

ADDENDUM NO. 1

Date March 25, 2020

City of Austin

Project Name Glenlake Pump Station Bypass Improvements

C.I.P. No. 2006.024 IFB No.: CLMC787

This Addendum forms a part of the Contract and corrects or modifies original Bid Documents, dated March 23, 2020 (first advertisement date). **Acknowledge receipt of this addendum in space provided on bid form.** Failure to do so may subject bidder to disqualification.

Public Bid Opening Update

Due to the unprecedented event of COVID-19 and to help prevent the further spread, Capital Contracting Office will NOT be conducting an in person bid opening. Bidders must submit their bids and compliance plans no earlier than 10am and prior to 2:00 PM on April 30, 2020 in Suite 1045B. Bidders may turn in their bid and compliance plan at the same time. Bids and compliance plans submitted after 2:00 pm on April 30, 2020 will not be accepted. The Capital Contracting Office will open the bids at 2:30pm on April 30, 2020.

Bidders may watch the bid opening online using the following Web link: [CCO Web Bid Opening Click Here](#).

Disclaimer: The result of the bid opening does not become final until all bids are verified and the bid tab is certified. The pencil bid tab and certified bid tab will be posted in Austin Finance Online at the following link:

https://www.austintexas.gov/financeonline/account_services/solicitation/solicitations.cfm

A. Project Manual Revisions:

Section 00020, Invitation for Bids

Article 3. **Submission of Bids**

REPLACE:

Sealed Bids will be received at the Capital Contracting Office Bid Opening Desk located at One Texas Center, 505 Barton Springs Rd., Suite 1045-C, Austin, Texas 78704, and then publicly opened and read aloud in the **SUITE 1045-C, Congress Conference Room**.

ALL BIDS ARE DUE PRIOR TO (Austin time) April 30, 2020 at 10:00 AM.

ALL COMPLIANCE PLANS ARE DUE PRIOR TO (Austin time) April 30, 2020 at 2:00 PM.

BIDS WILL BE OPENED AT (Austin time) April 30, 2020 at 2:00 PM.

ALL BIDS AND COMPLIANCE PLANS NOT RECEIVED PRIOR TO THE DATE AND TIME SET FORTH ABOVE WILL NOT BE ACCEPTED FOR CONSIDERATION. The time stamp clock in SUITE 1045-C is the time of record and is verified with www.time.gov, the official U.S. time.

WITH:

Sealed Bids will be received at the Capital Contracting Office located at One Texas Center, 505 Barton Springs Rd., Suite 1045-B, Austin, Texas 78704, and then publicly opened and read aloud online via the following Web link: [CCO Web Bid Opening Click Here](#).

ALL BIDS AND COMPLIANCE PLANS ARE DUE PRIOR TO (Austin time) April 30, 2020 2:00 PM
BIDS WILL BE OPENED AT (Austin time) April 30, 2020 2:30 PM.

ALL BIDS AND COMPLIANCE PLANS NOT RECEIVED PRIOR TO THE DATE AND TIME SET FORTH ABOVE WILL NOT BE ACCEPTED FOR CONSIDERATION. The time stamp clock in SUITE 1045B is the time of record and is verified with www.time.gov, the official U.S. time.

Article 11. **Pre-Bid Conference**

REPLACE:

A **non-mandatory** Pre-Bid Conference will be held on March 31, 2020, 10:30 AM (Austin time), at One Texas Center, 505 Barton Springs Road, Ste 800, Rm. 805, Austin, Texas. A non-mandatory Pre-Bid Site Visit will be held at 9809 Glenlake Dr., Austin, TX, 78730, following the Pre-Bid Conference.

WITH:

A **non-mandatory** Pre-Bid Conference will be held on April 7, 2020, 10:30 AM (Austin time), at One Texas Center, 505 Barton Springs Road, Ste 800, Rm. 805, Austin, Texas. A non-mandatory Pre-Bid Site Visit will be held at 9809 Glenlake Dr., Austin, TX, 78730, following the Pre-Bid Conference.

B. Drawing Revisions:

REMOVE Plans/Drawings in its entirety and REPLACE with the attached.

This addendum consists of 57 page(s)/sheet(s).

Approved by OWNER

Mike Singleton, P.E. *Mike Singleton*
Approved by PROJECT MANAGER

END

REVISED 04/13/2018

TRAVIS COUNTY PRE-CONSTRUCTION NOTES: PLEASE SCHEDULE YOUR PROJECTS PRE-CONSTRUCTION MEETING USING YOUR ACCOUNT ON MYPERMITNOW.ORG AND FOLLOW-UP WITH AN EMAIL TO JOHNNY ANGLIN - JOHNNY.ANGLIN@TRAVISCOUNTYTX.GOV

CITY OF AUSTIN, TEXAS AUSTIN WATER



GLENLAKE PUMP STATION BYPASS IMPROVEMENTS

FDU 3920 2207 6584 SUB PROJECT ID: 2006.024 WATER ID NO. W-2018- 0013 CLMC787

NOTES:

- 1. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION OR CLEARING OPERATIONS. 2. CONTRACTOR SHALL CALL "ONE CALL" AT 811 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET RIGHT OF WAYS.

NOTES: GENERAL PERMIT PROGRAM APPROVAL DOES NOT CONSTITUTE UTILITY ALIGNMENT/ASSIGNMENT APPROVAL. RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT.

GENERAL PERMIT PROGRAM CORRECTIONS RECORD

TRAVIS COUNTY CORRECTIONS

Table with 8 columns: NO, DESCRIPTION, BY, CORRECT (C) ADD (D) VOID (V) SHEET NO.'s, TOTAL # SHEETS IN CORRECTION PLAN SET, GENERAL PERMIT PROGRAM APPROVAL, APPROVAL DATE, TRAVIS COUNTY APPROVAL, APPROVAL DATE

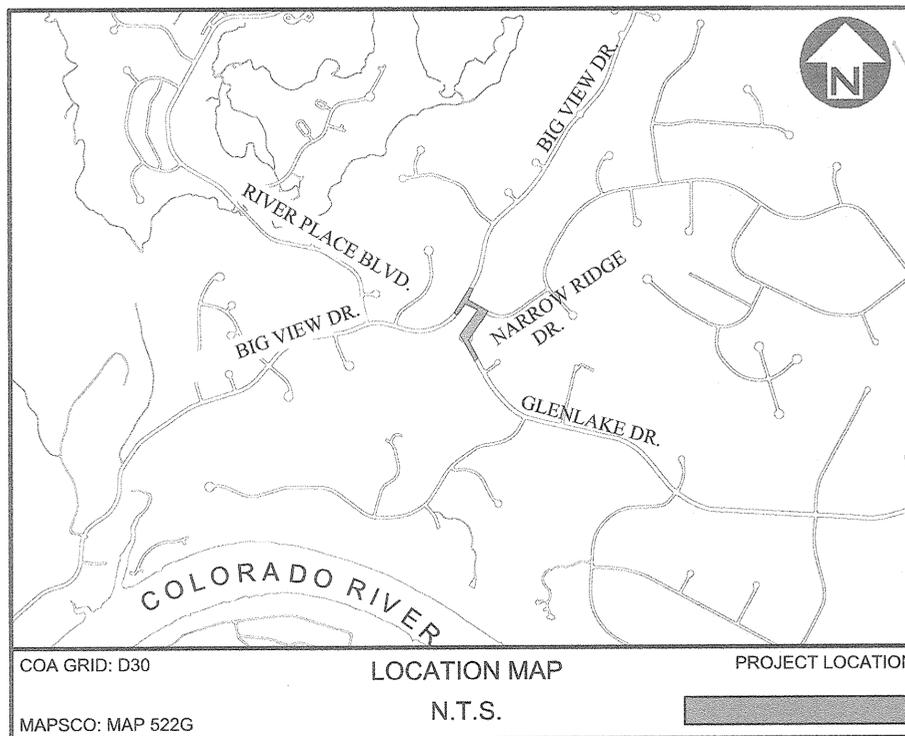


Table with 4 columns: LOCATION, MIN., TYP., MAX. for WATER PRESSURE ZONE: GLENLAKE

UCC-161103-06-01 AULCC NUMBER

PROJECT INFORMATION:

STREET ADDRESS: 9809 GLENLAKE DR. AUSTIN, TX 78730

CLIENT/SPONSOR: CITY OF AUSTIN AUSTIN WATER 625 E. 10TH STREET AUSTIN, TX 78701

PROJECT MANAGEMENT: CITY OF AUSTIN PUBLIC WORKS DEPARTMENT PROJECT MANAGEMENT DIVISION 505 BARTON SPRINGS RD., STE. 900 AUSTIN, TEXAS 78704

CONTACT: TIGER DAVIS, P.E. PHONE: (512) 972-2205 EMAIL: TIGER.DAVIS@austintwater.com

CONTACT: MICHEAL SINGLETON, P.E. PHONE: 512-974-2979 EMAIL: MICHEAL.SINGLETON@austintexas.gov

SUBMITTAL PREPARED BY:



ENGINEERING SERVICES DIVISION

CITY OF AUSTIN PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES DIVISION 505 BARTON SPRINGS RD., STE. 900 AUSTIN, TEXAS 78704

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CONTACT: THU CAO, P.E. PHONE: (512) 974-7167 FAX: (512) 974-7222 EMAIL: THU.CAO@austintexas.gov

APPROVED BY GENERAL PERMIT HOLDER:

Signature of P.E. CFM, 4/3/2018 DATE

GP-2018-0000-AW ANNUAL GENERAL PERMIT NUMBER

REVIEWED BY:

Review list with signatures and dates: [NUMBER], [Signature], 01-03-2018 DATE, [Signature], 01-03-2018 DATE, [Signature], 4/3/2018 DATE

APPROVALS:

Signature for Travis County, 9/17/18 DATE, 18-18786 TRAVIS COUNTY PERMIT NUMBER

APPROVAL FOR SITE DEVELOPMENT PERMIT:

Signature for Planning and Development Review Department, 5/17/18 DATE, GP-2018-0077-AW DEVELOPMENT PERMIT NUMBER

SUBMITTAL DATE:

4/06/18

Inspection Notice: Please contact Public Works, Construction Inspection Division at 974-1599 for arrangements for payment of inspection fees and job assignment for inspection of the public utilities related to this site.

AUSTIN WATER UTILITY EXPIRATION DATE APR 03 2020

GENERAL PERMIT PROGRAM

SINGLETON, MICHAEL

N:\IT\BAM\W\GLENLAKE\DWG\PRODUCTION\FILED\DWG\GLEN-G-CN-COVR.DWG, COA, PDF, 2/23/18, COA, FSD, STB

4/3/2018 3:45 PM

SHT	ID	Sheet Title
1	G-001	GENERAL COVER
2	G-002	INDEX SHEET
3	G-003	LEGEND SHEET
4	G-004	GENERAL CONSTRUCTION NOTES
5	G-005	TRAVIS COUNTY GENERAL CONSTRUCTION NOTES
6	G-101	OVERALL MAP & SURVEY CONTROL
7	CE-001	EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
8	CE-002	TREE PROTECTION AND ENVIRONMENTAL NOTES AND DETAILS
9	CE-101	EROSION & SEDIMENTATION CONTROL PLAN - PHASE 1 SHEET 1 OF 2
10	CE-102	EROSION & SEDIMENTATION CONTROL PLAN - PHASE 1 SHEET 2 OF 2
11	CE-103	RESTORATION PLAN - PHASE 2 SHEET 1 OF 2
12	CE-104	RESTORATION PLAN - PHASE 2 SHEET 2 OF 2
13	CE-601	TREE LIST AND TREE MITIGATION TABLE
14	V-101	PUMP STATION EXISTING CONDITIONS SHEET
15	VU-102	ISOLATION PLAN - PHASE 1
16	C-101	WATER TANKS & PUMP STATION DEMOLITION PLAN - PHASE 1
17	C-102	WATER TANKS & PUMP STATION DEMOLITION PLAN & ABANDONMENT PLAN - PHASE 2
18	CU-201	PROPOSED WATER PLAN & PROFILE - PHASE 1 WL-A BEGIN - STA. 3+50
19	CU-202	PROPOSED WATER PLAN & PROFILE - PHASE 1 WL-A STA. 3+50 - 7+50
20	CU-203	PROPOSED WATER PLAN & PROFILE - PHASE 1 WL-A STA. 7+50 - END & WL-B BEGIN - END
21	CU-204	WL-A & PRV & FLOW METER PLAN - PHASE 1
22	CU-205	PROPOSED WATER PLAN & PROFILE - PHASE 1 WL-C BEGIN - END
23	CU-501	PROPOSED PRV DETAILS - SHEET 1 OF 2
24	CU-502	PROPOSED PRV DETAILS - SHEET 2 OF 2
25	CU-503	STANDARD DETAILS SHEET 1 OF 4
26	CU-504	STANDARD DETAILS SHEET 2 OF 4
27	CU-505	STANDARD DETAILS SHEET 3 OF 4
28	CU-506	STANDARD DETAILS SHEET 4 OF 4
29	CT-001	TRAFFIC CONTROL NOTES
30	CT-101	TEMPORARY TRAFFIC CONTROL GLENLAKE DR. - PHASE 1 SHEET 1 OF 2
31	CT-102	TEMPORARY TRAFFIC CONTROL GLENLAKE DR. - PHASE 1 SHEET 2 OF 2
32	CT-103	TEMPORARY TRAFFIC CONTROL NARROW RIDGE DR. - PHASE 1 SHEET 1 OF 2
33	CT-104	TEMPORARY TRAFFIC CONTROL NARROW RIDGE DR. - PHASE 1 SHEET 2 OF 2
34	CT-105	TEMPORARY TRAFFIC CONTROL BIG VIEW DR. - PHASE 1 SHEET 1 OF 2
35	CT-106	TEMPORARY TRAFFIC CONTROL BIG VIEW DR. - PHASE 1 SHEET 2 OF 2
36	CT-107	TEMPORARY TRAFFIC CONTROL GLENLAKE DR - PHASE 2 SHEET 1 OF 2
37	CT-108	TEMPORARY TRAFFIC CONTROL GLENLAKE DR - PHASE 2 SHEET 2 OF 2
38	CT-501	TRAFFIC CONTROL DETAILS - SHEET 1 OF 5
39	CT-502	TRAFFIC CONTROL DETAILS - SHEET 2 OF 5
40	CT-503	TRAFFIC CONTROL DETAILS - SHEET 3 OF 5
41	CT-504	TRAFFIC CONTROL DETAILS - SHEET 4 OF 5
42	CT-505	TRAFFIC CONTROL DETAILS - SHEET 5 OF 5
43	G	PPS COVER - SHEET INDEX
44	CG-1	GENERAL CIVIL NOTES (NOT USED)
44	CG-2	GENERAL CIVIL DETAILS
43	CG-3	TRAFFIC CONTROL DETAILS # 1 (NOT USED)
44	CG-4	TRAFFIC CONTROL DETAILS # 2 (NOT USED)
45	CG-5	TRAFFIC CONTROL DETAILS # 3 (NOT USED)
45	SG-1	STRUCTURE GENERAL NOTES
46	SG-2	STRUCTURE GENERAL NOTE / DETAILS
47	EG-1	ELECTRICAL SYMBOLS LEGEND AND GENERAL NOTES
48	EG-2	ELECTRICAL SERVICE DIAGRAMS AND DETAILS
49	EG-3	ELECTRICAL DETAILS
50	IG-1	INSTRUMENTATION & SCADA PROCESS & INSTRUMENTATION DIAGRAM SYMBOLS & LEGEND
51	IG-2	INSTRUMENTATION AND SCADA SYMBOLS LEGEND/NOTES
52	IG-3	INSTRUMENTATION SCADA PP NO.72 PROCESS AND INSTRUMENTATION DIAGRAM
53	IG-4	TYPICAL INSTRUMENTATION INSTALLATION DETAILS (SHEET 1 OF 2)
54	IG-5	TYPICAL INSTRUMENTATION INSTALLATION DETAILS (SHEET 2 OF 2)
55	PP72.C1	CIVIL SITE PLAN RENOVATION PRESSURE POINT STATION #72
57	PP72.C2	CIVIL SITE DETAILS PRESSURE POINT STATION #72 (NOT USED)
58	PP72.E1.H	ELECTRICAL PLAN PRESSURE POINT STATION #72 (NOT USED)

REVISION DESCRIPTION		DATE	BY
1	REVISE PHASES IN SHEET TITLES	3/5/2019	TC
2	REPLACEMENT SHEET WITH	2/10/2020	TC
3	RENUMBER SHEETS FROM 5 TO 55		



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC # 93976 02/10/2020

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
INDEX SHEET



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



ENGINEERING SERVICES DIVISION

GP-2018-0000-AW

G-002 2 OF 55

REVIEWED
February 20, 2020
George R. Austin Water
George R.
Update project information

REPLACEMENT SHEET

N:\TEAM\AVU_GLENLAKE\DWG\PRODUCTION_FILES\DWG\GLEN-G-01\INDEX.DWG_COA_PDF_22X34_COA_ESD.STB

EXISTING FEATURES

	CENTERLINE		BRASS DISK FOUND		STORM DRAIN AREA INLET		COMMUNICATION PEDESTAL
	RIGHT OF WAY LINE		BRASS DISK SET		DRAINAGE ARROW		COMM. JUNCTION BOX
	PROPERTY LINE		BOLT FOUND		STORM DRAIN CURB INLET		COMMUNICATION MANHOLE
	EASEMENT LINE		BOLT SET		STORM DRAIN CLEANOUT		COMMUNICATION POLE
	FLOOD HAZARD ZONE 25 YEAR		BENCHMARK FOUND		STORM DRAIN GRATE INLET		COMMUNICATION VAULT
	FLOOD HAZARD ZONE 100 YEAR		BENCHMARK SET		STORM DRAIN HEADWALL		FIBER OPTIC MANHOLE
	CRITICAL WATER QUALITY ZONE		CALCULATED POINT		STORM DRAIN MANHOLE		FIBER OPTIC JUNCTION BOX
	TRANSITION WATER QUALITY ZONE		CONTROL POINT FOUND		STORM DRAIN WINGWALL		ELECTRIC ANCHOR
	DRAINAGE EDGE		CONTROL POINT SET		WASTEWATER CLEANOUT		ELECTRIC JUNCTION BOX
	DRAINAGE CENTERLINE		COTTON SPINDLE FOUND		WASTEWATER MANHOLE		ELECTRIC LIGHT POLE
	DITCH EDGE		COTTON SPINDLE SET		WASTEWATER METER		ELECTRIC MANHOLE
	TIME OF CONCENTRATION		DRILL HOLE FOUND		WASTEWATER CAP		ELECTRIC METER
	MAJOR CONTOURS		DRILL HOLE SET		WATER AIR FLUSH VALVE		ELECTRIC POLE
	MINOR CONTOURS		HUB & TACK FOUND		WATER AIR RELEASE VALVE		ELECTRIC VAULT
	PAVED ROAD EDGE		HUB & TACK SET		WATER CAP		ELECTRIC TOWER
	PAVED PARKING / DRIVEWAY EDGE		IRON PIPE FOUND		WATER DRAINAGE VALVE		CHILLED WATER MANHOLE
	GRAVEL EDGE		IRON PIPE SET		WATER FIRE CONNECTION		CHILLED WATER VALVE
	CURB LINE		IRON ROD FOUND		WATER FIRE HYDRANT		NATURAL GAS LIGHT
	BUILDING LINE		IRON ROD SET		WATER MANHOLE		NATURAL GAS MANHOLE
	GUARDRAIL		MONUMENT FOUND		WATER METER		NATURAL GAS METER
	HANDRAIL		MONUMENT SET		WATER REDUCER		NATURAL GAS VALVE
	CHAINLINK FENCE		MAGNAIL FOUND		WATER SHUTOFF VALVE		NATURAL GAS VENT
	BARBWIRE FENCE		MAGNAIL SET		WATER VALVE		IRRG. CONTROL VALVE
	WOOD FENCE		PROPERTY PIN FOUND		WATER WELL		SPRINKLER CONTROL VALVE
	STEEL FENCE		PROPERTY PIN SET		TEMP. BENCHMARK FOUND		IRRIGATION HOSE BIB
	FENCE LINE		TEMP. BENCHMARK SET		CROSS FOUND		RECLAIMED WATER MANH.
	STONE / ROCK WALL		CROSS SET		BIKE RACK		RECLAIMED WATER METER
	BRICK WALL		BOLLARD		BENCH		TRAF. SIGNAL MANHOLE
	TREE LINE		BENCH		BUS STOP		TRAF. SIGNAL CONTROL BOX
	COMMUNICATION OVERHEAD		GARBAGE CAN		TREE GRATE		TRAF. SIGNAL PULL BOX
	COMMUNICATION UNDERGROUND		GUARDRAIL POST		SIGN		TRAF. SIGNAL LIGHT & SIGN.
	FIBER OPTIC OVERHEAD		MAILBOX		MANHOLE UNKNOWN		TRAF. SIGNAL SIGN. EXTEND.
	FIBER OPTIC UNDERGROUND		PARKING METER		TEST PIT		
	TRAFFIC SIGNAL OVERHEAD		POST		BORE HOLE		
	TRAFFIC SIGNAL UNDERGROUND		RAMP		RAILROAD SIGNAL		
	ELECTRIC OVERHEAD		TREE GRATE		SHRUB		
	ELECTRIC UNDERGROUND		SIGN		TREE		
	CHILLED WATER LINE		MANHOLE UNKNOWN				
	NATURAL GAS LINE		TEST PIT				
	NATURAL GAS ABANDONED		BORE HOLE				
	RECLAIMED WATER LINE		RAILROAD SIGNAL				
	RECLAIMED WATER ABANDONED		SHRUB				
	IRRIGATION LINE		TREE				
	IRRIGATION ABANDONED						
	STORM DRAIN LINE						
	STORM DRAIN ABANDONED						
	WATER LINE						
	WATER ABANDONED						
	WASTEWATER LINE						
	FORCE MAIN LINE						
	WASTEWATER ABANDONED						
	FORCE MAIN ABANDONED						

PROPOSED FEATURES

	CENTERLINE		IRRIGATION LINE		COMMUNICATION PEDESTAL
	RIGHT OF WAY LINE		IRRIGATION TO ABANDON		COMM. JUNCTION BOX
	PROPERTY LINE		IRRIGATION DEMOLITION		COMMUNICATION MANHOLE
	EASEMENT LINE		STORM DRAIN LINE		COMMUNICATION POLE
	FLOOD HAZARD ZONE 25 YEAR		STORM DRAIN TO ABANDON		COMMUNICATION VAULT
	FLOOD HAZARD ZONE 100 YEAR		STORM DRAIN DEMOLITION		FIBER OPTIC MANHOLE
	CRITICAL WATER QUALITY ZONE		PERFORATED DRAIN		FIBER OPTIC JUNCTION BOX
	TRANSITION WATER QUALITY ZONE		WATER LINE		ELECTRIC ANCHOR
	DRAINAGE EDGE		WATER TO ABANDON		ELECTRIC JUNCTION BOX
	DRAINAGE CENTERLINE		WATER DEMOLITION		ELECTRIC LIGHT POLE
	DITCH EDGE		WASTEWATER LINE		ELECTRIC MANHOLE
	TIME OF CONCENTRATION		FORCE MAIN LINE		ELECTRIC METER
	MAJOR CONTOURS		WASTEWATER TO ABANDON		ELECTRIC POLE
	MINOR CONTOURS		FORCE MAIN TO ABANDON		ELECTRIC VAULT
	PAVED ROAD EDGE		WASTEWATER DEMOLITION		ELECTRIC TOWER
	PAVED PARKING / DRIVEWAY EDGE		FORCE MAIN DEMOLITION		CHILLED WATER MANHOLE
	GRAVEL EDGE				CHILLED WATER VALVE
	CURB LINE		BIKE RACK		STORM DRAIN AREA INLET
	BUILDING LINE		BOLLARD		DRAINAGE ARROW
	GUARDRAIL		BENCH		STORM DRAIN CURB INLET
	HANDRAIL		BUS STOP		STORM DRAIN CLEANOUT
	CHAINLINK FENCE		GARBAGE CAN		STORM DRAIN GRATE INLET
	BARBWIRE FENCE		GUARDRAIL POST		STORM DRAIN HEADWALL
	WOOD FENCE		MAILBOX		STORM DRAIN MANHOLE
	STEEL FENCE		PARKING METER		STORM DRAIN WINGWALL
	FENCE LINE		POST		WASTEWATER CLEANOUT
	STONE / ROCK WALL		RAMP		WASTEWATER MANHOLE
	BRICK WALL		TREE GRATE		WASTEWATER METER
	TREE LINE		SIGN		WASTEWATER CAP
	COMMUNICATION OVERHEAD		RAILROAD SIGNAL		WATER AIR FLUSH VALVE
	COMMUNICATION UNDERGROUND		SHRUB		WATER AIR RELEASE VALVE
	FIBER OPTIC OVERHEAD		TREE		WATER CAP
	FIBER OPTIC UNDERGROUND				WATER DRAINAGE VALVE
	TRAFFIC SIGNAL OVERHEAD				WATER FIRE CONNECTION
	TRAFFIC SIGNAL UNDERGROUND				WATER FIRE HYDRANT
	ELECTRIC OVERHEAD				WATER MANHOLE
	ELECTRIC UNDERGROUND				WATER METER
	CHILLED WATER LINE				WATER REDUCER
	NATURAL GAS LINE				WATER SHUTOFF VALVE
	NATURAL GAS ABANDONED				WATER VALVE
	RECLAIMED WATER LINE				WATER WELL
	RECLAIMED WATER ABANDONED				
	IRRIGATION LINE				
	IRRIGATION ABANDONED				
	STORM DRAIN LINE				
	STORM DRAIN ABANDONED				
	WATER LINE				
	WATER ABANDONED				
	WASTEWATER LINE				
	FORCE MAIN LINE				
	WASTEWATER ABANDONED				
	FORCE MAIN ABANDONED				

	BIKE RACK		STORM DRAIN AREA INLET		COMMUNICATION PEDESTAL
	BOLLARD		DRAINAGE ARROW		COMM. JUNCTION BOX
	BENCH		STORM DRAIN CURB INLET		COMMUNICATION MANHOLE
	BUS STOP		STORM DRAIN CLEANOUT		COMMUNICATION POLE
	GARBAGE CAN		STORM DRAIN GRATE INLET		COMMUNICATION VAULT
	GUARDRAIL POST		STORM DRAIN HEADWALL		FIBER OPTIC MANHOLE
	MAILBOX		STORM DRAIN MANHOLE		FIBER OPTIC JUNCTION BOX
	PARKING METER		STORM DRAIN WINGWALL		ELECTRIC ANCHOR
	POST		WASTEWATER CLEANOUT		ELECTRIC JUNCTION BOX
	RAMP		WASTEWATER MANHOLE		ELECTRIC LIGHT POLE
	TREE GRATE		WASTEWATER METER		ELECTRIC MANHOLE
	SIGN		WASTEWATER CAP		ELECTRIC METER
	RAILROAD SIGNAL		WATER AIR FLUSH VALVE		ELECTRIC POLE
	SHRUB		WATER AIR RELEASE VALVE		ELECTRIC VAULT
	TREE		WATER CAP		ELECTRIC TOWER
			WATER DRAINAGE VALVE		CHILLED WATER MANHOLE
			WATER FIRE CONNECTION		CHILLED WATER VALVE
			WATER FIRE HYDRANT		NATURAL GAS LIGHT
			WATER MANHOLE		NATURAL GAS MANHOLE
			WATER METER		NATURAL GAS METER
			WATER REDUCER		NATURAL GAS VALVE
			WATER SHUTOFF VALVE		NATURAL GAS VENT
			WATER VALVE		IRRG. CONTROL VALVE
			WATER WELL		SPRINKLER CONTROL VALVE
					SPRINKLER HEAD
					IRRIGATION HOSE BIB
					RECLAIMED WATER MANH.
					RECLAIMED WATER METER
					RECLAIMED WATER VALVE
					TRAF. SIGNAL MANHOLE
					TRAF. SIGNAL CONTROL BOX
					TRAF. SIGNAL PULL BOX
					TRAF. SIGNAL LIGHT & SIGN.
					TRAF. SIGNAL SIGN. EXTEND.

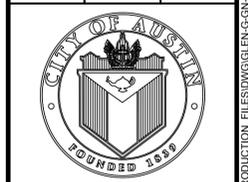
REV. NO.	BY	DATE	REVISION DESCRIPTION

STATE OF TEXAS
 PROFESSIONAL ENGINEER
 THU CAO
 93976
 LIC. # 93976
 03/27/2018

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 LEGEND SHEET

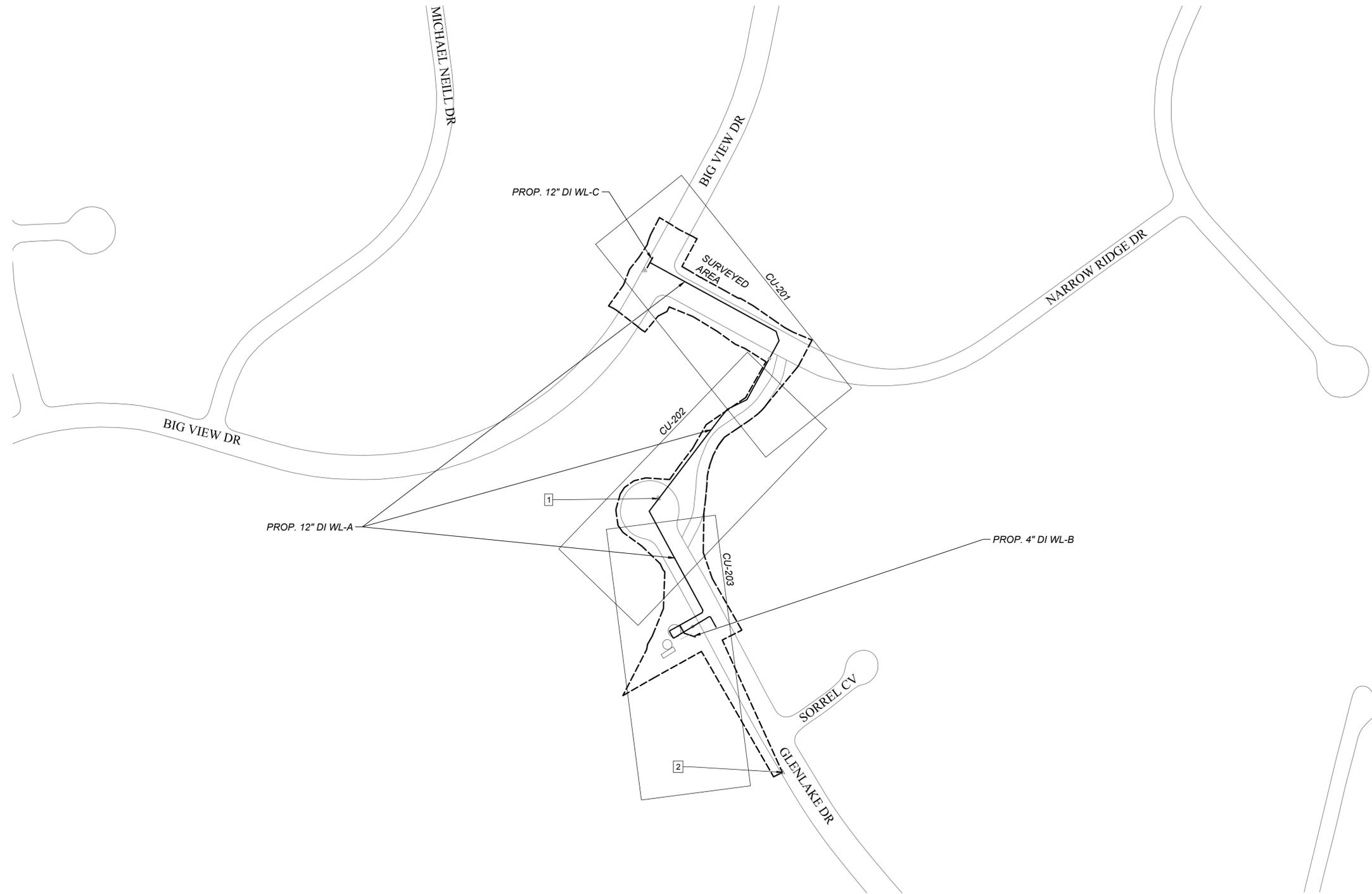


NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ESD
 ENGINEERING SERVICES
 DIVISION

GP-2018-0000-AW

G-003 3 OF 55



CONTROL POINT TABLE						
POINT NO.	NORTHING (GRID)	EASTING (GRID)	NORTHING (PLAN)	EASTING (PLAN)	ELEVATION	DESCRIPTION
1	10103986.49	3079170.98	10103986.49	3079170.98	944.40	CPS COTTON SPINDLE
2	10103514.95	3079385.69	10103514.90	3079385.71	938.37	CPS COTTON SPINDLE

- GRID COORDINATE VALUES ARE TEXAS STATE PLANE COORDINATES NAD 83 (2011) EPOCH 2010, CENTRAL ZONE. THE GRID COORDINATES FOR CONTROL POINT 1 ARE EQUAL TO THE PLAN COORDINATES (SURFACE DISTANCE COORDINATE VALUES) FOR CONTROL POINT 1 FOR THIS PROJECT.
- CONTROLLING MONUMENTS FOR THIS PROJECT ARE POINT 1 AND POINT 2 AND THE GRID COORDINATES FOR BOTH POINTS WERE ESTABLISHED FROM MEANED MULTIPLE VRS GPS OBSERVATIONS.
- ELEVATIONS WERE ESTABLISHED UTILIZING MEANED VRS GPS OBSERVATIONS ON CONTROL POINTS. THE BASIS OF THESE ELEVATIONS ARE NAVD 88 (GEOID 12A).
- TEMPORARY BENCHMARK COTTON SPINDLE SET IN POWER POLE APPROX. 2' WEST OF CURB AND NEAR NORTHEAST CORNER OF CITY OF AUSTIN TRACT AT 9809 GLENLAKE DRIVE. ELEV.: 948.19'
- THE COMBINED SCALE FACTOR FOR THIS PROJECT IS 0.9999026483

NOTES:
 DESIGN SURVEY WAS CONDUCTED BY CITY OF AUSTIN PWD/QMD.
 QUALITY MANAGEMENT DIVISION
 PUBLIC WORKS DEPARTMENT
 CITY OF AUSTIN
 505 BARTON SPRINGS ROAD, SUITE 760
 AUSTIN, TEXAS 78704
 CONTACT MARY HAWKINS, R.P.L.S.
 PHONE: (512)974-2661
 EMAIL: Mary.Hawkins@austintexas.gov

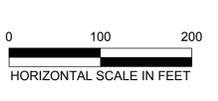
REV. NO.	BY	DATE	REVISION DESCRIPTION

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976
 I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 OVERALL MAP & SURVEY CONTROL



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



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**CITY OF AUSTIN - STANDARD NOTES
EROSION AND SEDIMENTATION CONTROL
(MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)**

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR EXCAVATION).

2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.

3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.

4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER, PERMIT APPLICANT, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND THE TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE GENERAL PERMIT PROGRAM OFFICE AT 512/974-6330, AT LEAST 3 DAYS PRIOR TO THE MEETING DATE.

5. ANY SIGNIFICANT VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE REVIEWING ENGINEER AND THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT DAILY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES. SILT ACCUMULATION AT INLET DEVICES SHOULD BE REMOVED WHEN THE DEPTH REACHES TWO (2) INCHES.

7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.

8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS ONE SQUARE FOOT OR LARGER IN TOTAL AREA, BLOWS AIR FROM WITHIN THE SUBSTRATE, AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME, IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT THE GENERAL PERMIT PROGRAM REPRESENTATIVE FOR FURTHER INVESTIGATION.

9. FIELD REVISIONS TO THE EROSION/SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES. ANY REVISIONS TO THE PERMITTED PLAN MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.

10. PERMANENT EROSION/SEDIMENTATION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE THE CRITERIA MANUAL AND CONTRACT DOCUMENTS DIFFER THE MOST ENVIRONMENTALLY BENEFICIAL MATERIALS/METHOD SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

11. DEVELOPER INFORMATION:

OWNER: AUSTIN WATER
COMPANY: CITY OF AUSTIN
CONTACT: TIGER DAVIS, P.E.

ADDRESS: 625 E. 10TH ST.
AUSTIN, TX 78701

PHONE: 512-972-2205
E-MAIL: TIGER.DAVIS@AUSTINTEXAS.GOV

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
COMPANY: CITY OF AUSTIN, PUBLIC WORKS DEPT.

CONTACT: THU CAO, PE
ADDRESS: 505 BARTON SPRINGS RD., SUITE 900
AUSTIN, TX 78704

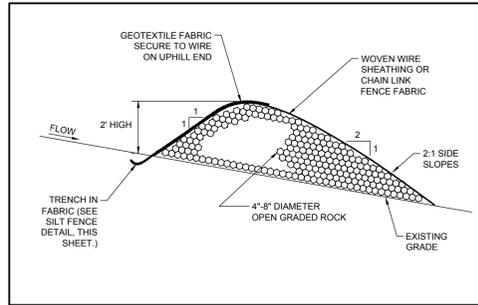
PHONE: 512-974-7167
E-MAIL: THU.CAO@AUSTINTEXAS.GOV

PARTY RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
COMPANY: CONTRACTOR

PARTY RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
COMPANY: CONTRACTOR

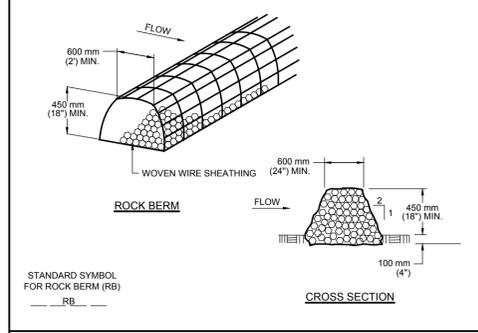
12. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE GENERAL PERMIT PROGRAM REPRESENTATIVE, AT 974-6330, AT LEAST 48 HOURS PRIOR TO THE SPOILS REMOVAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

13. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY PRIOR TO STREET WORK, AND WILL BE REMOVED AS SOON AS THE GENERAL PERMIT PROGRAM REPRESENTATIVE AGREES THAT THERE IS NO POTENTIAL FOR SEDIMENTATION.



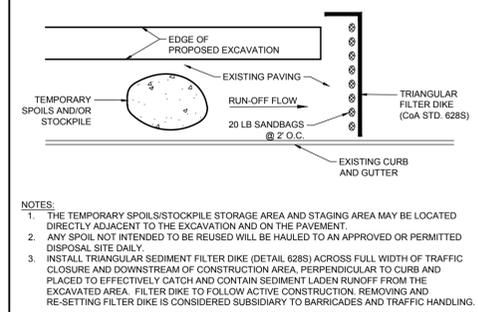
- NOTES:**
- USE ONLY OPEN GRADED ROCK, 4-8 INCH DIAMETER, FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK, 3-5 INCH DIAMETER, FOR OTHER CONDITIONS.
 - ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
 - ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
 - WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
 - DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
 - WHEN SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/01/2011 ADOPTED	FABRIC COVERED (SEVERE SERVICE) ROCK BERM	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/01/2011 ADOPTED	SILT FENCE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MAPI VIGIL 10/30/09 ADOPTED	FILTER DIKE CURB INLET PROTECTION	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK
GENERAL PERMIT PROGRAM N/A APPROVED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. N/A	STANDARD NO. 642S-1	STANDARD NO. 628S-2	STANDARD NO. 648S-1	STANDARD NO. 648S-1	STANDARD NO. 648S-1



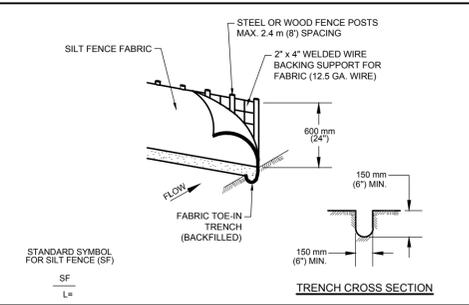
- NOTES:**
- USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
 - THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
 - THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
 - IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
 - WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 8/24/2010 ADOPTED	ROCK BERM	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	STABILIZED CONSTRUCTION ENTRANCE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY J. PATRICK MURPHY 3/27/00 ADOPTED	TRIANGULAR SEDIMENT FILTER DIKE
STANDARD NO. 639S-1	STANDARD NO. 641S-1	STANDARD NO. 628S	STANDARD NO. 628S	STANDARD NO. 628S	



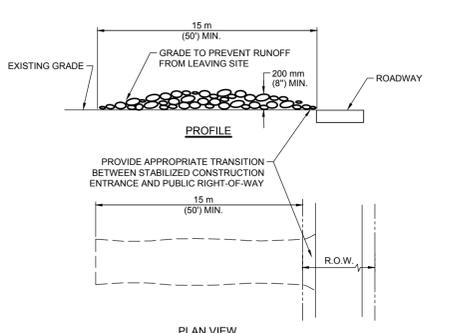
ADDITIONAL EROSION/SEDIMENTATION CONTROL FOR WORK IN PAVED AREAS FOR GENERAL PERMIT PROGRAM PROJECTS

- NOTES:**
- THE TEMPORARY SPOILS/STOCKPILE STORAGE AREA AND STAGING AREA MAY BE LOCATED DIRECTLY ADJACENT TO THE EXCAVATION AND ON THE PAVEMENT.
 - ANY SPOIL NOT INTENDED TO BE REUSED WILL BE HAULED TO AN APPROVED OR PERMITTED DISPOSAL SITE DAILY.
 - INSTALL TRIANGULAR SEDIMENT FILTER DIKE (DETAIL 628S) ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA, PERPENDICULAR TO CURB AND PLACED TO EFFECTIVELY CATCH AND CONTAIN SEDIMENT LADEN RUNOFF FROM THE EXCAVATED AREA. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION, REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.



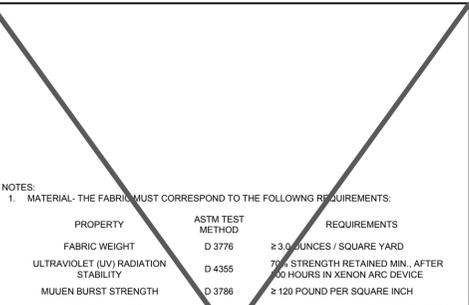
- NOTES:**
- STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 INCHES) DEPTH, USE STEEL POSTS.
 - THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
 - THE TRENCH MUST BE A MINIMUM OF 150 mm (6 INCHES) DEEP AND 150 mm (6 INCHES) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 - SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 - SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 INCHES). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/01/2011 ADOPTED	FABRIC COVERED (SEVERE SERVICE) ROCK BERM	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MAPI VIGIL 10/30/09 ADOPTED	SILT FENCE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MAPI VIGIL 10/30/09 ADOPTED	FILTER DIKE CURB INLET PROTECTION	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK
GENERAL PERMIT PROGRAM N/A APPROVED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. N/A	STANDARD NO. 642S-1	STANDARD NO. 628S-2	STANDARD NO. 648S-1	STANDARD NO. 648S-1	STANDARD NO. 648S-1



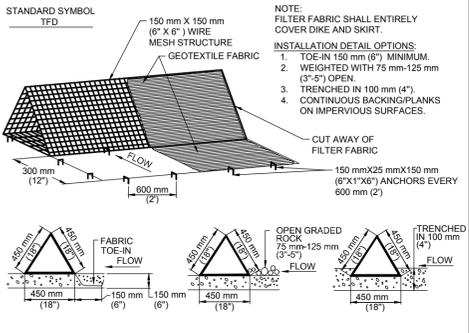
- NOTES:**
- STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
 - LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
 - THICKNESS: NOT LESS THAN 200 mm (8").
 - WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
 - WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
 - MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
 - DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	STABILIZED CONSTRUCTION ENTRANCE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY J. PATRICK MURPHY 3/27/00 ADOPTED	TRIANGULAR SEDIMENT FILTER DIKE
STANDARD NO. 641S-1	STANDARD NO. 628S	STANDARD NO. 628S	STANDARD NO. 628S



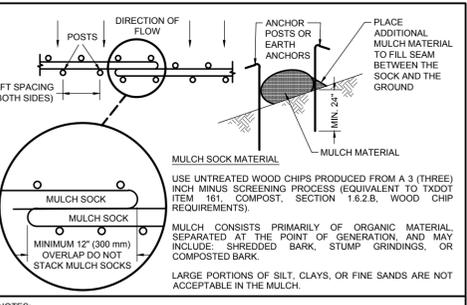
- NOTES:**
- MATERIAL - THE FABRIC MUST CORRESPOND TO THE FOLLOWING REQUIREMENTS:
- | PROPERTY | ASTM TEST METHOD | REQUIREMENTS |
|--------------------------------------|------------------|--|
| FABRIC WEIGHT | D 3776 | ≥ 3.0 LANCES / SQUARE YARD |
| ULTRAVIOLET (UV) RADIATION STABILITY | D 4355 | 70% STRENGTH RETAINED MIN. AFTER 100 HOURS IN XENON ARC DEVICE |
| MUEN BURST STRENGTH | D 3786 | ≥ 120 POUND PER SQUARE INCH |
| WATER FLOW RATE | D 4491 | ≥ 275 GALLONS / MINUTE / SQUARE FEET |
- THIS MATERIAL SHOULD HAVE A MAXIMUM EXPECTED USEFUL LIFE OF APPROXIMATELY EIGHTEEN (18) MONTHS. THE INLET PROTECTION DEVICES SHOULD BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN OUT AND DISPOSAL OF TRAPPED SEDIMENT WHILE MINIMIZING INTERFERENCE WITH CONSTRUCTION ACTIVITIES. THEY SHOULD ALSO BE CONSTRUCTED SUCH THAT ANY PONDING OF STORM WATER WILL NOT CAUSE EXCESSIVE R.O.W. FLOODING (I.E. < 4 INCHES OF STANDING WATER) OR DAMAGE TO THE STRUCTURE OR ADJACENT AREAS.
 - COVERAGE - THE FABRIC / WIRE SHOULD COMPLETELY COVER THE OPENING OF THE INLET AND DEVICES SHOULD BE INSTALLED WITHOUT PROTRUDING PARTS THAT COULD BE A TRAFFIC, WORKER, OR PEDESTRIAN HAZARD. WHERE SECTIONS OF THE FABRIC OVERLAP, THEY SHALL OVERLAP AT LEAST THREE (3) INCHES.
 - THE INLET FILTER SHALL BE ATTACHED IN A WAY THAT THEY CAN EASILY BE REMOVED AND ARE NOT SECURED OR ATTACHED BY THE USE OF SAND BAGS. THE INLET FILTER MUST BE REMOVED UPON COMPLETION OF WORK. IF REMOVAL DAMAGES THE CONCRETE CURB, THE CURB MUST BE REPAIRED IMMEDIATELY.
 - DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN THE DEPTH REACHES 50 MM (2 INCHES) INCHES OR ONE THIRD THE HEIGHT OF THE INLET THROAT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
 - CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORMWATER BEGINS TO OVERTOP THE CURB.
 - INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT HAS ACHIEVED FINAL STABILIZATION CONDITIONS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MAPI VIGIL 10/30/09 ADOPTED	FABRIC COVERED (SEVERE SERVICE) ROCK BERM	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MAPI VIGIL 10/30/09 ADOPTED	SILT FENCE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MAPI VIGIL 10/30/09 ADOPTED	FILTER DIKE CURB INLET PROTECTION	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK
GENERAL PERMIT PROGRAM N/A APPROVED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. N/A	STANDARD NO. 642S-1	STANDARD NO. 628S-2	STANDARD NO. 648S-1	STANDARD NO. 648S-1	STANDARD NO. 648S-1



- GENERAL NOTES:**
- DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
 - THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
 - THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
 - DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES OR 600 mm (24") CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (3/4") DIAMETER RE-BAR WITH TEE ENDS.
 - FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
 - THE DIKE STRUCTURE SHALL BE MW40-150 mm X 150 mm (6 GA. 6" X 6") WIRE MESH, 450 mm (18") ON A SIDE.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
 - AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY J. PATRICK MURPHY 3/27/00 ADOPTED	TRIANGULAR SEDIMENT FILTER DIKE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK
STANDARD NO. 628S	STANDARD NO. 628S	STANDARD NO. 648S-1	STANDARD NO. 648S-1



- NOTES:**
- STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
 - THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OF MULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
 - MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
 - SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
 - MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK
STANDARD NO. 648S-1	STANDARD NO. 648S-1	STANDARD NO. 648S-1	STANDARD NO. 648S-1



- NOTES:**
- STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
 - LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
 - THICKNESS: NOT LESS THAN 200 mm (8").
 - WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
 - WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
 - MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
 - DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY J. PATRICK MURPHY 3/27/00 ADOPTED	TRIANGULAR SEDIMENT FILTER DIKE	CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	MULCH SOCK
STANDARD NO. 628S	STANDARD NO. 628S	STANDARD NO. 648S-1	STANDARD NO. 648S-1



- GENERAL NOTES:**
- DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
 - THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
 - THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
 - DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES OR 600 mm (24") CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (3/4") DIAMETER RE-BAR WITH TEE ENDS.
 - FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
 - THE DIKE STRUCTURE SHALL BE MW40-150 mm X 150 mm (6 GA. 6" X 6") WIRE MESH, 450 mm (18") ON A SIDE.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
 - AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.



**GENERAL PERMIT OFFICE
EROSION/SEDIMENTATION
CONTROL
CITY OF AUSTIN STANDARD NOTES AND DETAILS**

NO.	DATE	BY	REVISIONS
2C	2/10/2020	TC	REPLACEMENT SHEET

ESD
ENGINEERING SERVICES
DIVISION
GP-2018-0000-AW
NCS 7 OF 55

**GENERAL PERMIT PROGRAM (GPP)
STANDARD ENVIRONMENTAL NOTES:**

ADDITIONAL AREAS:

- ANY ADDITIONAL AREAS REQUIRED FOR CONSTRUCTION OF THIS PROJECT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED ADDITIONAL AREAS PRIOR TO USE. APPROVAL OF "CORRECTION REQUEST" MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
- ALL ASSOCIATED PERMITS AND FEES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- IN ORDER TO SECURE APPROVAL FOR USE OF ADDITIONAL AREAS, CONTRACTOR MUST PROVIDE COMPLETE "CORRECTION REQUEST" SUBMITTAL TO GENERAL PERMIT PROGRAM OFFICE AND ALLOW A ONE WEEK COMMENT PERIOD FOR EACH REVIEW. CONTRACTOR SHOULD REQUEST INFORMATION ON THE ELEMENTS REQUIRED TO BE INCLUDED IN THE SUBMITTAL FROM THE OWNER'S REPRESENTATIVE OR THE GENERAL PERMIT PROGRAM OFFICE.
- CONTRACTOR MUST INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION FOR ALL SUCH AREAS IN ACCORDANCE WITH THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL AND AS INCLUDED IN THE APPROVED SUBMITTAL OR DIRECTED IN THE FIELD BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
- A SIGNED COPY OF THE PLANS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM MUST BE KEPT ON SITE AND ACCESSIBLE AT ALL TIMES DURING PROJECT CONSTRUCTION.

DEWATERING:

CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREA. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED DEWATERING PROCEDURES PRIOR TO INSTALLATION OR USE. APPROVAL MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM (GPP) OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT. CONTRACTOR MUST PROVIDE COMPLETE SUBMITTAL TO GPP OFFICE AND ALLOW AN ONE WEEK (MIN.) COMMENT PERIOD FOR EACH REVIEW. CONTACT THE GPP OFFICE FOR SUBMITTAL REQUIREMENTS.

FUEL STORAGE:

FUEL STORAGE IS PROHIBITED ON THIS PROJECT. ADDITIONALLY, THE CONTRACTOR IS REQUIRED TO NOTIFY THE GENERAL PERMIT PROGRAM OFFICE IMMEDIATELY FOLLOWING ANY SPILL OF FUEL OR OTHER TOXIC MATERIAL. CONTRACTOR IS REQUIRED TO FOLLOW-UP WITH WRITTEN DOCUMENTATION, INCLUDING A COMPLETE DESCRIPTION OF THE INCIDENT, MATERIAL SPILLED, AND ACTIONS TAKEN TO CONTAIN AND CLEAN-UP MATERIAL.

FUGITIVE DUST CONTROL:

ALL PROJECTS APPROVED THROUGH THE GENERAL PERMIT PROGRAM (GPP) MUST COMPLY WITH THE CODE OF THE CITY OF AUSTIN AND THE ENVIRONMENTAL CRITERIA MANUAL REQUIREMENTS TO CONTROL AIRBORNE DUST. COMPLIANCE IS REQUIRED FOR ENTIRE PROJECT SITE AS WELL AS ASSOCIATED OPERATIONS. CONTACT THE GPP OFFICE FOR RECOMMENDED CONTROL METHODS.

SPOILS STORAGE:

NO SPOILS STORAGE IS ALLOWED WITHIN A CRITICAL WATER QUALITY ZONE, A 100-YEAR FLOODPLAIN, OR ON A SLOPE WITH A GRADIENT OF MORE THAN 15 PERCENT.

E/S CONTROLS FOR BORE / RECEIVING PIT LOCATIONS:

TEMPORARY E/S CONTROLS MUST SURROUND THE ENTIRETY OF BORING OPERATIONS, INCLUDING PIT, EQUIPMENT, ETC. FOR LOCATIONS WITH IMPERVIOUS AREAS, TEMPORARY CONTROL WILL BE TRIANGULAR FILTER DIKE (COA STANDARD DETAIL #628S). DIKE FLAP WILL BE CONTINUOUSLY WEIGHTED DOWN THROUGH THE USE OF 1" BY 4" WOOD STRIPS NAILED TO THE PAVEMENT, EXCEPT FOR THE ACCESS POINT. PLACEMENT OF TEMPORARY E/S CONTROLS ACROSS ACCESS POINT WILL BE REQUIRED WHENEVER THE SITE IS NOT ACTIVELY USED. FOR LOCATIONS WITHIN PERVIOUS AREAS, TEMPORARY CONTROL WILL BE SILT FENCE (COA STANDARD DETAIL #642S-1) OR MULCH SOCKS (COA STANDARD DETAIL #648S-1), AS INDICATED ON APPROVED PLANS.

SOIL RETENTION BLANKET:

UNLESS OTHERWISE INDICATED IN THE PROJECT DOCUMENTS, INSTALLATION OF SOIL RETENTION BLANKET WILL BE REQUIRED FOR ALL IMPACTED SLOPES GREATER THAN 3:1 AND ALL IMPACTED AREAS WITHIN DRAINAGE CONVEYANCES. (CITY OF AUSTIN STANDARD SPECIFICATION ITEM 605S) SOIL RETENTION BLANKET SUBMITTAL MUST BE APPROVED BY PROJECT ENGINEER AND GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO USE AND MUST INCLUDE PRODUCT AND INSTALLATION DETAILS PROVIDED BY MANUFACTURER. FINISH GRADING MUST BE INSPECTED AND APPROVED BY GPP INSPECTOR PRIOR TO BLANKET INSTALLATION. INSTALLATION MUST BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND MUST BE INSPECTED AND APPROVED BY GPP REPRESENTATIVE PRIOR TO ACCEPTANCE.

SOD INSTALLATION:

REVEGETATION WITHIN MANAGED TURF AREAS MUST BE ACCOMPLISHED THROUGH THE INSTALLATION OF SOLID BLOCK GRASS SOD. SOD TYPE MUST MATCH ADJACENT GRASS TYPE. QUESTIONS REGARDING SOD TYPE WILL BE RESOLVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE. REFER TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 602S: SODDING FOR EROSION CONTROL, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.

TxDOT RIGHTS-OF-WAY:

TOPSOIL (TxDOT ITEM NO. 160), SOIL RETENTION BLANKET (TxDOT ITEM NO. 169), AND REVEGETATION (TxDOT ITEM NO. 164) INSTALLED WITHIN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) RIGHT-OF-WAY SHALL COMPLY WITH "REQUIREMENTS FOR INSTALLATION OF UTILITIES WITHIN THE STATE RIGHT-OF-WAY, AUSTIN DISTRICT".

PROJECT SEQUENCE:
(REFER TO FULL PLAN SET FOR PROJECT-SPECIFIC ADDITIONS, IF APPLICABLE.)

PRIOR TO CONSTRUCTION:

- SECURE APPLICABLE COA PERMITS, INCLUDING APPROVAL UNDER GENERAL PERMIT PROGRAM AND RIGHT-OF-WAY EXCAVATION PERMIT.
- NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PLACEMENT OF E/S CONTROLS AND TREE PROTECTION FENCING. ALL PROPOSED PHASING OF CONTROLS MUST BE SUBMITTED TO AND APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO THE FIELD PRE-CONSTRUCTION CONFERENCE.
- NOTIFY COA TEMPORARY TRAFFIC CONTROL REPRESENTATIVE PRIOR TO PLACEMENT OF TEMPORARY TRAFFIC CONTROLS. ALL PROPOSED PHASING OF CONTROLS MUST BE INDICATED ON APPROVED TEMPORARY TRAFFIC CONTROL PLAN AND SEALED BY PROFESSIONAL ENGINEER.
- PLACE TEMPORARY E/S CONTROLS AND TREE PROTECTION FENCING PRIOR TO BEGINNING ANY EXCAVATION. INSTALL C.I.P. SIGN, IF APPLICABLE.
- HOLD ENVIRONMENTAL PRE-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF E/S CONTROLS AND TREE PROTECTION FENCING AND PRIOR TO ANY TRENCHING OPERATIONS.
- PLACE TEMPORARY TRAFFIC CONTROL DEVICES.

PROJECT CONSTRUCTION:

- BEGIN CONSTRUCTION. NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE A MINIMUM OF 48 HOURS IN ADVANCE OF TRANSITION BETWEEN PHASES.
- CONTACT GENERAL PERMIT OFFICE TO SCHEDULE FIELD INSPECTION PRIOR TO BEGINNING INSTALLATION OF PERMANENT E/S CONTROLS.
- COMPLETE RESTORATION OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES FOR THIS PROJECT. (PERMANENT E/S CONTROLS)
- REMOVE TEMPORARY TRAFFIC CONTROL DEVICES RELATED TO WORK AREAS OUTSIDE OF THE STREET.
- HOLD ENVIRONMENTAL POST-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE. ALL PERMANENT E/S CONTROLS MUST BE ACCEPTED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE. PERMANENT CONTROLS SHALL CONSIST OF REVEGETATION PER DETAILS 602, 604S, AND 609S AS INDICATED ON APPROVED PLANS.
- FOLLOWING FINAL ACCEPTANCE OF PERMANENT E/S CONTROLS BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE, REMOVE TEMPORARY E/S CONTROLS. CLEAN EXISTING STORM DRAINAGE SYSTEMS AS NECESSARY DUE TO CONSTRUCTION OPERATIONS.
- DRESS-UP AND RESTORE ANY AREAS DISTURBED BY REMOVAL OF TEMPORARY E/S CONTROLS DESCRIBED ABOVE.

REQUIRED SUBMITTALS:

SUBMITTALS REQUIRED TO BE APPROVED BY GENERAL PERMIT PROGRAM REPRESENTATIVE INCLUDE: SUBMITTALS TRIGGERED BY CITY OF AUSTIN SERIES 600 SPECIFICATIONS AND RELATED SPECIAL PROVISIONS/SPECIFICATIONS, CONSTRUCTION SCHEDULE, TREE PROTECTION, P-6 AND OTHER ROOT ZONE PROTECTION/MITIGATION MEASURES, DEWATERING PLAN, WATERING SCHEDULE FOR REVEGETATION AREAS, AND ANY VEGETATIVE REPLACEMENT PROPOSALS, IF NOT ALREADY PART OF THE PERMITTED PLAN SET.

**CITY OF AUSTIN - STANDARD NOTES
TREE AND NATURAL AREA PROTECTION
(MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)**

- ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY MEASURES.
- PROTECTIVE MEASURES SHALL BE INSTALLED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
- PROTECTIVE MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE PROJECT.
- EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP, COMPACTION OR CUTTING OF CRITICAL ROOT ZONE WITHIN TREE DRIP LINES.
- TREE PROTECTION SHALL COMPLETELY SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE). FOR NATURAL AREAS, PROTECTIVE MEASURES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
 - SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
 - ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT;
 - WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
 - OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
- EXCEPTIONS TO INSTALLING PROTECTIVE FENCES AT CRITICAL ROOT ZONES MAY BE PERMITTED IN THE FOLLOWING CASES:
 - WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 FEET BEYOND THE AREA DISTURBED;
 - WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA;

- WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING;
- WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE GENERAL PERMIT PROGRAM OFFICE AT 974-6330 TO DISCUSS ALTERNATIVES.

SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.

WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE 5 FEET OR CLOSER TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING.

7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES, THOSE AREAS SHOULD BE COVERED WITH 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION DURING CONSTRUCTION. FILTER FABRIC UNDERLAYMENT MAY BE REQUIRED AT DIRECTION OF GENERAL PERMIT PROGRAM REPRESENTATIVE BASED ON SITE CONDITIONS AND CONSTRUCTION ACTIVITIES. MAXIMUM FOUR (4) INCHES DEPTH MAY BE LEFT IN PLACE AFTER CONSTRUCTION WITH APPROVAL FROM THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

8. ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCES TO 2 FEET BEHIND THE GRADE CHANGE AREA.

9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.

10. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIP LINES, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE DAMAGE TO REMAINING ROOTS.

11. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.

12. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.

13. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.

14. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. SEE NOTE THREE (3) OF SUPPLEMENTAL TREE PROTECTION NOTES FOR ADDITIONAL REQUIREMENTS.

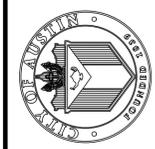
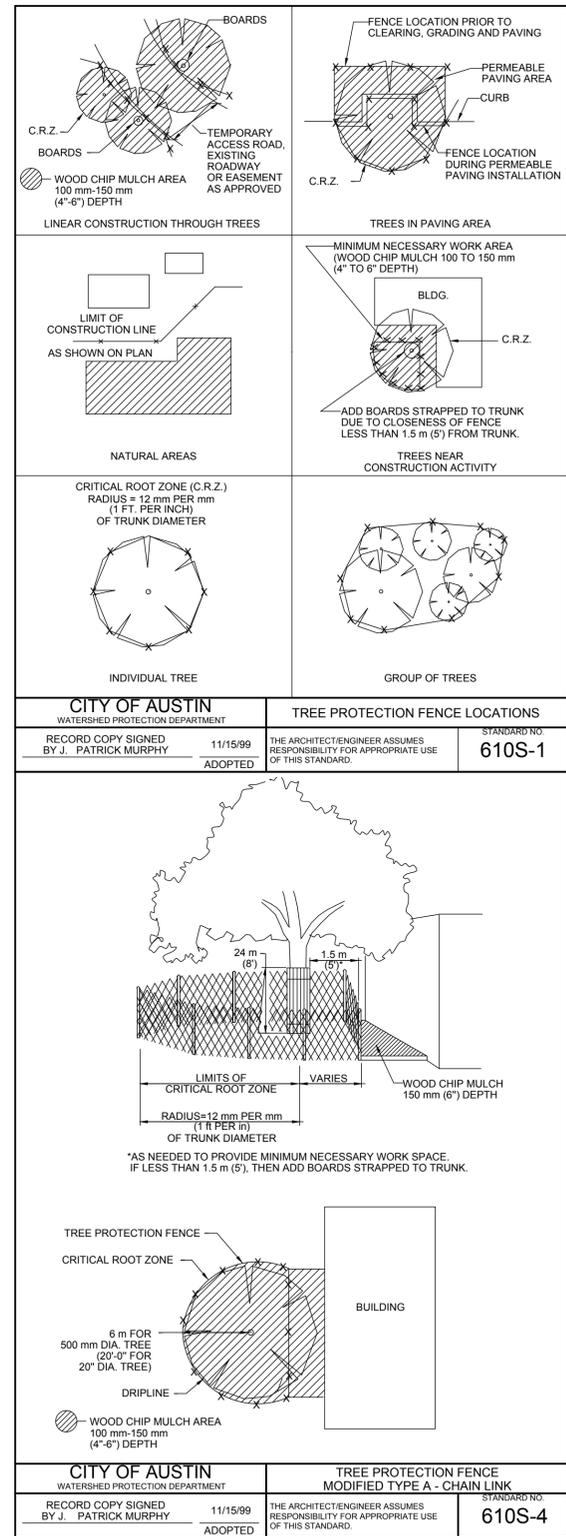
15. ALL FINISHED PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE GENERAL PERMIT PROGRAM OFFICE).

16. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NONCOMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

17. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.

SUPPLEMENTAL TREE PROTECTION NOTES

- ALL TREE PROTECTION MUST COMPLY WITH CITY OF AUSTIN REQUIREMENTS AS OUTLINED IN THE ENVIRONMENTAL CRITERIA MANUAL AND AS INDICATED BY STANDARD COA NOTES AND DETAILS INCLUDED WITHIN THIS DOCUMENT SET. CONTRACTOR SHALL INSTALL PROTECTION PRIOR TO PRE-CONSTRUCTION CONFERENCE, MAKE ADJUSTMENTS TO PROTECTION AS DIRECTED BY THE GPP REPRESENTATIVE, AND MAINTAIN PROTECTION UNTIL PROJECT IS COMPLETE.
- TYPE AND LOCATION OF ALL TREE PROTECTION MUST BE APPROVED IN THE FIELD BY THE GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO CONSTRUCTION.
- WALK-THROUGH: CONTRACTOR SHALL CONDUCT WALK-THROUGH MEETING WITH GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PERFORMING ANY PRUNING ACTIVITIES ON TREES IN PROJECT AREA. PURPOSE OF WALK-THROUGH WILL BE TWOFOLD. ONE PURPOSE WILL BE TO DETERMINE THE MINIMUM AMOUNT OF PRUNING NECESSARY TO ALLOW CONSTRUCTION WORK TO BE COMPLETED. SECOND PURPOSE WILL BE TO DETERMINE AREAS OF PROJECT IN WHICH EXHAUST DIVERTERS WILL BE REQUIRED ON CONSTRUCTION EQUIPMENT TO PREVENT SCORCHING OF EXISTING TREES.
- ALL PRUNING MUST BE PERFORMED IN ACCORDANCE WITH ANSI A300 (PART 1) - 2001 AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS (PRUNING), OR LATEST APPROVED VERSION. THIS DOCUMENT MAY BE OBTAINED ONLINE FOR A FEE AT WWW.ANSI.ORG.
- PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. TO PREVENT BARK TEARS, THE WEIGHT OF THE BRANCH SHALL BE REMOVED BEFORE MAKING FINAL PRUNING CUT.
- ALL PRUNING SHALL PRESERVE THE NATURAL CHARACTER OF THE TREE.
- ONLY COLLAR CUTS ARE ACCEPTABLE. NO FLUSH CUTS OR STUB CUTS WILL BE ALLOWED.
- ALL BRANCHES THAT ARE BROKEN OR DAMAGED DURING CONSTRUCTION SHALL BE REMOVED.
- PRUNING CUTS OR DAMAGED AREAS ON AN OAK TREE SHALL BE PAINTED WITHIN FIVE MINUTES WITH A STANDARD TREE WOUND DRESSING. TREE WOUND DRESSING SHALL BE EITHER TREEKOTE AEROSOL OR TANGLEFOOT PRUNING SEALER (OR APPROVED EQUAL). THIS ALSO APPLIES TO WOUNDS CREATED BY CONSTRUCTION VEHICLES OR EQUIPMENT. ALL PRUNING MUST BE IN ACCORDANCE WITH COA OAK WILT PREVENTION POLICY.
- ANY TREE ROOTS THAT ARE EXPOSED, CUT, OR TORN DURING CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SURROUNDING SOIL. (REFER ALSO TO NUMBER 9 OF THE TREE AND NATURAL AREA PROTECTION NOTES INCLUDED IN THIS PLAN SET.)
- ALL TRENCHING WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED WILL BE SAW CUT OR EXCAVATED BY HAND, AS APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST.
- REFER TO ENVIRONMENTAL CRITERIA MANUAL APPENDIX P-6 FOR FURTHER REMEDIAL TREE CARE REQUIREMENTS. P-6 REMEDIAL TREE CARE WILL BE COORDINATED WITH AND APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST FOR PROJECTS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM.

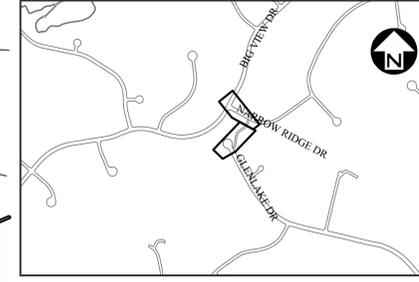
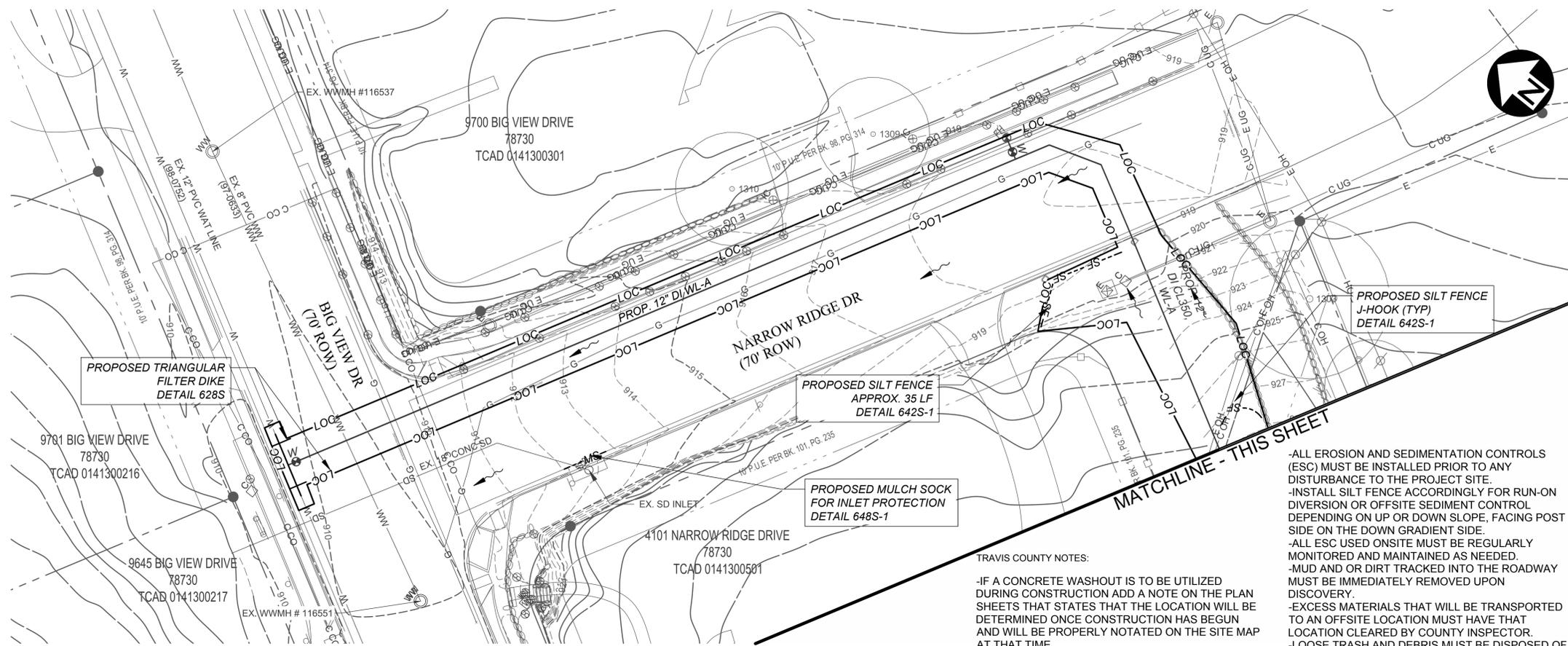


**GENERAL PERMIT OFFICE
TREE PROTECTION
AND ENVIRONMENTAL NOTES**
 CITY OF AUSTIN STANDARD NOTES AND DETAILS

NO.	BY	DATE	REVISIONS	REMARKS



GP-2018-0000-AW



TRAVIS COUNTY NOTES:

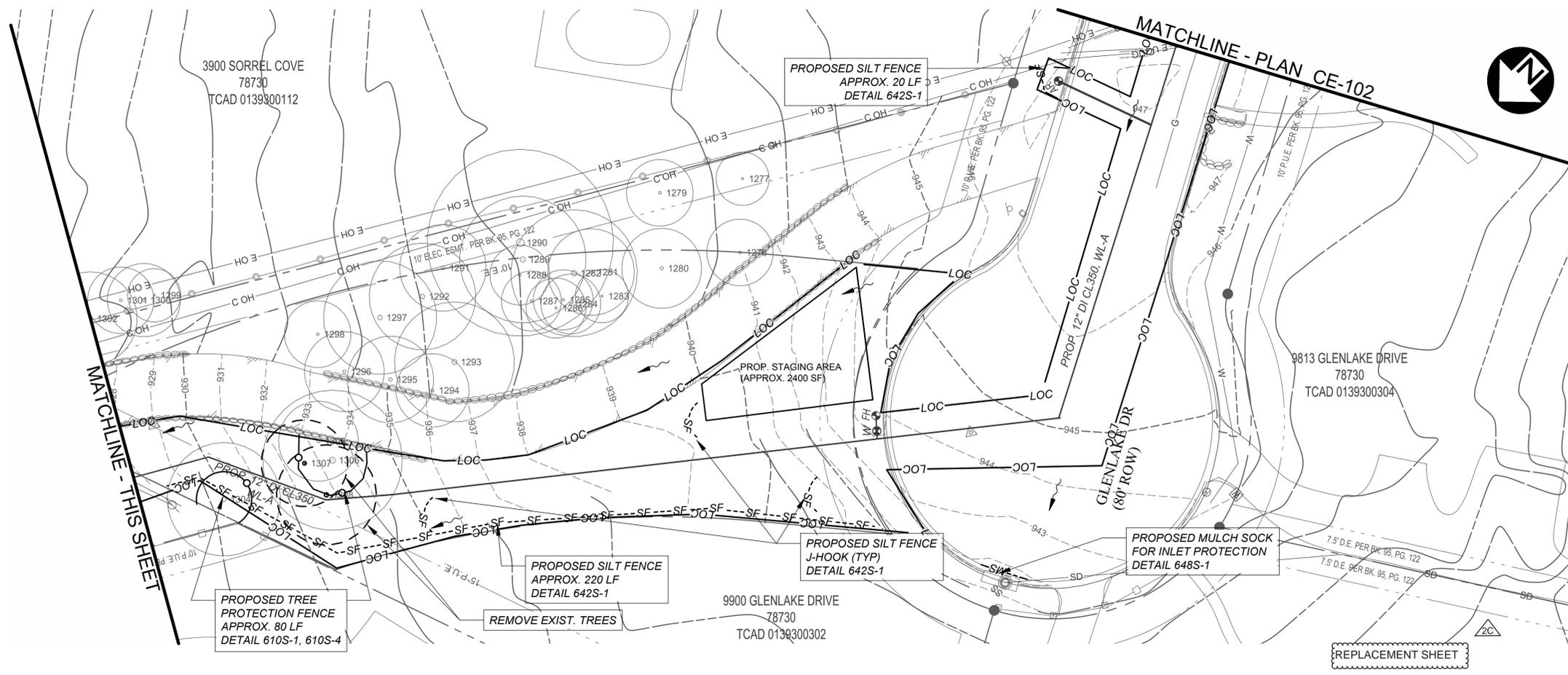
- IF A CONCRETE WASHOUT IS TO BE UTILIZED DURING CONSTRUCTION ADD A NOTE ON THE PLAN SHEETS THAT STATES THAT THE LOCATION WILL BE DETERMINED ONCE CONSTRUCTION HAS BEGUN AND WILL BE PROPERLY NOTATED ON THE SITE MAP AT THAT TIME.
- ALL REQUIRED NOTICES AND PERMITS MUST BE PLACED IN A HIGHLY VISIBLE LOCATION ONSITE BEFORE THE COMMENCEMENT OF CONSTRUCTION.

- ALL EROSION AND SEDIMENTATION CONTROLS (ESC) MUST BE INSTALLED PRIOR TO ANY DISTURBANCE TO THE PROJECT SITE.
- INSTALL SILT FENCE ACCORDINGLY FOR RUN-ON DIVERSION OR OFFSITE SEDIMENT CONTROL DEPENDING ON UP OR DOWN SLOPE, FACING POST SIDE ON THE DOWN GRADIENT SIDE.
- ALL ESC USED ONSITE MUST BE REGULARLY MONITORED AND MAINTAINED AS NEEDED.
- MUD AND OR DIRT TRACKED INTO THE ROADWAY MUST BE IMMEDIATELY REMOVED UPON DISCOVERY.
- EXCESS MATERIALS THAT WILL BE TRANSPORTED TO AN OFFSITE LOCATION MUST HAVE THAT LOCATION CLEARED BY COUNTY INSPECTOR.
- LOOSE TRASH AND DEBRIS MUST BE DISPOSED OF PROPERLY ONSITE.
- CONTRACTOR SHALL MAINTAIN AND UTILIZE DUST CONTROL FOR THE DURATION OF THE PROJECT.

- THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING ONTO THE PUBLIC ROADWAY ON AN ONGOING/REGULAR BASIS.
- INITIATE TEMPORARY STABILIZATION WHEN CONSTRUCTION CEASES IN A DISTURBED AREA FOR 14 DAYS.
- INITIATE PERMANENT STABILIZATION IMMEDIATELY ONCE WORK HAS CEASED AND FINAL GRADE HAS BEEN ACHIEVED.
- ALL DISTURBED/BARE AREAS WILL REQUIRE PERMANENT STABILIZATION BEFORE FINAL ACCEPTANCE CAN BE ACHIEVED. AVOID DISTURBING AREAS OF THE PROJECT THAT ARE NOT NECESSARY FOR CONSTRUCTION. IF IT IS UNDISTURBED IT WON'T NEED TO BE RESTORED.
- COUNTY INSPECTOR MAY REQUEST ADDITIONAL CONTROLS BE INSTALLED ONSITE AS NEEDED.

NOTES:

1. EVERY MEASURE WILL BE TAKEN BY THE CONTRACTOR TO PRESERVE OR PROTECT TREES ACCORDING TO CITY OF AUSTIN STANDARDS AND P-6 WILL BE APPLIED. PRIOR TO CONSTRUCTION CONTACT THE GENERAL PERMIT INSPECTOR AT 974-6330 FOR A SITE VISIT AND COORDINATION OF POSSIBLE ALTERNATE CONSTRUCTION METHODS. PROPOSED TRENCH WILL REQUIRE POTHOLING TO DETERMINE ROOT STRUCTURE.
2. SERVICE LOCATION WITHIN DRIP-LINE OF TREES SHALL BE COORDINATED WITH ENVIRONMENTAL AND CONSTRUCTION INSPECTOR. ALL TREE TRIMMING AND ROOT CUTTING TO FOLLOW CITY OF AUSTIN TREE PROTECTION REQUIREMENTS.
3. ALL DISTURBED AREAS OUTSIDE THE PAVEMENT WILL BE REVEGETATED TO EXISTING OR BETTER CONDITION. SOD WILL BE REPLACED IN KIND.
4. CONSTRUCTION IN PAVED AREAS REQUIRES INSTALLATION OF TRIANGULAR FILTER DIKE DOWNSTREAM OF CONSTRUCTION ACTIVITY AND SHOULD BE MOVED WITH PROGRESSION OF CONSTRUCTION. SEE SUPPLEMENTAL DETAIL "ADDITIONAL EROSION/SEDIMENTATION CONTROL FOR WORK IN PAVED AREAS".
5. ANY SPOIL NOT INTENDED TO BE REUSED WILL BE HAULED TO AN APPROPRIATE OR PERMITTED DISPOSAL SITE DAILY.
6. ANY TREE IMPACTED BY CONSTRUCTION OF THIS PROJECT IS SUBJECT TO TREATMENT IN ACCORDANCE WITH SPECIAL PROVISION TO P-6 ADDITIONALLY, P-6 WILL BE REQUIRED FOR THOSE TREES INDICATED ON APPROVED PLANS AND THE GPP INSPECTOR WILL IDENTIFY ANY TREES ACTUALLY REQUIRING TREATMENT AS CONSTRUCTION PROCEEDS.
7. IF APPLICABLE, A SECONDARY LIMIT OF CONSTRUCTION IS HEREBY CREATED FOR THE SOLE PURPOSE OF INSTALLING AND MAINTAINING TREE PROTECTION. THIS SECONDARY LIMIT OF CONSTRUCTION IS CREATED ONLY FOR TREES LOCATED WITHIN 5 FT OF THE LOC BOUNDARY SHOWN ON THIS PLAN.
8. PRIVATE LATERALS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE LANDOWNER AND DESIGN ENGINEER. TRENCHING WITHIN THE DRIP LINE OF ANY TREE 18" OR GREATER SHALL BE DONE ONLY AFTER CONTACTING THE GPP OFFICE AT (512)974-6330 FOR A SITE VISIT TO DETERMINE ALTERNATE TRENCHING METHODS.
9. CONTRACTOR WILL RECOVER ALL DISTURBED GRASS AFTER CONSTRUCTION WITH THE EXISTING GRASS AS SHOWN ON THE PLAN SHEETS.

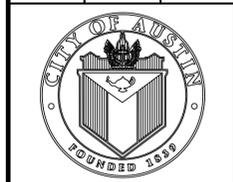


REV. NO.	DATE	REVISION DESCRIPTION
1	3/5/2019	REVISION SHEET TITLE
2	2/10/2020	REPLACEMENT SHEET

STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 02/10/2020
 THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

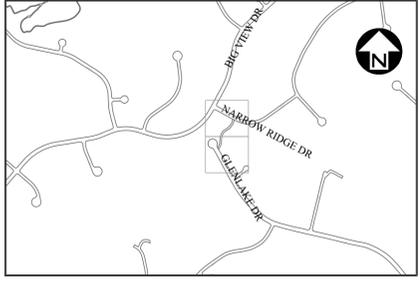
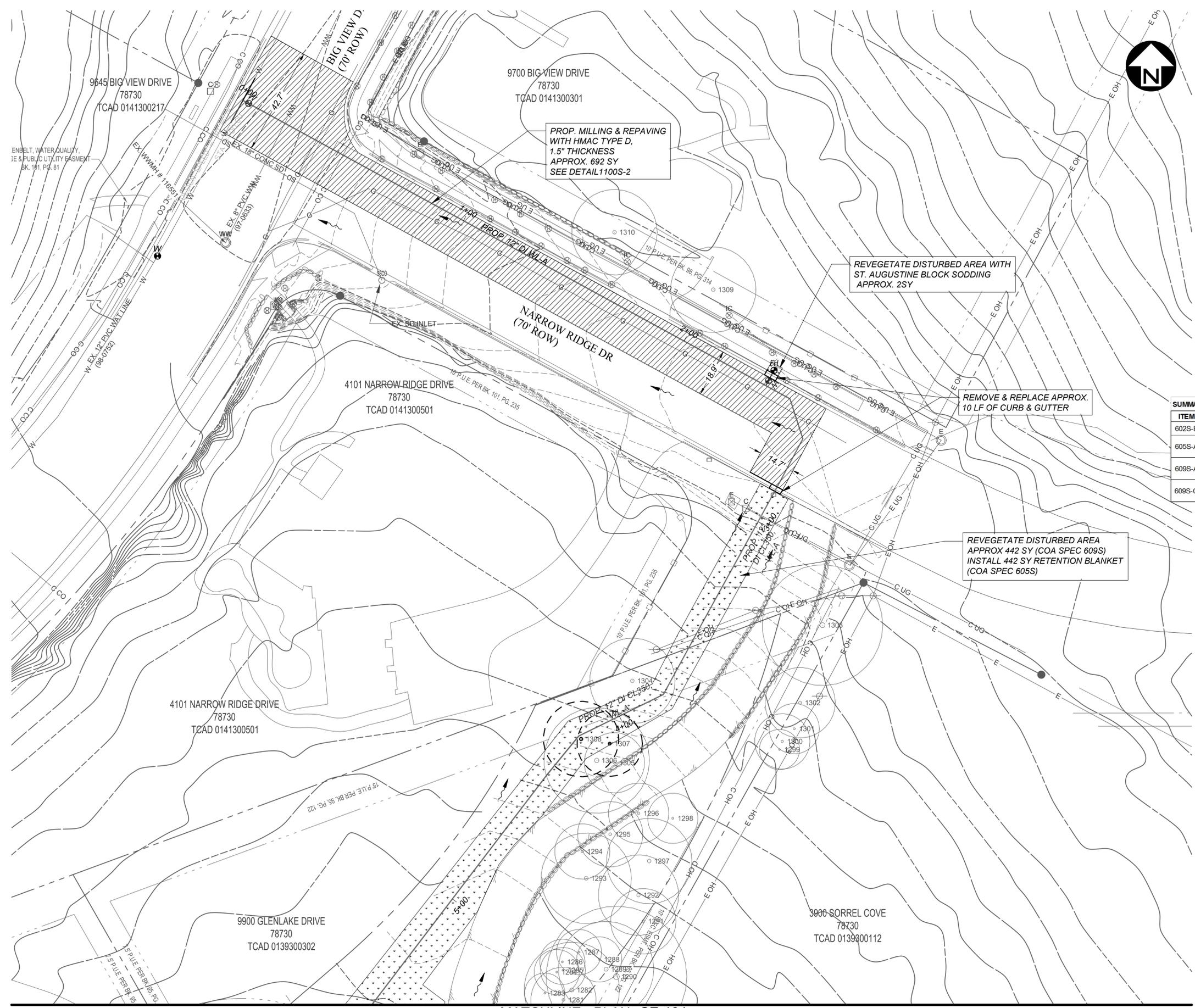
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 EROSION & SEDIMENTATION CONTROL PLAN -
 PHASE 1 SHEET 1 OF 2



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



GP-2018-0000-AW



SUMMARY OF PERMANENT EROSION CONTROL

ITEM	QUANTITY	UNIT	ITEM DESCRIPTION
602S-B	2	SY	ST. AUGUSTIN BLOCK SODDING
605S-A	442	SY	SOIL RETENTION BLANKET- CLASS 1 TYPE C
609S-A	442	SY	TOP SOIL AND SEEDBED PREPARATION
609S-C	442	SY	NATIVE SEEDING

- NOTES:**
- INITIATE PERMANENT STABILIZATION IMMEDIATELY ONCE WORK HAS CEASED AND FINAL GRADE HAS BEEN ACHIEVED IN ANY GIVEN AREA.
 - THE FINAL STABILIZATION/REVEGETATION EFFORTS SHALL BE IN ACCORDANCE WITH THE APPROVED RESTORATION PLAN DETAILS AND SPECIFICATIONS.
 - ALL 3:1 SLOPES OR STEEPER REQUIRE SOIL RETENTION BLANKET (SRB).
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE WATERING/IRRIGATION TO ACHIEVE THE PERMANENT STABILIZATION REQUIREMENTS IN ALL DISTURBED/REVEGETATED AREAS BEFORE FINAL ACCEPTANCE FOR THIS PROJECT CAN BE OBTAINED.
 - REVEGETATE DISTURBED AREA USING SPEC. 609S, TABLE 4 (UPLAND SPECIES, FULL SUN AREAS). IF REVEGETATION TAKES PLACE BETWEEN SEPT. 15 AND MARCH 1, INCLUDE 1 COOL SEASON SPECIES FROM TABLE 4 IN THE SEED MIX.
 - SOIL SHALL BE PLACED PER SP601S. TOP SOIL COMPRISED OF LANDSCAPE-GRADE 75% LOAM AND 25% SCREENED ORGANIC COMPOST WITH A MINIMUM OF 6" DEEP.
 - ANY DAMAGED (SCARRED) PAVEMENT THAT IS OUTSIDE THE DRAWN RESTORATION AREAS WILL BE REPAIRED BY REMOVING AND REPLACING THE SURFACE LAYER OF ASPHALT

REV. NO.	DATE	REVISION DESCRIPTION
1C	3/5/2019	REVISE SHEET TITLE
2C	2/10/2020	REPLACEMENT SHEET

STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 02/10/2020
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CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 RESTORATION PLAN - PHASE 2
 SHEET 1 OF 2



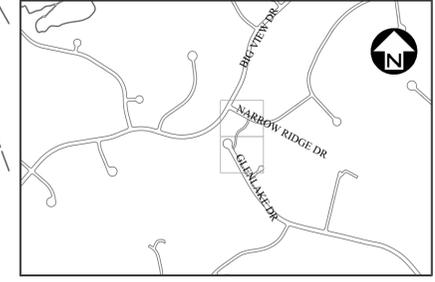
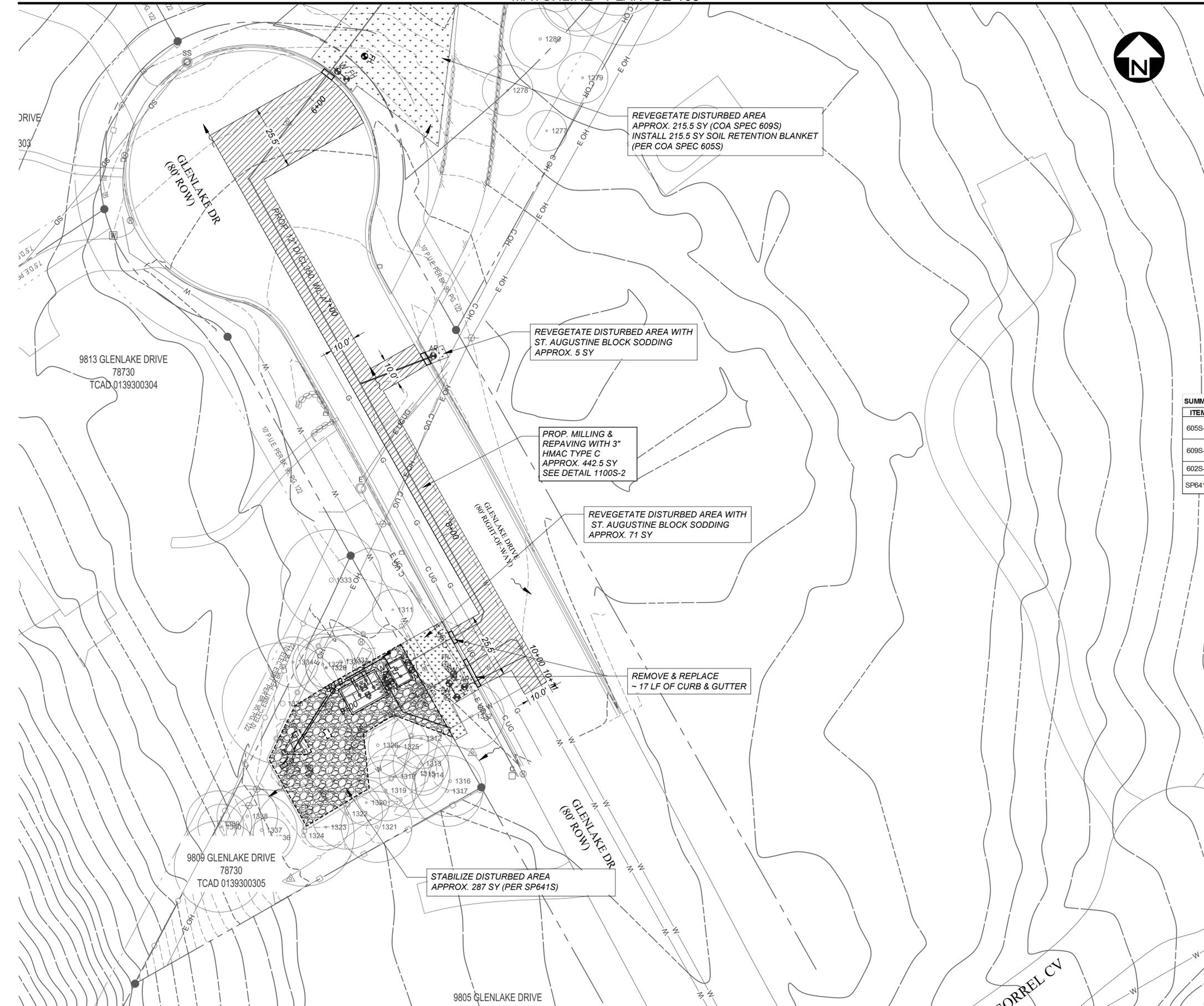
NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	TC	02/17
DESIGNED BY	TC	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



REPLACEMENT SHEET

GP-2018-0000-AW
 CE-103 11 OF 55

MATCHLINE - PLAN CE-104



REV. NO.	DATE	REVISION DESCRIPTION
1C	3/5/2019	REVISE SHEET TITLE
2C	2/10/2020	REPLACEMENT SHEET

STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
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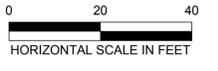
ITEM	QUANTITY	UNIT	ITEM DESCRIPTION
605S-A	215.5	SY	SOIL RETENTION BLANKET- CLASS 1 TYPE C
609S-A	215.5	SY	TOP SOIL AND SEEDBED PREPARATION
602S-B	76	SY	ST. AUGUSTIN BLOCK SODDING
SP641S	287	SY	STABILIZE EXISTING PUMP STATION MINIMUM 8" THICKNESS

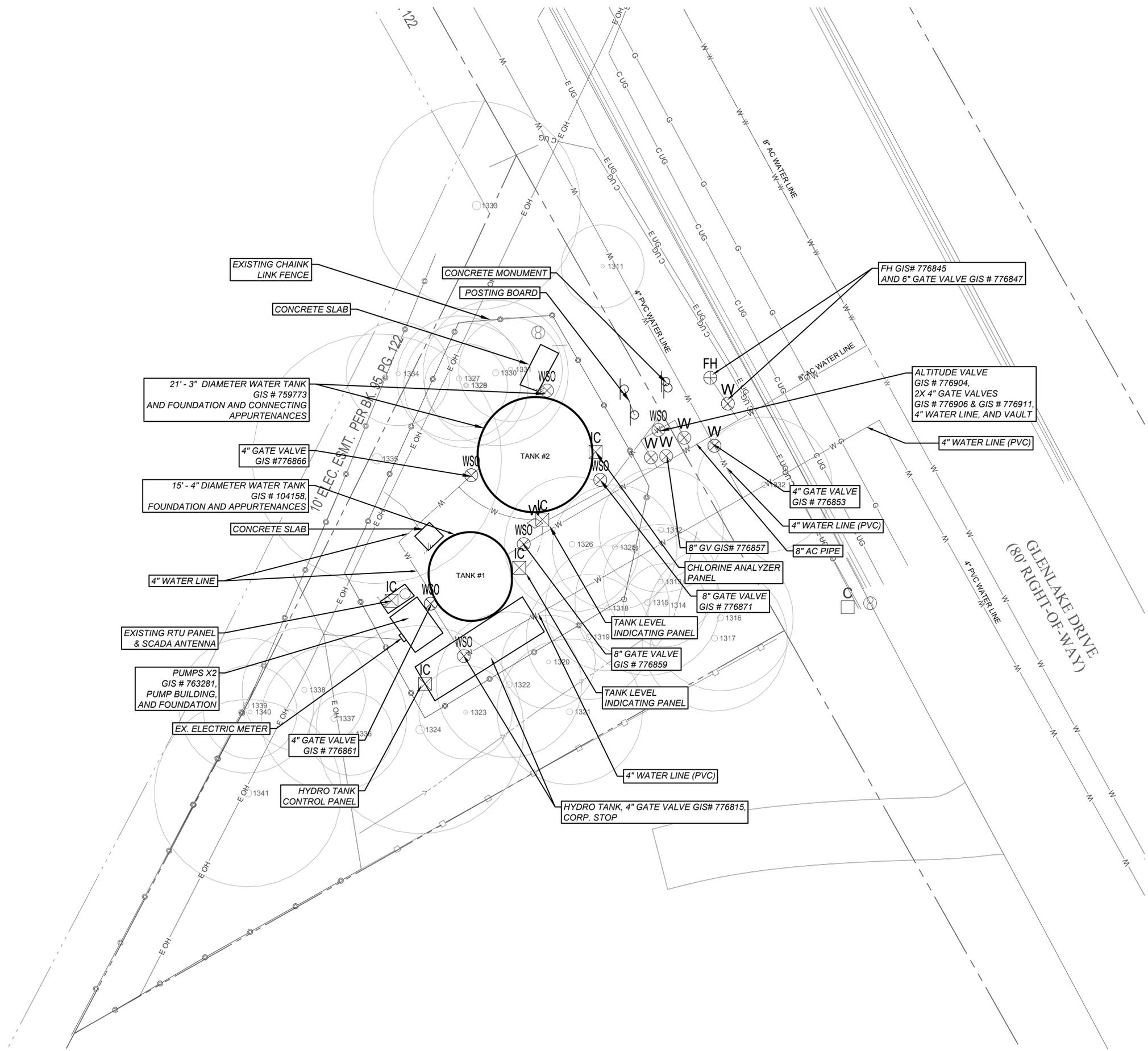
- NOTES:**
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CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 RESTORATION PLAN - PHASE 2
 SHEET 2 OF 2



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	TC	02/17
DESIGNED BY	TC	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17





REV. NO.	BY	DATE	REVISION DESCRIPTION



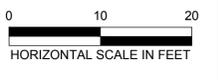
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CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 PUMP STATION EXISTING CONDITIONS SHEET



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



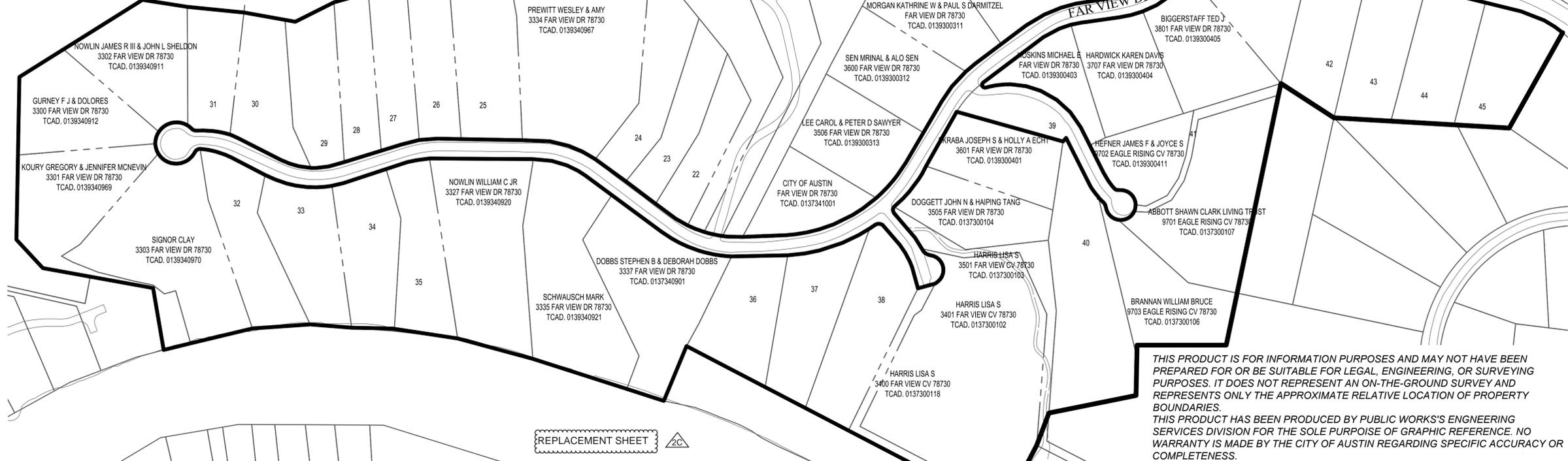
REVIEWED
 APR 03 2018
Jose Hernandez
 Austin Water Utility

GP-2018-0000-AW

NOTES:

1. THIS ISOLATION PLAN WILL BE APPLIED FOR PHASE 1 ONLY.
2. ANY SPECIFIC VALVES THAT ARE LISTED TO BE CLOSED AND/OR REOPENED ARE FOR INFORMATION PURPOSES ONLY. ISOLATION PLAN IS DEPENDANT ON TEST SHUTOUTS PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE TEST SHUTOUTS AND VALVES # SHOWN ON THE PLAN WITH AUSTIN WATER STAFF 1 MONTH PRIOR TO CONSTRUCTION. ALL VALVE SHUTOUTS SHALL BE PERFORMED BY CITY OF AUSTIN STAFF.

- | | | |
|---|--|--|
| 1 BOOTH JAMES & AMY
9725 BIG VIEW DR
TCAD. 0141300210 | 22 SCHIFF LISA M
3346 FAR VIEW DR 78730
TCAD. 0137341005 | 43 REED LOWELL C REVOCABLE LIVING TRUST
GLENLAKE DR 78730
TCAD. 0138300408 |
| 2 DOUGLASS EDWARD KENT & REBECCA
9721 BIG VIEW DR AUSTIN 78730
TCAD. 0141300211 | 23 JOHNSON JAMES M & COURTNEY C
3342 FAR VIEW DR 78730
TCAD. 0139340901 | 44 NORROD FORREST E & KAREN L
9507 GLENLAKE DR 78730
TCAD. 0139300409 |
| 3 TACK ROBERT JEFFREY
9717 BIG VIEW DR
TCAD. 0141300212 | 24 SCHIPPER STEPHEN & KRISTI ARMSTRONG
3338 FAR VIEW DR 78730
TCAD. 0139340902 | 45 FAUST JAMES B & MICHELLE E
9503 GLENLAKE DR 78730
TCAD. 0139300410 |
| 4 SWEET CHERYL L & PEDRO F DUART
9713 BIG VIEW DR 78730
TCAD. 0141300213 | 25 GABBI UMBERTO & PRISCILLA D
3330 FAR VIEW DR 78730
TCAD. 0139340904 | 46 TRAVIS COUNTY ESD # 4
9501 GLENLAKE DR 78730
TCAD. 0139300302 |
| 5 LAM LEANNE TRINH
9709 BIG VIEW DR AUSTIN 78730
TCAD. 0141300214 | 26 HATHAWAY JOHN G & CINDY A
3328 FAR VIEW DR 78730
TCAD. 0139340905 | 47 COSTA ANETA
3901 MICHAEL NEIL DR 78730
TCAD. 0139340601 |
| 6 KUMARA ARACHCHI SARATH & P PIY
9705 BIG VIEW DR
TCAD. 0141300215 | 27 LEITE CLAVO C & MARY B MCALLISTER
3322 FAR VIEW DR 78730
TCAD. 0139340906 | 48 SONG MOO JOON
9612 BIG VIEW DR 78730
TCAD. 0139340965 |
| 7 SHREINER JAY W & KATHY J
9701 BIG VIEW DR
TCAD. 0141300216 | 28 HOUSHMAND ALI &
3318 FAR VIEW DR 78730
TCAD. 0139340907 | 49 JANS ROBERT F & DEBORAH L
9616 BIG VIEW DR 78730
TCAD. 0139340966 |
| 8 JEFFRIES CRAIG & SHARYL
9728 BIG VIEW DR
TCAD. 0141300308 | 29 AGUILAR VIVIAN DEL CARMEN &
3314 FAR VIEW DR 78730
TCAD. 0139340908 | 50 CAILLOUX KEN & SANDRA
4101 NARROW RIDGE DR 78730
TCAD. 0141300501 |
| 9 BEASLEY LIVING TRUST
9724 BIG VIEW DR
TCAD. 0141300307 | 30 CERBONE DEBORAH
3310 FAR VIEW DR 78730
TCAD. 0139340909 | |
| 10 SCHWARTZ WILLIAM F &
9720 BIG VIEW DR AUSTIN 78730
TCAD. 0141300306 | 31 HOOVER WESLEY R & PAIGE F
3308 FAR VIEW DR 78730
TCAD. 0139340910 | |
| 11 DESAI SANDEEP K & DEEPA S
9716 BIG VIEW DR 78730
TCAD. 0141300305 | 32 HALL FORD RAY & KAREN
3307 FAR VIEW DR 78730
TCAD. 0139340915 | |
| 12 HINES ANN I & ROBERT W & ANN K
9712 BIG VIEW DR
TCAD. 0141300304 | 33 MCCONNELL CHRISTINE & MICHAEL
3311 FAR VIEW DR 78730
TCAD. 0139340916 | |
| 13 PIERSON JAMES R & JENNIFER L
9708 BIG VIEW DR
TCAD. 0141300303 | 34 REED CHARLES D & JANE K
3315 FAR VIEW DR 78730
TCAD. 0139340917 | |
| 14 JISTEL ARTHUR A & SHARON K
9704 BIG VIEW DR
TCAD. 0141300302 | 35 BURGESS ROBERT & DONNA L TRUST
3319 FAR VIEW DR 78730
TCAD. 0139340918 | |
| 15 THOMPSON JANE
9700 BIG VIEW DR AUSTIN 78730
TCAD. 0141300301 | 36 SCARLETT JOHN A & SUSAN E
3405 FAR VIEW DR 78730
TCAD. 0137340902 | |
| 16 BOBO BENJAMIN L & DEBRA A
9617 GLENLAKE DR 78730
TCAD. 0139300303 | 37 MCCLEROY WILLIAM B & MELANIE P
3409 FAR VIEW DR 78730
TCAD. 0137340903 | |
| 17 YODER RICHARD
9609 GLENLAKE DR 78730
TCAD. 0139300304 | 38 ARMITAGE HELENE
3502 FAR VIEW DR 78730
TCAD. 0137300101 | |
| 18 CITY OF AUSTIN
9609 GLENLAKE DR 78730
TCAD. 0139300305 | 39 MURPHY SEAN
3714 RANCH CREEK DR 78730
TCAD. 0139300402 | |
| 19 JOHNSTON RICHARD A & CYNTHIA B
9605 GLENLAKE DR 78730
TCAD. 0139300306 | 40 BURG GEORGE W
9705 EAGLE RISING CV 78730
TCAD. 0137300105 | |
| 20 CULLEN CHARLES H & LUANNE
9601 GLENLAKE DR 78730
TCAD. 0139300307 | 41 EAGLE RISING CV 78730
WOLFE TM & ASSOCIATES INC
TCAD. 0139300412 | |
| 21 TOMLINSON ALEXANDER I & IVONNE MERCADO
9705 GLENLAKE DR 78730
TCAD. 0139300308 | 42 MCLEAN ARTHUR G & GILLIAN M
9605 GLENLAKE DR 78730
TCAD. 0139300407 | |

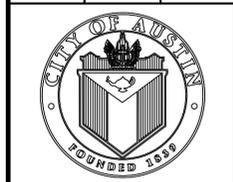


REV	BY	DATE	REVISION DESCRIPTION
1C	TC	3/5/2019	REVISE SHEET TITLE & NOTES
2C	TC	2/10/2020	REPLACEMENT SHEET

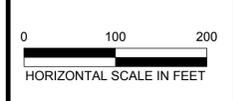
STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 THU CAO
 LIC. # 93976
 02/10/2020
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CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 ISOLATION PLAN - PHASE 1



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



GP-2018-0000-AW

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 THIS PRODUCT HAS BEEN PRODUCED BY PUBLIC WORKS'S ENGINEERING SERVICES DIVISION FOR THE SOLE PURPOSE OF GRAPHIC REFERENCE. NO WARRANTY IS MADE BY THE CITY OF AUSTIN REGARDING SPECIFIC ACCURACY OR COMPLETENESS.

REPLACEMENT SHEET



- TEMPORARILY REMOVE & RELOCATE POSTING BOARD & CONCRETE MONUMENT. PLACE BACK POST CONSTRUCTION
- REMOVE THIS PORTION OF EXISTING CHAIN LINK FENCE FOR ACCESS APPROX. 38 LF
- REMOVE CONCRETE SLAB
- REMOVE 21' - 3" DIAMETER WATER TANK GIS # 759773 AND CONNECTING APPURTENANCES
- DISCONNECT & CLOSE 4" GATE VALVE GIS #776866 FROM TANK #2
- DISCONNECT AND REMOVE CHLORINE ANALYZER PANEL AND ASSOCIATED CONDUIT AND WIRING. DISCONNECT AND REMOVE PLUMBING. SALVAGE THE PANEL AND RETURN TO OWNER (SSC).
- REMOVE 8" GATE VALVE GIS # 776871, PLUG WATER LINE & INSTALL THRUST BLOCK
- REMOVE TANK LEVEL INDICATING PANEL AND ASSOCIATED CONDUITS AND PLUMBING CONNECTIONS

- NOTES:
- COORDINATE WITH OWNER TO SALVAGE CHLORINE ANALYZER PANEL AND OTHER EQUIPMENT
 - SEE GENERAL CONSTRUCTION NOTES FOR PHASE 1 SEQUENCE OF DEMOLITION SHEET 4
 - KEEP TANK #1 AND PUMP STATION IN SERVICE

REVIEWED
February 20, 2020
Austin Water
George R.
update project information

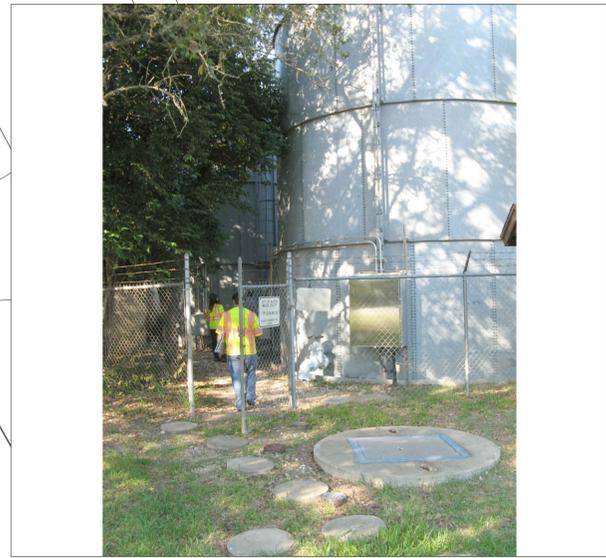


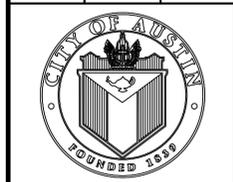
PHOTO "A" - EXIST. PUMP STATION ENTRANCE

REV. NO.	BY	DATE	REVISION DESCRIPTION
1C	TC	3/5/2019	REVISION NOTE
2C	TC	2/10/2020	REPLACEMENT SHEET

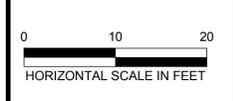
STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
02/10/2020
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
WATER TANKS & PUMP STATION DEMOLITION PLAN -
PHASE 1

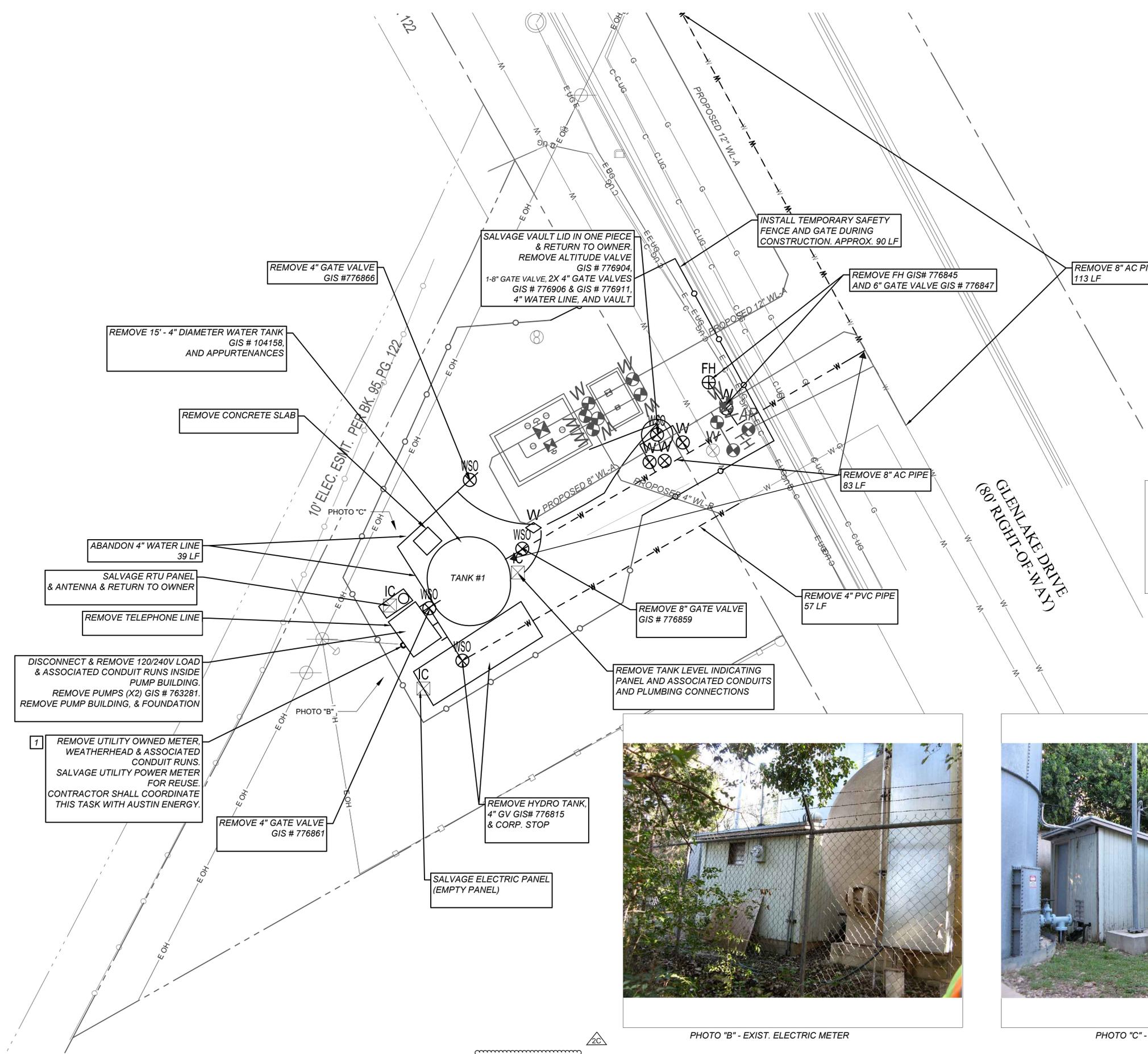


NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



GP-2018-0000-AW

REPLACEMENT SHEET



KEYED NOTES:

- 1 COORDINATE WITH AUSTIN ENERGY TO REMOVE EXISTING ELECTRIC SERVICE AND GETTING NEW ELECTRIC SERVICE. 120 VAC, SINGLE PHASE, 3 WIRE, 30 AMP

NOTES:

- 1. COORDINATE WITH OWNER TO SALVAGE EQUIPMENT
- 2. SEE GENERAL CONSTRUCTION NOTES FOR PHASE 2 SEQUENCE OF DEMOLITION, SHEET 4

REVIEWED
February 20, 2020
George R.
Austin Water
George R.
update project information

REV. NO.	DATE	REVISION DESCRIPTION
1C	3/5/2019	REVISE SHEET TITLE & NOTES
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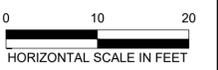
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
WATER TANKS & PUMP STATION DEMOLITION PLAN -
ABANDONMENT PLAN - PHASE 2



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



GP-2018-0000-AW

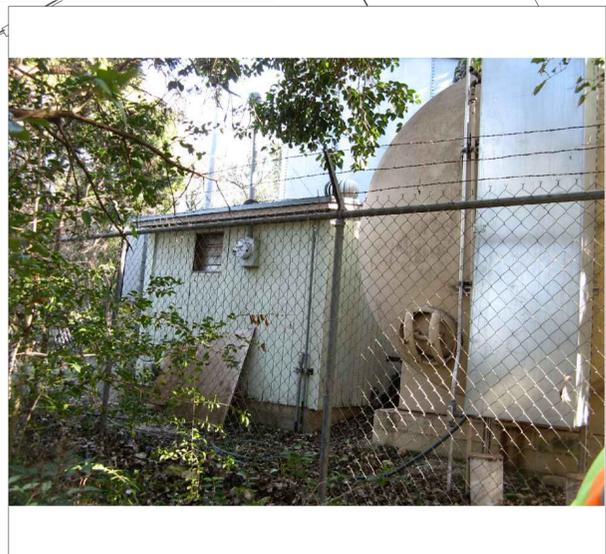


PHOTO "B" - EXIST. ELECTRIC METER

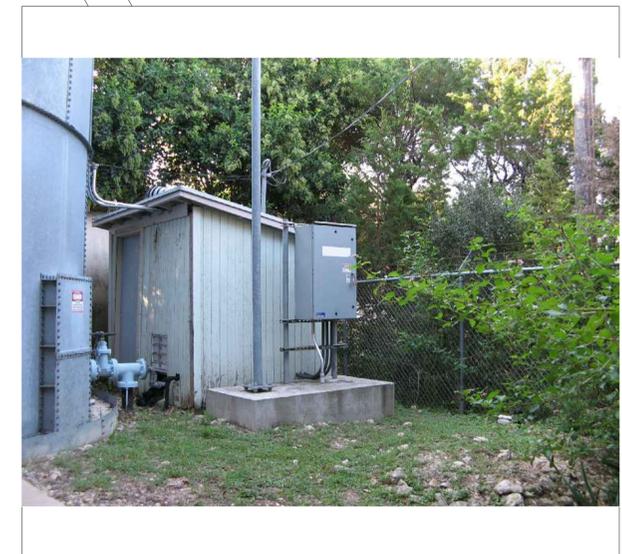
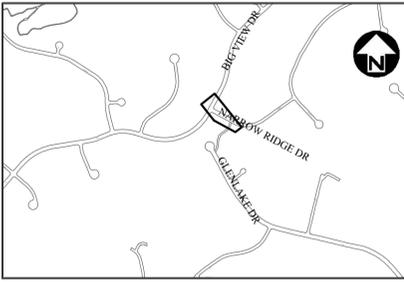
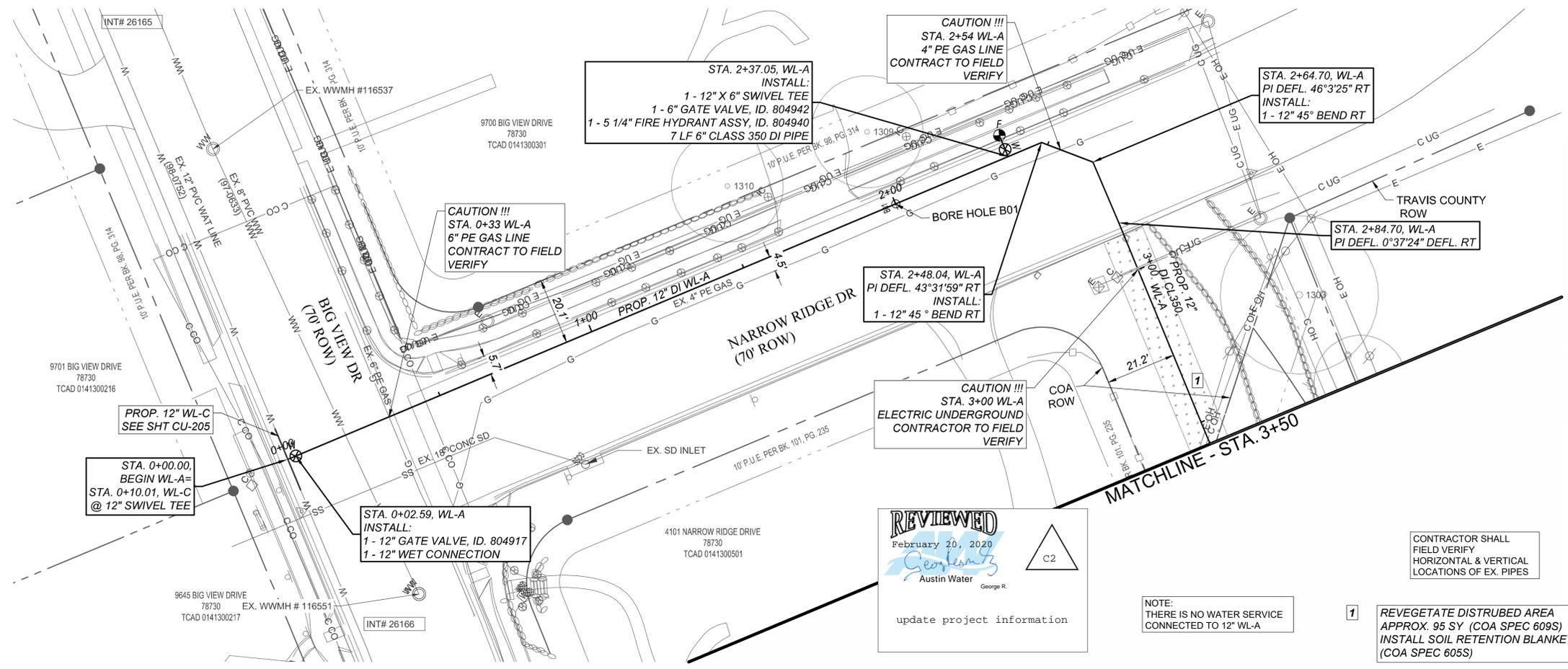


PHOTO "C" - EXIST. ANTENNA & RTU

REPLACEMENT SHEET

Xref M:\Autodesk\Civil 3D\2016\Template\References\PROJ-G-TITL.dwg

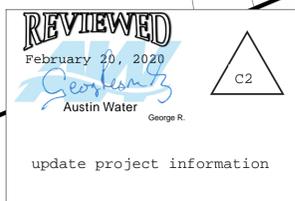


WASTEWATER	WATER	WATER
97-0633	24274	98-0752
PROFILE	INTERSECTION	PROJECT
MAP	MAP	NUMBER

RECORD REFERENCES

QUAD MAP	MAPSCO
D30	522C
NUMBER	NUMBER

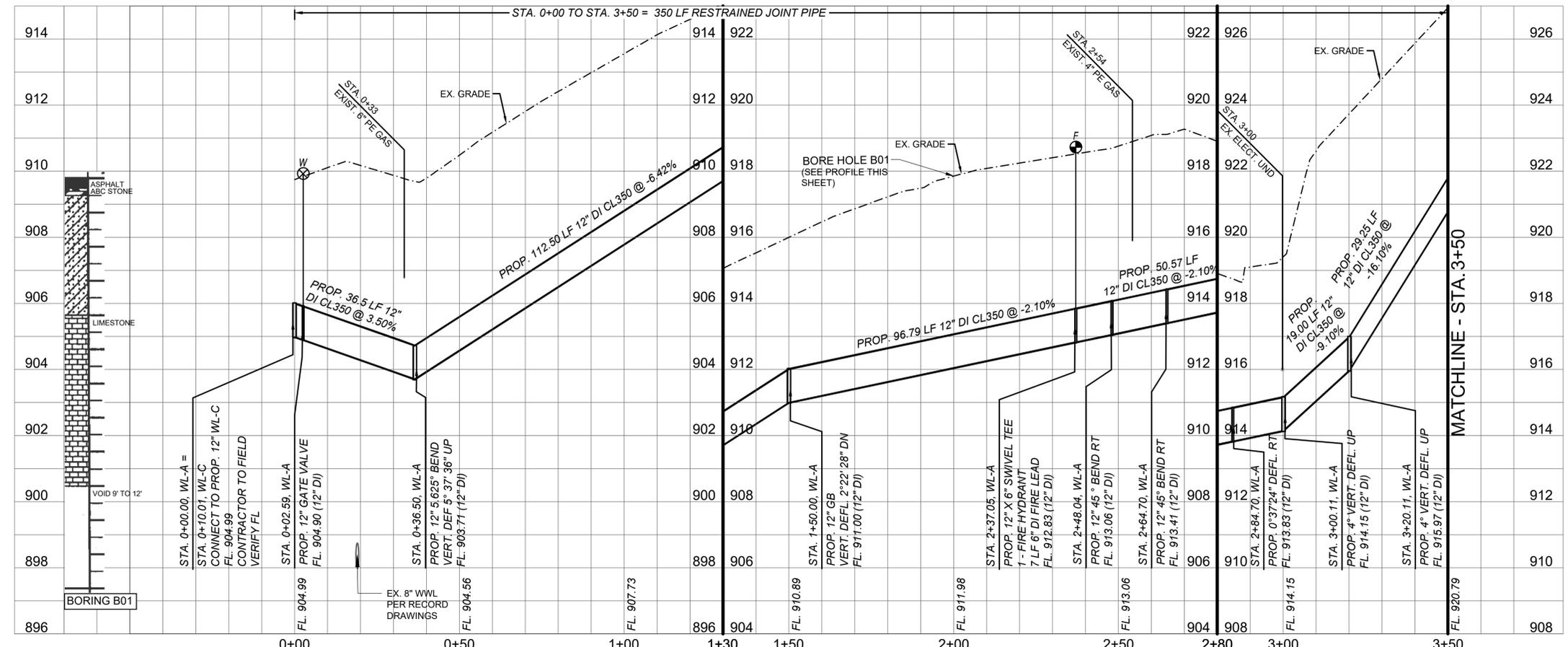
PLAN LEGEND
SEE SHEET G-003



REV. NO.	DATE	REVISION DESCRIPTION
1C	TC 3/5/2019	REVISE SHEET TITLE & ADD NOTE
2C	TC 02/10/2020	REPLACEMENT SHEET

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WL-A



- WATER PLAN & PROFILE NOTES:
- UTILITIES SHOWN REFLECT THE BEST INFORMATION AVAILABLE AT THE TIME THE PROJECT WAS DESIGNED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES THAT ARE TO BE EXTENDED, TIE-TO, CROSSED, OR ALTERED, OR SUBJECT TO DAMAGED/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
PROPOSED WATER PLAN & PROFILE - PHASE 1
WL-A BEGIN - STA. 3+50

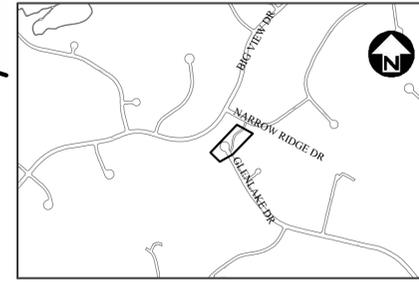
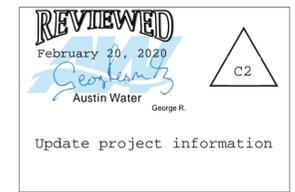
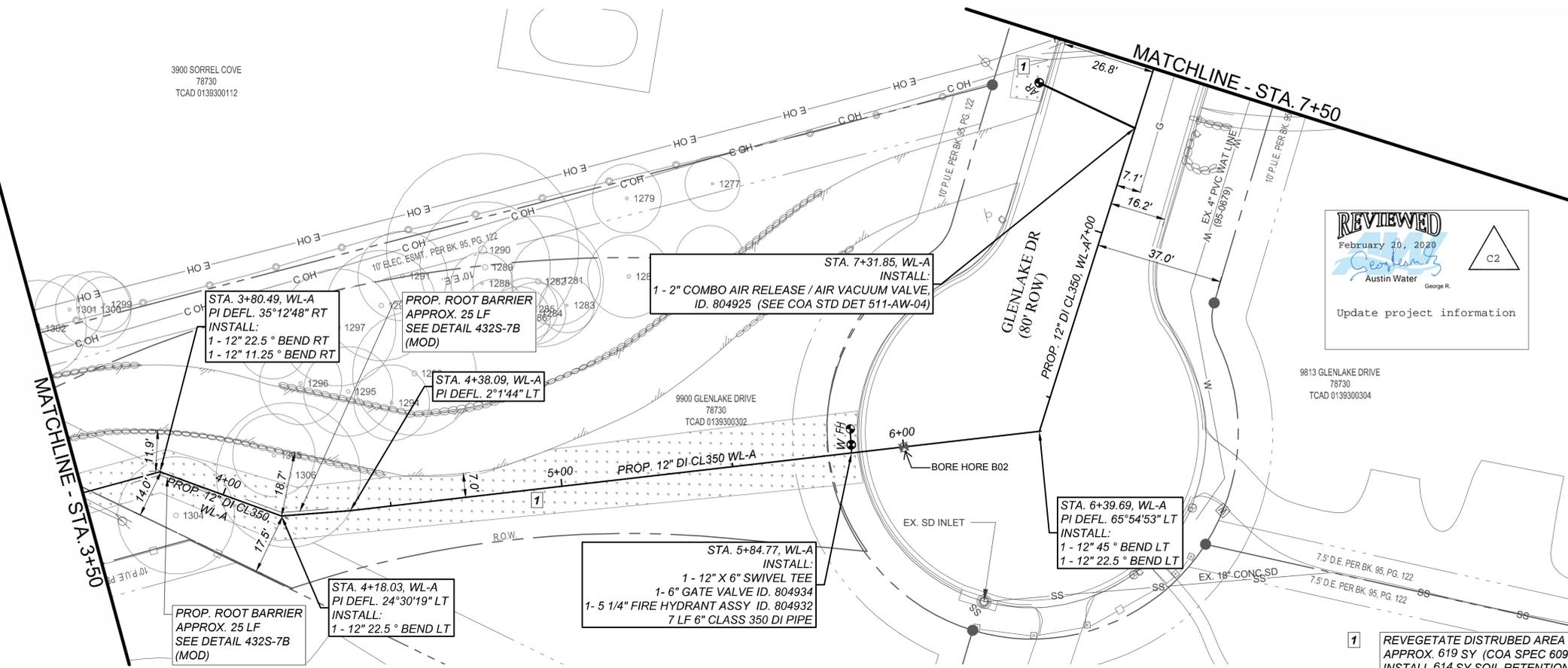


NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

0 20 40
HORIZONTAL SCALE IN FEET
0 2 4
VERTICAL SCALE IN FEET

GP-2018-0000-AW

3900 SORREL COVE
78730
TCAD 0139300112



REV. NO.	DATE	REVISION DESCRIPTION
1C	TC 3/5/2019	REPLACE SHEET TITLE & ADD NOTE
2C	TC 2/10/2020	REPLACEMENT SHEET

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976		
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WASTEWATER A- PROFILE MAP	WATER 13790 INTERSECTION MAP	WATER 95-0679 PROJECT NUMBER
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RECORD REFERENCES

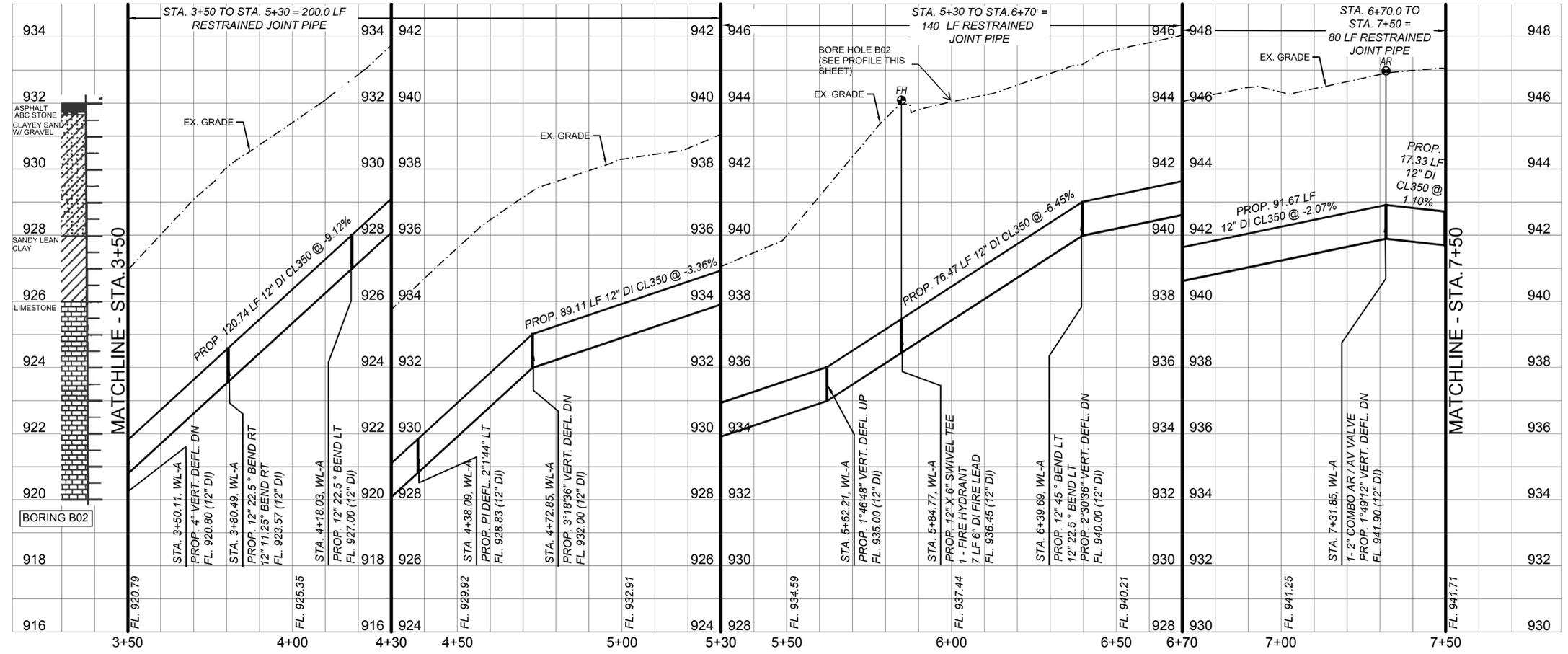
QUAD MAP D30 NUMBER	MAPSCO 522C NUMBER
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PLAN LEGEND
SEE SHEET G-003

1 REVEGETATE DISTURBED AREA APPROX. 619 SY (COA SPEC 609S) INSTALL 614 SY SOIL RETENTION BLANKET (COA SPEC 605S), SEE RESTORATION PLANS

NOTE: THERE IS NO WATER SERVICE CONNECTED TO 12" WL-A

WL-A

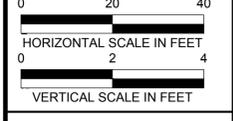


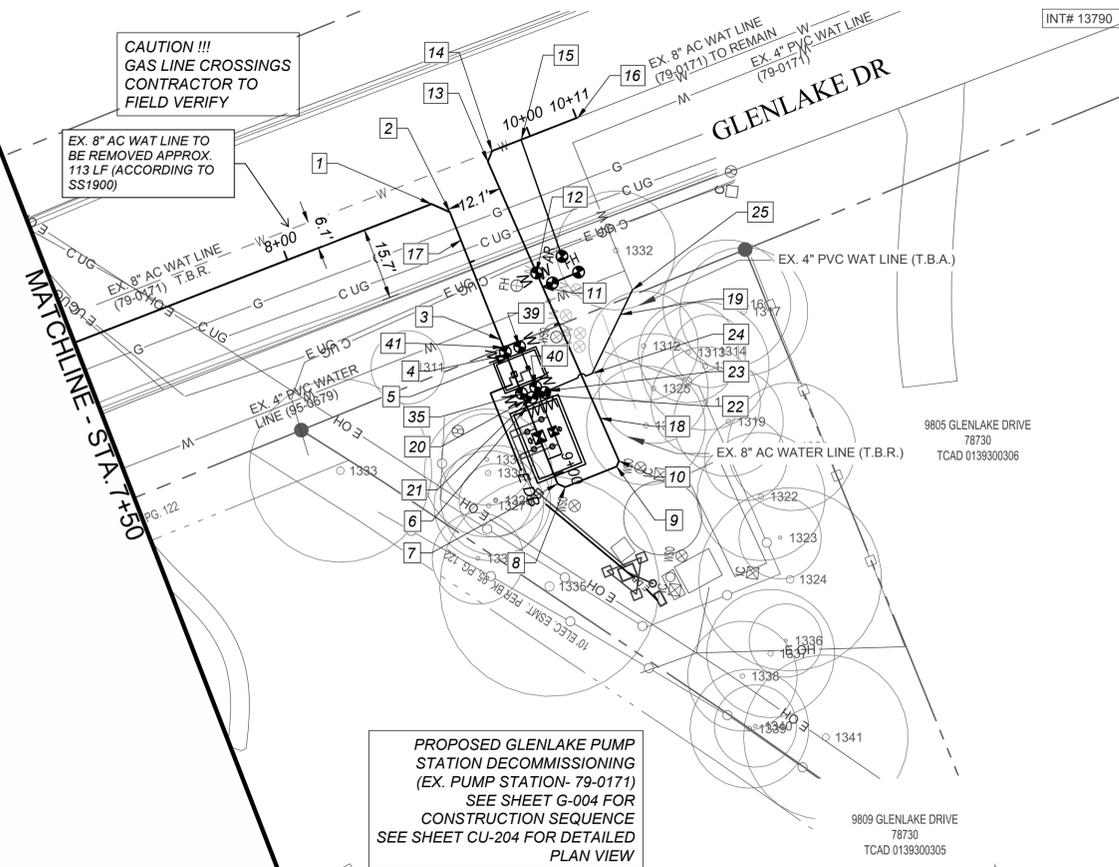
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
PROPOSED WATER PLAN & PROFILE PHASE 1
WL-A STA. 3+50 - STA. 7+50



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CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

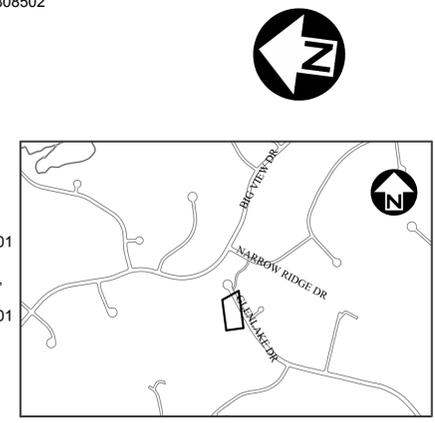




PROPOSED GLENLAKE PUMP STATION DECOMMISSIONING (EX. PUMP STATION- 79-0171) SEE SHEET G-004 FOR CONSTRUCTION SEQUENCE SEE SHEET CU-204 FOR DETAILED PLAN VIEW

- 1 STA. 8+33.80 WL-A 45° BEND RT
- 2 STA. 8+38.19, WL-A 45° BEND RT
- 3 STA. 8+67.35, WL-A 12" x 8" REDUCER
- 4 STA. 8+71.12, WL-A 8" GATE VALVE, ID#808500
- 5 STA. 8+72.42, WL-A BEGIN DUAL 8" & 4" FLOW METERS AND VAULT
- 6 STA. 8+83.92, WL-A BEGIN DUAL 8" & 4" PRVs AND VAULT
- 7 STA. 9+01.99, WL-A, 8"- 45° BEND LT
- 8 STA. 9+03.79, WL-A, 8"- 45° BEND LT
- 9 STA. 9+15.92, WL-A, 8"- 45° BEND LT
- 10 STA. 9+17.23, WL-A, 8"- 45° BEND LT
- 11 STA. 9+58.70, WL-A 12" x 6" SWIVEL TEE, 6" GATE VALVE, & 5 1/2" FIRE HYDRANT, 8 LF 6" DI FIRE LEAD
- 12 STA. 9+62.05, WL-A, 8" GATE VALVE,
- 13 STA. 9+88.56, WL-A, 8"- 45° BEND RT
- 14 STA. 9+91.05, WL-A, 8"- 45° BEND RT
- 15 STA. 9+97.89, WL-A 2" COMBO ARV
- 16 STA. 10+10.87, END WL-A, 8" DI TO AC PIPE ADAPTER TIE TO EX. 8" AC PIPE
- 17 PROP. 12" DI CL350, WL-A
- 18 PROP. 8" DI CL350, WL-A

- KEYED NOTES:**
- 19 PROP. 4" DI CL350, WL-B
 - 20 STA. 8+82.42, WL-A = STA. 0+00, WL-B, 1-8" x 4" TEE 8" FL=939.49, 4" FL=939.66
 - 21 STA. 0+01.10, WL-B 4" GATE VALVE, ID#804874
 - 22 STA. 0+03.35, WL-B 4" CROSS
 - 23 STA. 0+05.66, WL-B 4" GATE VALVE, ID#804876
 - 24 STA. 0+16.71, WL-B 45° BEND
 - 25 STA. 0+35.89, WL-B 45° BEND 4" DI TO PVC ADAPTER TIE TO EX. 4" PVC
 - 26 PROP. 33.73 LF 8" DI PIPE CL 350 @ 0.00%
 - 27 STA. 9+08.00, WL-A 2"34'48" VERT DEFL DN, FL=939.49
 - 28 PROP. 25.17 LF 8" DI PIPE CL 350 @ -4.51%
 - 29 STA. 9+35.00, WL-A 2"34'48" VERT DEFL UP, FL=938.27
 - 30 4" WL-B, FL=940.80
 - 31 STA. 9+41.87 WL-B 2"40'12" VERT DEFL UP, FL=938.27
 - 32 PROP. 49.63 LF 8" DI PIPE CL 350 @ 4.67%
 - 33 8" WL-A, FL=938.27
 - 34 PROP. 3.72 LF 8" DI PIPE CL 350 @ 0.00%
 - 35 STA. 8+81.22, WL-A PROP. 8" GATE VALVE, ID#808502
 - 36 PROP. 6.08 LF 4" DI PIPE CL 350 @ 0.00%
 - 37 PROP. 5.26 LF 4" DI PIPE CL 350 @ 19.79%
 - 38 PROP. 21.13 LF 4" DI PIPE CL 350 @ 0.00%
 - 39 PROP. 4" GATE VALVE, ID#808504 SEE PRV DETAIL SHT CU-501
 - 40 PROP. 4" GATE VALVE, ID#808506 SEE PRV DETAIL SHT CU-501
 - 41 STA. 8+69.92, WL-A 8" x 4" TEE



WASTEWATER	WATER	WATER
A-_____	13790	79-0171
PROFILE	INTERSECTION	PROJECT
MAP	MAP	NUMBER

RECORD REFERENCES

QUAD MAP	MAPSCO
D30	522C
NUMBER	NUMBER

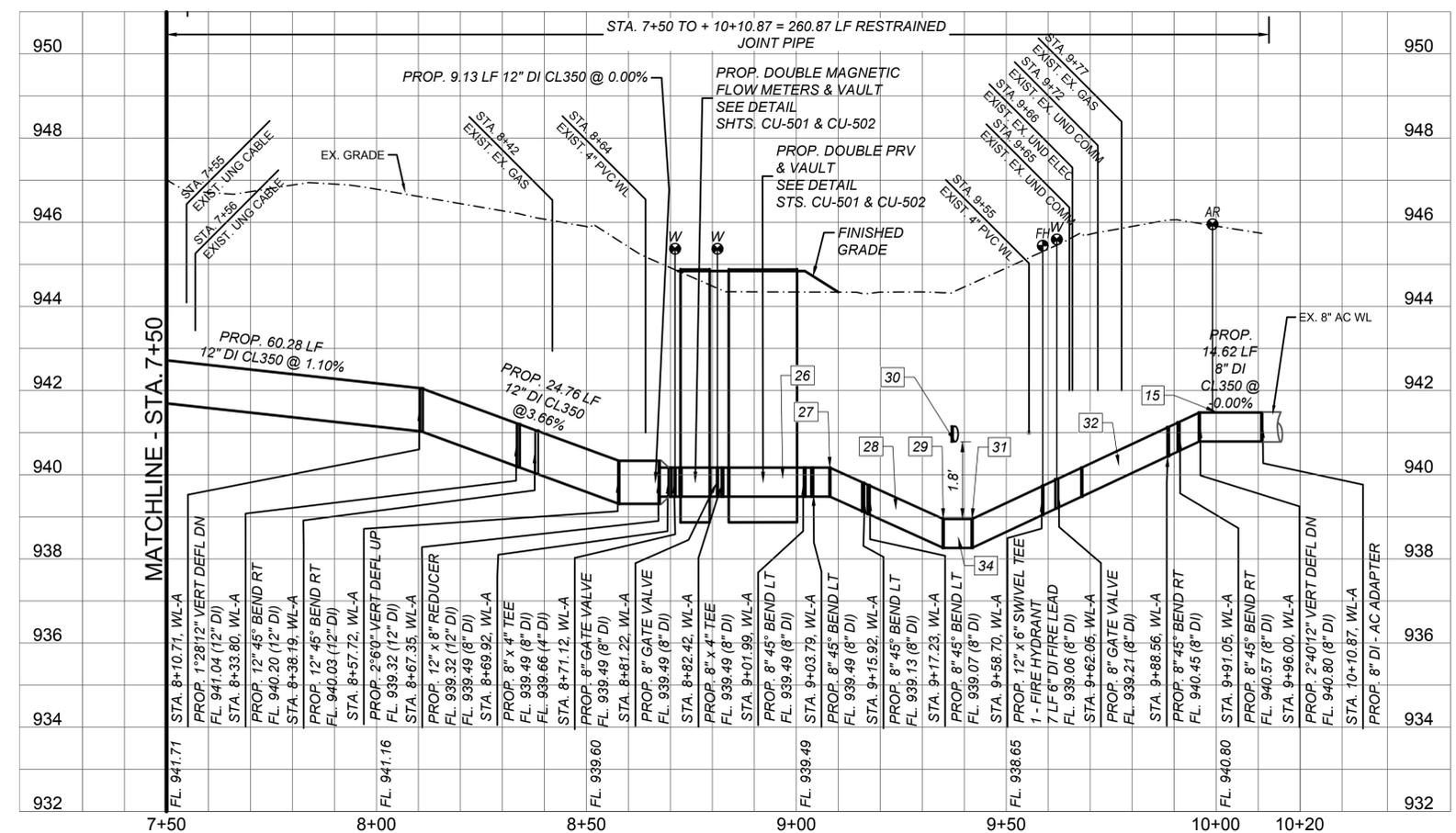
PLAN LEGEND
SEE SHEET G-003

CONTRACTOR SHALL FIELD VERIFY HORIZONTAL & VERTICAL LOCATIONS OF EX. PIPES

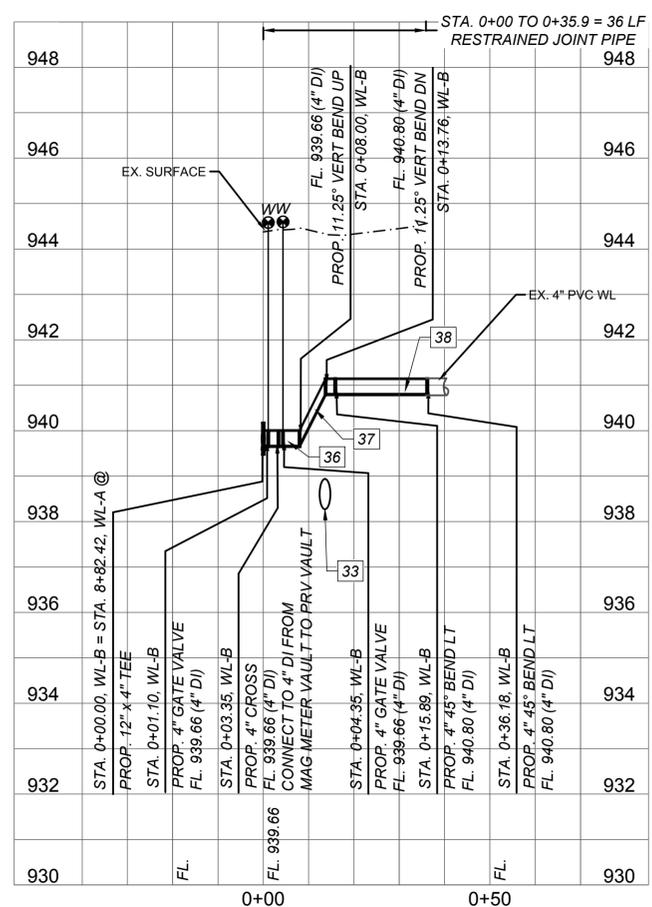
REVIEWED
February 20, 2020
Austin Water
George R.

update project information

WL-A



WL-B



WATER PLAN & PROFILE NOTES:

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION

GLENLAKE PUMP STATION BYPASS IMPROVEMENTS

PROPOSED WATER PLAN & PROFILE - PHASE 1
WL-A STA. 3+50 - STA. 7+50 & WL-B BEGIN-END

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
02/10/2020

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REV. NO.	DATE	REVISION DESCRIPTION
1C	3/5/2019	REVISION SHEET TITLE & ADD NOTE
2C	2/10/2020	REPLACEMENT SHEET

NOTES

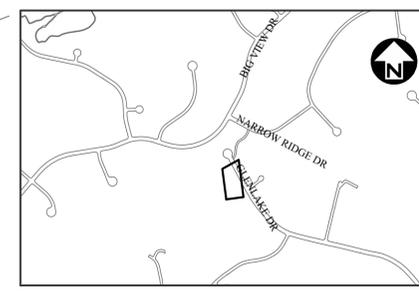
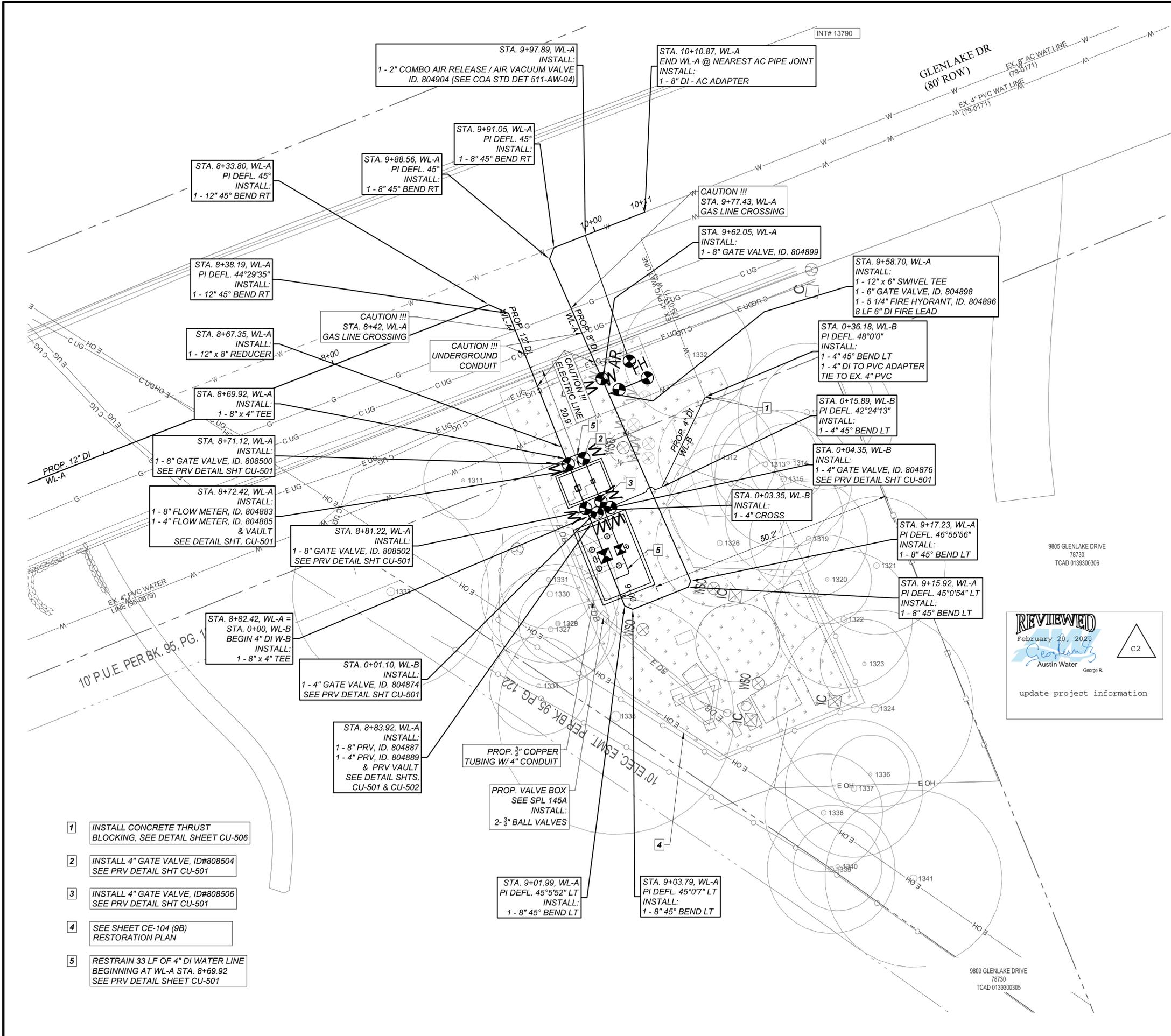
NOTES	NAME	DATE
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DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	02/16
REVIEWED BY	ESD	02/17

0 20 40
HORIZONTAL SCALE IN FEET

0 2 4
VERTICAL SCALE IN FEET

GP-2018-0000-AW

CU-203 20 OF 55



WASTEWATER	WATER	WATER
A- PROFILE	13790 INTERSECTION	79-0171 PROJECT
MAP	MAP	NUMBER

RECORD REFERENCES

QUAD MAP D30 NUMBER	MAPSCO 522C NUMBER
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PLAN LEGEND
SEE SHEET G-003

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2	2/10/2020	REPLACEMENT SHEET

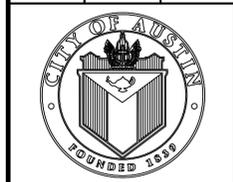
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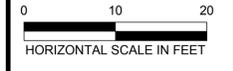
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
WL-A & PRV & FLOW METER PLAN PHASE 1

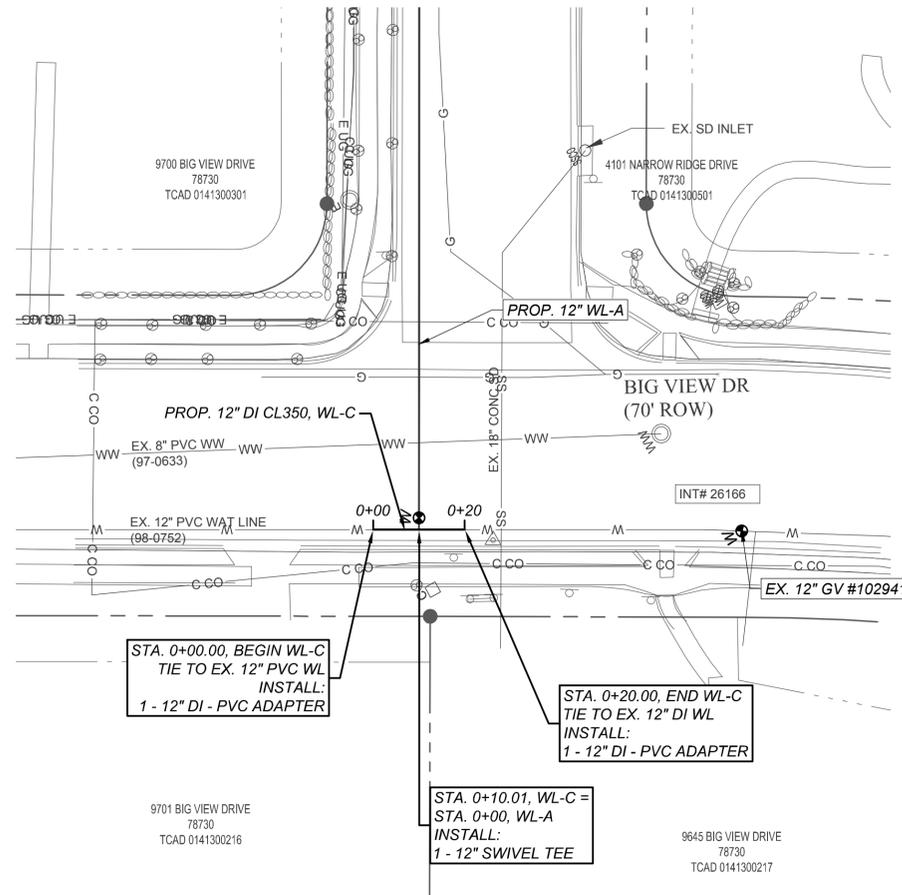
REVIEWED
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 Austin Water
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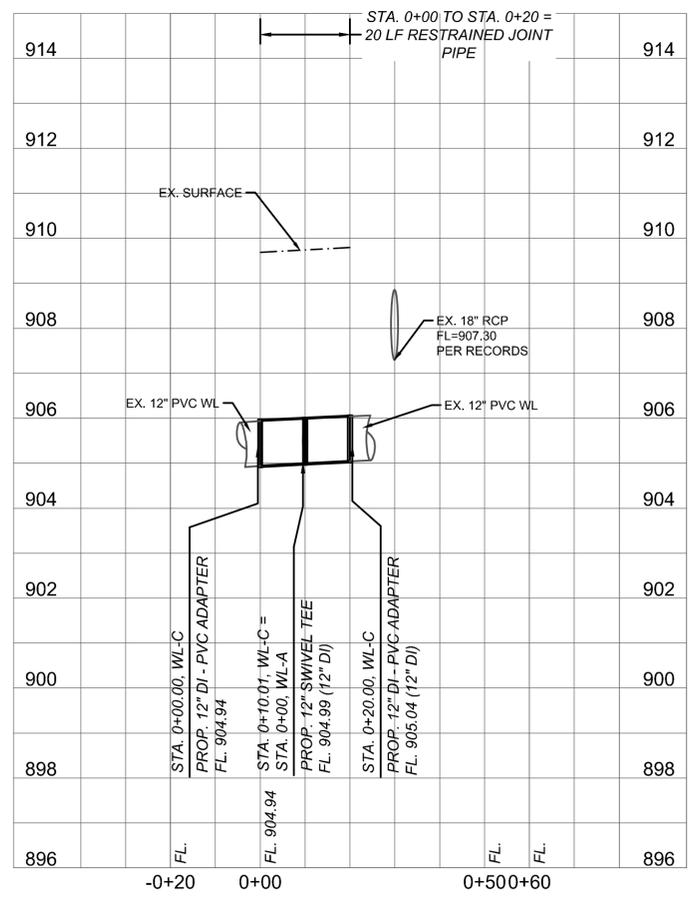




STA. 0+00.00, BEGIN WL-C
TIE TO EX. 12\"/>

STA. 0+20.00, END WL-C
TIE TO EX. 12\"/>

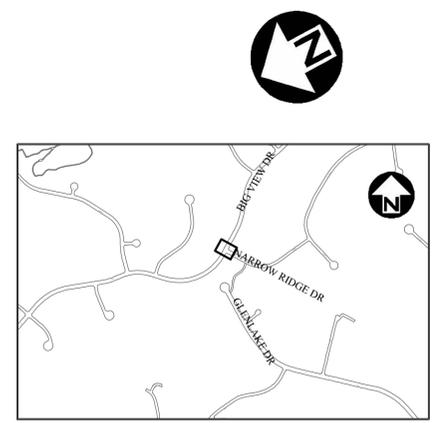
STA. 0+10.01, WL-C =
STA. 0+00, WL-A
INSTALL:
1 - 12\"/>



CONTRACTOR SHALL
FIELD VERIFY
HORIZONTAL & VERTICAL
LOCATIONS OF EX. PIPES

REVIEWED
February 20, 2020
George R.
Austin Water
George R.
update project information

REPLACEMENT SHEET



WASTEWATER 97-0633 PROFILE MAP	WATER 13790 INTERSECTION MAP	WATER 79-0171 PROJECT NUMBER
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RECORD REFERENCES

QUAD MAP D30 NUMBER	MAPSCO 522C NUMBER
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PLAN LEGEND
SEE SHEET G-003

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1C	3/5/2019
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STATE OF TEXAS
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93976
LICENSED
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DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
PROPOSED WATER PLAN & PROFILE - PHASE 1
WL-C BEGIN - END

CITY OF AUSTIN
FOUNDED 1859

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0 10 20
HORIZONTAL SCALE IN FEET

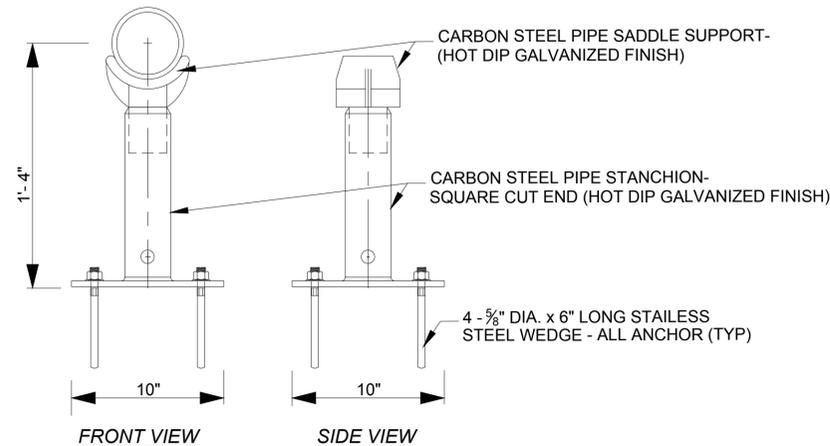
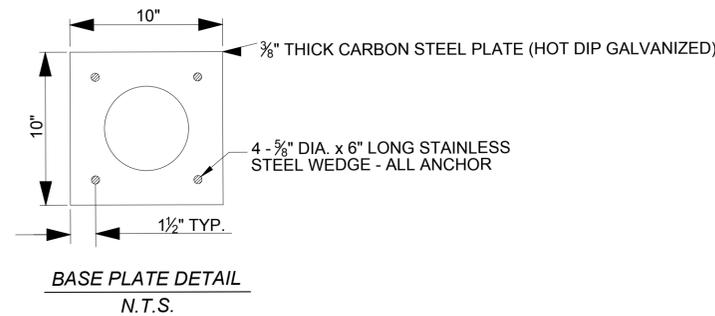
GP-2018-0000-AW

CU-205 22 OF 55

2/10/2020 2:30 PM

NOTES:

- ALL FABRICATED PIPE SECTIONS INSIDE VAULT SHALL CONFORM TO COA SPL WW-27 AND SPL WW-27E.
- ALL FITTINGS SHALL CONFORM TO COA SPL WW-27B. ALL FITTINGS SHALL BE RESTRAINED, MECHANICAL JOINTS OUTSIDE VAULT, w/FLANGED OR UNI-FLANGED FITTINGS INSIDE VAULT. ALL COUPLINGS SHALL UTILIZE RESTRAINED JOINT SYSTEM.
- TYPE 316 STAINLESS STEEL F-599 HEX BOLTS AND F-574 HEX NUTS c/w SAE STAINLESS STEEL WASHERS USED THROUGHOUT ASSEMBLY.
- FULL FACE 1/8" THICK RED RUBBER GASKETS USED THROUGHOUT ASSEMBLY.
- PRESSURE REDUCING VALVE SHALL BE PRESET TO:
4" PRV - P(OUT) = 31 PSI; 8" PRV - P(OUT) = 23 PSI
- INSTALL TEE WITH SHUT OFF VALVE (COA SPL WW-275) FOR PRESSURE GAUGE. INSTALL ALL NECESSARY COMPONENTS.
- CAST OR CORE PIT DRILLED WALL OPENING.
- MAINTAIN MIN. 18" CLEAR SPACE ALL AROUND BETWEEN PRV VAULT AND VALVE.
- CONTRACTORS TO VERIFY VALVE DIMENSION PRIOR TO SELECT THE PIPE SADDLE SUPPORT AND PIPE STANCHIONS



MATERIAL LIST

ITEM	DESCRIPTION	SIZE	MIN. FLANGE RATING / TYPE	QTY
1	CLA-VAL PRESSURE REDUCING VALVE PER COA SPL WW-319 NOTE: PILOT ARRANGEMENTS SHOWN FOR ILLUSTRATION ONLY	8"	ANSI CLASS 150 FLG x FLG	1
2	CLA-VAL PRESSURE REDUCING VALVE PER COA SPL WW-319 NOTE: PILOT ARRANGEMENTS SHOWN FOR ILLUSTRATION ONLY	4"	ANSI CLASS 150 FLG x FLG	1
3	STRAINER PER COA SPL WW-319A, CLA-VAL MODEL X43H H STYLE w/ STANDARD 10 MESH (OR APPROVED EQUAL)	8"	ANSI CLASS 150 FLG x FLG	1
4	STRAINER PER COA SPL WW-319A, CLA-VAL MODEL X43H H STYLE w/ STANDARD 10 MESH (OR APPROVED EQUAL)	4"	ANSI CLASS 150 FLG x FLG	1
5	DISMANTLING JOINT, ROMAC INDUSTRIES STYLE DJ405 (OR APPROVED EQUAL) w/ RomaGrip RESTRAINT, FUSION BONDED EPOXY COATED w/ STAINLESS STEEL HARDWARE PER COA SPL WW-27A	8"	AWWA CLASS D	1
6	DISMANTLING JOINT, ROMAC INDUSTRIES STYLE DJ405 (OR APPROVED EQUAL) w/ RomaGrip RESTRAINT, FUSION BONDED EPOXY COATED w/ STAINLESS STEEL HARDWARE PER COA SPL WW-27A	4"	AWWA CLASS D	1
7	RESILIENT-SEATED GATE VALVE PER COA SPL WW-700 (w/HANDWHEEL)	8"	FLG x FLG	2
8	RESILIENT-SEATED GATE VALVE PER COA SPL WW-700 (w/HANDWHEEL)	4"	FLG x FLG	2
9	RESILIENT-SEATED GATE VALVE PER COA SPL WW-700	4"	FLG x FLG	4
10	RESILIENT-SEATED GATE VALVE PER COA SPL WW-700	8"	FLG x FLG	2
11	8"x4" TEE	8"x4"	FLG x FLG	2
12	4"x90° BEND	4"	FLG x FLG	2
13	8" DI CLASS 350 PIPE JOINT	8"	FLG x P.E.	2
14	4" DI CLASS 350 PIPE - SPOOL PIECE	4"	FLG x FLG	4
15	PIPE STANCHION SADDLE SUPPORT (AVIL INTERNATIONAL, INC.) FIG. 258 AND FIG. 62 OR APPROVED EQUAL, HOT DIP GALVANIZED FINISH) WITH 316 STAINLESS STEEL EXPANSION ANCHORS (See Support Details on This Sheet)			6
16	8" ELECTROMAGNETIC FLOW METER (ABB MODEL FEW 325.200)	8"		1
17	4" ELECTRO MAGNETIC FLOW METER (ABB MODEL FEW 325.100)	4"		1
18	LADDER (HALLIDAY PRODUCT SERIES L1B LADDER & SERIES L1E EXTENTION) WITH 7" MIN. STAND OFF (FOR FLAT WALL)			2
19	4"x4" CROSS	4"x4"	FLG x FLG	1
20	8" SPOOL WITH 3" PORT	8"x8"	FLG x FLG	1
21	4" SPOOL WITH 2" PORT	4"x4"	FLG x FLG	1
22	LINK-SEAL MODULAR SEALS W/ STAINLESS STEEL HARDWARE (OR APPROVED EQUAL)			
23	2" DOUBLE STRAP SERVICE CLAMPS PER SPL WW-264	2"		2
24	3/4" AIR RELEASE VALVE PER COA SPL WW-462A	3/4"		2
25	3/4" BALL VALVE PER COA SPL- 275	3/4"		4

PRESSURE REDUCING VALVE STATION INFORMATION AT GLENLAKE DRIVE

UPSTREAM (HIGH PRESSURE) ZONE	UPSTREAM (HIGH PRESSURE) HGL	DOWNSTREAM (LOW PRESSURE)		DOMESTIC ONLY		DOMESTIC & FIREFLOW Q(MAX.)	UPSTREAM (HIGH PRESSURE)	DOWNSTREAM (LOW PRESSURE)	
		ZONE	HGL	Q(MIN.)	Q(MAX.)			4" PRV	8" PRV
RIVER PLACE 5	1110'	GLENLAKE 2 REDUCED	1010'	100	1480	3000	74 PSI	31 PSI	23 PSI

REVISION DESCRIPTION

DATE

REV. BY

NO.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS

PROPOSED PRV DETAILS - SHEET 2 OF 2

NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

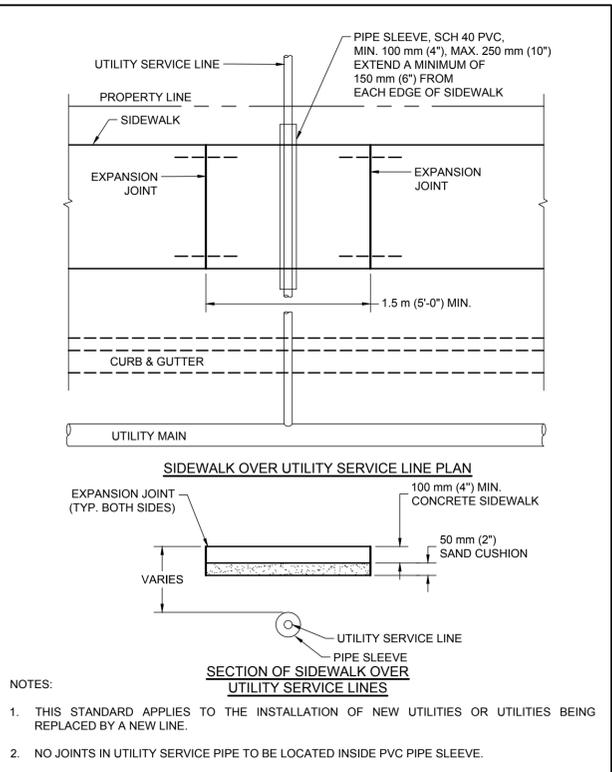
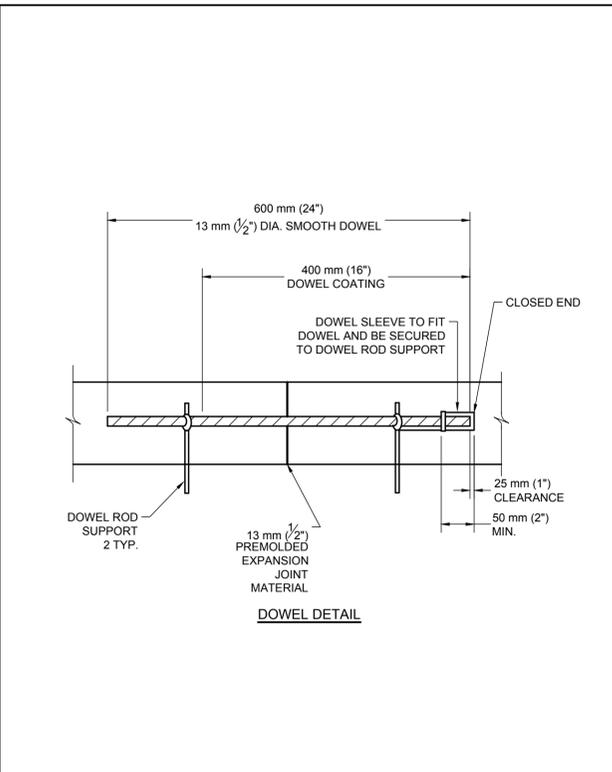
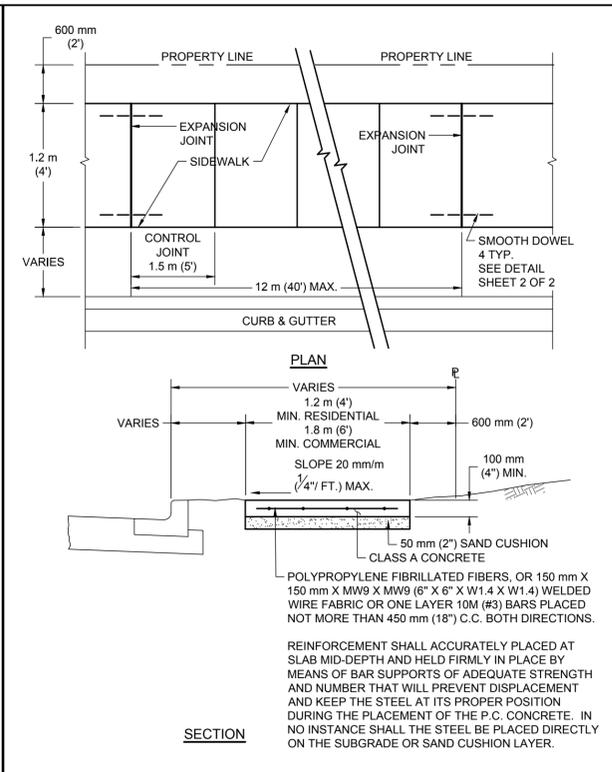
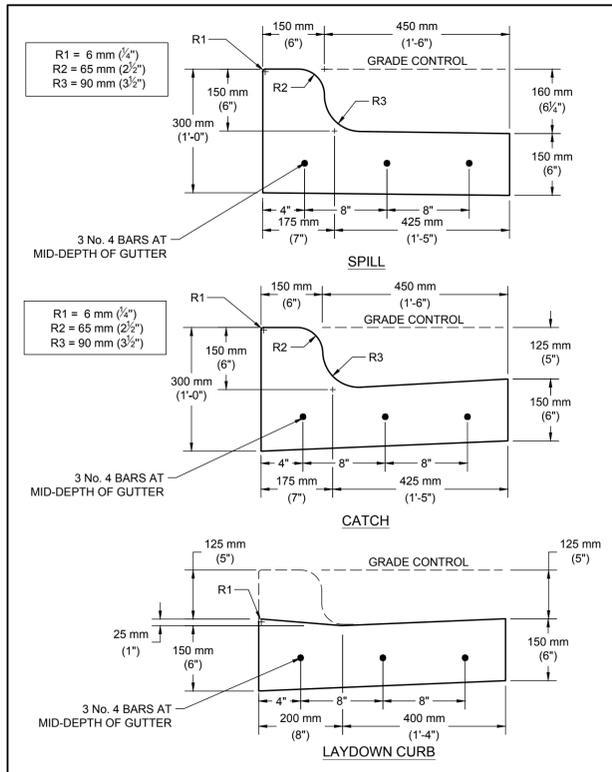
REVIEWED APR 03 2018
Austin Water Utility

ESD
ENGINEERING SERVICES
DIVISION

GP-2018-0000-AW

CU-502 24 OF 55

03/27/2018 9:01 PM

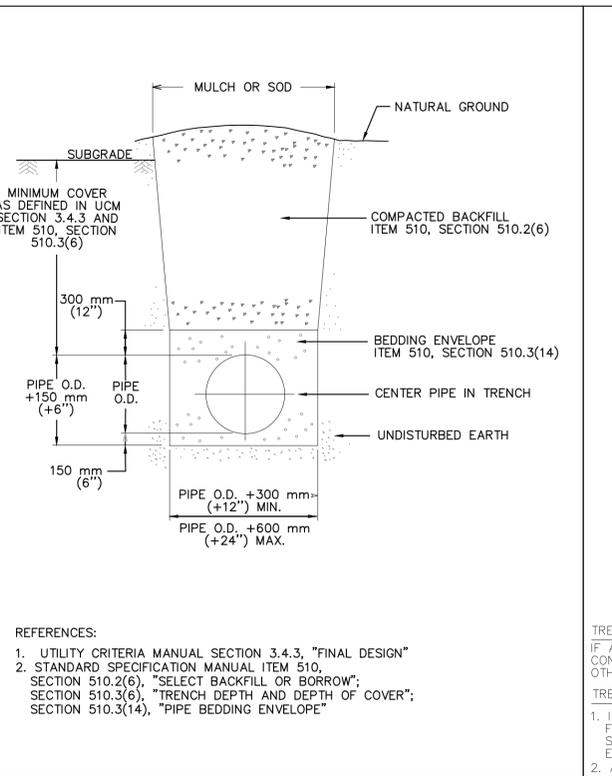


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	REINFORCED CURB AND GUTTER SECTION	STANDARD NO. 430S-2 1 OF 1
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/10 ADOPTED

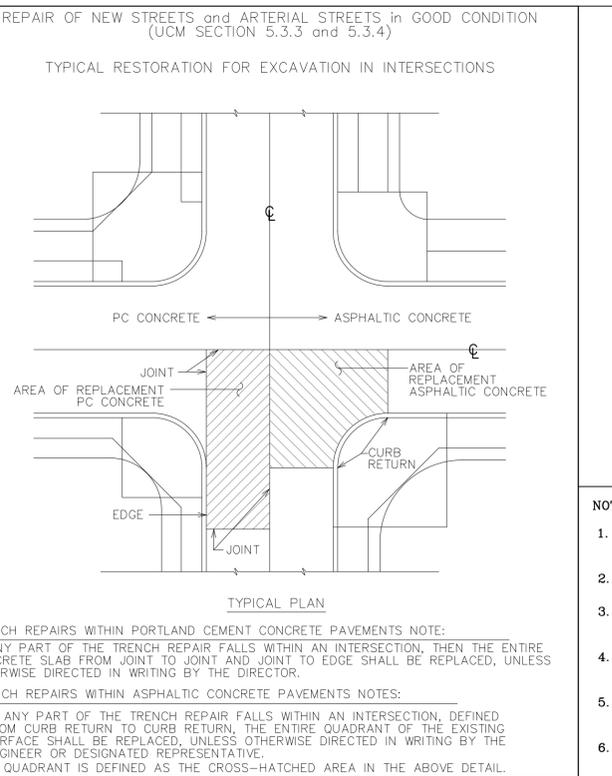
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	STANDARD NO. 432S-1 1 OF 3
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	03/26/08 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	STANDARD NO. 432S-1 2 OF 3
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	03/26/08 ADOPTED

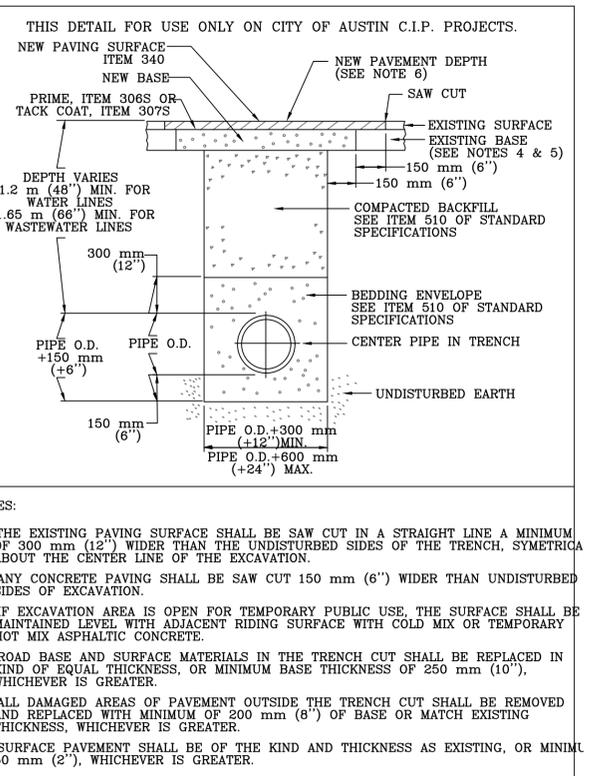
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	STANDARD NO. 432S-1 3 OF 3
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	03/26/08 ADOPTED



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	STANDARD NO. 510S-5
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	03/13/06 ADOPTED



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STREET REPAIR REQUIREMENTS	STANDARD NO. 1100S-7 1 OF 3
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	9/14/05 ADOPTED



CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE	STANDARD NO. 510S-3
RECORD COPY SIGNED BY KATHI L. FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	8/19/09 ADOPTED

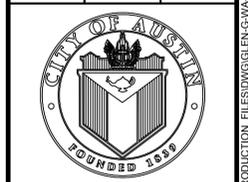
REVISION DESCRIPTION	DATE	REV. BY

STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 03/27/2018
 THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

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SINGLETON, MICHAEL

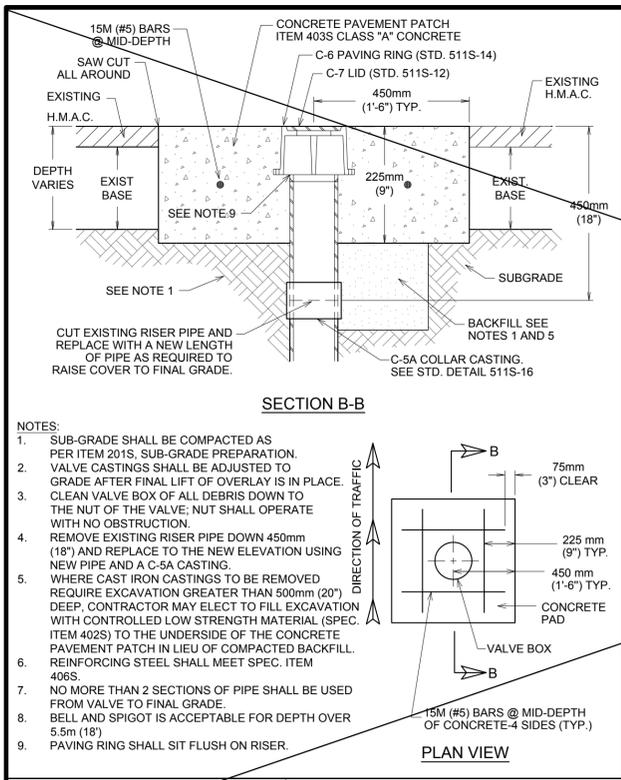
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 STANDARD DETAILS SHEET 1 OF 4



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

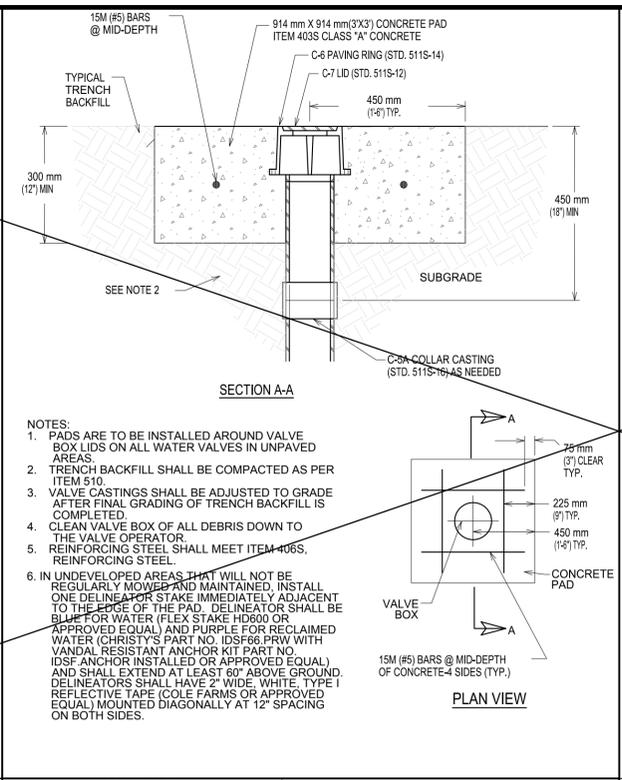
ESD
 ENGINEERING SERVICES
 DIVISION
 GP-2018-0000-AW
 CU-503 25 OF 55

REVIEWED
 APR 03 2018
 Sean Reed
 Austin Water Utility



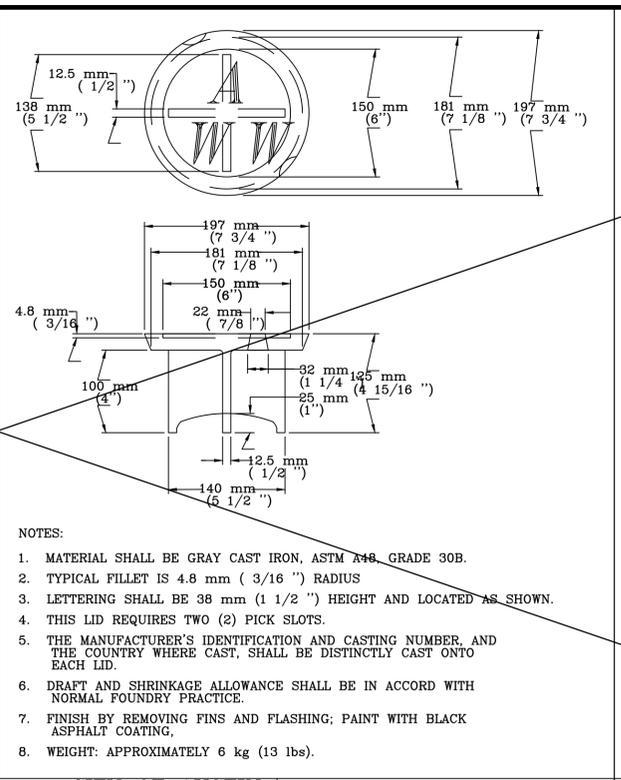
NOTES:

- SUB-GRADE SHALL BE COMPACTED AS PER ITEM 201S. SUB-GRADE PREPARATION.
- VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
- CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE. NUT SHALL OPERATE WITH NO OBSTRUCTION.
- REMOVE EXISTING RISER PIPE DOWN 450mm (18") AND REPLACE TO THE NEW ELEVATION USING NEW PIPE AND A C-5A CASTING.
- WHERE CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 500mm (20") DEEP. CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL (SPEC. ITEM 402S) TO THE UNDERSIDE OF THE CONCRETE PAVING PATCH IN LIEU OF COMPACTED BACKFILL. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.
- NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
- BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 5.5m (18").
- PAVING RING SHALL SIT FLUSH ON RISER.



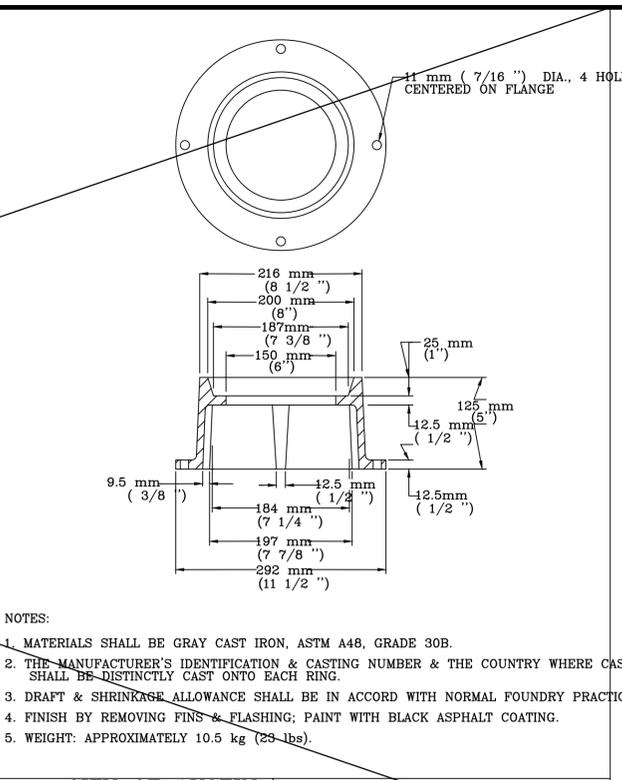
NOTES:

- PADS ARE TO BE INSTALLED AROUND VALVE BOX LIDS ON ALL WATER VALVES IN UNPAVED AREAS.
- TRENCH BACKFILL SHALL BE COMPACTED AS PER ITEM 510.
- VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL GRADING OF TRENCH BACKFILL IS COMPLETED.
- CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE VALVE OPERATOR.
- REINFORCING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
- IN UNDEVELOPED AREAS THAT WILL NOT BE REGULARLY MOVED AND MAINTAINED, INSTALL ONE DELINEATOR STAKE IMMEDIATELY ADJACENT TO THE EDGE OF THE PAD. DELINEATOR SHALL BE BLUE FOR WATER (FLEX STAKE HD800 OR APPROVED EQUAL) AND PURPLE FOR RECLAIMED WATER (CHRISTY'S PART NO. IDSF66 PRV WITH VANDAL RESISTANT ANCHOR KIT PART NO. IDSF ANCHOR INSTALLED OR APPROVED EQUAL) AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE, TYPE 1 REFLECTIVE TAPE (COLE FARMS OR APPROVED EQUAL) MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES.



NOTES:

- MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
- TYPICAL FILLET IS 4.8mm (3/16") RADIUS
- LETTERING SHALL BE 38mm (1 1/2") HEIGHT AND LOCATED AS SHOWN.
- THIS LID REQUIRES TWO (2) PICK SLOTS.
- THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
- DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
- FINISH BY REMOVING FINNS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
- WEIGHT: APPROXIMATELY 6 kg (13 lbs).



NOTES:

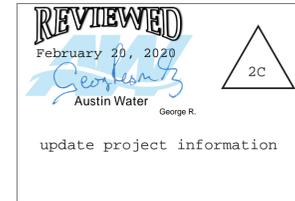
- MATERIALS SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
- THE MANUFACTURER'S IDENTIFICATION & CASTING NUMBER & THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH RING.
- DRAFT & SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
- FINISH BY REMOVING FINNS & FLASHING; PAINT WITH BLACK ASPHALT COATING.
- WEIGHT: APPROXIMATELY 10.5 kg (23 lbs).

CITY OF AUSTIN AUSTIN WATER UTILITY	WATER VALVE BOX ADJUSTMENT TO GRADE W/FULL DEPTH CONCRETE	STANDARD NO. 511S-13A
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

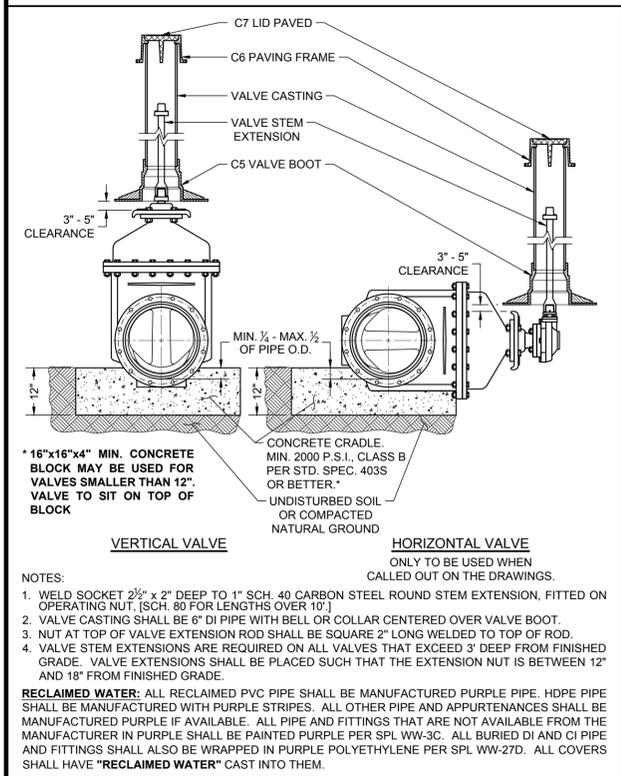
CITY OF AUSTIN AUSTIN WATER UTILITY	WATER VALVE BOX CONCRETE PAD IN UNPAVED AREA	STANDARD NO. 511S-13C
RECORD COPY SIGNED BY SAM ANGOORI 10/19/09	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	VALVE BOX CASTING C-7 LID	STANDARD NO. 511S-12
RECORD COPY SIGNED BY KATHI F. PAYNE 4/5/99	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

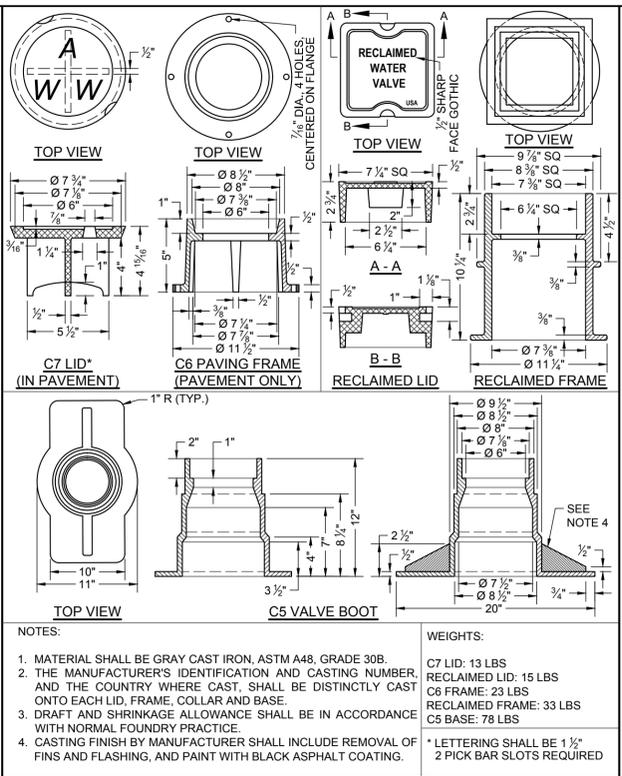
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	VALVE BOX CASTING C-6 PAVING RING	STANDARD NO. 511S-14
RECORD COPY SIGNED BY KATHI F. PAYNE 4/5/99	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED



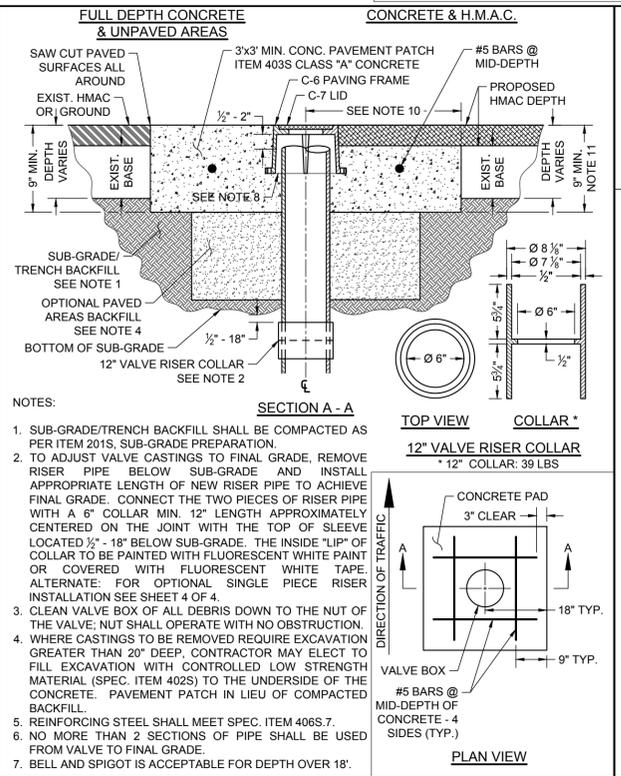
REPLACEMENT SHEET



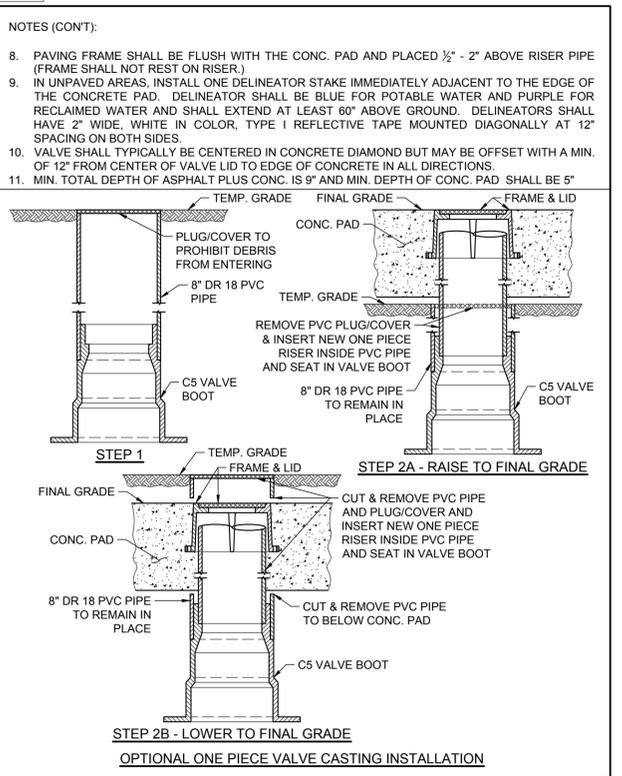
CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	STANDARD NO. 511-AW-01
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED



CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	STANDARD NO. 511-AW-01
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED



CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	STANDARD NO. 511-AW-01
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED



CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	STANDARD NO. 511-AW-01
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

REVISION DESCRIPTION	DATE	BY	NO.	2C
REPLACEMENT SHEET	2/10/2020	TC	2C	

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS

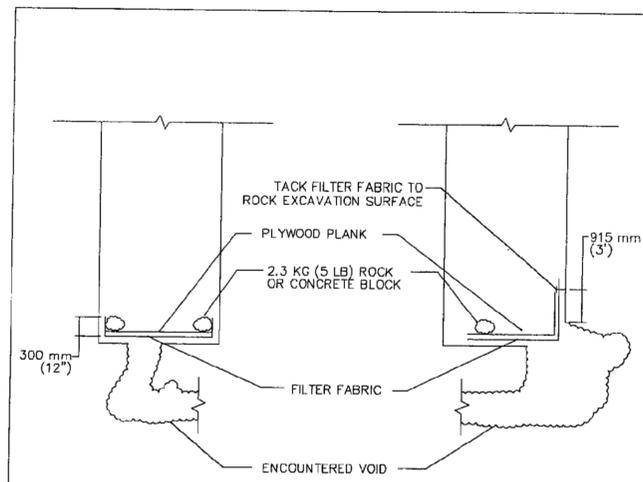
STANDARD DETAILS SHEET 2 OF 4

NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ENGINEERING SERVICES
DIVISION

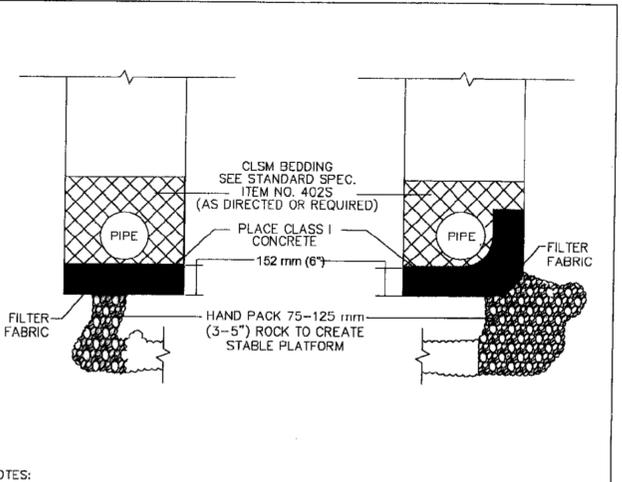
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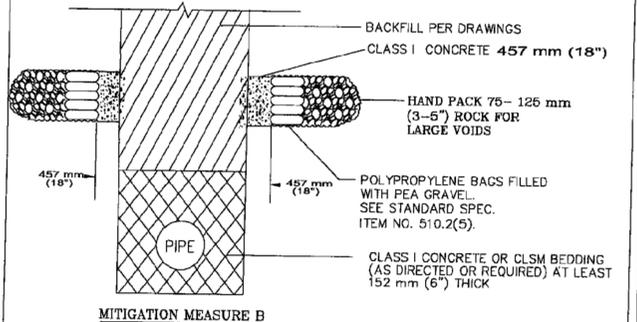
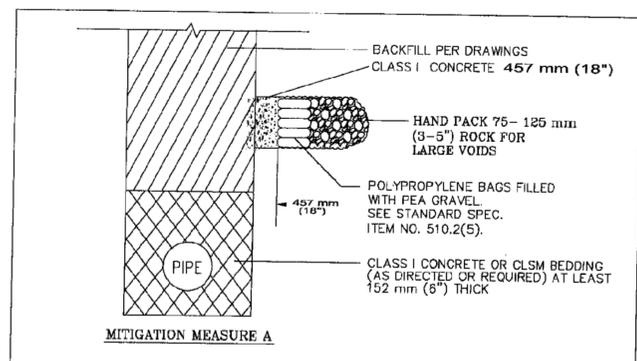
- NOTES:
1. PLACE TEMPORARY PROTECTION WITHIN TRENCH TO COVER VOID AS INDICATED. FABRIC SHALL EXTEND A MINIMUM OF 915 mm (3') BEYOND EDGE OF VOID. PLACE A PLYWOOD PLANK (MINIMUM 0.75" (19 mm) THICK) OVER FABRIC. PLANK AND FABRIC SHALL BE WEIGHED AS REQUIRED BY ROCK 2.3 KG (5 LB) OR CONCRETE BLOCK TO SECURE FILTER FABRIC.
 2. TEMPORARY PROTECTION SHALL BE IN PLACE AT ALL TIMES THAT CONSTRUCTION OPERATIONS ARE NOT IN ACTUAL PROGRESS.
 3. CONSTRUCTION OPERATIONS WITHIN 7.6 m (25') SHALL NOT PROGRESS DURING OCCURRENCE OF RAIN TO ALLOW FOR PROTECTION OF VOID DURING A RAIN EVENT.
 4. LOCALIZED EROSION MEASURES (SILT FENCE OR TRIANGULAR FILTER DIKES) SHALL BE INSTALLED ALONG THE TRENCH TO ENSURE THAT LOOSE SPOILS OR RUNOFF DO NOT ENTER THE TRENCH OR AFFECT PERFORMANCE OF TEMPORARY PROTECTION.
 5. SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT EROSION CONTROL MEASURES REQUIRED ALONG THE TRENCH ARE MAINTAINED, CLEANED AND FULLY FUNCTIONAL.
 6. PROCEDURES AND MATERIAL REQUIREMENTS OUTLINED IN STANDARD SPEC. ITEM NO. 658S SHALL BE FOLLOWED.
 7. FILTER FABRIC AND ROCK OR CONCRETE BLOCKS AND PLYWOOD PLANK SHALL BE REMOVED FROM THE TRENCH WHEN PERMANENT VOID MITIGATION MEASURES ARE INSTALLED.

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	CLASS I--TEMPORARY PROTECTION OF VOID AT BOTTOM OF TRENCH	STANDARD NO. 658S-1
<i>Dean Bales, P.E. 3-21-08</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	

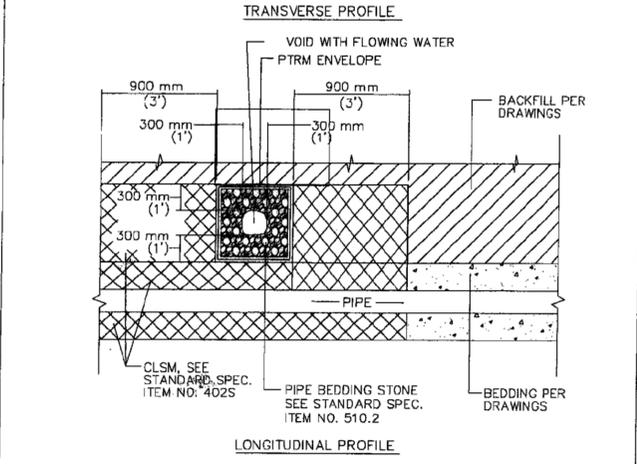
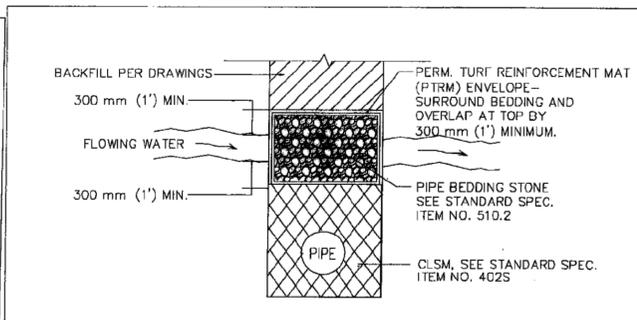


- NOTES:
1. PROCEDURES AND MATERIAL REQUIREMENTS OUTLINED IN STANDARD SPEC. ITEM NO. 658S SHALL BE FOLLOWED.
 2. VOID OPENING MAY REQUIRE REINFORCEMENT OR SUPPORT IF LARGER THAN 915 mm (3') IN WIDTH OR LENGTH. INSTALL AT DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
 3. CLASS I CONCRETE SHALL CONFORM TO STANDARD SPEC. ITEM NO. 403.7, TABLE 5. PLACE A FORM TO ENSURE MINIMUM THICKNESS OF 457 mm (18") EXTENDING A MINIMUM OF 150 mm (6") BEYOND THE EDGE OF THE VOID.

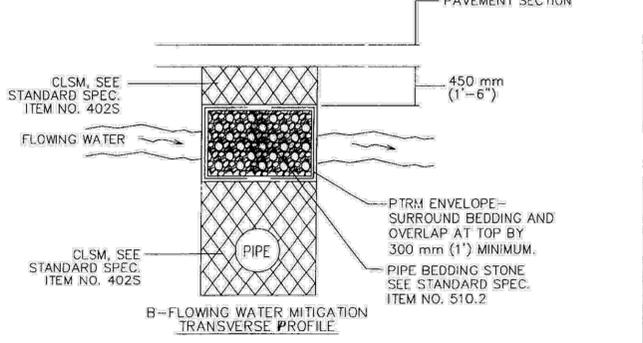
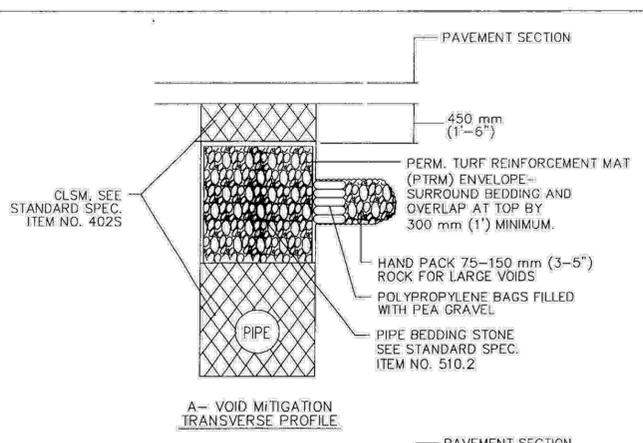
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	CLASS II--PERMANENT VOID MITIGATION MEASURES	STANDARD NO. 658S-2
<i>Dean Bales, P.E. 3-21-08</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	CLASS III--VOID MITIGATION MEASURES	STANDARD NO. 658S-3
<i>Dean Bales, P.E. 3-21-08</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	

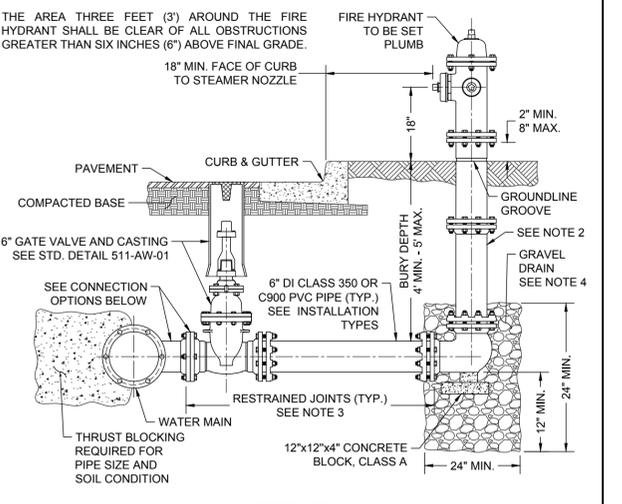


CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	CLASS V--WATER FLOW MITIGATION MEASURES GROUNDWATER ABOVE BEDDING MATERIAL DEPTH	STANDARD NO. 658S-5
<i>Dean Bales, P.E. 3-21-08</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	

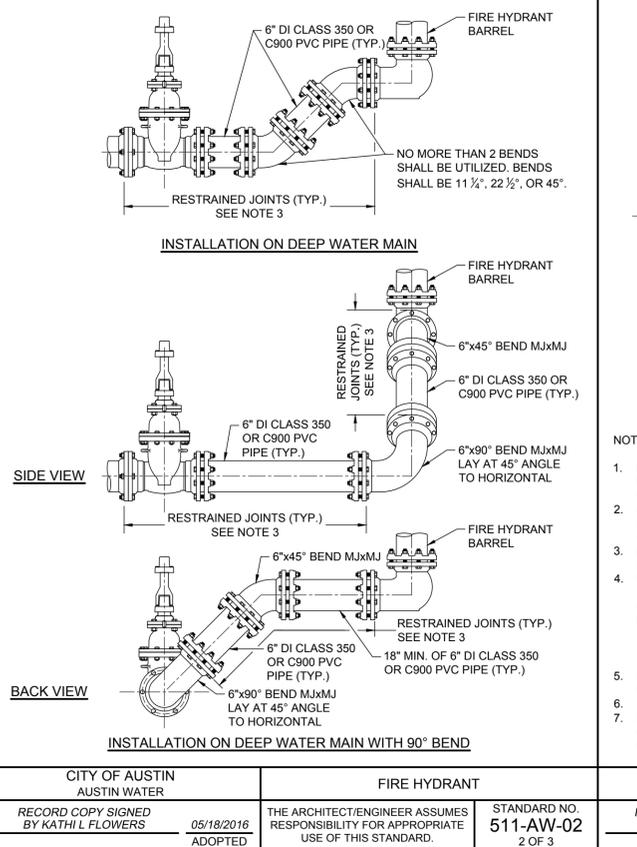


NOTE: PROCEDURES AND MATERIAL REQUIREMENTS OUTLINED IN STANDARD SPEC. ITEM NO. 658S TO BE FOLLOWED.

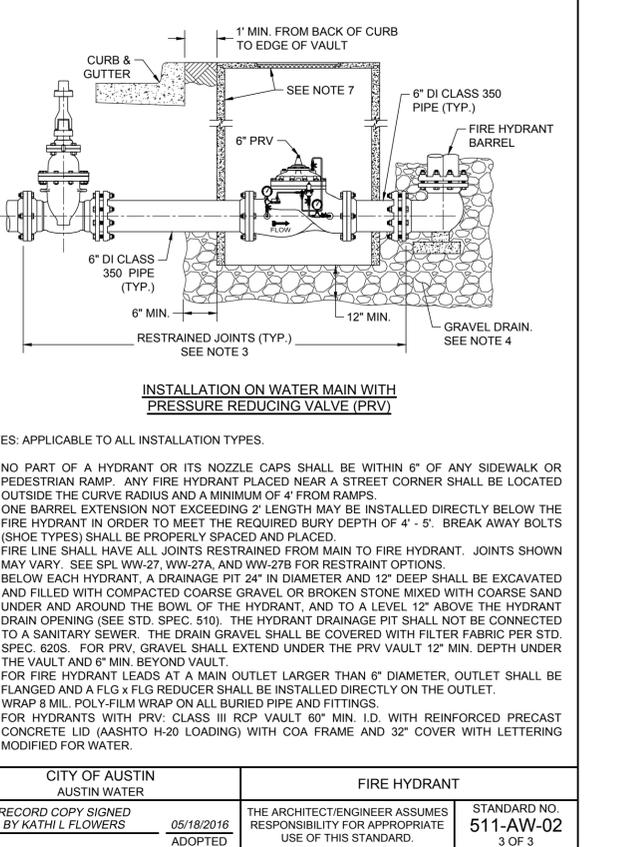
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	MODIFIED CLASS V--COMBINATION VOID AND POTENTIAL WATER FLOW MITIGATION MEASURES	STANDARD NO. 658S-6
<i>Dean Bales, P.E. 3-21-08</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	STANDARD NO. 511-AW-02
<i>RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	STANDARD NO. 511-AW-02
<i>RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	STANDARD NO. 511-AW-02
<i>RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016</i> ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	

REVISION DESCRIPTION	DATE	REV. BY

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
03/27/2018
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

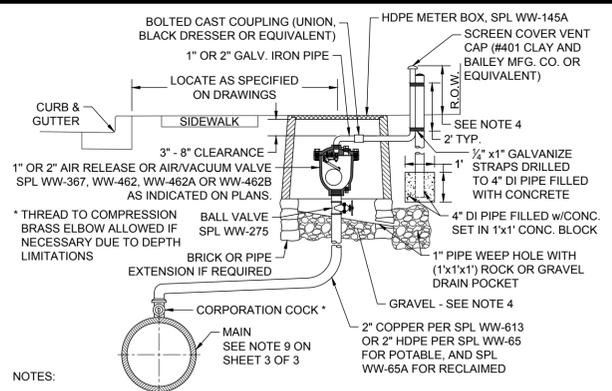
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
STANDARD DETAILS SHEET 3 OF 4



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ESD
ENGINEERING SERVICES
DIVISION
GP-2018-0000-AW
CU-505 27 OF 55



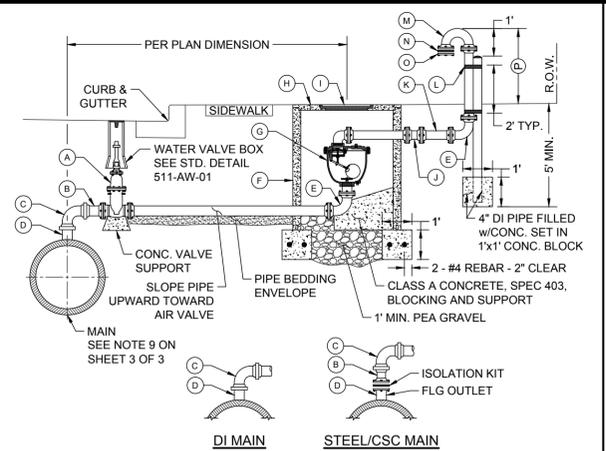
NOTES:

- EXTERIOR SURFACES OF EXPOSED AIR VENT PIPE AND DI SUPPORT PIPE SHALL BE PAINTED PER SPL WW-3C. POTABLE WATER PIPE SHALL BE PAINTED SAFETY BLUE.
- AIR VENT PIPE INSTALLATION SHALL BE AS NEAR AS PRACTICAL TO RIGHT-OF-WAY LINE WITH MINIMUM CLEARANCE OF 18" FROM ANY OBSTACLE.
- HDPE METER BOX PENETRATION SHALL BE CORE BIT DRILLED. VOID SHALL BE FILLED WITH LINKSEAL LS 300 OR APPROVED EQUAL.
- COMPACTED COARSE GRAVEL OR BROKEN STONE MIXED WITH SAND SLOPED TO DRAIN.
- IN UNDEVELOPED AREAS, THE AIR VENT PIPE SHALL BE 4" MIN. IN HEIGHT SUPPORTED BY A 4" DIA. DI PIPE WHICH HAS BEEN FILLED WITH CONCRETE (SUPPORT PIPE SHALL BE 6' LONG, BURIED IN CLASS A CONCRETE OR CLSM 3' BELOW FINAL GRADE AND EXTENDING 3' ABOVE FINAL GRADE). INSTALL ONE DELINEATOR STAKE WITHIN 3' OF THE VAULT ON THE VEHICULAR ACCESS SIDE OF VAULT OR AS DIRECTED BY AUSTIN WATER. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES. IN DEVELOPED AREAS, THE AIR VENT PIPE SHALL BE 8" - 12" IN HEIGHT AND LOCATED NOT TO CONFLICT WITH SIDEWALK, DRIVEWAY, OR OTHER PEDESTRIAN TRAFFIC.
- THE AIR VALVE AND ASSOCIATED PIPING SHALL BE INSTALLED ABOVE THE HIGHEST ELEVATION OF THE WATER MAIN. AIR VALVE PIPING, FROM THE WATER MAIN TO THE AIR VALVE, SHALL MAINTAIN A CONSTANT RISE, WITH NO DIPS, TO THE TOP OF THE GROUND.

1" - 2" AIR RELEASE OR AIR/VACUUM VALVE INSTALLATION - TYPE I

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	AIR RELEASE AND AIR/VACUUM VALVE	STANDARD NO. 511-AW-04 1 OF 3
RECORD COPY SIGNED BY KATHI L FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



NOTES:

- GATE VALVE (FLG x FLG). GATE VALVE SHALL NOT BE INSTALLED DIRECTLY ABOVE WATER MAIN.
- PIPE FLG x FACTORY RESTRAINED JOINT SPIGOT END.
- 90° BEND w/FACTORY RESTRAINED BELL ENDS, SPL WW-27F.
- FOR DI MAIN: WELDED-ON OUTLET w/FACTORY RESTRAINED JOINT SPIGOT END. FOR STEEL/CSC MAIN: WELDED-ON FLANGED OUTLET w/ISOLATION KIT AND FLG x FACTORY RESTRAINED SPIGOT END.
- 90° BEND (FLG x FLG).
- CLASS III RCP VAULT 60" MIN. I.D.
- AIR RELEASE VALVE w/GOOSENECK PER AIR RELEASE VALVES FOR WATER SPL WW-367 OR AIR RELEASE/VACUUM RELIEF VALVES FOR POTABLE WATER SPL WW-462A OR AIR RELEASE/VACUUM RELIEF VALVES FOR RECLAIMED WATER SPL WW-462B OR AIR RELEASE/AIR VACUUM VALVE FOR WASTEWATER SPL WW-462B.
- REINFORCED PRECAST CONCRETE LID (AASHTO H-20 LOADING).
- COA FRAME AND 32" COVER WITH LETTERING MODIFIED FOR WATER.
- BOLTED CAST COUPLING (SMITH-BLAIR 441 OMNI CAST COUPLING OR APPROVED EQUAL).
- AIR VENT PIPE, 3" PIPE - GALVANIZED IRON, 4" AND LARGER PIPE - DI ONLY.
- 1/2" x 1" GALVANIZE STRAPS DRILLED TO 4" DI PIPE FILLED w/CONCRETE (SEE NOTE 7).
- RETURN BEND (FLG x FLG).
- No. 18 MESH BRASS CLOTH.
- COMPANION FLANGE (SEE NOTE 5).
- 4" MIN. - UNDEVELOPED AREAS.

3" OR LARGER AIR/VACUUM VALVE INSTALLATION - TYPE II

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	AIR RELEASE AND AIR/VACUUM VALVE	STANDARD NO. 511-AW-04 2 OF 3
RECORD COPY SIGNED BY KATHI L FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED

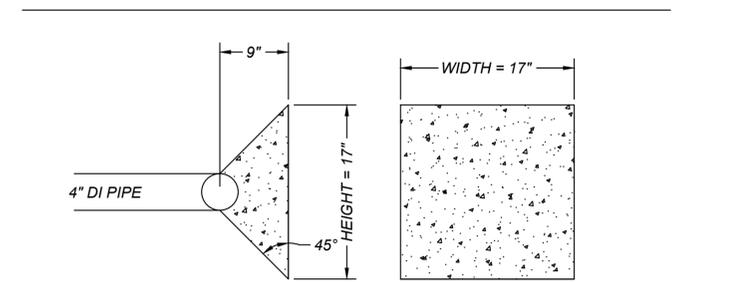
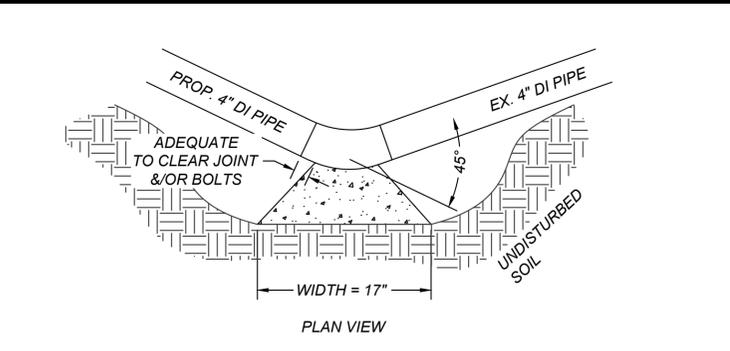
NOTES:

- ON 10" AND LARGER TWO PIECE COMBINATION AIR VALVES, THE OUTLET PIPING OF THE SMALL VALVE SHALL BE VENTED WITHIN THE VAULT INTO THE LARGER VENT PIPE.
- AIR VENT PIPE 6" AND LARGER SHALL BE DI (CLASS 350 MIN.) PIPE FLANGE FITTINGS AND EXTERIOR SURFACES OF ALL EXPOSED PIPE SHALL BE PAINTED PER SPL WW-3C. POTABLE WATER PIPE SHALL BE PAINTED SAFETY BLUE. SURFACE PREPARATION SHALL BE PER PAINT MANUFACTURER'S REQUIREMENTS.
- ENTIRE AIR VENT ASSEMBLY SHALL BE LOCATED WITHIN EASEMENT OR R.O.W.
- CONCRETE PIPE PENETRATIONS SHALL BE CORE BIT DRILLED. VOID SHALL BE SEALED w/LINKSEAL LS 300 OR APPROVED EQUAL.
- CROSS SECTIONAL AREA OF OPENING TO BE EQUAL TO OR GREATER THAN CROSS SECTIONAL AREA OF AIR VENT PIPE.
- AIR/VACUUM VALVE SHALL BE INSTALLED IN A MANNER WHICH WILL ALLOW REMOVAL OF ASSEMBLY WITHOUT REMOVAL OF PRECAST CONCRETE LID.
- IN UNDEVELOPED AREAS, THE AIR VENT PIPE SHALL BE 4" MIN. IN HEIGHT SUPPORTED BY A 4" DIA. DI PIPE WHICH HAS BEEN FILLED WITH CONCRETE (SUPPORT PIPE SHALL BE 6' LONG, BURIED IN CLASS A CONCRETE OR CLSM 3' BELOW FINAL GRADE AND EXTENDING 3' ABOVE FINAL GRADE). INSTALL ONE DELINEATOR STAKE WITHIN 3' OF THE VAULT ON THE VEHICULAR ACCESS SIDE OF VAULT OR AS DIRECTED BY AUSTIN WATER. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES. IN DEVELOPED AREAS, THE AIR VENT PIPE SHALL BE LOCATED NOT TO CONFLICT WITH SIDEWALK, DRIVEWAY, OR OTHER PEDESTRIAN TRAFFIC.
- GATE VALVE, PIPE, AND FITTINGS FROM MAIN TO ARV SHALL BE OF EQUAL DIAMETER AS THE AIR VALVE EXCEPT 3" ARV SHALL HAVE 4" FITTINGS AND A 4"x3" REDUCER AT THE ARV, AND ALL PIPE AND FITTINGS ON THE OUTLET SIDE OF THE ARV SHALL BE EQUAL TO THE SIZE OF THE OUTLET OF THE ARV. VAULTS SHALL BE 5" DIAMETER FOR 3" VALVE; 6" DIAMETER FOR 4", 6", AND 8" VALVES; AND 7" DIAMETER FOR 10" AND 12" VALVES.
- FOR 24" AND LARGER MAINS, AN 18" OUTLET WITH BLIND FLANGE SHALL BE INSTALLED AT CONNECTION OF ARV.

3" OR LARGER AIR/VACUUM VALVE INSTALLATION - TYPE II

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

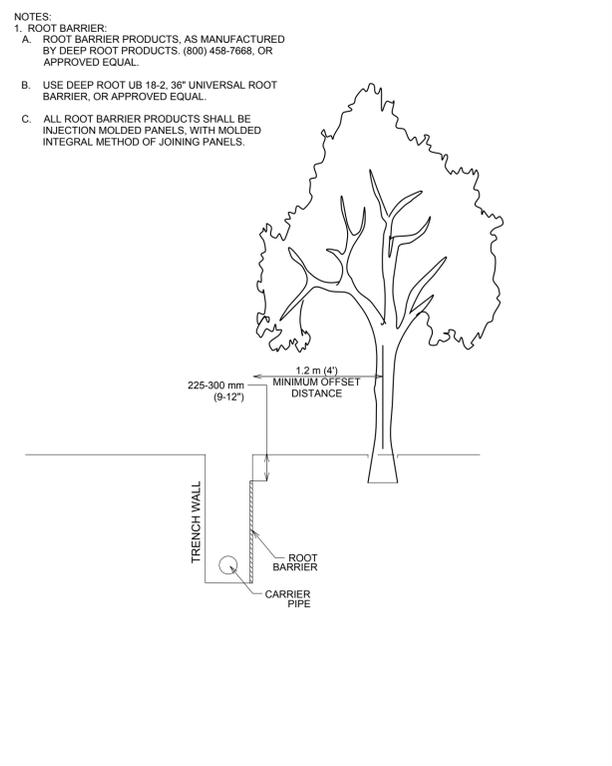
CITY OF AUSTIN AUSTIN WATER	AIR RELEASE AND AIR/VACUUM VALVE	STANDARD NO. 511-AW-04 3 OF 3
RECORD COPY SIGNED BY KATHI L FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	05/18/2016 ADOPTED



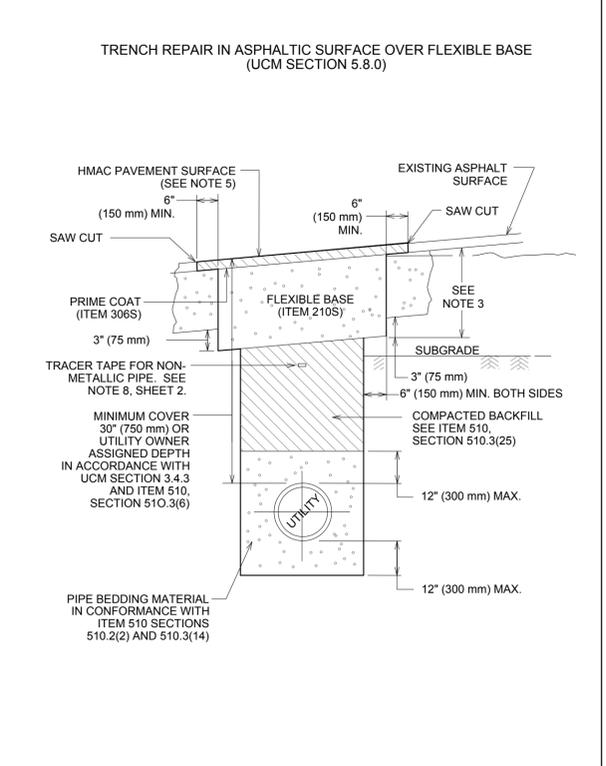
NOTES:

- THRUST BLOCK BASE SHALL BE 17" X 17"
- BEARING SURFACE SHALL BE PLACED AGAINST UNDISTURBED SOIL. WHERE SOIL IS DISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.

CONCRETE THRUST BLOCK DETAIL



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	ROOT BARRIER	STANDARD NO. 432S-7B MOD
RECORD COPY SIGNED BY KATHI L FLOWERS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/11 ADOPTED



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT	STANDARD NO. 1100S-2 1 OF 2
RECORD COPY SIGNED BY KERI JUAREZ	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/11 ADOPTED

NOTES:

- THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" (300 mm) WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
- IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMA. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
- ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3" (75 mm), BUT IN NO CASE LESS THAN 12" (300 mm).
- DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" (250 mm) OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
- REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
 - MIN. 2" (50 mm) HMA TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
 - MIN. 3" (75 mm) HMA TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
- SEE ITEM 340S, SECTION 340S.4.
- CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
- TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S).
- AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE, OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

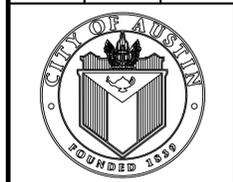
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT	STANDARD NO. 1100S-2 2 OF 2
RECORD COPY SIGNED BY KERI JUAREZ	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/11 ADOPTED

REVISION DESCRIPTION	DATE	REV. BY	NO.

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
3/27/2018
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
STANDARD DETAILS SHEET 4 OF 4

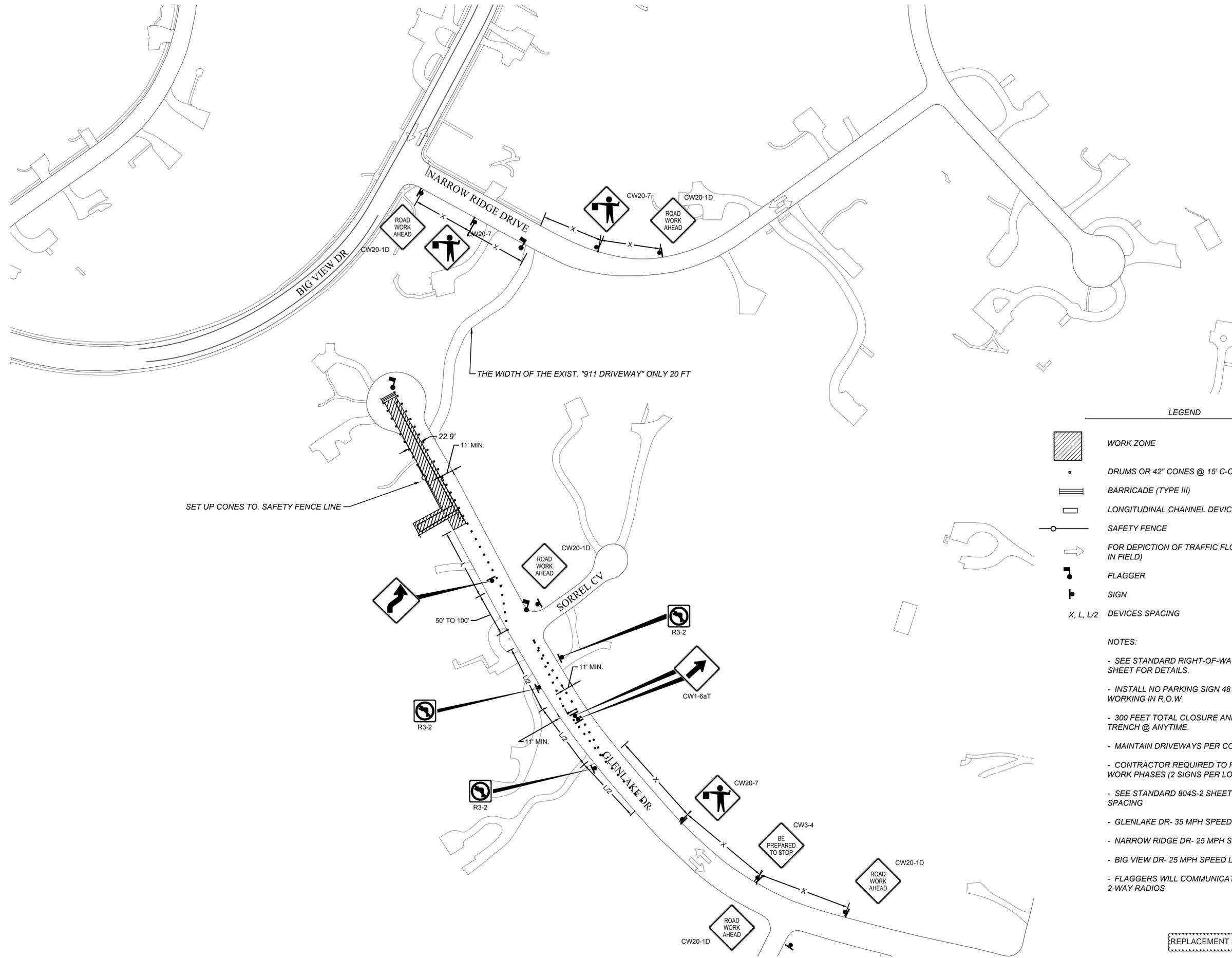


NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ESD
ENGINEERING SERVICES
DIVISION
GP-2018-0000-AW
CU-506 28 OF 55

REVIEWED
APR 03 2018
George Kennedy
Austin Water Utility

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LEGEND

- WORK ZONE
- DRUMS OR 42" CONES @ 15' C-C
- BARRICADE (TYPE III)
- LONGITUDINAL CHANNEL DEVICE - WATER FILLED BARRIER
- SAFETY FENCE
- FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
- FLAGGER
- SIGN
- DEVICES SPACING

NOTES:

- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
- INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
- 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
- MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
- CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- GLENLAKE DR- 35 MPH SPEED LIMIT
- NARROW RIDGE DR- 25 MPH SPEED LIMIT
- BIG VIEW DR- 25 MPH SPEED LIMIT
- FLAGGERS WILL COMMUNICATE WITH EACH OTHER BY 2-WAY RADIOS

REPLACEMENT SHEET

REV. NO.	BY	DATE	REVISION DESCRIPTION
1C	TC	3/5/2019	REVISE SHEET TITLE
2C	TC	2/10/2020	REPLACEMENT SHEET



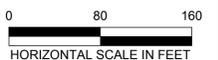
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CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 TEMPORARY TRAFFIC CONTROL
 GLENLAKE DR. - PHASE 1 SHEET 1 OF 2

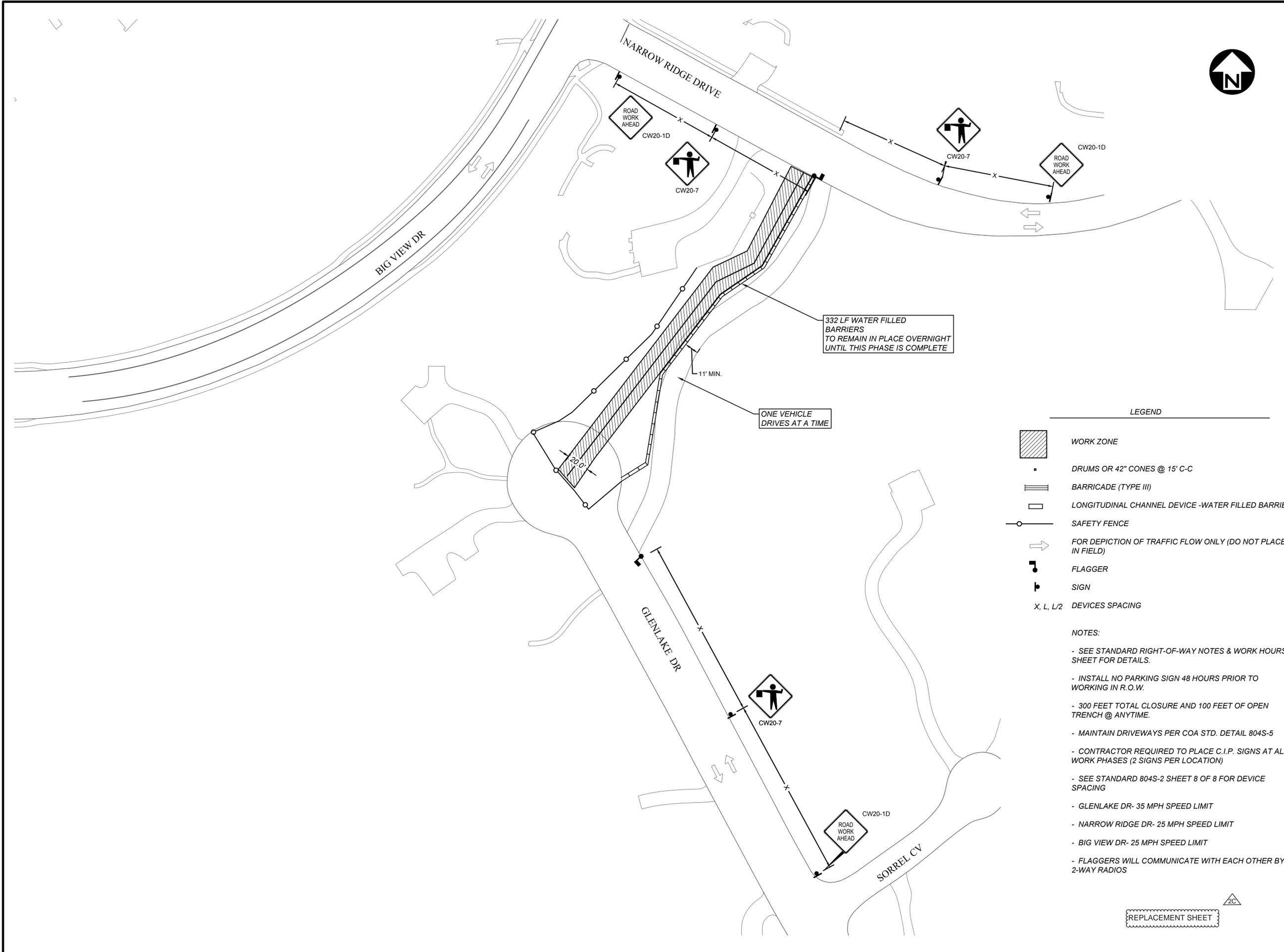


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DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



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LEGEND

	WORK ZONE
	DRUMS OR 42" CONES @ 15' C-C
	BARRICADE (TYPE III)
	LONGITUDINAL CHANNEL DEVICE -WATER FILLED BARRIER
	SAFETY FENCE
	FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
	FLAGGER
	SIGN
X, L, L/2	DEVICES SPACING

- NOTES:**
- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
 - INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
 - 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
 - MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
 - CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
 - SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
 - GLENLAKE DR- 35 MPH SPEED LIMIT
 - NARROW RIDGE DR- 25 MPH SPEED LIMIT
 - BIG VIEW DR- 25 MPH SPEED LIMIT
 - FLAGGERS WILL COMMUNICATE WITH EACH OTHER BY 2-WAY RADIOS

REPLACEMENT SHEET

REV. NO.	BY	DATE	REVISION DESCRIPTION
1C	TC	3/5/2019	REVISE SHEET TITLE
2C	TC	2/10/2020	REPLACEMENT SHEET

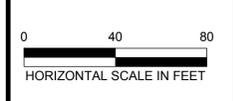
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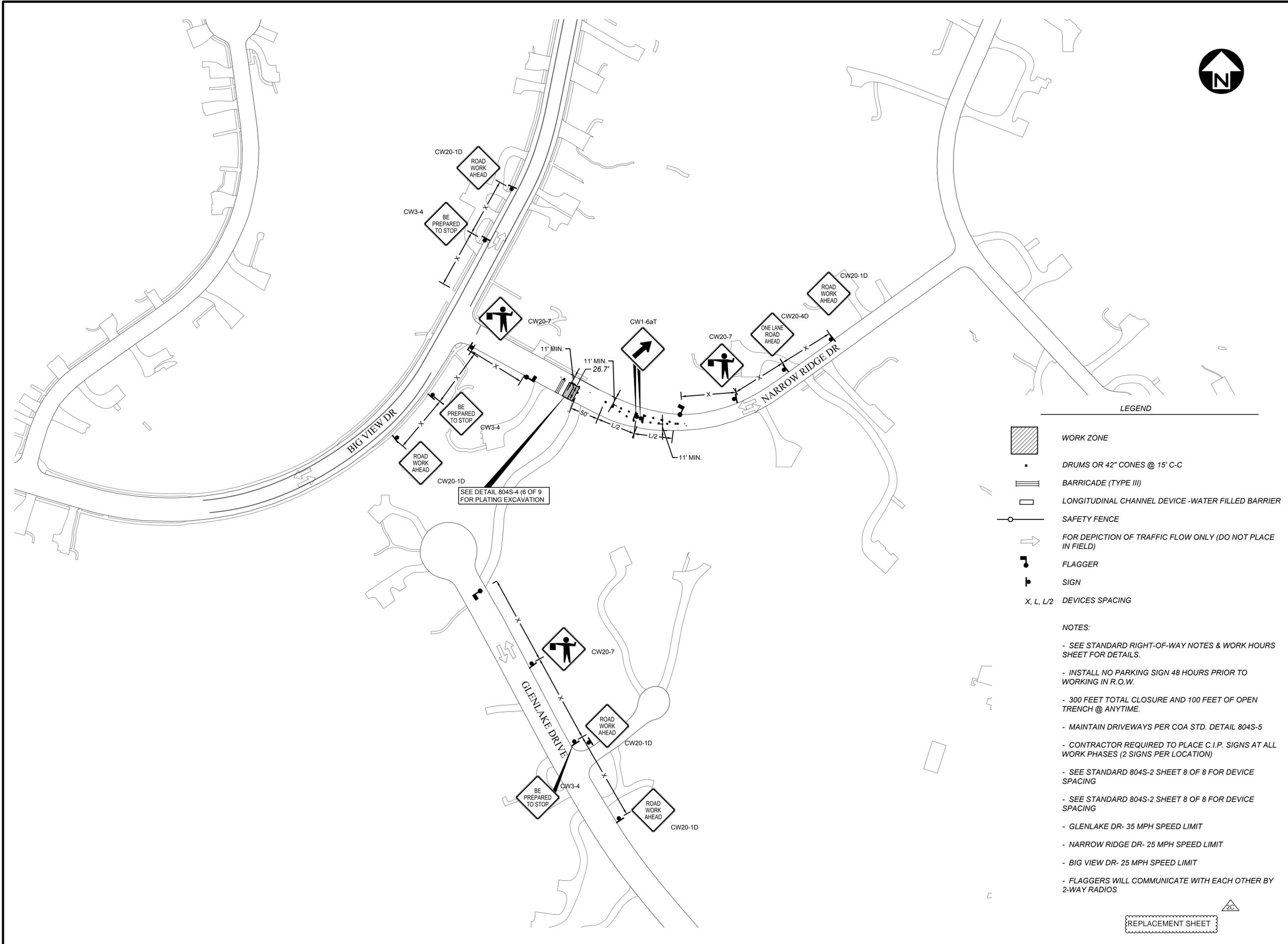
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
 TEMPORARY TRAFFIC CONTROL
 GLENLAKE DR. - PHASE 1 SHEET 2 OF 2



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
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DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



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LEGEND

- WORK ZONE
- DRUMS OR 42" CONES @ 15' C-C
- BARRICADE (TYPE III)
- LONGITUDINAL CHANNEL DEVICE -WATER FILLED BARRIER
- SAFETY FENCE
- FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
- FLAGGER
- SIGN
- X, L, L/2 DEVICES SPACING

NOTES:

- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
- INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
- 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
- MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
- CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- GLENLAKE DR- 35 MPH SPEED LIMIT
- NARROW RIDGE DR- 25 MPH SPEED LIMIT
- BIG VIEW DR- 25 MPH SPEED LIMIT
- FLAGGERS WILL COMMUNICATE WITH EACH OTHER BY 2-WAY RADIOS

REPLACEMENT SHEET

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2	TC	2/10/2020	REPLACEMENT SHEET

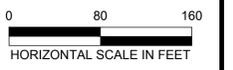
STATE OF TEXAS
 PROFESSIONAL ENGINEER
 THU CAO
 93976
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CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 NARROW RIDGE DR. - PHASE 1 SHEET 1 OF 2



NOTES	NAME	DATE
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REVIEWED BY	ESD	02/17



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NOTES:

- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
- INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
- 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
- MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
- CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- CONTRACTOR SHALL COORDINATE WITH HOMEOWNER FOR THE CLOSURE OF DRIVEWAY AT 9700 BIG VIEW DR
- GLENLAKE DR- 35 MPH SPEED LIMIT
- NARROW RIDGE DR- 25 MPH SPEED LIMIT
- BIG VIEW DR- 25 MPH SPEED LIMIT

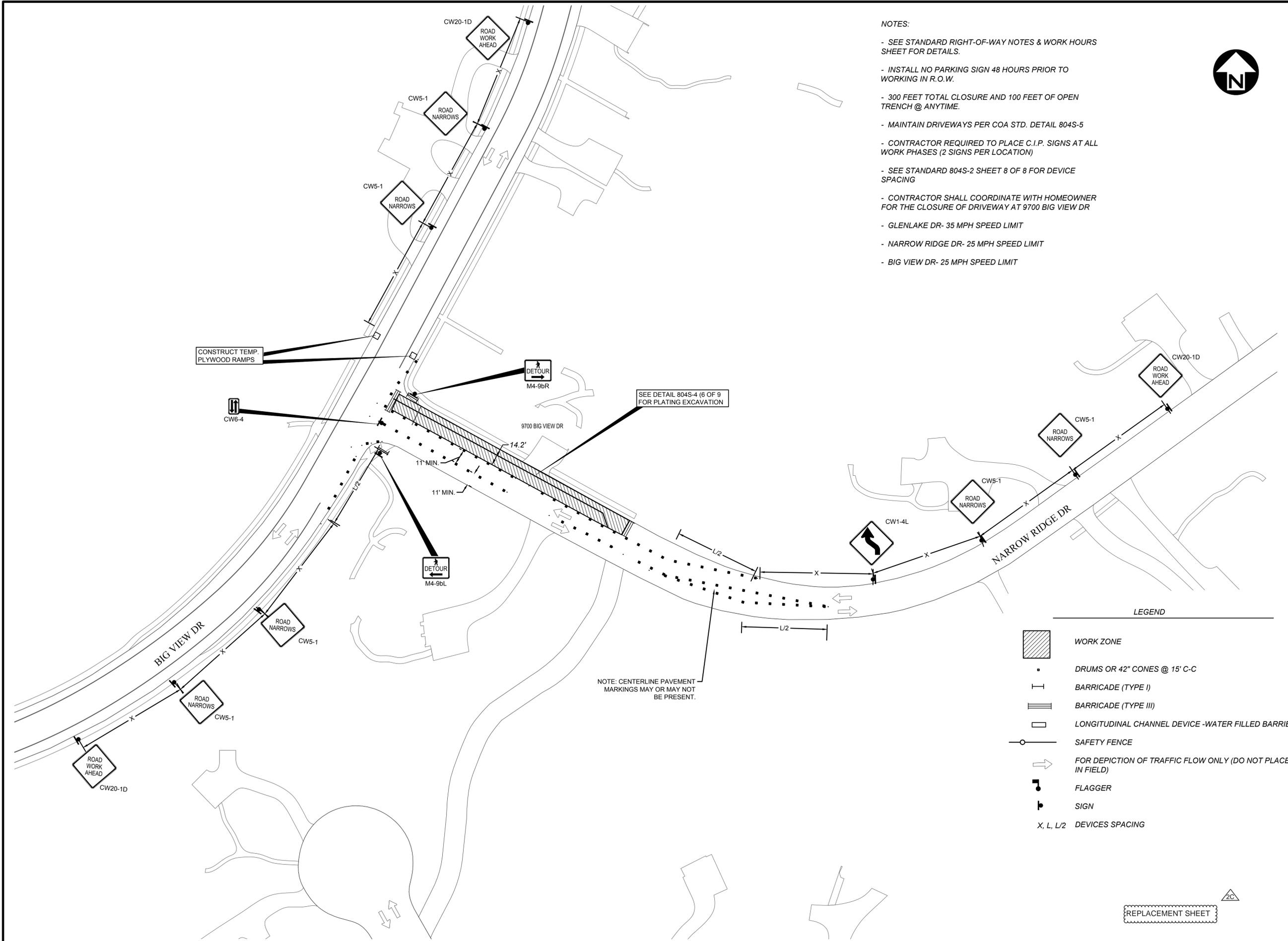


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1C	TC	3/5/2019	REVISE SHEET TITLE
2C	TC	2/10/2020	REPLACEMENT SHEET

THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 STATE OF TEXAS

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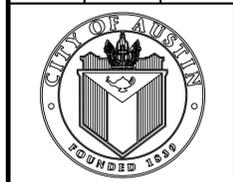
LEGEND

- WORK ZONE
- DRUMS OR 42" CONES @ 15' C-C
- BARRICADE (TYPE I)
- BARRICADE (TYPE III)
- LONGITUDINAL CHANNEL DEVICE -WATER FILLED BARRIER
- SAFETY FENCE
- FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
- FLAGGER
- SIGN
- X, L, L/2 DEVICES SPACING

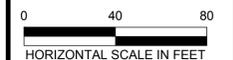
NOTE: CENTERLINE PAVEMENT MARKINGS MAY OR MAY NOT BE PRESENT.

REPLACEMENT SHEET

CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 NARROW RIDGE DR. - PHASE 1 SHEET 2 OF 2

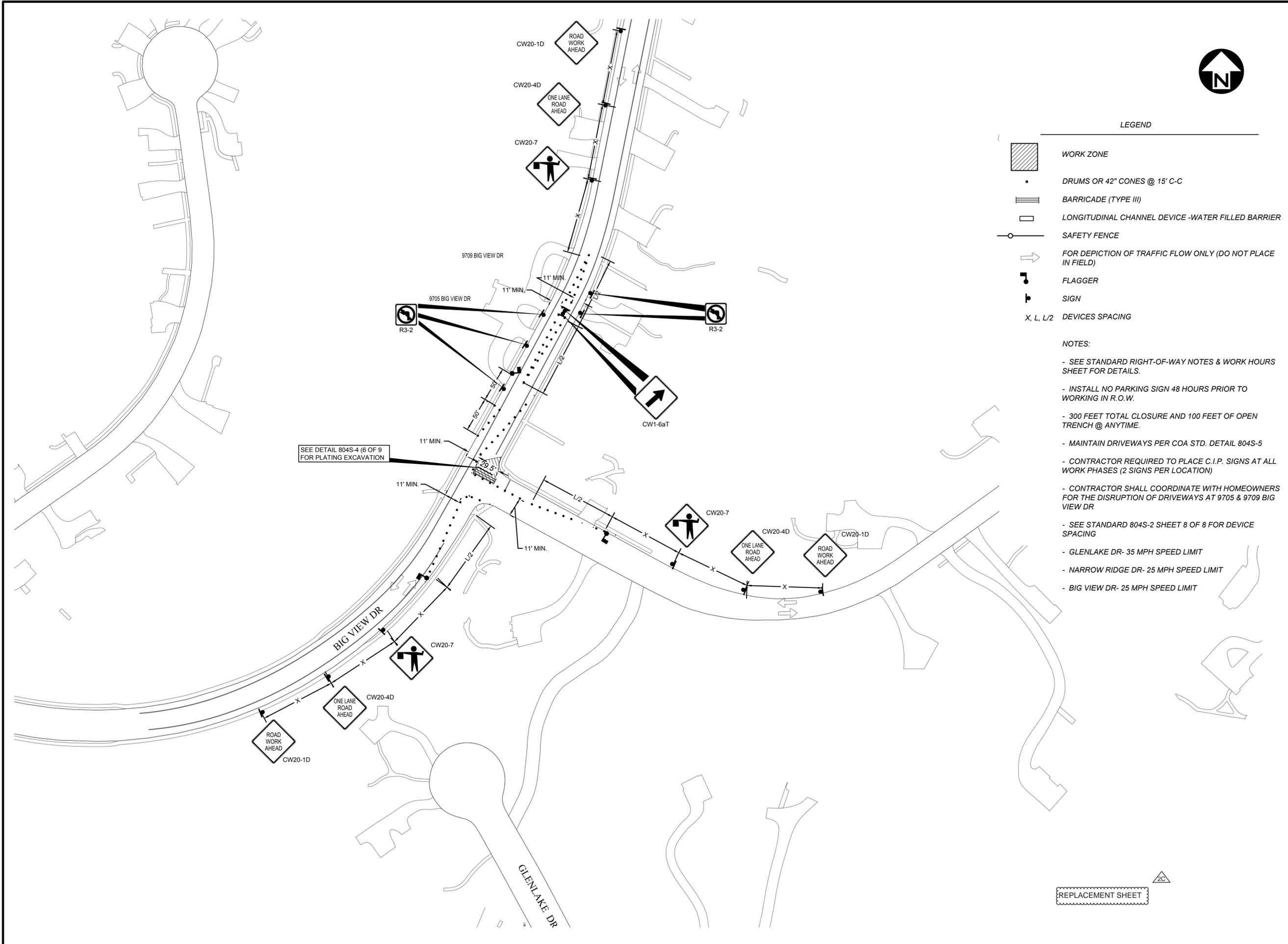


NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



GP-2018-0000-AW

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LEGEND

- WORK ZONE
- DRUMS OR 42" CONES @ 15' C-C
- BARRICADE (TYPE III)
- LONGITUDINAL CHANNEL DEVICE -WATER FILLED BARRIER
- SAFETY FENCE
- FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
- FLAGGER
- SIGN
- X, L, L/2 DEVICES SPACING

NOTES:

- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
- INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
- 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
- MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
- CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
- CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS FOR THE DISRUPTION OF DRIVEWAYS AT 9705 & 9709 BIG VIEW DR
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- GLENLAKE DR- 35 MPH SPEED LIMIT
- NARROW RIDGE DR- 25 MPH SPEED LIMIT
- BIG VIEW DR- 25 MPH SPEED LIMIT

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 STATE OF TEXAS

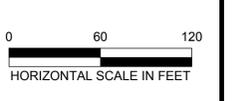
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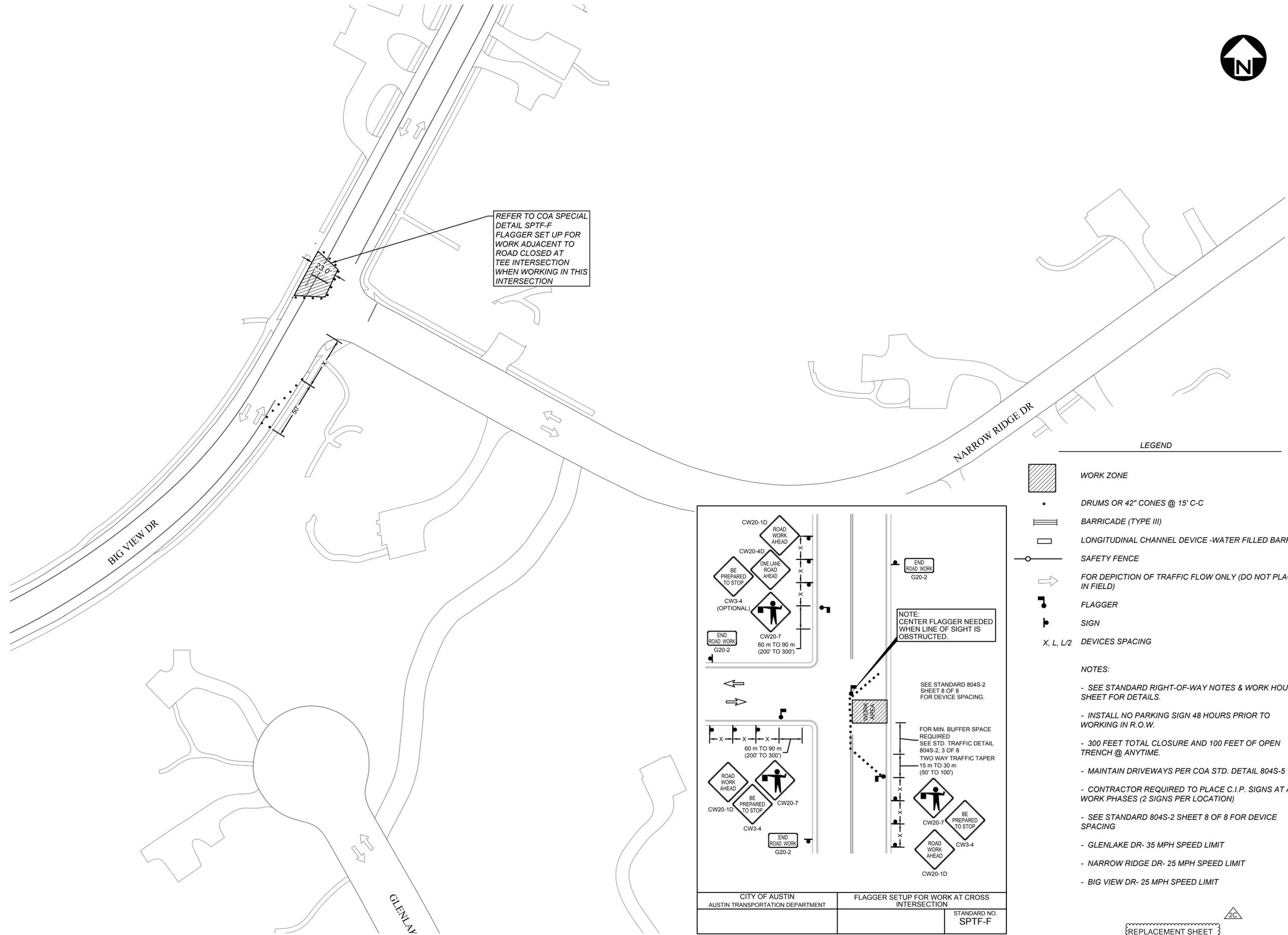
SINGLETON, MICHAEL

CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
 TEMPORARY TRAFFIC CONTROL
 BIG VIEW DR. - PHASE 1 SHEET 1 OF 2

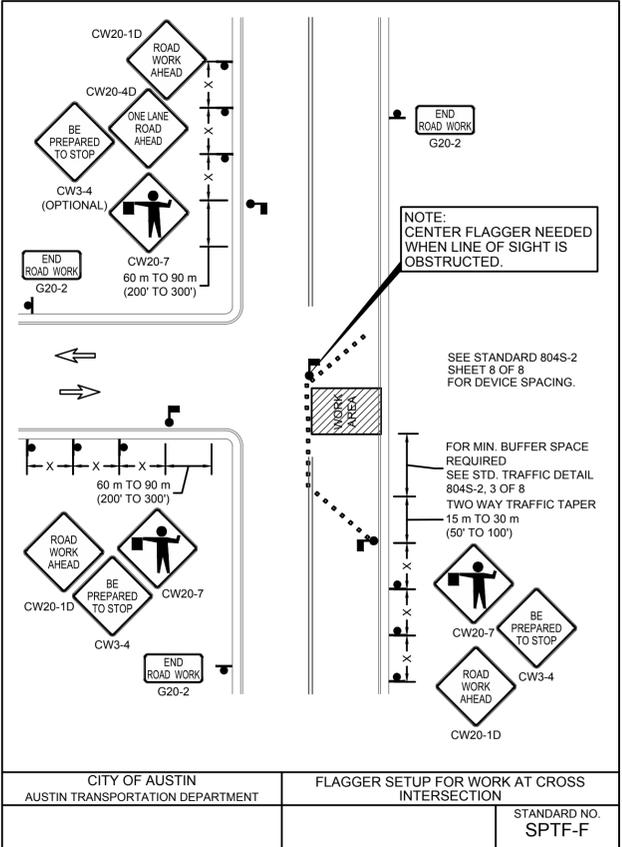


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DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17





REFER TO COA SPECIAL DETAIL SPTF-F FLAGGER SET UP FOR WORK ADJACENT TO ROAD CLOSED AT TEE INTERSECTION WHEN WORKING IN THIS INTERSECTION



- LEGEND**
- WORK ZONE
 - DRUMS OR 42" CONES @ 15' C-C
 - BARRICADE (TYPE III)
 - LONGITUDINAL CHANNEL DEVICE -WATER FILLED BARRIER
 - SAFETY FENCE
 - FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
 - FLAGGER
 - SIGN
 - DEVICES SPACING

- NOTES:**
- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
 - INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
 - 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
 - MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
 - CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
 - SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
 - GLENLAKE DR- 35 MPH SPEED LIMIT
 - NARROW RIDGE DR- 25 MPH SPEED LIMIT
 - BIG VIEW DR- 25 MPH SPEED LIMIT

CITY OF AUSTIN AUSTIN TRANSPORTATION DEPARTMENT	FLAGGER SETUP FOR WORK AT CROSS INTERSECTION	STANDARD NO. SPTF-F
--	--	------------------------

REPLACEMENT SHEET

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STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 02/10/2020
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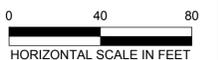
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SINGLETON, MICHAEL

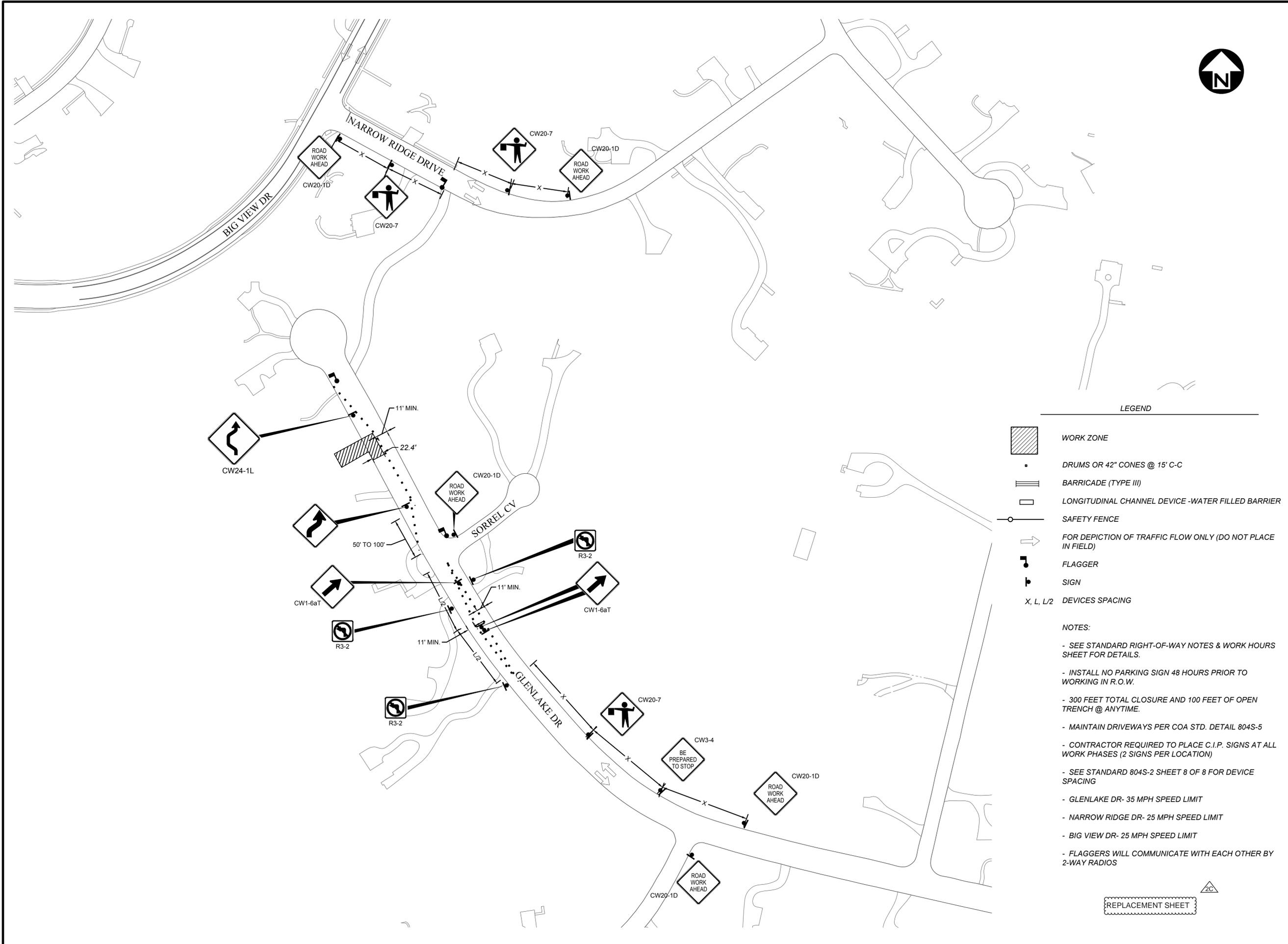
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 TEMPORARY TRAFFIC CONTROL
 BIG VIEW DR. - PHASE 1 SHEET 2 OF 2



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LEGEND

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- DRUMS OR 42" CONES @ 15' C-C
- BARRICADE (TYPE III)
- LONGITUDINAL CHANNEL DEVICE - WATER FILLED BARRIER
- SAFETY FENCE
- FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
- FLAGGER
- SIGN
- DEVICES SPACING

NOTES:

- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
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- 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
- MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
- CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- GLENLAKE DR- 35 MPH SPEED LIMIT
- NARROW RIDGE DR- 25 MPH SPEED LIMIT
- BIG VIEW DR- 25 MPH SPEED LIMIT
- FLAGGERS WILL COMMUNICATE WITH EACH OTHER BY 2-WAY RADIOS

REPLACEMENT SHEET

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2C	TC	2/10/2020	REPLACEMENT SHEET

STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 02/10/2020

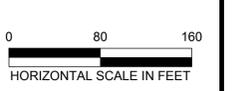
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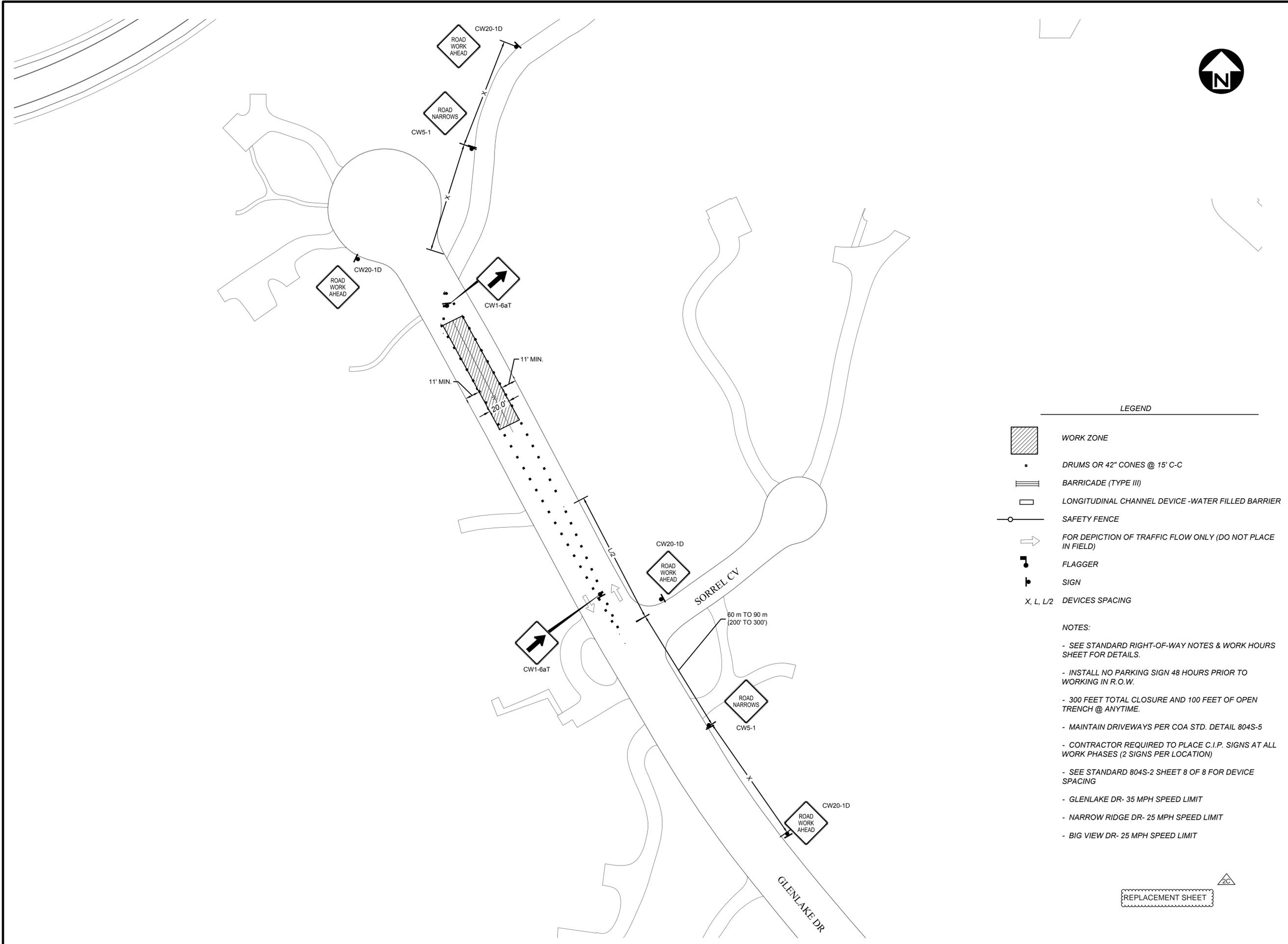
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 TEMPORARY TRAFFIC CONTROL
 GLENLAKE DR. - PHASE 2 SHEET 1 OF 2



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DRAWN BY	MS	02/17
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LEGEND

-  WORK ZONE
-  DRUMS OR 42" CONES @ 15' C-C
-  BARRICADE (TYPE III)
-  LONGITUDINAL CHANNEL DEVICE - WATER FILLED BARRIER
-  SAFETY FENCE
-  FOR DEPICTION OF TRAFFIC FLOW ONLY (DO NOT PLACE IN FIELD)
-  FLAGGER
-  SIGN
- X, L, L/2 DEVICES SPACING

NOTES:

- SEE STANDARD RIGHT-OF-WAY NOTES & WORK HOURS SHEET FOR DETAILS.
- INSTALL NO PARKING SIGN 48 HOURS PRIOR TO WORKING IN R.O.W.
- 300 FEET TOTAL CLOSURE AND 100 FEET OF OPEN TRENCH @ ANYTIME.
- MAINTAIN DRIVEWAYS PER COA STD. DETAIL 804S-5
- CONTRACTOR REQUIRED TO PLACE C.I.P. SIGNS AT ALL WORK PHASES (2 SIGNS PER LOCATION)
- SEE STANDARD 804S-2 SHEET 8 OF 8 FOR DEVICE SPACING
- GLENLAKE DR- 35 MPH SPEED LIMIT
- NARROW RIDGE DR- 25 MPH SPEED LIMIT
- BIG VIEW DR- 25 MPH SPEED LIMIT

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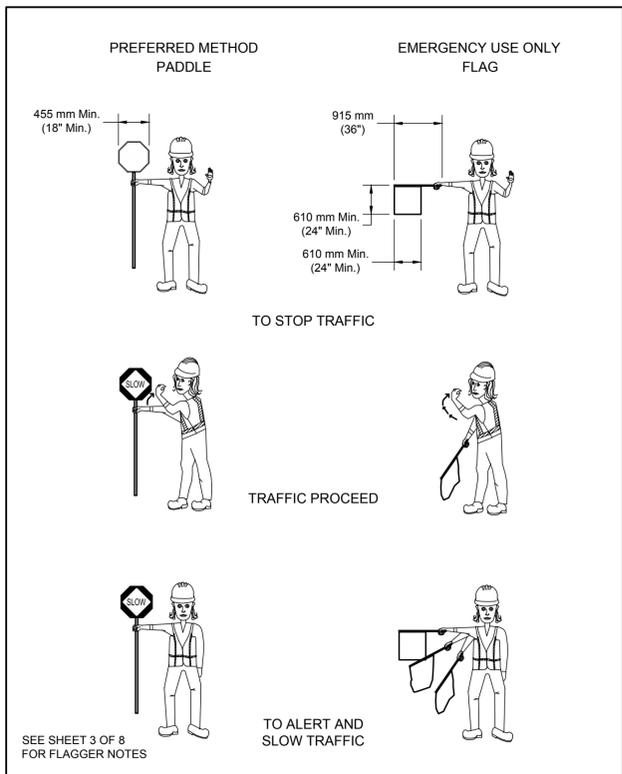
CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
 TEMPORARY TRAFFIC CONTROL
 GLENLAKE DR. - PHASE 2 SHEET 2 OF 2



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DRAWN BY	MS	02/17
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Typical Transition Lengths and Suggested Maximum Spacing of Devices

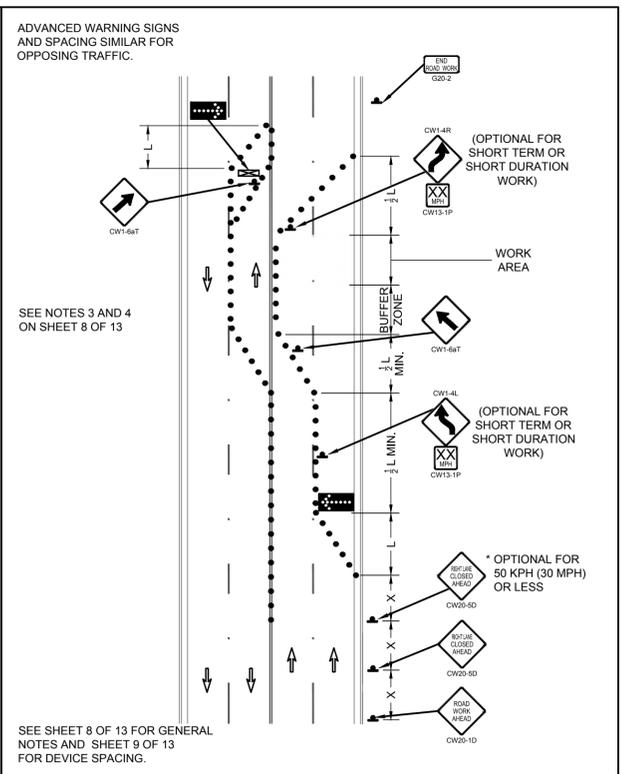
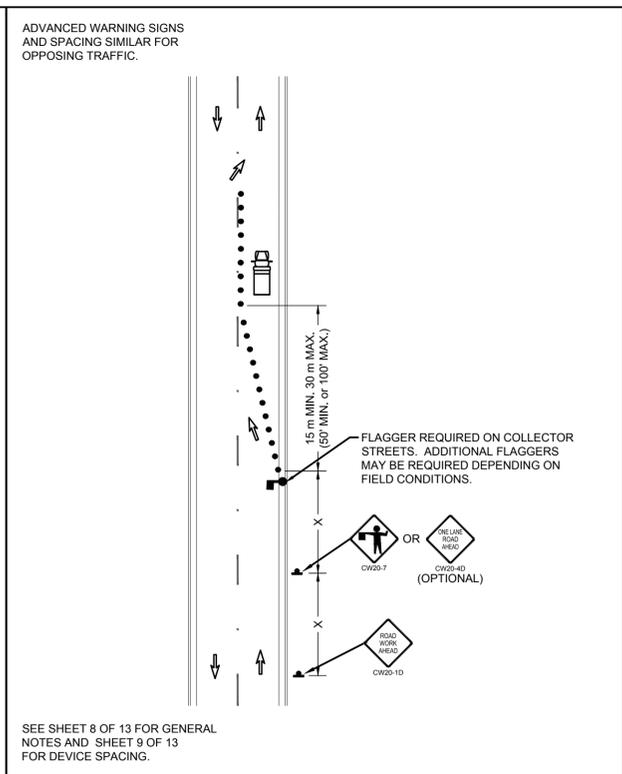
SPEED KMPH	POSTED SPEED MPH	FORMULA	Minimum Desirable Taper Lengths (L) Meters (Feet)			Suggested Max Device Spacing		Suggested Sign Spacing Meters (Feet)
			3.0(10) OFFSET METERS (FEET)	3.3(11) OFFSET METERS (FEET)	3.6(12) OFFSET METERS (FEET)	On a Taper Meters (feet)	On a Tangent Meters (feet)	
50	30	$L = \frac{WS^2}{2}$	45 (150)	50 (165)	55 (180)	9 (30)	15-20 (50-65)	40 (120)
55	35		65 (205)	70 (225)	75 (245)	10 (35)	20-25 (65-80)	50 (160)
65	40		80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70	45	$L = \frac{WS^2}{2}$	135 (450)	150 (495)	165 (540)	13 (45)	25-30 (80-100)	100 (320)
80	50		150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-110)	120 (400)
90	55		165 (550)	185 (605)	200 (660)	16 (55)	35-40 (110-130)	150 (500)
95	60	$L = \frac{WS^2}{2}$	180 (600)	200 (660)	220 (720)	18 (60)	40-45 (130-150)	180 (600)
105	65		195 (650)	215 (715)	235 (780)	19 (65)	45-50 (150-165)	210 (700)
115	70		215 (700)	235 (770)	255 (840)	21 (70)	50-55 (165-180)	240 (800)

LEGEND
 Channelizing devices
 Trailer mounted flashing arrow board
 Flagger

TRAFFIC DETOUR NOTES:

- "STREET CLOSED" AND "STREET CLOSED TO THRU TRAFFIC" MAY BE USED IN PLACE OF "ROAD CLOSED" AND "ROAD CLOSED TO THRU TRAFFIC".
- THE USE OF A STREET SIGN NAME MOUNTED WITH THE M-9 DETOUR SIGN** IS REQUIRED. THE STREET NAME PLATE SHOULD BE PLACED ABOVE THE DETOUR SIGN. THE PLATE MAY HAVE EITHER A WHITE-ON-GREEN OR A BLACK-ON-ORANGE LEGEND.
- ADDITIONAL "DO NOT ENTER SIGNS" MAY BE DESIRABLE AT INTERSECTIONS WITH INTERVENING STREETS.
- A M-9 DETOUR SIGN** WITH AN ADVANCE TURN ARROW MAY BE USED IN ADVANCE OF A TURN ON MULTI-LANE STREETS. SUCH SIGNS SHOULD BE USED.
- M-9 DETOUR SIGNS** MAY BE LOCATED ON THE FAR SIDE OF INTERSECTIONS.

** TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED

USE OF HAND SIGNALING DEVICES

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-2
7 OF 8

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED

TYPICAL LENGTHS & SPACING OF DEVICES, LEGEND AND GENERAL NOTES

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-2
8 OF 8

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY KERI JUAREZ 01/11/11 ADOPTED

COLLECTOR/RESIDENTIAL LANE CLOSURES

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-1
5 OF 9

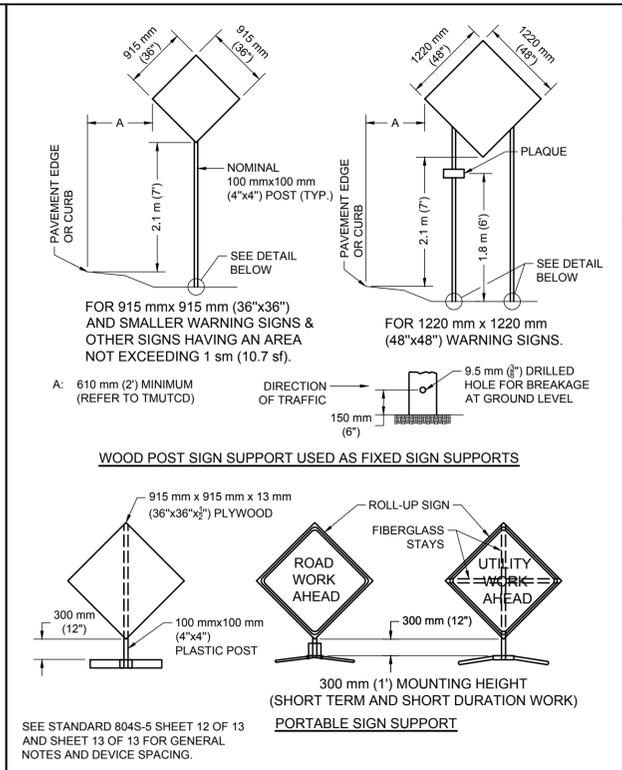
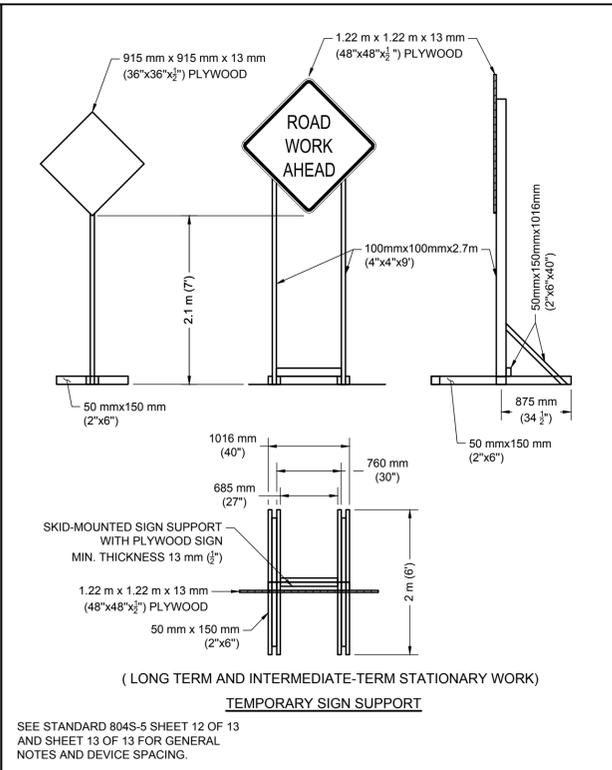
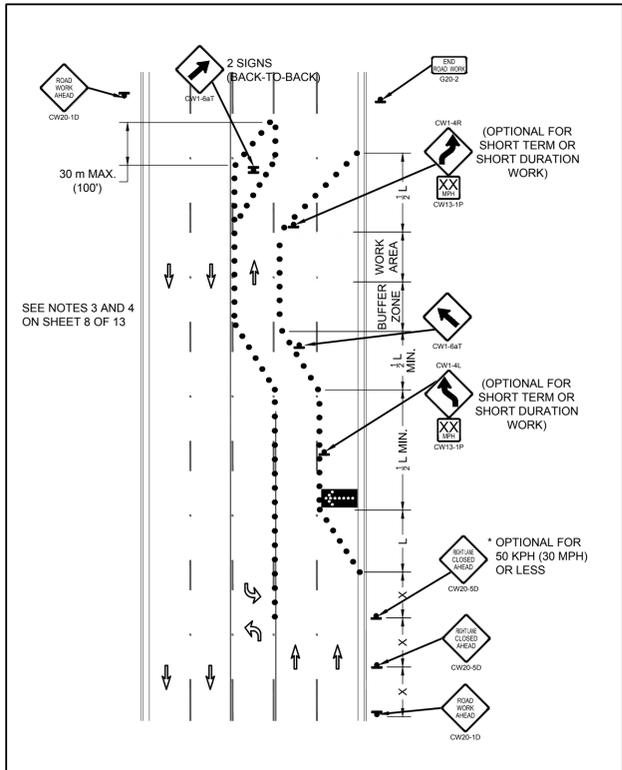
CITY OF AUSTIN
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RECORD COPY SIGNED BY KERI JUAREZ 01/11/11 ADOPTED

TYPICAL TRAFFIC CONTROL PLAN FOR SHIFTING TRAFFIC

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-1
6 OF 9



1. WARNING SIGNS SHALL BE ORANGE, FLUORESCENT RED-ORANGE OR FLUORESCENT YELLOW-ORANGE IN COLOR. THE FLUORESCENT VERSIONS OF ORANGE PROVIDE HIGHER CONSPICUITY THAN STANDARD ORANGE, ESPECIALLY DURING NIGHT. ALL SIGNS USED AT NIGHT SHALL BE EITHER RETRO-REFLECTIVE, WITH A MATERIAL THAT HAS A SMOOTH, SEALED OUTER SURFACE, OR ILLUMINATED TO SHOW SIMILAR SHAPE AND COLOR BOTH DAY AND NIGHT. SIGN ILLUMINATION MAY BE EITHER INTERNAL OR EXTERNAL ROADWAY LIGHTING DOES NOT MEET THE REQUIREMENTS FOR SIGN ILLUMINATION.

2. TYPE A FLASHING WARNING LIGHTS MAY BE USED IN CONJUNCTION WITH SIGNS AT NIGHT. STANDARD ORANGE FLAGS MAY BE USED FOR DAY TIME OPERATIONS. HOWEVER, NEITHER LIGHTS NOR FLAGS MAY BLOCK THE SIGN LEGEND.

3. SIGNS SHOULD BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY. WHEN SPECIAL EMPHASIS IS NEEDED, SIGNS MAY BE PLACED ON BOTH THE LEFT AND RIGHT SIDES OF ROADWAY. SIGNS SHALL BE PLACED ON BOTH THE LEFT AND RIGHT SIDES OF ONE-WAY OR DIVIDED ROADWAYS. SIGNS USED FOR LONG-TERM STATIONARY AND INTERMEDIATE-TERM STATIONARY WORK SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 2.1 m (7'), MEASURED FROM THE BOTTOM OF THE SIGN. THE HEIGHT TO THE BOTTOM OF A SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 0.3 m (1') LESS THAN THE APPROPRIATE HEIGHT ABOVE.

4. SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, MOBILE CONDITIONS AND EMERGENCIES. SIGNS MOUNTED ON PORTABLE SUPPORTS SHALL BE AT A HEIGHT OF AT LEAST 0.3 m (1'), MEASURED FROM THE BOTTOM OF THE SIGN.

5. ALL SIGN SYSTEMS SHOULD BE CRASHWORTHY. NO SIGN MOUNTS SHALL BLOCK OR IMPEDE SIDEWALKS UNLESS NO OTHER OPTIONS ARE AVAILABLE. ONLY SANDBAGS SHOULD BE USED FOR BALLASTING SIGN MOUNTS.

TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

Roadway Classification	Posted Speed	Sign Spacing	Long-term Stationary Or Intermediate-term Stationary Approaching Warning Signs CW20 Series And CW22-1 Sign		Short-term Stationary Or Short Duration Approaching Warning Signs CW22 Series		Other Warning Signs
			Standard	Minimum 4	Standard	Minimum 4	
Conven.	KPH (MPH)	meter (feet)	mm (inches)	mm (inches)	mm (inches)	mm (inches)	mm (inches)
	50 (30)	40 (120)	1220x1220 (48x48)	915x915 (36x36)	915x915 (36x36)	915x915 (36x36)	915x915 (36x36)
	55 (35)	50 (160)					
	65 (40)	75 (240)					
	70 (45)	100 (320)					
	80 (50)	120 (400)					
	90 (55)	150 (500)					
	100 (60)	180 (600)			1220x1220 (48x48)		1220x1220 (48x48)
	105 (65)	210 (700)					
	115 (70)	240 (800)					
Exp. or Fly	**	**	3				

* MINIMUM DISTANCE FROM WORK TO FIRST ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN EACH ADDITIONAL SIGN.
 ** FOR TYPICAL SIGN SPACING ON EXPRESSWAYS AND FREEWAYS, REFER TO THE CURRENT ADDITION OF TMUTCD.
 *** SMALLER SIGN SIZES MAY BE USED WHERE SIGN DESIGNS HAVE NOT BEEN INCLUDED IN THE "STANDARD HIGHWAY SIGNS DESIGN MANUAL".

1. SPECIAL OR LARGER SIZE SIGNS MAY BE USED AS NECESSARY.
 2. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE A 0.8 m (1500') OR MORE ADVANCE WARNING.
 3. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE A 0.8 km (½ MILE) OR MORE ADVANCE WARNING.
 4. FOR USE ONLY ON SECONDARY ROADS OR CITY STREETS WHERE SPEEDS ARE LOW.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY KERI JUAREZ 01/11/11 ADOPTED

TYPICAL TRAFFIC CONTROL PLAN FOR SHIFTING TRAFFIC

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-1
7 OF 9

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED

TRAFFIC CONTROL SIGNS

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-5
5 OF 13

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

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TRAFFIC CONTROL SIGNS

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-5
6 OF 13

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

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TRAFFIC CONTROL SIGNS

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-5
7 OF 13

REVISION DESCRIPTION

REV. NO.	DATE	BY	DESCRIPTION
1	2/10/2020	TC	REPLACEMENT SHEET

STATE OF TEXAS
THU CAO
93976
PROFESSIONAL ENGINEER
02/10/2020
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CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
TRAFFIC CONTROL DETAILS - SHEET 1 OF 5

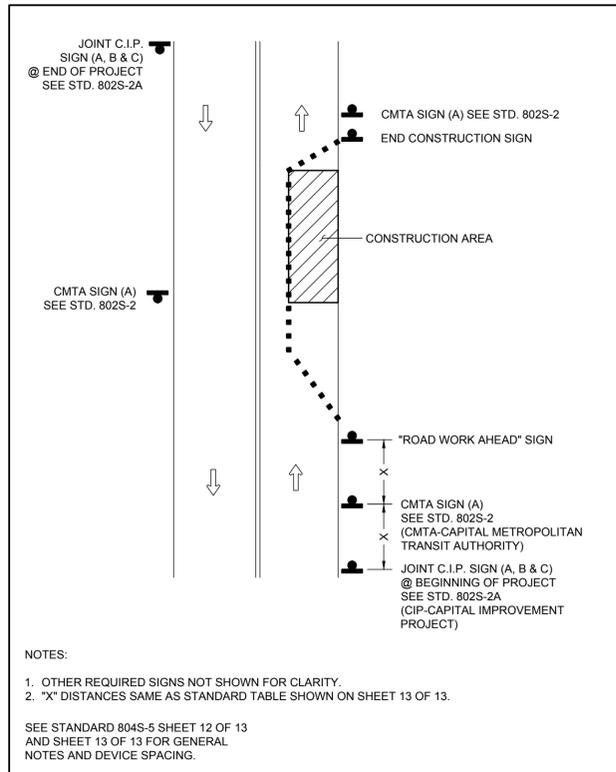
NOTES

NOTES	NAME	DATE
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ENGINEERING SERVICES DIVISION

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CT-501 38 OF 55



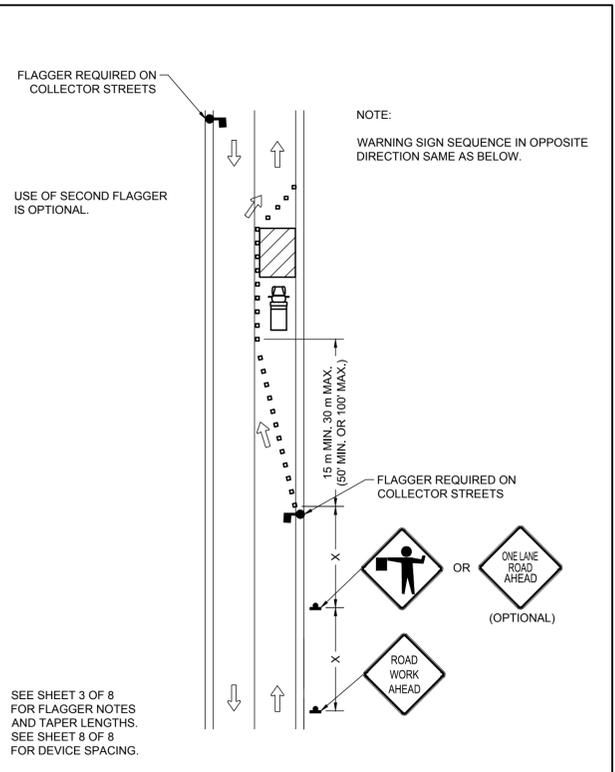
- ALL SETUPS SHALL BE IN ACCORDANCE WITH THE CURRENT ADDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
- TO DETERMINE APPROPRIATE DEVICES AND SIGN SIZES TO BE USED, REFER TO STANDARD 804S-5, SHEETS 5, 6 AND 7 OF 13.
- FOR INTERMEDIATE-TERM SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, THE CHANNELIZATION MUST BE MADE DOMINANT BY USING A VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION, SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTERLINE. IN SUCH LOCATIONS, A MAXIMUM CHANNELIZING DEVICE SPACING OF 3 m (10') IS REQUIRED.
- FOR LONG TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED AND CENTERLINE STRIPING PROVIDED WHERE TWO WAY TRAFFIC IS IN ADJACENT LANES.
- FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS SEE STANDARD 804S-3.
- FOR ONE-WAY AND MULTI-LANE ROADWAYS THE "LANE BLOCKED" SIGN MAY BE USED IN LIEU OF THE "LANE CLOSED AHEAD" SIGN. THE NUMBER OF DIGITS ON THE SIGN SHALL NOT BE GREATER THAN THE NUMBER OF LANES PRESENT ON THE ROADWAY. THE "X" SHALL BE PLACED UNDER THE NUMBER OF LANE(S) BLOCKED.
- FOR FLAGGING OPERATION REQUIREMENTS SEE STANDARD 804S-2.
- CONTRACTOR SHALL PROVIDE SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS WHEREVER PEDESTRIAN MOVEMENTS ARE AFFECTED BY CONSTRUCTION ACTIVITIES. ALL SIDEWALKS AND CROSSWALKS SHALL BE ACCESSIBLE WHEN CONTRACTOR IS NOT WORKING UNLESS APPROVED BY THE TRANSPORTATION DIVISION.
- FOR EXCAVATION PROTECTION AND SAFETY FENCE REQUIREMENTS SEE STANDARD 804S-4.
- THE USE OF ARROW DISPLAYS ARE REQUIRED ON ALL LANE CLOSURES. THE CONTRACTOR SHALL PROVIDE ONE (1) STAND-BY UNIT IN GOOD WORKING CONDITION AT THE JOB SITE, READY FOR USE IF THE OPERATION REQUIRES 24-HOUR A DAY LANE CLOSURE SET-UPS.

Typical Transition Lengths and Suggested Maximum Spacing of Devices

SPEED KPH	POSTED SPEED MPH	FORMULA	Minimum Desirable Taper Lengths (L) Meters (Feet)			Suggested Max Device Spacing		Suggested Sign Spacing Meters (Feet)
			3.0(10) OFFSET METERS (FEET)	3.3(11) OFFSET METERS (FEET)	3.6(12) OFFSET METERS (FEET)	On a taper Meters (feet)	On a Tangent Meters (feet)	
50	30	L=WS	45 (150)	50 (165)	55 (180)	9 (30)	15-20 (50-65)	40 (120)
55	35		65 (205)	70 (225)	75 (245)	10 (35)	20-25 (65-80)	50 (160)
65	40		80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70	45	L=WS ²	135 (450)	150 (495)	165 (540)	13 (45)	25-30 (80-100)	100 (320)
80	50		150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-110)	120 (400)
90	55		165 (550)	185 (605)	200 (660)	16 (55)	35-40 (110-130)	150 (500)
95	60	L=WS ²	180 (600)	200 (660)	220 (720)	18 (60)	40-45 (130-150)	180 (600)
105	65		195 (650)	215 (715)	235 (780)	19(65)	45-50 (150-165)	210 (700)
115	70		215 (770)	235 (770)	255 (840)	21 (70)	50-55 (165-180)	240 (800)

LEGEND

- Channelizing devices
- Trailer mounted flashing arrow board
- Flagger



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

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TRAFFIC CONTROL SIGNS

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-5 8 OF 13

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY KERI JUAREZ 01/11/11 ADOPTED

GENERAL NOTES

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-1 8 OF 9

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

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DEVICE SPACING

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-1 9 OF 9

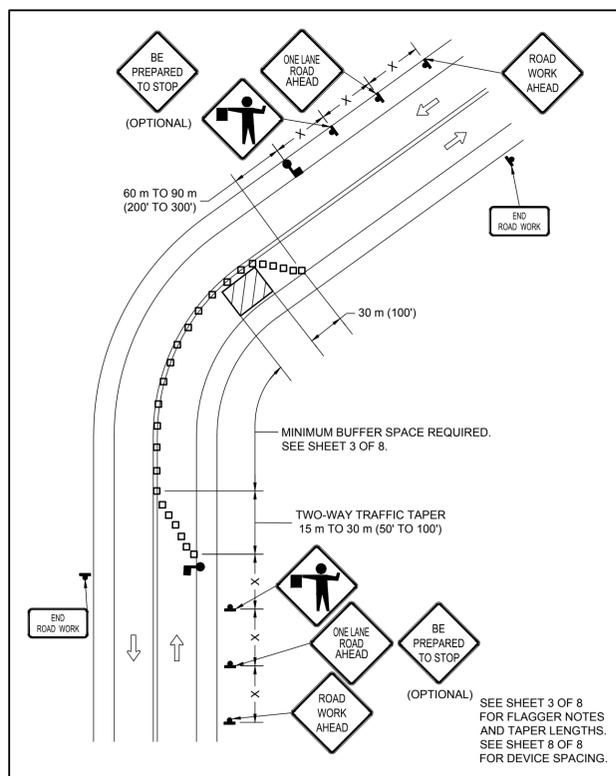
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED

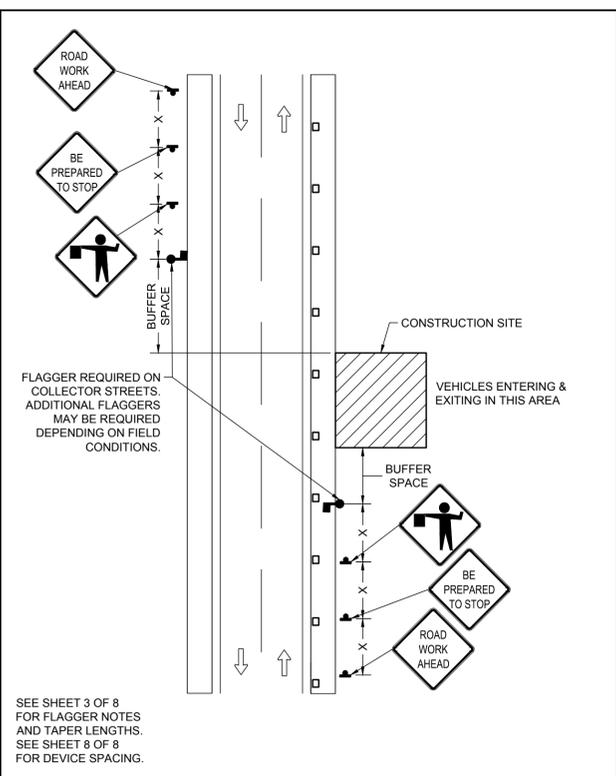
COLLECTOR / RESIDENTIAL STREET FLAGGING OPERATIONS

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-2 1 OF 8



- FOR DAYTIME WORK, THE FLAGGER SHALL WEAR AN APPROVED BRIGHTLY COLORED VEST. FOR NIGHTTIME WORK, THE VEST SHALL BE RETROREFLECTIVE. THE RETRO-REFLECTIVE MATERIAL SHALL BE ORANGE, YELLOW, WHITE, SILVER, STRONG YELLOW-GREEN OR A FLOURESCENT VERSION OF THESE COLORS AND SHALL BE VISIBLE AT A MINIMUM DISTANCE OF 305 m (1,000').
 - FOR LOW-VOLUME APPLICATIONS, A SINGLE FLAGGER MAY BE ADEQUATE. WHERE ONE FLAGGER CAN BE USED, SUCH AS FOR SHORT WORK AREAS ON STRAIGHT ROADWAYS, THE FLAGGER MUST BE VISIBLE TO APPROACHING TRAFFIC FROM BOTH DIRECTIONS.
 - FLAGGERS SHALL USE ONLY STOP/SLOW PADDLE TO DIRECT TRAFFIC UNLESS WORKING IN A SIGNALIZED INTERSECTION WHERE DRIVERS MAY BE CONFUSED BY THE SIGN PADDLE. HAND SIGNAL MAY BE USED IN THESE SITUATIONS.
 - FLAGGERS SHALL ENSURE THAT ALL REQUIRED SIGNING IS IN PLACE PRIOR TO BEGINNING FLAGGING OPERATIONS.
 - FLAGGERS SHALL NOT PERFORM WORK THAT IS NOT RELATED TO FLAGGING WHILE ON DUTY.
 - FLAGGERS MAY CARRY AIR HORNS OR WHISTLES TO WARN WORKERS OF AN EMERGENCY CONDITION.
 - FLAGGERS SHALL BE REQUIRED TO USE TWO-WAY RADIOS WHEN OUT OF CLEAR VIEW OF EACH OTHER.
 - FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
- TAPER LENGTHS
- | SPEED (kmph) | SPEED (mph) | LENGTH (meters) | LENGTH (feet) |
|--------------|-------------|-----------------|---------------|
| 30 | 20 | 11 | 35 |
| 40 | 25 | 17 | 55 |
| 50 | 30 | 26 | 85 |
| 55 | 35 | 36 | 120 |
| 65 | 40 | 51 | 170 |
| 70 | 45 | 66 | 220 |
| 80 | 50 | 84 | 280 |
| 90 | 55 | 101 | 335 |
| 95 | 60 | 125 | 415 |
| 105 | 65 | 146 | 485 |
- *POSTED SPEED



- ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES AND SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUCD), THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 800 AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL, OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IF A CONFLICT ARISES THEN THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL SHALL CONTROL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- THE CONTRACTOR SHALL NOTIFY THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024 NO LATER THAN THE MONDAY OF THE WEEK DURING WHICH THE CONTRACTOR INTENDS TO SET UP BARRICADES TO START CONSTRUCTION.
- PROPOSED CONSTRUCTION TRAFFIC MOVEMENTS MAY REQUIRE EXISTING SIGNAL HEADS TO BE RELOCATED. THE CITY OF AUSTIN WILL REVIEW SIGNAL HEAD LOCATIONS DURING CONSTRUCTION AND PERFORM THE REQUIRED ADJUSTMENTS. THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024, THREE (3) DAYS PRIOR TO PLACEMENT ANY TRAFFIC CONTROLS WHICH MAY REQUIRE SIGNAL HEAD ADJUSTMENTS/RELOCATION.
- THE CONTRACTOR SHALL PROVIDE ONE (1) FULL-TIME OFF-DUTY, UNIFORMED AUSTIN POLICE DEPARTMENT CERTIFIED PEACE OFFICER AND ONE (1) VEHICLE OF THE TYPE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE FOR TEMPORARY LANE CLOSURES UNDER SEALING, MILLING, PAVING AND WHEN WORKING IN INTERSECTIONS AS PART OF THE TRAFFIC CONTROL OPERATIONS. THE PEACE OFFICER SHALL BE ABLE TO SHOW PROOF OF CERTIFICATION BY THE TEXAS COMMISSION ON LAW ENFORCEMENT OFFICER STANDARDS.
- THE CONTRACTOR SHALL NOTIFY ALL OTHER GOVERNMENTAL AGENCIES WHOSE RIGHTS-OF-WAY ARE AFFECTED BY HIS WORK ACTIVITIES. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT THEY MAY NEED.
- THE CONTRACTOR SHALL MAINTAIN ONE (1) DUST-FREE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR APPROVED THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- THERE SHALL BE A MINIMUM OF THREE (3) METERS (10 FEET) CLEAR WIDTH FOR EACH LANE OF TRAFFIC IN CHANNELIZED AREAS, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER OR DESIGNATED REPRESENTATIVE SHALL PROVIDE AT LEAST 24 HOUR WRITTEN NOTICE OF LIMITED ACCESS TO AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE BUSINESS ACCESS SIGNS AS NEEDED TO INFORM DRIVERS OF THE LOCATIONS OF ALL DRIVEWAYS.
- TEMPORARY LANE CLOSURES IN THE CENTRAL BUSINESS DISTRICT (CBD) OR ON ARTERIAL STREETS SHALL NOT BE PERMITTED DURING THE HOURS OF 7 AM TO 9 AM AND 4 PM TO 6PM MONDAY THROUGH FRIDAY UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE TRANSPORTATION DIVISION.
- TRAFFIC CONTROL SHOWN ON STANDARD DETAILS IS TYPICAL. ADDITIONAL SIGNING AND/OR BARRICADING, AS WELL AS TEMPORARY PAVEMENT MARKINGS AND OBLITERATION/RESTORATION OF EXISTING PAVEMENT MARKINGS, MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS. FIELD ADJUSTMENTS TO TRAFFIC CONTROLS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM NO. 803S "BARRICADES, SIGNS AND TRAFFIC HANDLING".
- THE CONTRACTOR SHALL DESIGNATE A COMPETENT PERSON FOR TRAFFIC CONTROL. THE COMPETENT PERSON SHALL MAKE INSPECTIONS OF THE TRAFFIC CONTROL DEVICES AT LEAST TWO (2) TIMES A DAY (ONCE AT THE BEGINNING OF THE DAY AND ONCE AT THE END OF THE DAY), INCLUDING NON-WORKING DAYS, ENSURING THAT ALL DEVICES ARE IN THEIR PROPER PLACE AND ARE IN WORKING ORDER.
- ALL DEVICES SHALL BE MADE USING MATERIALS LISTED ON THE TxDOT APPROVED PRODUCTS LIST.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED

FLAGGER SETUP FOR 2 LANE ROADWAY

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-2 2 OF 8

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED

FLAGGER SETUP FOR 2 LANE ROADWAY

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-2 3 OF 8

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED

FLAGGER SETUP FOR VEHICLES ENTERING AND EXITING WORK SITE

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-2 4 OF 8

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS

RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED

SIGNING AND BARRICADING CROSSROAD & DRIVEWAY

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 804S-5 12 OF 13

REPLACEMENT SHEET

REVISION DESCRIPTION

REV. NO.	DATE	DESCRIPTION
1	2/10/2020	REPLACEMENT SHEET

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
02/10/2020
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
TRAFFIC CONTROL DETAILS - SHEET 2 OF 5

NOTES

SURVEY BY	NAME	DATE
QMD	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ENGINEERING SERVICES DIVISION

GP-2018-0000-AW

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- ALL PERSONS WORKING WITHIN THE RIGHT-OF-WAY SHALL WEAR A BRIGHTLY COLORED SAFETY VEST. FOR NIGHTTIME WORK THE VEST SHALL BE RETRO-REFLECTIVE.
- WHEN AN INTERSECTION IS CLOSED FOR CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CONSTRUCTION IN SUCH A MANNER THAT THE CLOSURE TIME IS MINIMIZED.
- THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO DISPATCHER AT 385-4295 ONE (1) WEEK PRIOR TO LANE CLOSURES ADJACENT TO BUS STOPS.

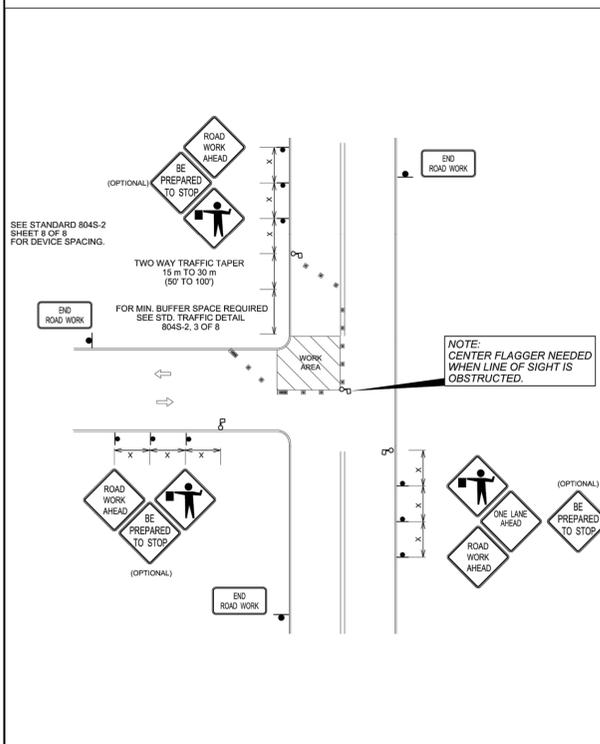
DURATION OF WORK

WORK DURATION IS A MAJOR FACTOR IN DETERMINING THE NUMBER AND TYPES OF DEVICES USED IN TEMPORARY TRAFFIC ZONES. THE FIVE (5) CATEGORIES OF WORK DURATION AND THEIR TIME AT A LOCATION ARE AS FOLLOWS:

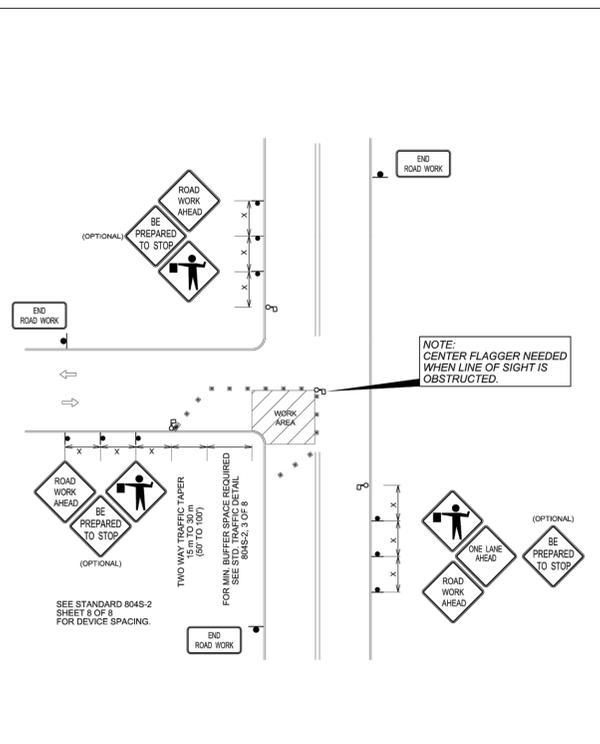
- LONG-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FOR MORE THAN 3 DAYS.
- INTERMEDIATE-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FROM OVERNIGHT TO 3 DAYS.
- SHORT-TERM STATIONARY-DAYTIME WORK THAT OCCUPIES A LOCATION FROM 1 TO 12 HOURS.
- SHORT-DURATION WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.
- MOBILE-WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

Typical Transition Lengths and Suggested Maximum Spacing of Devices						
Speed KMPH	Posted Speed MPH	Formula	3.0(10) Offset Meters (feet)	3.3(11) Offset Meters (feet)	3.6(12) Offset Meters (feet)	Suggested Max. Device Spacing
50	30	L=WS ² /80	45 (150)	50 (165)	55 (180)	9 (30)
55	35		65 (205)	70 (225)	75 (245)	10 (35)
65	40		80 (265)	90 (295)	100 (320)	12 (40)
70	45	L=WS	135 (450)	150 (495)	165 (540)	13 (45)
80	50		150 (500)	165 (550)	180 (600)	15 (50)
90	55		165 (550)	185 (605)	200 (660)	16 (55)
95	60	L=WS	180 (600)	200 (660)	220 (720)	18 (60)
105	65		195 (650)	215 (715)	235 (780)	19 (65)
115	70		215 (700)	235 (770)	255 (840)	21 (70)
						On a taper Meters (feet)
						On a tangent Meters (feet)
						"X" Dimension
						40 (120)
						50 (160)
						75 (240)
						100 (320)
						120 (400)
						150 (500)
						180 (600)
						210 (700)
						240 (800)

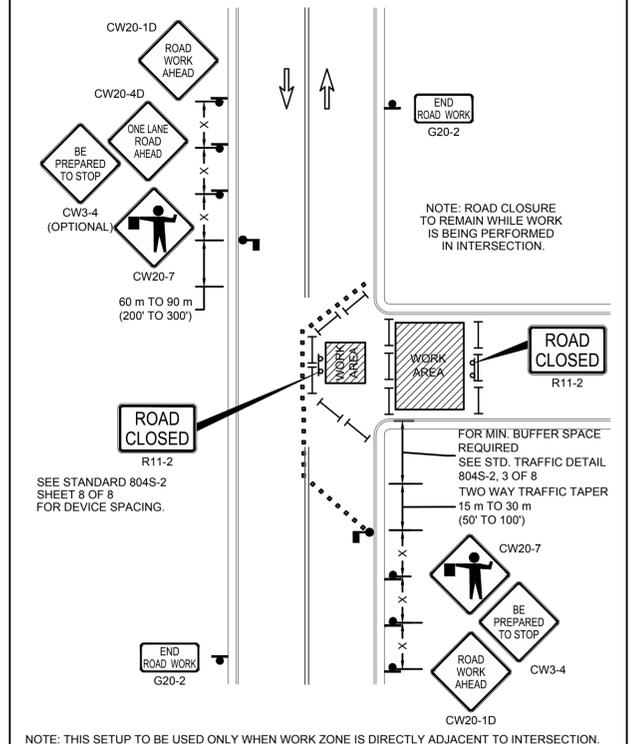
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GENERAL TRAFFIC CONTROL NOTES
RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 804S-5 13 OF 13



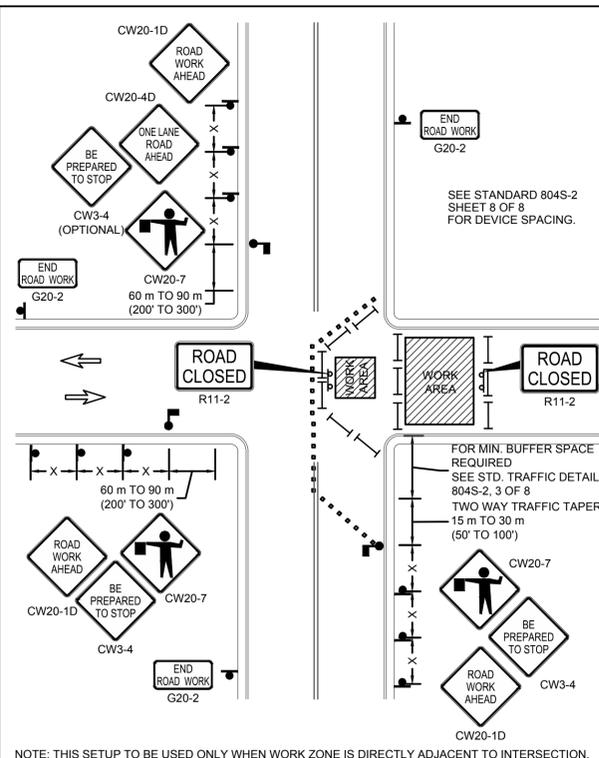
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLAGGER SETUP FOR WORK ADJACENT TO LANE CLOSED AT TEE INTERSECTION
	STANDARD NO. SPTF-A



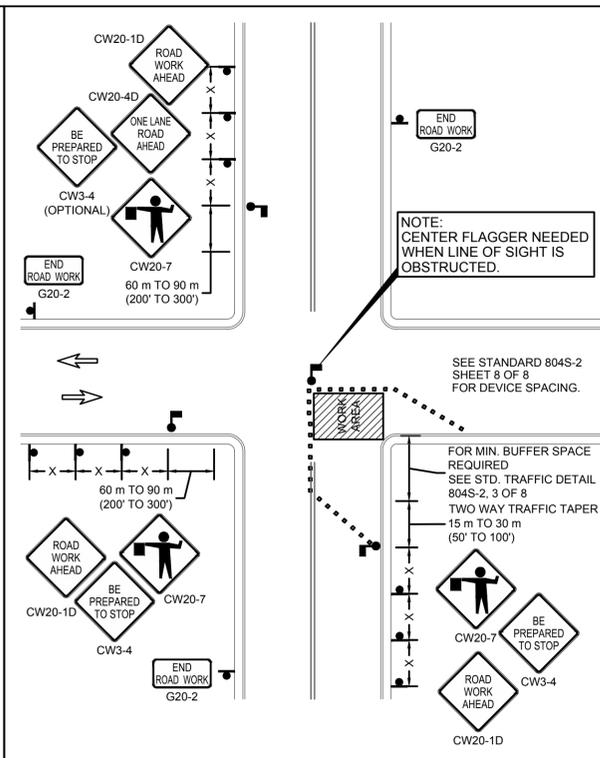
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLAGGER SETUP FOR WORK ADJACENT TO LANE CLOSED AT TEE INTERSECTION
	STANDARD NO. SPTF-B



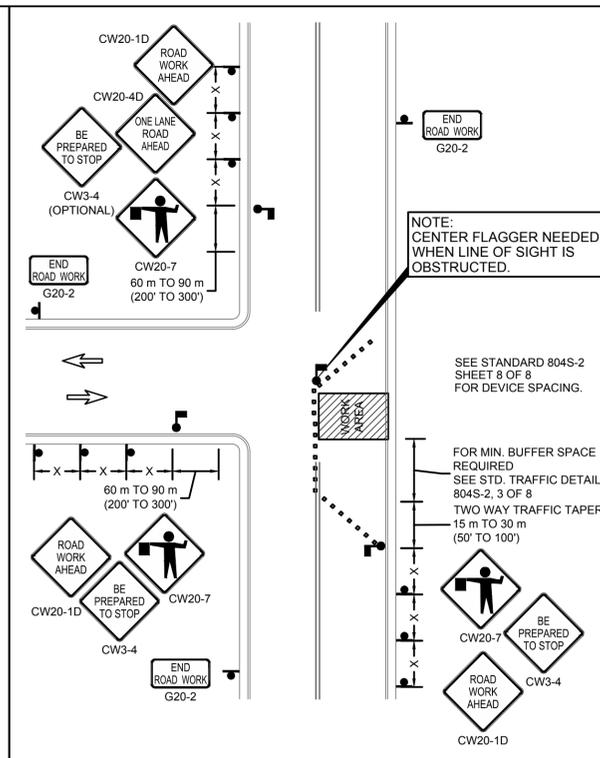
CITY OF AUSTIN AUSTIN TRANSPORTATION DEPARTMENT	FLAGGER SETUP FOR WORK ADJACENT TO ROAD CLOSED AT TEE INTERSECTION
	STANDARD NO. SPTF-C



CITY OF AUSTIN AUSTIN TRANSPORTATION DEPARTMENT	FLAGGER SETUP FOR WORK ADJACENT TO ROAD CLOSED AT CROSS INTERSECTION
	STANDARD NO. SPTF-D



CITY OF AUSTIN AUSTIN TRANSPORTATION DEPARTMENT	FLAGGER SETUP FOR WORK AT CROSS INTERSECTION
	STANDARD NO. SPTF-E



CITY OF AUSTIN AUSTIN TRANSPORTATION DEPARTMENT	FLAGGER SETUP FOR WORK AT CROSS INTERSECTION
	STANDARD NO. SPTF-F

- ALL PAVEMENT MARKINGS USED SHALL CONFORM TO THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY AND EXISTING PAVEMENT MARKINGS ON ALL ROADWAYS WITHIN THE CONSTRUCTION LIMITS AND ON ANY ROADWAY OUTSIDE THE CONSTRUCTION LIMITS THAT REQUIRES THE ROUTING OF TRAFFIC FOR HIS WORK.
- ALL ROADWAYS TO BE OPENED TO TRAFFIC SHALL HAVE TEMPORARY OR STANDARD PAVEMENT MARKINGS INSTALLED AS SHOWN IN THE DRAWINGS, AT THE END OF EACH DAY'S OPERATION.
- MARKINGS SHALL PROVIDE A VISIBLE REFERENCE FOR A MINIMUM DISTANCE OF 91.5 m (300') DURING NORMAL DAYLIGHT HOURS AND 49 m (160') WHEN ILLUMINATED BY AUTOMOBILE LOW-BEAM HEADLIGHTS AT NIGHT, UNLESS SIGHT DISTANCE IS RESTRICTED BY ROADWAY GEOMETRICS.
- ALL TEMPORARY REMOVABLE PAVEMENT MARKINGS SHALL BE SUPPLEMENTED WITH RAISED PAVEMENT MARKERS.
- TEMPORARY REMOVABLE PAVEMENT MARKING TAPE IS THE PREFERRED PAVEMENT MARKING; HOWEVER, THE CONTRACTOR MAY, WITH APPROVAL OF THE ENGINEER OR DESIGNATED REPRESENTATIVE, USE RAISED PAVEMENT MARKINGS, PAINT AND BEADS OR THERMOPLASTIC IF THE ROADWAY IS TO BE COMPLETELY RESURFACED.
- PAVEMENT MARKINGS THAT ARE NO LONGER APPLICABLE AND WHICH MAY CREATE CONFUSION OR DIRECT A MOTORIST TOWARD OR INTO THE CLOSED PORTION OF THE ROADWAY, SHALL BE REMOVED OR OBLITERATED BEFORE THE ROADWAY IS OPENED TO TRAFFIC. THE ABOVE DOES NOT APPLY TO SHORT-DURATION, SHORT TERM STATIONARY OR INTERMEDIATE TERM STATIONARY WORK.
- REMOVAL OR OBLITERATION OF PAVEMENT MARKINGS INCLUDES CENTERLINES, CHANNELIZING LINES, LANE LINES, EDGE LINES, WORDS, ARROWS, SYMBOLS AND RAISED PAVEMENT MARKINGS.
- PAVEMENT MARKINGS SHALL BE REMOVED OR OBLITERATED TO THE FULLEST EXTENT POSSIBLE, SO AS NOT TO LEAVE A DISCERNIBLE MARK. GRINDING OF PAVEMENT MARKINGS WILL ONLY BE ALLOWED ON PAVEMENT THAT IS TO BE COMPLETELY REPLACED.
- TEMPORARY FLEXIBLE-REFLECTIVE TABS MAY BE USED FOR TEMPORARY PAVEMENT MARKINGS ON NEW PAVEMENT, PROVIDED THEY ARE PLACED ON 1.5 m (5') CENTERS.
- THE CONTRACTOR SHALL PLACE TEMPORARY FLEXIBLE-REFLECTIVE TABS IMMEDIATELY AFTER THE FINAL HMAC OVERLAY AS EACH LANE IS COMPLETED AND READY FOR TRAFFIC. NO DIRECT PAYMENT WILL BE MADE FOR THIS OPERATION, BUT WILL BE CONSIDERED SUBSIDIARY TO THE OTHER BID ITEMS. FINAL STRIPING SHOULD BE COMPLETED WITHIN FOURTEEN (14) DAYS OF THE FINAL PAVING.

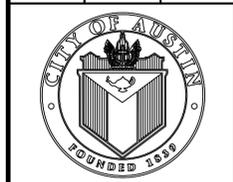
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GENERAL NOTES
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 804S-3 5 OF 5

REVISION DESCRIPTION	DATE	REV. BY	NO.

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
03/27/2018
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

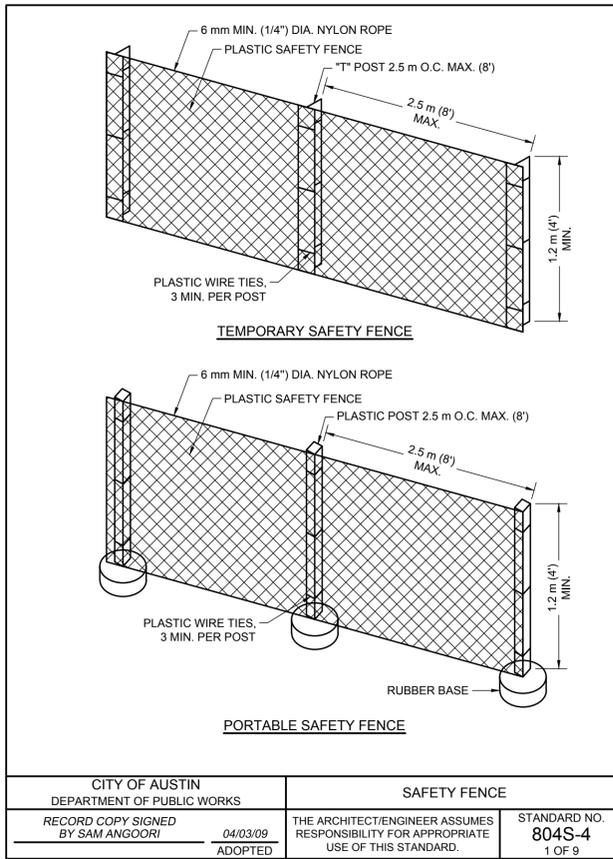
I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION BYPASS IMPROVEMENTS
TRAFFIC CONTROL DETAILS - SHEET 3 OF 5

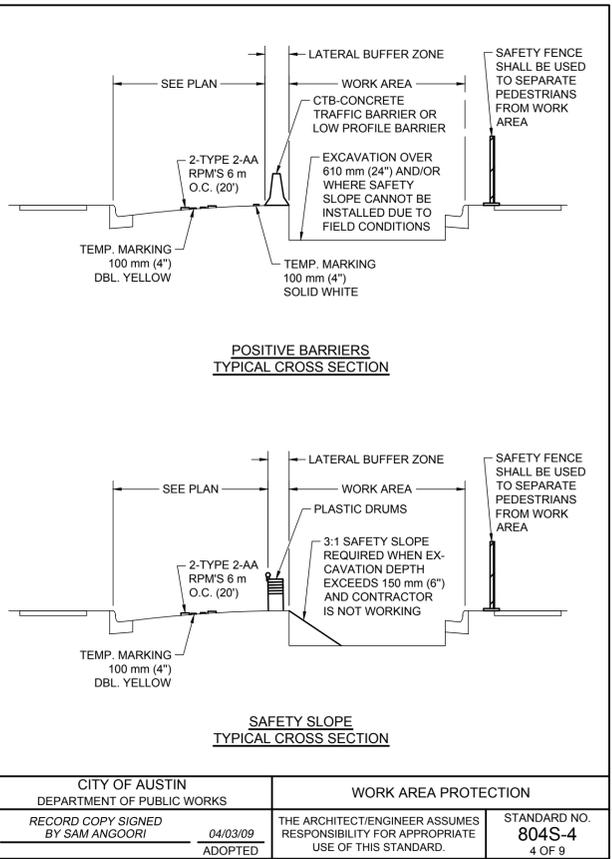
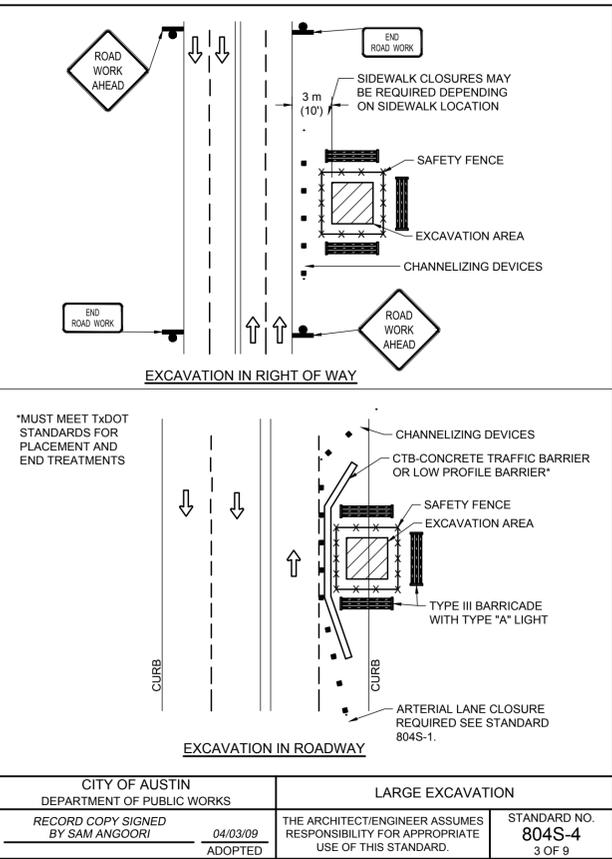


NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ESD
ENGINEERING SERVICES DIVISION
GP-2018-0000-AW



- SAFETY FENCE SHALL BE USED TO PROTECT ALL EXCAVATIONS IN THE RIGHT-OF-WAY.
- SAFETY FENCES SHALL BE USED TO SEPARATE CONSTRUCTION ACTIVITIES FROM PEDESTRIAN.
- ALL SAFETY FENCING SHALL BE PLASTIC, 1,200 mm (48") MINIMUM HEIGHT AND ORANGE IN COLOR.
- SAFETY FENCE USED WITHIN THE ROADWAY SHALL BE REFLECTORIZED WITH A MINIMUM OF TWO (2) STRIPS OF RETROREFLECTIVE MATERIAL, A MINIMUM OF 25 mm (1") WIDE, THE LENGTH OF THE FENCE OR DELINEATED BY CHANNELIZING DEVICES.
- SAFETY FENCE USED TO SEPARATE SIDEWALKS FROM CONSTRUCTION ACTIVITIES SHALL HAVE MINIMUM ENCROACHMENT TO THE SIDEWALK.
- AS A MINIMUM, SAFETY FENCING IS REQUIRED IN AREAS ADJACENT TO EXCAVATIONS GREATER THAN OR EQUAL TO 150 mm (6").
- SAFETY FENCING SHALL BE PAID FOR UNDER ITEM 803S, "BARRICADES, SIGNS AND TRAFFIC HANDLING", PAY ITEM NO. 803S-SF.
- PORTABLE SAFETY FENCE MOUNTS SHALL BE APPROVED BY THE TRANSPORTATION DIVISION PRIOR TO CONSTRUCTION.

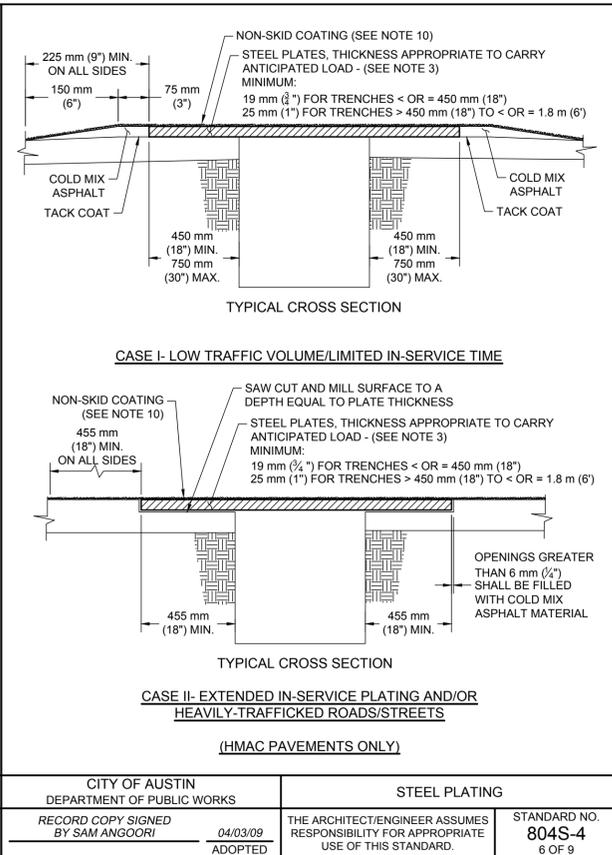
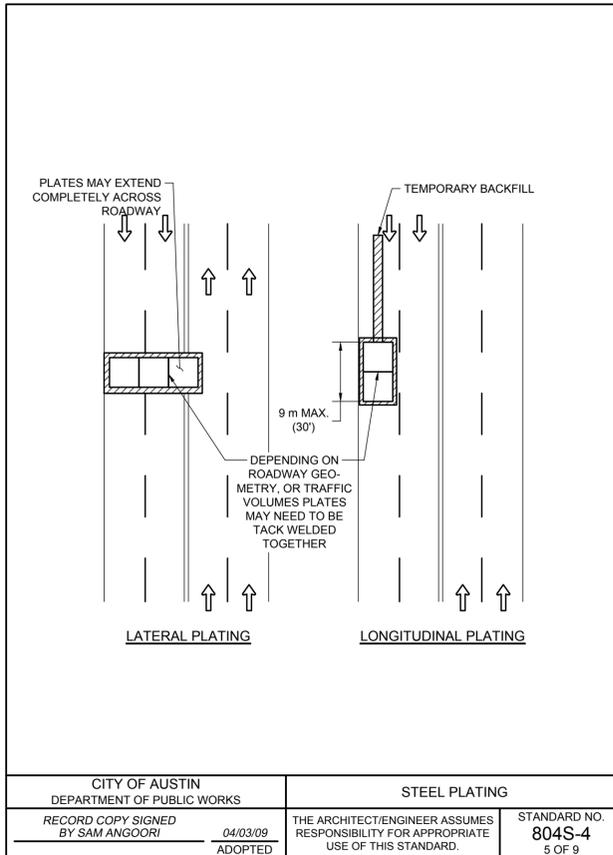


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SAFETY FENCE	STANDARD NO. 804S-4 1 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

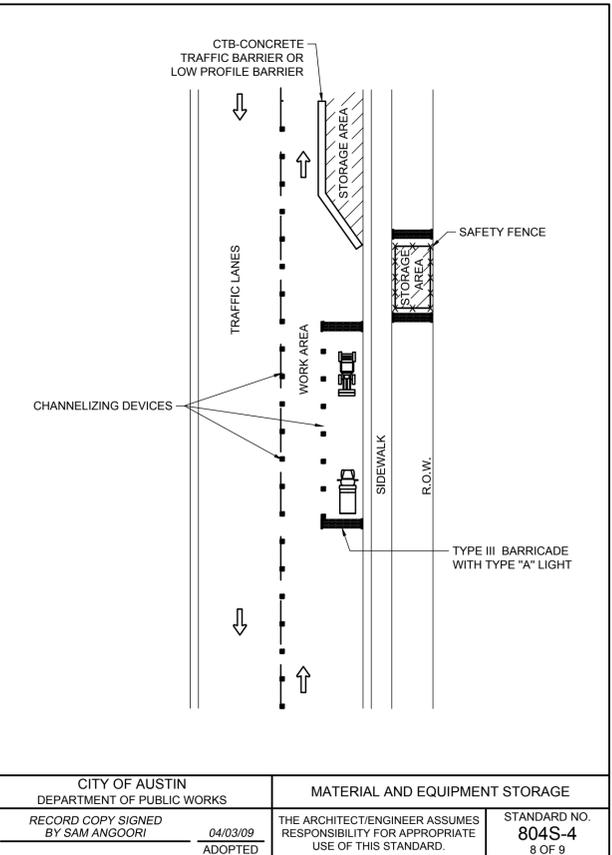
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SAFETY FENCE	STANDARD NO. 804S-4 2 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	LARGE EXCAVATION	STANDARD NO. 804S-4 3 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	WORK AREA PROTECTION	STANDARD NO. 804S-4 4 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED



- NOTES:
- WHERE TRAFFIC MUST CROSS TRENCHES, THE CONTRACTOR SHALL PROVIDE SUITABLE BRIDGES.
 - THE USE OF STEEL PLATES SHALL BE APPROVED BY THE RIGHT OF WAY MANAGEMENT DIVISION OF WATERSHED PROTECTION AND DEVELOPMENT DEPARTMENT PRIOR TO INITIATION OF CONSTRUCTION.
 - THE THICKNESS OF PLATES FOR TRENCH WIDTHS EXCEEDING 1.8 m (6") SHALL BE ESTABLISHED IN AN ANALYSIS COMPLETED BY A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF TEXAS. THE ANALYSIS SHALL BE BASED ON HS-20 TRAFFIC LOADING WITH A MAXIMUM PLATE DEFLECTION OF 50 mm (2") WHEN EXPERIENCING SAID LOADING. FOR SITUATIONS WHERE MULTIPLE LAYERS OF PLATES (OR STACKED PLATES) ARE TO BE EMPLOYED, THE SEAMS (I.E. THE INTER-FACE BETWEEN PLACED SIDE-BY-SIDE) OF THE UPPER LAYER SHALL BE PLACED PERPENDICULAR TO THE SEAMS OF THE UNDERLYING PLATES.
 - WHEN APPROVED, THE TYPE OF PLATE INSTALLATION SHALL BE BASED ON THE ANTICIPATED LENGTH OF TIME THE PLATE WILL BE IN SERVICE:
CASE I: A CASE I INSTALLATION SHALL APPLY FOR NO LONGER THAN A 2 WEEK PERIOD.
CASE II: A CASE II INSTALLATION SHALL APPLY FOR NO LONGER THAN 2 WEEK PERIOD.
 - THE TOPSIDE OF THE STEEL PLATE SHALL BE FLAT AND FREE OF ANY CLIPS, CHAINS, ATTACHMENTS, WELDMENTS OR SURFACE IRREGULARITIES.
 - PLATES WITH A PERMANENT DISPLACEMENT (I.E. DISPLACEMENT ANYWHERE ON THE SURFACE OF THE PLATE WITH RESPECT TO A PLANE FORMED BY THE OUTSIDE EDGES) THAT EXCEEDS 12 mm (1/2") SHALL NOT BE USED FOR PLATING PURPOSES. PLATES THAT DEVELOP A PERMANENT DISPLACEMENT EXCEEDING 12 mm (1/2") DURING SERVICE SHALL BE REMOVED AND REPLACED.
 - THE PLATES SHALL BE PROVIDED WITH APPROPRIATE NUMBER OF KEYHOLE SLOTS OR CIRCULAR HOLES FOR HANDLING, LIFTING, INSTALLATION AND REMOVAL PURPOSES.
 - THE CONTRACTOR SHOULD AVOID USING A LONG SERIES OF PLATES THAT RUN PARALLEL TO VEHICULAR TRAFFIC WHEELS PATHS.
 - ADDITIONAL METHODS OF SECURING PLATES MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS.
 - FOR PLATES 1.8 m (6") OR GREATER IN DIRECTION OF TRAFFIC, A NON-SKID COATING SHOULD BE APPLIED TO THE ENTIRE SURFACE AREA OF ALL PLATES, AS WELL AS ADJACENT AREAS. THE NON-SKID COATING SHALL BE TCA (TEXTURED COATING OF AMERICA, INC.) STRATA-GRIP DECK COATING SYSTEM; SLIPFIX, INC. SPS (SLIP PROTECTION SURFACE) OR AN EQUIVALENT PRODUCT APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STEEL PLATING	STANDARD NO. 804S-4 5 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STEEL PLATING	STANDARD NO. 804S-4 6 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STEEL PLATING	STANDARD NO. 804S-4 7 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	MATERIAL AND EQUIPMENT STORAGE	STANDARD NO. 804S-4 8 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

REVISION DESCRIPTION	DATE	REV. BY	NO.

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
03/27/2018
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976
I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
TRAFFIC CONTROL DETAILS - SHEET 4 OF 5



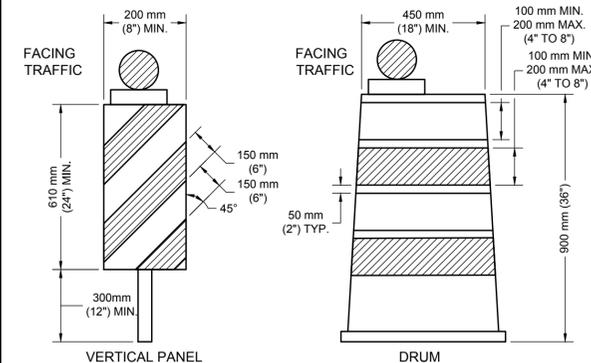
NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ESD
ENGINEERING SERVICES
DIVISION
GP-2018-0000-AW

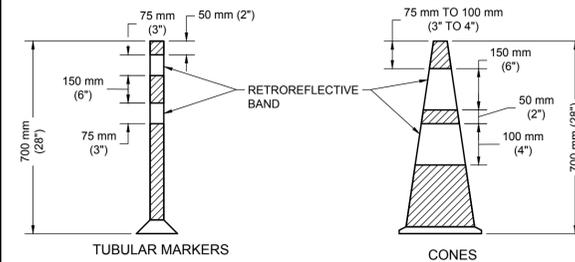
BARRICADES:

- BARRICADES SHALL BE OF THREE TYPES: TYPE I, TYPE II OR TYPE III.
- STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETRO-REFLECTIVE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS). THE STRIPES SHALL BE 150 mm (6") WIDE, EXCEPT WHERE RAIL LENGTHS ARE LESS THAN 900 mm (36"), WHEN 100 mm (4") WIDE STRIPES MAY BE USED.
- WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, THE SURFACE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWN-WARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.
- BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE MOTORIST AND PROVIDE A STABLE SUPPORT NOT EASILY BLOWN OVER BY THE WIND OR TRAFFIC. FOR TYPE I BARRICADES, THE SUPPORT MAY INCLUDE OTHER UN-STRIPED HORIZONTAL PANELS NECESSARY TO PROVIDE STABILITY.
- BARRICADES ARE LOCATED ADJACENT TO TRAFFIC AND ARE THEREFORE SUBJECT TO IMPACT WITH ERRANT VEHICLES. BECAUSE OF THEIR VULNERABLE POSITION AND THE HAZARD THEY COULD CREATE, THEY SHOULD BE CONSTRUCTED OF LIGHTWEIGHT MATERIALS AND HAVE NO RIGID STAY BRACING FOR A-FRAME DESIGNS. ALL BARRICADE SYSTEMS SHOULD BE CRASHWORTHY.
- ON HIGH-SPEED EXPRESSWAYS OR IN OTHER SITUATION WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVER TURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

- STORAGE OF EQUIPMENT AND MATERIALS SHALL BE RESTRICTED TO LOCATIONS WHERE DRIVER SIGHT DISTANCES TO TRAFFIC, PEDESTRIANS, BUSINESSES AND SIDE STREET INTERSECTIONS ARE NOT OBSTRUCTED OR WHERE AN UNSIGHTLY APPEARANCE. AS DETERMINED BY THE ENGINEER, WILL NOT EXIST.
- EQUIPMENT MUST BE PARKED AS FAR AWAY FROM THE TRAVELWAYS AS PRACTICAL.
- TOTAL AREA USED FOR EQUIPMENT STORAGE SHALL BE KEPT TO A MINIMUM.
- ALL MATERIALS STORED IN THE RIGHT-OF-WAY MUST BE MAINTAINED IN A NEAT AND ORGANIZED MANNER.
- MATERIALS STORED MAY NOT BE MORE THAN 915 mm (36") IN HEIGHT.
- ALL MATERIALS STORED MUST BE USED WITHIN THREE (3) DAYS.



LONG TERM AND INTERMEDIATE TERM STATIONARY WORK



SHORT TERM AND SHORT DURATION WORK

SEE STANDARD 804S-5 SHEET 12 OF 13 AND SHEET 13 OF 13 FOR GENERAL NOTES AND DEVICE SPACING.

CHANNELIZING DEVICES:

- ALL CHANNELIZING DEVICES SHALL HAVE WARNING LIGHTS OR LARGE REFLECTORS WHEN USED AT NIGHT. FLASHING WARNING LIGHTS MAY BE PLACED ON CHANNELIZING DEVICES USED SINGULARLY OR IN GROUPS TO MARK A SPOT CONDITION. WARNING LIGHTS ON CHANNELIZING DEVICES USED IN A SERIES SHALL BE STEADY-BURN. CHANNELIZING DEVICES IN TAPERS AT NIGHT SHALL HAVE TYPE C WARNING LIGHTS.
- THE RETRO-REFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE.
- THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR OR SUPPLIER SHALL BE SHOWN ON THE NON-RETROREFLECTIVE SURFACE OF ALL CHANNELIZING DEVICES. THE LETTERS AND NUMBERS SHALL BE A NON-RETROREFLECTIVE COLOR AND NOT OVER 50 mm (2") IN HEIGHT.
- PARTICULAR ATTENTION SHOULD BE GIVEN TO ASSURE THAT CHANNELIZING DEVICES ARE MAINTAINED AND KEPT CLEAN, VISIBLE AND PROPERLY POSITIONED AT ALL TIMES. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETRO-REFLECTIVITY AND EFFECTIVENESS.

CONES:

CONES SHALL PREDOMINANTLY BE ORANGE, FLUORESCENT RED-ORANGE, OR FLUORESCENT YELLOW-ORANGE IN COLOR, NOT LESS THAN 70 mm (28") IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES ON IMPACT. FOR NIGHT TIME USE, CONES SHALL BE RETRO-REFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETRO-REFLECTION OF CONES SHALL BE PROVIDED BY A WHITE BOND 150 mm (6") WIDE, NO MORE THAN 75 TO 100 mm (3 TO 4") FROM THE TOP OF THE CONE, AND AN ADDITIONAL 100 mm (4") WHITE BAND A MINIMUM OF 50 mm (2") BELOW THE 150 mm (6") BAND. TRAFFIC CONES ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT DURATION WORK. HOWEVER, CONES MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT, IF THE SITE IS CONTINUOUSLY MANNED.

TUBULAR MARKERS:

TUBULAR MARKERS SHALL PREDOMINANTLY BE ORANGE IN COLOR, NOT LESS THAN 700 mm (28") IN HEIGHT. A MINIMUM 50 mm (2") WIDE WHEN FACING TRAFFIC AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES. FOR NIGHT TIME USE, TUBULAR MARKERS SHALL BE RETRO-REFLECTIVE PROVIDED BY TWO (2) 75 mm (3") WIDE WHITE BANDS PLACED A MAXIMUM OF 50 mm (2") FROM THE TOP, WITH A MAXIMUM OF 150 mm (6") BETWEEN BANDS. TUBULAR MARKERS ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT DURATION WORK. HOWEVER, TUBULAR MARKERS MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT, IF THE SITE IS CONTINUOUSLY MANNED.

VERTICAL PANELS:

VERTICAL PANELS SHALL BE 200 TO 300 mm (8 TO 12") WIDE AND AT LEAST 600 mm (24") IN HEIGHT. THEY SHALL HAVE ORANGE AND WHITE STRIPES, AND BE RETRO-REFLECTIVE. PANEL STRIPE WIDTHS SHALL BE 150 mm (6") EXCEPT WHERE PANEL HEIGHTS ARE LESS THAN 900 mm (36"), WHEN 100 mm (4") STRIPES MAY BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

DRUMS:

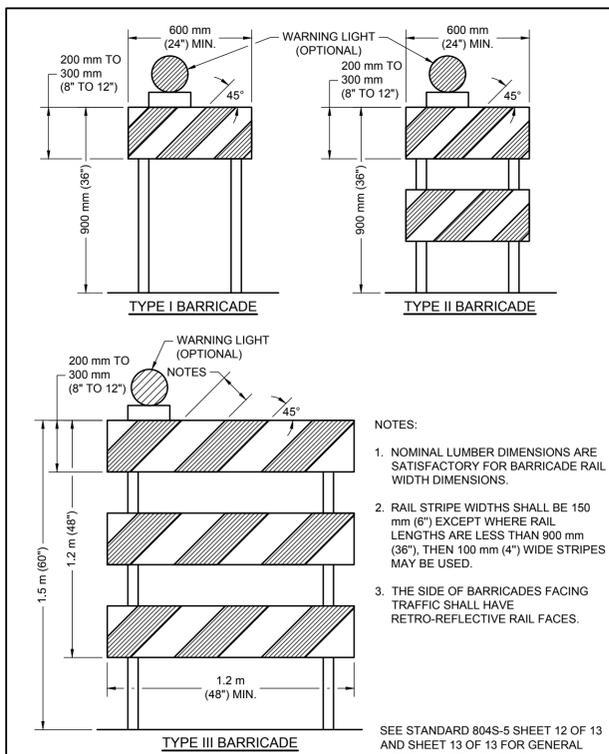
- DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHT-WEIGHT FLEXIBLE AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 900 mm (36") IN HEIGHT, AND HAVE AT LEAST 450 mm (18") MINIMUM WIDTH, REGARDLESS OF ORIENTATION. STEEL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETRO-REFLECTIVE STRIPES 100 TO 200 mm (4 TO 8") WIDE. EACH DRUM SHALL HAVE A MINIMUM OF TWO (2) ORANGE AND TWO (2) WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, SHALL NOT EXCEED 50 mm (2") WIDE. DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF ROADWORK OR OTHER DEBRIS.
- DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER OR ANY MATERIAL TO AN EXTENT THAT WOULD MAKE THE HAZARDOUS TO MOTORISTS, PEDESTRIANS OR WORKERS. WHEN THEY ARE USED IN REGIONS SUSCEPTIBLE TO FREEZING, THEY SHOULD HAVE DRAINAGE HOLES IN THE BOTTOM SO WATER WILL NOT ACCUMULATE AND FREEZE, CAUSING A HAZARD IF STRUCK BY A MOTORIST. BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	BARRICADES	STANDARD NO. 804S-5 4 OF 13
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/10 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	MATERIAL AND EQUIPMENT STORAGE	STANDARD NO. 804S-4 9 OF 9
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	04/03/09 ADOPTED

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	CHANNELIZING DEVICES	STANDARD NO. 804S-5 1 OF 13
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/10 ADOPTED

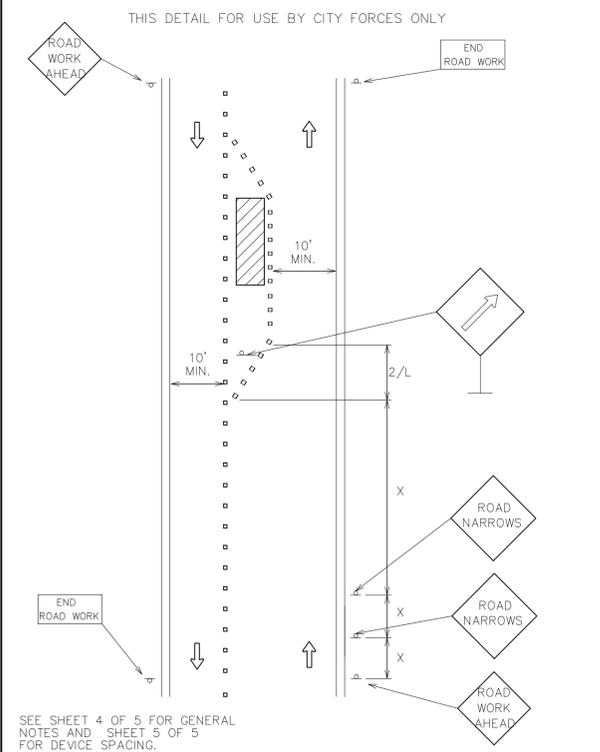
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	CHANNELIZING DEVICES	STANDARD NO. 804S-5 2 OF 13
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/10 ADOPTED



- NOTES:**
- NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY FOR BARRICADE RAIL WIDTH DIMENSIONS.
 - RAIL STRIPE WIDTHS SHALL BE 150 mm (6") EXCEPT WHERE RAIL LENGTHS ARE LESS THAN 900 mm (36"), THEN 100 mm (4") WIDE STRIPES MAY BE USED.
 - THE SIDE OF BARRICADES FACING TRAFFIC SHALL HAVE RETRO-REFLECTIVE RAIL FACES.

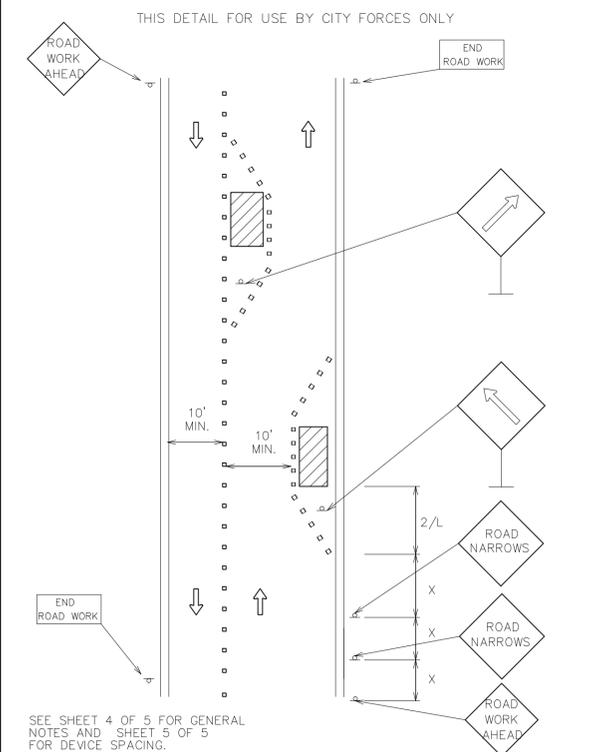
SEE STANDARD 804S-5 SHEET 12 OF 13 AND SHEET 13 OF 13 FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	BARRICADES	STANDARD NO. 804S-5 3 OF 13
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	01/04/10 ADOPTED



SEE SHEET 4 OF 5 FOR GENERAL NOTES AND SHEET 5 OF 5 FOR DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	RESIDENTIAL ROAD NARROWS FOR CENTERLINE WORK	STANDARD NO. 804S-1A 1 OF 5
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	11/13/07 ADOPTED



SEE SHEET 4 OF 5 FOR GENERAL NOTES AND SHEET 5 OF 5 FOR DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	RESIDENTIAL ROAD NARROWS FOR CL/CURB WORK	STANDARD NO. 804S-1A 2 OF 5
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	11/13/07 ADOPTED

- THIS DETAIL FOR USE BY CITY FORCES ONLY**
- ALL SETUPS SHALL BE IN ACCORDANCE WITH THE CURRENT ADDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
 - TO DETERMINE APPROPRIATE DEVICES AND SIGN SIZES TO BE USED, REFER TO STANDARD 804S-5, SHEETS 5, 6 AND 7 OF 11.
 - FOR INTERMEDIATE-TERM SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, THE CHANNELIZATION MUST BE MADE DOMINANT BY USING A VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION, SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTERLINE. IN SUCH LOCATIONS, A MAXIMUM CHANNELIZING DEVICE SPACING OF 3 m (10') IS REQUIRED.
 - FOR LONG TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED AND CENTERLINE STRIPING PROVIDED WHERE TWO WAY TRAFFIC IS IN ADJACENT LANES.
 - FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS SEE STANDARD 804S-3.
 - FOR ONE-WAY AND MULTI-LANE ROADWAYS THE "LANE BLOCKED" SIGN MAY BE USED IN LIEU OF THE "LANE CLOSED AHEAD" SIGN. THE NUMBER OF DIGITS ON THE SIGN SHALL NOT BE GREATER THAN THE NUMBER OF LANES PRESENT ON THE ROADWAY. THE "X" SHALL BE PLACED UNDER THE NUMBER OF LANE(S) BLOCKED.
 - FOR FLAGGING OPERATION REQUIREMENTS SEE STANDARD 804S-2.
 - CONTRACTOR SHALL PROVIDE SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS WHEREVER PEDESTRIAN MOVEMENTS ARE AFFECTED BY CONSTRUCTION ACTIVITIES. ALL SIDEWALKS AND CROSSWALKS SHALL BE ACCESSIBLE WHEN CONTRACTOR IS NOT WORKING UNLESS APPROVED BY THE TRANSPORTATION DIVISION.
 - FOR EXCAVATION PROTECTION AND SAFETY FENCE REQUIREMENTS SEE STANDARD 804S-4.
 - THE USE OF ARROW DISPLAYS ARE REQUIRED ON ALL LANE CLOSURES. THE CONTRACTOR SHALL PROVIDE ONE (1) STAND-BY UNIT IN GOOD WORKING CONDITION AT THE JOB SITE, READY FOR USE IF THE OPERATION REQUIRES 24-HOUR A DAY LANE CLOSURE SET-UPS.
 - WHEN ACTIVITY ENCLOSES OR BLOCKS A BIKE LANE, SIGNS ARE REQUIRED TO INDICATE BIKE LANE CLOSURES.

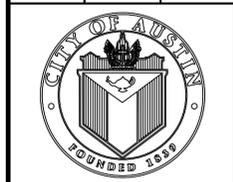
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GENERAL NOTES	STANDARD NO. 804S-1A 4 OF 5
RECORD COPY SIGNED BY BILL GARDNER	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	11/13/07 ADOPTED

REV. NO.	DATE	REVISION DESCRIPTION

STATE OF TEXAS
THU CAO
93976
LICENSED PROFESSIONAL ENGINEER
03/27/2018
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION
GLENLAKE PUMP STATION
BYPASS IMPROVEMENTS
TRAFFIC CONTROL DETAILS - SHEET 5 OF 5



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17

ESD
ENGINEERING SERVICES
DIVISION

GP-2018-0000-AW



AUSTIN WATER UTILITY
AUSTIN, TEXAS

POTABLE WATER PRESSURE POINT STATION IMPROVEMENT (IDIQ)

PROJECT No - CIP ID 2006.024

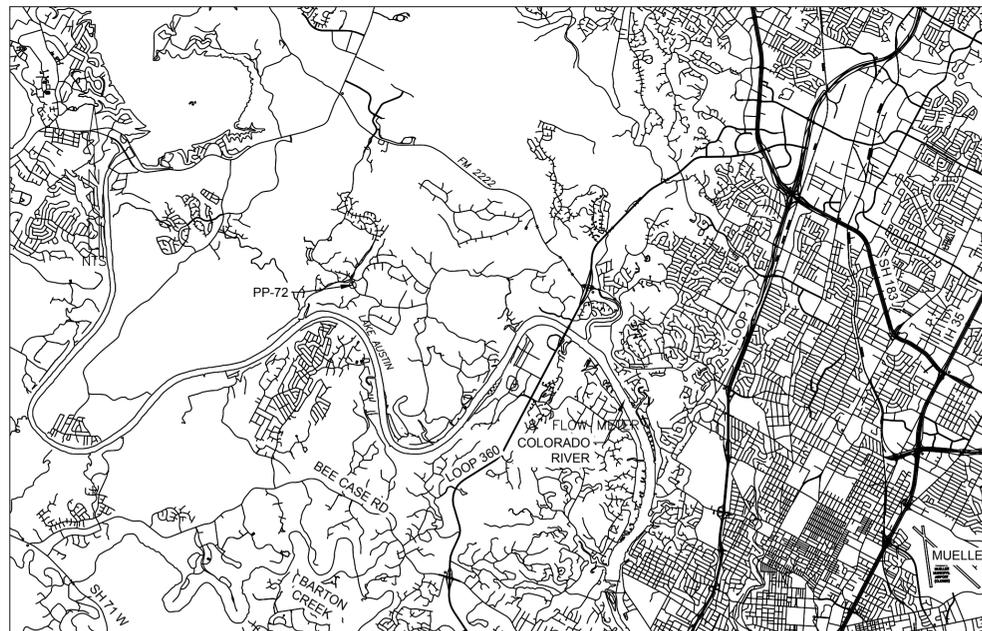
MARCH 28, 2018



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SHEET INDEX

GENERAL SHEETS	
CG-1	COVER SHEET/INDEX
CG-1	GENERAL CIVIL NOTES (NOT USED)
CG-2	GENERAL CIVIL DETAILS
CG-3	TRAFFIC CONTROL DETAIL #1 (NOT USED)
CG-4	TRAFFIC CONTROL DETAIL #2 (NOT USED)
CG-5	TRAFFIC CONTROL DETAIL #3 / NOTES (NOT USED)
SG-1	STRUCTURAL GENERAL NOTES
SG-2	STRUCTURAL GENERAL NOTES / DETAILS
EG-1	ELECTRICAL SYMBOLS LEGEND AND GENERAL NOTES
EG-2	SERVICE DIAGRAMS AND DETAILS
EG-3	ELECTRICAL DETAILS
IG-1	INSTRUMENTATION & SCADA PROCESS & INSTRUMENTATION DIAGRAM SYMBOLS & LEGEND
IG-2	INSTRUMENTATION AND SCADA SYMBOLS LEGEND / NOTES
IG-3	INSTRUMENTATION AND SCADA PRESSURE POINT NO. 72 PROCESS AND INSTRUMENTATION DIAGRAM
IG-4	TYPICAL INSTRUMENTATION INSTALLATION DETAILS (SHEET 1 OF 2)
IG-5	TYPICAL INSTRUMENTATION INSTALLATION DETAILS (SHEET 2 OF 2)
PRESSURE POINT STATION 72 - 9809 GLENLAKE DRIVE, AUSTIN, TX 78730	
PP72.C1	CIVIL SITE PLAN - PRESSURE POINT STATION #72
PP72.C2	CIVIL SITE DETAILS - PRESSURE POINT STATION #72 (NOT USED)
PP72.E1	ELECTRICAL PLAN - PRESSURE POINT STATION #72 (NOT USED)



PROJECT SITE LOCATION MAP

OWNER: AUSTIN WATER UTILITY
WALLER CREEK CENTER
625 EAST 10TH STREET
AUSTIN, TEXAS 78701

CONTACT: TIGER DAVIS, P.E.
AUSTIN WATER UTILITY

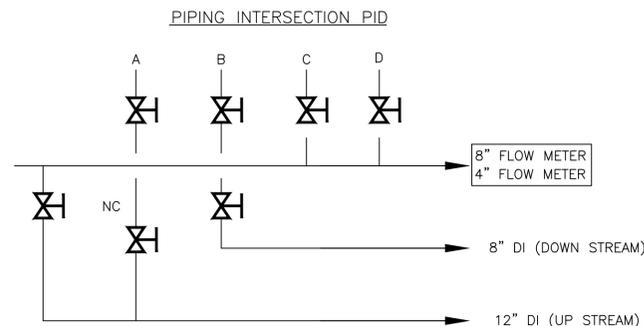
PM: DEMIRA WYATT
PUBLIC WORKS DEPARTMENT

SUBMITTAL PREPARED BY:
ENGINEERING SERVICES DIVISION
PUBLIC WORKS DEPARTMENT

PREPARED BY:

THU CAO, P.E.
Engineer
TEXAS REGISTRATION NUMBER 93976

3/28/2018
DATE



Pressure Point Station # 72 Design Table					Actuator	Flow
Site Address:	Press Zone	PSI Range	Elevation	Antenna Height	Control?	Meter?
8909 Glenlake Dr., Austin, TX 78730					N	Y
Tap A	RiverPlace(RP5)	78 - 87	905'	Demolition Req? (Y/N)	Y	
Tap B	Glenlake (GL2)	63 - 72	939.5'	Antenna Pole? (15/30')	15'	
C (Flow)	N/A	N/A		Sump Pump? (Y/N)	N	
D (Flow)	N/A	N/A		Ground Plates? (Y/N)	Y	

GENERAL

- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL RESULTING REVISIONS TO THE STRUCTURAL SYSTEM OR OTHER TRADES AS A RESULT OF ACCEPTANCE OF CONTRACTOR PROPOSED ALTERNATIVES OR SUBSTITUTIONS.
- METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST SATISFY THE MINIMUM REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL DETERMINE THE SCOPE OF THE STRUCTURAL WORK FROM THE CONTRACT DOCUMENTS TAKEN AS A WHOLE. THE STRUCTURAL DRAWINGS SHALL NOT BE CONSIDERED SEPARATELY FOR PURPOSES OF BIDDING THE STRUCTURAL WORK. DUE CONSIDERATION SHALL BE GIVEN TO OTHER STRUCTURAL WORK OR WORK RELATED TO THE STRUCTURE, INCLUDING NECESSARY COORDINATION DESCRIBED OR IMPLIED BY THE ARCHITECTURAL, CIVIL AND MEP DRAWINGS.
- THE REPRODUCTIVE USE OF THE STRUCTURAL CONTRACT DOCUMENTS OR ELECTRONIC FILES AS STRUCTURAL SHOP DRAWING DOCUMENTS BY THE CONTRACTOR OR SUB-CONTRACTORS IS NOT ALLOWED.
- SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL REFERENCE ONLY. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED BY DIRECT SCALING OF THE DRAWING.
- GENERAL CONTRACTOR IS TO VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL PENETRATIONS THROUGH THE STRUCTURE WITH SHOP DRAWINGS FROM MECHANICAL EQUIPMENT SUPPLIERS AND INSTALLERS PRIOR TO CONSTRUCTION.
- THESE DRAWINGS DO NOT, NOR ARE INTENDED TO, LOCATE PROPERTY LINES, BUILDING SET BACKS NOR HEIGHT LIMITATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE THE BUILDING AND CONSTRUCT IT TO, AND WITHIN, APPLICABLE CODE RESTRICTIONS. FURTHER, IT IS THE CIVIL ENGINEER'S RESPONSIBILITY TO ADDRESS SITE DRAINAGE APPROPRIATE TO THE SITE AND IN CONSIDERATION TO ADJOINING PROPERTIES.

CODES

- THE STRUCTURE AND COMPONENTS SHOWN IN THESE DRAWINGS HAVE BEEN DESIGNED UNDER THE GUIDELINES OF THE STRUCTURAL REQUIREMENTS LISTED IN THE 2015 INTERNATIONAL BUILDING CODE WITH REQUIRED AMENDMENTS.
- MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES, ASCE/SEI 7-10.
- STRUCTURAL STEEL: AISC STEEL CONSTRUCTION MANUAL, FOURTEENTH EDITION.
- STRUCTURAL CONCRETE: AMERICAN CONCRETE INSTITUTE, ACI 318-11.

CONCRETE FOOTINGS

- FOOTINGS NOT SPECIFICALLY LOCATED ON THE PLAN SHALL BE LOCATED ON CENTERLINE OF PILASTER OR COLUMN ABOVE. WHERE NO PILASTER OR COLUMN OCCURS, LOCATE ON CENTERLINE OF WALL OR BEAM.
- PROVIDE DOWELS FROM FOOTINGS INTO CONCRETE ABOVE USING SAME BAR SIZE AND NUMBER AS SHOWN FOR PILASTER OR COLUMN ABOVE. WHERE NO PILASTER OR COLUMN OCCURS, USE (4) #6 DOWELS. EXTEND DOWELS 30 BAR DIAMETERS INTO WALL, BEAM, PILASTER OR COLUMN U.N.O.
- ELEVATION OF TOP OF PLINTHS/FOOTINGS, UNLESS NOTED OTHERWISE ON DRAWINGS, IS AT THE BOTTOM OF THE DEEPEST INTERSECTING BEAM OR WALL SUPPORTED BY THE FOOTING.
- FOOTING EXCAVATIONS SHALL BE TO NEAT LINES AND SHALL BE FREE OF LOOSE OR WET MATERIALS.
- FOOTING REINFORCING AND CONCRETE SHALL BE PLACED IMMEDIATELY AFTER EXCAVATIONS ARE COMPLETE; IN NO CASE SHALL A FOOTING BE EXCAVATED THAT CANNOT BE PLACED BY THE END OF THE WORKDAY.
- SEE PLAN AND DETAILS FOR FOOTING LOCATIONS, SIZES, REINFORCEMENT, AND DEPTHS.
- REINFORCING STEEL SHOP DRAWINGS SHALL INCLUDE PLACING DRAWINGS FOR TEMPLATES TO SET DOWELS IN FOOTINGS.

CONCRETE

- ALL CONCRETE MIX DESIGNS SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL SHALL ADHERE TO ACI 318.
- CONCRETE MIX WILL BE CLASS A AS DESCRIBED IN SPECIFICATION 403S.

- CONFORMANCE TO ACI 305.1 "SPECIFICATION FOR HOT WEATHER CONCRETING" IS REQUIRED WHEN AIR TEMPERATURE IS ABOVE 90 DEG F.
- CONFORMANCE TO ACI 306 "COLD WEATHER CONCRETING" IS REQUIRED WHEN A PERIOD FOR MORE THAN THREE (3) CONSECUTIVE DAYS, THE AVERAGE DAILY AIR TEMPERATURE IS BELOW 40 DEG F AND THE AIR TEMPERATURE IS NOT GREATER THAN 50 DEG F FOR MORE THAN ONE-HALF OF ANY 24 HOUR PERIOD.
- GENERAL CONTRACTOR SHALL NOTIFY THE OWNER AND EEC 48 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.
- DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING" AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".
- NO CONDUIT OR PIPING LARGER THAN 1" I.D. SHALL BE RUN IN STRUCTURAL CONCRETE MEMBERS UNLESS SHOWN ON STRUCTURAL DRAWINGS.
- ALL PIPE SLEEVES IN CONCRETE MEMBERS SHALL BE SCHEDULE 40 PIPE UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWINGS. LOCATION OF THE SLEEVES SHALL BE AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 3 ADDITIONAL STIRRUPS EACH SIDE OF EACH SLEEVE IN BEAMS AND SPACE AS DIRECTED BY THE ENGINEER.
- REINFORCED STEEL SHALL BE DEFORMED NEW BILLET STEEL BARS IN ACCORDANCE WITH A.S.T.M. SPECIFICATION A615 GRADE 60 AND CITY OF AUSTIN STANDARD SPECIFICATION ITEM 406S.
- ALL STIRRUPS SHALL BE GRADE 60 WITH STANDARD 90 DEGREE HOOKS.
- PROVIDE (2) #5 X 4'-0" "L" SHAPED BARS TOP AND BOTTOM AT ALL CORNERS AND "T" INTERSECTIONS OF BEAMS.
- ALL HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI STANDARDS UNLESS SHOWN OTHERWISE.
- REINFORCEMENT DESIGNATED AS "CONTINUOUS" MAY BE SPLICED USING TYPE "B" SPLICES. REINFORCEMENT BAR SPLICE LENGTHS IN BEAMS WHICH ARE LOCATED AT THE CENTERLINE OF SUPPORTS FOR BOTTOM BARS AND AT MID-SPAN FOR TOP BARS MAY BE 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. PROVIDE STANDARD ACI HOOKS FOR TOP AND BOTTOM BARS AT DISCONTINUOUS ENDS OF ALL GRADE BEAMS.
- HORIZONTAL AND VERTICAL JOINTS ARE NOT PERMITTED WITHOUT REVIEW AND APPROVAL BY EEC.
- REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED, OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR REVIEWED BY THE STRUCTURAL ENGINEER.
- WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4. ELECTRODES FOR SHOP AND FIELD WELDING OF REINFORCEMENT BARS SHALL CONFORM TO ASTM A233, CLASS E90XX.
- MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED)

CONCRETE EXPOSED TO WEATHER	
#5 BARS AND SMALLER	1 - 1/2 INCHES
ALL OTHER BARS	2 INCHES
CONCRETE CAST AGAINST EARTH	3 INCHES
GRADE BEAMS:	
TOP	1 - 1/2 INCHES
BOARD FORMED SIDES	2 INCHES
EARTH FORMED SIDES	3 INCHES
BOTTOM	3 INCHES
SLABS ON GRADE:	
SINGLE LAYER OR TOP LAYER	2 INCHES
BOTTOM LAYER CAST AGAINST SOIL	3 INCHES
BOTTOM LAYER NOT CAST AGAINST SOIL	2 INCHES
COLUMNS	1 - 1/2 INCHES
PILASTERS & PLINTHS	2 INCHES
SLABS ON METAL FORMS	3/4 INCHES (TOP)
WALLS BELOW GRADE (BACKFILLED SIDE)	2 INCHES
WALLS BELOW GRADE (NO BACKFILL)	3/4 INCHES

- CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE.
- UNLESS SPECIFIED OTHERWISE, ANCHORS SHALL BE EMBEDDED IN THE APPROPRIATE SUBSTRATE WITH A MINIMUM EMBEDMENT OF 8 TIMES THE NOMINAL ANCHOR DIAMETER OR THE EMBEDMENT REQUIRED TO SUPPORT THE INTENDED LOAD.
- CONTRACTOR TO NOTIFY ENGINEER PRIOR TO INSTALLATION FOR ANCHOR PRODUCT APPROVAL CHOSEN FROM LIST BELOW.
- SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE.
- CONTACT SIMPSON STRONG-TIE AT (800) 999-5099 OR HILTI AT (800) 879-6000 X7980 FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.
- ACCEPTABLE PRODUCTS FOR INSTALLATION IN CONCRETE ARE AS FOLLOWS:

- A. EXPANSION ANCHORS SHALL BE:
 - SIMPSON STRONG-TIE "STRONG-BOLT" PER ICC ESR-1771
 - SIMPSON STRONG-TIE "STRONG-BOLT 2" PER ICC ESR-3037
 - HILTI "KWIK BOLT TZ" PER ICC ESR-1917
- B. SCREW ANCHORS SHALL BE:
 - SIMPSON STRONG-TIE "TITEN HD" PER ICC ESR-2713
- C. ADHESIVE ANCHORS SHALL BE:
 - SIMPSON STRONG-TIE "SET-XP EPOXY-TIE ADHESIVE" PER ICC ESR-2508
 - HILTI "RES500-SD EPOXY ADHESIVE" PER ICC ESR-2322
- D. POWDER ACTUATED FASTENERS SHALL BE:
 - SIMPSON STRONG-TIE "POWDER-DRIVEN FASTENERS" PER ICC ESR-2138
 - HILTI "X-U POWDER-DRIVEN FASTENERS" PER ICC ESR-2269

STRUCTURAL SHEET INDEX	
SG-1	GENERAL NOTES
SG-2	GENERAL NOTES / DETAILS

POST-INSTALLED ANCHORS

- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE S DRAWINGS.
- CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED C



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: _____ MARCH 2017

1C	4/10/2018	TC		REPLACEMENT SHEET
2C	2/10/2020	TC		REPLACEMENT SHEET
REV. NO.	DATE	DRWN	CHKD	REMARKS

AUSTIN WATER UTILITY

POTABLE WATER PRESSURE POINT STATION IMPROVEMENTS

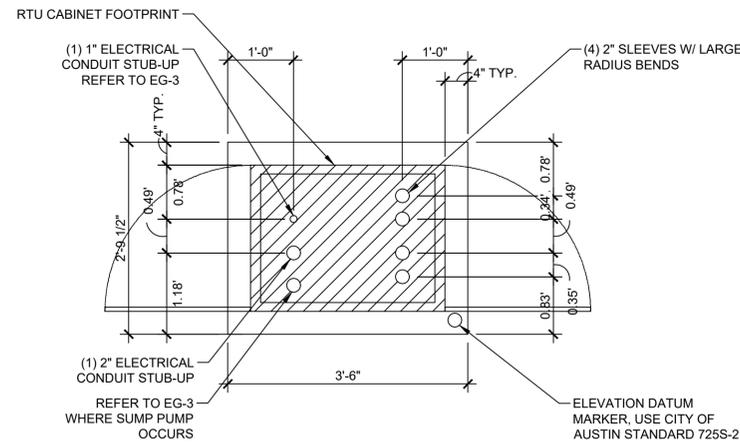
STRUCTURAL GENERAL NOTES

PROJECT NO.	GLEN_7_SG-1
FILE NAME:	GLEN_7_SG-1
SHEET NO.	45 OF 55
SG-1	

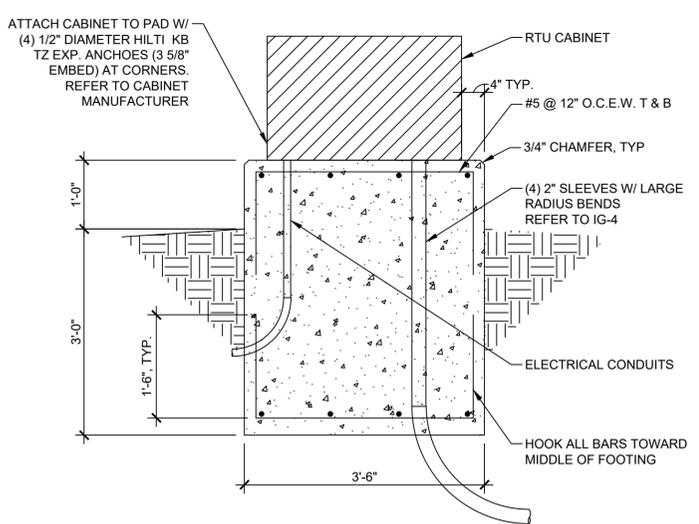


N:\TEAM3\AVUL_GLEN\AKEDWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLEN_7_SG-1 By: cao, thu Saved: 4/10/2019 8:57:40 AM Plotted: 4/10/2019 9:00:06 AM

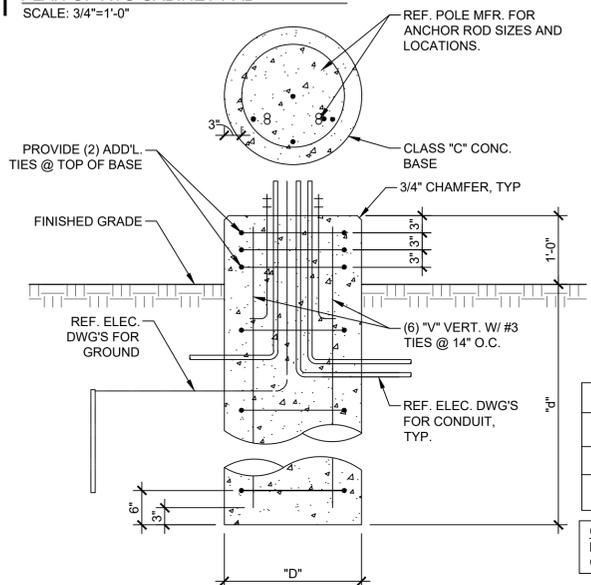
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1 PLAN OF RTU CABINET PAD
SCALE: 3/4"=1'-0"



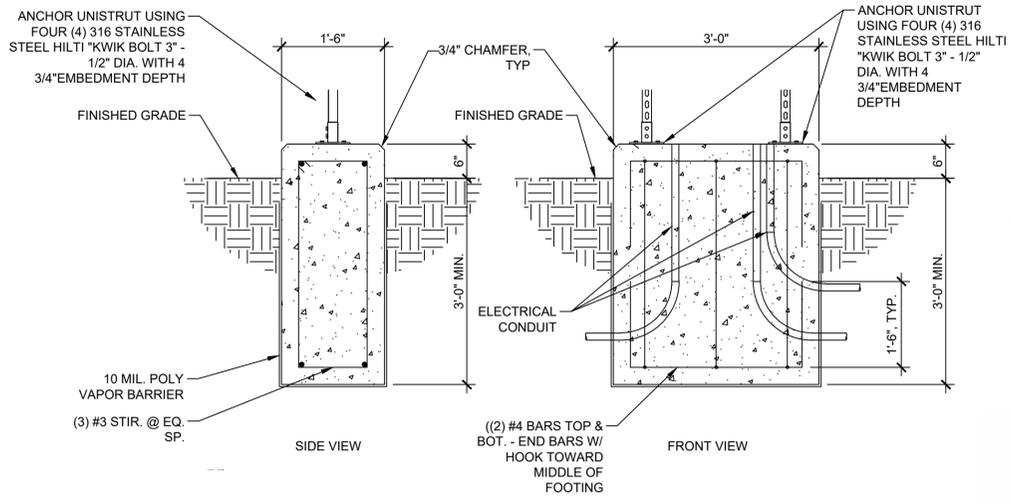
2 SECTION OF RTU CABINET PAD
SCALE: 3/4"=1'-0"



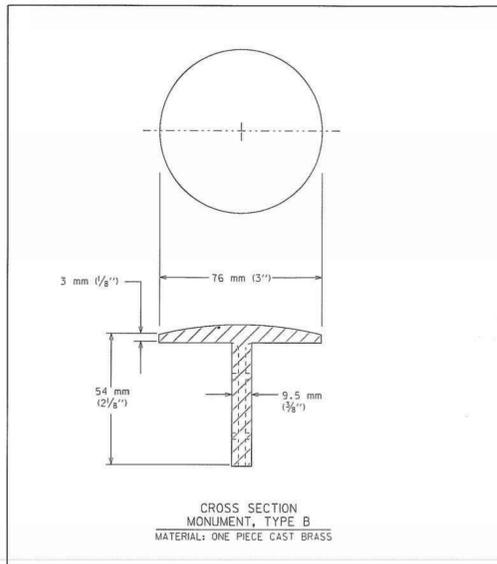
3 SECTION @ ANTENNA POLE FOUNDATION
SCALE: 3/4"=1'-0"

DRILLED SHAFT SCHEDULE			
POLE HT	D	d	REINF. ("V")
15'	18"	6'-0"	#6
30'	18"	8'-0"	#6

CONTRACTOR'S NOTE:
REFERENCE DESIGN TABLE FOR
COSTING/COORDINATION



4 METER/MCB RACK FOOTING
SCALE: 3/4"=1'-0"



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	MONUMENT, TYPE B SURVEY IDENTIFICATION MARKER	STANDARD NO. 725S-2
<i>John Baker, P.E.</i>	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

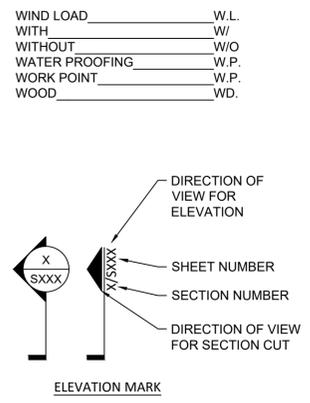


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STRUCTURAL ABBREVIATIONS

ADDITIONAL	ADDL.
ADJACENT	ADJ.
AGGREGATE	AGGR.
AIR CONDITIONER	A/C
AIR HANDLING UNIT	AH.
ALTERNATE	ALT.
ANCHOR ROD	A.R.
APPROXIMATE(LY)	APPROX.
ARCHITECT(URAL)	ARCH(L).
AXIAL LOAD	P
BACK FACE	B.F.
BEAM	BM.
BEARING	BRG.
BETWEEN	BTWN.
BLOCKING	BLKG.
BLOCK-OUT	B.O.
BOTTOM	BOT.
BOTTOM OF STEEL	B.O.S.
BRICK LEDGE	BR.L.
BRIDGING	BRDG.
BUILDING	BLDG.
BUILDING LINE	B.L.
CAST-IN-PLACE	C.I.P.
CENTER LINE	C.L. OR ϕ
CENTER LINE OF STEEL	C.L.S.
CENTER OF GRAVITY	C.G.
CLEAR(ANCE)	CLR.
COLUMN	COL.
COMPRESSION	C OR COMP.
CONCRETE	CONC.
CONCRETE MASONRY UNIT	C.M.U.
CONNECTIONS	CONX(S).
CONTINUOUS	CONT.
CONTRACTOR	CONTR.
CONTROL JOINT	CT.J.
CONSTRUCTION	CONST.
CONSTRUCTION JOINT	C.J.
COVER PLATE	COV. PL.
DEFORMED BAR ANCHOR(S)	DBA(S).
DETAIL	DET.
DEAD LOAD	D.L.
DIAGONAL	DIAG.
DIAMETER	DIA.
DIMENSION(S)	DIM(S).
DRAWING(S)	DWG(S).
DOUBLE	DBL.
DOUBLE EXTRA STRONG	XXS
DOWEL(S)	DWL(S).
EACH	EA.
EACH FACE	E.F.
EACH WAY	E.W.
ELECTRICAL	ELEC.
ELEVATION	EL.
ELEVATOR	ELEV.
EMBEDMENT	EMBED.
ENGINEER	ENGR. EEC
EQUAL	EQ.
EQUIPMENT	EQPT.
EXPANSION	EXP.
EXPANSION JOINT	E.J.
EXISTING	EXIST.
EXTERIOR	EXT.
EXTRA STRONG	XS
FACE TO FACE	F. TO F.
FABRICATE(ION)(OR)	FAB.
FAR SIDE	F.S.
FINISH(ED)	FIN(D)
FINISHED FLOOR	F.F.
FIRE PROOF(ING)	F.P.
FLANGE	FLG.
FLOOR	FL.
FLOOR DRAIN	F.D.
FOOTING	FTG.
FOUNDATION	FDN.
GALVANIZED	GALV.
GENERAL	GEN.
GENERAL CONTRACTOR	G.C.
GLUE LAMINATED TIMBER	GLULAM
GRADE	GR.
GRADE BEAM	GR.BM.
GYPSON BOARD	GYP.
HOT DIP(PIED)	H.D.
HEADED STUD(S)	H.S.
HEADER	HDR.
HEIGHT	HT.
HORIZONTAL	HORIZ.
HOOK	HK.
INSIDE DIAMETER	I.D.
INSIDE FACE	I.F.
INTERIOR	INT.
INTERMEDIATE	INTERM.
JOINT	JT.
JOIST(S)	JST(S).
LAMINATED VENEER LUMBER	LVL
LIGHTWEIGHT	LWT.
LIVE LOAD	L.L.
LONGITUDINAL	LONG.
LONG LEG HORIZONTAL	LLH.
LONG LEG VERTICAL	LLV.
LONG SIDE HORIZONTAL	LSH.
LONG SIDE VERTICAL	LSV.
MANUFACTURE(R)	MFR.
MASONRY	MAS.
MATERIAL	MATL.
MECHANICAL	MECH(L).
METAL	MTL.
MEZZANINE	MEZZ.
MIDDLE	MID.
MISCELLANEOUS	MISC.
MOMENT	M.
MOMENT CONNECTION(S)	M.C.
NEAR FACE	N.F.
NOMINAL	NOM.
NON-SHRINK	N.S.
NORMAL WEIGHT	N.W.
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
ON CENTER	O.C.
OPEN WEB STEEL JOIST	OWSJ
OPENING(S)	OPNG(S).
OPPOSITE	OPP.
OPPOSITE HAND	O.H.
ORIENTED STRAND BOARD	OSB
OUTSIDE FACE	O.F.
OUTSIDE DIAMETER	O.D.
PARALLEL	PAR.
PARALLEL STRAND LUMBER	PSL
PENETRATION	PEN.
PERPENDICULAR	PERP.
PIECE	PC.
PLATE	PL. OR
PLYWOOD	PLYWD.
POINT	PT.
POST-TENSION(ED)	P.T.
POUND(S) X1000	KIP(S)
POUNDS PER LINEAR FOOT	PLF
POUNDS PER SQUARE FOOT	PSF
POUNDS PER CUBIC FOOT	PCF
POUNDS PER CUBIC YARD	PCY
PRECAST CONCRETE	P/C
PREFABRICATED	PREFAB.
PRELIMINARY	PRELIM.
PRESSURE	PRESS.
PROJECT(ION)	PROJ.
RADIUS	R.
REFER TO / REFERENCE	REF.
REINFORCED CONCRETE PIPE	RCP.
REINFORCE(ING)(ED)(MENT)	REINF.
REMAINDER	REM.
REQUIRE(D)	REQ.(D)
RETURN	RET.
ROOF DRAIN	R.D.
ROUGH OPENING	R.O.
ROUND	RND.
SCHEDULE(D)	SCHED.
SECTION	SECT.
SHEAR FORCE	V
SHEET	SHT.
SIMILAR	SIM.
SPACE(S)(ING)	SPA.
SPECIFICATION(S)	SPEC(S).
SPECIFIED	SPEC'D
SQUARE	SQ.
STAINLESS STEEL	S.S.
STANDARD	STD.
STEEL	STL.
STIFFENER	STIFF.
STRAIGHT	STR.
STIRRUPS	STIR.
STRUCTURE(AL)	STRUCT.
SUPPORT(S)	SUPT(S).
TENSION	T.
THICK(NESS)	THK.
TONGUE AND GROOVE	T&G
TOP AND BOTTOM	T&B
TOP OF BEAM	T.O.BM.
TOP OF FOOTING	T.O.FTG.
TOP OF PIER	T.O.PIER
TOP OF PIER CAP	T.O.P.C.
TOP OF STEEL	T.O.S.
TOP OF STRUCTURAL CONCRETE	T.O.S.C.
TOP OF WALL	T.O.W.
TREATED	TRTD.
TYPICAL	TYP.
UNLESS NOTED OTHERWISE	UN.O.
VERTICAL	VERT.
VOLUME	VOL.
WATER STOP	W.S.
WELDED WIRE MESH	W.W.M.
WIND BRACE	WB

WIND LOAD	W.L.
WITH	W/
WITHOUT	W/O
WATER PROOFING	W.P.
WORK POINT	W.P.
WOOD	WD.



PLAN/DETAIL DESIGNATION
1 PLAN NAME / DETAIL TITLE
SCALE
VIEW NUMBER

STRUCTURAL DRAWING TYPES
S1 GENERAL NOTES & ISOMETRIC VIEWS
S2 FOUNDATION & FRAMING PLANS
S3 CONCRETE CONSTRUCTION
S4 MASONRY CONSTRUCTION
S5 STEEL CONSTRUCTION
S6 WOOD CONSTRUCTION

PATTERNS LEGEND

	EXISTING CONSTRUCTION
	CONVENTIONAL REINFORCING (NON-POST-TENSIONED)
	SLAB DEPRESSION/MECH. ZONE
	SERVICE PLATFORM
	BUILT-UP FRAMING
	BRICK/STONE IN SECTION
	CMU IN SECTION
	CONCRETE IN SECTION
	CONSTRUCTION BY OTHERS
	EARTH (UNDISTURBED)
	EARTH/FILL (COMPACTED)
	GLULAM IN SECTION
	GLULAM IN ELEVATION (PER SLOPE OF MEMBER)
	GRAVEL
	GROUT/SAND IN SECTION
	LVL IN SECTION
	PLYWOOD IN SECTION
	ROCK
	STEEL IN SECTION
	WOOD IN SECTION

DRAFTING SYMBOLS
SECTION MARK

REPLACEMENT SHEET

2C	2/10/2020	TC		REPLACEMENT SHEET
REV. NO.	DATE	DRWN	CHKD	REMARKS
DESIGNED BY:				
DRAWN BY:				
SHEET CHK'D BY:				
CROSS CHK'D BY:				
APPROVED BY:				
DATE:	MARCH 2017			

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AUSTIN WATER UTILITY
POTABLE WATER PRESSURE POINT STATION IMPROVEMENTS

STRUCTURAL GENERAL NOTE / DETAILS

PROJECT NO.	GLEN_8_SC-2
FILE NAME:	GLEN_8_SC-2
SHEET NO.	46 OF 55
SG-2	

SUBMITTAL

N:\TEAM\WU_GLEN\AKEDWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLEN_8_SC-2 By: cao, thu Saved: 2/11/2020 6:22:09 PM Plotted: 2/11/2020 6:25:26 PM

Plotted: 2/11/2020 6:25:26 PM

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ELECTRICAL ABBREVIATIONS

AMPERE _____ A(AMP)
 ABOVE FINISHED GRADE _____ AFG

CIRCUIT BREAKER _____ CB
 CONCRETE _____ CONC.
 CONDUIT _____ C.
 COPPER _____ CU
 CURRENT TRANSFORMER _____ CT

DISCONNECT _____ DISC.

EACH _____ EA.

EXISTING _____ EXIST.
 ELECTRICAL DUCT BANK _____ EDB.

GROUND _____ G
 GROUND FAULT CIRCUIT _____ GFCI
 INTERRUPT

HAND-OFF-AUTO _____ HOA
 HEATER _____ HTR
 HORSEPOWER _____ HP
 HEATING, VENTILATION & AIR _____ HVAC
 CONDITIONING

HYDROTANK _____ HYD
 HYPOCHLORITE _____ HYP
 HERTZ _____ HZ

INSTRUMENTATION AND _____ I&C
 CONTROLS

KILO-AMPERES INTERRUPTION _____ KAIC
 CURRENT

KELVIN _____ K

MAIN CIRCUIT BREAKER _____ MCB
 MAIN LUG ONLY _____ MLO

NEUTRAL _____ N

PHASE _____ PH/Ø
 POLE _____ P
 POLYVINYL CHLORIDE _____ PVC
 POUNDS PER SQUARE INCH _____ PSI

STAINLESS STEEL _____ SS

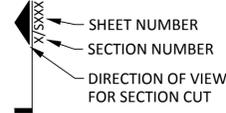
TYPICAL _____ TYP

VOLTAGE _____ V.

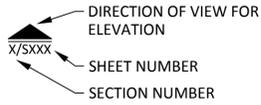
WATT _____ W
 WEATHER PROOF _____ WP

DRAFTING SYMBOLS

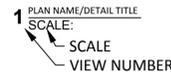
SECTION MARK



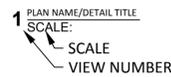
ELEVATION MARK



PLAN/DETAIL DESIGNATION



PLAN/DETAIL DESIGNATION



PLAN SYMBOL LEGEND

- • CONDUIT RUN UNDERGROUND IN DUCTBANK
- _____ • CONDUIT RUN EXPOSED
- • GROUND WIRE, BARE COPPER UNDERGROUND
- ~~~~~ • LIQUID TIGHT FLEXIBLE CONDUIT
- |— • CONDUIT CAPPED FOR FUTURE
- |> • CONDUIT TURN UP/DOWN
- ⊙ • J-BOX
- ⊙ • MOTOR
- ⊞ • DISCONNECT
- ⊞ • FUSED DISCONNECT
- ⊞ • MOLDED CASE SWITCH

ONE-LINE DIAGRAM SYMBOL LEGEND

- ⊞ • TRANSFORMER
- ⊙ • UTILITY METER
- ⊞ • CIRCUIT BREAKER OR MOLDED CASE SWITCH WHERE NOTED
- ⊞ • GROUND ROD
- ⊞ • NEUTRAL BUS
- ⊞ • GROUND BUS

ELECTRICAL GENERAL NOTES

1. ELECTRICAL CONTRACTOR SHALL VISIT THE PREMISES AND BECOME THOROUGHLY FAMILIAR WITH ALL DETAILS OF THE WORK AND WORKING CONDITIONS, TO VERIFY ALL DIMENSIONS IN THE FIELD.
2. VERIFY LOCATION OF EQUIPMENT ON ELECTRICAL DRAWINGS WITH AUSTIN WATER UTILITY PERSONNEL PRIOR TO CONSTRUCTION.
3. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, LOCAL CODE AND ORDINANCES AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION.
4. ALL MATERIAL SHALL BE NEW AND BEAR A U.L. LABEL.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND WITH UTILITY COMPANY FOR TIMELY INSTALLATION OF WORK WHILE SPACE IS ACCESSIBLE. CUTTING AND PATCHING CAUSED BY FAILURE TO COORDINATE WITH OTHER TRADES WILL BE PERFORMED AT NO EXTRA COST TO THE OWNER AND COORDINATED WITH THE OWNER.
6. FURNISH ALL MATERIAL, LABOR, EQUIPMENT AND PERMITS TO PROVIDE A COMPLETE ELECTRICAL SYSTEM CONSISTENT WITH THE INTENT OF THE DRAWINGS.
7. SUBMIT COMPLETE DESCRIPTIVE DATA OF EQUIPMENT AND DEVICES TO ENGINEER FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. OBTAIN OWNERS' APPROVAL ON ALL EQUIPMENT, DEVICE, ETC. INDICATED OR NOT ON DRAWINGS. COORDINATE LOCATION AND INSTALLATION OF OWNER-FURNISHED ITEMS AFFECTING THIS TRADE.
8. NOTIFY ENGINEER OF ANY DISCOVERED OR DISCLOSED CONDITIONS THAT DIFFER FROM THE CONTRACT DOCUMENTS.
9. INSTALLATIONS FOUND NOT COMPLYING WITH SPECIFIED WORKMANSHIP PRACTICES SHALL BE REVISED TO COMPLY AT NO ADDITIONAL COST TO THE OWNER.
10. ELECTRICAL CONTRACTOR SHALL PERFORM WORK IN A SAFE MANNER AND MAINTAIN ADEQUATE PROTECTION OF WORK, THE OWNER'S PROPERTY AND ALL PERSONS ON SITE FROM INJURY, DAMAGE OR LOSS.
11. ENTIRE ELECTRICAL SYSTEM SHALL BE GROUNDED ACCORDING TO NATIONAL ELECTRICAL CODE REQUIREMENTS AND AUSTIN WATER UTILITY IDIQ GROUNDING SPECIFICATION.
12. MINIMUM WIRE SIZE FOR LIGHTING AND BRANCH CIRCUITS SHALL BE #12 XHHW-2 COPPER.
13. FEEDER CONDUCTORS, BRANCH WIRING AND PANEL BUSS AND GROUND BUSS SHALL BE COPPER.
14. PROVIDE COMPLETE AND TYPE-WRITTEN PANEL DIRECTORIES FOR ALL ELECTRICAL PANELS. MOUNT DIRECTORIES ON INSIDE FACE OF PANEL DOOR.
15. ELECTRICAL CONTRACTOR SHALL ASSEMBLE AND PROVIDE TO THE OWNER AS PART OF CLOSE-OUT SUBMISSION REQUIREMENTS, ORGANIZED BINDER WITH TECHNICAL DATA, CUT SHEETS, MAINTENANCE REQUIREMENTS, ADJUSTMENT PROCEDURES, TEST REPORTS, APPROVALS, WARRANTIES, PHONE NUMBERS OF SERVICE PERSONNEL, SOURCES OF REPLACEMENT PARTS AND OTHER PERTINENT INFORMATION.
16. ALL WORK SHALL ADHERE TO THE REQUIREMENTS OUTLINED IN AUSTIN WATER UTILITY IDIQ SPECIFICATIONS.

ELECTRICAL SHEET INDEX:

- EG-1 ELECTRICAL GENERAL NOTES, ABBREVIATIONS & SYMBOLS
- EG-2 ELECTRICAL SERVICE DIAGRAMS AND DETAILS
- EG-3 ELECTRICAL DETAILS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: _____ MARCH 2017

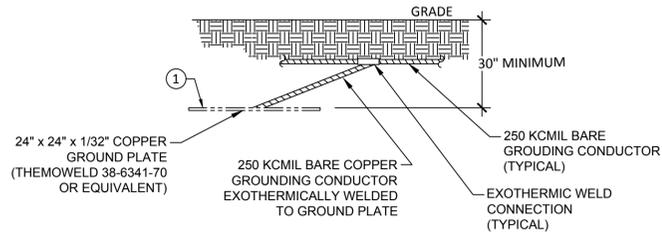


AUSTIN WATER UTILITY
POTABLE WATER PRESSURE POINT STATION IMPROVEMENTS

ELECTRICAL SYMBOLS LEGEND AND GENERAL NOTES

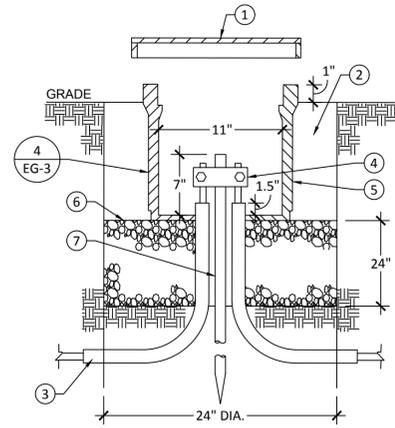
PROJECT NO. _____
 FILE NAME: GLEN_9_EG-1
 SHEET NO. 47 OF 55
EG-1

N:\TEAM3\AWU_GLENLAKE\DWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLEN_10_EG-2 By: singleton, michael Saved: 3/27/2018 11:59:58 AM Plotted: 3/28/2018 2:51:32 PM



DESCRIPTION
1 GROUNDING PLATE SHALL BE LOCATED ONLY IN AREAS OF NATURAL OR AREAS OF COMPACTED BASE MATERIAL. GROUNDING PLATE SHALL NOT BE LOCATED IN AREAS OF SAND OR LOOSE ROCK.

6 GROUNDING PLATE INSTALLATION
SCALE: NONE



DESCRIPTION
1 TRAFFIC RATED COVER (CAST IRON).
2 COMPACTED BACK FILL.
3 250 KCMIL BARE STRANDED COPPER GROUNDING CONDUCTOR IN 1.5\"/>
4 GROUND CONNECTOR BURNDY TYPE GAR OR APPROVED EQUAL.
5 CAST CONCRETE JUNCTION BOX. ACCEPTABLE MANUFACTURER IS BROOK PRODUCTS (OR APPROVED EQUAL). BROOK PRODUCTS PART NUMBERS ARE: A. TRAFFIC RATED NO. 36 CAST IRON COVER - #1701430. B. REINFORCED CONCRETE BODY - #9700086. C. PULL BOX SIZE: INSIDE DEMENSIONS: 10-1/2\"/>
6 3/8\"/>
7 3/4\"/>

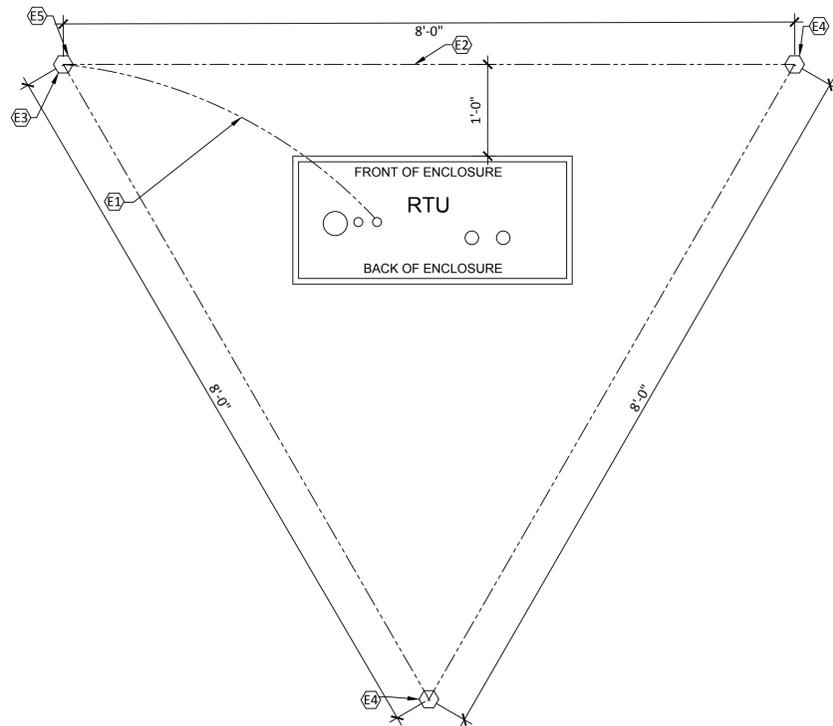
5 GROUNDING TEST WELL & ROD INSTALLATION (ALTERNATE)
SCALE: NONE

**NOTE TO DESIGNER:
COORDINATE SERVICE TYPE
WITH AUSTIN ENERGY AND
PROVIDE APPLICABLE SERVICE
DETAIL**

4 36\"/>

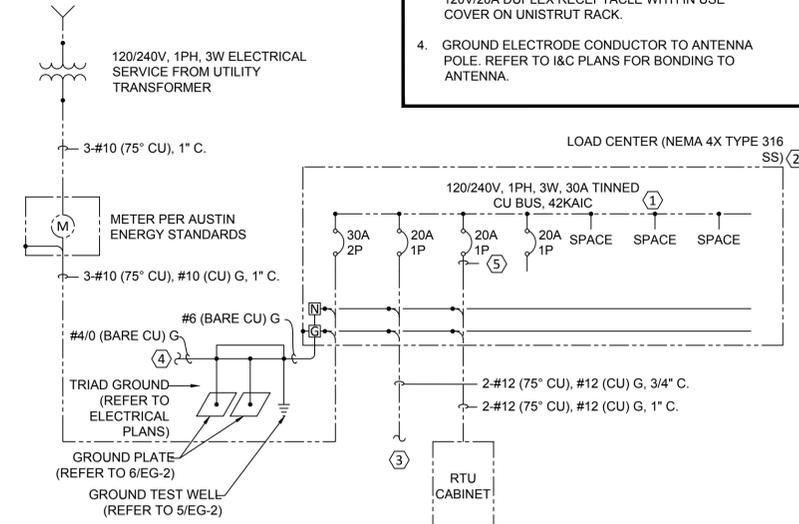
**NOTE TO DESIGNER:
COORDINATE SERVICE TYPE
WITH AUSTIN ENERGY AND
PROVIDE APPLICABLE SERVICE
DETAIL**

3 SECONDARY RISER OR TRANSFORMER PAD DETAIL
SCALE: NONE



2 GROUNDING PLAN - TRIAD LAYOUT
SCALE: NONE

KEYED NOTES
E1 #1/0 AWG STRANDED COPPER WIRE WITH GREEN XHHW-2 INSULATION IN 1\"/>
E2 250 KCMIL BARE STRANDED COPPER GROUND WIRE. MINIMUM BURIAL DEPTH SHALL BE 24\"/>
E3 CADWELD ALL WIRE CONNECTION TP GROUND PLATES REFER TO 6/ EG- 2
E4 24\"/>
E5 PROVIDE TEST WELL REFER TO 5/ EG-2



1 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

ONE LINE KEYED NOTES	
1. CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH AUSTIN ENERGY AND PROVIDE EQUIPMENT RATED ACCORDINGLY.	5. ALL CIRCUIT BREAKERS SHALL BE BOLT ON TYPE (SQ.D.Q08 TYPE OR EQUAL) TYPICAL.
2. PROVIDE AND INSTALL NEMA 1 LOAD CENTER INSIDE OF NEMA 4X TYPE 316 SS ENCLOSURE: HOFFMAN #A24H2006SSLP3PT OR APPROVED EQUAL ON UNISTRUT RACK.	
3. PROVIDE AND INSTALL WEATHERPROOF GFCI 120V/20A DUPLEX RECEPTACLE WITH IN USE COVER ON UNISTRUT RACK.	
4. GROUND ELECTRODE CONDUCTOR TO ANTENNA POLE. REFER TO I&C PLANS FOR BONDING TO ANTENNA.	

REV. NO.	DATE	DRWN	CHKD	REMARKS

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CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: MARCH 2017

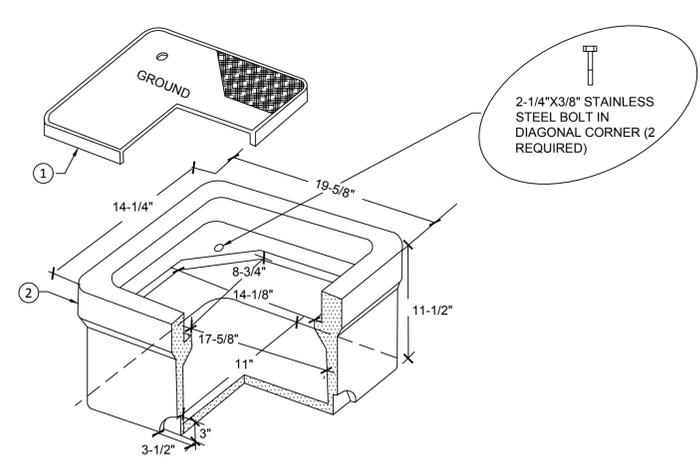


AUSTIN WATER UTILITY
POTABLE WATER PRESSURE POINT STATION
IMPROVEMENTS

ELECTRICAL
SERVICE DIAGRAMS AND DETAILS

PROJECT NO. FILE NAME: GLEN_10_EG-2
SHEET NO. 48 OF 55 EG-2

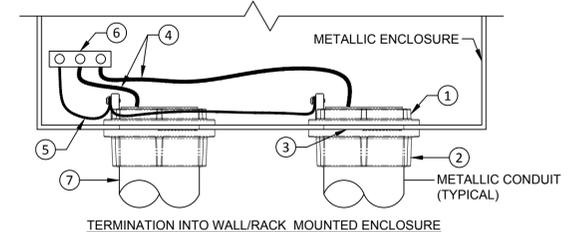
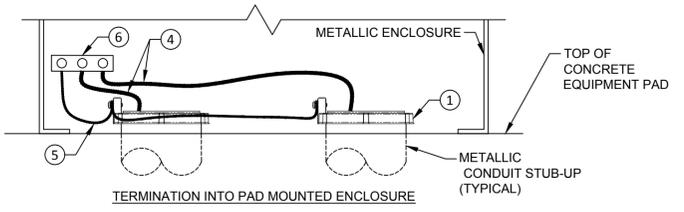
SUBMITTAL



- NOTES:**
- A. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE MINIMUM DIMENSIONS.
 - B. FURNISH AND INSTALL PRECAST CONCRETE PULLBOX WITH MINIMUM INTERIOR DIMENSIONS OF 11"X 17-5/8"X9-3/4". PULL BOX COVER SHALL BE TRAFFIC RATED CAST IRON WITH STAINLESS STEEL HARDWARE. PULLBOX ASSEMBLY SHALL BE MODEL NO.36-T AS MANUFACTURED BY OLDCASTLE PRECAST INC. OR APPROVED EQUAL.

DESCRIPTION	NO.
TRAFFIC RATED CAST IRON COVER.	1
NO. 36 BODY.	2

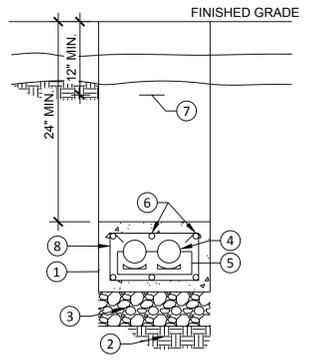
4 GROUND TEST WELL JUNCTION BOX
N.T.S.



- NOTES:**
- A. ONLY (1) GROUNDING CONDUCTOR SHALL BE TERMINATED IN EACH TERMINATION POINT ON THE EQUIPMENT GROUND BUS BAR. COORDINATE QUANTITY OF GROUNDING CONDUCTORS AND PROVIDE BUS BAR SIZED ACCORDINGLY.

DESCRIPTION	NO.
INSULATED GROUNDING BUSHING.	1
CONDUIT HUB FITTING.	2
RUBBER GASKET.	3
INSULATED EQUIPMENT GROUNDING CONDUCTOR. SEE CONDUIT AND CONDUCTOR SCHEDULE FOR SIZE.	4
#10 AWG BARE STRANDED COPPER GROUNDING CONDUCTOR.	5
EQUIPMENT GROUND BUS BAR.	6
SECOND CONDUIT OCCURS IF SUMP PUMP IS REQUIRED.	7

3 CONDUIT TERMINATION INTO ENCLOSURE GROUNDING DETAIL
N.T.S.



- NOTES:**
- A. PROVIDE MIN. 2 INCHES BETWEEN CONDUITS.
 - B. SELECT FILL TO A MINIMUM OF 2 FT. ABOVE DUCTBANK. COMPACT ALL BACKFILL IN 8 IN. LIFTS TO 90 PERCENT OF STANDARD PROCTOR (ASTM D 698) DENSITY, UNLESS UNDER EXISTING OR PROPOSED PAVEMENT, OTHER UNDERGROUND UTILITIES, OR STRUCTURES. IF DUCTBANK IS UNDER EXISTING OR PROPOSED PAVEMENT, OTHER UNDERGROUND UTILITIES, OR STRUCTURES, COMPACT ALL BACKFILL IN 8 IN. LIFTS TO 95 PERCENT OF STANDARD PROCTOR DENSITY.
 - C. REFER TO STRUCTURAL SPECIFICATIONS FOR CONCRETE.

DESCRIPTION	NO.
CONCRETE ENCASEMENT MAINTAIN 3" MIN. COVER. MIX IN RED DYE FOR ALL DUCTS.	1
UNDISTURBED EARTH. PROVIDE WELL COMPACTED FILL IN AREAS WHICH HAVE BEEN UNDERCUT.	2
MINIMUM 6" OF WELL-GRADED GRAVEL.	3
SCH. 40 PVC CONDUIT AS INDICATED ON PLANS AND IN SPECIFICATIONS. QUANTITY VARIES.	4
PLASTIC DUCT SPACERS AT 6 FT. INTERVALS.	5
#4 @ 12" O.C. TRANSVERSE REINFORCEMENT (LAP SPLICES 12" MIN.).	6
WARNING TAPE.	7
#3 STIRRUPS AT 24" O.C.	8

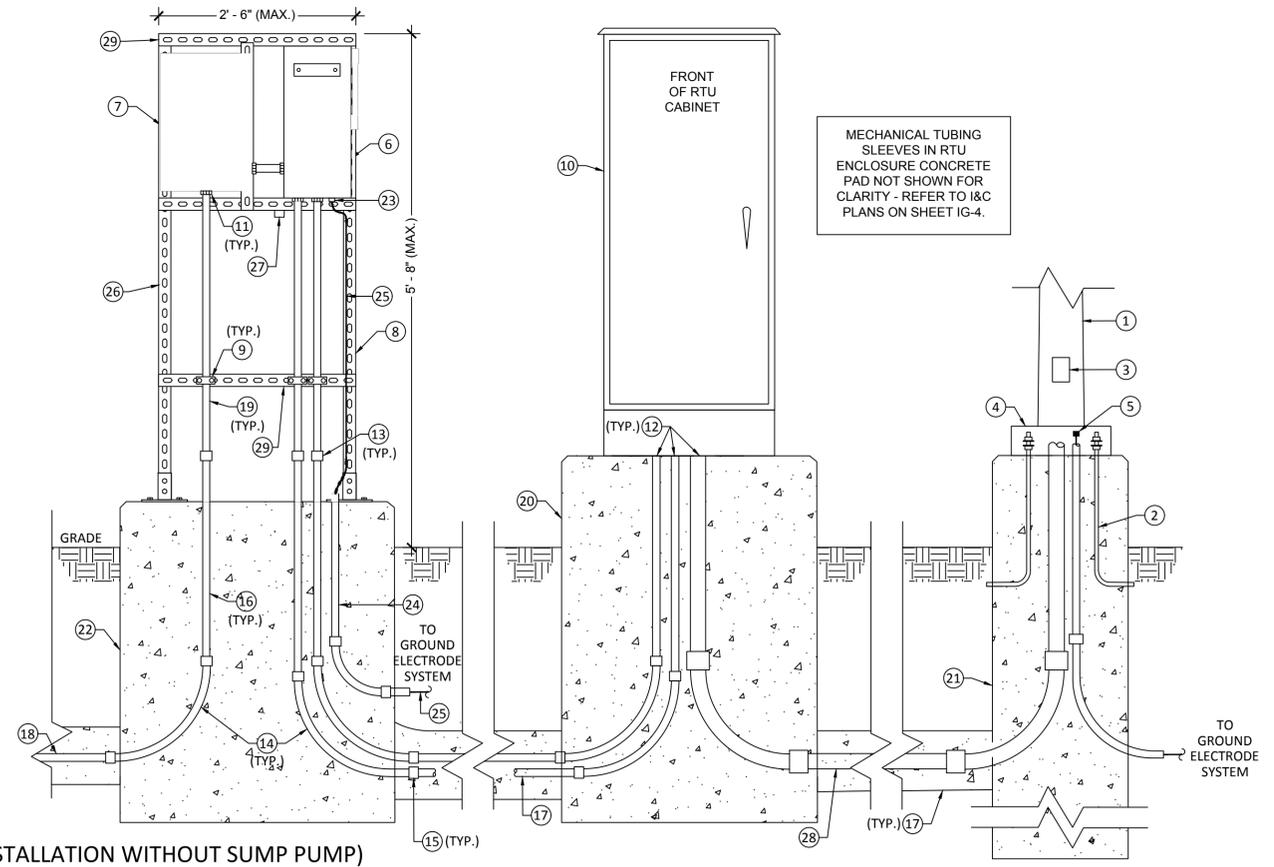
2 DUCTBANK DETAIL/SECTION
N.T.S.

DESCRIPTION	NO.
TAPERED ROUND ANTENNA POLE. REFER TO DETAIL 1, SHEET IG-4.	1
SECURE POLE TO BASE WITH TYPE 316 STAINLESS STEEL ANCHOR BOLTS AND HARDWARE.	2
ANTENNA POLE HANDHOLE. REFER TO DETAIL 1, SHEET IG-4.	3
ANCHOR BASE COVER.	4
PVC CONDUIT SLEEVE FOR GROUND ELECTRODE CONDUCTOR. BOND GROUND ELECTRODE TO BASE OF POLE UNDER BASE COVER. EXOTHERMICALLY WELD GROUND ELECTRODE CONDUCTOR TO GROUND ELECTRODE SYSTEM. REFER TO ELECTRICAL PLANS AND ONE-LINE FOR GROUND ELECTRODE SIZE.	5
NEMA 4X TYPE 316 STAINLESS STEEL ENCLOSURE WITH LOAD CENTER. REFER TO 1/EG-2 & 2/EG-2. PROVIDE PADLOCKING PROVISIONS FOR ENCLOSURES. REFER TO ONE-LINE DIAGRAMS ON SHEET EG-2 FOR SIZES.	6
UTILITY POWER METER. COORDINATE WITH LOCAL UTILITY ON GOVERNING CODES AND INSTALLATION REQUIREMENTS.	7
1-5/8" X 1-5/8" TYPE 316 STAINLESS STEEL UNISTRUT CHANNEL FOR EQUIPMENT AND CONDUIT SUPPORT. SECURE RACK WITH TYPE 316 STAINLESS STEEL 3/8" EXPANSION ANCHOR BOLTS TO CONCRETE PAD.	8
TYPE 316 STAINLESS STEEL CONDUIT CLAMP. REFER TO SPECIFICATIONS.	9
PRESSURE POINT RTU CABINET. REFER TO I&C PLANS SHEET IG-4 FOR ADDITIONAL REQUIREMENTS.	10
PROVIDE AND INSTALL MYERS HUB OR EQUAL. REFER TO 3/EG-3.	11
PROVIDE AND INSTALL INSULATED GROUND BUSHING. REFER TO 3/EG-3.	12
PVC TO RIGID ALUMINUM COUPLING 6" AFG. REFER TO SPECIFICATIONS.	13
PVC COATED GRS LONG RADIUS ELBOW TO BE ENCASED IN RED CONCRETE. REFER TO SPECIFICATIONS.	14
PVC TO PVC COATED RIGID GALVANIZED PVC FEMALE ADAPTOR AT 90° ELBOWS. REFER TO SPECIFICATIONS.	15
PVC CONDUIT. REFER TO SPECIFICATIONS.	16
CONDUIT TO BE ENCASED IN RED CONCRETE. REFER TO 2/EG-3.	17
UNDERGROUND UTILITY SERVICE. COORDINATE WITH LOCAL UTILITY ON ESTABLISHING SERVICE.	18
RIGID ALUMINUM CONDUIT. REFER TO SPECIFICATIONS.	19
RTU ENCLOSURE FOUNDATION. REFER TO STRUCTURAL SHEET SG-2.	20
ANTENNA POLE FOUNDATION. REFER TO STRUCTURAL SHEET SG-2.	21
METER/MCB RACK CONCRETE FOUNDATION. REFER TO STRUCTURAL SHEET 4/SG-2.	22
CGB FITTING FOR GROUND ELECTRODE CONDUCTOR.	23
1" PVC SLEEVE THROUGH CONCRETE PAD FOR GROUND ELECTRODE CONDUCTOR.	24
GROUND ELECTRODE CONDUCTOR. REFER TO ONE-LINE DIAGRAM ON SHEET EG-2 FOR SIZE. SECURE TO RACK WITH TYPE 316 STAINLESS STEEL TIES.	25
DOUBLE CONDUIT SUPPORT CHANNEL (TYPICAL)	26
120V/20A DUPLEX RECEPTACLE. WP/GFCI. WHILE IN USE COVER (DIE CAST A360 ALUMINUM ALLOY)	27

28	2" PVC CONDUIT
29	SINGLE CONDUIT SUPPORT CHANNEL (TYP.)

- NOTES:**
- A. REFER TO I&C PLANS SHEET IG-4 FOR INSTALLATION OF ANTENNA, ANTENNA POLE AND RTU ENCLOSURE.
 - B. FIELD VERIFY EQUIPMENT LOCATIONS WITH OWNER PRIOR TO LAYOUT AND INSTALLATION.
 - C. ALL CONDUIT INSTALLED ABOVE GROUND TO BE RIGID ALUMINUM UNLESS OTHERWISE NOTED.
 - D. ALL CONDUIT INSTALLED IN CONCRETE TO BE SCH 40 PVC OR PVC COATED GRS.
 - E. REFER TO IDIQ SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

1 TYPICAL UNDERGROUND UTILITY ARRANGEMENT AND RACK (INSTALLATION WITHOUT SUMP PUMP)
N.T.S.



REV. NO.	DATE	DRWN	CHKD	REMARKS

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 APPROVED BY: _____
 DATE: MARCH 2017



AUSTIN WATER UTILITY
POTABLE WATER PRESSURE POINT STATION IMPROVEMENTS

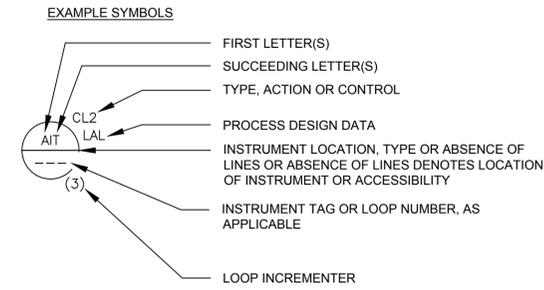
ELECTRICAL DETAILS

PROJECT NO. GLEN_11_EG-3
 FILE NAME: GLEN_11_EG-3
 SHEET NO. 49 OF 55
EG-3

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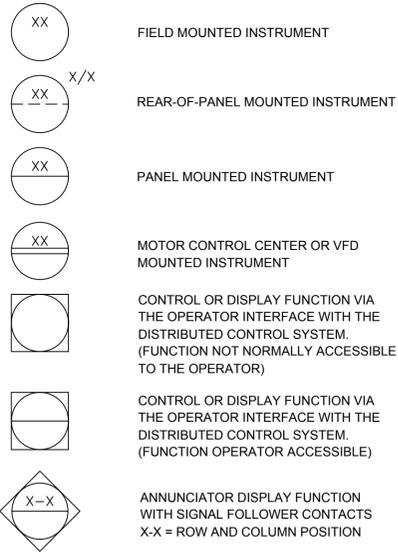
INSTRUMENT IDENTIFICATION



DIGITAL SYSTEM INTERFACES

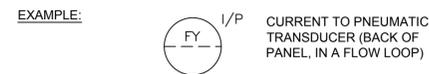
- ▲ ANALOG INPUT
- ▼ ANALOG OUTPUT
- △ DISCRETE INPUT
- ▽ DISCRETE OUTPUT

GENERAL INSTRUMENTS OR FUNCTIONAL SYMBOLS



TRANSDUCERS

- A ANALOG
- D DIGITAL
- E VOLTAGE
- F FREQUENCY
- H HYDRAULIC
- I CURRENT
- P PNEUMATIC
- PF PULSE FREQUENCY
- PD PULSE DURATION
- R RESISTANCE

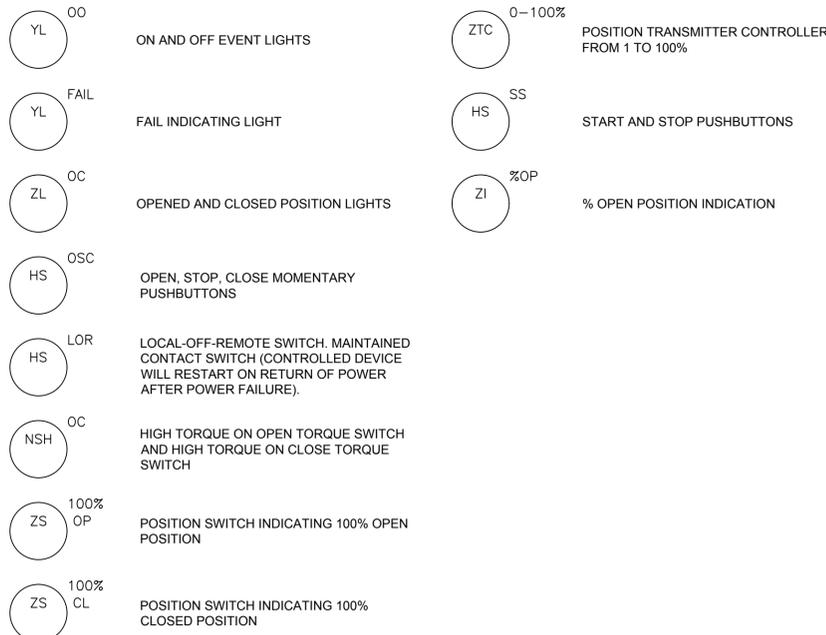


INSTRUMENT SOCIETY OF AMERICA TABLE

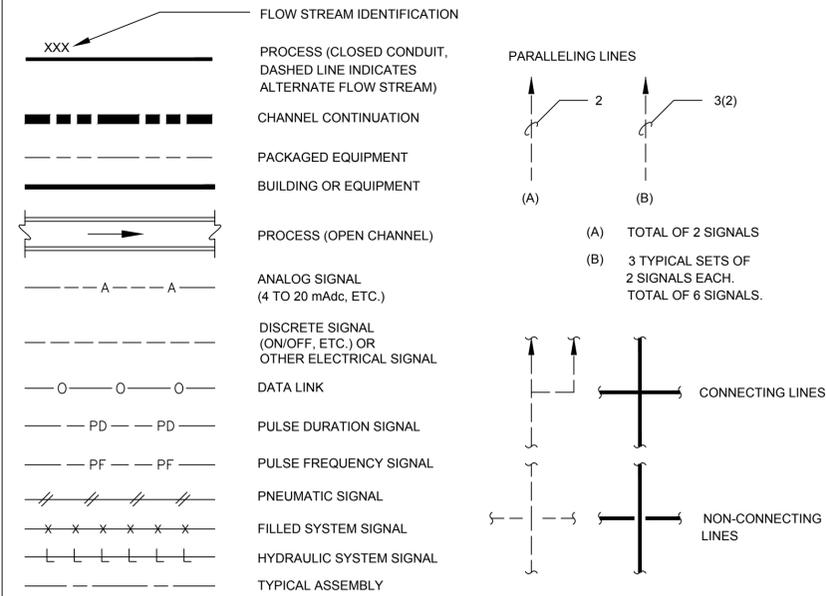
LETTER	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (+)	USER'S CHOICE (+)	USER'S CHOICE (+)
C	USER'S CHOICE (+)			CONTROL	
D	DENSITY (S.G)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	DATA		GLASS, GAUGE VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE
N	TORQUE		USER'S CHOICE (+)	USER'S CHOICE (+)	USER'S CHOICE (+)
O	USER'S CHOICE (+)		ORIFICE RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION (+)	MULTIFUNCTION (+)	MULTIFUNCTION (+)
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED (+)	X AXIS	UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

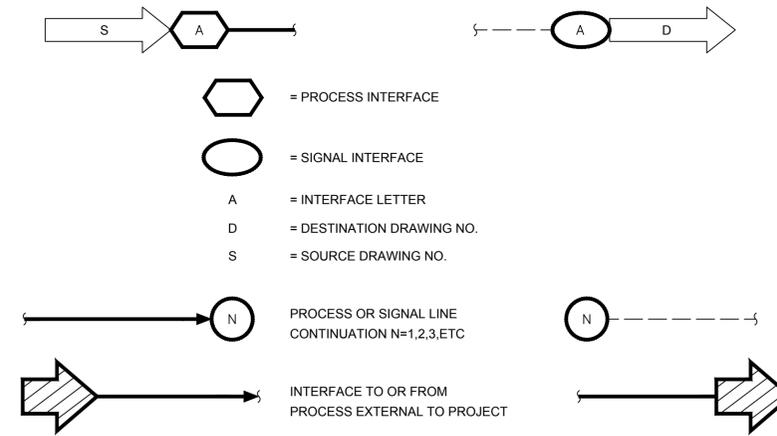
SPECIAL CASES



LINES LEGEND



INTERFACE SYMBOLS



SYMBOLS

- Δ DIFFERENCE
- Σ SUM
- x MULTIPLY
- ÷ DIVIDE
- f(x) CHARACTERIZED
- Xn RAISE TO THE Nth POWER
- √ SQUARE ROOT
- AVG AVERAGE
- 1:1 REPEAT OR BOOST
- > SELECT HIGHEST SIGNAL
- < SELECT LOWEST SIGNAL
- +/- BIAS
- % GAIN OR ATTENUATE

GENERAL NOTES

- COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) SHALL BE PROVIDED AS PART OF MECHANICAL, DIVISION 11, 13 OR 15.
- THIS IS A STANDARD LEGEND, THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.
- EQUIPMENT AND STRUCTURES SHOWN SCREENED ARE EXISTING AND THEREFORE SHOWN FOR REFERENCE ONLY.



ABBREVIATIONS & LETTER SYMBOLS

- AC ALTERNATING CURRENT
- ACK ACKNOWLEDGE
- ALKY ALKALINITY
- AM AUTO-MANUAL
- AOM AUTO-OFF-MANUAL
- CAM COMPUTER-AUTO-MANUAL
- CCS CENTRAL CONTROL SYSTEM
- CF CUBIC FEET
- CL2 etc. CHLORINE (TYPICAL USE STANDARD CHEMICAL ELEMENT ABBREVIATION)
- CM COMPUTER-MANUAL
- COMB COMBUSTIBLE
- DC DIRECT CURRENT
- DCP DISTRIBUTED CONTROL PANEL
- DCS PLANT DISTRIBUTION CONTROL SYSTEM
- DO DISSOLVED OXYGEN
- E-STOP EMERGENCY STOP
- FCL FREE CHLORINE RESIDUAL
- FOR FORWARD-OFF-REVERSE
- FOS FAST-OFF-SLOW
- FOSA FAST-OFF-SLOW-AUTO
- FOSR FAST-OFF-SLOW-REMOTE
- FP-W-X FIELD PANEL NO. WX (W = UNIT PROCESS NUMBER, X = PANEL NUMBER)
- FR FORWARD-REVERSE
- H2S HYDROGEN SULFIDE
- HOA HAND-OFF-AUTO
- HOD HAND-OFF-DCS
- HOR HAND-OFF-REMOTE
- LCP-X LOCAL CONTROL PANEL NO.X
- LEL LOWER EXPLOSIVE LIMIT
- LOD LOCAL-OFF-DCS
- LOR LOCAL-OFF-REMOTE
- LOS LOCKOUT STOP
- LR LOCAL-REMOTE
- LRM LOCAL-REMOTE-MAINTENANCE
- LWMR LOCKOUT RELAY WITH MANUAL RESET
- MA MANUAL-AUTO
- MCC-X MOTOR CONTROL CENTER NO.X
- MMR MOTOR MANAGEMENT PROTECTIVE RELAY
- MR MANUAL REMOTE
- MSC MANUFACTURER SUPPLIED CABLE
- NH-CL CHLORAMINE
- NH AMMONIA
- OC OPEN-CLOSE (D)
- OCA OPEN-CLOSE-AUTO
- OCB OPEN-CLOSE-DCS
- OCR OPEN-CLOSE-REMOTE
- OLR OFF-LOCAL-REMOTE
- OO ON-OFF
- OOA ON-OFF-AUTO
- OoAM ON-OFF-AUTO-MAINTENANCE
- Oom ON-OFF-MAINTENANCE
- OOR ON-OFF-REMOTE
- OOT ON-OFF-TEST
- OR OPEN-REMOTE
- ORP OXIDATION REDUCTION POTENTIAL
- OSC OPEN-STOP-CLOSE
- P/B PUSHBUTTON
- PFCC POWER FACTOR CORRECTION CAPACITOR
- pH HYDROGEN ION CONCENTRATION
- PMU POWER MONITORING UNIT
- RM-X REMOTE MULTIPLEXING MODULE NO.X
- ROJ RUN-OFF-JOG
- RTU-X REMOTE TELEMETRY UNIT NO.X
- S/D SHUTDOWN
- SF SLOWER-FASTER
- SPD SURGE PROTECTIVE DEVICE
- SS START-STOP
- SSA START-STOP-AUTO
- SSC SUPERVISORY SET POINT CONTROL
- TCL TOTAL CHLORINE RESIDUAL
- TOC TOTAL ORGANIC CARBON
- TOD TOTAL OXYGEN DEMAND
- TURB TURBIDITY
- VFD VARIABLE FREQUENCY DRIVE
- VHC VOLATILE HYDROCARBONS
- VIB VIBRATION

VALVE SYMBOLS

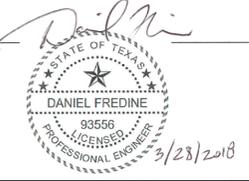


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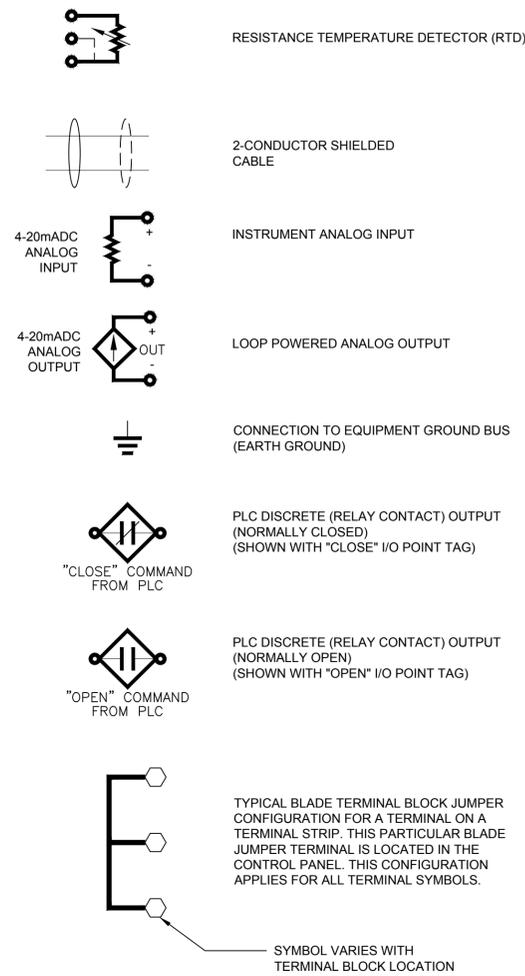
AUSTIN WATER UTILITY
 POTABLE WATER PRESSURE POINT STATION
 IMPROVEMENTS

INSTRUMENTATION & SCADA
 PROCESS & INSTRUMENTATION DIAGRAM
 SYMBOLS & LEGEND

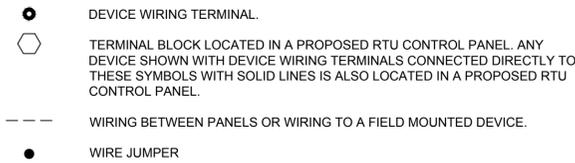
PROJECT NO. GLEN_12_IG-1
 SHEET NO. 50 OF 55
 IG-1

SUBMITTAL

INSTRUMENTATION LOOP WIRING SCHEMATIC SYMBOLS



WIRING AND TERMINAL DEVICE LEGEND:



ADDITIONAL REQUIREMENTS NOTES

- THE RTUS "PN-PP72-SC.RTU-001.SC". SHALL BE PER SPECIFICATION 17000, 17100, 17410, AND SECTION 17420 WITH THE FOLLOWING EXCEPTIONS:
 - ALL RTUS SHALL BE AS FOLLOWS:
 - PART NUMBER PPRTU-1000-0-0 AS MANUFACTURED BY CONTROL PANEL USA, 16310 BRATTON LANE, BUILDING 1, SUITE 100, AUSTIN, TEXAS 78728 WWW.CONTROLPANELSUSA.NET PHONE 512-863-3224 CONTACT PERSON: JOHN McCLANAHAN
 - PART NUMBER 17600-PP-RTU AS MANUFACTURED BY PRIME CONTROLS, LP 1725 LAKEPOINTE DR. LEWISVILLE, TX 75057. WWW.PRIME-CONTROLS.COM PHONE: 512-550-5892 CONTACT PERSON: ALFONSO GARZA
 - NO EQUAL
 - ALL RTUS SHALL BE OUTDOOR LOCATED, FREE STANDING AND FLOOR MOUNTED. REFER TO THE DRAWINGS FOR ADDITIONAL REQUIREMENTS.
 - RTU ENCLOSURE SHALL BE NEMA-3R ALUMINUM.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL EQUIPMENT INSIDE OF/ON THE RTU AND MAKE ALL FINAL CONNECTIONS. REFER TO THE DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- SPARE PARTS: FURNISH THE FOLLOWING SPARE PARTS IN ADDITION TO THE SPARE PARTS REQUIRED ELSEWHERE BY THE SPECIFICATIONS:
 - FURNISH 1 SPARE PRESSURE TRANSMITTER COMPLETE WITH VALVE MANIFOLD PER IDIQ SPECIFICATION SECTION 17500.

GENERAL NOTES:

- ALL EQUIPMENT SHOWN ON THE EXISTING/DEMOLITION DRAWINGS ARE EXISTING.
- CROSS-HATCHED LINEWORK SHOWN ON THE DEMOLITION DRAWINGS DENOTES EQUIPMENT TO BE DEMOLISHED UNLESS OTHERWISE NOTED. ALL DEMOLITION ACTIVITIES SHALL ALSO BE FULLY COORDINATED WITH MECHANICAL/STRUCTURAL/CIVIL/ETC. DEMOLITION ACTIVITIES AND SHALL SUPPORT THE OPERATIONAL REQUIREMENTS OF THE PRESSURE POINT STATIONS DURING ALL PHASES OF CONSTRUCTION. ALL DEMOLISHED ITEMS SHALL REMAIN THE PROPERTY OF THE OWNER. RELOCATE ALL DEMOLISHED ITEMS TO LOCATION(S) SPECIFIED BY OWNER AT NO ADDITIONAL COST TO THE OWNER.
- EQUIPMENT/CONDUIT TAGS/NAMES HAVE BEEN ARBITRARILY ASSIGNED TO AID IN THE DRAWINGS. SOME EXISTING TAGS/NAMES HAVE BEEN USED WHERE POSSIBLE. CONTRACTOR SHALL MAKE EXTENSIVE VERIFICATION OF EXISTING EQUIPMENT PRIOR TO COMMENCING FULL SCALE DEMOLITION/RENOVATION ACTIVITIES.
- VERIFY LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION OF FACILITIES PROPOSED IN THIS CONTRACT. TAKE CARE TO AVOID DAMAGE TO EXISTING FACILITIES. REPAIR ANY FACILITY DAMAGED IN THE COURSE OF CONSTRUCTION OF ANY PART OF THIS CONTRACT TO ITS ORIGINAL OPERATING CONDITION IMMEDIATELY, WITH REPAIR CREWS WORKING 24 HOURS PER DAY UNTIL THE DAMAGE IS REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE AWARE THAT WHEN ANY EXISTING EQUIPMENT IS DISCONNECTED, REMOVED, RELOCATED OR OTHERWISE MODIFIED, THE POSSIBILITY MAY EXIST FOR SUCH ACTION TO LEAD TO INTERRUPTION OF OPERATION OF THE PRESSURE POINT IF EXTREME CARE, VERIFICATION, AND VALIDATION IS NOT CAREFULLY EXERCISED PRIOR TO COMMENCEMENT OF SUCH ACTIVITY. THE CONTRACTOR SHALL KNOW THAT ANY INTERRUPTION TO THE CONTINUITY OF PRESSURE POINT OPERATION IS UNACCEPTABLE DURING THE CONSTRUCTION COURSE OF THIS PROJECT. HOWEVER, SHOULD ANY INTERRUPTION TO THE PRESSURE POINT OPERATION OCCUR FOR ANY UNFORESEEN REASON, WHETHER TOTALLY ACCIDENTAL OR DUE TO IMPROPER FIELD INVESTIGATION AND IMPROPER PLANNING PRIOR TO COMMENCEMENT OF THE ELECTRICAL/INSTRUMENTATION DEMOLITION EFFORT, THE RESPONSIBLE CONTRACTOR SHALL DETERMINE THE PROBLEM, CORRECT IT, AND START UP THE INTERRUPTED EQUIPMENT WITHIN A CERTAIN TIME PERIOD AS DETERMINED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL PROVIDE CONTINUOUS, 24-HOUR, LABOR, EQUIPMENT, MATERIAL, AND ACCESSORIES UNTIL SUCH TIME THAT ANY AFFECTED EQUIPMENT OPERATES AS PREVIOUSLY OPERATED, AT NO ADDITIONAL COST TO THE OWNER AND TO THE OWNER'S SATISFACTION.
- NOT ALL REQUIREMENTS ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED INSTRUMENTATION SYSTEM ARE SHOWN ON THE RENOVATION DRAWINGS. REFER TO OTHER CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
- THE OWNER'S EXISTING EQUIPMENT IS IN WORKING CONDITION. SHOULD THE EXISTING EQUIPMENT, ITS ASSOCIATED INTERCONNECT CONDUIT/WIRE, ETC., AS APPLICABLE, BE DAMAGED OR BECOME OTHERWISE UNUSABLE DURING THE CONSTRUCTION COURSE OF THIS PROJECT, THE RESPONSIBLE CONTRACTOR SHALL DETERMINE THE PROBLEM, CORRECT IT, AND FURNISH AND INSTALL ALL NECESSARY WIRING/HARDWARE/ETC. TO MATCH EXISTING AND MAKE ALL FINAL CONNECTIONS SUCH THAT ALL AFFECTED EQUIPMENT OPERATES AS PREVIOUSLY OPERATED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.
- NOT ALL ELECTRICAL/MECHANICAL/STRUCTURAL/CIVIL/ETC. ITEMS ARE SHOWN ON EACH DRAWING. REFER TO THE APPLICABLE ELECTRICAL/MECHANICAL/STRUCTURAL/CIVIL/ETC. DRAWINGS AND MAKE ALL FINAL CONNECTIONS. FIELD VERIFICATION OF EXISTING CONDITIONS IS REQUIRED.
- CONTRACTOR SHALL SIZE ALL PULL/JUNCTION BOXES PER, AND IN ACCORDANCE WITH, THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (N.E.C.).
- EXACT LOCATIONS OF ELECTRICAL/MECHANICAL/STRUCTURAL/CIVIL COMPONENTS ARE NOT SHOWN ON THE INSTRUMENTATION, OR SCADA SYSTEM DRAWINGS. REFER TO ELECTRICAL/MECHANICAL/STRUCTURAL/CIVIL DRAWINGS AND FIELD CONDITIONS FOR EXACT LOCATIONS OF ELECTRICAL/MECHANICAL/STRUCTURAL/CIVIL ITEMS.

GENERAL NOTES (CONTINUED):

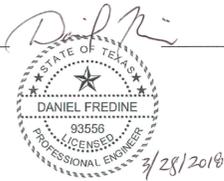
- ANY MODIFICATION TO THE ROADWAY/CURBING/SIDEWALK/FENCE/ LANDSCAPING/ GRASSES/ ETC., WHETHER SHOWN ON THE DRAWINGS OR NOT, SHALL BE REPAIRED TO MATCH EXISTING TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- TYPICAL WIRING SCHEMATIC DRAWINGS ARE PRESENTED FOR PROPOSED MODIFICATIONS TO THE PRESSURE POINT SITES. ALTHOUGH TYPICAL WIRING SCHEMATICS ARE PRESENTED FOR EQUIPMENT, THE CONTRACTOR SHALL GENERATE SPECIFIC EQUIPMENT WIRING SCHEMATICS (I.E., INDIVIDUAL WIRING SCHEMATICS DEDICATED FOR EACH SPECIFIC EQUIPMENT) BASED UPON THE TYPICAL WIRING SCHEMATICS AND THE EQUIPMENT TAGS APPLICABLE TO THE TYPICAL WIRING SCHEMATICS AS SHOWN ON THE TYPICAL WIRING SCHEMATICS. THE CONTRACTOR SHALL GENERATE SPECIFIC EQUIPMENT WIRING SCHEMATICS SHALL FOLLOW THE SAME OVERALL PRESENTATION FORMAT AS THE TYPICAL EQUIPMENT WIRING SCHEMATICS PRESENTED HEREIN. THE SPECIFIC EQUIPMENT WIRING SCHEMATICS, COMPLETE WITH ALL SPECIFIC EQUIPMENT/DEVICE TAGS (AS MINIMUM, ALSO REFER TO THE SPECIFICATIONS), SHALL BE GENERATED BY THE CONTRACTOR AND INCLUDED WITH THE PROJECT SUBMITTALS (I.E., PRIOR TO EQUIPMENT PURCHASE) AND THE PROJECT RECORD DRAWINGS. ANY CONTRACTOR GENERATED WIRING SCHEMATICS SHOWN AS APPLICABLE TO MULTIPLE EQUIPMENT SHALL NOT BE ACCEPTED. THIS APPLIES TO ALL OTHER TYPES DRAWINGS, I.E., SCHEMATICS, FRONT ELEVATIONS, DETAILS, ETC., AS PRESENTED IN THIS PROJECT.
- PROPOSED ITEMS SHOWN ON THE PROPOSED/RENOVATION/MODIFICATION DRAWINGS ARE SHOWN IN DARK LINEWORK. EXISTING AND FUTURE ITEMS ARE SHOWN IN LIGHT LINEWORK, UNLESS NOTED OTHERWISE.
- THE ACTUAL REQUIRED SIZE OF CONDUIT ENTRANCE AREAS TO BE DETERMINED BY THE MANUFACTURER. THE LOCATION AND SIZE OF THE CONDUIT ENTRANCE AREAS FOR THE CONTROL PANEL, MOTOR STARTER PANELS, ETC., AS APPLICABLE, SHALL BE COORDINATED WITH THE APPLICABLE STRUCTURE PLANS. REFER TO THE APPLICABLE CIVIL/STRUCTURAL/ MECHANICAL/ELECTRICAL, ETC. DRAWINGS.
- LOCATIONS AND SIZES OF INSTRUMENTATION EQUIPMENT ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND ALL POINTS OF CONNECTION PRIOR TO INSTALLATION OF PROPOSED COMPONENTS.
- THE PHOTOGRAPHS SHOWN ON THE DRAWINGS DEPICT EXISTING CONDITIONS AT THE TIME THE PHOTOGRAPHS WERE TAKEN AND ARE NOT TO SCALE. CROSS-HATCHED ITEMS IN PHOTOGRAPHS SHALL BE DISCONNECTED AND REMOVED.
- WHERE TYPICAL DRAWINGS ARE SHOWN, THE ACTUAL TAG FOR EACH EQUIPMENT WILL DIFFER FROM THAT SHOWN ON THE TYPICAL DRAWINGS. REFER TO THE APPLICABLE TAG REPLACEMENT SCHEDULES TO DERIVE THE CORRESPONDING TAGS FOR EACH EQUIPMENT. THE EQUIPMENT TAG REPLACEMENT SCHEDULE SHALL BE CROSS-REFERENCED WITH THE TYPICAL CONTROL SCHEMATIC/ INSTRUMENT LOOP/ETC. DRAWINGS IN ORDER TO ASSIGN THE PROPER REQUIRED TAGS TO ALL OF THE SPECIFIC DEVICES FOR EACH EQUIPMENT. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TAGS FOR EACH EQUIPMENT AS SHOWN. FOR EQUIPMENT TAGS THAT MAY BE SHOWN ON THE TYPICAL SCHEMATIC BUT NOT IDENTIFIED IN THE TAG REPLACEMENT SCHEDULE, REFER TO THE ASSOCIATED TYPICAL WIRING SCHEMATIC DETAILS, PLC I/O SCHEDULE, AND OTHER CONTRACT DOCUMENTS.
- FIELD VERIFY ALL POINTS OF CONNECTION PRIOR TO COMMENCING MODIFICATION ACTIVITIES. THE CONTRACTOR SHALL USE CAUTION DURING THE DEMOLITION ACTIVITIES AND CAREFULLY IDENTIFY AND RECORD ALL EXISTING WIRES, WIRE NUMBERS, TERMINAL BLOCKS, AND ASSOCIATED DEVICE TERMINAL CONNECTIONS PRIOR TO COMMENCING DEMOLITION ACTIVITIES. THE CONTRACTOR SHALL USE THIS INFORMATION DURING THE RENOVATION ACTIVITIES TO RECONNECT EXISTING EQUIPMENT THAT IS SCHEDULED FOR REUSE.
- FOR PURPOSES OF CLARITY ON THE INSTRUMENTATION AND SCADA DESIGN DRAWINGS, THE FACILITY CODE PORTION OF OWNER'S TAGGING SCHEME IS NOT SHOWN FOR ANY OF THE PROPOSED OR RETAGGED EQUIPMENT/COMPONENTS/DEVICES/ETC. REGARDLESS, THE EQUIPMENT/COMPONENTS/DEVICES/ETC. SHALL BE TAGGED INCLUSIVE OF THE FACILITY CODE WHICH IS "PP" FOR "PRESSURE POINT". CONTRACTOR SHALL TAG THE EQUIPMENT ACCORDINGLY. COORDINATE WITH OWNER, AS NECESSARY, TO OBTAIN ADDITIONAL OR MISSING TAGGING INFORMATION. FRONT ELEVATIONS, DETAILS, ETC., AS PRESENTED IN THIS PROJECT.
- CONTRACTOR SHALL ENSURE ALL PRODUCTS ADHERE TO THE STANDARD PRODUCTS LIST PUBLISHED BY THE OWNER.

ALL GENERAL NOTES LISTED HERE ARE APPLICABLE FOR ALL INSTRUMENTATION AND SCADA SYSTEM DRAWINGS IN ADDITION TO ANY GENERAL NOTES SHOWN ON EACH INDIVIDUAL DRAWING.

REPLACEMENT SHEET

N:\TEAM3\AWU_GLENLAKE\DWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLEN_13_IG-2 By: singleton, michael Saved: 3/28/2018 2:30:24 PM Plotted: 3/28/2018 2:51:52 PM

2C	2/10/2020	TC	DF	REPLACEMENT SHEET
DESIGNED BY:				
DRAWN BY:				
SHEET CHK'D BY:				
CROSS CHK'D BY:				
APPROVED BY:				
DATE:	MARCH 2017			
REV. NO.	DATE	DRWN	CHKD	REMARKS



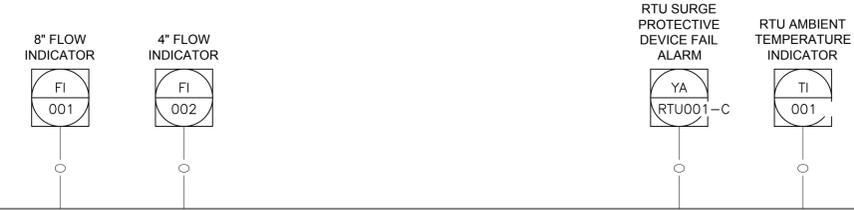
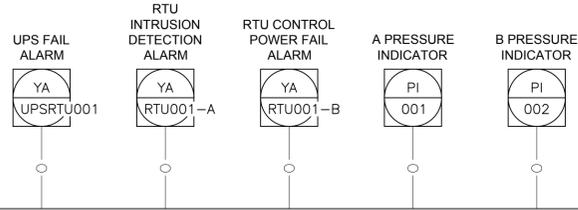
AUSTIN WATER UTILITY
POTABLE WATER PRESSURE POINT STATION
IMPROVEMENTS

INSTRUMENTATION AND SCADA
SYMBOLS LEGEND/NOTES

PROJECT NO.
FILE NAME: GLEN_13_IG-2
SHEET NO.
51 OF 55
IG-2

SUBMITTAL

DISTRIBUTED CONTROL SYSTEM

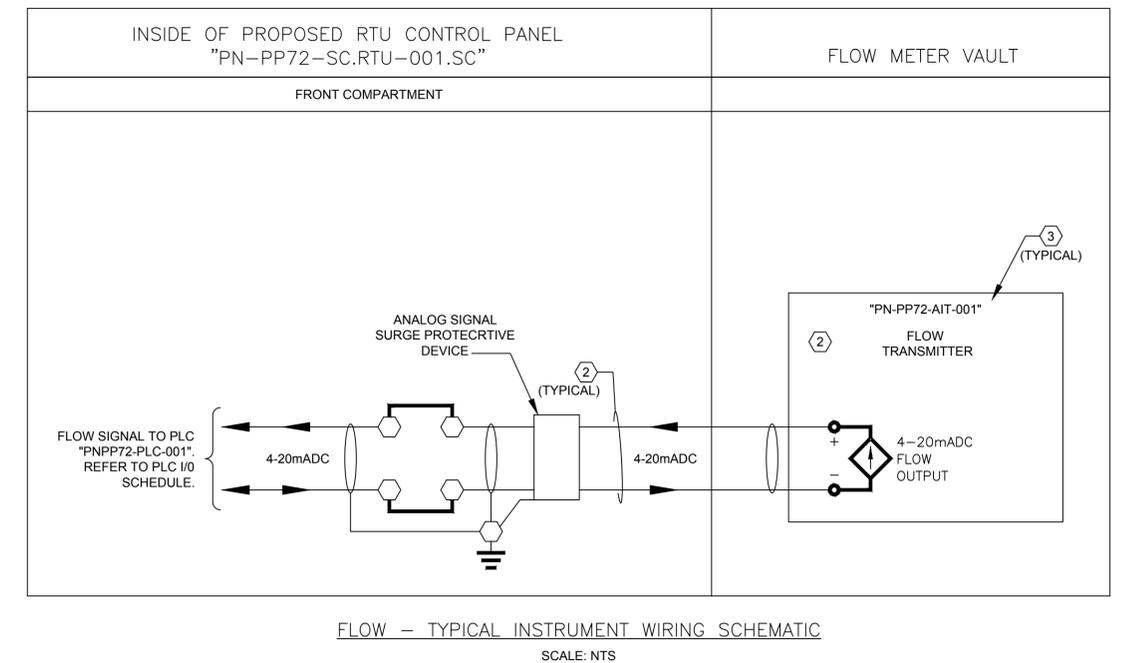
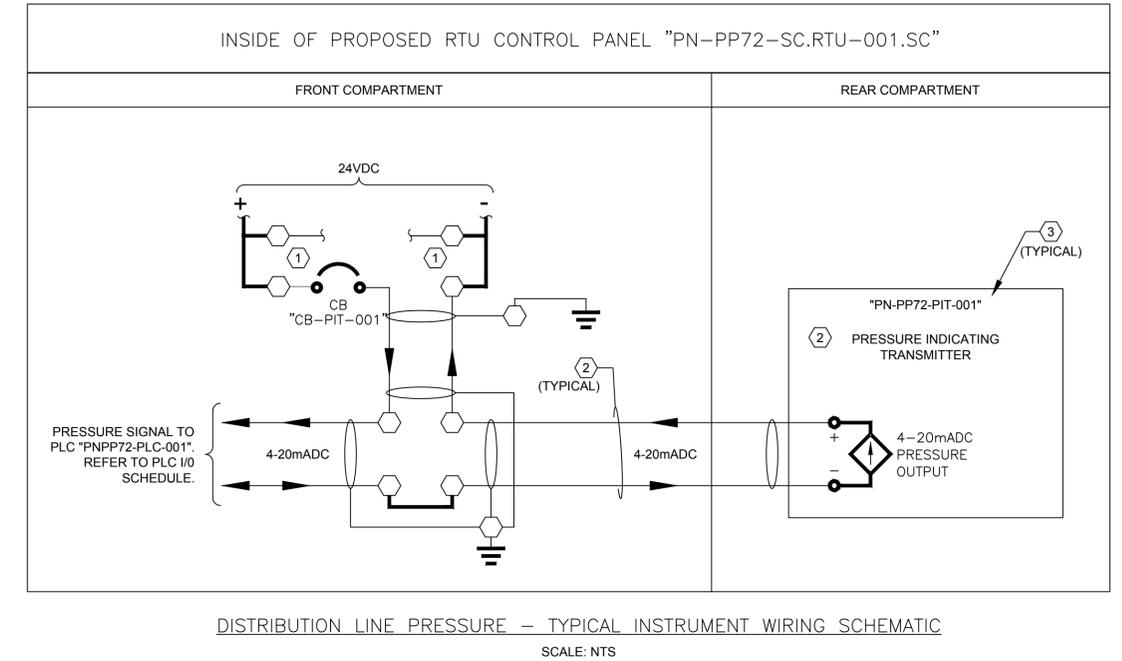
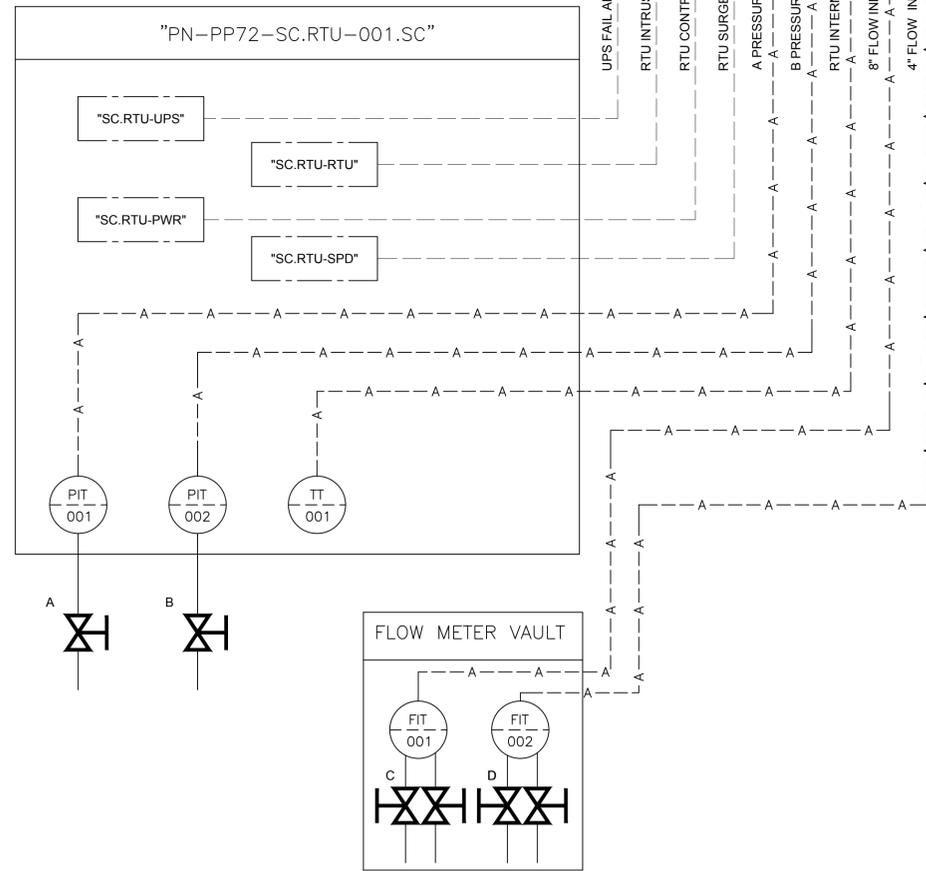


"PN-PP72-SC.RTU-001.SC"

"PN-PP72-PLC-001"

PRESSURE POINT NO. 72
PROPOSED PLC INPUT/OUTPUT POINT SCHEDULE

I/O IDENTIFIER	DESCRIPTION	PANEL	RACK	MODULE	POINT
PP72_DS_PIT_001	A PRESSURE	PN-PP72-SC.RTU-001.SC	1	AI-01	01
PP72_DS_PIT_002	B PRESSURE	PN-PP72-SC.RTU-001.SC	1	AI-01	02
PP72_DS_FIT_001	A FLOW (8")	PN-PP72-SC.RTU-001.SC	1	AI-01	03
PP72_DS_FIT_002	B FLOW (4")	PN-PP72-SC.RTU-001.SC	1	AI-01	04
	SPARES	PN-PP72-SC.RTU-001.SC	1	AI-01	05 - 07
PP72_PNL_TIT-001	RTU INTERNAL AMBIENT TEMPERATURE	PN-PP72-SC.RTU-001.SC	1	AI-01	08
PP72_PNL_SURG	RTU SURGE PROTECTIVE DEVICE FAIL ALARM	PN-PP72-SC.RTU-001.SC	1	DI-01	01
PP72_PLC001_JAL	RTU CONTROL POWER FAIL ALARM	PN-PP72-SC.RTU-001.SC	1	DI-01	02
PP72_IDD001_XS	RTU INTRUSION DETECTION ALARM	PN-PP72-SC.RTU-001.SC	1	DI-01	03
PP72_UPS001_UPSF	RTU UPS FAIL ALARM	PN-PP72-SC.RTU-001.SC	1	DI-01	04
	SPARES	PN-PP72-SC.RTU-001.SC	1	DI-01	05-07



KEY NOTES:

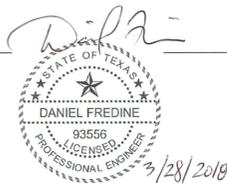
- ① SIZE, FURNISH, AND INSTALL CIRCUIT BREAKER INSIDE OF CONTROL PANEL. LOCATE PROPOSED CIRCUIT BREAKER ADJACENT TO OTHER 24VDC CIRCUIT BREAKERS. EXTEND PROPOSED WIRING TO CONNECT TO CONTROL PANEL 24VDC DISTRIBUTION.
- ② FURNISH AND INSTALL PROPOSED TRANSMITTER AND ASSOCIATED WIRING INSIDE OF CONTROL PANEL AND MAKE ALL FINAL CONNECTIONS.
- ③ THIS DRAWING IS TYPICAL FOR MULTIPLE EQUIPMENT. THE ACTUAL TAG FOR EACH EQUIPMENT WILL DIFFER FROM THAT SHOWN HERE. REFER TO THE APPLICABLE TAG REPLACEMENT SCHEDULE TO DERIVE THE CORRESPONDING TAGS FOR EACH PROPOSED EQUIPMENT.

GENERAL NOTES:

1. NOT ALL INSTRUMENT TUBING/VALVING INSIDE THE RTU ARE SHOWN HERE. REFER TO DRAWING NO. [IG-5] FOR ADDITIONAL REQUIREMENTS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: MARCH 2017



AUSTIN WATER UTILITY
**POTABLE WATER PRESSURE POINT STATION
 IMPROVEMENTS**

**INSTRUMENTATION AND SCADA
 PRESSURE POINT NO. 72
 PROCESS AND INSTRUMENTATION DIAGRAM**

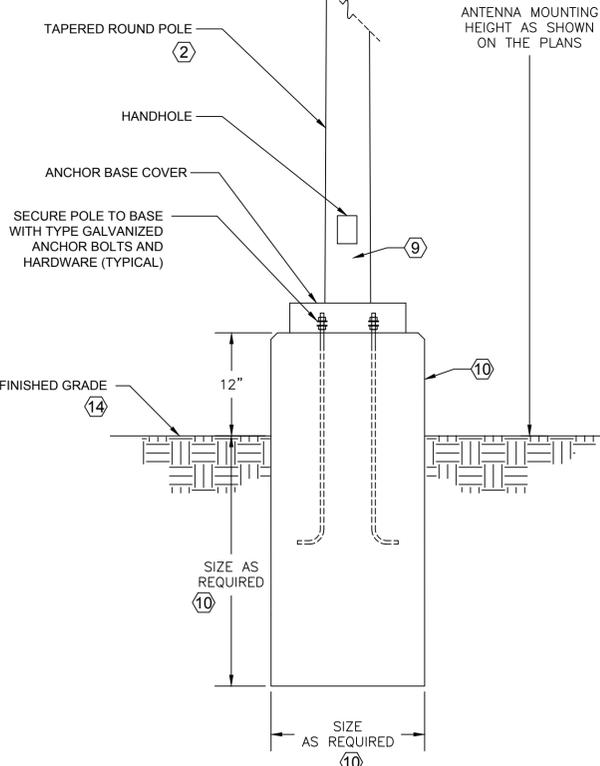
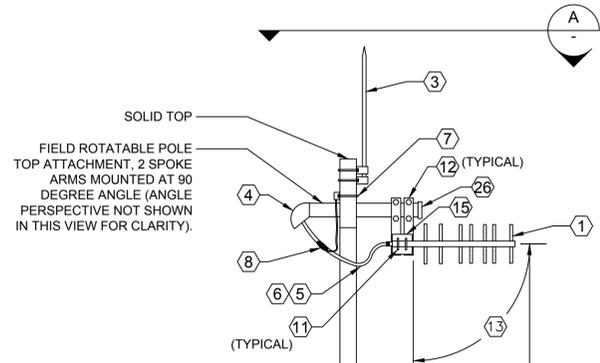
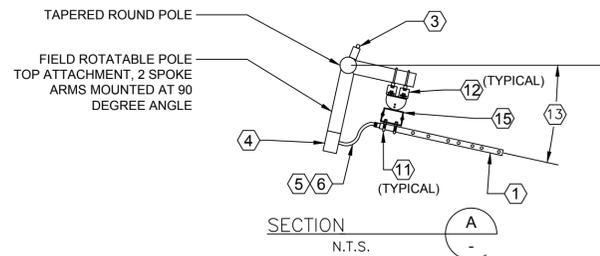
PROJECT NO. _____
 FILE NAME: GLEN_14_IG-3
 SHEET NO. _____
 52 OF 55
IG-3

SUBMITTAL

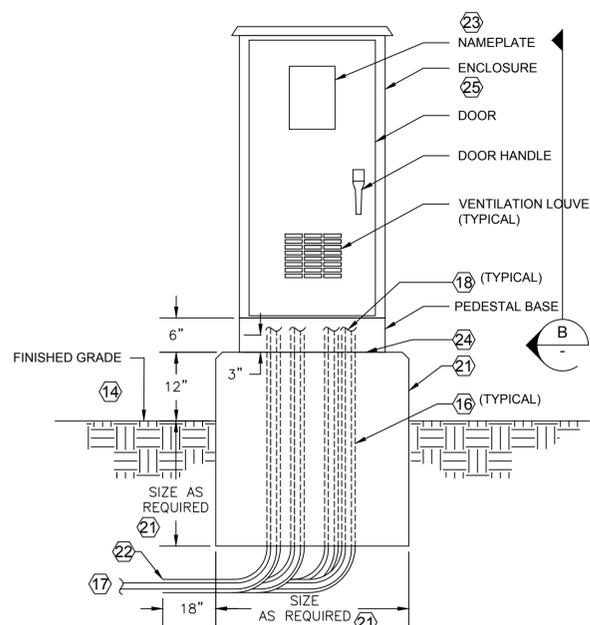
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Plotted: 3/28/2018 2:51:57 PM

N:\TEAM3\AWU_GLENLAKE\DWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLEN_15_IC-4 By: singleton, michael Saved: 4/11/2018 8:31:20 AM Plotted: 4/11/2018 10:16:03 AM



TYPICAL ANTENNA INSTALLATION DETAIL
N.T.S.



TYPICAL RTU INSTALLATION DETAIL
N.T.S.

KEY NOTES:

- ① FURNISH AND INSTALL YAGI ANTENNA WITH MOUNTING HARDWARE PER SPECIFICATIONS. COORDINATE FINAL ANTENNA ELEVATION AND ORIENTATION WITH THE OWNER.
- ② FURNISH AND INSTALL PROPOSED ANTENNA MOUNTING POLE. COORDINATE LOCATION AND HEIGHT WITH THE PLANS. POLE SHALL BE AS FOLLOWS:
 - A. TYPE: ROUND TUBULAR LINEAR TAPERED POLE WITH INTEGRAL MOUNTING BASE AND CONTINUOUSLY WELDED JOINTS
 - B. TUBE MATERIAL: ASTM A595 GRADE A OR A572 GRADE 55 STEEL
 - C. BASE MATERIAL: ASTM A595 GRADE A OR A572 GRADE 55 STEEL. DRILL HOLES IN BASE FOR ANCHOR BOLTS.
 - D. SHAPE: ROUND. POLE SHALL BE UNIFORMLY TAPERED ALONG ITS HEIGHT.
 - E. SIZE: 8-INCH DIAMETER (DIAMETER AS MEASURED AT BOTTOM OF POLE) POLE SHAFT, 0.203 INCH WALL THICKNESS AT MINIMUM. INCREASE SIZE AS REQUIRED TO SUPPORT THE LOAD WITH A WIND SPEED OF 100 MILES PER HOUR. AT MINIMUM, AT NO ADDITIONAL COST TO THE OWNER. PROVIDE POLE LENGTH AS REQUIRED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS.
 - F. HANDHOLE: WELDED INTO POLE SHAFT, MINIMUM OF 3" X 5" RECTANGULAR OPENING. PROVIDE WITH BOLTED AND GASKETED FIELD REMOVABLE COVER. PROVIDE OVERSIZED HANDHOLE AS REQUIRED TO FACILITATE WIRING INSTALLATION.
 - G. FINISH: GALVANIZED PER MANUFACTURER'S STANDARD PROCESS. FINISH SHALL BE APPLIED TO BOTH THE INTERIOR AND EXTERIOR OF THE POLE AS WELL AS BOTH SIDES OF THE BASE, BASE COVER, HANDHOLE COVER, ACCESSORIES, ETC. I.E., ALL SURFACES.
 - H. ACCESSORIES:
 1. FIELD ROTATABLE POLE TOP BRACKET ATTACHMENT WITH TWO SPOKE ARMS LOCATED 90 DEGREES APART. END OF SPOKE ARMS SHALL BE FACTORY THREADED TO FACILITATE ATTACHMENT OF THREADED WEATHERHEAD/CAP. COORDINATE THREADS ACCORDINGLY.
 2. GROUNDING LUG
 3. WIND VIBRATION DAMPENERS
 4. POLE COVER COLLAR
 5. ADDITIONAL ACCESSORIES AS REQUIRED BY THE PLANS.
 - I. MANUFACTURER: VALMONT STRUCTURES "ROUND TAPERED STEEL POLE DS210" OR APPROVED EQUAL.
- ③ FURNISH AND INSTALL 5/8" X 48" COPPER AIR TERMINAL AND MOUNTING HARDWARE FOR LIGHTNING PROTECTION.
- ④ 3" THREADED TYPE COPPER-FREE ALUMINUM WEATHERHEAD FOR ROUTING COAXIAL CABLE/GROUNDING CONDUCTORS. LIBERALLY COAT THREADS PRIOR TO INSTALLATION.
- ⑤ COAXIAL ANTENNA CABLE.
- ⑥ DRIP LOOP.
- ⑦ PIPE CLAMP GROUNDING KIT.
- ⑧ STANDARD COAXIAL CABLE GROUND STRAP KIT. TIE GROUND TO ANTENNA MOUNTING STRUCTURE.
- ⑨ BOLT POLE GROUNDING CONDUCTOR TO INTERIOR OF POLE. REFER TO ELECTRICAL DRAWINGS FOR POLE GROUNDING REQUIREMENTS.

KEY NOTES (CONTINUED):

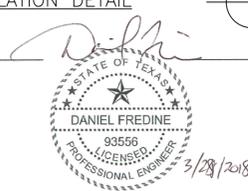
- ⑩ FURNISH AND INSTALL DEDICATED REINFORCED CONCRETE FOUNDATION TO SUPPORT ANTENNA POLE PER THE CIVIL/STRUCTURAL DRAWINGS/SPECIFICATIONS.
- ⑪ U-BOLT WITH PIPE SADDLE.
- ⑫ SINGLE CONDUIT SUPPORT CHANNEL OF MAXIMUM 10" LENGTH. QUANTITY TWO REQUIRED PER ANTENNA.
- ⑬ COORDINATE ANGLE WITH THE OWNER. COORDINATE ANTENNA ORIENTATION PER THE ENGINEER.
- ⑭ COORDINATE LOCATION OF FINISHED GRADE (PARKING LOT/SIDEWALK/NATURAL GRADE/ETC.) WITH SITE/CIVIL DRAWINGS.
- ⑮ FURNISH AND INSTALL STAINLESS STEEL, FIELD ADJUSTABLE SWIVEL MOUNTING BRACKET AS MANUFACTURERED BY TERRAWAVE SOLUTIONS, MODEL TW-ART-MOUNT-IS, OR APPROVED EQUAL.
- ⑯ FURNISH AND INSTALL FOUR 2" PVC CONDUITS. PVC CONDUITS SHALL BE FURNISHED AND INSTALLED FOR THE ENTIRE LENGTH ALTHOUGH REQUIRED OTHERWISE BY THE SPECIFICATIONS. FOUR CONDUITS SHALL BE FURNISHED AND INSTALLED REGARDLESS IF THE PROPOSED PRESSURE POINT SITE HAS FEWER THAN FOUR PROPOSED TRANSMITTERS. STUB-UP CONDUITS 3" ABOVE TOP OF CONCRETE FOUNDATION. EXTEND CONDUITS 18" HORIZONTALLY BEYOND EDGE OF FOUNDATION BOTTOM. USE 36" LONG RADIUS ELBOW BENDS. FILL ANNULAR SPACE BETWEEN CONDUIT AND INSTRUMENT TUBING (KEYNOTE 17) WITH DUCT SEAL.
- ⑰ FURNISH AND INSTALL 3/4" COPPER INSTRUMENTATION TUBING BETWEEN CONTROL PANEL AND PRESSURE/FLOW TAP LOCATION. COORDINATE PRESSURE TAP LOCATION WITH THE OWNER AND FIELD VERIFY LOCATION. TUBING SHALL ROUTE UNDERGROUND AND ENCASED IN AN ENVELOPE OF WASHED SAND EXTENDING A MINIMUM OF 2" IN ALL DIRECTIONS. MINIMUM COVER SHALL BE 24" MEASURED TO THE TOP OF THE TUBING.
- ⑱ TUBING CONTINUES INSIDE CONTROL PANEL. REFER TO DRAWING NO. [IG-5] FOR ADDITIONAL REQUIREMENTS.
- ⑲ REFER TO RTU MANUFACTURER'S DRAWINGS FOR INTERNAL CABINET ARRANGEMENT OF THIS COMPARTMENT.
- ⑳ REFER TO DRAWING NO. [IG-5] FOR ADDITIONAL REQUIREMENTS.
- ㉑ FURNISH AND INSTALL DEDICATED REINFORCED CONCRETE FOUNDATION TO SUPPORT RTU PER THE CIVIL/STRUCTURAL DRAWINGS/SPECIFICATIONS.
- ㉒ FOR UNOCCUPIED CONDUITS ONLY: ALTHOUGH NOT SHOWN HERE, FURNISH AND INSTALL FEMALE ADAPTER WITH RECESSED THREADED PLUG AT THIS END. OTHERS WILL CONNECT IN THE FUTURE.
- ㉓ FURNISH AND INSTALL EXTERIOR DOOR NAMEPLATE PER SPECIFICATION SECTION 17410. SUBMIT NAMEPLATE TEXT AS PART OF RTU SHOP DRAWINGS.
- ㉔ FURNISH AND INSTALL MINIMUM 1/16" THICK LAYER OF MASTIC UNDERNEATH PORTION OF ENCLOSURE IN CONTACT WITH CONCRETE PAD. TRIM MASTIC FOR AESTHETIC APPEARANCE. MASTIC SHALL BE NON-SHRINK, NON-HARDENING, ASBESTOS FREE, ASTM E-84, BUTYL RUBBER SUITABLE FOR USE OUTDOORS OVER TEMPERATURE RANGE -25 DEGREES F TO 180 DEGREES F. MASTIC SHALL BE AS MANUFACTURED BY "DSI-PERMATITE" MODEL "INSTA-SEAL" OR APPROVED EQUAL. CLEAN SURFACES PRIOR TO MASTIC INSTALLATION.
- ㉕ SECURE ENCLOSURE TO FOUNDATION WITH A MINIMUM OF FOUR ANCHOR BOLTS AND HARDWARE (NOT SHOWN) WITH ONE BOLT LOCATED AT EACH CORNER. BOLTS AND HARDWARE SHALL BE 3/8" DIAMETER, TYPE 316 STAINLESS STEEL. ALSO REFER TO THE STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- ㉖ FURNISH AND INSTALL THREADED PIPE CAP.
- ㉗ THE FINAL ANTENNA MOUNTING HEIGHT SHALL BE DETERMINED BY THE ENGINEER AND MAY BE ADJUSTED FROM THE HEIGHT SHOWN HERE. CONTRACTOR SHALL COORDINATE THE MOUNTING HEIGHT AND RELATED ADJUSTMENTS WITH THE OWNER AND MAKE ALL FINAL CONNECTIONS. IN THE PROPOSAL DEVELOPMENT, CONTRACTOR SHALL DEVELOP COSTS FOR 15'-0" HEIGHT AND SUBMIT COSTS TO THE OWNER.

GENERAL NOTES:

1. ELECTRICAL FIELD CONDUIT/WIRE, GROUNDING, STRUCTURAL, ETC., ARE NOT SHOWN. REFER TO THE ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. ALL CONDUIT, CONDUIT SUPPORT CHANNEL, U-BOLTS, AND MOUNTING HARDWARE SHALL BE TYPE 316 STAINLESS STEEL. ALSO COMPLY WITH THE REQUIREMENTS OF SPECIFICATION SECTION 16110.
3. UNLESS OTHERWISE SPECIFIED ON THIS DRAWING, ALL ANTENNA, ANTENNA MOUNTING POLE, RADIO SYSTEM CABLING AND RELATED HARDWARE SHALL BE PER SECTION 17320. ACCORDINGLY, SUBMIT SHOP DRAWINGS AND O&M MANUALS, INCLUSIVE OF PRODUCT SHOWN HEREIN, PER SECTION 17320.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: MARCH 2017

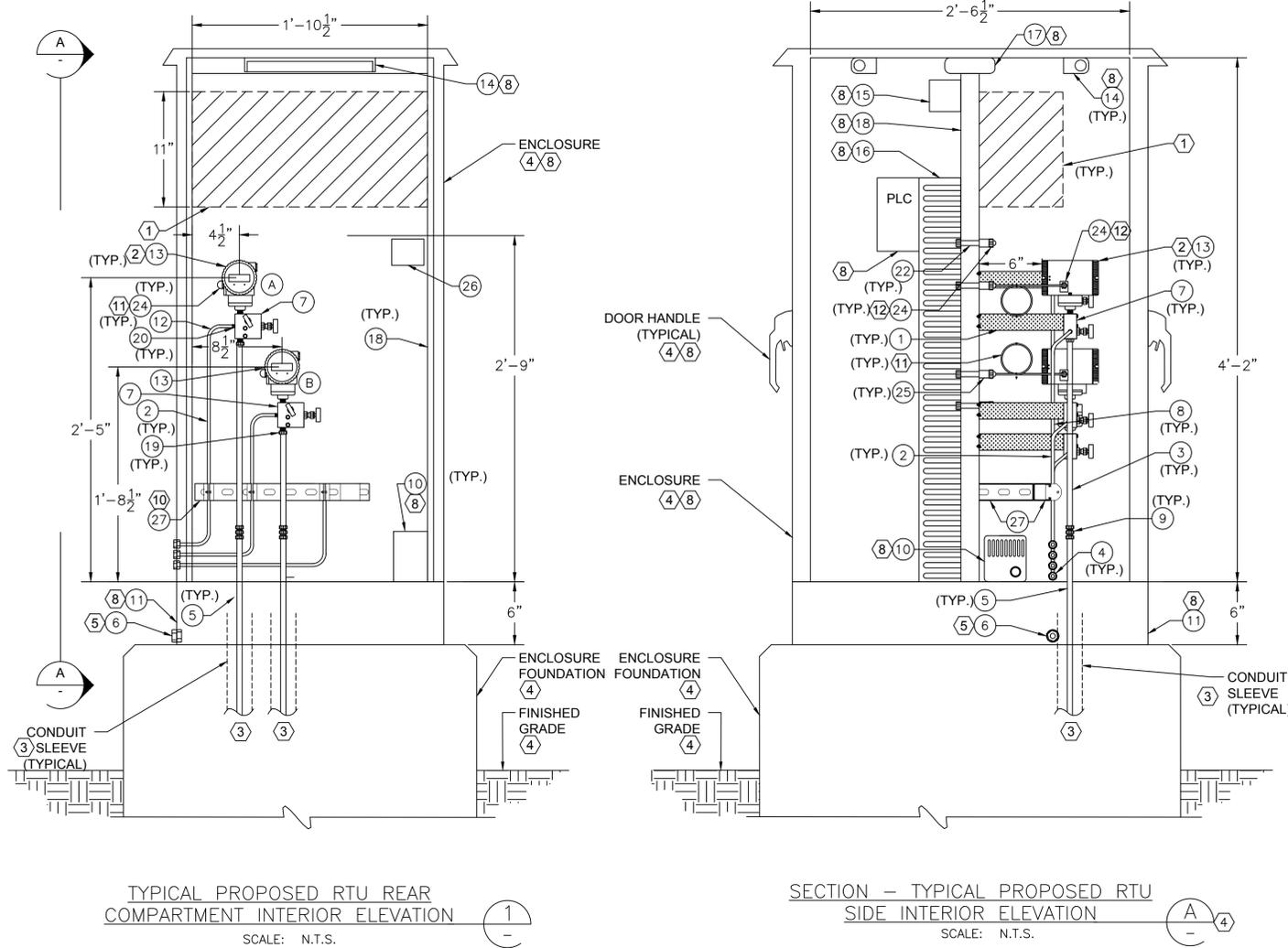


AUSTIN WATER UTILITY
 POTABLE WATER PRESSURE POINT STATION
 IMPROVEMENTS

TYPICAL INSTRUMENTATION
 INSTALLATION DETAILS
 (SHEET 1 OF 2)

PROJECT NO. GLEN_15_IC-4
 SHEET NO. 53 OF 55
 IG-4

N:\TEAM3\AWU_GLENLAKE\DWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLEN_16_IG-5 By: singleton, michael Saved: 4/11/2018 8:31:09 AM Plotted: 4/11/2018 10:16:28 AM



TYPICAL PROPOSED RTU REAR COMPARTMENT INTERIOR ELEVATION

SCALE: N.T.S.

SECTION - TYPICAL PROPOSED RTU SIDE INTERIOR ELEVATION

SCALE: N.T.S.

KEY NOTES:

- ① RESERVED AREA FOR OPTIONAL VALVE FIELD CONTROL STATIONS. VALVE FIELD CONTROL STATIONS ARE NOT REQUIRED FOR THIS PROJECT UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE PRESSURE POINT STATION DESIGN TABLE SHOWN ON THE COVERSHEET. REFER TO THE COVERSHEET.
- ② QUANTITY OF REQUIRED TRANSMITTERS VARIES BY SITE. LETTER DESIGNATION SHOWN ADJACENT TO EACH TRANSMITTER IS A CROSS-REFERENCE TO DENOTE THE DESIRED INSTALLATION LOCATION FOR THE TRANSMITTER SHOWN FOR EACH SITE. REFER TO THE PRESSURE POINT STATION DESIGN TABLE SHOWN ON THE COVERSHEET. REFER TO THE COVERSHEET.
- ③ CONDUIT SLEEVE AND TUBING CONTINUES. REFER TO DRAWING NO. [G-4].
- ④ NOT ALL INSTALLATION REQUIREMENTS ARE SHOWN IN THIS VIEW FOR CLARITY. REFER TO DRAWING NO. [G-4] FOR ADDITIONAL REQUIREMENTS.
- ⑤ LOCATE MOUNTING ELEVATION AS LOW AS POSSIBLE ON PEDESTAL BASE.
- ⑥ REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. ALL MANUFACTURERS AND MODEL NUMBERS LISTED ARE "OR APPROVED EQUAL" UNLESS SPECIFICALLY NOTED OTHERWISE.
- ⑦ REFER TO ON THE PRESSURE POINT STATION DESIGN TABLE SHOWN ON THE COVERSHEET FOR ADDITIONAL REQUIREMENTS.
- ⑧ EQUIPMENT SHALL BE PROVIDED AS PART OF RTU. REFER TO RTU MANUFACTURER'S DRAWINGS.
- ⑨ NAMEPLATE TEXT SHALL READ "TOP OF SLAB REFERENCE MARKER ELEVATION IS XXX.XXFT MSL". THE CONTRACTOR SHALL REPLACE "XXX.XX" WITH THE ACTUAL TOP OF SLAB ELEVATION ABOVE MSL ESTABLISHED THROUGH SURVEY COMPARISON WITH NEAREST SURVEY BENCHMARK. REFER TO THE CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS. COORDINATE FINAL NAMEPLATE TEXT WITH OWNER.
- ⑩ SECURE 1/4" TUBING TO RACK.

KEY NOTES (CONTINUED):

- ⑪ ALTHOUGH REQUIRED OTHERWISE BY THE SPECIFICATIONS, SIGNAL CABLE CONNECTING TO THE TRANSMITTER SHALL BE FURNISHED AND INSTALLED PER SECTION 16200.2.01.G. COIL 12" OF SLACK CABLE AND SECURE WITH WIRE TIES. WHEN COILING THE CABLE, COMPLY WITH CABLE BENDING RADIUS LIMITATIONS.
- ⑫ FURNISH AND INSTALL CORD AND CABLE FITTING. FITTING SHALL COPPER-FREE ALUMINUM WITH THREADED GLAND NUT, STRAIGHT THREADED BODY, AND ALSO A NEOPRENE SEALING CABLE BUSHING. FITTING SHALL BE AS MANUFACTURED BY CROUSE-HINDS "CGB" OR APPROVED EQUAL.

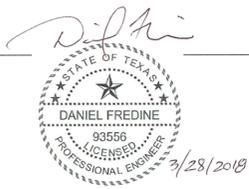
GENERAL NOTES:

- 1. THIS TYPICAL DETAIL DRAWING DEPICTS THE MINIMUM REQUIREMENTS FOR A TYPICAL PRESSURE POINT RTU WITH FOUR PRESSURE TRANSMITTERS. THE QUANTITY OF INSTALLED PRESSURE TRANSMITTERS VARIES BY PRESSURE POINT SITE. REFER TO THE PRESSURE POINT STATION DESIGN TABLE SHOWN ON THE COVERSHEET FOR THE REQUIRED QUANTITY OF PRESSURE TRANSMITTERS TO BE FURNISHED AND INSTALLED AT EACH PRESSURE POINT SITE. CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS SHOWN ON THIS DRAWING UNLESS SPECIFICALLY NOTED OTHERWISE.

EQUIPMENT SCHEDULE MAIN INSTRUMENT/CONTROL PRESSURE POINT ENCLOSURE. ⑥				
IDENTIFICATION MARK	DESCRIPTION	MANU-FACTURER	MODEL/TYPE	SPECIFICATION SECTION
①	FABRICATED ALUMINUM SUPPORT BRACKET	PER SPECS	PER SPECS	17500
②	1/4" TYPE 316 STAINLESS STEEL TUBING	PER SPECS	PER SPECS	17500
③	1/2" TYPE 316 STAINLESS STEEL TUBING	PER SPECS	PER SPECS	17500
④	1/4" TYPE 316 STAINLESS STEEL FEMALE BULKHEAD CONNECTOR	HOKE	4BCF4-316	17500
⑤	3/4" COPPER TUBING	PER SPECS	PER SPECS	17500
⑥	3/8" TYPE 316 STAINLESS STEEL MALE BULKHEAD FITTING WITH TYPE 316 STAINLESS STEEL WIRE MESH INSECT VENT SCREEN	HOKE	6BCM6-316 6SCRN-316	17500
⑦	TYPE 316 STAINLESS STEEL 2-VALVE MANIFOLD	FOXBORO	PT7	17500
⑧	45 DEGREE BEND (USING 45 DEGREE TUBING BENDER)	PER SPECS	PER SPECS	17500
⑨	3/4"X1/2" TYPE 316 STAINLESS STEEL REDUCING FITTING	HOKE	12 RU8-316	17500
⑩	SPACE HEATER	PER SPECS	PER SPECS	N/A ⑧
⑪	ENCLOSURE PEDESTAL BASE	PER SPECS	PER SPECS	N/A ⑧
⑫	90 DEGREE BEND (USING 90 DEGREE TUBING BENDER)	PER SPECS	PER SPECS	N/A
⑬	PRESSURE INDICATING TRANSMITTER	FOXBORO	IGP10-G	17500 ⑦
⑭	LIGHT FIXTURE	PER SPECS	PER SPECS	N/A ⑧
⑮	THERMOSTAT	PER SPECS	PER SPECS	N/A ⑧
⑯	SLOTTED WIREWAY	PER SPECS	PER SPECS	N/A ⑧
⑰	VENTILATION FANS	PER SPECS	PER SPECS	N/A ⑧
⑱	BACK-TO-BACK MOUNTED BACKPANELS	PER SPECS	PER SPECS	N/A ⑧
⑲	1/2" X 1/2" TYPE 316 STAINLESS STEEL TUBING MALE CONNECTOR	HOKE	8CM8-316	N/A
⑳	1/4" X 1/2" TYPE 316 STAINLESS STEEL TUBING MALE CONNECTOR	HOKE	4CM8-316	N/A
㉑	90 DEGREE LIQUIDTIGHT CONNECTER	PER SPECS	PER SPECS	N/A
㉒	CHASE NIPPLE	PER SPECS	PER SPECS	N/A
㉓	LIQUIDTIGHT CONDUIT	PER SPECS	PER SPECS	N/A
㉔	CORD/CABLE FITTING CONNECTOR	⑫	⑫	N/A
㉕	COUPLING	PER SPECS	PER SPECS	N/A
㉖	3-PLY PHENOLIC BLACK-WHITE-BLACK INTERIOR NAMEPLATE WITH 1/4" HIGH LETTERING ⑨	PER SPECS	PER SPECS	17410
㉗	RACEWAY SUPPORT CHANNELS WITH 90 DEGREE ANGLE BRACKETS AND STAINLESS STEEL TUBING CUSHION-CLAMPS. CUSHION CLAMPS SHALL BE AS MANUFACTURED BY UNISTRUT "CUSH-A-CLAMP" OR APPROVED EQUAL.	PER SPECS	PER SPECS	16110

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____
 DRAWN BY: _____
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: MARCH 2017



AUSTIN WATER UTILITY
 POTABLE WATER PRESSURE POINT STATION
 IMPROVEMENTS

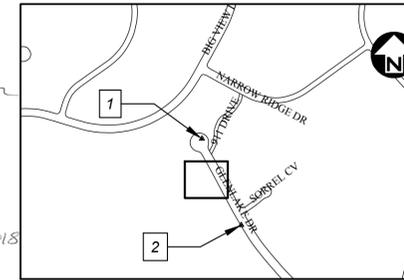
TYPICAL INSTRUMENTATION
 INSTALLATION DETAILS
 (SHEET 2 OF 2)

PROJECT NO.
 FILE NAME: GLEN_16_IG-5
 SHEET NO.
 54 OF 55
 IG-5

SUBMITTAL

★ CONTROL MARK LOCATIONS:

CONTROL POINTS: #1 & #2
 CONTROL POINT TYPE: CPS COTTON SPINDLES
 #1 NEAR INTERSECTION: GLENLAKE DR & 911 DR
 NORTHING: 10103986.49
 EASTING: 3079170.98
 LATITUDE: N30°21'41.84"
 LONGITUDE: W97°51'06.28"
 ELEVATION: 944.40
 #2 NEAR INTERSECTION: NARROW RIDGE DR & BIG VIEW DR
 NORTHING: 10103514.95
 EASTING: 3079385.69
 LATITUDE: N30°21'37.13"
 LONGITUDE: W97°51'03.94"
 ELEVATION: 938.37



PROJECT LOCATION MAP
 GRIDS D30 MAPSCO PG 522G
 NTS



REVISION DESCRIPTION	DATE	BY	NO.

STATE OF TEXAS
 THU CAO
 93976
 LICENSED PROFESSIONAL ENGINEER
 03/27/2018
 THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY THU CAO LIC. # 93976

I CERTIFY THAT THESE DRAWINGS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THEIR INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION UNTIL FORMAL CITY APPROVAL.

WASTEWATER	WATER	WATER
A-___	13790	79-0171
PROFILE	INTERSECTION	PROJECT
MAP	MAP	NUMBER

RECORD REFERENCES

QUAD MAP	MAPSCO
D30	522C
NUMBER	NUMBER

PLAN LEGEND
 SEE SHEET G-003

NOTE:
 CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AN APPROVED ELECTRONIC SERVICE PLANNING APPLICATION (ESPA) IN ORDER TO GET THE NECESSARY PERMITS SO THE ELECTRIC SERVICE (120/240 VAC, SINGLE PHASE, 3-WIRE, 100 AMPS) CAN BE RELOCATED IN ACCORDANCE WITH AUSTIN ENERGY REQUIREMENTS.

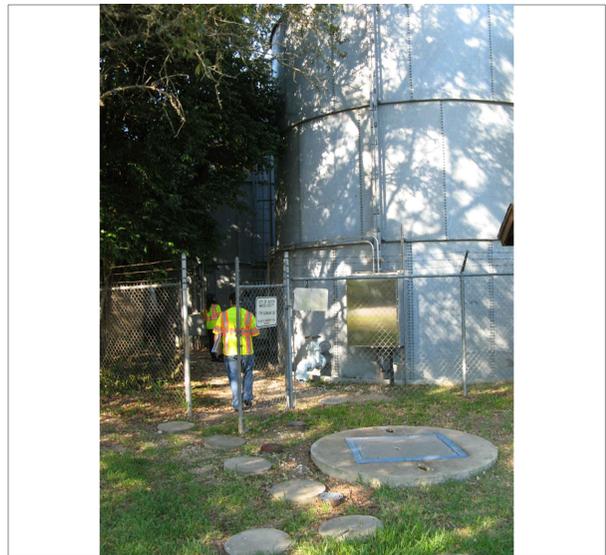
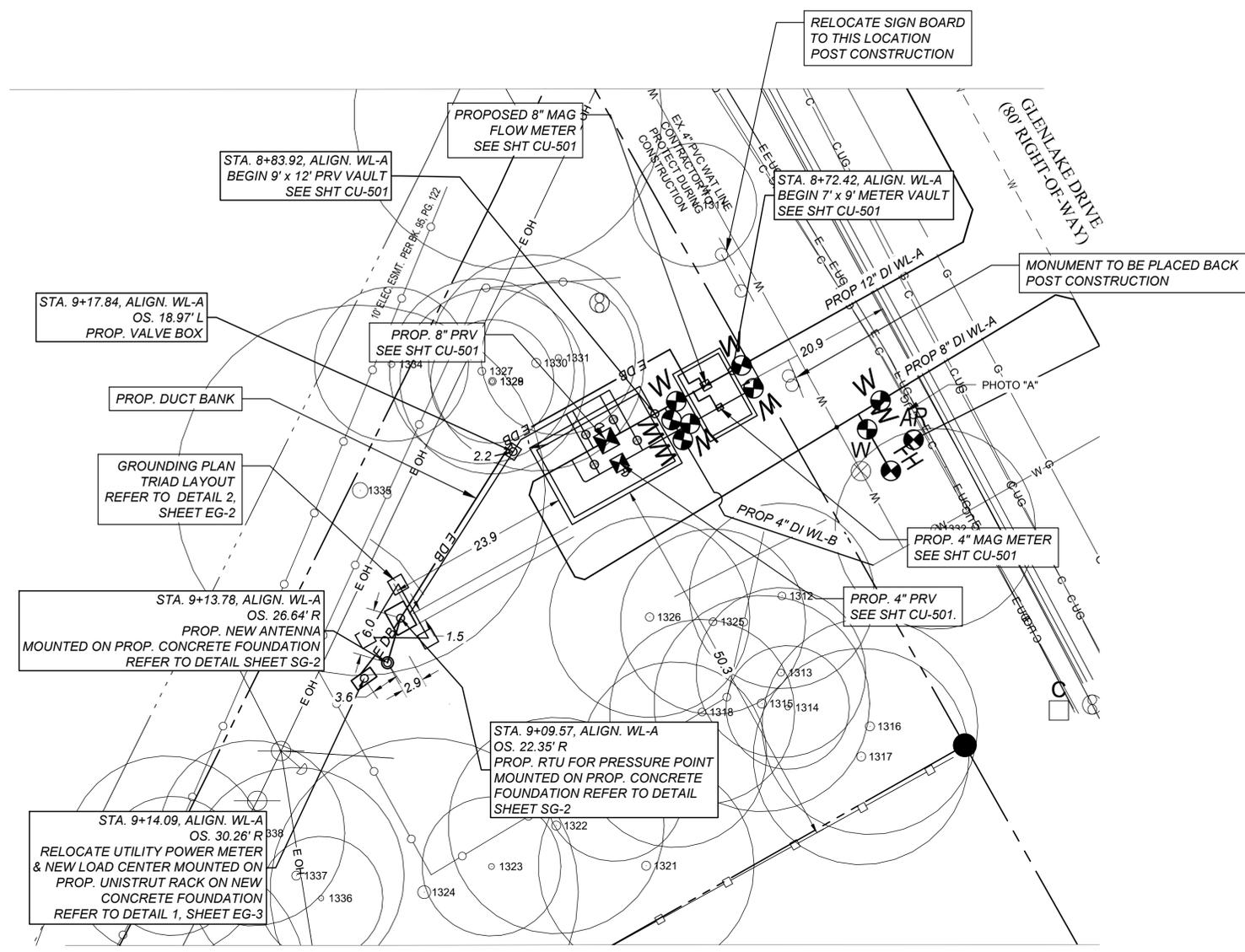
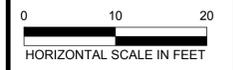


PHOTO "A" - EXIST. PUMP STATION ENTRANCE

CITY OF AUSTIN, TEXAS
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING SERVICES DIVISION
 GLENLAKE PUMP STATION
 BYPASS IMPROVEMENTS
 CIVIL SITE PLAN RENOVATION #72
 PRESSURE POINT STATION



NOTES	NAME	DATE
SURVEY BY	QMD	10/16
DRAWN BY	MS	02/17
DESIGNED BY	MS	10/16
CHECKED BY	TC	10/16
REVIEWED BY	ESD	02/17



GP-2018-0000-AW

N:\TEAM\RAWL_GLENLAKE.DWG\PRODUCTION_FILES\DWG\PRESSURE POINT\GLENLAKE_PUMP_STATION_P1.DWG - MONOCHROME.CTB