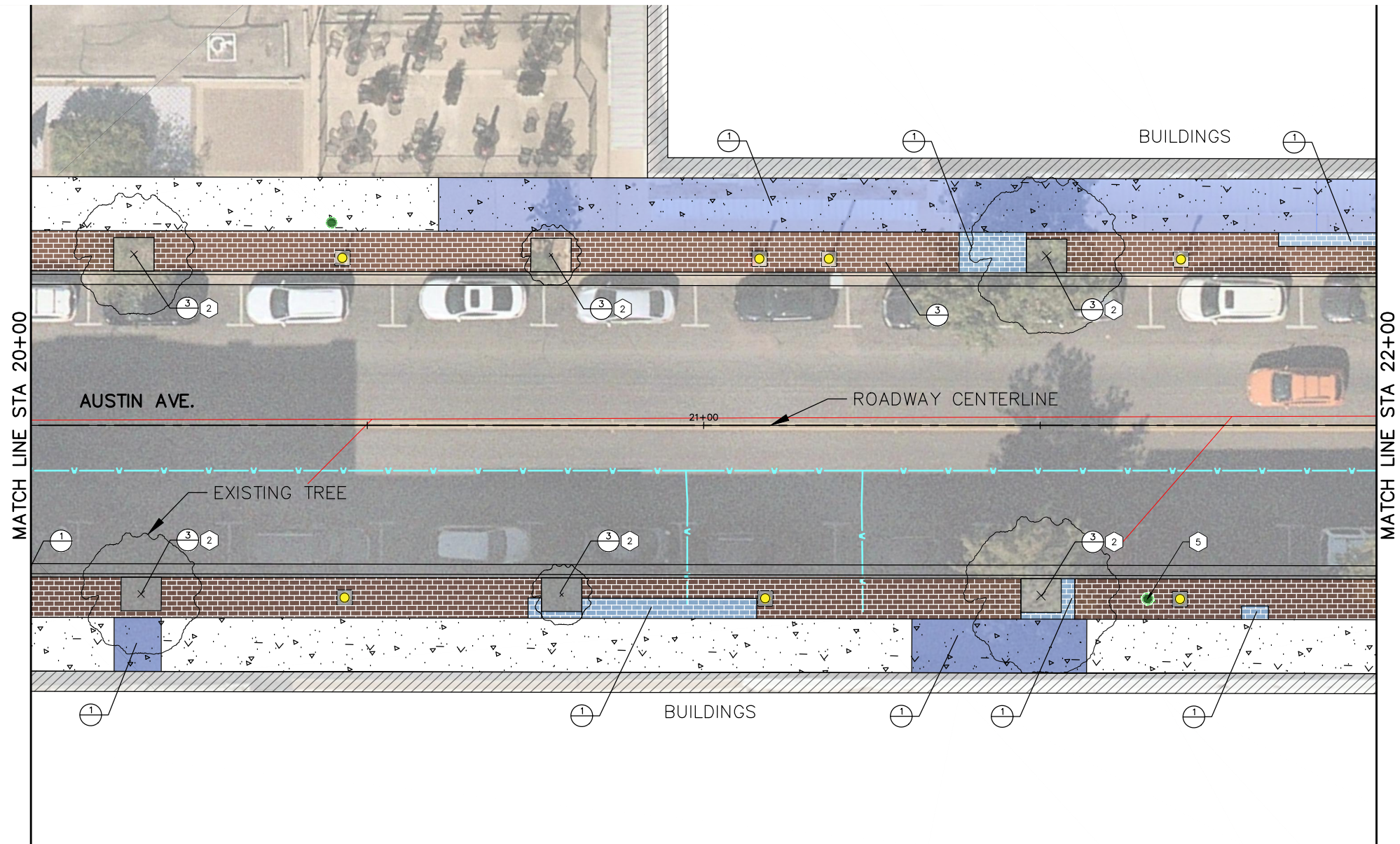
CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 18+00 TO STA 20+00

	BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		
	DESIGNED: BGE	DATE	PROJECT NO.
	DRAWN: BGE	MAY 2023	11264-00
CHECKED: BGE		Sheet 109	

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
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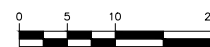
LEGEND

- EXISTING BRICK PAVERS TO REMAIN
- REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
- CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)
- REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
- CURB RAMP LANDING/TURNING SPACE (RE. DETAIL SW-7)
- EXISTING SIDEWALK TO REMAIN
- REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)
- AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
- STORM DRAIN (EXISTING)
- WASTEWATER LINE (EXISTING)
- WATERLINE (EXISTING)
- EXISTING LUMINARE ON METAL POLE
- EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
- EXISTING SIGNAL
- EXISTING TRASHCAN
- EXISTING FIRE HYDRANT

SIDEWALK

- 1 REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
- 2 TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
- 3 TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
- 4 REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
- 5 REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

60%
SUBMITTAL
FOR PRELIMINARY
DESIGN REVIEW



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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 20+00 TO STA 22+00

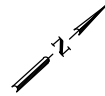
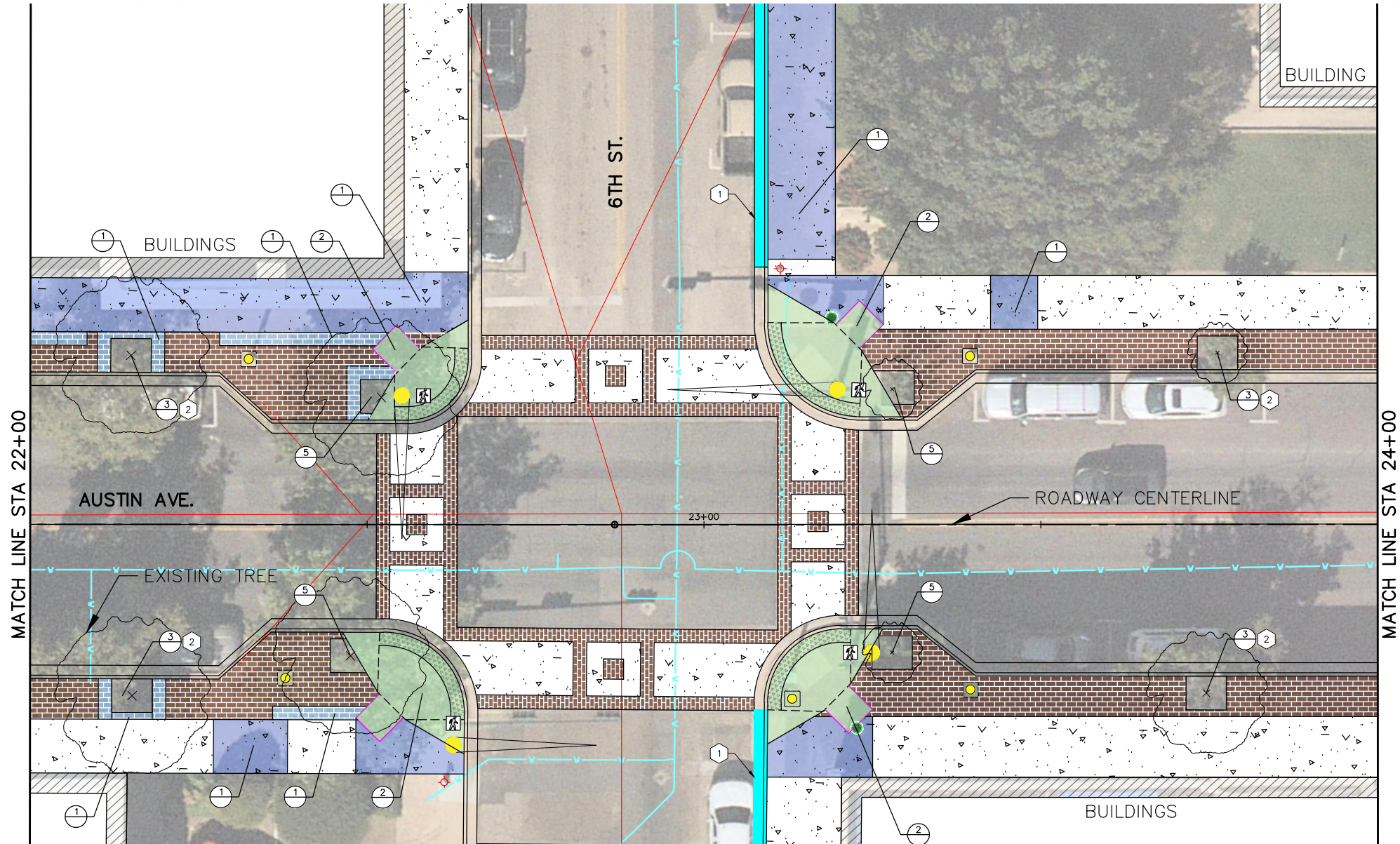


BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264-00	110
CHECKED: BGE			

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
2	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
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4	POOR PEDESTRIAN CROSSING MARKINGS	INSTALL VISIBLE CROSSWALK MARKINGS
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6	JOINTS BETWEEN SIDEWALK PANELS > 1/2" OPENING AND/OR ARE NOT PERPENDICULAR TO DOMINANT DIRECTION OF TRAVEL	INSTALL ADA COMPLIANT SIDEWALK



LEGEND	
	EXISTING BRICK PAVERS TO REMAIN
	REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
	CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)
	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
	CURB RAMP LANDING/TURNING SPACE (RE. DETAIL SW-7)
	EXISTING SIDEWALK TO REMAIN
	REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)
	AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
	STORM DRAIN (EXISTING)
	WASTEWATER LINE (EXISTING)
	WATERLINE (EXISTING)
	EXISTING LUMINARE ON METAL POLE
	EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT

SIDEWALK	
1	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
2	TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
3	TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
4	REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
5	REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

60%
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DESIGN REVIEW

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

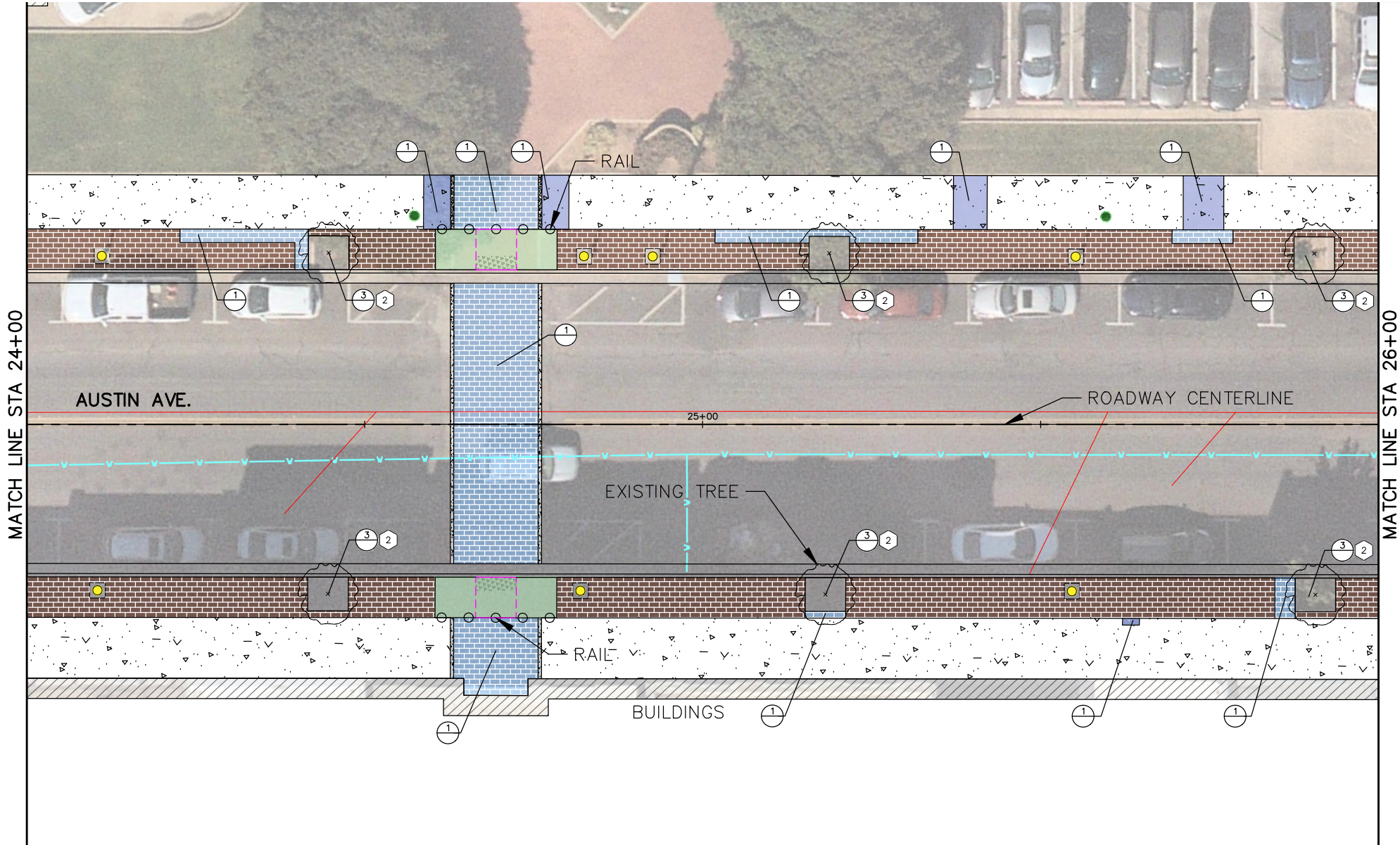
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 22+00 TO STA 24+00

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE					111
CHECKED: BGE			MAY 2023	11264-00	

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
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LEGEND	
	EXISTING BRICK PAVERS TO REMAIN
	REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
	CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)
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	AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
	STORM DRAIN (EXISTING)
	WASTEWATER LINE (EXISTING)
	WATERLINE (EXISTING)
	EXISTING LUMINAIRE ON METAL POLE
	EXISTING LUMINAIRE (ANTIQUE) AND SHOEBOX FIXTURES
	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
1	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
2	TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
3	TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
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60%
SUBMITTAL
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DESIGN REVIEW

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

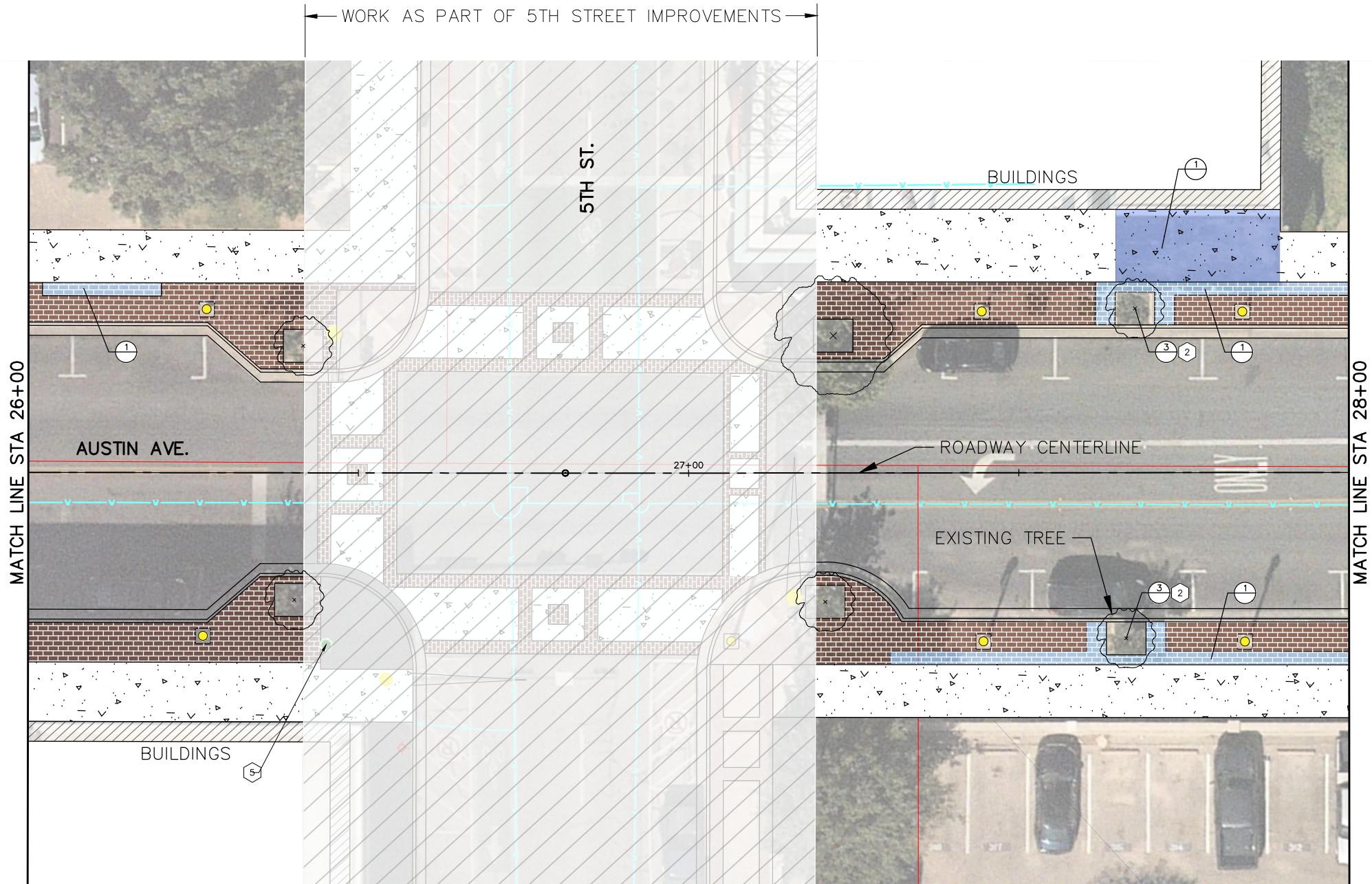
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 24+00 TO STA 26+00

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046	DESIGNED: BGE	DATE	PROJECT NO.	Sheet 112
	DRAWN: BGE	MAY 2023	11264-00	
	CHECKED: BGE			

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
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LEGEND	
	EXISTING BRICK PAVERS TO REMAIN
	REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
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	AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
	STORM DRAIN (EXISTING)
	WASTEWATER LINE (EXISTING)
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	EXISTING LUMINAIRE ON METAL POLE
	EXISTING LUMINAIRE (ANTIQUE) AND SHOEBOX FIXTURES
	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
	TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
	TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
	REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
	REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

60%
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

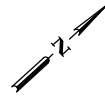
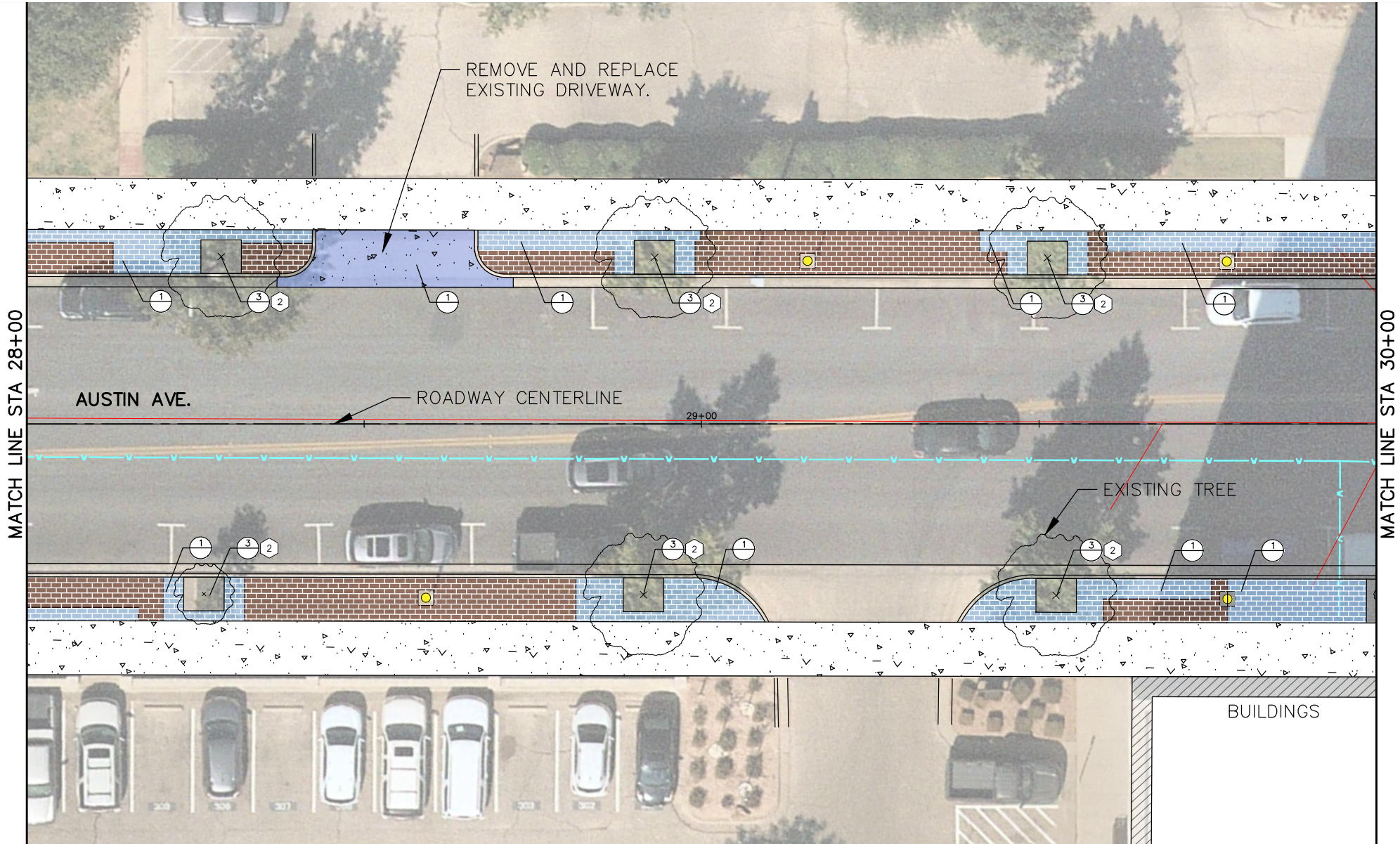
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 26+00 TO STA 28+00

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE		CHECKED: BGE	MAY 2023	11264-00	113

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
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AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)

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WATERLINE (EXISTING)

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EXISTING SIGNAL

EXISTING TRASHCAN

EXISTING FIRE HYDRANT

SIDEWALK

REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)

TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)

TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)

REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)

REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

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BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

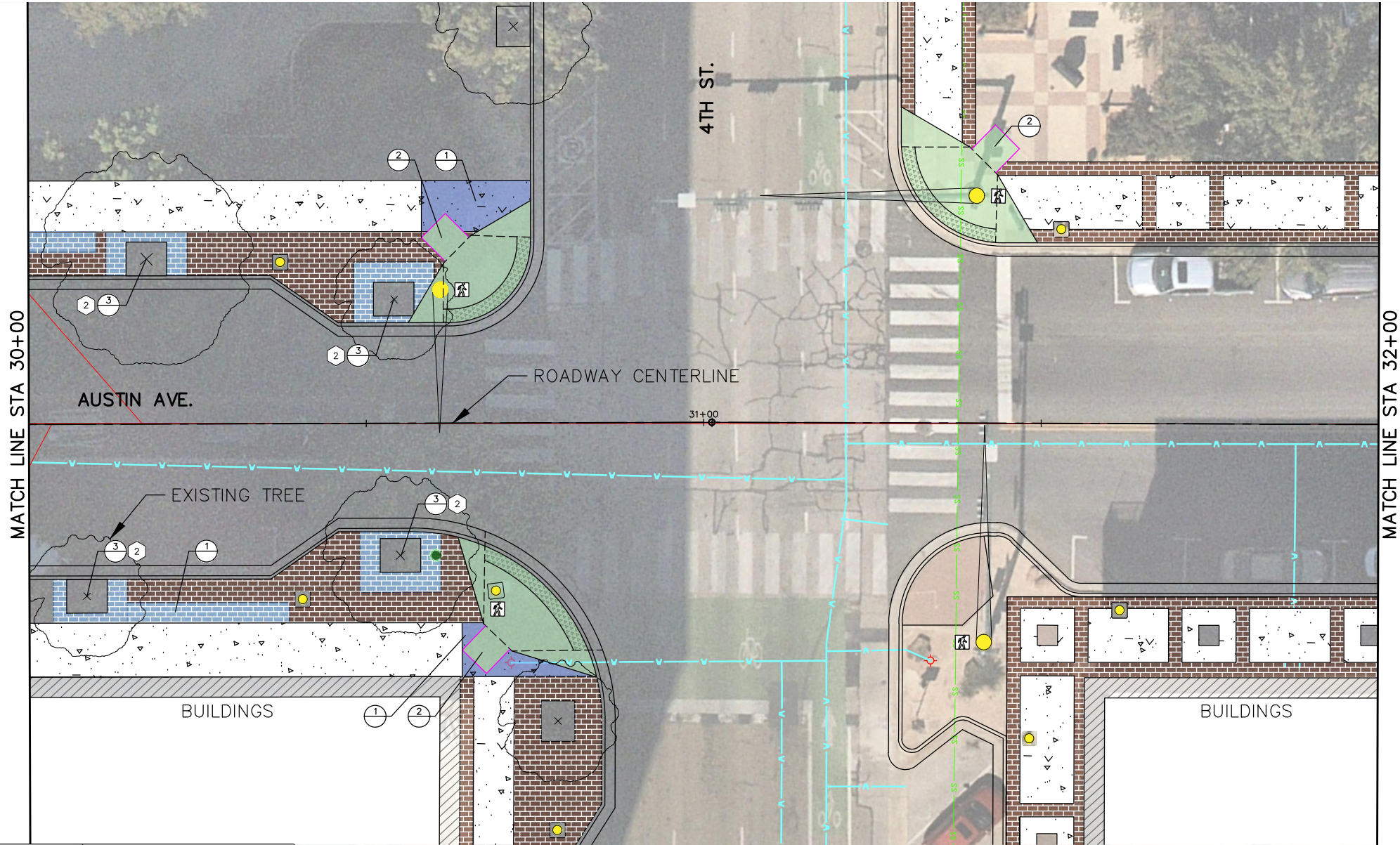
PLAN SHEET
STA 28+00 TO STA 30+00

BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264-00	114
CHECKED: BGE			

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
2	NON ADA COMPLIANT RAMP	INSTALL ADA COMPLIANT RAMP
3	NON ADA COMPLIANT AT/NEAR TREE WELL	REMOVE/REPLACE TO MAKE ADA COMPLIANT
4	POOR PEDESTRIAN CROSSING MARKINGS	INSTALL VISIBLE CROSSWALK MARKINGS
5	TREE/TREEWELL IN CONFLICT WITH RAMP	REMOVE TREE/TREE WELL
6	JOINTS BETWEEN SIDEWALK PANELS > 1/2" OPENING AND/OR ARE NOT PERPENDICULAR TO DOMINANT DIRECTION OF TRAVEL	INSTALL ADA COMPLIANT SIDEWALK



LEGEND	
	EXISTING BRICK PAVERS TO REMAIN
	REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
	CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC. (RE. DETAIL SHT 218)
	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
	CURB RAMP LANDING/TURNING SPACE (RE. DETAIL SW-7)
	EXISTING SIDEWALK TO REMAIN
	REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)
	AUDIBLE APS RETROFIT TO EXISTING PED SIGNALS (RE. DETAIL XX SHEET XXX)
	STORM DRAIN (EXISTING)
	WASTEWATER LINE (EXISTING)
	WATERLINE (EXISTING)
	EXISTING LUMINARE ON METAL POLE
	EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
	EXISTING SIGNAL
	EXISTING TRASHCAN
	EXISTING FIRE HYDRANT
SIDEWALK	
1	REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
2	TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
3	TREE PRUNING/TRIMMING (RE. DETAIL SHT 220)
4	REMOVE EXISTING TREE WELL (RE. DETAIL SHT 217)
5	REMOVE, REFURBISH, AND RESET EXISTING TRASHCAN

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FOR PRELIMINARY
DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

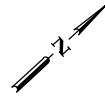
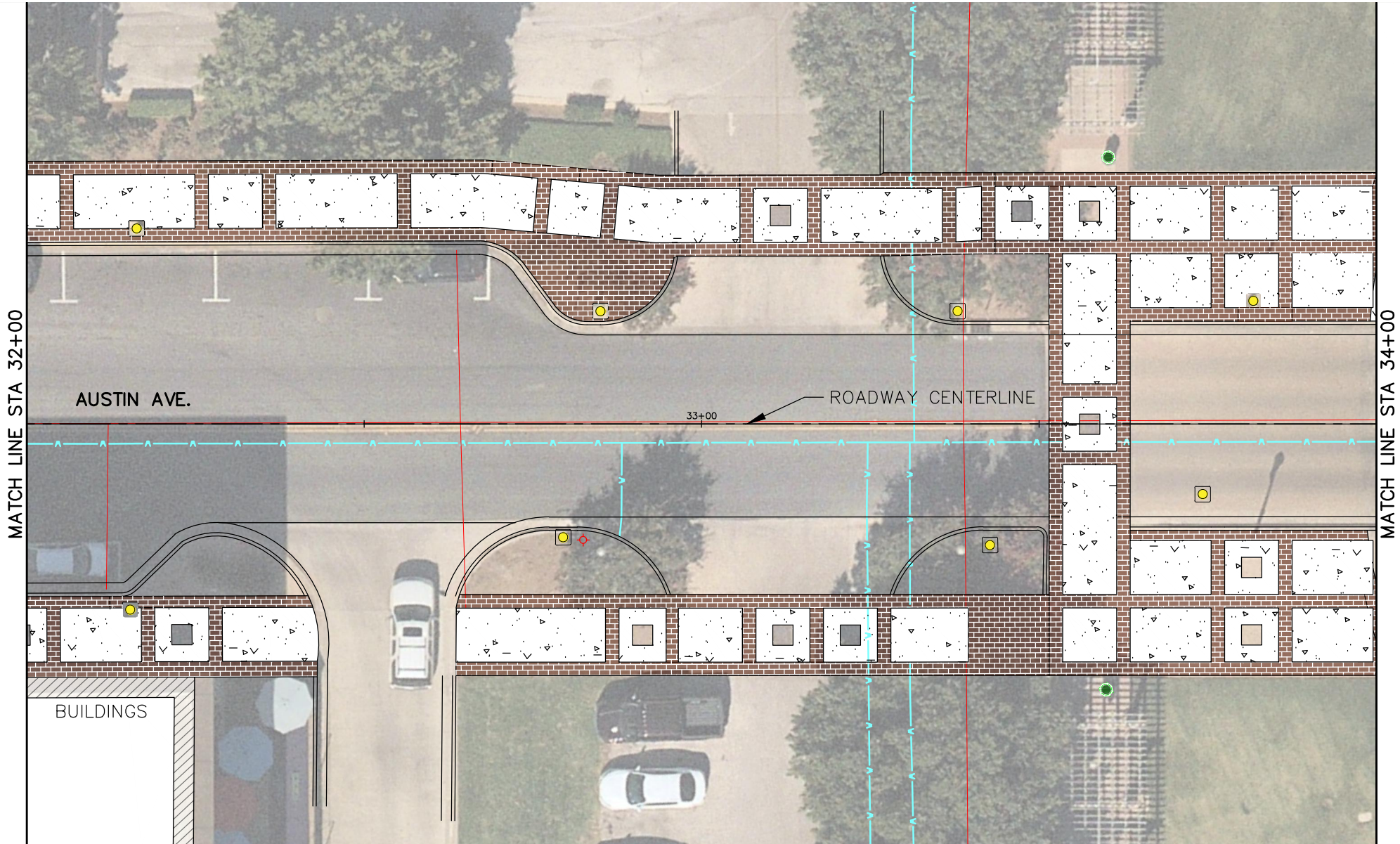
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 30+00 TO STA 32+00

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046		DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE		CHECKED: BGE	MAY 2023	11264-00	115

BGE, Inc.
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
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- WATERLINE (EXISTING)
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- EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
- EXISTING SIGNAL
- EXISTING TRASHCAN
- EXISTING FIRE HYDRANT

SIDEWALK

- 1 REMOVE AND REPLACE CURB AND GUTTER (RE. DETAIL SHT 219)
- 2 TREE WELL RETROFIT/IRRIGATION SERVICE REPAIR (RE. DETAIL SHT 220)
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CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 32+00 TO STA 34+00



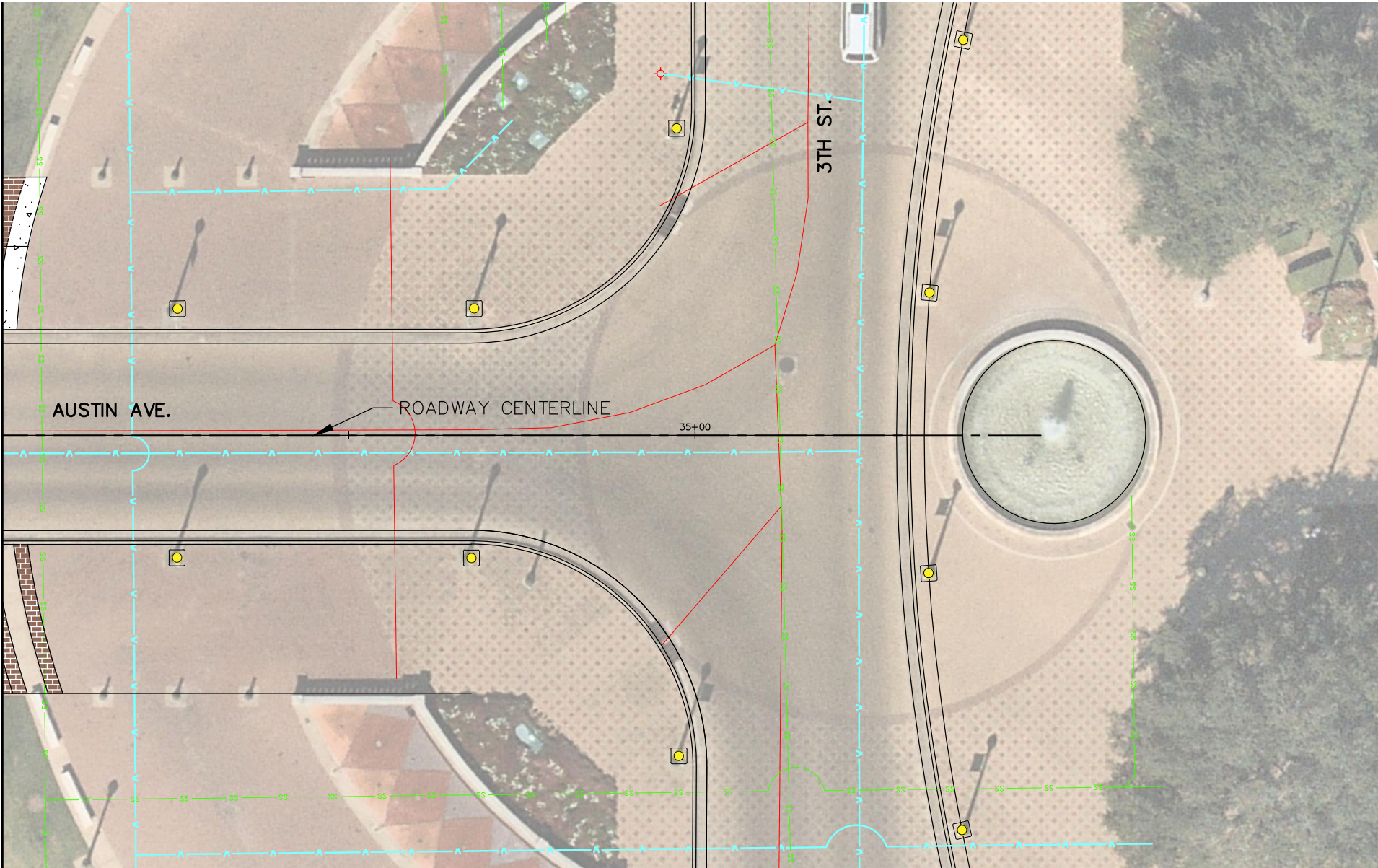
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700 N Pearl St., Suite 2100, Dallas, TX 75201
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DESIGNED: BGE	DATE	PROJECT NO.	Sheet
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	SAFETY HAZARD	COUNTERMEASURE
1	POOR CONDITION/NON ADA COMPLIANT SURFACE (CHANGE IN LEVEL > 1/4" MAXIMUM)	INSTALL ADA COMPLIANT SIDEWALK
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MATCH LINE STA 34+00



LEGEND

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- REMOVE AND REPLACE CONCRETE SIDEWALK (RE. DETAIL SHT 216)
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- STORM DRAIN (EXISTING)
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- EXISTING LUMINARE (ANTIQUE) AND SHOEBOX FIXTURES
- EXISTING SIGNAL
- EXISTING TRASHCAN
- EXISTING FIRE HYDRANT

SIDEWALK

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REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PLAN SHEET
STA 34+00 TO STA END



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CONSTRUCTION MATERIAL SAMPLING AND TESTING MATRIX - 1 OF 2

Construction Operation	Standard Specifications		Standard Details	Applicable Testing	Frequency of Testing
	Material Specs	Construction Specs			
(Fill) Embankment		Section 1.5, Part 2		Standard Proctor & field densities	Proctor for each material to be used. Densities to be project specific
Excavation & Backfill (Trenching Operations)	Section 4.2, Part 2	Section 4.2, Part 3			
Embedment	Section 4.2, Part 2.A.1, & Part 2.A.2	Section 4.2, Part 3.A.5	G-8 & G-7	Gradations, Atterberg Limits, Standard Proctor, Field Densities	Gradation, Atterberg Limits, and Proctor at beginning of project on material submitted for use and at anytime there is an apparent change in material. Densities to be project specific.
Trench Backfill	Section 4.2, Part 2.A.3	Section 4.2, Part 3.A.5	G-9 & G-7	Gradations, Atterberg Limits, Standard Proctor, Field Densities	Gradation, Atterberg Limits, and Proctor at beginning of project on material submitted for use and at anytime there is an apparent change in material. Densities: 4 in first 100 LF and 2 every additional 500 LF. Additional densities as required if compaction fails to meet specifications.
Flowable Fill (Controlled Low Strength Material)	Section 4.2, Part 2.A.3(f)	Section 4.2, Part 2.A.3(f)	G-9 Note 7 & G-7 Note 3	Consistency, Compressive strength ASTM D4832	Consistency and Compressive Strength every 300 LF of trench backfilled.
Subgrade	Testing - Section 2.6				
Stabilization Determination			ST-2 & ST-4	Atterberg Limits to determine if stabilization is necessary, pH to determine amount of lime needed to stabilize	City Projects: Preliminary determined during design. Every 600 LF maximum along CL of street after mass grading. Subdivisions: Every 600 LF maximum along CL of street after mass grading.
Lime Treatment	Section 2.4, Part 2	Section 2.4, Part 3	ST-2 & ST-4	Gradations, Standard Proctor, Moisture Bias Calculations, Field Densities	Initial gradations performed to determine mixing pattern. Standard Proctor performed on each material that is visibly different. Densities performed at a rate of one per 300 LF of paving for two lanes.
Portland Cement Treatment	Section 2.2.B, Part 2	Section 2.2.B, Part 3		Unconfined Compressive Strength	1 sample per day of operations
Reclamation	Section 2.3.D, Part 2	Section 2.3.D, Part 3		Refer to either Lime Treatment or Portland Cement Treatment	Refer to either Lime Treatment or Portland Cement Treatment
Existing Material		Section 2.2, Part 3		Standard Proctor, Field Densities	Standard Proctor performed on each visibly different material. Densities performed at a rate of one per 300 LF of paving for two lanes.
Base Course	Testing - Section 2.6				
Gravel Base Course	Section 2.3, Part 2	Section 2.3, Part 3		Gradations, Atterberg Limits, Standard Proctor, Field Densities	Gradation, Atterberg Limits, and Proctor at beginning of project on material submitted for use and at any time there is an apparent change in material. Densities to be project specific.
Flexible Base	Section 2.3.B, Part 2	Section 2.3.B, Part 3		Gradations, Atterberg Limits, Standard Proctor, Field Densities	Gradation, Atterberg Limits, and Proctor at beginning of project on material submitted for use and at any time there is an apparent change in material. Densities to be project specific.
Cement Treated Base (Pug Base)	Section 2.3.C, Part 2	Section 2.3.C, Part 3	ST-2	Unconfined Compressive Strength	1 sample per day of operations

CONSTRUCTION MATERIAL SAMPLING AND TESTING MATRIX - 2 OF 2

Construction Operation	Standard Specifications		Standard Details	Applicable Testing	Frequency of Testing
	Material Specs	Construction Specs			
Surface Course	Testing - Section 3.7				
Hot-Mix Asphaltic Concrete Pavement	Section 3.3, Part 2	Section 3.3, Part 3	ST-2, ST-3	Extraction, Gradation, Stability & Flow, Densities	1 sample per day of paving operations. Densities - one per 600 LF of paving.
Portland Cement Concrete Pavement	Section 3.6, Part 2	Section 3.6, Part 3	ST-1, ST-4, ST-6 thru ST-9, G-7	Air Content, Slump, Compressive Strength	1 set of 4 cylinders per 150 CY but no less than 2 sets per day
Concrete	Testing - Section 5.6				
Curb and Gutter	Section 5.1, Part 2 & 3	Section 5.3, Part 3	ST-1, ST-7, ST-15 thru ST-20, G-7	Slump, Compressive Strength	One set of 4 cylinders per placement for the first 5 placements then one set for every other placement thereafter. (max. of 2 sets per day) *Different trucks on the same site at different times of the day constitute different placements.
Drive Approach	Section 5.1, Part 2 & 3	Section 5.4, Part 3	ST-1, ST-23A thru ST-24B, ST-26, G-7	Slump, Compressive Strength	
Valley & Fillet	Section 5.1, Part 2 & 3		ST-1, ST-18, ST-19, G-7	Slump, Compressive Strength	
Sidewalk, Curb Ramps, & Architectural Retaining Walls	Section 5.1, Part 2 & 3	Section 5.4, Part 3	ST-1, SW-1 thru SW-19, SW-21, G-7	Slump, Compressive Strength	
Concrete Lined Channel	Section 5.1, Part 2 & 3		SD-1, SD-14, G-7	Slump, Compressive Strength	
Cast-In-Place Sanitary Sewer Manholes	Section 5.1, Part 2 & 3	Section 4.8, Part 3.A.3	S-5 Note 16, S-13, G-7	Air, Slump, Compressive Strength	
Storm Sewer Manholes	Section 5.1, Part 2 & 3		SD-1, SD-10 thru SD-13 G-7	Air, Slump, Compressive Strength	
Inlets	Section 5.1, Part 2 & 3		SD-1 thru SD-7 G-7	Air, Slump, Compressive Strength	
Concrete Medians	Section 5.1, Part 2 & 3	Section 5.1, Part 3	ST-5, G-7	Slump, Compressive Strength	
Reinforced Concrete Headers	Section 5.1, Part 2 & 3	Section 5.1, Part 3	G-7	Slump, Compressive Strength	
Concrete Steps	Section 5.1, Part 2 & 3	Section 5.1, Part 3	G-7	Slump, Compressive Strength	
Retaining Walls (Structural)	Section 5.1, Part 2 & 3	Section 5.1, Part 3	G-7	Air, Slump, Compressive Strength	One set per placement



ENGINEERING
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REVISIONS				DATE
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1	REVISE STD DETAILS AND FREQ OF TESTING	MZ	02/01/2022	G-1A
#	DESCRIPTION	FL	MM/DD/YYYY	



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REVISIONS				DATE
NO.	COMMENTS	BY	DATE	
1	REVISE STD DETAILS AND FREQ OF TESTING	MZ	02/01/2022	G-1B
#	DESCRIPTION	FL	MM/DD/YYYY	

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

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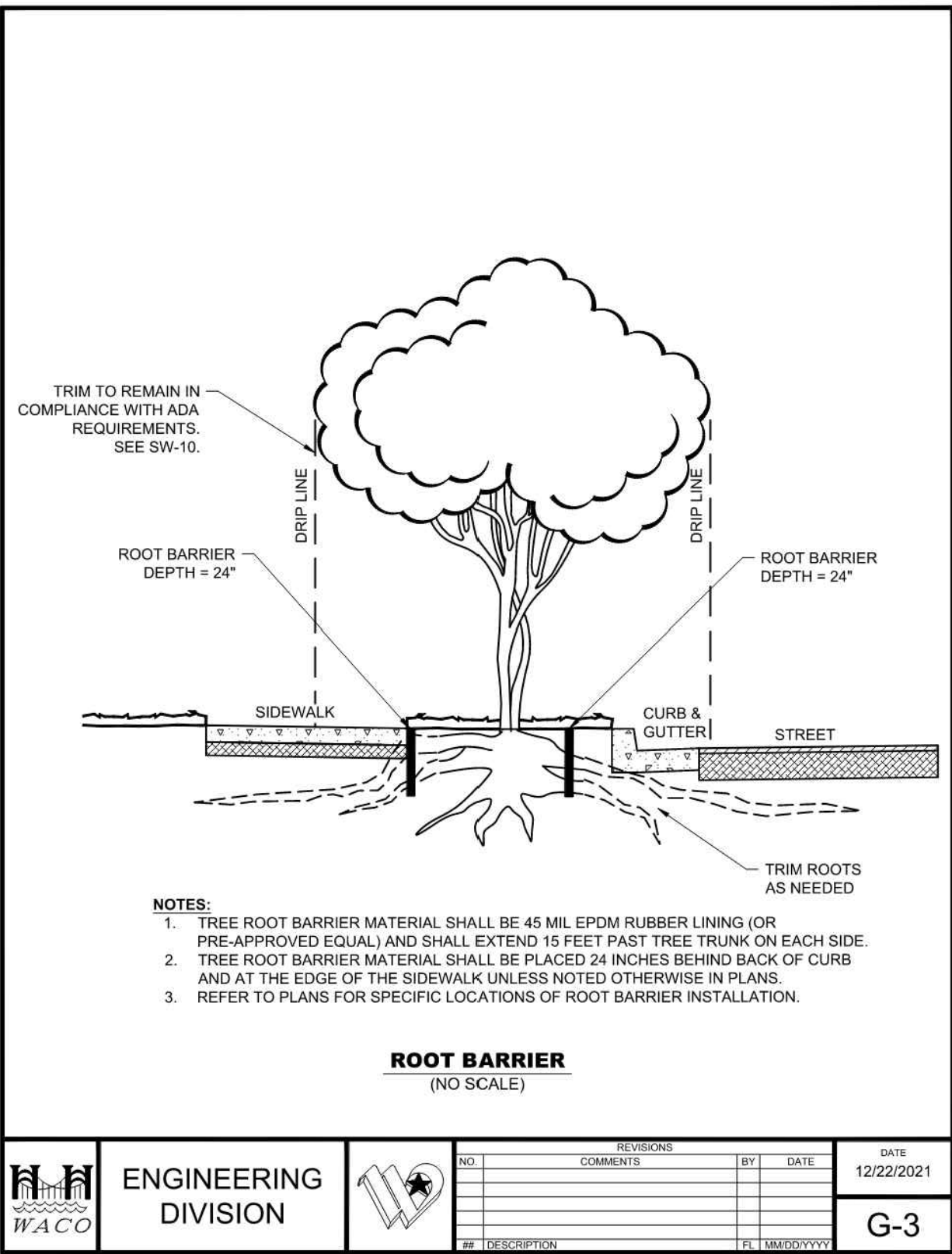
CITY OF WACO



AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS
GENERAL
SHEET 1 OF 4

BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046	DESIGNED: BGE	DATE	PROJECT NO.	Sheet 201
	DRAWN: BGE	MAY 2023	11264--00	
	CHECKED: BGE			

BGE, Inc.
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	ENGINEERING DIVISION		REVISIONS				DATE 12/22/2021
			NO.	COMMENTS	BY	DATE	
			##	DESCRIPTION	FL	MM/DD/YYYY	G-3

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CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS
GENERAL
SHEET 2 OF 4

 BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
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TBPE Registration No. F-1046

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GENERAL CONCRETE & REINFORCEMENT NOTES

GENERAL

1. ALL CONCRETE AND REINFORCEMENT MATERIALS AND PLACEMENT MUST COMPLY WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. CURING MEMBRANE SHALL BE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

MATERIALS

3. ALL CONCRETE SHALL BE 3000 PSI, 5 SACK, MIX WITH A MAXIMUM 15% FLY ASH CONTENT; PLACED AT SLUMP VALUES AS SPECIFIED IN SECTION 5.1 PART 3. PARAGRAPH B.
4. ALL REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60, UNLESS OTHERWISE SPECIFIED.

SITE PREPARATION

5. GRADE AND SUBGRADE NEED TO BE ADEQUATELY WATERED, PRIOR TO THE PLACEMENT OF PUG AND PRIOR TO THE PLACEMENT OF CONCRETE.
6. GRADE AND/OR SUBGRADE SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY AT $\pm 2\%$ OPTIMAL MOISTURE CONTENT.

REINFORCING STEEL

7. CONSTRUCTION VEHICLES SHALL NOT DRIVE ON REINFORCEMENT.
8. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS AND THE ACI STANDARDS, WITH OVERLAPS OF 40 BAR DIAMETERS.
9. DOWEL BARS SHALL BE SMOOTH, LEVEL, AND PERPENDICULAR TO THE JOINT; ADEQUATELY SUPPORTED TO RETAIN PROPER ALIGNMENT; AND SHALL HAVE ONE END PROTECTED AGAINST BONDING TO THE CONCRETE IN ACCORDANCE WITH STANDARD CONSTRUCTIONS SPECIFICATIONS (SEE SECTION 5.1 PART 2 ITEM 6).
10. REBAR CHAIRS SHALL BE PLACED ON 4' MAXIMUM SPACING, EACH WAY.
11. REINFORCING STEEL COVER SHALL BE MINIMUM 2 IN. FORMED AND 3 IN. AGAINST EARTH IF UNFORMED FROM OUTSIDE LAYER OF STEEL TO FACE OF CONCRETE. THE MAXIMUM LATERAL COVER IS 3 INCHES.

CONCRETE

12. PLACEMENT OF CONCRETE NEEDS TO COMPLY WITH THE SPECIFICATIONS AND ACI STANDARDS, INCLUDING HOT AND COLD WEATHER PLACEMENT. SEE STANDARD SPECIFICATION SECTION 5.1 PART 3 ITEM E FOR MORE INFORMATION.
13. NO WATER SHALL BE ADDED AFTER INSPECTION AND TESTING.
14. CONCRETE SHALL BE VIBRATED WHERE POSSIBLE.
15. UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE PLACED AT 4 IN. SLUMP, ± 1 INCH.

DIMENSIONAL TOLERANCES

16. LEVEL AND HORIZONTAL ALIGNMENT TOLERANCES FOR CURBS, GUTTERS, PAVEMENTS, SIDEWALKS, AND RAMPS, IN ALL DIRECTIONS, SHALL BE SUCH THAT THE GAP BELOW AN UNLEVELED 10' STRAIGHTEDGE RESTING ON THE HIGH SPOTS SHALL NOT EXCEED 1/8 INCH.
17. DIMENSIONAL TOLERANCES FOR OTHER CONCRETE PLACEMENTS SHALL COMPLY WITH ACI 117.

CONSTRUCTION AND CRACK CONTROL AND EXPANSION JOINTS

18. UNLESS OTHERWISE SPECIFIED CONSTRUCTION (FULL DEPTH) JOINTS SHALL BE PLACED AT MAXIMUM OF 50' AND CRACK CONTROL JOINTS (DUMMY JOINTS) AT A MAXIMUM OF 10'.
19. CRACK CONTROL JOINTS MAY BE TOOLED OR SAWED A MINIMUM OF 1/2 THE THICKNESS OF THE CONCRETE ON CURB AND GUTTER AND 1/2 INCH ON SIDEWALKS.
20. CONSTRUCTION JOINTS ARE FULL DEPTH JOINTS AND MAY BE CONSTRUCTED WITH DOWEL BARS, AS INDICATED IN THE DESIGN AND DETAILS.
21. EXPANSION BARS ARE FULL DEPTH JOINTS THAT MAY BE CONSTRUCTED WITH SMOOTH BARS AS INDICATED IN THE DESIGN AND DETAILS. EXPANSION MATERIAL MAY BE 1/2 IN. THICK REDWOOD OR ANY MATERIAL COMPLYING WITH ASTM D 1751. ALL MATERIALS MUST BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.

DISCLAIMER: THE USE OF THIS STANDARD IS GOVERNED BY THE "TEXAS ENGINEERING PRACTICE ACT". NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF WACO FOR ANY PURPOSE WHATSOEVER. THE CITY OF WACO ASSUMES NO RESPONSIBILITY FOR THE CONVERSION OF THIS STANDARD TO OTHER FORMATS OR FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.



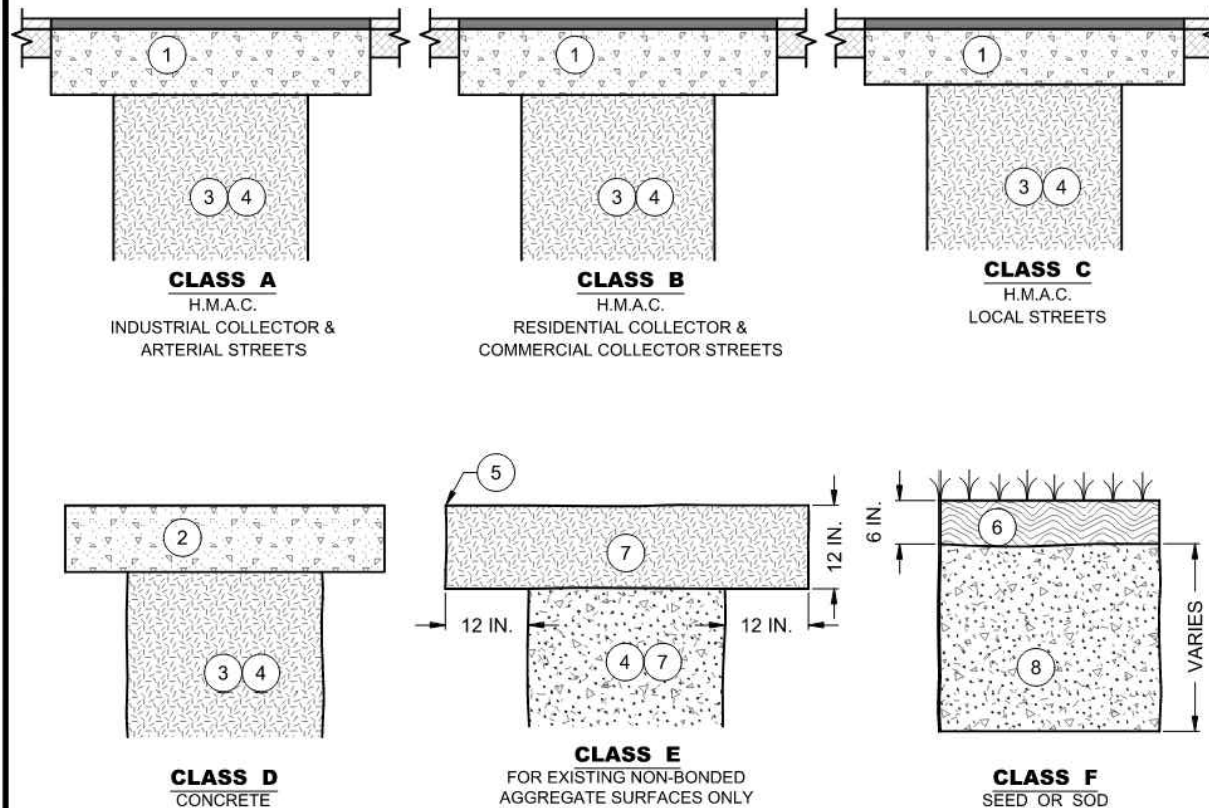
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DIVISION



REVISIONS			
NO.	COMMENTS	BY	DATE
1	MODIFY NOTE 15	MZ	10/24/2022
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DATE _____

G-7



PAVEMENT / SURFACE REPLACEMENT DETAILS

- ① SEE ST-30 AND APPLICABLE ST-33 AND/OR ST-34 FOR SAW CUT AND PAVEMENT REPLACEMENT DETAILS.
- ② SEE ST-37 AND APPLICABLE ST-35 AND/OR ST-36 FOR SAW CUT AND PAVEMENT REPLACEMENT DETAILS.
- ③ TYPE "A" MATERIAL PER STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 4.2 EXCAVATION AND BACKFILL, PART 2: PRODUCT, A. MATERIALS, 3. TRENCH BACKFILL, A. TYPE "A." MATERIAL MECHANICALLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY (TEX-113-E) OR CONTROLLED LOW STRENGTH MATERIAL.
- ④ USE CONTROLLED LOW STRENGTH MATERIAL TO BACKFILL ALL TRENCHES 18 IN. OR NARROWER, IN THE RIGHT-OF-WAY AND PUBLIC EASEMENTS.
- ⑤ EDGE TO BE STRAIGHT, SQUARE AND PARALLEL TO SIDES OF TRENCH.
- ⑥ 6 IN. MIN. TOPSOIL AND SEED OR SOD - SUBSIDIARY.
- ⑦ TXDOT ITEM 247 FLEXIBLE BASE TYPE A GRADE 1-2 MINIMUM PLASTICITY INDEX 5.
- ⑧ SEE G-10 FOR BACKFILL MATERIAL REQUIREMENTS AND FOR INSTALLATION.

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NO.	COMMENTS	BY	DATE
1	ADD NOTES	MZ	09/12/2022
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G-9

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DESIGN REVIEW**

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

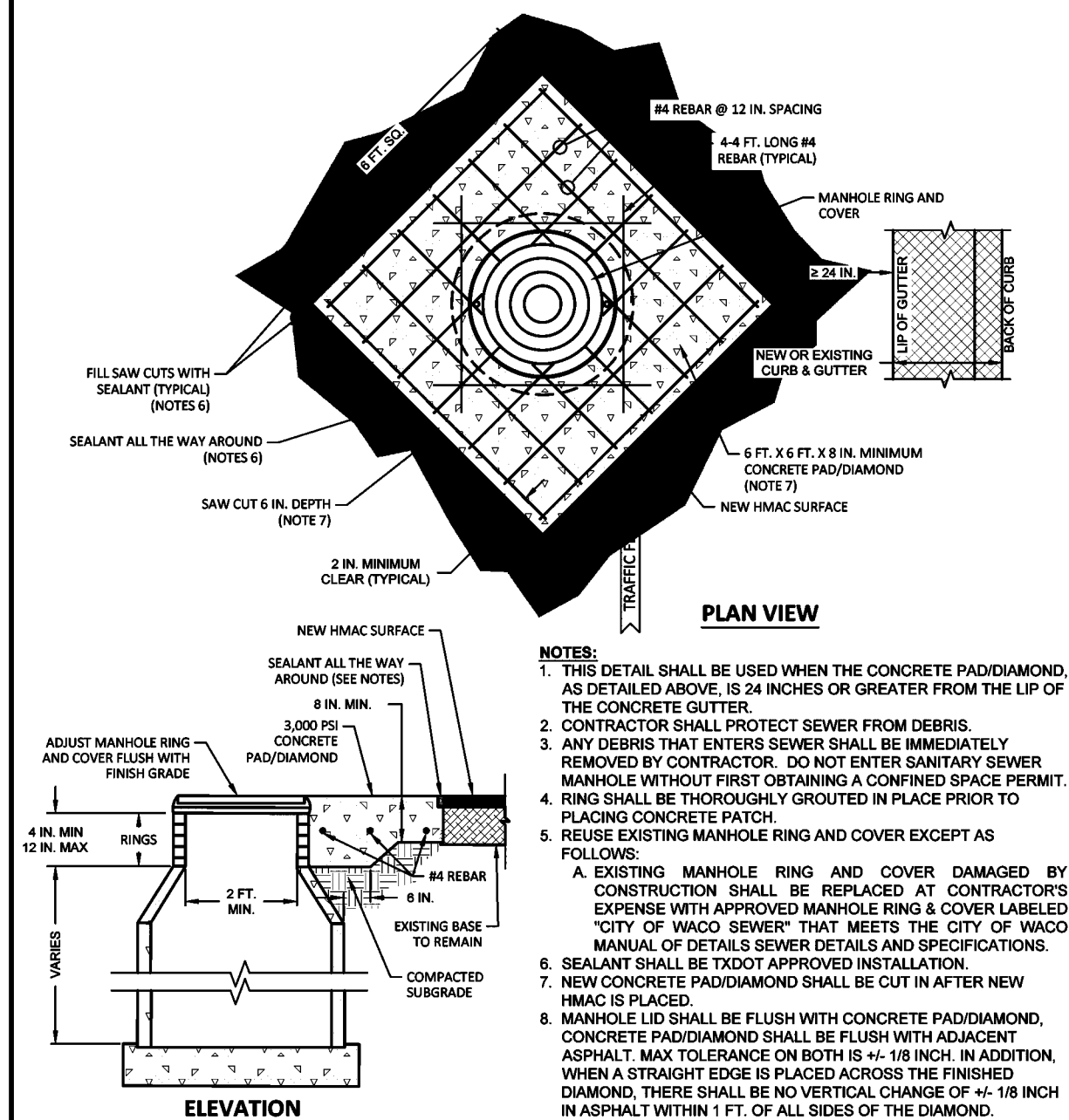
STANDARD DETAILS
GENERAL
SHEET 4 OF 4



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700 N Pearl St., Suite 2100, Dallas, TX 75201
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TBPE Registration No. F-1046

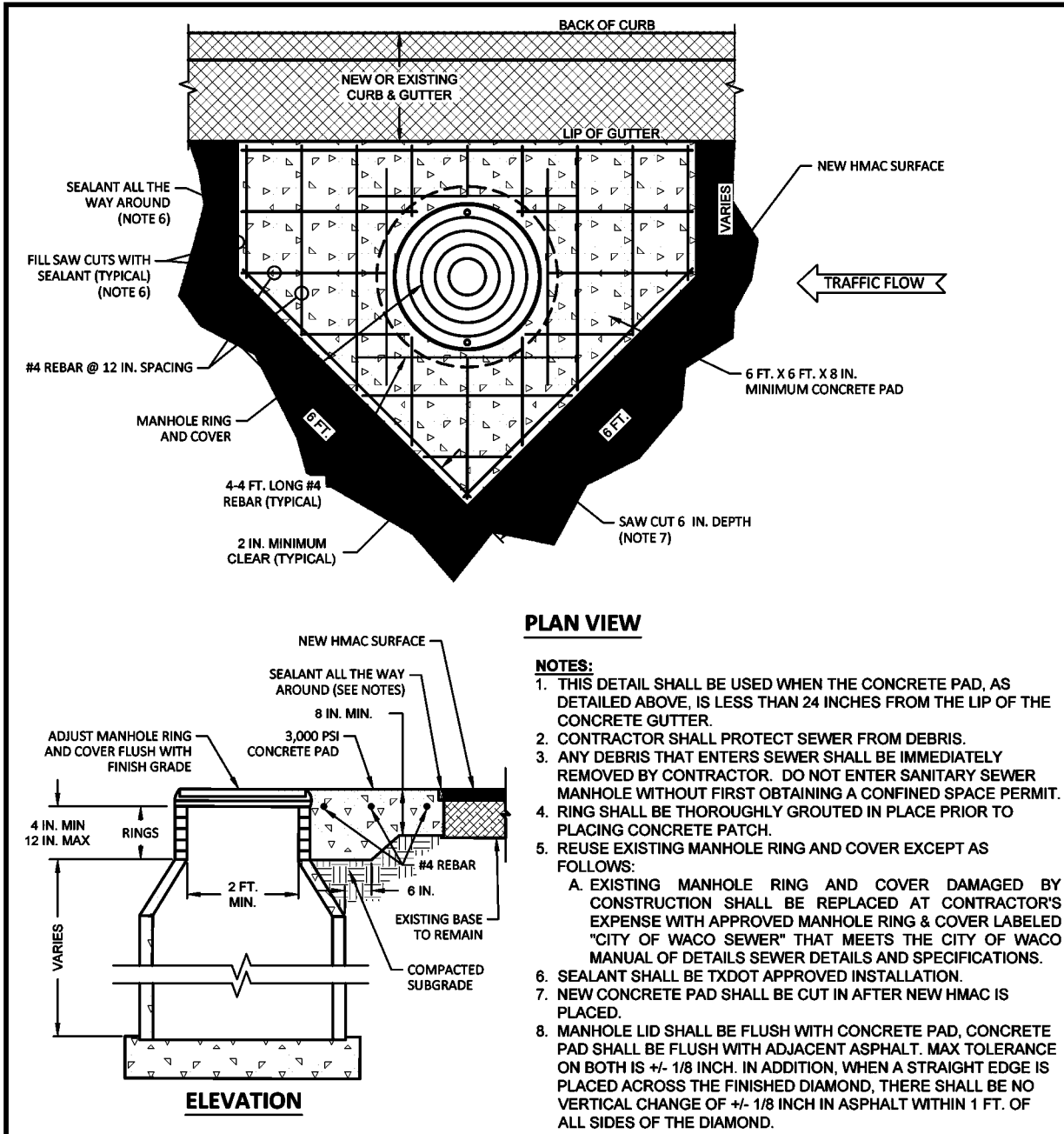
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BGE, Inc.
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MANHOLE LID HEIGHT ADJUSTMENT DETAIL A
(FOR ALL NEW HOT MIX ASPHALTIC CONCRETE (HMAC) INSTALLATIONS) (NO SCALE)

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MANHOLE LID HEIGHT ADJUSTMENT DETAIL B
(FOR ALL NEW HOT MIX ASPHALTIC CONCRETE (HMAC) INSTALLATIONS) (NO SCALE)

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
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CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS SANITARY SEWER



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SIDEWALK GENERAL NOTES

GENERAL

1. ALL CONCRETE AND REINFORCEMENT MATERIALS AND PLACEMENT MUST COMPLY WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION AND WITH ALL NOTES ON SHEET G-7 OF THE CITY OF WACO MANUAL OF STANDARD DETAILS.
2. PROPOSED SIDEWALKS MUST COMPLY WITH THE CITY OF WACO CODES AND ORDINANCES, CHAPTER 22, ARTICLE III, SIDEWALKS.
3. PEDESTRIAN ROUTES AND ELEMENTS WITHIN THE CITY RIGHT-OF-WAY AND PUBLIC EASEMENTS SHALL COMPLY WITH THE UNITED STATES ACCESS BOARD'S CURRENT PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).
4. RETAINING WALLS IN THE RIGHT-OF-WAY AND PUBLIC EASEMENT SHALL BE CAST-IN-PLACE CONCRETE.
5. TRUNCATED DOME BRICK PAVERS ARE REQUIRED FOR DETECTABLE WARNING STRIPS. SAKRETE® PAVER SET POLYMERIC SAND™ OR PRE-APPROVED EQUAL SHALL BE USED.
6. SW-5, SW-6, SW-7, SW-8 SHOW SOME TYPICAL RAMPS, ILLUSTRATING REQUIRED SLOPES AND DIMENSIONS AS THEY MIGHT BE APPLIED IN SEVERAL PARTICULAR CIRCUMSTANCES. IF ADEQUATE RIGHT-OF-WAY IS NOT AVAILABLE FOR THESE TYPICAL RAMPS, ALTERNATE DESIGNS MUST BE CREATED TO FIT WITHIN AVAILABLE RIGHT-OF-WAY AND STILL SATISFY THE GENERAL SLOPE AND DIMENSIONAL REQUIREMENTS ILLUSTRATED.

CONFIGURATION

7. SIDEWALKS AND LANDINGS SHALL BE FORMED AT A MAXIMUM CROSS-SLOPE OF 1.5%. FINISHED CROSS-SLOPES EXCEEDING 2% WILL NOT BE ACCEPTED.
8. NEW SIDEWALK SHALL BE CONNECTED TO ALL EXISTING ADJACENT WALKS AND STEPS.
9. LANDINGS SHALL BE 5 FT. X 5 FT. MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION, GRADED FOR POSITIVE DRAINAGE TO STREET.
10. IF AN EXISTING GUTTER AT THE ENTRANCE TO A NEW RAMP OR LANDING HAS A CROSS SLOPE GREATER THAN 2%, THE EXISTING GUTTER MUST BE REMOVED AND REPLACED WITH GUTTER TIED TO THE 2% CROSS SLOPE ON ONE SIDE AND THE EXISTING STREET ON THE OTHER. THE SLOPE OF THE NEW GUTTER TOWARD THE STREET MAY NOT EXCEED 1:12.
11. SLOPE OF RAMPS SHALL NOT EXCEED 1:12 UNLESS OTHERWISE NOTED.
12. MINIMUM RAMP WIDTH IS 5 FEET EXCLUSIVE OF FLARED SIDES.



CONSTRUCTION

13. PLACE CONSTRUCTION JOINTS WITH EXPANSION MATERIAL AT MINIMUM 50 FT. INTERVALS. EXPANSION JOINTS SHALL EXTEND THROUGH ANY ADJACENT RETAINING WALL OR TRANSITION CURB.
14. REBAR CHAIRS SHALL BE PLACED ON 4 FT. MAX SPACING EACH WAY.
15. PLACE TOOLED, CRACK CONTROL JOINTS AT A SPACING EQUAL TO THE WIDTH OF THE WALK.
16. VERTICAL CHANGES IN LEVEL GREATER THAN 1/4 INCH ARE NOT PERMITTED ALONG SIDEWALKS.
17. WHERE SIDEWALK OR CURB RAMP IS ADJACENT TO BACK OF CURB, DRIVEWAY RADIUS, INLET, OR ANY CONCRETE STRUCTURE, INSTALL CONSTRUCTION JOINT. SEE DETAIL SW-3.
18. WHERE SIDEWALK OR CURB RAMP CONTACTS A POLE OR POLE FOUNDATION, PLACE ½ IN. EXPANSION JOINT MATERIAL BETWEEN POLE OR POLE FOUNDATION AND SIDEWALK/RAMP.
19. CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
20. POOR WORKMANSHIP OR APPEARANCE SHALL BE GROUNDS FOR REMOVAL OR REJECTION.

LOCATIONS WITHIN THE CODE OF ORDINANCES OF MINIMUM REQUIRED WIDTHS OF SIDEWALK AND RELATED BUFFER PRESENTLY INCLUDE THE FOLLOWING

- [SEC. 22-37. - CHANGING OF GRADE OF STREETS, ETC.](#)
- [SEC. 22-63. - SAME-LOCATION AND WIDTH OF SIDEWALKS.](#)
- [SEC. 28-880.11. - PUBLIC SPACES.](#)
- [SEC. 28-839. - SIDEWALKS.](#)
- [SUBDIVISION ORDINANCE SEC. 5.2. - PERMANENT IMPROVEMENTS.5.207. SIDEWALKS](#)



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	ENGINEERING DIVISION		REVISIONS			DATE	
			NO.	COMMENTS	BY	DATE	01/10/2022
			2	REVISE NOTE 17	MZ	12/21/2022	SW-1
			1	ADD CODE OF ORDINANCES LOCATIONS	MZ	03/28/2022	
#	DESCRIPTION	FL	MM/DD/YYYY				

SIDEWALK DETAILS LEGEND

- ① 5 IN. 3000 PSI CONCRETE WITH REBAR CHAIRS AT 48 IN. OCEW MAX. SIDEWALK SHALL BE 8 IN. THICK WHEN ADJACENT TO RETAINING WALLS. UNLESS OTHERWISE NOTED, SIDEWALK REINFORCEMENT SHALL BE #4 BARS @ 18 IN. OCEW.
- ② 4 INCH BASE. TYPE "A" MATERIAL PER STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 4.2 EXCAVATION AND BACKFILL PART 2: PRODUCT A. MATERIALS 3. TRENCH BACKFILL A. TYPE "A." MATERIAL OR RECYCLED CRUSHED CONCRETE (TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM 247 FLEXIBLE BASE TYPE D GRADE 1-2, EXCLUDING TYPE A MATERIAL, WITH MINIMUM P.I. OF FOUR) MECHANICALLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY (TEX-113-E). DEFINED AS "CURB BACKFILL" IN SELECT DETAILS.
- ③ MAXIMUM CROSS-SLOPE OF SIDEWALK SHALL BE 1.5% FORMED. ANY CROSS-SLOPE EXCEEDING 2% SHALL NOT BE ACCEPTED.
- ④ TOOLED EDGE. MATCH EXISTING GRADE IF EXISTING GRADE IS HIGHER THAN TOP OF CURB. OTHERWISE, AREA BETWEEN CURB AND NEW SIDEWALK MUST BE FILLED AS REQUIRED & GRADED TO DRAIN. FILL SHALL BE COMPACTED TO 85% STANDARD PROCTOR DENSITY, AT OR ABOVE OPTIMUM MOISTURE CONTENT.
- ⑤ GRADE/SLOPE SHALL BE WITHIN THE RANGE OF 1/4 IN. PER 1 FT. TO 1/2 IN. PER 1 FT.
- ⑥ SLOPE OF BUFFER/LANDSCAPE AREAS WITHIN THE RIGHT-OF-WAY SHALL NOT EXCEED 4%.
- ⑦ RESTORE VEGETATION IN KIND TO PRE-PROJECT CONDITIONS. FOR NEW SUBDIVISIONS, COMPLY WITH VEGETATION REQUIREMENTS
- ⑧ CURB AND GUTTER PER PLANS AND CITY OF WACO DETAILS.
- ⑨ IF EXISTING GRADE IS LOWER THAN NEW BACK OF SIDEWALK, FILL SHALL BE PLACED PER ORDINANCE, SEC. 22-73. - DIMENSIONS-PARKWAY. OUTSIDE OF RIGHT-OF-WAY FILL SHALL BE PLACED WITH MAXIMUM SLOPE OF 25% DOWN TO EXISTING GRADE. FILL SHALL BE COMPACTED TO 85% STANDARD PROCTOR DENSITY AT OR ABOVE OPTIMUM MOISTURE CONTENT.
- ⑩ MATCH EXISTING GRADE.
- ⑪ CUT TO GRADE.
- ⑫ ¾ INCH CHAMFER BOTH SIDES.
- ⑬ CONTRACTION JOINTS WITH ¾ IN. CHAMFER ON EACH SIDE SHALL BE PLACED ALONG ENTIRE HEIGHT OF RETAINING WALL AT EQUAL SPACING OF ADJOINING SIDEWALK.
- ⑭ FRONT OF RETAINING WALL SHALL BE BROOM FINISHED PER ORDINANCE.
- ⑮ WHERE SIDEWALK WITH RETAINING WALL IS SPECIFIED, RETAINING WALL WILL BE SUBSIDIARY TO THE ITEM, "CONCRETE SIDEWALK (SPECIAL) (RETAINING WALL)", WITH LIMITS OF PAY AS SHOWN HEREON.
- ⑯ 2 IN. SCH. 40 PVC WEEP HOLES @ 10 FT. OC (TYP) SLOPED ¼ INCH PER FOOT TO DRAIN TOWARD FRONT OF SIDEWALK.
- ⑰ 1 CUBIC FOOT WASHED ROCK WRAPPED IN FILTER FABRIC.
- ⑱ 1 IN. DIA X 3 FT. SMOOTH DOWELS AT 1 FT OC.
- ⑲ 1 IN. PVC PIPE WITH CAPPED END.
- ⑳ 1/2 IN. PERMANENT EXPANSION JOINT MATERIAL.

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	ENGINEERING DIVISION		REVISIONS			DATE	
			NO.	COMMENTS	BY	DATE	01/10/2022
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#	DESCRIPTION	FL	MM/DD/YYYY				

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TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

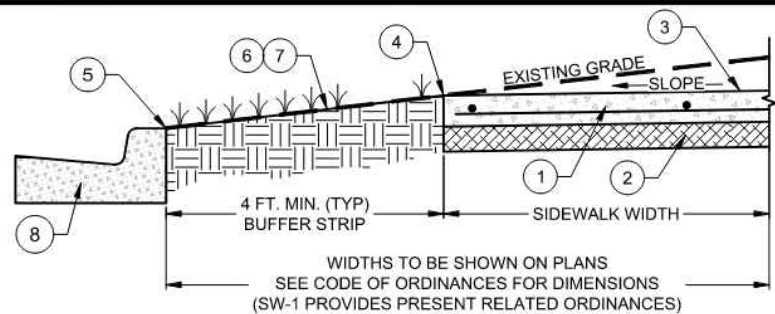
STANDARD DETAILS
SIDEWALK
SHEET 1 OF 5



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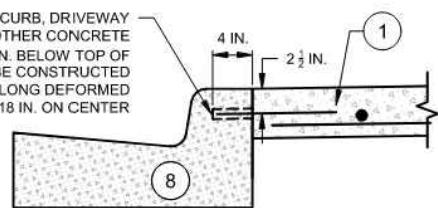
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BCE, Inc.
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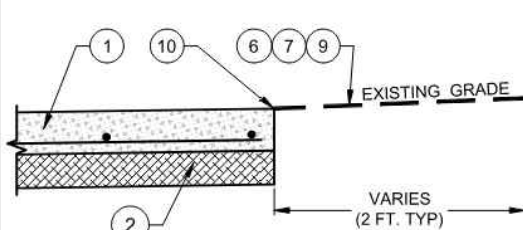


TYPICAL DETAILS OF FRONT OF SIDEWALKS

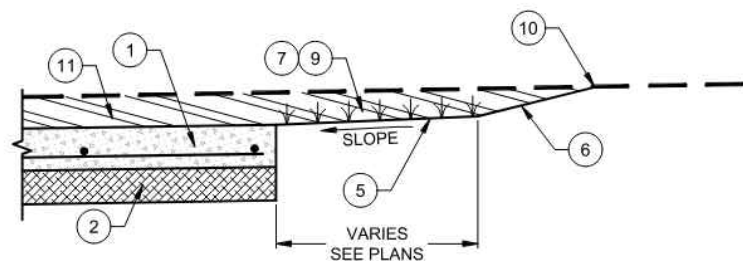
DRILL 4 IN. INTO BACK OF CURB, DRIVEWAY RADIUS, INLET, OR OTHER CONCRETE STRUCTURE, 2 1/2 IN. BELOW TOP OF ADJACENT SIDEWALK TO BE CONSTRUCTED AND EPOXY GROUT 12 IN. LONG DEFORMED #4 BARS AT 18 IN. ON CENTER



CONSTRUCTION JOINT OF SIDEWALK ADJACENT TO BACK OF CURB, DRIVEWAY RADIUS, INLET, OR OTHER CONCRETE STRUCTURE



SIDEWALK TO MATCH EXISTING GRADE



CUT BEHIND SIDEWALK TO MATCH EXISTING GRADE

FOR GENERAL NOTES SEE SHEET SW-1
FOR LEGEND DESCRIPTIONS SEE SHEET SW-2

SIDEWALK DETAILS - 1 OF 2
(NO SCALE)

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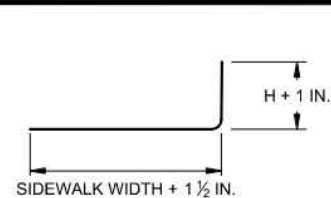


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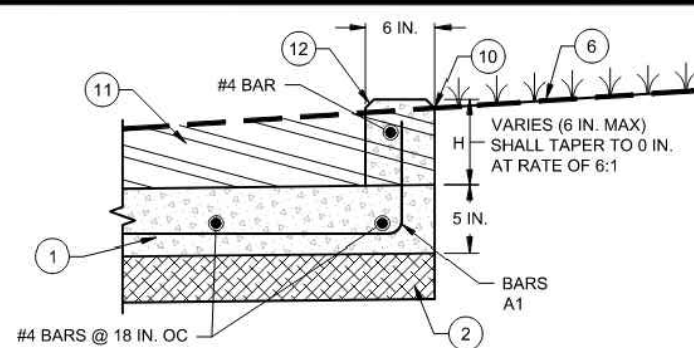


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1	ADD CODE OF ORDINANCES NOTE	MZ	03/28/2022	
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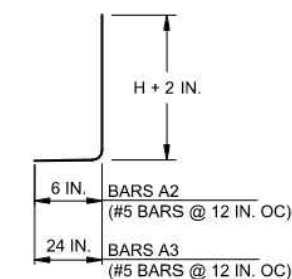
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BAR BENDING DIAGRAM
BARS A1
(#4 BARS @ 18 IN. OC)



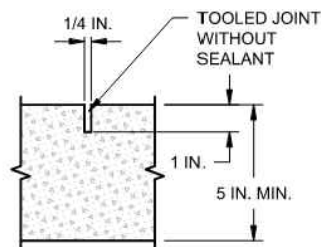
CURB TO MATCH EXISTING GRADE



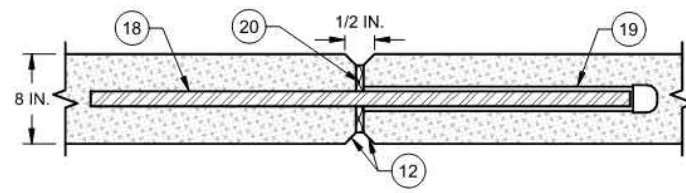
BAR BENDING DIAGRAM
BARS A2
(#5 BARS @ 12 IN. OC)
BARS A3
(#5 BARS @ 12 IN. OC)

SIDEWALK REINF.
EXTEND TO FRONT OF SIDEWALK

RETAINING WALL MATCH TO EXISTING GRADE



CONTRACTION JOINT



RETAINING WALL EXPANSION JOINT

FOR GENERAL NOTES SEE SHEET SW-1
FOR LEGEND DESCRIPTIONS SEE SHEET SW-2

SIDEWALK DETAILS - 2 OF 2
(NO SCALE)

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1	ADD CODE OF ORDINANCES NOTE	MZ	03/28/2022	
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CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS
SIDEWALK
SHEET 2 OF 5



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BGE, Inc.
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CURB RAMPS GENERAL NOTES - 1 OF 2

CURB RAMPS

1. INSTALL A CURB RAMP OR BLENDED TRANSITION AT EACH PEDESTRIAN STREET CROSSING.
2. ALL SLOPES SHOWN ARE MAXIMUM ALLOWABLE. CROSS SLOPES OF 1.5% OR LESS (RUNNING) SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
3. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
4. THE MINIMUM SIDEWALK WIDTH IS 5 FT.. WHERE THE SIDEWALK IS ADJACENT TO THE BACK OF CURB, A 6 FT. SIDEWALK WIDTH IS DESIRABLE. WHERE A 5 FT. SIDEWALK CANNOT BE PROVIDED DUE TO SITE CONSTRAINTS, SIDEWALK WIDTH MAY BE REDUCED TO 4 FT. FOR SHORT DISTANCES. 5 FT.X 5 FT. PASSING AREAS AT INTERVALS NOT TO EXCEED 200 FT. ARE REQUIRED.
5. TURNING SPACES SHALL BE 5 FT.X 5 FT. MINIMUM. CROSS SLOPE SHALL BE MAXIMUM 2%.
6. CLEAR SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4 FT.X 4 FT. WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
7. PROVIDE FLARED SIDES WHERE THE PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP. FLARED SIDES SHALL BE SLOPED AT 10% MAXIMUM, MEASURED PARALLEL TO THE CURB. RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTED, SUBSTANTIALLY OBSTRUCTED, OR OTHERWISE PROTECTED.
8. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE LATEST DRAFT OF THE PROPOSED GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY (PROWAG) AS PUBLISHED BY THE U.S. ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD (ACCESS BOARD).
9. TO SERVE AS A PEDESTRIAN REFUGE AREA, THE MEDIAN SHOULD BE A MINIMUM OF 6 FT. WIDE, MEASURED FROM BACK OF CURBS. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
10. SMALL CHANNELIZATION ISLANDS, WHICH DO NOT PROVIDE A MINIMUM 5 FT.X 5 FT. LANDING AT THE TOP OF CURB RAMPS, SHALL BE CUT THROUGH LEVEL WITH THE SURFACE OF THE STREET.
11. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL ALIGN WITH THEORETICAL CROSSWALKS UNLESS OTHERWISE DIRECTED.
12. PROVIDE CURB RAMPS TO CONNECT THE PEDESTRIAN ACCESS ROUTE AT EACH PEDESTRIAN STREET CROSSING. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS.
13. SIDEWALKS WILL BE MEASURED BY THE SQUARE YARD OF SURFACE AREA. CURB RAMPS WILL BE MEASURED BY THE SQUARE YARD OF SURFACE AREA OR BY EACH. A CURB RAMP CONSISTS OF THE RAMP, LANDING(S), ADJACENT FLARES OR SIDE CURB, AND DETECTABLE WARNING SURFACE AS SHOWN ON THE PLANS. THE WORK PERFORMED AND MATERIALS FURNISHED IN ACCORDANCE WITH THIS ITEM AND MEASURED AS PROVIDED ABOVE WILL BE PAID FOR AT THE UNIT PRICE BID FOR "CONCRETE SIDEWALKS" AND "CURB RAMPS" OF THE TYPE SPECIFIED. THIS PRICE IS FULL COMPENSATION FOR SURFACE PREPARATION OF SIDEWALK FOUNDATION; MATERIALS; REMOVAL AND DISPOSAL OF EXISTING CONCRETE; EXCAVATION, HAULING AND DISPOSAL OF EXCAVATED MATERIAL; DRILLING AND DOWELING INTO EXISTING CONCRETE CURB, SIDEWALK, AND PAVEMENT; REPAIR OF ADJACENT STREET OR PAVEMENT STRUCTURE DAMAGED BY THESE OPERATIONS; AND EQUIPMENT, LABOR, MATERIALS, TOOLS, AND INCIDENTALS.
14. PLACE CONCRETE AT A MINIMUM DEPTH OF 5 IN. FOR RAMPS, FLARES AND LANDINGS, UNLESS OTHERWISE DIRECTED.
15. FURNISH AND INSTALL #4 REINFORCING STEEL BARS AT 18 IN. O.C. BOTH WAYS, UNLESS OTHERWISE DIRECTED.
16. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
17. CURBS SHOWN ON SHEET SW-7 WITHIN THE LIMITS OF PAYMENT ARE CONSIDERED PART OF THE CURB RAMP FOR PAYMENT, WHETHER IT IS CONCRETE CURB, GUTTER, OR COMBINED CURB AND GUTTER.
18. EXISTING FEATURES THAT COMPLY WITH APPLICABLE STANDARDS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.

LEGEND	
PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.	
DETECTABLE WARNING SURFACE	
PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.	
GUTTER LINE	
GRADE BREAK	
RAMP LIMITS OF PAYMENT	
SHOWS DOWNWARD SLOPE.	

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	ENGINEERING DIVISION		REVISIONS				DATE 01/10/2022
			NO.	COMMENTS	BY	DATE	
			##	DESCRIPTION	FL	MM/DD/YYYY	SW-5

CURB RAMPS GENERAL NOTES - 2 OF 2

DETECTABLE WARNING MATERIAL

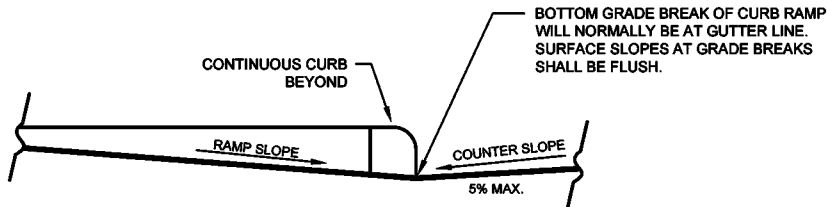
1. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH PROWAG. THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES.
2. DETECTABLE WARNING MATERIALS MUST MEET TXDOT DEPARTMENTAL MATERIALS SPECIFICATION DMS 4350 AND BE LISTED ON THE MATERIAL PRODUCER LIST AND SHALL BE UNIT PAVER DETECTABLE WARNING SYSTEMS. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. DETECTABLE WARNING SURFACES MUST BE FIRM, STABLE AND SLIP RESISTANT.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24 IN. IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE BACK OF CURB AND NEITHER END OF THAT EDGE IS GREATER THAN 5 FEET FROM THE BACK OF CURB. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
6. SHADED AREAS ON SHEET SW-7 INDICATE THE APPROXIMATE LOCATION FOR THE DETECTABLE WARNING SURFACE FOR EACH CURB RAMP TYPE.

DETECTABLE WARNING PAVERS

7. FURNISH DETECTABLE WARNING PAVER UNITS MEETING ALL REQUIREMENTS OF ASTM C-936, C-33. LAY IN A TWO BY TWO UNIT BASKET WEAVE PATTERN OR AS DIRECTED.
8. LAY FULL-SIZE UNITS FIRST FOLLOWED BY CLOSURE UNITS CONSISTING OF AT LEAST 25 PERCENT (25%) OF A FULL UNIT. CUT DETECTABLE WARNING PAVER UNITS USING A POWER SAW.



SIDEWALKS

9. PROVIDE CLEAR GROUND SPACE AT OPERABLE PARTS, INCLUDING PEDESTRIAN PUSH BUTTONS. OPERABLE PARTS SHALL BE PLACED WITHIN UNOBSTRUCTED REACH RANGE SPECIFIED IN PROWAG SECTION R406.
10. PLACE TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SO AS NOT TO OBSTRUCT THE PEDESTRIAN ACCESS ROUTE OR CLEAR GROUND SPACE.
11. STREET GRADES AND CROSS SLOPES SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
12. CHANGES IN LEVEL GREATER THAN 1/4 IN. ARE NOT PERMITTED.
13. THE LEAST POSSIBLE GRADE SHOULD BE USED TO MAXIMIZE ACCESSIBILITY. THE RUNNING SLOPE OF SIDEWALKS AND CROSSWALKS WITHIN THE PUBLIC RIGHT OF WAY MAY FOLLOW THE GRADE OF THE PARALLEL ROADWAY. WHERE A CONTINUOUS GRADE GREATER THAN FIVE PERCENT (5%) MUST BE PROVIDED, HANDRAILS MAY BE DESIRABLE TO IMPROVE ACCESSIBILITY. HANDRAILS MAY ALSO BE NEEDED TO PROTECT PEDESTRIANS FROM POTENTIALLY HAZARDOUS CONDITIONS. IF PROVIDED, HANDRAILS SHALL COMPLY WITH PROWAG R409.
14. HANDRAIL EXTENSIONS SHALL NOT PROTRUDE INTO THE USABLE LANDING AREA OR INTO INTERSECTING PEDESTRIAN ROUTES.
15. DRIVEWAYS AND TURNOUTS SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH ITEM "INTERSECTIONS, DRIVEWAYS AND TURNOUTS". SIDEWALKS SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH ITEM, "SIDEWALKS".
16. SIDEWALK DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

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THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS
SIDEWALK
SHEET 3 OF 5



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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TRAFFIC CONTROL PLANS

GENERAL REQUIREMENTS

- MUST CONFORM WITH CURRENT TEXAS MUTCD STANDARD
- MULTIPLE PHASES OF CONSTRUCTION WILL REQUIRE A SEPARATE TCP FOR EACH PHASE. ALL MAY BE SUBMITTED AT ONE TIME FOR ACCEPTANCE.
- MUST BE DEVELOPED TO ADDRESS THE SPECIFIC CONDITIONS OF THE PLANNED CONSTRUCTION WORK ZONE LOCATION.
- MUST BE COMPILED BY TEXAS LICENSED PROFESSIONAL ENGINEER

TCP SUBMITTAL PROCESS:

- THE TCP SHALL BE SUBMITTED TO THE CITY OF WACO TRAFFIC ENGINEERING OFFICE 15 CALENDAR DAYS PRIOR TO THE ANTICIPATED START DATE, WITH COPY OF CURRENT CERTIFICATION.
- ALL SUBMITTALS SHALL BE IN PORTABLE DOCUMENT FORMAT (.pdf) AND SENT VIA EMAIL TO TCP_SUBMITTAL@WACOTX.GOV, EXCEPT THAT CITY OF WACO PROJECTS IN PROJECTMATES SHALL BE SUBMITTED THROUGH THE PORTAL AT: [HTTPS://CITYOFWACO.PROJECTMATES.COM](https://cityofwaco.projectmates.com).

LOCAL ROADS

- TCP REQUIRED FOR ANY LANE OR ROAD CLOSURES EXCEEDING 4 HOURS
- MAY UTILIZE TX MUTCD TYPICAL DETAILS INSTEAD OF A SITE-SPECIFIC TCP

COLLECTORS & ARTERIALS

- TCP REQUIRED FOR ANY LANE OR ROAD CLOSURES REGARDLESS OF DURATION
- TCP MUST BE SITE-SPECIFIC TO ADDRESS THE SPECIFIC CONDITIONS OF THE CORRIDOR AND ACCESS TO ADJACENT PROPERTIES
- LANE CLOSURES WILL REQUIRE ARROW BOARDS
- ROAD CLOSURES MAY REQUIRE DYNAMIC MESSAGE BOARDS TO PROVIDE PRIOR WARNING AHEAD OF START DATE
- NO INTERFERENCE WITH TRAFFIC FLOW SHALL BE PERMITTED DURING THE HOURS OF 6:30 A.M. TO 9:30 A.M. AND 3:30 P.M. TO 6:30 P.M., MONDAYS THROUGH FRIDAYS, UNLESS DIRECTED OTHERWISE BY THE DIRECTOR OF PUBLIC WORKS. EMERGENCY CLOSURES DURING THESE HOURS SHALL BE WITH THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.

OTHER INFORMATION

- LANE OR ROAD CLOSURES ALONG STATE FACILITIES REQUIRE TXDOT APPROVAL
- REFERENCE CITY ORDINANCE: SEC. 23-25 TRAFFIC CONTROL

TCP IMPLEMENTATION

- CONTRACTOR SHALL PROVIDE A DESIGNATED CONTRACTOR'S RESPONSIBLE PERSON (CRP) FOR IMPLEMENTATION AND MAINTENANCE OF IMPLEMENTED TRAFFIC CONTROL PLAN.
- CONTRACTOR WILL HAVE TXDOT APPROVED TRAINING UNDER THE MATERIAL PRODUCER LIST [HTTPS://WWW.TXDOT.GOV/BUSINESS/RESOURCES/PRODUCER-LIST.HTML](https://www.txdot.gov/business/resources/producer-list.html)

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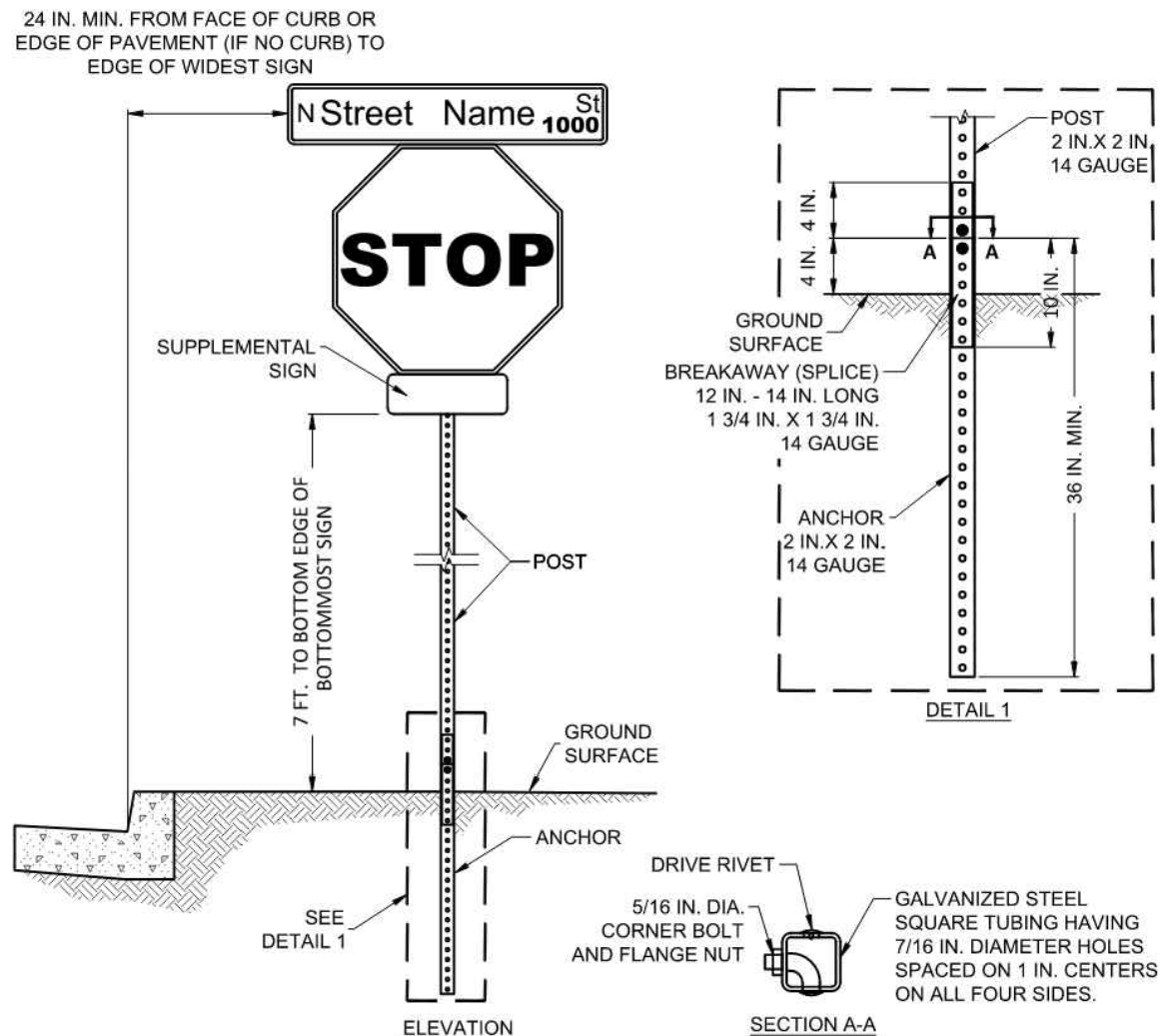
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07/01/2022

T-1



NOTES:

1. SIGN AND SIGN POST SHALL BE TWO SEPARATE PAY ITEMS.
2. SIGN POST SHALL BE PLUMB (TRUE VERTICAL) IN ALL DIRECTIONS, AND SIGNS SHALL BE BE PERPENDICULAR TO POST.
3. SIGN SHALL BE FASTENED TO POST USING JUMBO HEAD DRIVE RIVETS.
4. IF TRAFFIC CONTROL SIGN (E.G., STOP, YIELD) IS REQUIRED, IT SHALL BE LOCATED BELOW THE STREET NAME SIGN.
5. SUPPLEMENTAL SIGN(S) SHALL BE LOCATED BELOW THE TRAFFIC CONTROL SIGN.
6. DRIVE RIVETS SHALL BE JUMBO HEAD, SHALL HAVE 3/8 INCH DIAMETER SHANK, AND SHALL HAVE A 1 INCH DIAMETER HEAD.
7. ANCHOR POST SHALL BE DRIVEN INTO THE GROUND OR SET IN 3000 PSI CONCRETE HAVING 1 FOOT DIAMETER AND A 26 INCH DEPTH. ANCHOR POST SHALL BE WRAPPED IF IT IS SET IN CONCRETE.

SIGN POST INSTALLATION

(NO SCALE)

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T-6

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

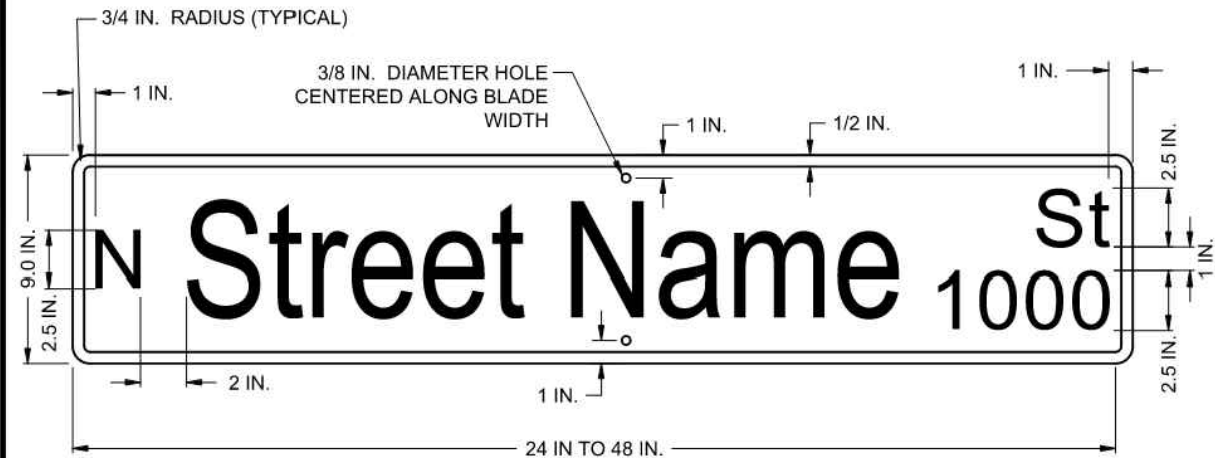
**STANDARD DETAILS
TRAFFIC CONTROL
SHEET 1 OF 2**



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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BGE, Inc.
C:\Users\BGE\OneDrive\Projects\City_Waco\1264-00-Austin_Avenue_Sidewalk_Improvements\DWG\01_STANDARD\01_Standard_Detail_Traffic_Control.dwg May 15, 2023 12:20pm arangel



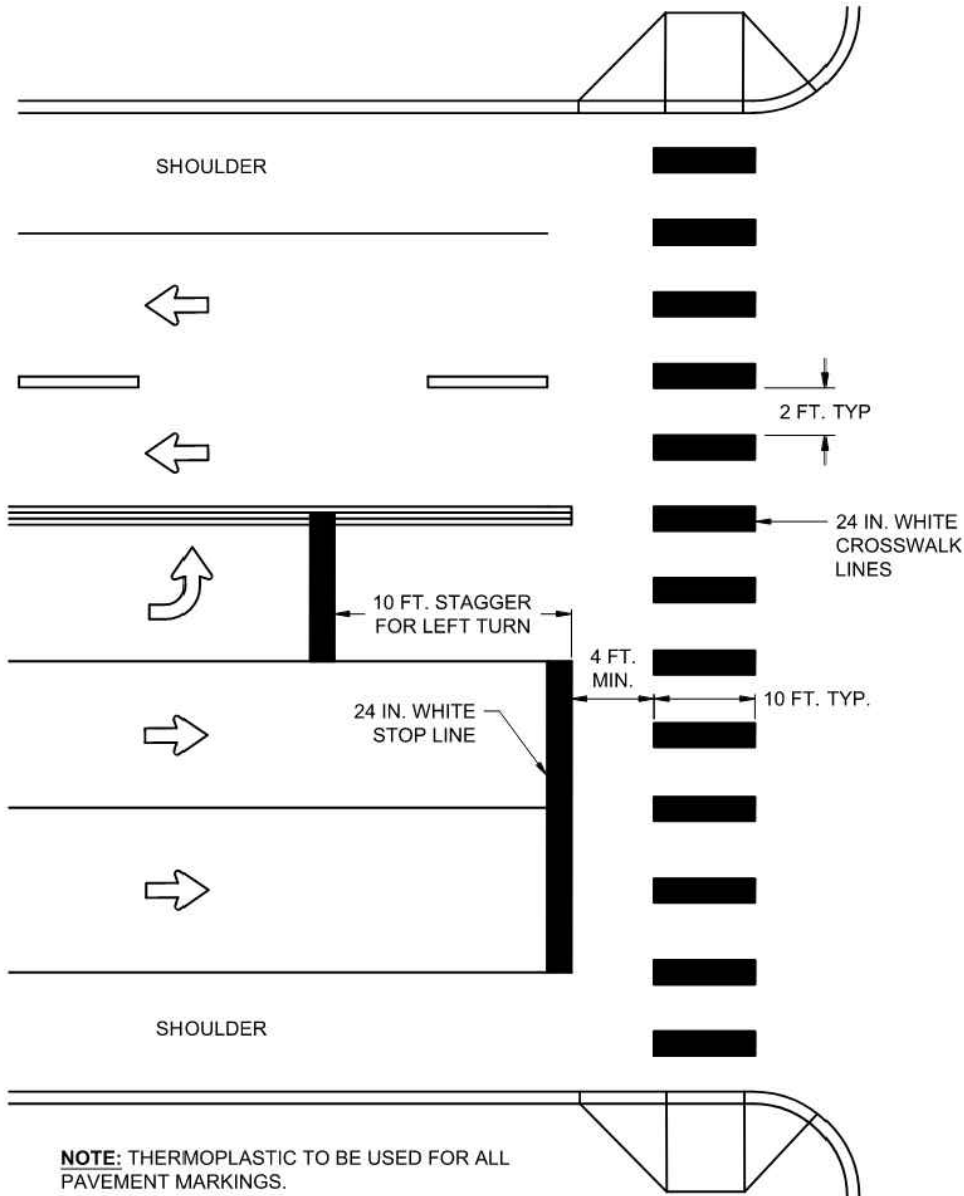
NOTES:

1. STREET NAME SIGNS SHALL BE INSTALLED AT LOCATIONS SHOWN ON PLANS THAT ARE APPROVED BY CITY ENGINEER.
2. STREET NAME SIGN SHALL FACE EACH DIRECTION OF TRAFFIC.
3. SIGN BLADE BLANK SHALL BE A FLAT (I.E., NOT EXTRUDED) SHEET HAVING A MINIMUM THICKNESS OF 0.080 INCH. THE BLANK SHALL BE MADE OF ALUMINUM ALLOY THAT CONFORMS TO REQUIREMENTS OF ASTM B209 (FOR ALLOYS 5052-H38 OR 6061-T6) AND SHALL BE FREE OF DEFECT INCLUDING WARP, DENT, BURR, CORROSION, WHITE RUST, AND DIRT.
4. SIGN FACE MATERIALS SHALL CONFORM TO THE CURRENT "DEPARTMENTAL MATERIALS SPECIFICATION 8300" OF THE TEXAS DEPARTMENT OF TRANSPORTATION. MATERIALS SHALL CONSIST OF GREEN ELECTRONIC-CUTTABLE (EC) FILM OVER WHITE HIGH INTENSITY PRISMATIC (HIP) RETROFLECTIVE SHEETING. EC FILM SHALL BE 1177C GREEN, AVERY DENNISON OL-2007 GREEN, OR EQUIVALENT. HIP SHEETING SHALL CONFORM TO REQUIREMENTS OF ASTM D4956 (TYPE III HIP) OR AASHTO M268 (E.G., AVERY DENNISON OMNICUBE T-11500 WHITE OR EQUIVALENT).
5. SIGN FACE SHALL HAVE WHITE LETTERING ON A GREEN BACKGROUND AND SHALL HAVE A 1/2 INCH WIDE WHITE BORDER.
6. LETTERING FONT (TYPEFACE) SHALL BE CLEARVIEW.
7. STREET NAME SHALL BE CENTER-JUSTIFIED AND SHALL HAVE AN UPPERCASE FIRST LETTER FOLLOWED BY LOWERCASE LETTERS. UPPERCASE LETTERS SHALL BE AT LEAST 5 INCHES TALL. LOWERCASE LETTERS SHALL BE AT LEAST 4 INCHES TALL.
8. STREET NAME DIRECTIONAL PREFIX (E.G., N, S) SHALL BE LEFT-JUSTIFIED, UPPERCASE, AND 2.5 INCHES TALL.
9. STREET NAME SUFFIX SHALL BE RIGHT-JUSTIFIED, ABBREVIATED, AND 2.5 INCHES TALL. THE SUFFIX SHALL HAVE AN UPPERCASE FIRST LETTER FOLLOWED BY LOWERCASE LETTERS. ACCEPTABLE ABBREVIATIONS INCLUDE: Ave, Blvd, Cir, Ct, Dr, Hwy, Pkwy, Pl, Plz, Rd, St, Ter, AND Trl.
10. STREET NUMBER SUFFIX (E.G., nd, th) SHALL BE LOWERCASE AND 2.5 INCHES TALL.
11. EVERY STREET NAME SIGN SHALL HAVE A BEGINNING BLOCK NUMBER. THE NUMBER SHALL BE RIGHT-JUSTIFIED AND 2.5 INCHES TALL.

STREET NAME SIGN BLADE
(FOR LOCAL AND RESIDENTIAL COLLECTOR STREETS)
(NO SCALE)

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NOTE: THERMOPLASTIC TO BE USED FOR ALL PAVEMENT MARKINGS.

HIGH-VISIBILITY LONGITUDINAL CROSSWALK AT CONTROLLED APPROACH
(NO SCALE)

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

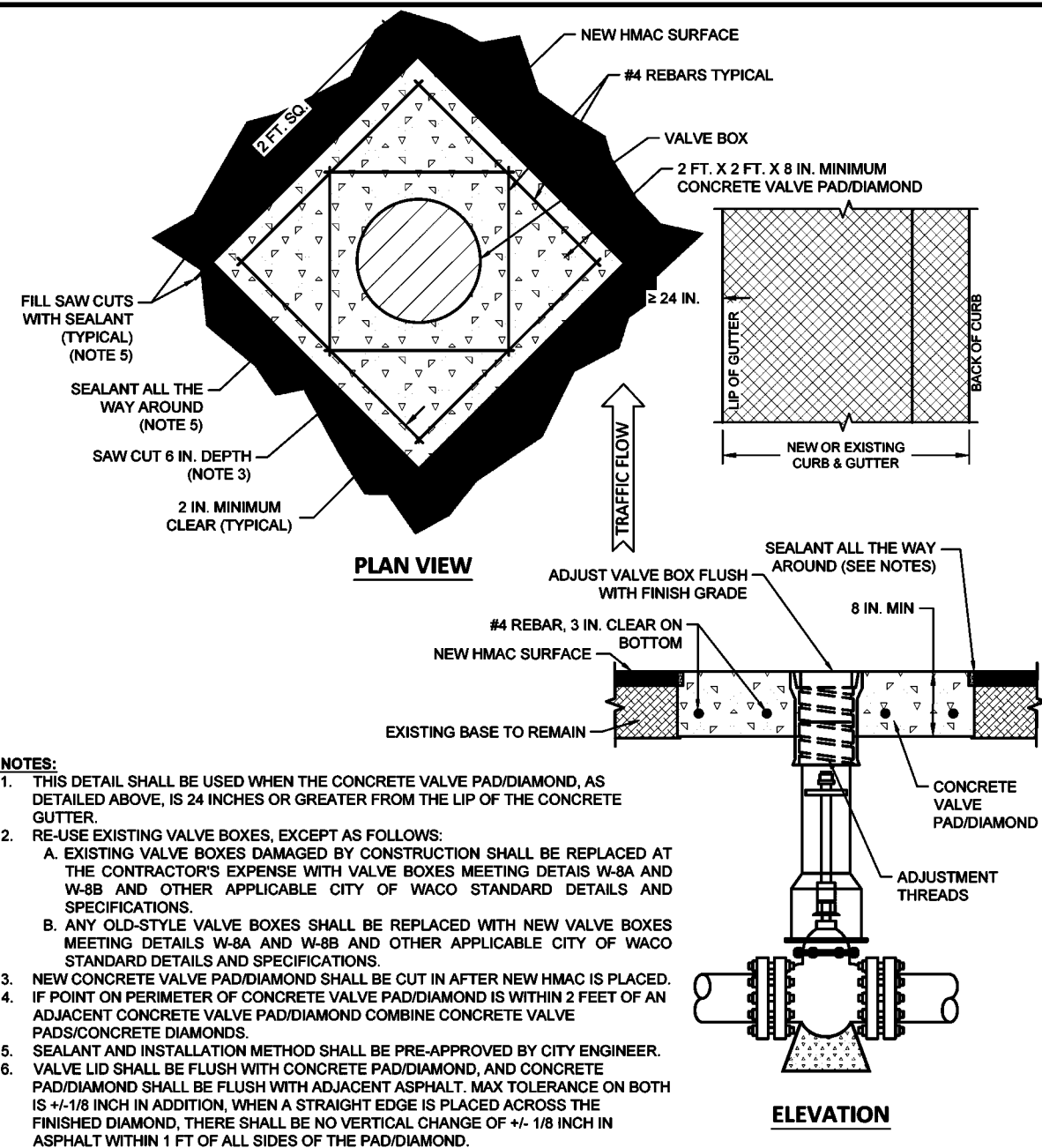
CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS
TRAFFIC CONTROL
SHEET 2 OF 2

BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
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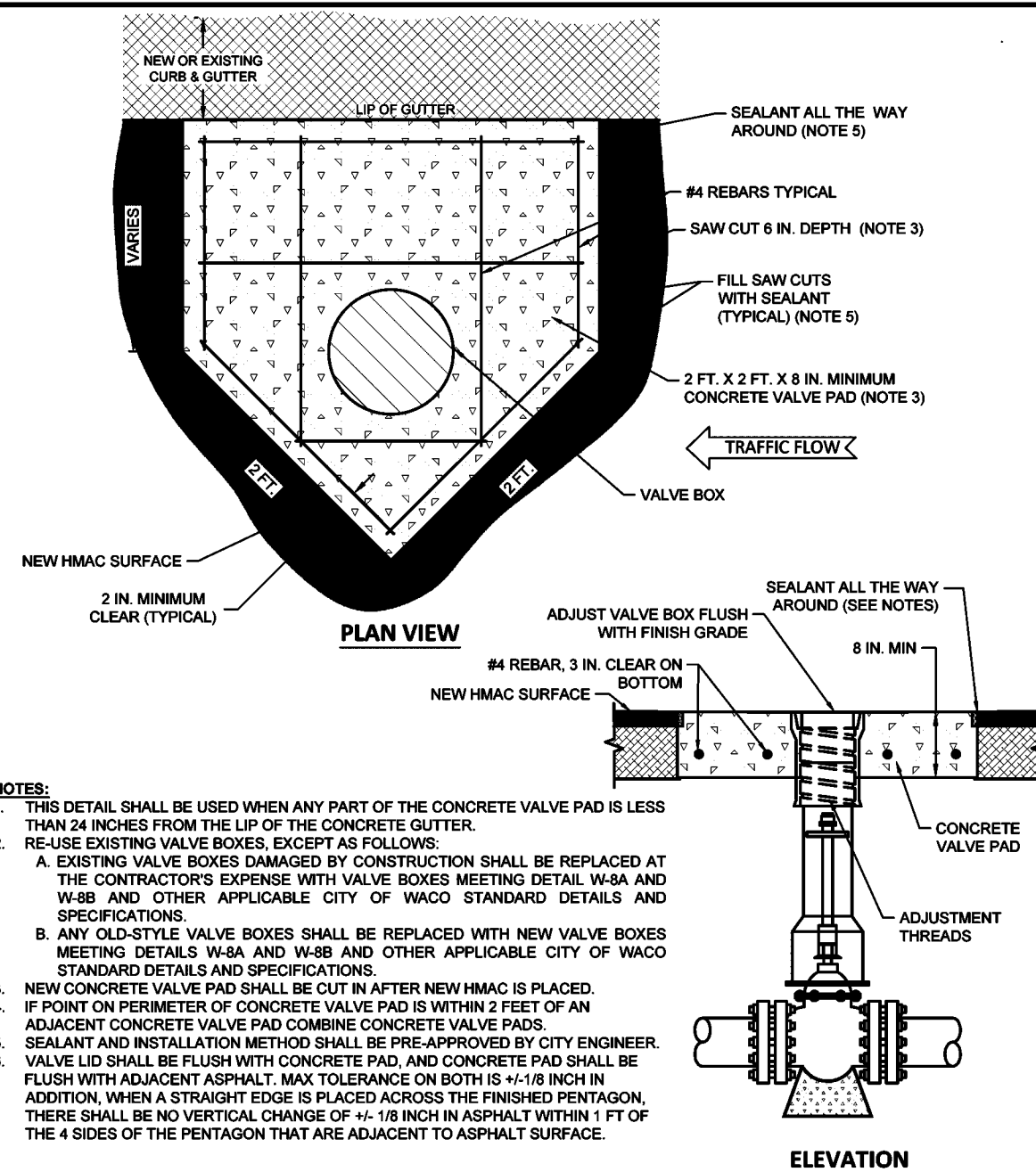
VALVE BOX HEIGHT ADJUSTMENT A (FOR ASPHALT STREET REHABILITATION PROJECTS ONLY)

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(NO SCALE)

STANDARD CITY OF WACO ENGINEERING DIVISION
STANDARD CITY OF WACO ENGINEERING DIVISION

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			NO.	COMMENTS	BY	DATE	
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VALVE BOX HEIGHT ADJUSTMENT B
(FOR ASPHALT STREET REHABILITATION PROJECTS ONLY)

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(NO SCALE)

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

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CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

STANDARD DETAILS

WATER



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DATE
MAY 2023



PROJECT NO.
11264-00

Sheet
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STORMWATER POLLUTION PREVENTION

GENERAL NOTES

1. ALL CONSTRUCTION WORK WITHIN THE CITY OF WACO MUST COMPLY WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) PROGRAM, AND CITY OF WACO ORDINANCES AND STANDARD SPECIFICATIONS FOR CONSTRUCTION (SECTION GP-3.6.D STORMWATER POLLUTION PREVENTION PLAN (EROSION CONTROL PLAN)).
2. ALL STORMWATER POLLUTION PREVENTION AND EROSION CONTROL PLANS MUST BE APPROVED BY THE WATERSHED PROTECTION COMPLIANCE TEAM PRIOR TO INSTALLATION OF PROTECTIVE MEASURES. THE INSTALLATION OF THE PROTECTIVE MEASURES MUST BE INSPECTED AND APPROVED BY CITY OF WACO INSPECTION STAFF PRIOR TO COMMENCING ANY OTHER CONSTRUCTION ACTIVITY. FAILURE OF COMPLIANCE WILL BE SUBJECT TO CITY OF WACO FEE SCHEDULE.
3. ALL MATERIALS USED FOR STORMWATER POLLUTION PREVENTION SHALL MEET THE MINIMUM DESIGN AND SPECIFICATION REQUIREMENTS AS REFERENCED FROM THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) INTEGRATED STORMWATER MANAGEMENT (ISWM) DESIGN MANUAL FOR CONSTRUCTION. THE CONTRACTOR SHALL USE APPROPRIATE CONTROL DEVICES TO PROTECT AGAINST STORMWATER POLLUTION FROM CONSTRUCTION SITE ACTIVITY.
4. IN THE EVENT OF CONFLICT BETWEEN THE SPECIFIED REQUIREMENTS AND STORMWATER POLLUTION CONTROL LAWS, RULES, OR REGULATIONS, OR OTHER LOCAL, STATE, OR FEDERAL AGENCIES, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
5. ALL PROTECTIVE MEASURES SHALL BE INSPECTED BY THE PRIMARY OPERATOR REGULARLY (AT LEAST AS OFTEN AS REQUIRED BY THE TPDES CONSTRUCTION GENERAL PERMIT).
6. ALL POLLUTION PREVENTION CONTROL STRUCTURES AND PROCEDURES MUST BE MAINTAINED IN FULL WORKING ORDER AT ALL TIMES DURING CONSTRUCTION. THIS SHALL INCLUDE ANY NECESSARY REPAIR OR REPLACEMENT OF ITEMS, WHICH HAVE BECOME DAMAGED OR INEFFECTIVE. REMOVE SEDIMENT AND OTHER POLLUTANTS, WHICH ACCUMULATE IN POLLUTION CONTROL DEVICES AS NECESSARY TO MAINTAIN THE INTENDED DESIGN EFFICIENCY FOR THE POLLUTION PREVENTION MEASURE.
7. UPON COMPLETION OF CONSTRUCTION AND ACHIEVEMENT OF FINAL STABILIZATION, PROPERLY REMOVE THE TEMPORARY POLLUTANT CONTROL STRUCTURES AND COMPLETE THE AREA AS INDICATED. POLLUTION CONTROL DEVICES MADE OF ORGANIC MATERIALS DESIGNED TO DEGRADE NATURALLY IN PLACE WILL NOT REQUIRE REMOVAL, UNLESS SPECIFICALLY REQUIRED BY THE OWNER, ENGINEER, OR OWNER'S REPRESENTATIVE.
8. STANDARD DETAILS FOR SOME PROTECTIVE MEASURES HAVE BEEN INCLUDED. PLEASE REFER TO THE ISWM DESIGN MANUAL FOR OTHER PROTECTIVE MEASURES AS NEEDED.

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##	DESCRIPTION	FL	MM/DD/YYYY	WP-1			

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CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

**STANDARD DETAILS
STORMWATER
SHEET 1 OF 2**



BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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BGE, Inc.
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DESCRIPTION:



INLET PROTECTION CONSISTS OF A VARIETY OF METHODS TO INTERCEPT SEDIMENT AT LOW POINT INLETS THROUGH THE USE OF DEPRESSED GRADING, FILTER STONE, FILTER FABRIC, INLET INSERTS, AND OTHER MATERIALS. THE PROTECTION DEVICES ARE PLACED AROUND OR ACROSS THE INLET OPENINGS TO PROVIDE LOCALIZED DETENTION OR FILTRATION OF SEDIMENT AND FLOATABLE MATERIALS IN STORMWATER. PROTECTION DEVICES MAY BE ASSEMBLED ONSITE OR PURCHASED AS MANUFACTURED ASSEMBLIES. CURB INLET PROTECTION SHALL E IN ACCORDANCE WITH WP-7B.

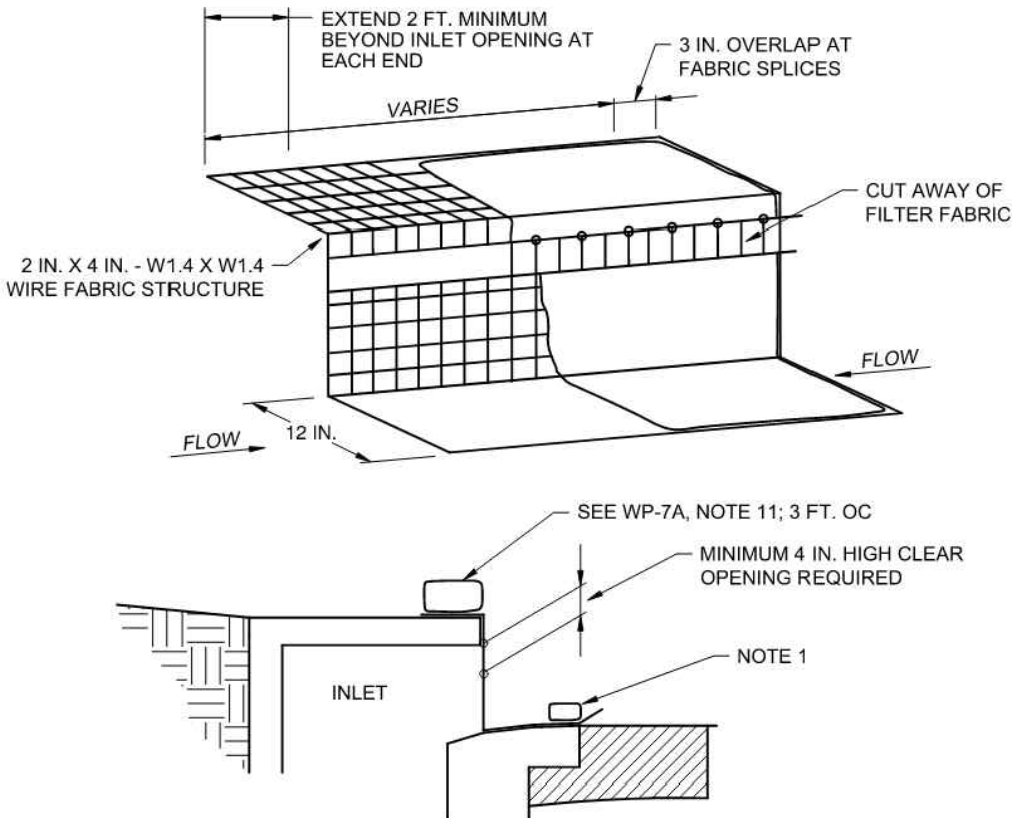
GENERAL NOTES:

- DRAINAGE PATTERNS SHALL BE EVALUATED TO ENSURE INLET PROTECTION WILL NOT DIVERT FLOW OR FLOOD THE ROADWAY OR ADJACENT PROPERTIES AND STRUCTURES.
- INLET PROTECTION MEASURES OR DEVICES THAT COMPLETELY BLOCK THE INLET ARE PROHIBITED. THEY MUST ALSO INCLUDE A BYPASS CAPABILITY IN CASE THE PROTECTION MEASURES ARE CLOGGED.
- INLET PROTECTION MUST BE DESIGNED TO PASS THE CONVEYANCE STORM (25-YEAR, 24-HOUR) WITHOUT CREATING A ROAD HAZARD OR DAMAGING ADJACENT PROPERTY. THIS MAY BE ACCOMPLISHED BY ANY OF THE FOLLOWING MEASURES:
 - AN OVERFLOW WEIR ON THE PROTECTION MEASURE.
 - AN EXISTING POSITIVE OVERFLOW SWALE ON THE INLET.
 - SUFFICIENT STORAGE VOLUME AROUND THE INLET TO HOLD THE PONDED WATER UNTIL IT CAN ALL FILTER INTO THE INLET.
 - OTHER ENGINEERED METHOD.
- POSITIVE OVERFLOW DRAINAGE IS CRITICAL IN THE DESIGN OF INLET PROTECTION. IF OVERFLOW IS NOT PROVIDED FOR AT THE INLET, TEMPORARY MEANS SHALL BE PROVIDED TO ROUTE EXCESS FLOWS THROUGH ESTABLISHED SWALES, STREETS, OR OTHER WATERCOURSES TO MINIMIZE DAMAGE DUE TO FLOODING.
- FILTER FABRIC AND WIRE MESH USED FOR INLET PROTECTION SHALL MEET THE MATERIAL REQUIREMENTS SPECIFIED IN CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- BLOCK AND GRAVEL (CRUSHED STONE OR RECYCLED CONCRETE) PROTECTION IS USED WHEN FLOWS EXCEED 0.5 CUBIC FEET PER SECOND AND IT IS NECESSARY TO ALLOW FOR OVERTOPPING TO PREVENT FLOODING.
- BAGS USED TO SECURE INLET PROTECTION DEVICES ON TOP OF CURB INLET SHALL BE FILLED WITH AGGREGATE, FILTER STONE, OR CRUSHED ROCK THAT IS LESS LIKELY THAN SAND TO BE WASHED INTO AN INLET IF THE BAG IS BROKEN. FILLED BAGS SHALL BE 24 TO 30 INCHES LONG, 16 TO 18 INCHES WIDE, AND 6 TO 8 INCHES THICK. BAGS SHALL BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN FABRIC WITH A MINIMUM UNIT WEIGHT OF 4 OUNCES PER SQUARE YARD AND MEET THE FOLLOWING CRITERIA:
 - GREATER THAN 300 PSI MULLEN BURST STRENGTH USING ASTM D3786 STANDARD TEST METHOD FOR HYDRAULIC BURSTING STRENGTH OF TEXTILE FABRICS-DIAPHRAGM BURSTING STRENGTH TESTER METHOD.
 - GREATER THAN 70 PERCENT UV STABILITY USING ASTM D4355 STANDARD TEST METHOD FOR DETERIORATION OF GEOTEXTILES BY EXPOSURE TO LIGHT, MOISTURE, AND HEAT IN A XENON ARC TYPE APPARATUS.
- INLET PROTECTION SHALL BE MAINTAINED AS FOLLOWS:
 - INSPECT EVERY 14 DAYS
 - CHECK FOR AND REMOVE BLOCKAGE OF INLET AFTER EVERY STORM EVENT WITHIN 24 HOURS
 - REMOVE SEDIMENT BEFORE IT REACHES HALF THE DESIGN HEIGHT OR VOLUME OF THE INLET PROTECTION, MORE FREQUENTLY FOR CURB INLETS
 - REPAIR OR REPLACE DAMAGED MATERIALS
 - CLEAN OR REPLACE FILTER STONE WHEN CLOGGED WITH SEDIMENT
 - FOR NON-CITY PROJECTS, REMOVAL OR TRANSFER (SEE FORM [WSP-0001](#)) OF ALL INLET PROTECTION AT SUBMISSION OF NOTICE OF TERMINATION.
 - PLEASE REFER TO THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 1.10, PART 2, A 4 AND PART 3, B 3 FOR INLET PROTECTION MATERIAL AND INSTALLATION SPECIFICATIONS.

INLET PROTECTION GENERAL NOTES

DISCLAIMER: THE USE OF THIS STANDARD IS GOVERNED BY THE "TEXAS ENGINEERING PRACTICE ACT". NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF WACO FOR ANY PURPOSE WHATSOEVER. THE CITY OF WACO ASSUMES NO RESPONSIBILITY FOR THE CONVERSION OF THIS STANDARD TO OTHER FORMATS OR FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

	ENGINEERING DIVISION		REVISIONS				DATE
			NO.	COMMENTS	BY	DATE	05/02/2022
			##	DESCRIPTION	FL	MM/DD/YYYY	WP-7A





NOTES:

- A 1 IN. X 4 IN. BOARD SECURED WITH $\frac{1}{4}$ IN. OR $\frac{3}{8}$ IN. \varnothing CONCRETE SCREWS OF SUFFICIENT LENGTH. THE SCREWS SHALL BE ATTACHED TO THE GUTTER BY DRILLING AN APPROPRIATE PILOT HOLE WITH A CONCRETE BIT AND INSERTING PLASTIC FASTENERS. THE TOP OF THE SCREW SHALL BE RECESSED BELOW THE TOP OF THE BOARD. THE SCREWS SHALL BE PLACED ON 3 FT. O.C. UPON REMOVAL, EITHER LEAVE THE PLASTIC FASTENERS IN PLACE, OR REMOVE THE PLASTIC FASTENERS, CLEAN ANY DIRT/DEBRIS FROM THE SCREW LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH THE SURFACE OF THE GUTTER.
- A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
- DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2 INCHES.
- CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVER-TOP THE CURB.
- INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

FILTER WEIR CURB INLET PROTECTION

(NO SCALE)

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	ENGINEERING DIVISION		REVISIONS				DATE
			NO.	COMMENTS	BY	DATE	05/02/2022
			##	DESCRIPTION	FL	MM/DD/YYYY	WP-7B

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THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

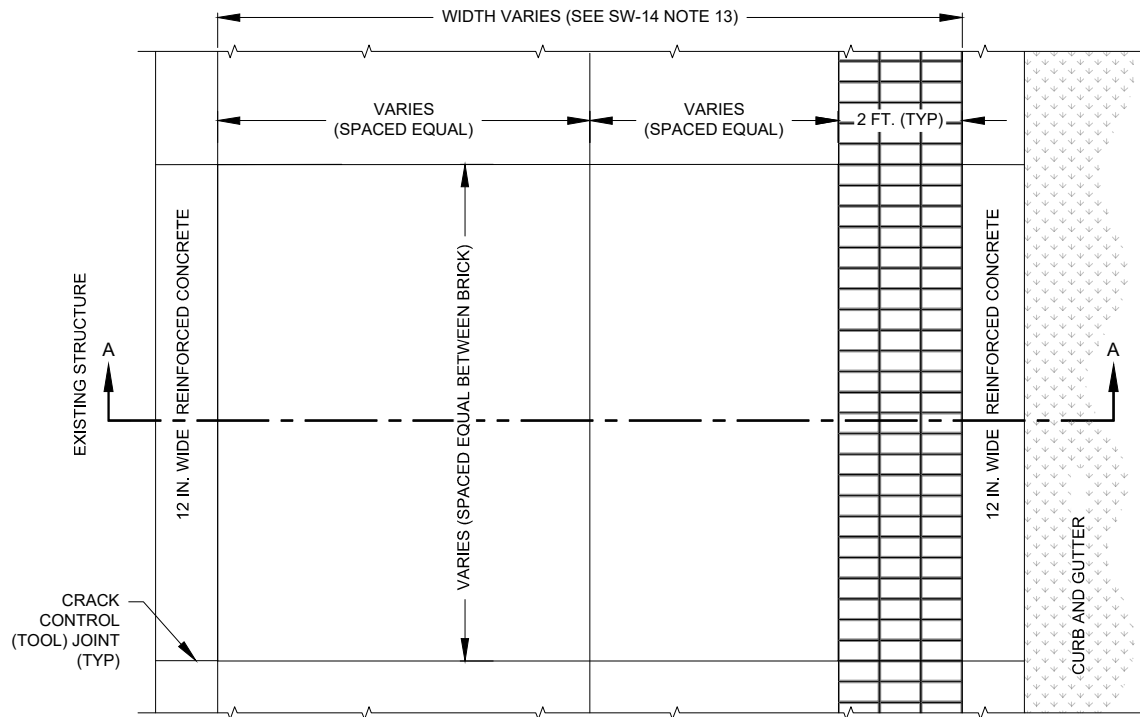
**STANDARD DETAILS
STORMWATER
SHEET 2 OF 2**



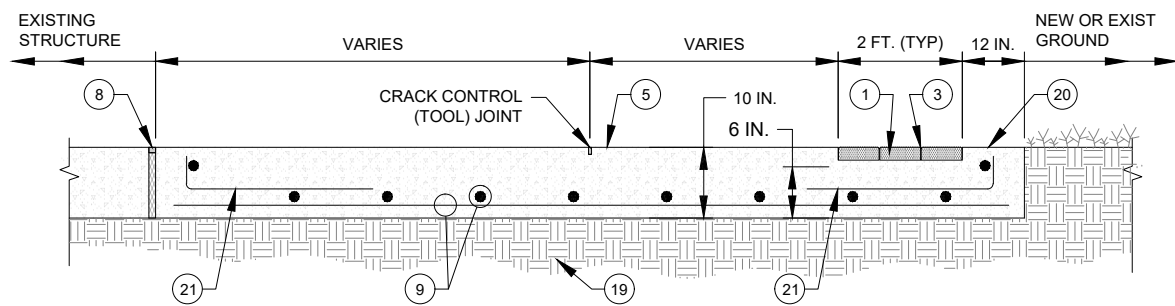
BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264--00	215
CHECKED: BGE			

BGE, Inc.
C:\Users\BGE\OneDrive\Projects\City_Waco\11264-00-Austin_Avenue_Sidewalks_Improvements\DWG\11264-00-Sidewalks_DET_SWM.dwg, May 15, 2023-12:22pm, orange



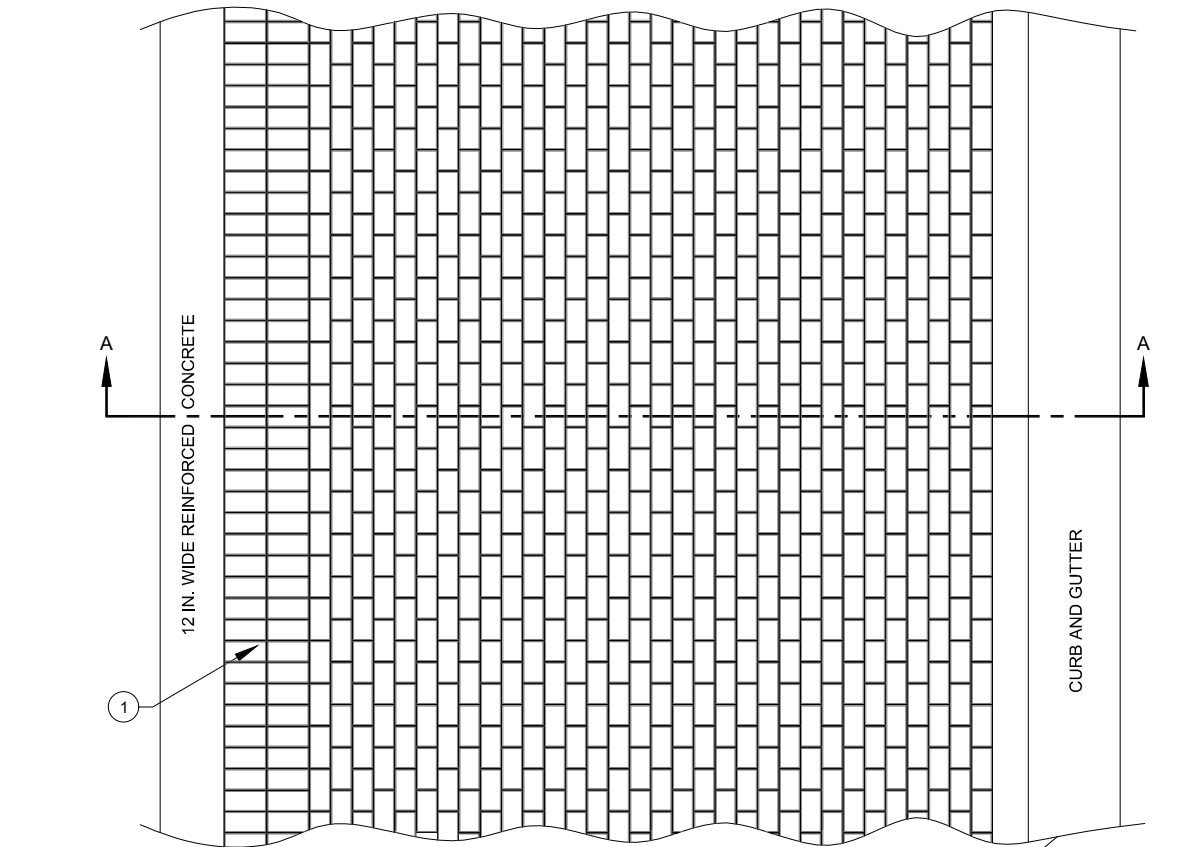
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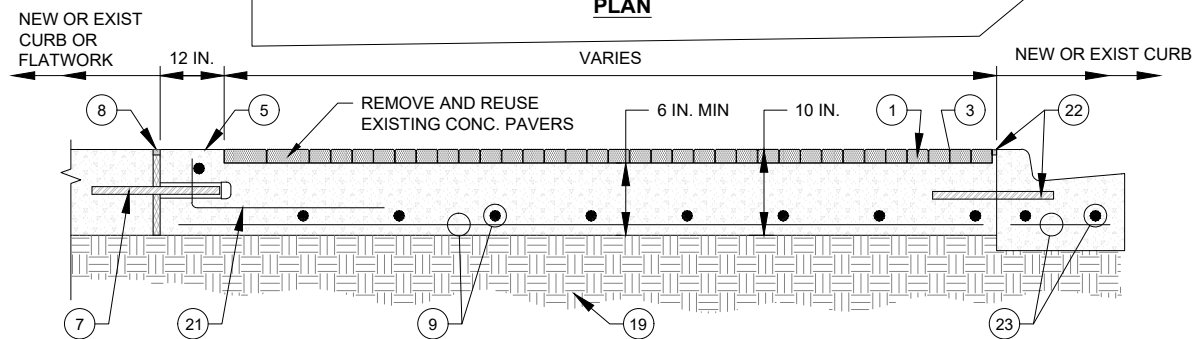
SECTION A-A

FOR GENERAL NOTES SEE SHEET SW-1
FOR LEGEND DESCRIPTIONS SEE SHEET SW-14

PEDESTRIAN CONCRETE PATH DETAILS IN NON-TRAFFIC AREAS
(NO SCALE)



PLAN



SECTION A-A

FOR GENERAL NOTES SEE SHEET SW-1
FOR LEGEND DESCRIPTIONS SEE SHEET SW-14

PEDESTRIAN BRICK PAVER PATH DETAILS
(NO SCALE)

SIDEWALK DETAILS LEGEND

- 1 BELGARD INTERLOCKING CONCRETE PAVER UNITS OR APPROVED EQUAL ARE MADE FROM "NO-SLUMP" CONCRETE MIX UNDER EXTREME PRESSURE AND HIGH FREQUENCY VIBRATION AND MEET OR EXCEED THE FOLLOWING REQUIREMENTS:
- 3 FILL JOINTS BETWEEN BRICKS WITH SAKRETE® PAVER SET POLYMERIC SAND™ OR PRE-APPROVED EQUAL.
- 5 CONCRETE BROOM FINISH. SLOPE 1/4 IN. PER FOOT FOR DRAINAGE (TYPICAL), ALL EXPOSED CORNERS SHALL BE EITHER TOOLED OR CHAMFERED TO A 1/2 IN. RADIUS.
- 8 REDWOOD EXPANSION JOINT OR PRE-APPROVED EQUAL WITH 1 IN. X 3/4 IN. W.R. MEADOWS, SOF-SEAL, LOW MODULUS HORIZONTAL SEALANT OR PRE-APPROVED EQUAL. REFERENCE ST-9.
- 9 #4 REBARS @ 18 IN. OCEW
- 19 COMPACT EXISTING SUBGRADE TO 95% STANDARD PROCTOR DENSITY AT, OR ABOVE, OPTIMUM MOISTURE CONTENT.
- 20 12 IN. WIDE CONCRETE EDGE - MANDATORY AT ALL LOCATIONS, ALL EXPOSED CORNERS SHALL BE EITHER TOOLED OR CHAMFERED TO A 1/2 IN. RADIUS.
- 21 36 IN. X 5 IN. #4 "L" BAR AT 18 IN. OC.
- 24 NEENAH TYPE R-87-38-A1 TREE GRATE OR APPROVED EQUAL.
- 25 TREE GRATE FRAME PER MANUFACTURE OR PRE-APPROVED GALVANIZED "L" ANGLE IRON PERIMETER FRAME, SIZED TO COORDINATE WITH GRATE WITH #4 BAR AT 18 IN. OC.
- 26 CYPRESS MULCH. REFERENCE CODE OF ORDINANCES FOR SPECIFICATIONS.

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

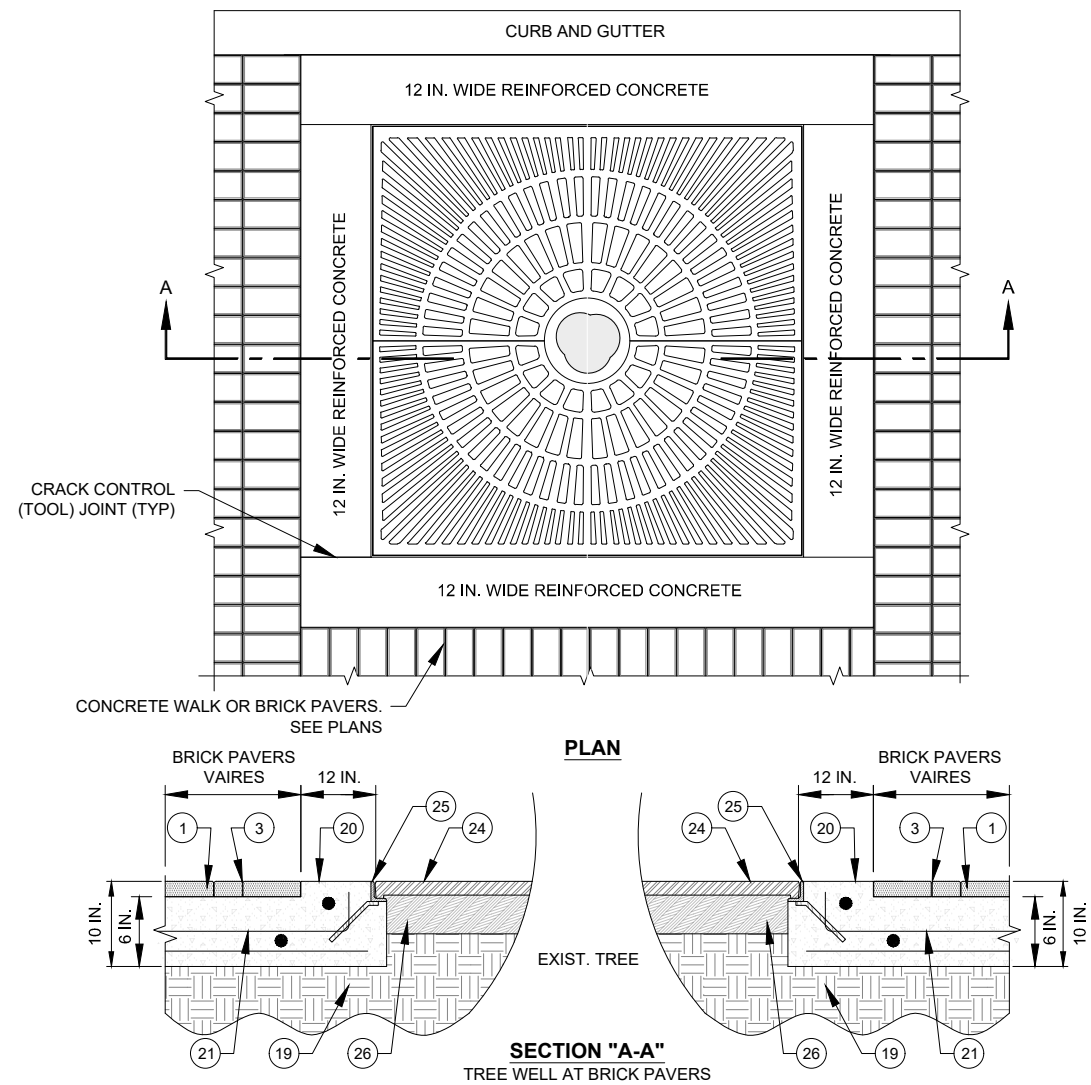
CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

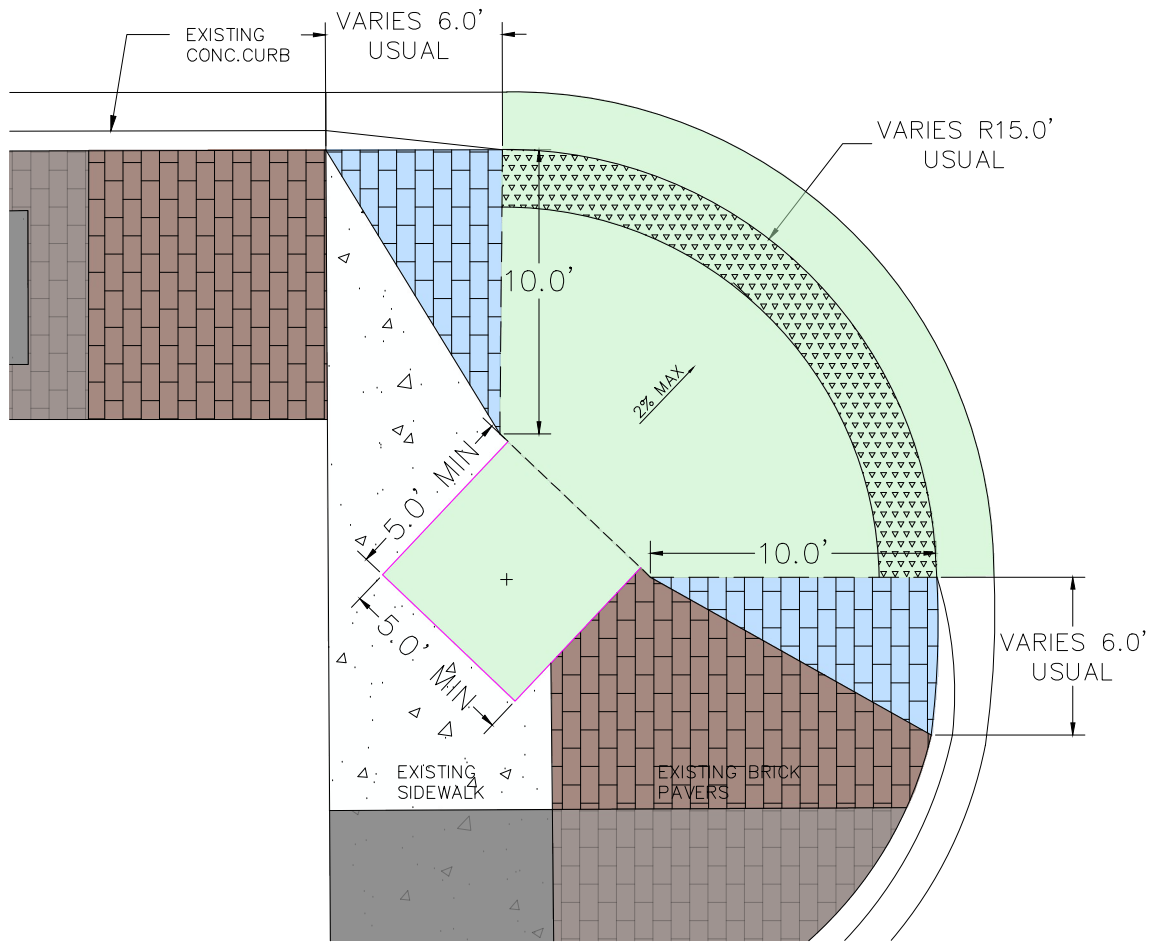
**MODIFIED DETAILS
SIDEWALK
SHEET 1 OF 3**

BGE, Inc.
700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

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CHECKED: BGE			



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C:\Users\BGE\OneDrive\Projects\City_Waco\11264-00-Austin_Avenue_Sidewalk_Improvements\DWG\01_SideVG_DET_SideVG.dwg May 15, 2023 12:22pm arangel



LEGEND

- EXISTING BRICK PAVERS TO REMAIN
- REMOVE AND RELAY PEDESTRIAN BRICK PAVERS (RE. DETAIL SHT 216)
- CURB RAMP (SPECIAL)(ADA) TO INCLUDE REMOVE EXISTING RAMP, SIDEWALK, GUTTER, ETC.
- EXISTING SIDEWALK TO REMAIN
- CURB RAMP LANDING/TURNING SPACE

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BGE, INC.
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CLARK CAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

MODIFIED DETAILS
SIDEWALK
SHEET 3 OF 3



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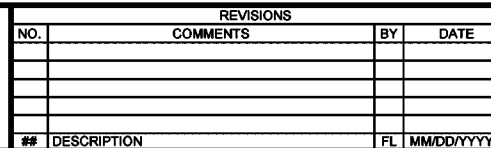
DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE			218
CHECKED: BGE	MAY 2023	11264-00	



1. **HMAC AND BONDING COURSE SHALL BE PLACED FOLLOWING COMPLETION AND CURE OF BASE REPAIR. BONDING COURSE SHALL BE APPLIED TO CLEAN SURFACE AND ALLOWED TO CURE. SEE SPECIAL PROJECT PROVISIONS FOR MATERIAL REQUIREMENTS.**

- ### **BASE FAILURE REPAIR WITH CONTROLLED LOW STRENGTH MATERIAL (STREET PRESERVATION PROJECTS)**

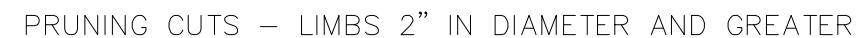
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ST-29



DESIGNED: BGE	DATE	PROJECT NO.	Sheet 219
DRAWN: BGE			
CHECKED: BGE	MAY 2023	11264-00	



1. SEE "LOW-VOLUME LANDSCAPE IRRIGATION DESIGN MANUAL (D39030D) FOR DRIPLINE EMITTER SPACING.
2. QUANTITY OF DRIPLINE RINGS, EMITTER SPACING AND FLOWS ARE DEPENDANT ON TREE CANOPY SIZE.

DRIP LINE AROUND TREE/IRRIGATION
NOT TO SCALE

RE:



NOTES

THIS WORK AND ALL ASSOCIATED MATERIALS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE SUBSIDIARY TO BID ITEM - PREPARING RIGHT OF WAY.

TREE REMOVAL:

REMOVE ALL DEAD WOODY VEGETATION WITHIN THE ROW. GROUND STUMPS +/- 12" BELOW GROUND. REMOVE ROOTS UNDER STREET.

TREE PRUNING:

THE OBJECTIVE IS FOR CROWN RAISING TO ALLOW CLEARANCE FOR PEDESTRIANS AND VEHICLES.

WHEN PRUNING OAK TREES, DISINFECT TOOLS
BEFORE MOVING FROM ONE TREE TO ANOTHER.
USE 70% METHYL ALCOHOL, CHLORINE SOLUTION, OR
OTHER APPROVED MATERIAL AS A DISINFECTANT.

TREAT ALL WOUNDS AND CUTS ON ALL OAK SPECIES WITH A COMMERCIAL TREE WOUND DRESSING WITHIN 20 MINUTES OF CREATING THE WOUND.

REPAIR DAMAGE TO A PRIVATE FENCE OR OTHER
PRIVATE PROPERTY AT CONTRACTOR EXPENSE.

PERFORM TREE PRUNING WITHIN ROW LIMITS. IF POSSIBLE, OBTAIN LANDOWNER PERMISSION AND MAKE PROPER PRUNING CUTS NECESSARY TO MAINTAIN THE HEALTH OF THE TREE.

CUT LIMBS AT A MAJOR FORK IN THE BRANCH OR, IF THE ENTIRE BRANCH IS ENCRDACHING INTO THE AREA TO BE CLEARED, REMOVE THE BRANCH AT THE TRUNK.

DO NOT LEAVE A STUB BEYOND THE BRANCH COLLAR OR CUT THROUGH THE BRANCH COLLAR WHEN MAKING PRUNING CUTS. THE BRANCH COLLAR IS GENERALLY VISIBLE, BUT IF IT IS NOT, MAKE THE FINAL CUT APPROXIMATELY 1/2" FROM THE PARENT BRANCH OR TRUNK, PERPENDICULAR TO THE BRANCH OR LIMB BEING REMOVED.

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PROJECT SPECIFIC DETAILS

TREE PLANTING, IRRIGATION, REMOVAL AND PRUNNING



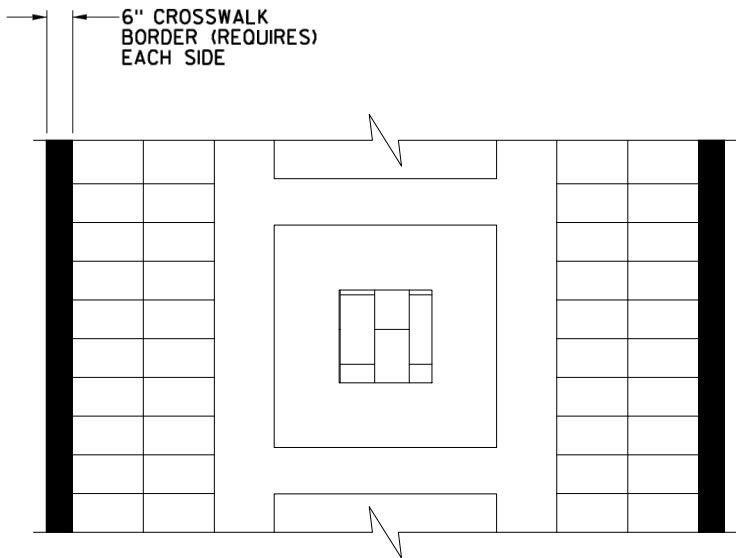
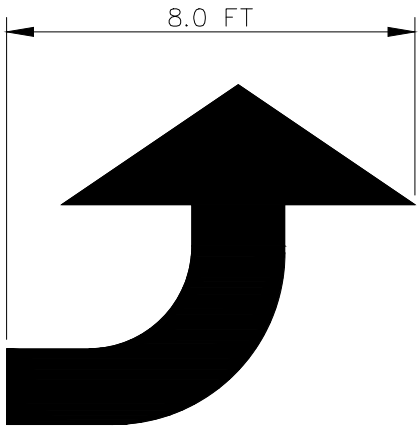
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700 N Pearl St., Suite 2100, Dallas, TX 75201
Tel: 469-621-3200 • www.bgeinc.com
TBPE Registration No. F-1046

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
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CHECKED: BGE			

BGE, Inc.
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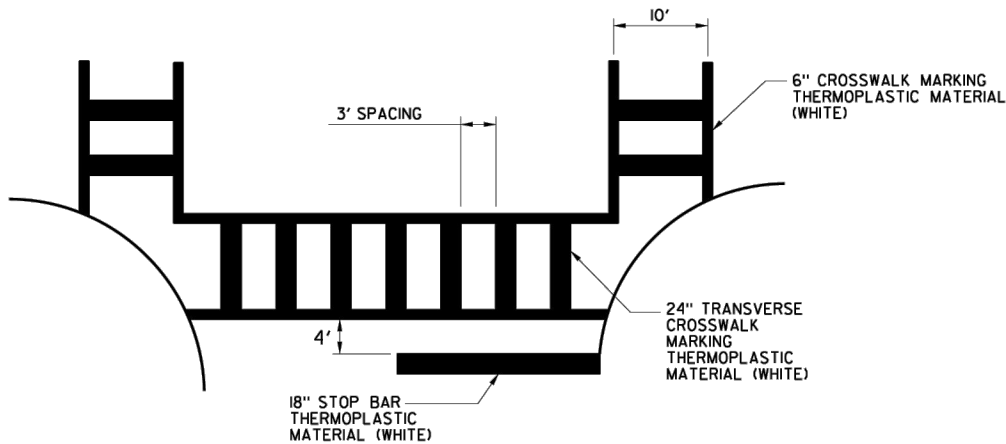
TURN LANE—USE ARROW



NOTE:

DECORATIVE CROSSWALK COLOR AND PATTERNS SHALL BE APPROVED BY THE DEPARTMENT OF TRANSPORTATION PRIOR TO INSTALLATION.

DECORATIVE CROSSWALK



NOTE:

FOR ROADS WITHOUT TRAFFIC LANE LINES MARKINGS.

CROSSWALK DETAIL

GENERAL NOTES

1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.
3. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
4. When lane—use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full—width turn lane.
5. Use raised pavement marker Type I—C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II—C—R with divided highways and raised medians.
6. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

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CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

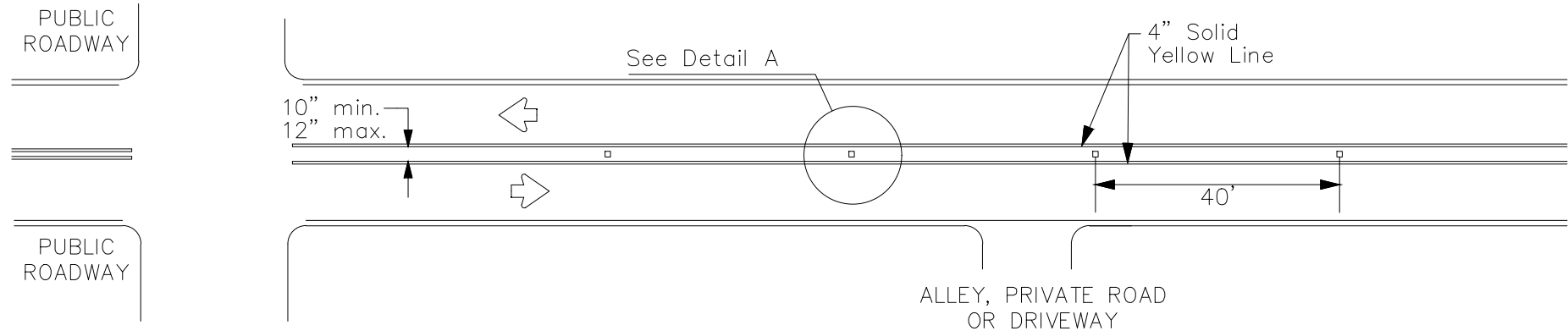
PROJECT SPECIFIC DETAILS
PAVEMENT MARKING
SHEET 1 OF 2



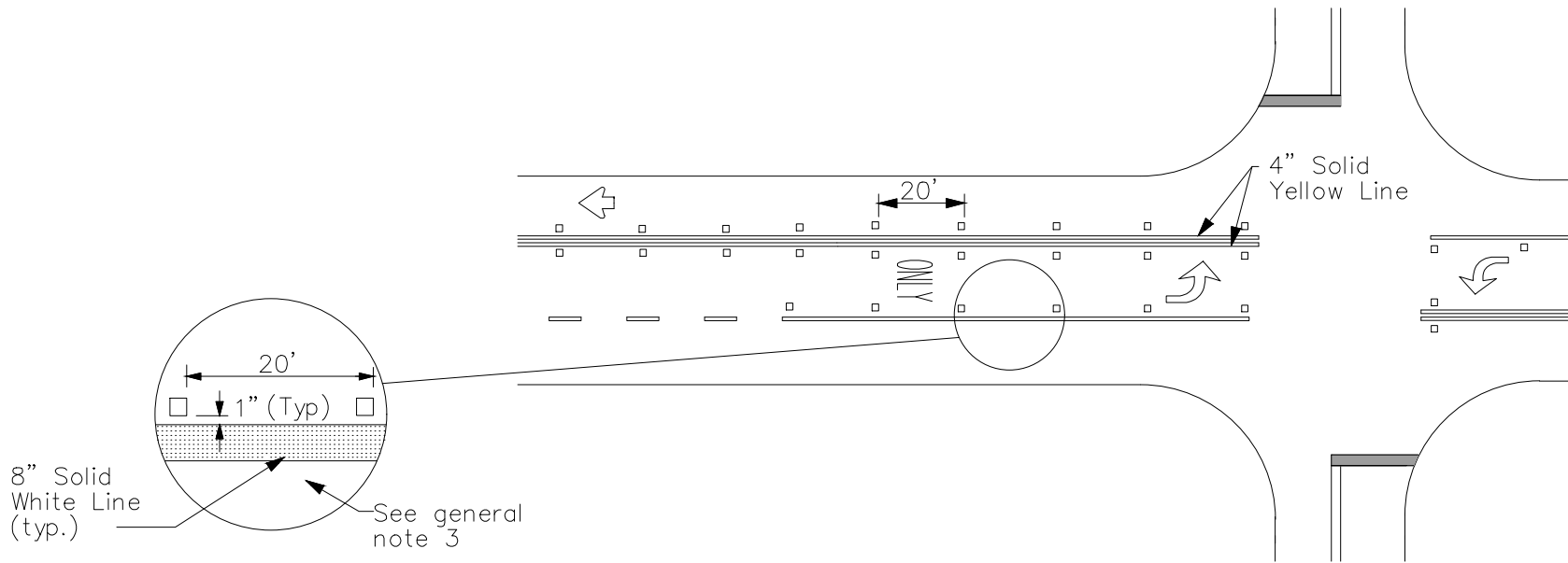
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Tel: 469-621-3200 • www.bgeinc.com
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C:\Users\jclark\OneDrive\Documents\Projects\1264-00-Austin Avenue Sidewalk Improvements\DWG\1264-00-Sidewalk Improvements\DWG\1264-00-Sidewalk Improvements.dwg May 15, 2023 12:23pm erangel

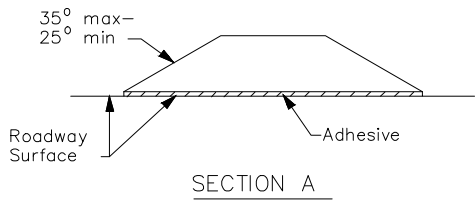
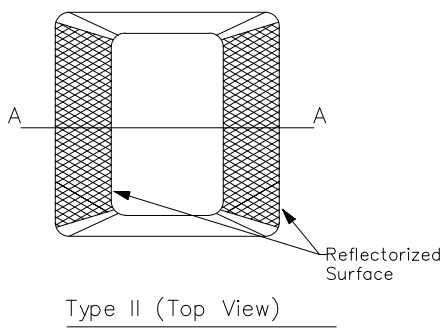


TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

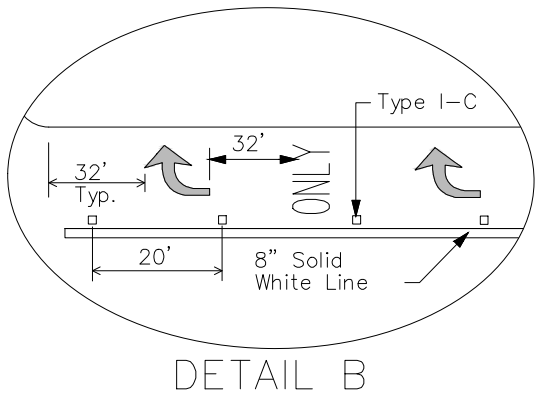
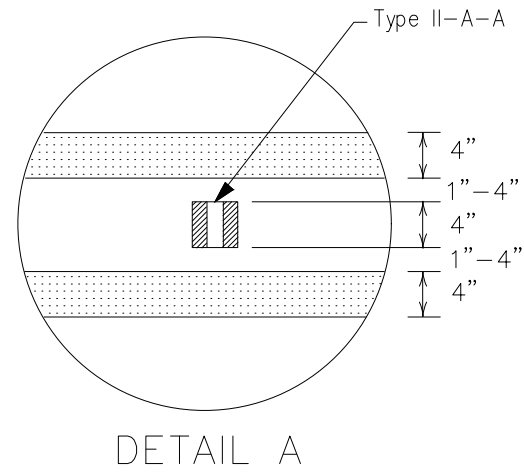


TYPICAL TWO-LANE INTERSECTION WITH LEFT TURN BAYS

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240



RAISED PAVEMENT MARKERS



GENERAL NOTES

1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.
3. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
4. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
5. Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
6. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

AUSTIN AVENUE SIDEWALK IMPROVEMENTS

PROJECT SPECIFIC DETAILS
PAVEMENT MARKING
SHEET 2 OF 2

DESIGNED: BGE	DATE	PROJECT NO.	Sheet
DRAWN: BGE	MAY 2023	11264-00	222
CHECKED: BGE			

BGE, Inc.
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Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)

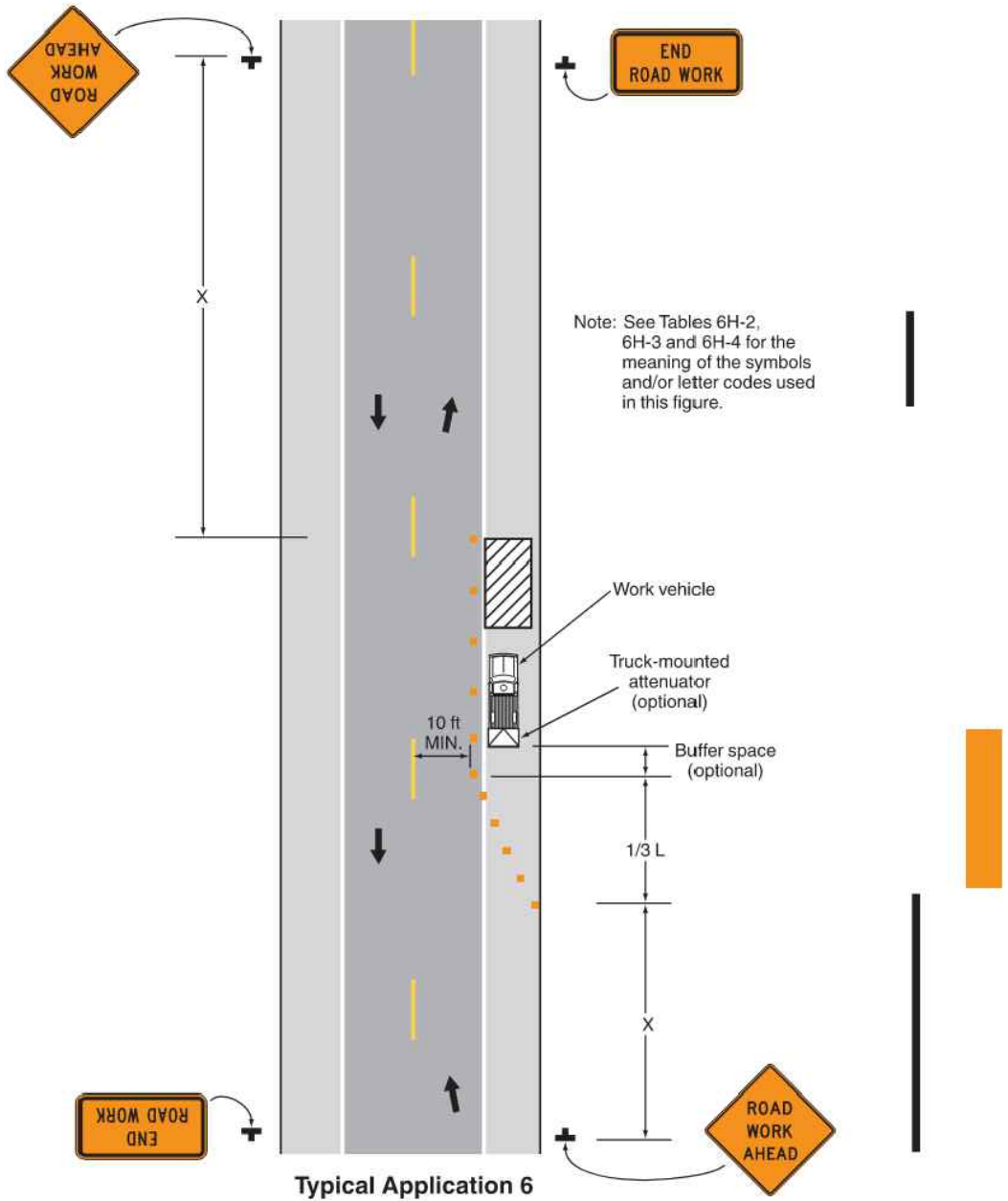


Table 6H-3. Suggested Advance Warning Sign Spacing

Road Classification	Posted Speed (MPH)	Sign Spacing "X" (Feet)
Conventional Highway	25	100
	30	120
	35	160
	40	240
	45	320
	50	400
	55*	500
	60*	600
	65*	700
	70*	800
Expressway or Freeway	75*	900
	80*	1000
Expressway or Freeway	All Speeds	See Typical Applications **

December 2011

Sect. 6H.01

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TEXAS REGISTERED ENGINEERING FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

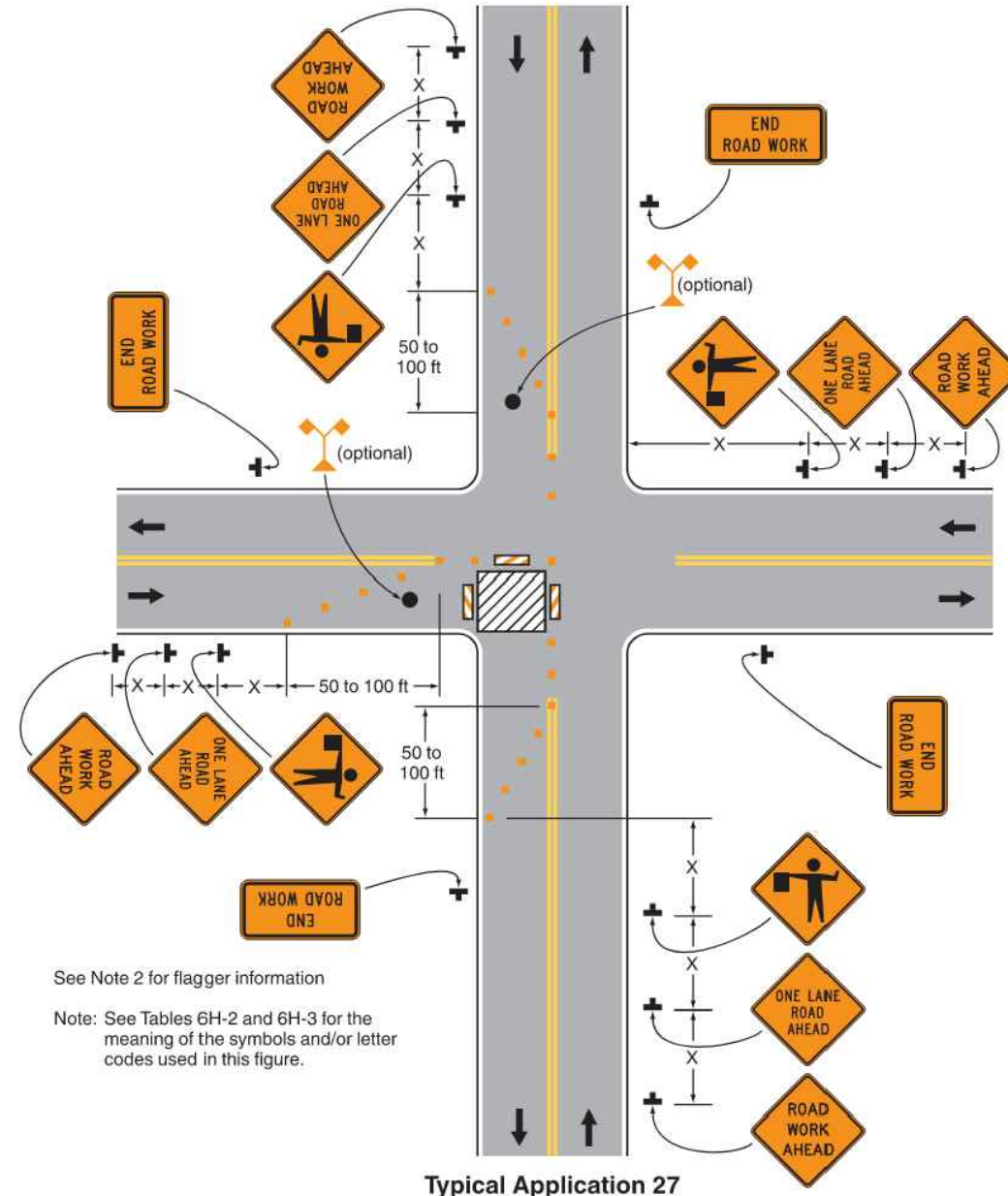
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AUSTIN AVENUE SIDEWALK IMPROVEMENTS

TMUTCD DETAILS
SHEET 1 OF 3

<div><div>BGE</div><div>BGE, Inc. 700 N Pearl St., Suite 2100, Dallas, TX 75201 Tel: 469-621-3200 • www.bgeinc.com TBPE Registration No. F-1046</div></div>		DATE	PROJECT NO.	Sheet
DESIGNED: BGE	BGE	MAY 2023	11264-00	223
DRAWN: BGE	BGE			
CHECKED: BGE	BGE			

Figure 6H-27. Closure at the Side of an Intersection (TA-27)



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Table 6H-3. Suggested Advance Warning Sign Spacing

Road Classification	Posted Speed (MPH)	Sign Spacing "X" (Feet)
Conventional Highway	25	100
	30	120
	35	160
	40	240
	45	320
	50	400
	55*	500
	60*	600
	65*	700
	70*	800
	75*	900
80*	1000	
Expressway or Freeway	All Speeds	See Typical Applications **

Sect. 6H.01

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THESE PLANS ARE ISSUED FOR
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FOR CONSTRUCTION.
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FINAL FORM THEY WILL BE
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RESPONSIBLE ENGINEER:
BGE, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-1046
CLARK GAUER, P.E.
TEXAS REGISTRATION NO. 80599
May 15, 2023

REV.	DESCRIPTION	BY	DATE

CITY OF WACO

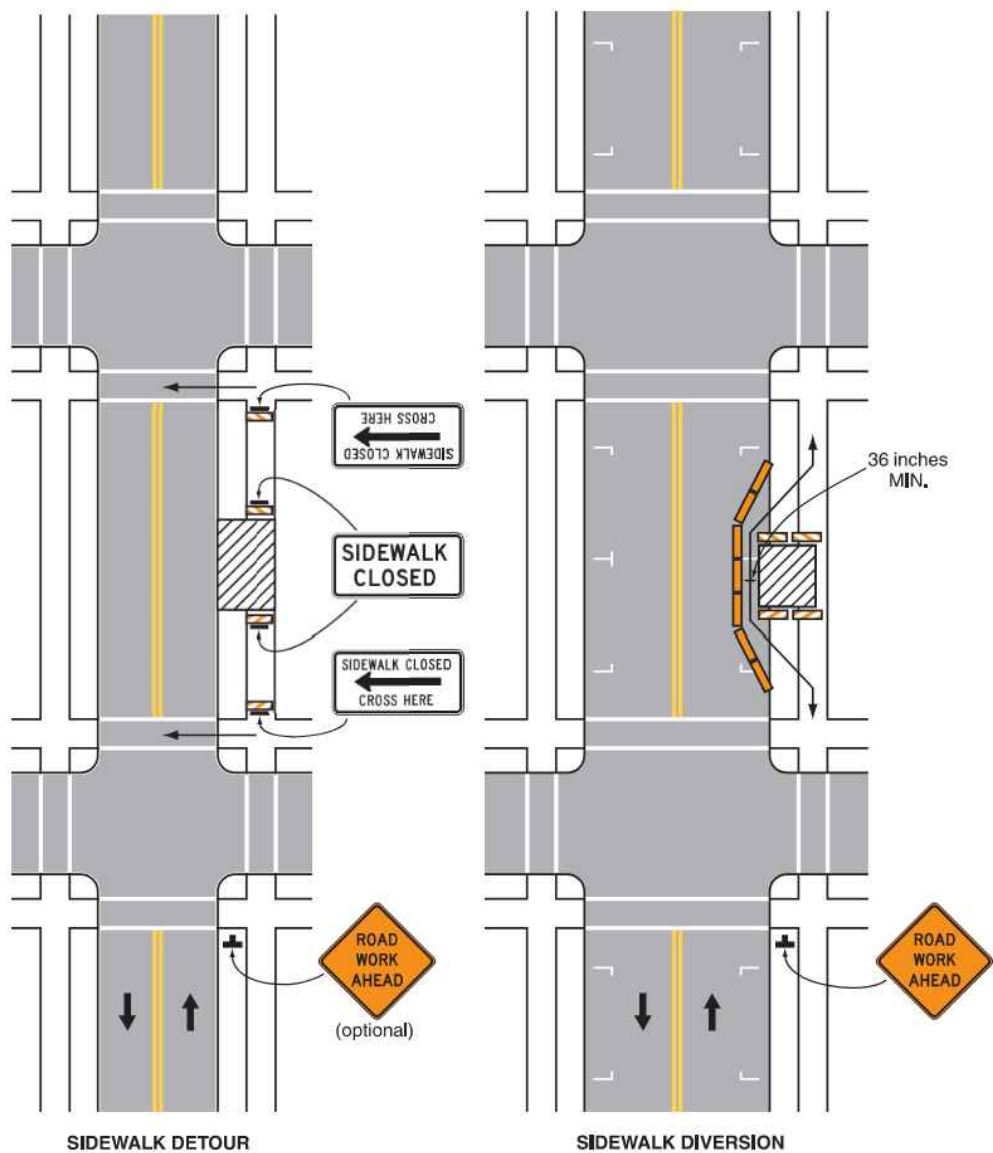
AUSTIN AVENUE SIDEWALK IMPROVEMENTS

TMUTCD DETAILS
SHEET 2 OF 3

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Figure 6H-28. Sidewalk Detour or Diversion (TA-28)



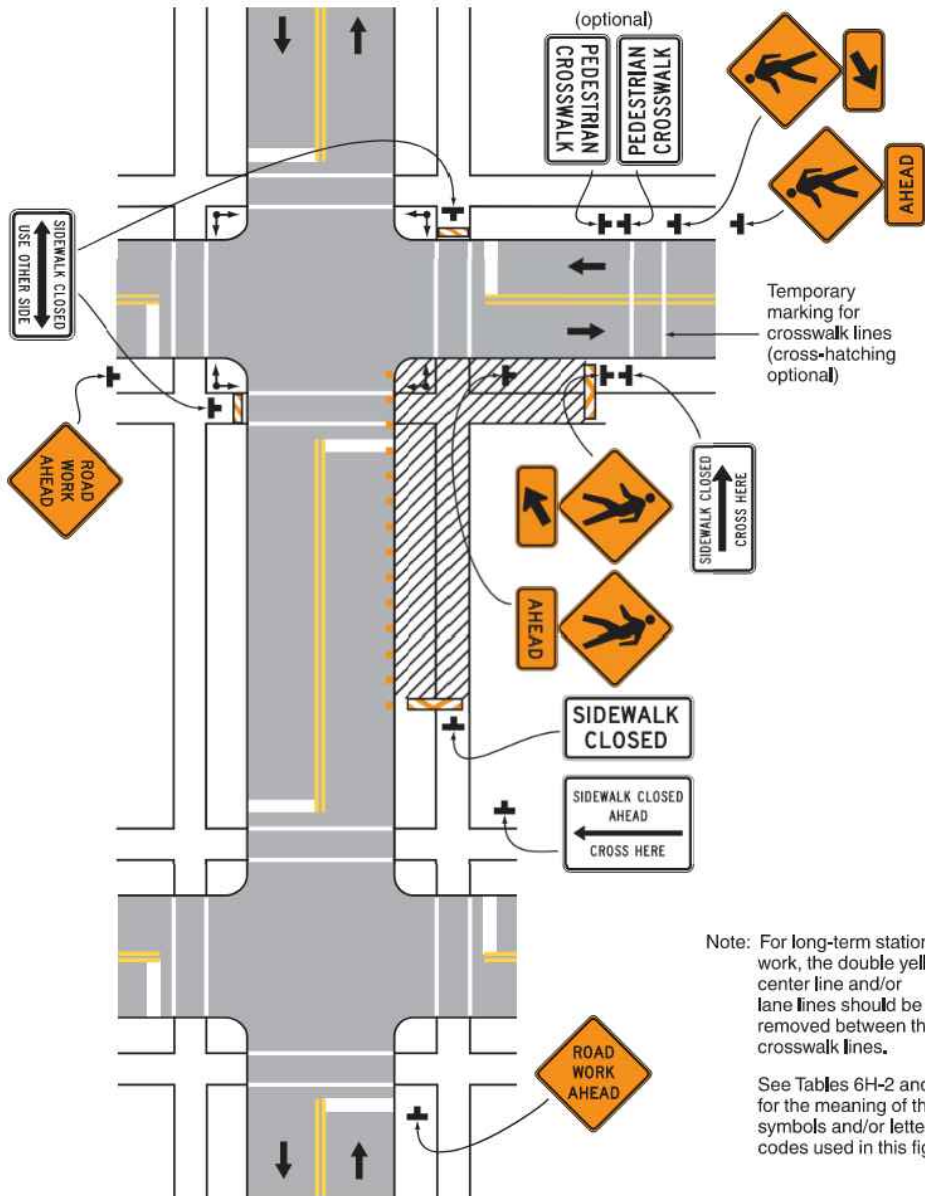
Typical Application 28

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Table 6H-3. Suggested Advance Warning Sign Spacing

Road Classification	Posted Speed (MPH)	Sign Spacing "X" (Feet)
Conventional Highway	25	100
	30	120
	35	160
	40	240
	45	320
	50	400
	55*	500
	60*	600
	65*	700
	70*	800
Expressway or Freeway	75*	900
	80*	1000
	All Speeds	See Typical Applications **

Figure 6H-29. Crosswalk Closures and Pedestrian Detours (TA-29)



Typical Application 29

Note: For long-term stationary work, the double yellow center line and/or lane lines should be removed between the crosswalk lines.
See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

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REV.	DESCRIPTION	BY	DATE

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