



**2019 SMP Package II (Lyons St., Sligo St.)
Solicitation Number: CO-00203
Job No.: Water – 18-5009 Sewer – 18-5509**

**ADDENDUM 1
August 2, 2018**

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

CHANGES TO THE SPECIFICATIONS

1. Replace the bid proposal with attached bid proposal. The quantity for Item 25w - REMOVAL, TRANSPORTATION, AND DISPOSAL OF AC PIPE was revised from 14 L.F. to 29 L.F.

CHANGES TO THE PLANS

1. Replace the drawing plan set with the attached drawing plan set. Sheet 7 of 19 was revised to show the existing 6" CI water main along N. Elmendorf Street to be located on the west side of N. Elmendorf Street.

END OF ADDENDUM

This Addendum, including these one (1) page, is twenty one (21) pages with attachments in its entirety.
Attachments:

1. Water Plan Set
2. Bid Proposal (water and sewer)

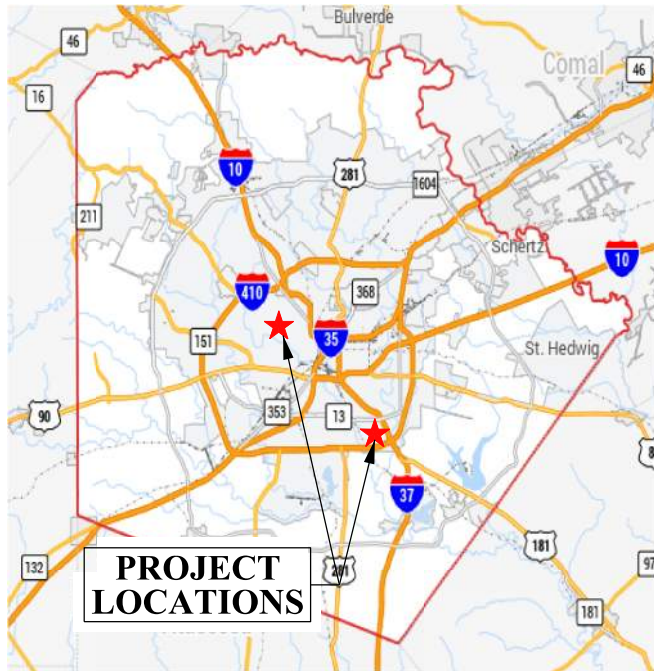


Kum Wing Chan, P.E.
Unitech Consulting Engineers

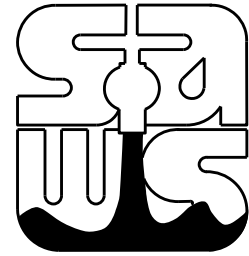


SAWS
 2019 SMP Package II(LYONS ST., SLIGO ST)
 SAWS JOB NO: 18-5009; 18-5509

Item No.	Spec. No.	Description	Unit	Quantity	Unit Price	Total Price
1 w	103.3	REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (3,000 SF < X < 10,000 SF)	SF	308		
2 w	203.1	TACK COAT	SY	108		
3 w	205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEPTH)	SY	850		
4 w	205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH) (< 5000 SY)	SY	1083		
5 w	502.1	CONCRETE SIDEWALKS (< 150 SY)	LS	34		
6 w	550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	2091		
7 w	818.0	8" PVC WATERLINE	L.F.	2091		
8 w	824.0	RELAY 3/4" SHORT SERVICE	EA.	23		
9 w	824.0	RELAY 3/4" LONG SERVICE	EA.	26		
10 w	824.0	RELAY 1" SHORT SERVICE	EA.	1		
11 w	824.0	NEW 3/4" SHORT UNMETERED SERVICE	EA.	12		
12 w	824.0	NEW 3/4" LONG UNMETERED SERVICE	EA.	15		
13 w	824.0	RELOCATE 3/4" LONG SERVICE	EA.	4		
14 w	824.5	CUSTOMER SHUT-OFF VALVE	EA.	7		
15 w	828.0	8" GATE VALVES	EA.	7		
16 w	833.0	EXISTING METER AND NEW METER BOX RELOCATION	EA.	7		
17 w	833.0	METER BOX	EA.	72		
18 w	834.1	FIRE HYDRANT	EA.	3		
19 w	836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	2		
20 w	840.0	6" WATER TIE-INS	EA.	6		
21 w	841.0	HYDROSTATIC TESTING	EA.	3		
22 w	844.0	2" BLOWOFF, PERMANENT	EA.	1		
23 w	844.0	2" BLOWOFF, TEMPORARY	EA.	6		
24 w	COSA 413	FLOWABLE FILL	C.Y.	76		
25 w	3000.0	REMOVAL, TRANSPORTATION, AND DISPOSAL OF AC PIPE	L.F.	29		
1 s	203.1	TACK COAT	GAL	73		
2 s	205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEPTH)	S.Y.	348		
3 s	205.4	HMAC TYPE "D" (2" COMP. DEPTH)(<5000 S.Y.)	S.Y.	443		
4 s	205.4	HOT MIX ASPHALTIC PAVEMENT- TYPE "D" (3" COMP. DEPTH)	S.Y.	284		
5 s	208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (3")	S.Y.	284		
6 s	550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	855		
7 s	848.0	8" PVC SANITARY SEWER LINE. (SDR 26, ASTM 2241, 150 PSI)	L.F.	855		
8 s	852.1	SANITARY SEWER MANHOLE (0' - 6')	EA.	4		
9 s	852.3	EXTRA DEPTH MANHOLES (> 6')	V.F.	9		
10 s	854.0	SANITARY SEWER LATERALS (SDR 26, ASTM 2241, 150 PSI)	L.F.	737		
11 s	854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA.	50		
12 s	860.0	VERTICAL STACKS	V.F.	114		
13 s	864.0	BYPASS PUMPING	L.S.	1		
14 s	866.0	SEWER MAIN PRE-TELEVISION (8"-15")	L.F.	855		
15 s	866.0	SEWER MAIN TELEVISION INSPECTION (8" - 15")	L.F.	855		
16 s	COSA 413	FLOWABLE FILL	C.Y.	21		
	530.1	BARRICADE,SIGNS AND TRAFFIC HANDLING(Lyons St)	EA.	1		
	530.1	BARRICADE,SIGNS AND TRAFFIC HANDLING(Sligo St)	EA.	1		
	100.1	MOBILIZATION	LS	≤10%		
	101.1	PREPARATION OF ROW	LS	≤5%		
				TOTAL BID PRICE		

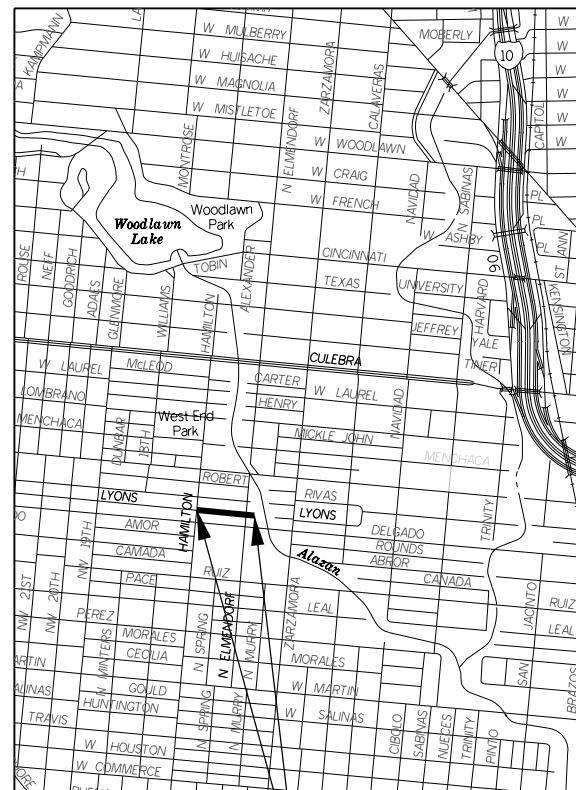


SAN ANTONIO WATER SYSTEM

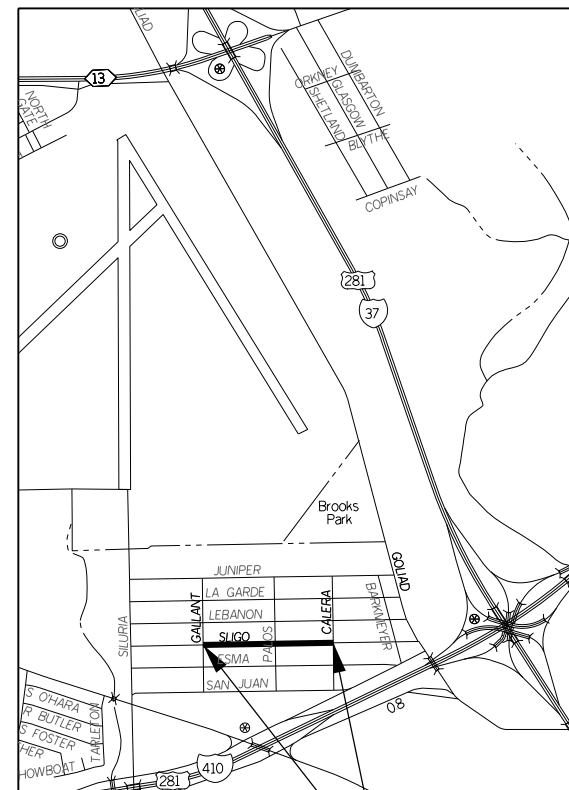


SAWS WATER JOB NO: 18-5009

2019 SMP PACKAGE II (LYONS ST., SLIGO ST.)



**LYONS ST.
PROJECT
LOCATION**



**SLIGO ST.
PROJECT
LOCATION**



CITY OF SAN ANTONIO, TEXAS VICINITY MAP
NO SCALE



Michael Pieprzica



**UNINTECH CONSULTING
ENGINEERS, INC.**
2431 E. Evans Road
San Antonio, Texas 78259
Phone: (210) 641-6003
TBPE Reg. No. F-5499
Fax: (210) 641-8279
www.unitech.com

INDEX OF DRAWINGS

SHEET NO.	SHEET TITLE
1 OF 19	WATER WORK COVER SHEET
2 OF 19	INDEX OF DRAWINGS, LEGEND, AND ABBREVIATIONS
3 OF 19	WATER GENERAL NOTES
4 OF 19	SUMMARY OF QUANTITIES
5 OF 19	LYONS ST. WATER LAYOUT AND CONTROL PLAN
6 OF 19	LYONS ST. WATER PLAN STA. 0+00 - 4+00
7 OF 19	LYONS ST. WATER PLAN STA. 4+00 - 8+46.93
8 OF 19	SLIGO ST. WATER LAYOUT AND CONTROL PLAN
9 OF 19	SLIGO ST. WATER PLAN STA. 0+00 - 4+00
10 OF 19	SLIGO ST. WATER PLAN STA. 4+00 - 8+00
11 OF 19	SLIGO ST. WATER PLAN STA. 8+00 - 10+19.20
12 OF 19	TREE PRESERVATION
13 OF 19	MISCELLANEOUS CONSTRUCTION STANDARDS
14 OF 19	WHEELCHAIR RAMP STANDARDS
15 OF 19	BARRICADE AND CONSTRUCTION STANDARDS (SA)
16 OF 19	BARRICADE AND CONSTRUCTION STANDARDS I
17 OF 19	BARRICADE AND CONSTRUCTION STANDARDS II
18 OF 19	BARRICADE AND CONSTRUCTION STANDARDS III
19 OF 19	WORK CLEARANCE ZONES FOR CPS UTILITIES

LIST OF ABBREVIATIONS

A.T.B.	ASPHALT TREATED BASE	NO.	NUMBER
BLDG	BUILDING	N.S.P.I.	NO SEPARATE PAY ITEM
B.M.P.'S	BEST MANAGEMENT PRACTICES	N.T.S.	NOT TO SCALE
B.W.	BOTH WAYS	O.C.	ON CENTER
C.I.	CAST-IRON	O.D.	OUTSIDE DIAMETER
CPS	CITY PUBLIC SERVICE	P.C.	POINT OF CURVATURE
C.S.C.	CONCRETE STEEL CYLINDER PIPE	P.E.	POLISHED END
CU	COPPER	P.I.	POINT OF INTERSECTION
D.I.	DUCTILE IRON PIPE	P.P.	POWER POLE
DIA.	DIAMETER	PSI	POUNDS PER SQUARE INCH
O.H.E.	OVERHEAD ELECTRIC LINE	P.T.	POINT OF TANGENCY
F.H.	FIRE HYDRANT	RJ	RESTRAINT JOINT
FND.	FOUND	R.O.W.	RIGHT-OF-WAY
F.O.C.	FIBER OPTIC CABLE	S.A.W.S.	SAN ANTONIO WATER SYSTEM
G	NATURAL GAS	SBC	SOUTHWESTERN BELL TELEPHONE COMPANY
G.I.	GALVANIZED IRON	SCH	SCHEDULE
IAW	IN ACCORDANCE WITH	SD	STORM DRAIN
INV.	INVERT	S.S.	SANITARY SEWER
I.P.	IRON PIN	STA.	STATION
IRRG	IRRIGATION	STD.	STANDARD
L.F.	LINEAR FEET	THD.	THREAD
L.L.	LAID LENGTH	UE	UNDERGROUND ELECTRIC
MIN.	MINIMUM	UT	UNDERGROUND TELEPHONE
MH.	MANHOLE	W	POTABLE WATER
M.J.	MECHANICAL JOINT		



Michael Pieprzica

WATER LEGEND

— G —	EXISTING GAS	— SS —	EXISTING SEWER MAIN
— T —	EXISTING TELEPHONE LINE	-----	PIPE TO BE REMOVED OR ABANDONED
— SD —	EXISTING STORM DRAIN	— SD —	PROPOSED STORM DRAIN
— W —	EXISTING WATER MAIN	— W 8" —	PROPOSED WATER LINE
— (W) —	EXISTING VALVE	— ● —	PROPOSED WATER VALVE
— E —	EXISTING OVERHEAD ELECTRICAL LINE	— SS 8" —	PROPOSED SANITARY SEWER
⊙	EXISTING POWER POLE	○	PROPOSED TWO-WAY SEWER CLEANOUT
⊗	EXISTING TREES	●	PROPOSED SANITARY SEWER MANHOLE

LEGEND			
PROP. WATER MAIN	---		
EXIST. WATER MAIN	---		
GAS MAIN	---		
SANITARY SEWER	---		
STORM SEWER	---		
UTILITY POLE LINE	---		
ELECTRIC CABLE	---		
TELEPHONE CABLE	---		
DUAL BRANCH SERV.	---		
NEW UNMETERED SERVICE:			
3/4" SINGLE	---		
1" DUAL	---		
SERVICE RECONNECT:			
3/4"	---		
1" OR LARGER	---		
SERVICE RELAY:			
3/4"	---		
1" OR LARGER	---		
SERVICE RELOCATE:			
3/4"	---		
1" OR LARGER	---		
RELOCATE METER	---		
NEW SERVICE:			
3/4"	---		
1" OR LARGER	---		

NO.	DATE	REVISION	APP.

UNINTECH CONSULTING ENGINEERS, INC.	
2431 E. Evans Road San Antonio, Texas 78259 Phone: (210) 641-6003	TBPE Reg. No. F-5499 Fax: (210) 641-8279 www.unitech.com

2019 SMP PACKAGE II (LYONS ST., SLIGO ST.)	
SAWS WATER WORK	
INDEX OF DRAWINGS, LEGEND, AND ABBREVIATIONS	
DEVELOPER:	CONT.
SUBMITTED	
APPROVED	
MAP No. 148544	BUDGET PROJ. 33
95% SUBMITTAL	PROJECT NO. 18-5009
DRAWN: RP	DESIGN: MP
CHECK: KWC	DATE: 7/27/2018
SHEET NO. : 2 OF 19	

GENERAL WATER NOTES:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
 - CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
 - CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
 - CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION."
 - CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION."
 - CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE, http://www.saws.org/business_center/specs. UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500, AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 72 HOURS PRIOR TO EXCAVATION.
- LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
 SAN ANTONIO WATER SYSTEM:
 SAWS UTILITY LOCATES: <http://www.saws.org/Service/Locates>
 COSA DRAINAGE 1-210-207-8048
 COSA TRAFFIC SIGNAL OPERATIONS 1-210-207-7720
 TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO constworkreq@saws.org. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO constworkreq@saws.org. ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- PRE CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSPI).
- POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS, AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.
- CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

WATER SECTION:

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY. SAWS PRODUCTION CONTROL CENTER 210-233-2016
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS, PAYMENT FOR SUCH WORK IS TO BE MADE UNDER ITEM NO. 3000, "HANDLING ASBESTOS CEMENT PIPE".
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

GENERAL NOTES:

- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.
- IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE SAWS INSPECTOR FORTY-EIGHT (48) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLAGE AND / OR TRACKED CONSTRUCTION MATERIALS AND / OR DEBRIS.

AT&T TELEPHONE COMPANY NOTE:

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THESE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR MUST CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-344-8377, CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

SPECTRUM (TIME WARNER CABLE) NOTE:

CONTRACTOR SHALL CONTACT THE ONE-CALL LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-344-8377. CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND SUPPORTING CABLE TV PLANT DURING CONSTRUCTION.

CPS ENERGY NOTES

- CALL CPS ENERGY LOCATOR AT 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- OVERHEAD LINES EXIST IN THE WORK AREAS. THESE LINES MAY NOT HAVE BEEN MARKED ON THE DRAWINGS SINCE THEY ARE CLEARLY VISIBLE. THE CONTRACTOR SHALL LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN TEN (10) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 3' RADIUS FROM NEUTRAL AND 10' RADIUS FROM PRIMARY BETWEEN PROPOSED TRAFFIC SIGNAL EQUIPMENT, INCLUDING SPAN WIRE, AND EXISTING OVERHEAD ELECTRICAL LINES.
- THE CONTRACTOR IS LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS CARRIES BOTH CRIMINAL AND CIVIL LIABILITY.
- CONTRACTOR SHALL NOT BEGIN WORK OR ACTIVITY UNTIL THE CONTRACTOR HAS NEGOTIATED A SATISFACTORY MUTUAL ARRANGEMENT WITH CPS ENERGY TO PROVIDE TEMPORARY DE-ENERGIZATION AND GROUNDING, TEMPORARY RELOCATION OR RAISING OF THE LINE, OR TEMPORARY MECHANICAL BARRIERS TO SEPARATE AND PREVENT CONTACT BETWEEN THE LINE AND THE MATERIAL OR EQUIPMENT OR THE PERSON PERFORMING THE WORK, ACTIVITY, OR FUNCTION.
- CONTRACTOR SHALL PAY CPS ENERGY THE ACTUAL EXPENSE INCURRED BY THE OPERATOR IN PROVIDING THE CLEARANCE PRESCRIBED IN THE AGREEMENT. CPS ENERGY MAY REQUIRE PAYMENT IN ADVANCE AND IS NOT REQUIRED TO PROVIDE THE CLEARANCE UNTIL THE CONTRACTOR MAKES THE PAYMENT.
- CONTRACTOR SHALL CONTACT AND COORDINATE WITH CPS ENERGY REPRESENTATIVE FOR POLES TO BE BRACED AND LINES TO BE DE-ENERGIZED AND/OR MOVED. CONTRACTOR IS RESPONSIBLE TO CPS ENERGY FOR ANY COSTS ASSOCIATED WITH BRACING OF POWER POLES OR DE-ENERGIZING AND/OR MOVING ANY CONFLICTING OVERHEAD POWER LINES.
- WHEN EXCAVATING WITHIN TWENTY FOUR INCHES (24") OF THE INDICATED LOCATION OF CPS ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CPS ENERGY FACILITIES ARE EXPOSED, CONTRACTOR SHALL PROVIDE SUFFICIENT SUPPORT TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
- THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.



Michael Pieprzica

7/27/2018 2:38:34 PM rpliomori V:\B-043-V SAWS-2019 Pipelines W&S Pk. II\ZDesign\Phase I-Drawings\Util-Water\DCN\B-043V-wl-01_gnote.dgn

LEGEND			
PROP. WATER MAIN			
EXIST. WATER MAIN			
GAS MAIN			
SANITARY SEWER			
STORM SEWER			
UTILITY POLE LINE			
ELECTRIC CABLE			
TELEPHONE CABLE			
DUAL BRANCH SERV.			
NEW UNMETERED SERVICE:			
3/4" SINGLE			
1" DUAL			
SERVICE RECONNECT:			
3/4" OR LARGER			
SERVICE RELAY:			
3/4" OR LARGER			
SERVICE RELOCATE:			
3/4" OR LARGER			
RELOCATE METER			
NEW SERVICE:			
3/4" OR LARGER			

NO.	DATE	REVISION	APP.

UNINTECH CONSULTING ENGINEERS, INC.
 2431 E. Evans Road
 San Antonio, Texas 78259
 Phone: (210) 641-6003
 TBPE Reg. No. F-5499
 Fax: (210) 641-8279
 www.unintech.com

2019 SMP PACKAGE II (LYONS ST., SLIGO ST.)
SAWS WATER WORK
WATER GENERAL NOTES

DEVELOPER:	CONT.
SUBMITTED	
APPROVED	
MAP No. 148544	BUDGET PROJ. 33
95% SUBMITTAL	PROJECT NO. 18-5009
DRAWN: RP	DESIGN: MP
CHECK: KWC	DATE: 7/27/2018
SHEET NO. : 3	OF 19

SUMMARY OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES					TOTAL QUANTITY
			SHEET 6	SHEET 7	SHEET 9	SHEET 10	SHEET 11	
100.1	MOBILIZATION	L.S.						1
101.1	PREPARING RIGHT OF WAY	L.S.						1
103.3	REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (3,000 SF < X < 10,000 SF)	SF			160	80	40	308
203.1	TACK COAT	GAL	21	25	21	21	11	108
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10' COMP. DEPTH)	SY	161	197	163	163	89	850
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH) (< 5000 SY)	SY	205	251	207	207	114	1083
502.1	CONCRETE SIDEWALKS (< 150 SY)	SY			18	9	4	34
530.1	BARRICADE, SIGNS AND TRAFFIC HANDLING	LS		0.5			1	2
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	396	485	400	400	220	2091
818.0	8" PVC WATERLINE	L.F.	396	485	400	400	220	2091
824.0	RELAY 3/4" SHORT SERVICE	EA.	7	4	5	3	2	23
824.0	RELAY 3/4" LONG SERVICE	EA.	8	7	5	4		26
824.0	RELAY 1" SHORT SERVICE	EA.	1					1
824.0	NEW 3/4" SHORT UNMETERED SERVICE	EA.	1	2	3	5		12
824.0	NEW 3/4" LONG UNMETERED SERVICE	EA.	2	4	3	2	3	15
824.0	RELOCATE 3/4" LONG SERVICE	EA.	2		2			4
824.5	CUSTOMER SHUT-OFF VALVE	EA.			5	1		7
828.0	8" GATE VALVES	EA.	1	3		1	1	7
833.0	EXISTING METER AND NEW METER BOX RELOCATION	EA.			5	1		7
833.0	METER BOX	EA.	19	17	11	13	5	72
834.1	FIRE HYDRANT	EA.	1		1	1		3
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.6	0.5	0.4	0.2	0.3	2
840.0	6" WATER TIE-INS	EA.	1	2	1		1	6
841.0	HYDROSTATIC TESTING	EA.	1		1		1	3
844.0	2" BLOWOFF, PERMANENT	EA.		1				1
844.0	2" BLOWOFF, TEMPORARY	EA.	1	2	1		1	6
COSA 413	FLOWABLE FILL	C.Y.	7	56	2	2	2	76
3000.0	REMOVAL, TRANSPORTATION, AND DISPOSAL OF AC PIPE	L.F.			13		13	29

7/27/2018 2:38:35 PM
 V:\B-043-V SAWS-2019 Pipelines W&S Pk. II\2Design Phase I\Drawings\Util-Water\DCN\B-043V-w-04_summary.dgn



NO.	DATE	REVISION	APP.
UNITECH CONSULTING ENGINEERS, INC. <small>2431 E. Evans Road San Antonio, Texas 78259 Phone: (210) 641-6003</small>			
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.) SAWS WATER WORK SUMMARY OF QUANTITIES			
DEVELOPER:		CONT.	
SUBMITTED		APPROVED	
MAP No.	148544	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 18-5009	DATE:	7/27/2018
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO.: 4 OF 19

LEGEND

PROP. WATER MAIN	---
EXIST. WATER MAIN	---
GAS MAIN	---
SANITARY SEWER	---
STORM SEWER	---
UTILITY POLE LINE	---
ELECTRIC CABLE	---
TELEPHONE CABLE	---
DUAL BRANCH SERV.	---
NEW UNMETERED SERVICE:	
3/4" SINGLE	-----
1" DUAL	-----
SERVICE RECONNECT:	
3/4"	-----
1" OR LARGER	-----
SERVICE RELAY:	
3/4"	-----
1" OR LARGER	-----
SERVICE RELOCATE:	
3/4"	-----
1" OR LARGER	-----
RELOCATE METER	-----
NEW SERVICE:	
3/4"	-----
1" OR LARGER	-----

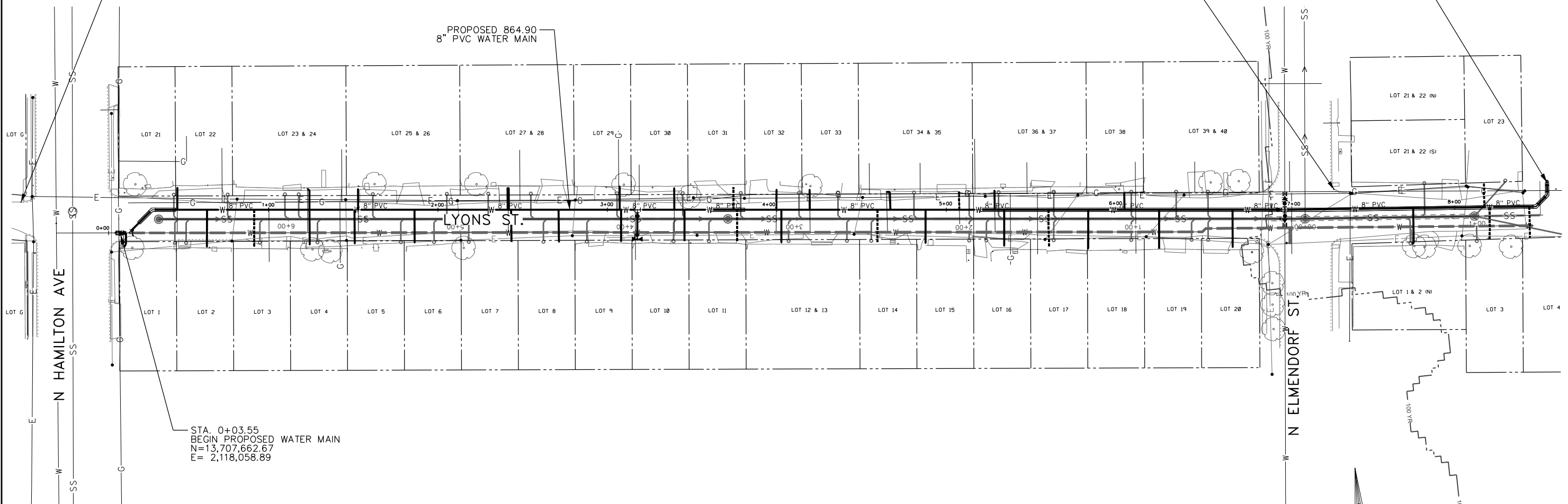
CONTROL POINT CP-1
 1/2" IRON ROD W/BLUE CAP
 N= 13,707,659.05
 E= 2,118,001.56
 ELEV.= 680.20

CONTROL POINT CP-2
 MAG NAIL W/ SHINER
 N=13,707,585.52
 E=2,118,773.04
 ELEV. 661.61

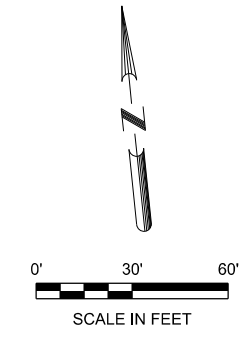
STA. 8+64.90
 END PROPOSED
 WATER MAIN
 N=13,707,603.84
 E= 2,118,902.65

PROPOSED 864.90
 8" PVC WATER MAIN

STA. 0+03.55
 BEGIN PROPOSED WATER MAIN
 N=13,707,662.67
 E= 2,118,058.89



NOTE: 1. ALL PRUNING, TREE TRIMMING & LANDSCAPE REPAIR TO EXISTING OR BETTER CONDITION IS N.S.P.I
 2. PLEASE COORDINATE WITH IRVING MIDDLE SCHOOL DURING TIE-INS AND WATER SHUT DOWN



Michael Pieprzica

CONTROL POINT							
CONTROL POINT No.	DESCRIPTION	ELEVATION	NORTHING (Grid)	EASTING (Grid)	CONVERGENCE	LATITUDE	LONGITUDE
1	1/2" Iron Rod w/Blue Cap	680.20	13707659.05	2118001.56	0° 13' 48.45"	N29° 26' 22.38"	W98° 31' 48.99"
2	MAG NAIL w/Shiner	661.61	13707585.52	2118773.04	0° 13' 52.72"	N29° 26' 21.62"	W98° 31' 40.27"

LEGEND

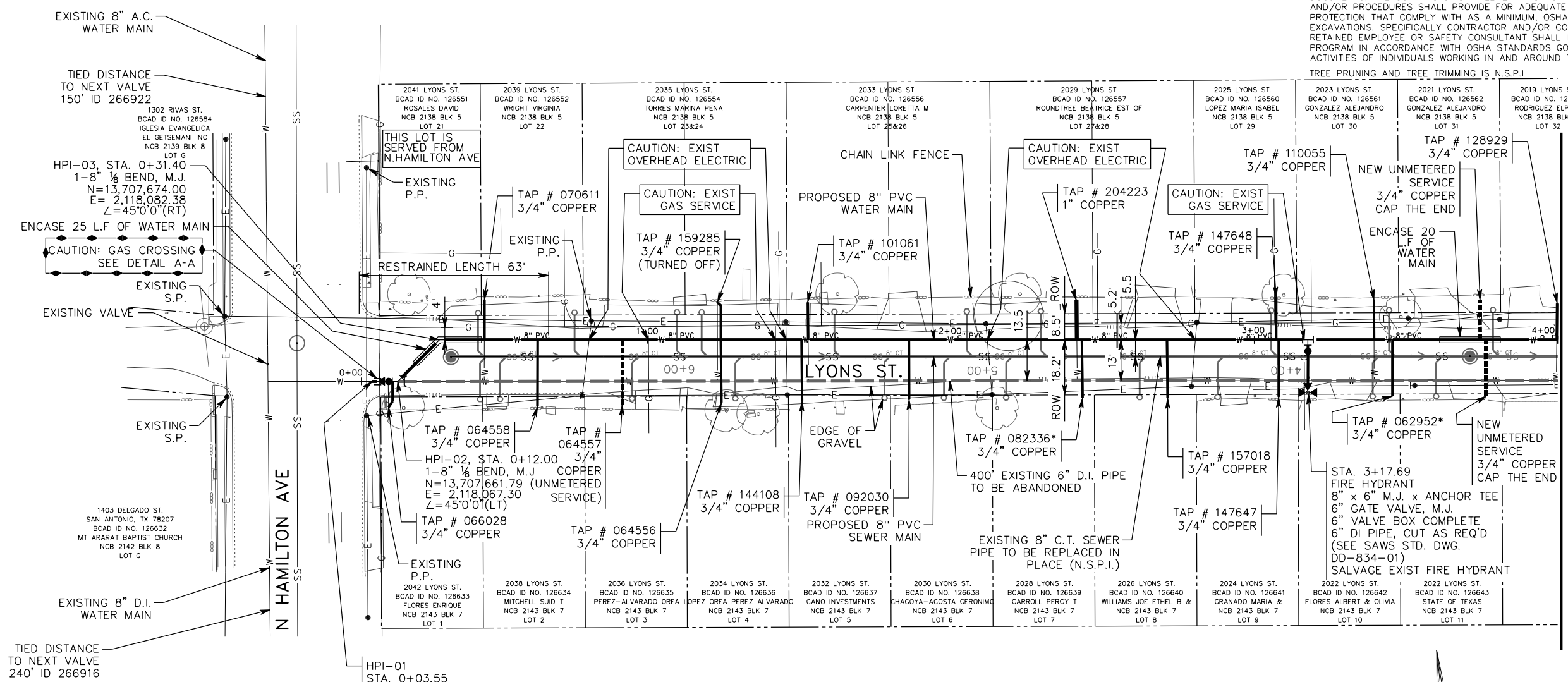
- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED
- SERVICE:
 - 3/4" SINGLE
 - 1" DUAL
 - SERVICE RECONNECT:
 - 3/4"
 - 1" OR LARGER
 - SERVICE RELAY:
 - 3/4"
 - 1" OR LARGER
 - SERVICE RELOCATE:
 - 3/4"
 - 1" OR LARGER
 - RELOCATE METER
 - NEW SERVICE:
 - 3/4"
 - 1" OR LARGER

NO.	DATE	REVISION	APP.
UNINTECH CONSULTING ENGINEERS, INC. 2431 E. Evans Road San Antonio, Texas 78259 Phone: (210) 641-6003 TBPE Reg. No. F-5499 Fax: (210) 641-8279 www.unintech.com			
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.) SAWS WATER WORK LYONS ST. WATER LAYOUT			
DEVELOPER:		CONT.	
SUBMITTED			
APPROVED			
MAP No.	148544	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 18-5009	DATE:	7/27/2018
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO.: 5 OF 19

7/27/2018 2:38:51 PM
 V:\B-043-V SAMS-2019 Pipelines W&S Pk. II\2Design Phase I-Drawings\Util-Water\CON\B-043V-wt-05_lyons layout.dgn
 rpilamori

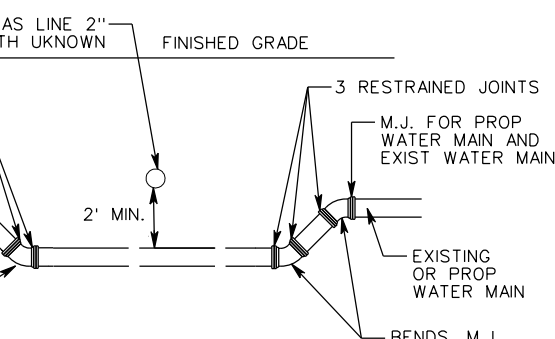
TRENCH EXCAVATION SAFETY PROTECTION
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

TREE PRUNING AND TREE TRIMMING IS N.S.P.I.



MATCHLINE - STA. 4+00.00

TIED DISTANCE TO NEXT VALVE
240' ID 266916



TYPICAL WATER MAIN ADJUSTMENT FOR UTILITY CROSSING
DETAIL A-A
NO SCALE

HPI-01
STA. 0+03.55
BEGIN 8" WATER MAIN LINE
N=13,707,662.67
E= 2,118,058.89
1 - 8" GATE VALVES, M.J.
1 - 6" VALVE BOXES COMPLETE
1 - 2" TEMPORARY BLOWOFF (6" & 8" MAINS)
8" x 2" ECCENTRICALLY TAPPED, FLANGE (TEMP)
2" STD - BLOWOFF (TEMP)
(SEE SAWS STD DWG. DD-844-02) (SEE SHEET 3 OF 4)
MACHINE CHLORINATION: (SEE SAWS STD. DWG. DD-847-01)
TIE-IN AFTER RELEASE FOR SERVICE:
AFTER RELEASE FOR SERVICE
TIE NEW 8" PVC MAIN TO EXISTING 6" D.I. MAIN
1 - 6" CASTING COUPLING (PVC TO D.I.)
THRUST BLOCKS
12 L.F. OF 8" PVC PIPE, CUT AS REQUIRED
REMOVE 12 L.F. OF EXIST 6" D.I. PIPE

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
203.1	TACK COAT	GAL	21
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEPTH)	SY	161
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH)	SY	205
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	396
818.0	8" PVC WATERLINE	L.F.	396
824.0	RELAY 3/4" SHORT SERVICE	EA.	7
824.0	RELAY 3/4" LONG SERVICE	EA.	8
824.0	RELAY 1" SHORT SERVICE	EA.	1
824.0	NEW 3/4" SHORT UNMETERED SERVICE	EA.	1
824.0	NEW 3/4" LONG UNMETERED SERVICE	EA.	2
824.0	RELOCATE 3/4" LONG SERVICE	EA.	2
828.0	8" GATE VALVES	EA.	1
833.0	METER BOX	EA.	19
834.1	FIRE HYDRANT	EA.	1
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.6
840.0	6" WATER TIE-INS	EA.	1
841.0	HYDROSTATIC TESTING	EA.	1
844.0	2" BLOWOFF, TEMPORARY	EA.	1
COSA 413	FLOWABLE FILL	C.Y.	7

7/27/2018
 STATE OF TEXAS
 REGISTERED PROFESSIONAL ENGINEER
 MICHAEL PIEPRZICA
 111638
 Michael Pieprzica

LEGEND

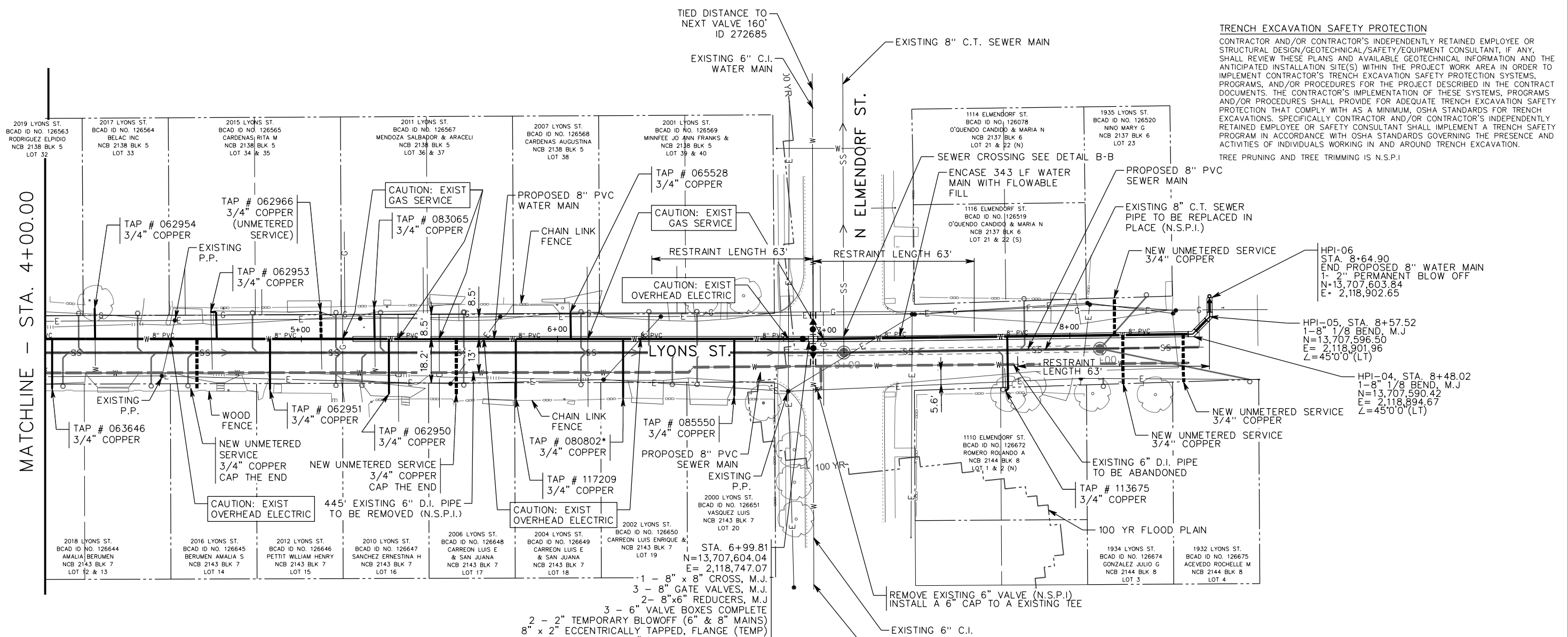
- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED SERVICE:
- 3/4" SINGLE
- 3/4" DUAL
- SERVICE RECONNECT:
- 3/4"
- 1" OR LARGER
- SERVICE RELAY:
- 3/4"
- 1" OR LARGER
- SERVICE RELOCATE:
- 3/4"
- 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
- 3/4"
- 1" OR LARGER

NO.	DATE	REVISION	APP.
 UNINTECH CONSULTING ENGINEERS, INC. 2431 E. Evans Road San Antonio, Texas 78259 Phone: (210) 641-6003 TBPE Reg. No. F-5499 Fax: (210) 641-8279 www.unitech.com			
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.) SAWS WATER WORK LYONS ST. WATER PLAN STA. 0+00 - 4+00			
DEVELOPER:		CONT.	
SUBMITTED: _____			
APPROVED: _____			
MAP No.	148544	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 18-5009	DATE: 7/27/2018	
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO.: 6 OF 19

7/27/2018 2:38:56 PM V:\B-043-V SAWS-2019 Pipelines W&S Pk. II\Drawings\Util-Water\DCN\B-043V-wl-06_lyons plan-L.dgn

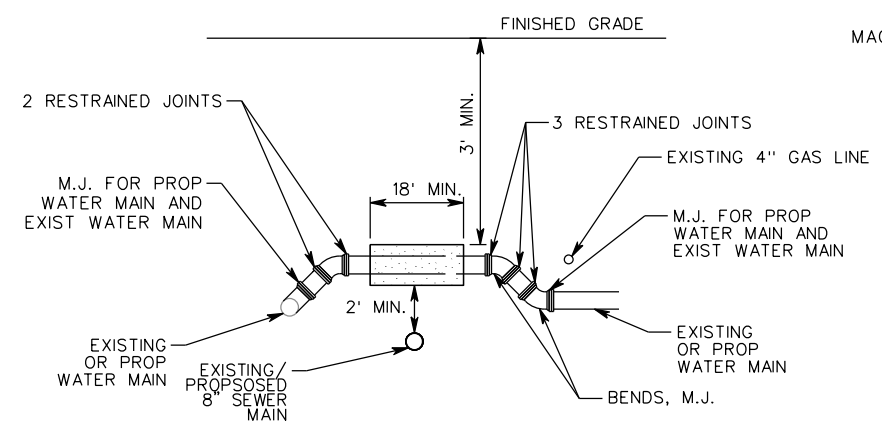
* WATER SERVICE LOCATION UNKNOWN. THE METER LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION AND UPDATE ON AS BUILTS.

7/27/2018 2:52:27 PM
 V:\B-043-V SAMS-2019 Pipelines W&S Pk. II\ZDesign\Phase I\Drawings\Util-Water\DCN\B-043V-wl-07_lyons plan-2.dgn
 rpilomori



TRENCH EXCAVATION SAFETY PROTECTION
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
 TREE PRUNING AND TREE TRIMMING IS N.S.P.I.

MATCHLINE - STA. 4+00.00



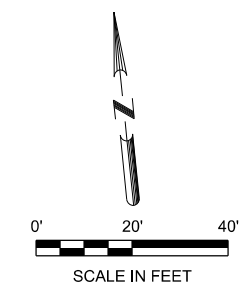
TYPICAL WATER MAIN ADJUSTMENT FOR UTILITY CROSSING
 NO SCALE
 DETAIL B-B

* WATER SERVICE LOCATION UNKNOWN. THE METER LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION AND UPDATE ON AS BUILTS.

1 - 8" x 8" CROSS, M.J.
 3 - 8" GATE VALVES, M.J.
 2 - 8"x6" REDUCERS, M.J.
 3 - 6" VALVE BOXES COMPLETE
 2 - 2" TEMPORARY BLOWOFF (6" & 8" MAINS)
 8" x 2" ECCENTRICALLY TAPPED, FLANGE (TEMP)
 2" STD - BLOWOFF (TEMP)
 (SEE SAWS STD DWG. DD-844-02) (SEE SHEET 3 OF 4)
 MACHINE CHLORINATION: (SEE SAWS STD. DWG. DD-847-01)
 TIE-IN AFTER RELEASE FOR SERVICE:
 AFTER RELEASE FOR SERVICE
 TIE NEW 8" PVC MAIN TO EXISTING 6" C.I. MAINS
 2 - 6" CASTING COUPLING (PVC TO C.I.)
 THRUST BLOCKS
 12 L.F. OF 8" PVC PIPE, CUT AS REQUIRED
 REMOVE 12 L.F. OF EXIST 6" C.I. PIPE (N.S.P.I.)

ESTIMATED QUANTITIES

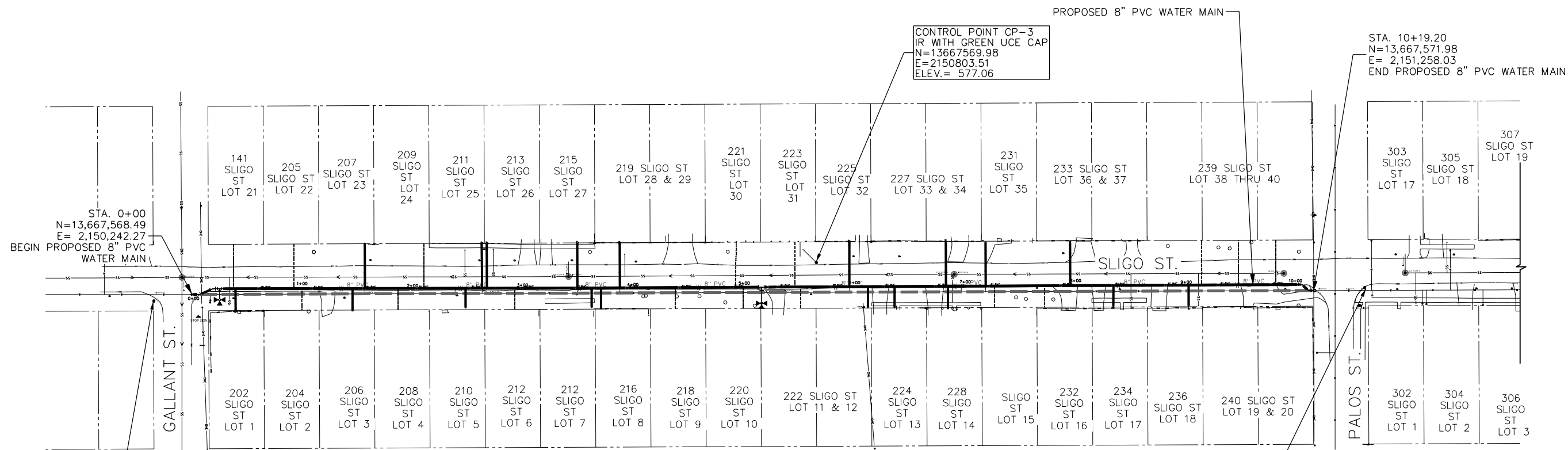
ITEM	DESCRIPTION	UNIT	QUANTITIES
203.1	TACK COAT	GAL	25
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEPTH)	SY	197
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH)	SY	251
530.1	BARRICADE, SIGNS AND TRAFFIC HANDLING	LS	05
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	485
818.0	8" PVC WATERLINE	L.F.	485
824.0	RELAY 3/4" SHORT SERVICE	EA.	4
824.0	RELAY 3/4" LONG SERVICE	EA.	7
824.0	NEW 3/4" SHORT UNMETERED SERVICE	EA.	2
824.0	NEW 3/4" LONG UNMETERED SERVICE	EA.	4
828.0	8" GATE VALVES	EA.	3
833.0	METER BOX	EA.	17
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	05
840.0	6" WATER TIE-INS	EA.	2
844.0	2" BLOWOFF, PERMANENT	EA.	1
844.0	2" BLOWOFF, TEMPORARY	EA.	2
COSA 413	FLOWABLE FILL	C.Y.	56



LEGEND

PROP. WATER MAIN	---
EXIST. WATER MAIN	---
GAS MAIN	---
SANITARY SEWER	---
STORM SEWER	---
UTILITY POLE LINE	---
ELECTRIC CABLE	---
TELEPHONE CABLE	---
DUAL BRANCH SERV.	---
NEW UNMETERED SERVICE:	
3/4" SINGLE	-----
1" DUAL	-----
SERVICE RECONNECT:	
3/4"	-----
1" OR LARGER	-----
SERVICE RELAY:	
3/4"	-----
1" OR LARGER	-----
SERVICE RELOCATE:	
3/4"	-----
1" OR LARGER	-----
RELOCATE METER	-----
NEW SERVICE:	
3/4"	-----
1" OR LARGER	-----

NO.	DATE	REVISION	APP.
UNINTECH CONSULTING ENGINEERS, INC.			
2431 E. Evans Road San Antonio, Texas 78259 Phone: (210) 641-6003			
TBPE Reg. No. F-5499 Fax: (210) 641-8279 www.unitech.com			
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.)			
SAWS WATER WORK			
LYONS ST. WATER PLAN			
STA. 4+00 - 8+46.93			
DEVELOPER:		CONT.	
SUBMITTED:			
APPROVED:			
MAP No.	148544	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 18-5009	DATE:	7/27/2018
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO.: 7 OF 19



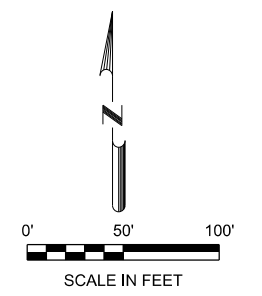
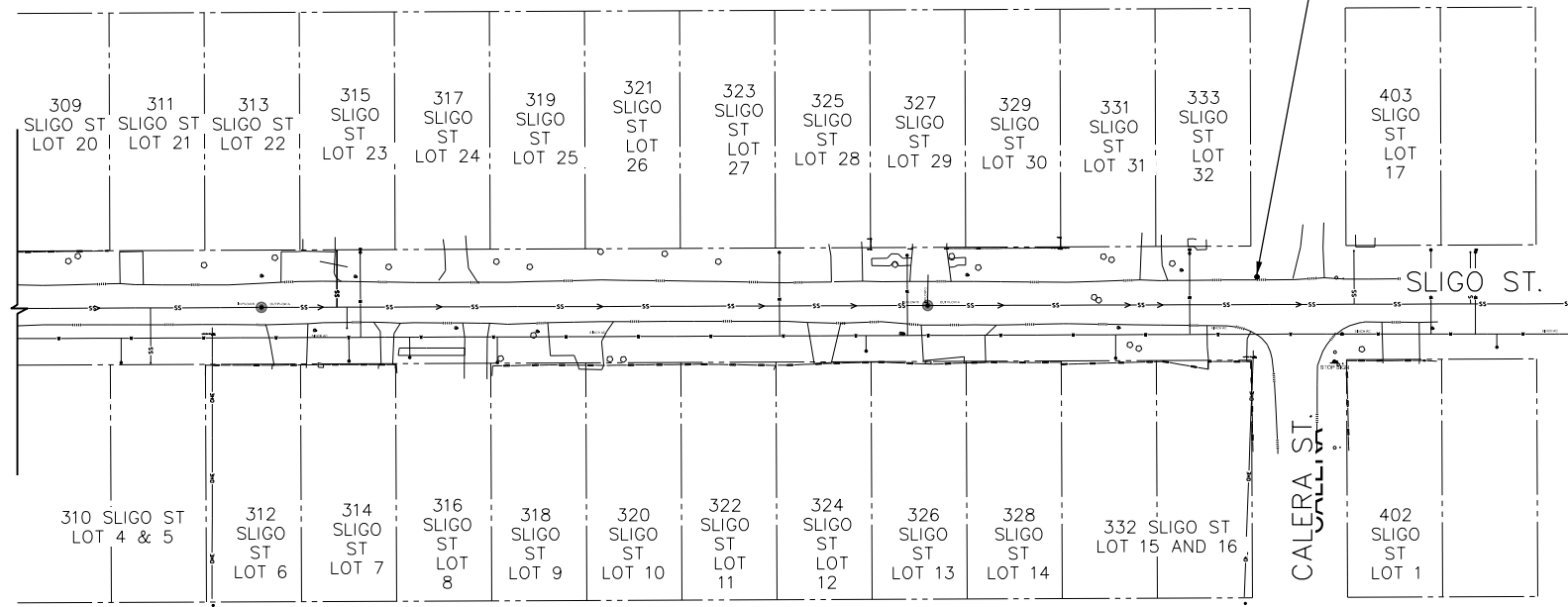
CONTROL POINT CP-4
IR WITH GREEN UCE CAP
N=13667535.24
E=2150203.60
ELEV.= 567.01

CONTROL POINT CP-3
IR WITH GREEN UCE CAP
N=13667569.98
E=2150803.51
ELEV.= 577.06

CONTROL POINT CP-2
MAG WITH SHINER
N=13667547.20
E=2151299.92
ELEV.=578.41

CONTROL POINT CP-1
IR WITH GREEN UCE CAP
N=13667577.76
E=2152106.16
ELEV.=575.93

STA. 10+19.20
N=13,667,571.98
E= 2,151,258.03
END PROPOSED 8" PVC WATER MAIN



7/27/2018
STATE OF TEXAS
MICHAEL PIEPRZICA
111638
REGISTERED PROFESSIONAL ENGINEER
Michael Pieprzica

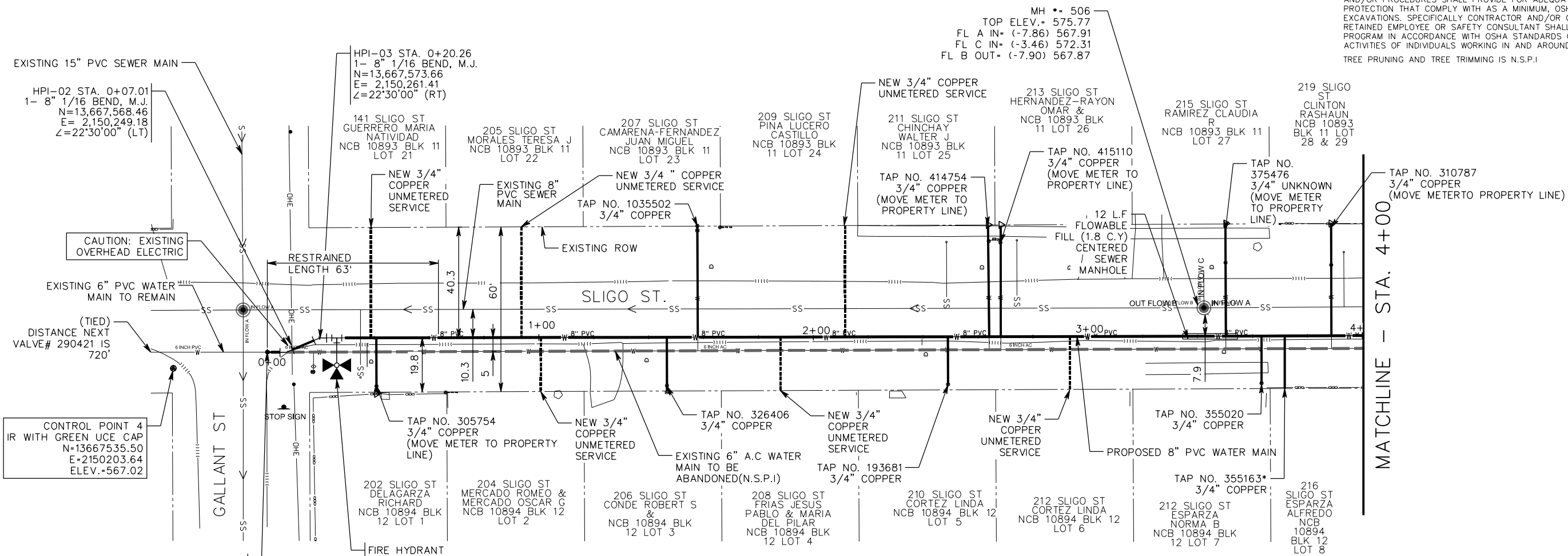
CONTROL POINTS									
CONTROL POINT No.	DESCRIPTION	ELEVATION	NORTHING (SURF)	EASTING (SURF)	NORTHING (GRID)	EASTING (GRID)	COVERGENCE	LATITUDE	LONGITUDE
1	IR WITH GREEN UCE CAP	575.91	13669491.18	2152407.34	13667577.72	2152106.05	00° 16' 56.33493"	29° 19' 44.03660"	98° 25' 25.47715"
2	MAG NAIL	578.44	13669460.61	2151601.06	13667547.15	2151299.88	00° 16' 51.87169"	29° 19' 43.77317"	98° 25' 34.58743"
3	IR WITH GREEN UCE CAP	577.12	13669483.44	2151104.61	13667569.98	2150803.50	00° 16' 49.12469"	29° 19' 44.02329"	98° 25' 40.19456"
4	IR WITH GREEN UCE CAP	567.02	13669448.65	2150504.63	13667535.20	2150203.60	00° 16' 45.80311"	29° 19' 43.70795"	98° 25' 46.97450"

- LEGEND**
- PROP. WATER MAIN
 - EXIST. WATER MAIN
 - GAS MAIN
 - SANITARY SEWER
 - STORM SEWER
 - UTILITY POLE LINE
 - ELECTRIC CABLE
 - TELEPHONE CABLE
 - DUAL BRANCH SERV.
 - NEW UNMETERED SERVICE:
 - 3/4" SINGLE
 - 1" DUAL
 - SERVICE RECONNECT:
 - 3/4"
 - 1" OR LARGER
 - SERVICE RELAY:
 - 3/4"
 - 1" OR LARGER
 - SERVICE RELOCATE:
 - 3/4"
 - 1" OR LARGER
 - RELOCATE METER
 - NEW SERVICE:
 - 3/4"
 - 1" OR LARGER

NO.	DATE	REVISION	APP.
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.) SAWS WATER WORK			
DEVELOPER:		CONT.	
SUBMITTED			
APPROVED			
MAP No.	180544 & 182544	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 18-5009	DATE:	7/27/2018
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO.: 8 OF 19

7/27/2018 2:39:20 PM
 V:\B-043-V SAWS-2019 Pipelines W&S Pk. II\ZDesign Phase I\Drawings\Util-Water\DCN\B-043V-wl-08_sligo st. layout.dgn
 rpilamori

TRENCH EXCAVATION SAFETY PROTECTION
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
 TREE PRUNING AND TREE TRIMMING IS N.S.P.I



HPI-02 STA. 0+07.01
 1- 8" 1/16 BEND, M.J.
 N=13,667,568.46
 E= 2,150,249.18
 Z=22°30'00" (LT)

HPI-03 STA. 0+20.26
 1- 8" 1/16 BEND, M.J.
 N=13,667,573.66
 E= 2,150,261.41
 Z=22°30'00" (RT)

CAUTION: EXISTING OVERHEAD ELECTRIC

EXISTING 6" PVC WATER MAIN TO REMAIN

(TIED) DISTANCE NEXT VALVE# 290421 IS 720'

CONTROL POINT 4
 IR WITH GREEN UCE CAP
 N=13667535.50
 E=2150203.64
 ELEV.=567.02

HPI-01 STA. 0+00
 N=13,667,568.49
 E= 2,150,242.27

BEGIN 8" PROPOSED WATER MAIN
 1- 8"x6" REDUCER, M.J
 1-2" TEMPORARY BLOW OFF(6" & 8" MAINS)
 8" M.J x 2" THD C.I OR D.I
 ECCENTRIC REDUCER, (TEMP.)
 (SEE SAWS STD. DWG. DD-844-01)
 SEE SHEET 3 OF 4

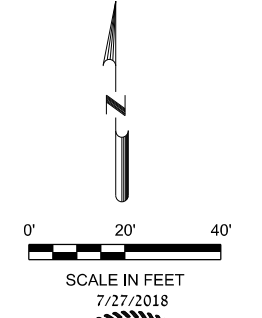
MACHINE CHLORINATION:
 (SEE SAWS STD. DWG DD-847-01)
 TIE IN AFTER RELEASE FOR SERVICE:
 AFTER RELEASE FOR SERVICE
 TIE NEW 8" PVC MAIN TO EXISTING 6" A.C.
 VALVE
 1-6" TRANSITION COUPLING (P.V.C TO A.C)
 THRUST BLOCKS
 5 L.F. OF 6" PVC, CUT AS REQUIRED
 REMOVE 13 L.F. OF 6" A.C. PIPE

FIRE HYDRANT STA. 0+26.36
 8" x 6" M.J. x ANCHOR TEE
 6" GATE VALVE, M.J.
 6" VALVE BOX COMPLETE
 6" DI PIPE, CUT AS REQ'D
 (SEE SAWS STD. DWG. DD-834-01)
 SALVAGE EXISTING FIRE HYDRANT N.S.P.I

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
103.3	REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (3,000 SF < X <	SF	160
203.1	TACK COAT	GAL	21
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEPTH)	SY	163
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH) (<	SY	207
502.1	CONCRETE SIDEWALKS (< 150 SY)	SY	18
550	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	400
818	8" PVC WATERLINE	L.F.	400
824	RELAY 3/4" SHORT SERVICE	EA.	5
824	RELAY 3/4" LONG SERVICE	EA.	5
824	NEW 3/4" SHORT UNMETERED SERVICE	EA.	3
824	NEW 3/4" LONG UNMETERED SERVICE	EA.	3
824	RELOCATE 3/4" LONG SERVICE	EA.	2
824.5	CUSTOMER SHUT-OFF VALVE	EA.	5
833	EXISTING METER AND NEW METER BOX RELOCATION	EA.	5
833	METER BOX	EA.	11
834.1	FIRE HYDRANT	EA.	1
836	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.4
840	6" WATER TIE-INS	EA.	1
841	HYDROSTATIC TESTING	EA.	1
844	2" BLOWOFF, TEMPORARY	EA.	1
COSA 413	FLOWABLE FILL	C.Y.	2
3000	REMOVAL, TRANSPORTATION, AND DISPOSAL OF AC PIPE	L.F.	13

* WATER SERVICE LOCATION UNKNOWN. THE METER LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION AND UPDATE ON AS BUILTS.



Michael Pieprzica

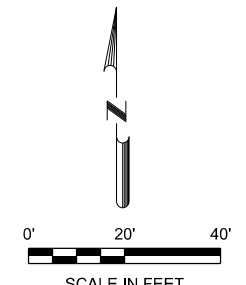
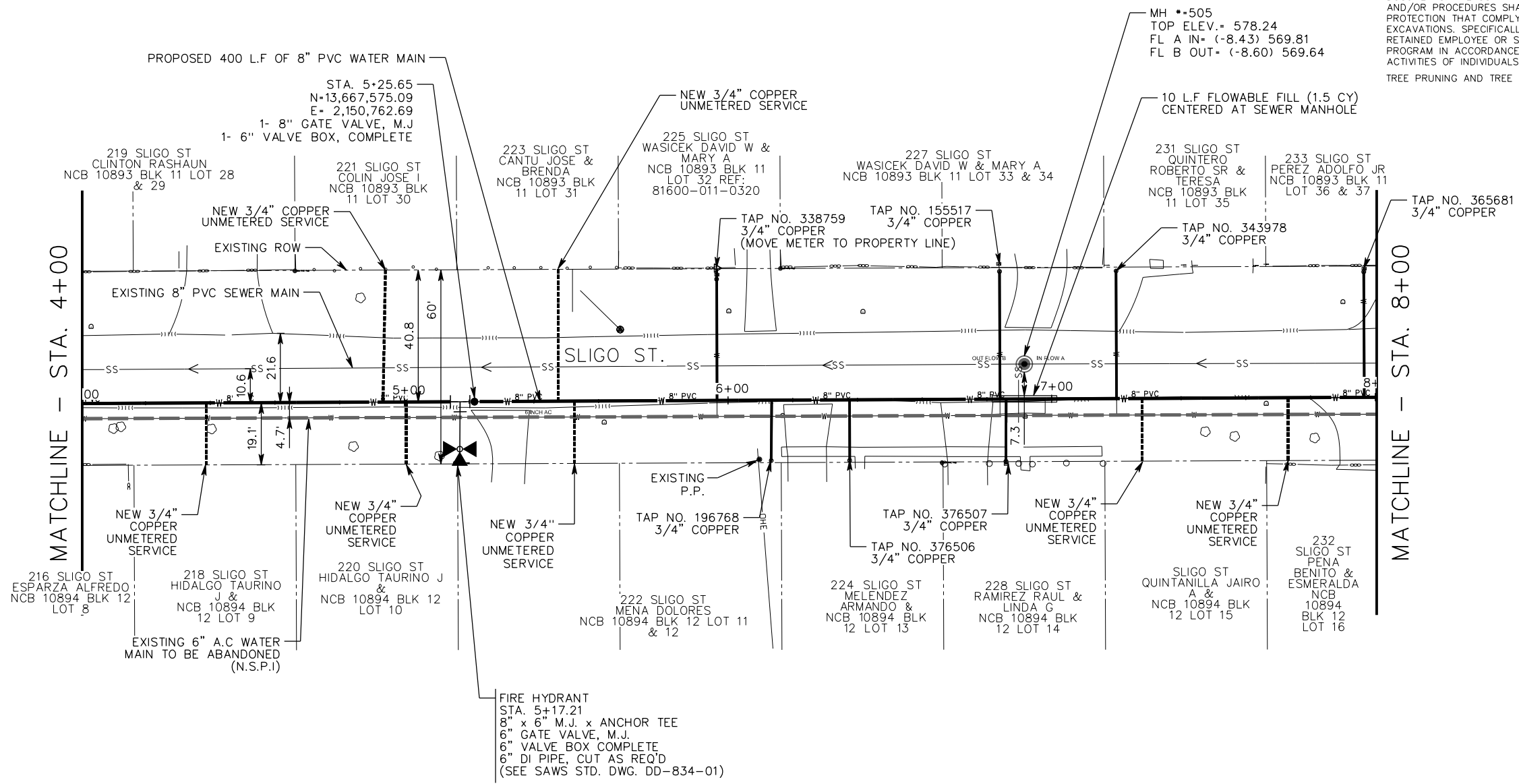
LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED SERVICE:
- 3/4" SINGLE
- 1" DUAL
- SERVICE RECONNECT:
- 3/4"
- 1" OR LARGER
- SERVICE RELAY:
- 3/4"
- 1" OR LARGER
- SERVICE RELOCATE:
- 3/4"
- 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
- 3/4"
- 1" OR LARGER

NO.	DATE	REVISION	APP.
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.) SAWS WATER WORK SLIGO ST. WATER PLAN STA. 0+00 - STA. 4+00			
DEVELOPER:		CONT.	
SUBMITTED:			
APPROVED:			
MAP No. 180544 & 182544	BUDGET PROJ. 33		
95% SUBMITTAL	PROJECT NO. 18-5009	DATE: 7/27/2018	
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO.: 9 OF 19

7/27/2018 2:39:26 PM
 W:\B-043-V SAWS-2019 Pipelines W&S Pk. II\ZDesign Phase I\Drawings\Util-Water\DCN\B-043V-wl-09_sligo st. plan-1.dgn
 rpilamori

TRENCH EXCAVATION SAFETY PROTECTION
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
 TREE PRUNING AND TREE TRIMMING IS N.S.P.I



7/27/2018
 STATE OF TEXAS
 MICHAEL PIEPRZICA
 111638
 REGISTERED PROFESSIONAL ENGINEER
Michael Pieprzica

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
103.3	REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (3,000 SF)	SF	80
203.1	TACK COAT	GAL	21
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEP)	SY	163
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEP)	SY	207
502.1	CONCRETE SIDEWALKS (< 150 SY)	SY	9
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	400
818.0	8" PVC WATERLINE	L.F.	400
824.0	RELAY 3/4" SHORT SERVICE	EA	3
824.0	RELAY 3/4" LONG SERVICE	EA	4
824.0	NEW 3/4" SHORT UNMETERED SERVICE	EA	5
824.0	NEW 3/4" LONG UNMETERED SERVICE	EA	2
824.5	CUSTOMER SHUT-OFF VALVE	EA	1
828.0	8" GATE VALVES	EA	1
833.0	EXISTING METER AND NEW METER BOX RELOCATION	EA	1
833.0	METER BOX	EA	13
834.1	FIRE HYDRANT	EA	1
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.2
COSA 413	FLOWABLE FILL	C.Y.	2

* WATER SERVICE LOCATION UNKNOWN. THE METER LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION AND UPDATE ON AS BUILTS.

LEGEND

PROP. WATER MAIN
 EXIST. WATER MAIN
 GAS MAIN
 SANITARY SEWER
 STORM SEWER
 UTILITY POLE LINE
 ELECTRIC CABLE
 TELEPHONE CABLE
 DUAL BRANCH SERV.
 NEW UNMETERED SERVICE:
 3/4" SINGLE
 1" DUAL
 SERVICE RECONNECT:
 3/4"
 1" OR LARGER
 SERVICE RELAY:
 3/4"
 1" OR LARGER
 SERVICE RELOCATE:
 3/4"
 1" OR LARGER
 RELOCATE METER
 NEW SERVICE:
 3/4"
 1" OR LARGER

NO.	DATE	REVISION	APP.

UNINTECH CONSULTING ENGINEERS, INC.
 2431 E. Evans Road
 San Antonio, Texas 78259
 Phone: (210) 641-6003
 TBPE Reg. No. F-5499
 Fax: (210) 641-8279
 www.unintech.com

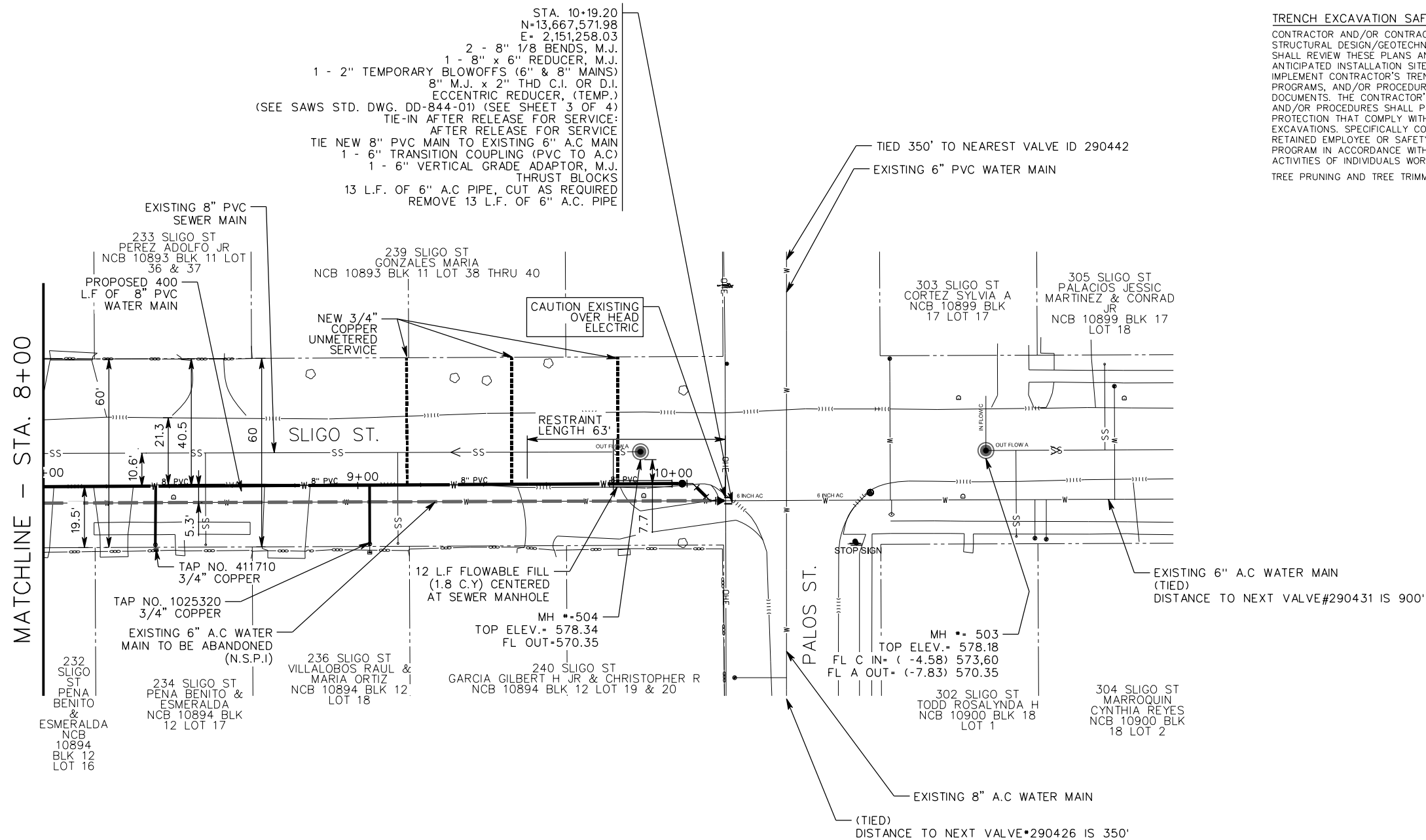
**2019 SMP PACKAGE II (LYONS ST., SLIGO ST.)
 SAWS WATER WORK
 SLIGO ST. WATER PLAN
 STA. 4+00 - STA. 8+00**

DEVELOPER: _____ CONT. _____
 SUBMITTED: _____
 APPROVED: _____

MAP No. 180544 & 182544 BUDGET PROJ. 33
 95% SUBMITTAL PROJECT NO. 18-5009 DATE: 7/27/2018
 DRAWN: RP DESIGN: MP CHECK: KWC SHEET NO.: 10 OF 19

7/27/2018 2:39:33 PM
 V:\B-043-V SAWS-2019 Pipelines W&S Pk. II\ZDesign\Phase I-Drawings\Util-Water\DCN\18-043V-wl-10_sligo st. plan-2.dgn
 rpliomori

7/27/2018 2:39:39 PM
 W:\B-043-V SAMS-2019 Pipelines W&S Pk. II\2Design Phase\Drawings\Util-Water\DCN\B-043V-wt-11_sligo st. plan-3.dgn
 rpilomori



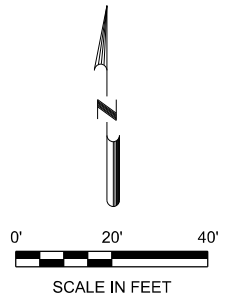
TRENCH EXCAVATION SAFETY PROTECTION
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
 TREE PRUNING AND TREE TRIMMING IS N.S.P.I

STA. 10+19.20
 N=13,667,571.98
 E= 2,151,258.03
 2 - 8" 1/8 BENDS, M.J.
 1 - 8" x 6" REDUCER, M.J.
 1 - 2" TEMPORARY BLOWOFFS (6" & 8" MAINS)
 8" M.J. x 2" THD C.I. OR D.I. ECCENTRIC REDUCER, (TEMP.)
 (SEE SAWS STD. DWG. DD-844-01) (SEE SHEET 3 OF 4)
 TIE-IN AFTER RELEASE FOR SERVICE:
 AFTER RELEASE FOR SERVICE:
 TIE NEW 8" PVC MAIN TO EXISTING 6" A.C MAIN
 1 - 6" TRANSITION COUPLING (PVC TO A.C)
 1 - 6" VERTICAL GRADE ADAPTOR, M.J.
 THRUST BLOCKS
 13 L.F. OF 6" A.C PIPE, CUT AS REQUIRED
 REMOVE 13 L.F. OF 6" A.C. PIPE

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
103.3	REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (3,000 SF < X < 10	SF	40
203.1	TACK COAT	GAL	11
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (10" COMP. DEPTH)	SY	89
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH) (< 50	SY	114
502.1	CONCRETE SIDEWALKS (< 150 SY)	SY	4
530.1	BARRICADE SIGNS AND TRAFFIC HANDLING	LS	1
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	220
818.0	8" PVC WATERLINE	L.F.	220
824.0	RELAY 3/4" SHORT SERVICE	EA.	2
824.0	NEW 3/4" LONG UNMETERED SERVICE	EA.	3
828.0	8" GATE VALVES	EA.	1
833.0	METER BOX	EA.	5
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.3
840.0	6" WATER TIE-INS	EA.	1
841.0	HYDROSTATIC TESTING	EA.	1
844.0	2" BLOWOFF, TEMPORARY	EA.	1
COSA 413	FLOWABLE FILL	C.Y.	2
3000.0	REMOVAL, TRANSPORTATION, AND DISPOSAL OF AC PIPE	L.F.	13

* WATER SERVICE LOCATION UNKNOWN. THE METER LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION AND UPDATE ON AS BUILTS.



7/27/2018
 STATE OF TEXAS
 MICHAEL PIEPRZICA
 111638
 REGISTERED PROFESSIONAL ENGINEER
Michael Pieprzica

NO.	DATE	REVISION	APP.

UNINTECH CONSULTING ENGINEERS, INC.
 2431 E. Evans Road San Antonio, Texas 78259 Phone: (210) 641-6003
 TBPE Reg. No. F-5499 Fax: (210) 641-8279 www.unitech.com

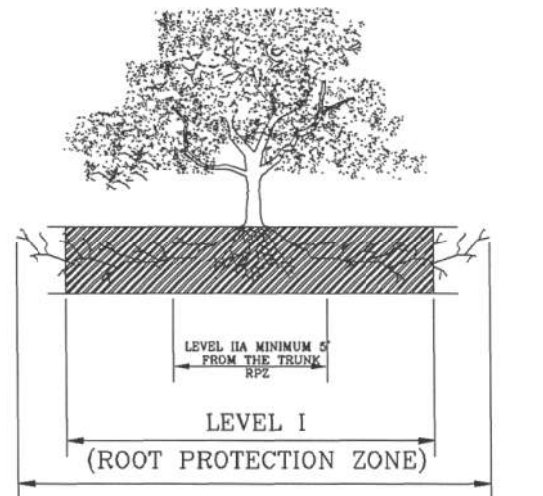
2019 SMP PACKAGE II (LYONS ST., SLIGO ST.)
SAWS WATER WORK
SLIGO ST. WATER PLAN
STA. 8+00 - 12+00

DEVELOPER: _____ CONT. _____
 SUBMITTED: _____
 APPROVED: _____

MAP No. 180544 & 182544 BUDGET PROJ. 33
 95% SUBMITTAL PROJECT NO. 18-5009 DATE: 7/27/2018
 DRAWN: RP DESIGN: MP CHECK: KWC SHEET NO.: 11 OF 19

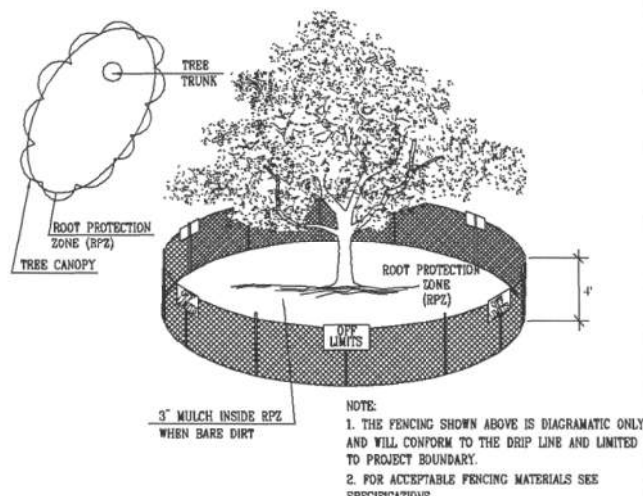
LEGEND

PROP. WATER MAIN	---
EXIST. WATER MAIN	---
GAS MAIN	---
SANITARY SEWER	---
STORM SEWER	---
UTILITY POLE LINE	---
ELECTRIC CABLE	---
TELEPHONE CABLE	---
DUAL BRANCH SERV.	---
NEW UNMETERED SERVICE:	
3/4" SINGLE	-----
1" DUAL	-----
SERVICE RECONNECT:	
3/4"	-----
1" OR LARGER	-----
SERVICE RELAY:	
3/4"	-----
1" OR LARGER	-----
SERVICE RELOCATE:	
3/4"	-----
1" OR LARGER	-----
RELOCATE METER	▷
NEW SERVICE:	
3/4"	-----
1" OR LARGER	-----



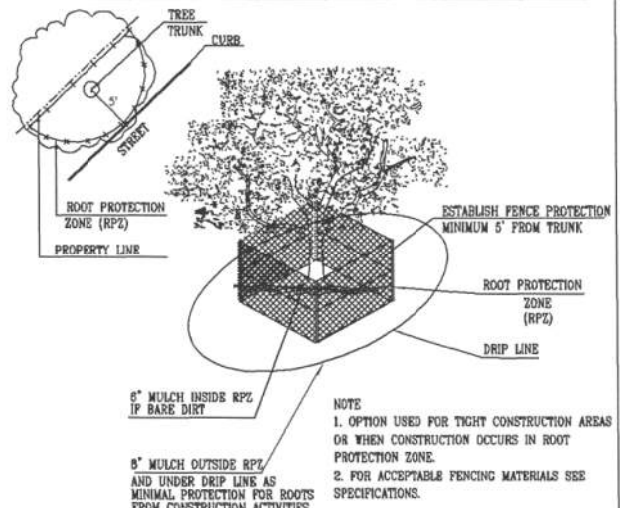
1.1.1 ELEVATION
N. T. S.

ROOT PROTECTION ZONE (RPZ) IS A CIRCULAR AREA AROUND A TREE THAT IS BASED ON THE DIAMETER OF THE TREE. EACH 1 INCH DIAMETER OF THE TREE EQUALS 1 FOOT RADIUS FOR ROOT PROTECTION ZONE.



1.1.2 LEVEL I & FENCE PROTECTION
N. T. S.

NOTE:
1. THE FENCING SHOWN ABOVE IS DIAGRAMATIC ONLY AND WILL CONFORM TO THE DRIP LINE AND LIMITED TO PROJECT BOUNDARY.
2. FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

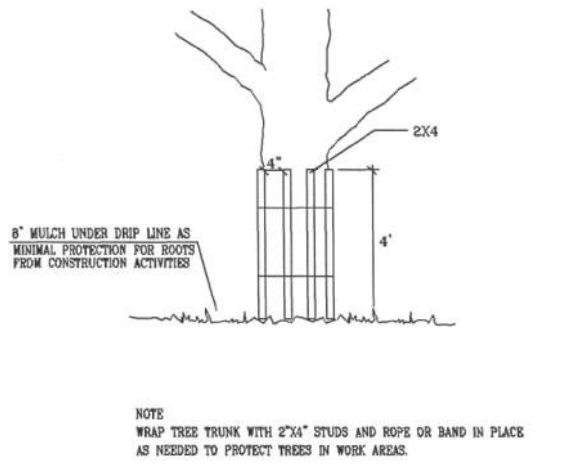


1.1.3 LEVEL IIa FENCE PROTECTION
N. T. S.

NOTE:
1. OPTION USED FOR TIGHT CONSTRUCTION AREAS OR WHEN CONSTRUCTION OCCURS IN ROOT PROTECTION ZONE.
2. FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

GENERAL NOTES

- ALL THE TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO ITEM No. 802. TREE PRUNING, SOIL AMENDING AND FERTILIZATION, UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 2 PROTECTION AS PER ITEM No. 802. TREES TO RECEIVE LEVEL 1 PROTECTION AS PER ITEM No. 802 ARE SHOWN ON TREE PROTECTION TABLE ON THIS SHEET.
- ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
- NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR.
- THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER, WITHIN 20 MINUTES TO PREVENT OAK WILT.
- ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER OR CITY INSPECTOR.
- GRADING, IF REQUIRED, SHALL BE LIMITED TO A 3 INCH CUT OR FILL WITHIN THE FENCED ROOT ZONE AREAS.
- TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND AS DIRECTED BY THE PROJECT MANAGER OR CITY INSPECTOR.
- TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE ENGINEER'S SATISFACTION.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO ITS REMOVAL.

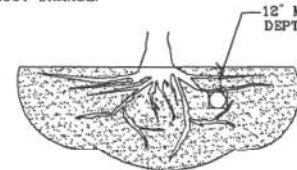


1.1.4 LEVEL II B FENCE PROTECTION
N. T. S.

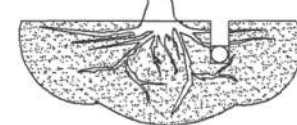
NOTE:
WRAP TREE TRUNK WITH 2"x4" STUDS AND ROPE OR BAND IN PLACE AS NEEDED TO PROTECT TREES IN WORK AREAS.

TREES THAT ARE MARKED TO BE PRESERVED ON A SITE PLAN AND FOR WHICH UTILITIES MUST PASS THROUGH THEIR ROOT PROTECTION ZONES MAY REQUIRE TUNNELING AS OPPOSED TO OPEN TRENCHES. THIS DECISION TO TUNNEL WILL BE DETERMINED ON A CASE BY CASE BASIS BY THE ENGINEER.

TUNNELS SHALL BE DUG THROUGH THE ROOT PROTECTION ZONE IN ORDER TO MINIMIZE ROOT DAMAGE.

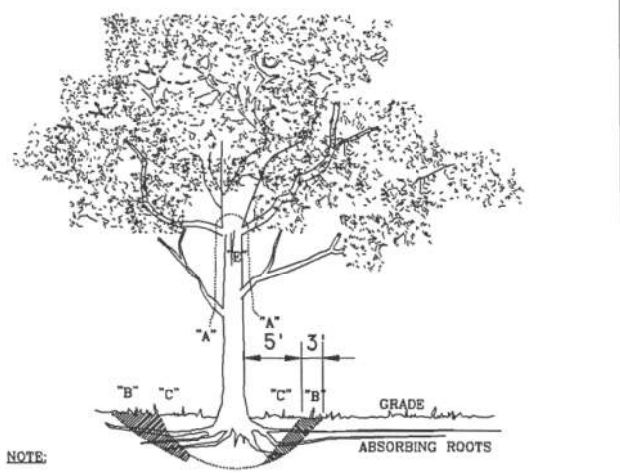


TUNNEL TO MINIMIZE ROOT DAMAGE (TOP) AS OPPOSED TO SURFACE-DUG TRENCHES IN ROOT PROTECTION ZONE WHEN THE 5' MINIMUM DISTANCE FROM TRUNK CAN NOT BE ACHIEVED.



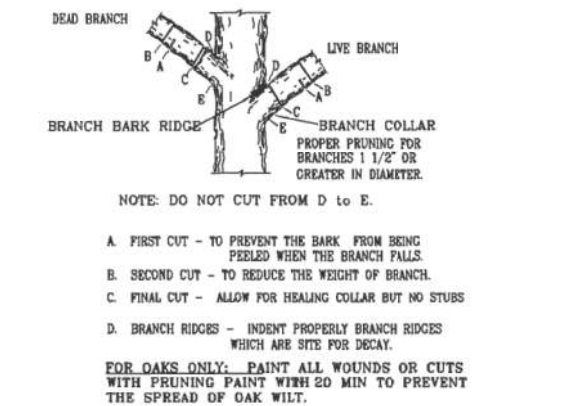
OPEN TRENCHING MAY BE USED IF EXPOSED TREE ROOTS DO NOT EXCEED 3" OR ROOTS CAN BE BENT BACK.

1.2 BORING THRU TREE ROOT ZONE
N. T. S.



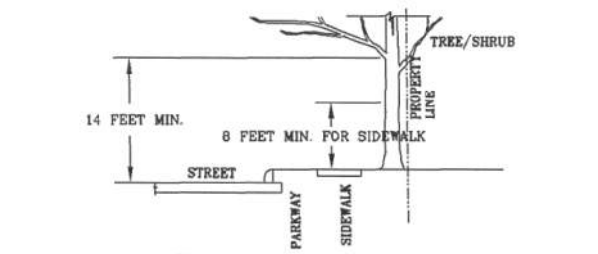
NOTE:
A" REMOVE BULKY TREE PARTS "SHRED" AND/OR HAUL SEPARATELY.
B" BEGIN EXCAVATION APPROX. 8' FROM THE TRUNK - CUT THRU ANCHOR ROOTS AT AN ANGLE - 3" TO 4" DEEP
C" USING TREE TRUNK AS A LEVER PUSH AT POINT "E" TO REMOVE TREE BOLE AND LARGE FEEDER ROOTS (4" TO 10" IN DIAM.)
D" BACKFILL HOLE AND CLEAN UP.

1.3 TREE REMOVAL DIAGRAM
N. T. S.



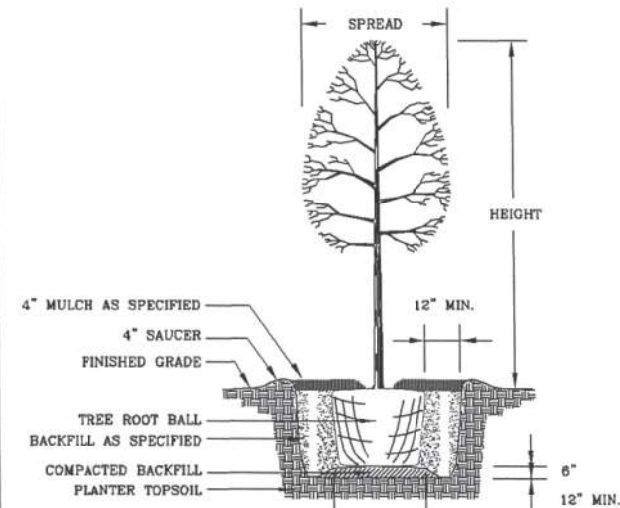
1.4 BRANCH PRUNING DETAIL
N. T. S.

NOTE: DO NOT CUT FROM D TO E.
A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELLED WHEN THE BRANCH FALLS.
B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
D. BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.
FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITH 20 MIN TO PREVENT THE SPREAD OF OAK WILT.



1.5 BRANCH CLEARANCE DETAIL
N. T. S.

FIGURE No. 2:
A MINIMUM BRANCH CLEARANCE OF 14 FEET ABOVE STREET ELEVATION MUST BE MAINTAINED FROM THE PROPERTY LINE TO THE CURB LINE AS PRESCRIBED BY PROJECT MANAGER.



1.6 NEW TREE PLANTING DETAIL
N. T. S.

TREE PROTECTION TABLE			
PROTECTION MEASURE			
SHEET #	TREE/CAUPER	STATION OR NUMBER	MAINTENANCE/TREATMENTS/PROTECTION

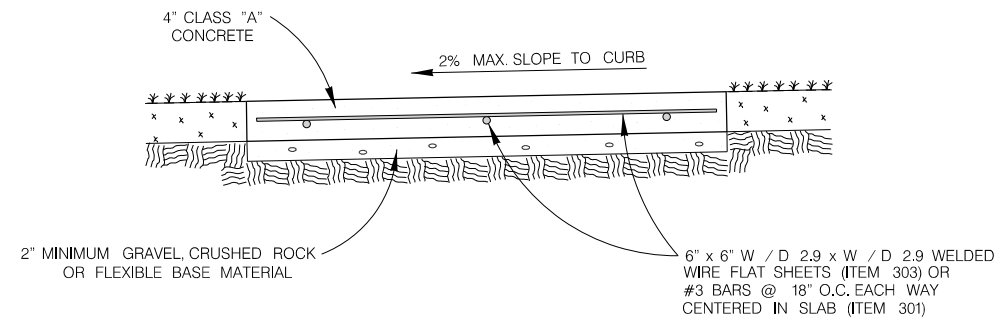
PREPARED BY: FERNANDEZ FRAZER WHITE & ASSOC. INC.
& C. F. ZAVALA GROUP

CITY OF SAN ANTONIO

DEPARTMENT OF PUBLIC WORKS

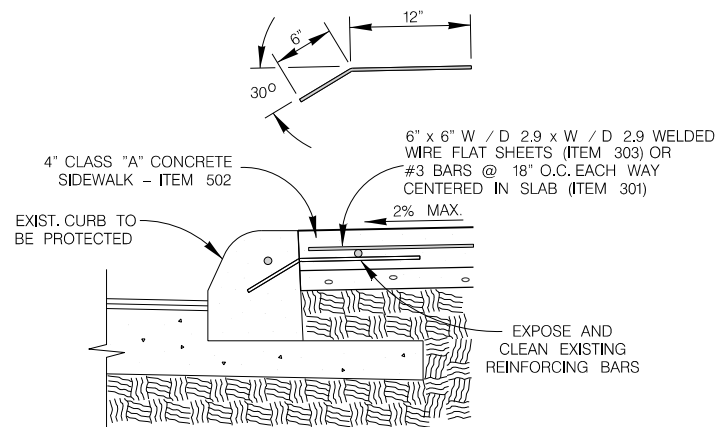
CITY OF SAN ANTONIO
TREE PROTECTION DETAILS
TREE PRESERVATION

DESIGNED:	FEB. RD. DIV. NO.	STATE		SHT. NO.
CHECKED:	TERMS			1 OF 4
DRAWN:	STATE DIST. NO.	COUNTY	CONTROL NO.	SECT. NO.
CHECKED:		BEAR		JOB NO. HIGHWAY NO.



CONCRETE SIDEWALK SECTION

ITEM 502
NO SCALE




**CONCRETE SIDEWALK
ABUTTING CURB SECTION**

ITEM 502
NO SCALE

7/27/2018 2:40:24 PM
 V:\B-043-V SAMS-2019 Pipelines W&S Pk. II\2Design Phase\Drawings\Util-Water\DCN\B-043V-wl-15_dtl-01.dgn
 rpilomori


NO.	DATE	REVISION	APP.



**UNITECH CONSULTING
ENGINEERS, INC.**

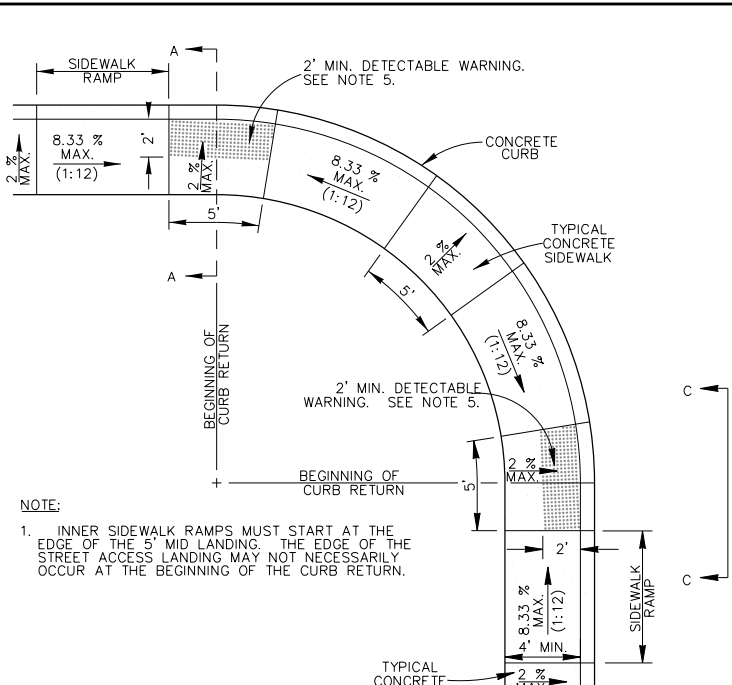
2431 E. Evans Road
San Antonio, Texas 78259
Phone: (210) 641-6003

TBPE Reg. No. F-5499
Fax: (210) 641-8279
www.unitech.com

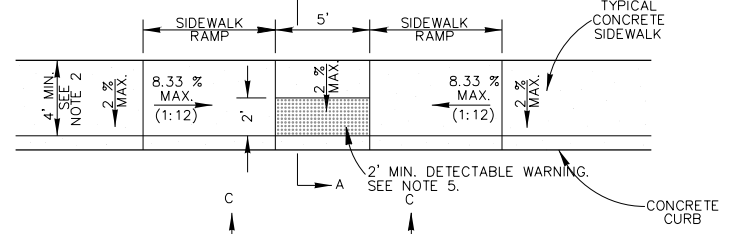


**2019 SMP PACKAGE II (LYONS ST.,
SLIGO ST.)
SAWS WATER WORK
CONSTRUCTION
STANDARDS**

DEVELOPER:		CONT.	
SUBMITTED _____			
APPROVED _____			
MAP No.	180544 & 182544	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 18-5009	DATE:	7/27/2018
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO : 13 OF 19



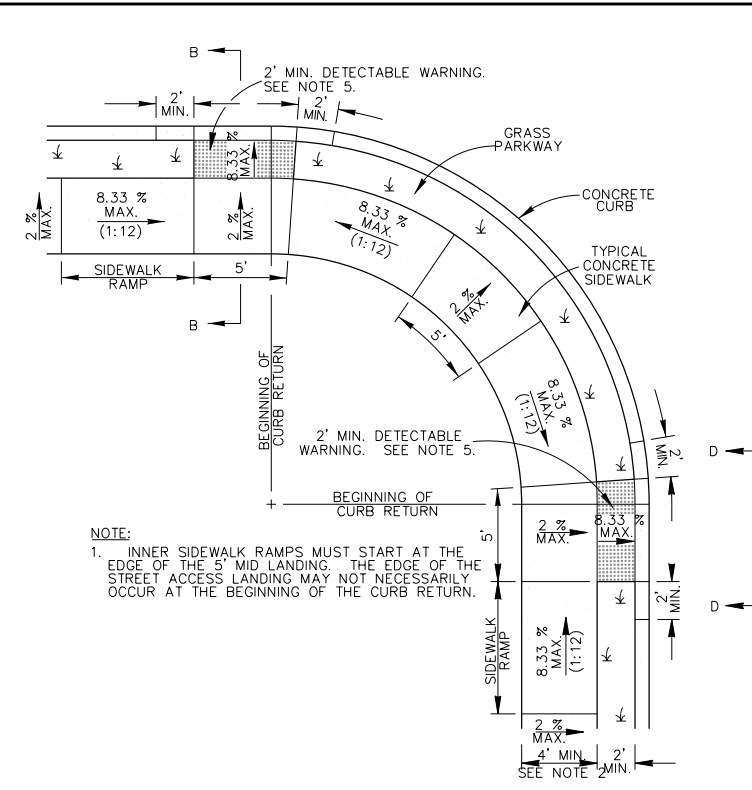
TYPICAL SIDEWALK RAMP - TYPE I
SIDEWALK ABUTS THE CURB
SCALE : 1"=10'



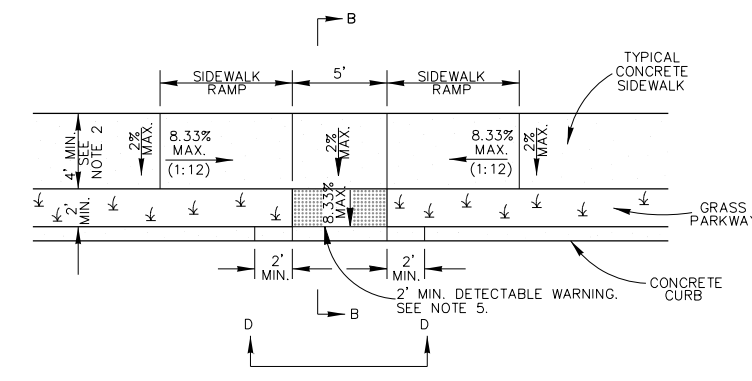
TYPICAL SIDEWALK RAMP - TYPE II
USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB
SCALE : 1"=10'

GENERAL NOTES

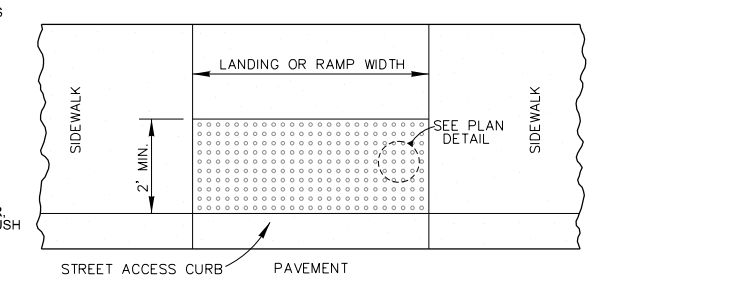
1. WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE A CAST-IN-PLACE TILE CONFORMING TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS OR PAVERS CONFORMING TO TXDOT STANDARD PED-05, PEDESTRIAN FACILITIES.
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
8. CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 - CONCRETE CURB, GUTTER AND CONCRETE CURB AND GUTTER" AND / OR "502 - CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



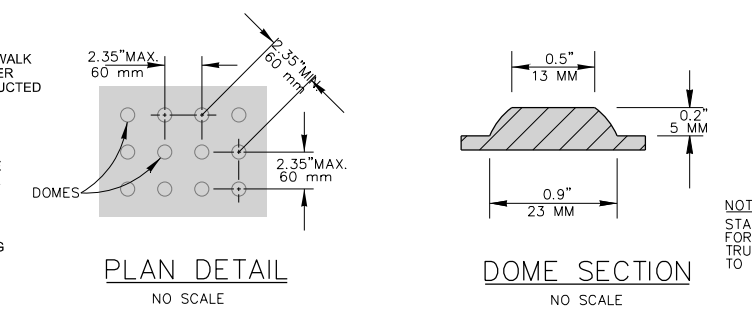
TYPICAL SIDEWALK RAMP - TYPE III
SIDEWALK SEPARATED FROM CURB
SCALE : 1"=10'



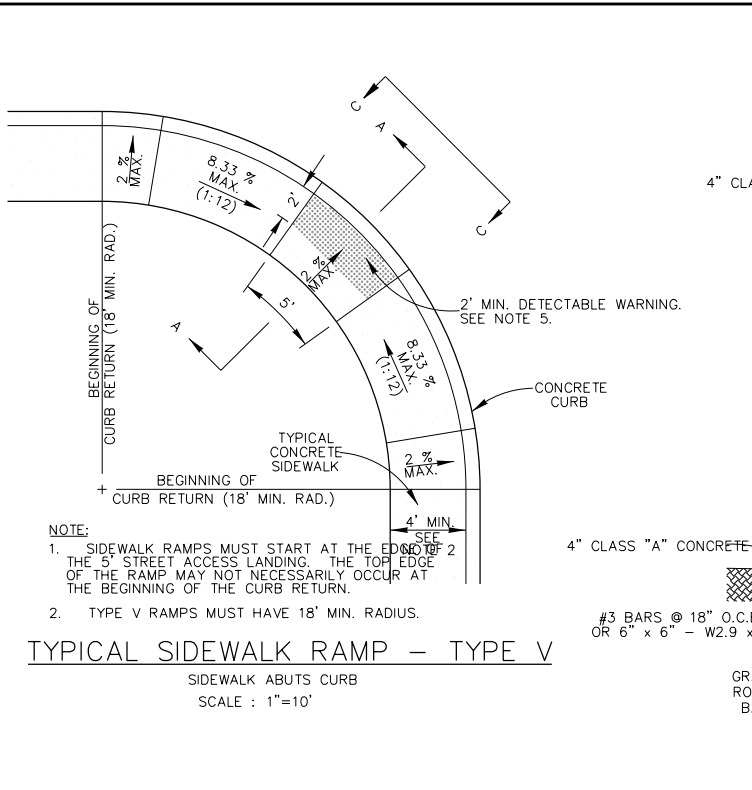
TYPICAL SIDEWALK RAMP - TYPE IV
USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=10'



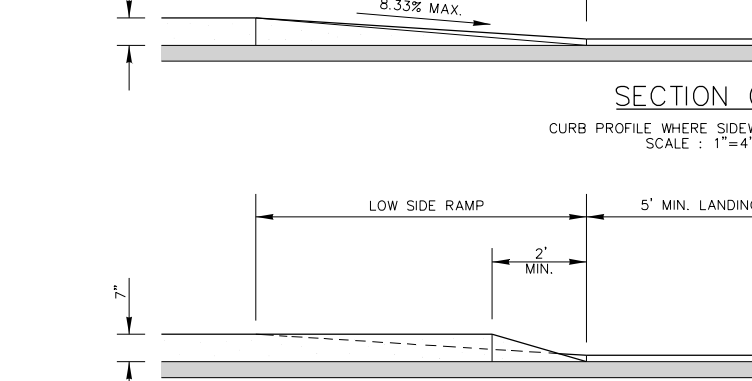
DETECTABLE WARNING SURFACE
SCALE : 1"=4'



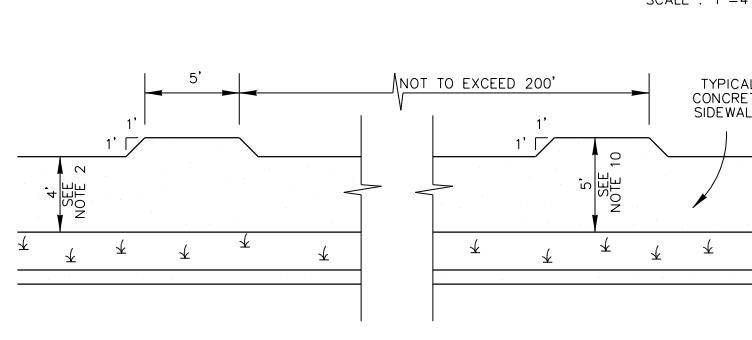
PLAN DETAIL NO SCALE
DOMES SECTION NO SCALE



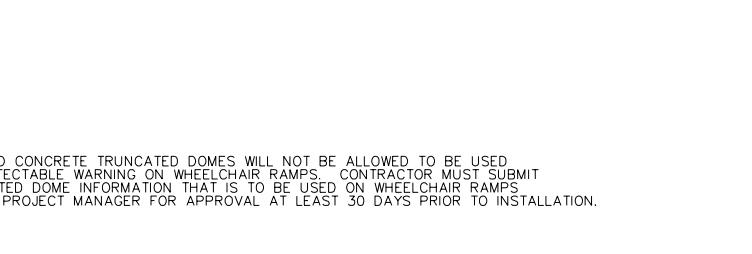
TYPICAL SIDEWALK RAMP - TYPE V
SIDEWALK ABUTS CURB
SCALE : 1"=10'



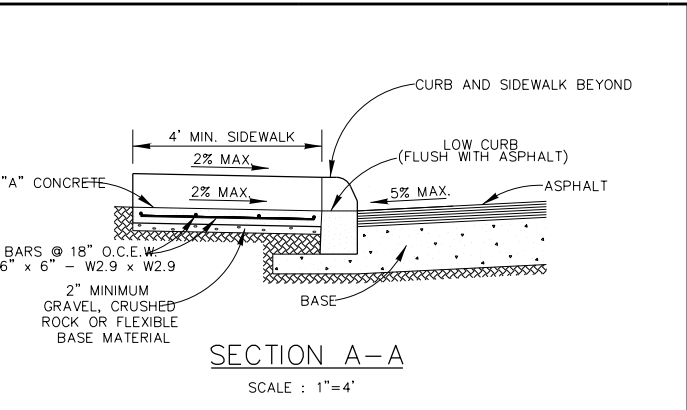
SECTION C-C
CURB PROFILE WHERE SIDEWALK ABUTS CURB
SCALE : 1"=4'



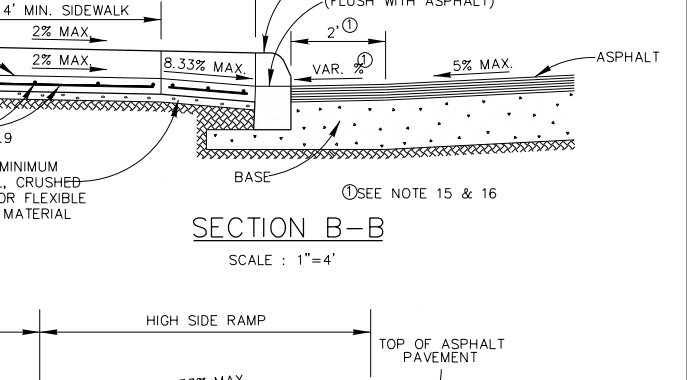
SECTION D-D
CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=4'



SIDEWALK PASSING SPACE
SCALE : 1"=10'



SECTION A-A
SCALE : 1"=4'



SECTION B-B
SCALE : 1"=4'

TABLE 1
(SEE NOTE 4)

GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	5'-6"	7'-2"
2%	5'-0"	8'-4"
3%	4'-6"	10'-0"
4%	4'-2"	12'-6"
5%	3'-10"	16'-8"

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

0% SUBMITTAL	PROJECT NO.:	DATE: 7/27/2018
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.

7/27/2018 2:40:24 PM V:\B-043-V-SAMS-2019-Pipelines W&S Pk. II\2Design Phose I-Drawings\Util-Water\DCN\B-043V-w-16-dtl-02.dgn

TRAFFIC NOTES

TRENCHING / EXCAVATING

The following notes shall apply to excavations of trenches or pits that are located in the pavement or are within six (6) feet of the edge of roadway:

- 1.) Trench walls shall not be closer than three (3) feet from the edge of the traveled way at any stage of construction.
- 2.) Traffic control devices shall be in place before starting any excavation.
- 3.) Trenches or pits will not be permitted to be bridged by steel plates and open to traffic unless they are temporarily backfilled to finished street grade.
- 4.) For pits or trenches along or in a roadway that are going to be left open over night that are zero to fifty (0 = 50) feet in length, the following applies: **GUARD RAIL OR CONCRETE BARRIER SHALL BE USED.**
- 5.) For pits or trenches along or in a roadway that are going to be left open over night and are longer than 50 feet in length, **CONCRETE BARRIERS MUST BE USED.**
- 6.) Plastic construction fencing shall be required for any trench or pit left open over night.
- 7.) When using any guardrail or concrete barrier, protected end must be used as per the TEXAS-M.U.T.C.D.
- 8.) For vertical drop-offs greater than two (2) feet along roadway, low profile concrete with appropriate end protection must be installed.
- 9.) All concrete barriers placed on City R.O.W shall be low profile. No high profile barriers will be allowed.

REFLECTIVE SHEETING

The reflectorized white and reflectorized orange stripes for channelizing devices such as barricade drums and vertical panels shall be constructed of reflective sheeting meeting the color and retro-reflectivity requirements of high intensity, unless otherwise specified in the plans.

MAINTENANCE

- 1.) All traffic signs shall be kept in proper position, clean and legible at all times. Damaged barricades, signs, and other traffic control devices shall be replaced without undue delay.
- 2.) To ensure adequate maintenance, a suitable schedule for inspection, cleaning, and replacement of barricades, lights, and signs shall be established.
- 3.) Special attention and necessary action shall be taken to see that weeds, trees, shrubbery and construction materials do not obscure the face of any sign or barricades.

TRAINING

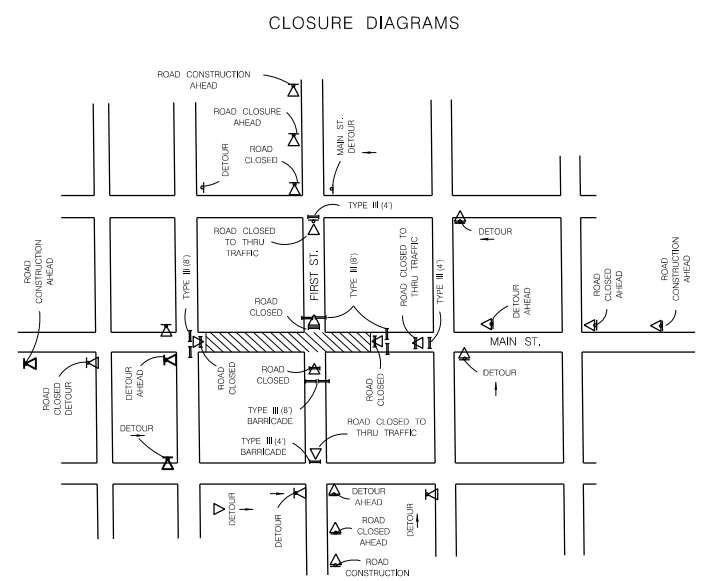
Each person whose actions affect maintenance and construction zone safety, from the upper-level management personnel through construction and maintenance field personnel, should receive training appropriate to the job decision each individual is required to make. Only those individuals who are qualified by means of adequate training in safe traffic control practices and have a basic understanding of the principles established by applicable standards and regulations, including those of the TEXAS M.U.T.C.D. should supervise the selection, placement, and maintenance of traffic control devices in maintenance and construction areas.

SPECIAL EVENTS BARRICADING

All Type I (8) barricades used for special events (Dance, Runs, Walks, Parades etc.) shall be a minimum of 42" high and 96" wide. Any necessary signs will require proper sign stands.

USE OF CITY R.O.W.

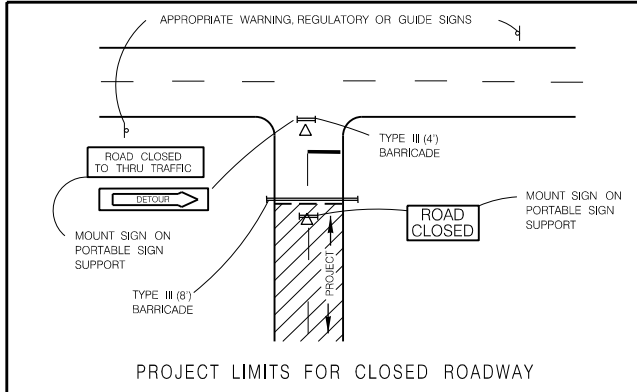
The City of San Antonio reserves the right to allow contracting and barricading sub-contractors to use the City's R.O.W. The City also reserves the right to advise contractors and barricading sub-contractors to remove stored or unused traffic control devices from the City of San Antonio R.O.W. It is the barricading sub-contractor's responsibility to remove any traffic control device from City's R.O.W. when instructed to do so by a City representative.



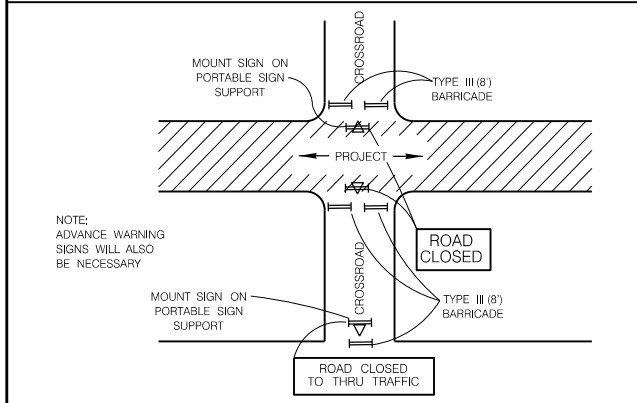
TYPICAL INTERSECTING STREET CLOSURE FOR TWO LANE STREETS

NOTE:
ALL SIGNS WILL BE MOUNTED ON SIGN SUPPORTS ONLY

JUNE 2005 CITY OF SAN ANTONIO DEPARTMENT OF PUBLIC WORKS			
TRAFFIC STANDARDS BARRICADE AND CONSTRUCTION STANDARDS			
SHEET 3 OF 4			
DATE	PROJECT NO.	PROJECT NAME	PROJECT LOCATION

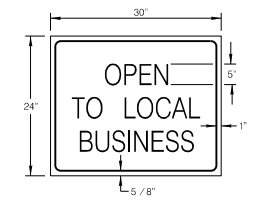
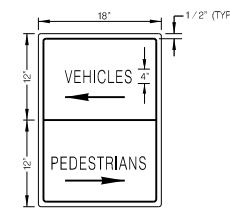
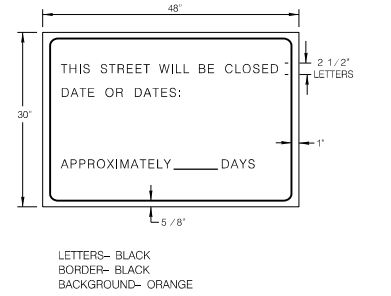


BARRICADES SHALL BE ERECTED COMPLETELY ACROSS ROADWAY. CHANNELIZING DEVICES MAY BE DRUMS, VERTICAL PANELS OR CONES AS SPECIFIED IN THE PLANS



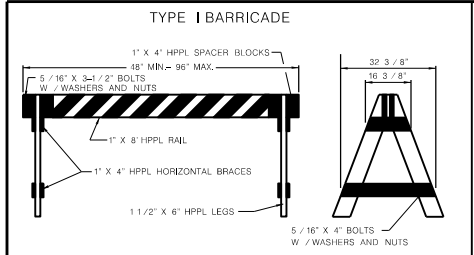
NOTE:
ADVANCE WARNING SIGNS WILL ALSO BE NECESSARY

CROSS STREET SIGNING AND BARRICADING TOTALLY CLOSED

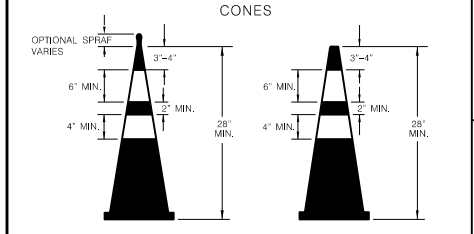


LETTERS- BLACK
BORDER- BLACK
BACKGROUND- ORANGE
SPACING- 3 SIGNS PER BLOCK
DIRECTION OF ARROWS ARE REVERSIBLE

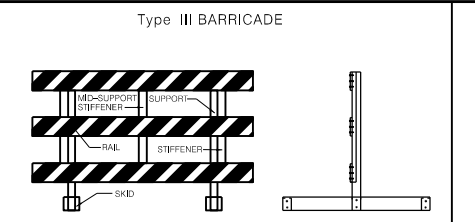
JUNE 2005 CITY OF SAN ANTONIO DEPARTMENT OF PUBLIC WORKS			
TRAFFIC STANDARDS BARRICADE AND CONSTRUCTION STANDARDS			
SHEET 2 OF 4			
DATE	PROJECT NO.	PROJECT NAME	PROJECT LOCATION



- 1.) Only the following Type I barricade shall be used in the City of San Antonio Right-Of-Way:
 - A. 1" x 8" plastic rail with 2" x 6" wooden legs.
 - B. 1" x 8" wooden rail with plastic legs.
 - C. 1" x 8" wooden rail with 2" x 6" wood legs.
 - D. No screws allowed for assembly of A-legs or rail.
 - E. Warning lights will be used as directed by the Traffic Engineer.
 - F. All Type I (4) barricades will be a minimum of 36" high and 60" wide. (For Construction Use Only)
 - G. All Type I (8) barricades with wooden legs shall be 2" x 6" wood only.
 - H. All Type I (4) barricades with wooden legs shall be 1" x 8" wood only.
 - 2.) Type I Barricades shall not be used for partial and total street closures in construction work zones. Only Type III barricades shall be used for this purpose.
 - 3.) Warning lights shall not be mounted on Type I barricades.
- (See TxDOT BC-03 Sheets for specific construction information)



- 1.) Base for 28" high cones must weigh at least 9.5 lbs.
 - 2.) Night time cones must have reflective collars.
- (See TxDOT BC-03 Sheets for specific construction information)



- 1.) Only the following Type III barricade shall be used in the City of San Antonio Right-Of-Way.
 - A. Hollow polyvinyl or fiberglass tubing post with 1" x 8" wooden rails.
 - B. Hollow polyvinyl or fiberglass tubing post with plastic rails.
 - C. Skids must be wood or solid plastic only.
 - D. Warning lights shall not be mounted on Type III barricades.
- (See TxDOT BC-03 Sheets for specific construction information)

TEMPORARY MARKINGS

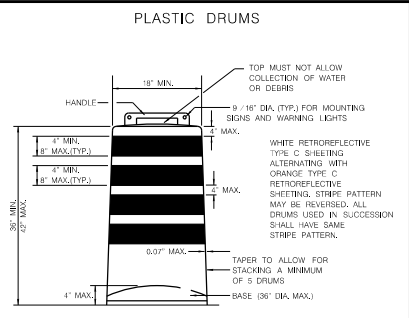
- 1.) Solid double yellow painted lines shall be installed for temporary division of traffic or construction duration longer than five (5) days, with repainting to occur once monthly or at the discretion of the Traffic Engineer. (All cost of upkeep will be at the contractor's expense.)
- 2.) Solid double yellow tabs, or VP panels shall be installed for temporary division of traffic for construction duration less than five (5) days, with re-tapping to occur at the discretion of the Traffic Engineer. **NAILS SHALL NOT BE USED TO FIX TABS TO CEMENT OR BASE** (All cost of upkeep will be at the contractor's expense.)

(See TxDOT BC-03 Sheets for specific construction information.)

TEMPORARY CONCRETE BARRIER

- 1.) All concrete barriers placed on City R.O.W. shall be low profile.
- 2.) No high profile barriers will be allowed.
- 3.) Reflectors will be required on each concrete barrier.

(See TxDOT BC-03 Sheets for specific construction information)



- 1.) Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
 - 2.) Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
 - 3.) The Engineer/Inspector shall provide written notice to the Contractor regarding the replacement of drums or other traffic control devices. The Contractor shall have a maximum of 24 hours to replace any plastic drums or other traffic control devices identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.
 - 4.) Each drum must have a 40 lb. rubber or plastic snap on.
 - 5.) No signs larger than 18" x 24" will be allowed to be mounted on plastic drums.
 - 6.) No warning lights will be allowed to be mounted on plastic barrels.
 - 7.) In lieu of a warning light, a yellow reflector will be acceptable.
- (See TxDOT BC-03 Sheets for specific construction information)

JUNE 2005 CITY OF SAN ANTONIO DEPARTMENT OF PUBLIC WORKS			
TRAFFIC STANDARDS BARRICADE AND CONSTRUCTION STANDARDS			
SHEET 3 OF 4			
DATE	PROJECT NO.	PROJECT NAME	PROJECT LOCATION

SIGNS

- 1.) A maximum of two signs can be mounted on any one Long / Intermediate Term Stationary Portable Sign Support.
- 2.) 48" x 48" signs shall be mounted separately on the Long / Intermediate Term Stationary Portable Sign Support.
- 3.) For Short Term Stationary Portable Sign Support the distance from the bottom of the vinyl sign to the existing ground must be one (1) foot.
- 4.) Long / Intermediate Term Stationary Portable Signs must be made of wood or plastic only.
- 5.) No signs shall be mounted to any Type I, Type III, or folding barricades.
- 6.) Signs shall be mounted only on TxDOT approved sign supports.
- 7.) Detour signs will be mounted on single "D" legs w / 7' clearance from the bottom of the sign.
- 8.) WORK DURATION TERMINOLOGY
 Long Term Stationary = occupies a location 3 or more days.
 Intermediate-Term Stationary = occupies a location for overnight to 3 days.
 Short Term Stationary = daylight work that occupies a location from 1 to 12 hours.
 Short Duration = occupies a location up to 1 hour.
- 9.) Signs shall adhere to the following requirements:
 - Signs placed on plastic barrels or drums shall be made of ABS plastic or plywood.
 - Signs placed on skids shall be made of plywood or aluminum.
 - Aluminum signs shall have a minimum thickness of 0.08".
 - Plywood signs shall have a minimum thickness of 1 / 2".
 - ABS Plastic signs shall have a minimum thickness of 0.13".
 - Plastic signs cannot exceed 18" by 24" in size and shall be reinforced with 2" wide, 0.08" thick aluminum slats, as depicted below:

(See TxDOT BC-03 Sheets for specific construction information.)

- No other material shall be accepted without the express written approval of the Traffic Engineer.

(See TxDOT BC-03 Sheets for specific construction information.)

LONG TERM / INTERMEDIATE TERM SIGN SUPPORT

- 1.) 48" X48" signs must be mounted independently.
- 2.) A maximum of two signs can be mounted on any one long term / intermediate sign support.
- 3.) Sand bag all sign supports.
- 4.) Distance from the bottom of the sign to the existing ground shall be 7'.
- 5.) Distance from the header barricade rail to the face of the sign panel shall be 2' min. and 10' max.
- 6.) Steel tripods shall not be allowed.

(See TxDOT BC-03 Sheets for specific construction information)

JUNE 2005 CITY OF SAN ANTONIO DEPARTMENT OF PUBLIC WORKS			
TRAFFIC STANDARDS BARRICADE AND CONSTRUCTION STANDARDS			
SHEET 4 OF 4			
DATE	PROJECT NO.	PROJECT NAME	PROJECT LOCATION

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Limits," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project. Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.

GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including: a) rough road or damaged pavement surface; b) substantial alteration of roadway geometrics (diversions); c) construction detours; d) grade; e) width; f) other conditions readily apparent to the driver.

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barriers when work activity is within 10 feet of the traveled way or actually in the traveled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorist only when work activity is present. When work activity is not present, signs shall be removed or covered. (See Removing or Covering on BC(1)).

GENERAL NOTES

- Regulatory work zone speed limits should be used only for sections of construction projects where speed controls of major importance.
- Regulatory work zone speed limit signs should be placed on supports at a 7 foot minimum mounting height.
- Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
- Frequency of work zone speed limit signs should be:
 - 40 mph and greater: 0.2 to 2 miles
 - 35 mph and less: 0.2 to 1 mile
- Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
- Fabrication, erection and maintenance of the "ADVANCE SPEED LIMIT" (CW3-5) sign, "WORK ZONE" (G20-50P) plaque and the "SPEED LIMIT" (R2-1) signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
- Turning signs from way laying signs over or down should not be allowed, unless otherwise noted under "REMOVING OR COVERING" on BC(4).
- Techniques that may help reduce traffic speeds include but are not limited to:
 - A. Low enforcement.
 - B. Flagger stationed next to sign.
 - C. Portable changeable message sign (PCMS).
 - D. Low-power (dome) radar transmitter.
 - E. Speed monitor trailers or signs.
- Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
- For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT Form #2004 in the TxDOT e-form system.

SHEET 3 OF 12

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-14

REV	DATE	BY	CHKD	APP'D	REVISION
1	7-13	CSJ	J	HBT	NEW
2	8-14	CSJ	J	HBT	REVISED
3	7-13	CSJ	J	HBT	REVISED
4	8-14	CSJ	J	HBT	REVISED

TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

ATTACHMENT FOR SIGN SUPPORTS

Sign supports shall extend more than 1/2 way up the back of the sign substrate.

Attachment to wooden supports shall be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports.

Nails shall NOT be allowed.

Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

STOP/SLOW PADDES

- STOP/SLOW paddees are the primary method to control traffic by flaggers. The STOP/SLOW padde size should be 24" x 24" as detailed below.
- When used at night, the STOP/SLOW padde shall be retroreflective.
- STOP/SLOW paddees may be attached to a sign with a minimum length of 8" to the bottom of the sign.
- Any signs incorporated into the STOP or SLOW padde faces shall be as specifically described in Section 6E03. Head Signage devices in the TMUTCD.

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

- Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographic, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better, route guidance as normally installed on a roadway without construction.
- When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message resumes the roadway condition.
- When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
- Existing signs are to be relocated on their original supports, if they shall be installed on temporary bases as shown on the SMD Standards sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work shall be paid for under the appropriate pay item for relocating existing signs.
- Permanent signs are to be removed and relocated along temporary supports, if they shall be installed on temporary bases as shown on the BC Sheets or the SMD Standards. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work shall be paid for under the appropriate pay item for relocating existing signs.
- Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This shall be subsidiary to Item 502.

SHEET 4 OF 12

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-14

REV	DATE	BY	CHKD	APP'D	REVISION
1	7-13	CSJ	J	HBT	NEW
2	8-14	CSJ	J	HBT	REVISED
3	7-13	CSJ	J	HBT	REVISED
4	8-14	CSJ	J	HBT	REVISED

BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

- The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction government markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
- The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
- The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
- The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
- Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.
- When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
- The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
- As signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
- The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
- As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER (see Sign Detail G20-10T) and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque should be erected in advance of the CSJ limits. However, the TRAFFIC FINES DOUBLE sign will not be required on projects consisting solely of mobile operation work, such as slitting or milling, edge, rumble strips, the BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.
- Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.
- The Engineer has the final decision on the location of all traffic control devices.
- Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY APPAREL NOTES:

- Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

SHEET 1 OF 12

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-14

REV	DATE	BY	CHKD	APP'D	REVISION
1	7-13	CSJ	J	HBT	NEW
2	8-14	CSJ	J	HBT	REVISED
3	7-13	CSJ	J	HBT	REVISED
4	8-14	CSJ	J	HBT	REVISED

TYPICAL LOCATION OF CROSSROAD SIGNS

T-INTERSECTION

CSJ LIMITS AT T-INTERSECTION

- The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
- If construction closes the road at a T-intersection the Contractor shall place the "CONTRACTOR NAME" (G20-87) sign behind the Type 3 Barricade for the road closure (see BC(1) also). The "ROAD WORK NEXT X MILES" (G20-10T) and "ROAD WORK NEXT X MILES" (G20-10T) signs shall be replaced by the detour signing called for in the plans.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS

GENERAL NOTES

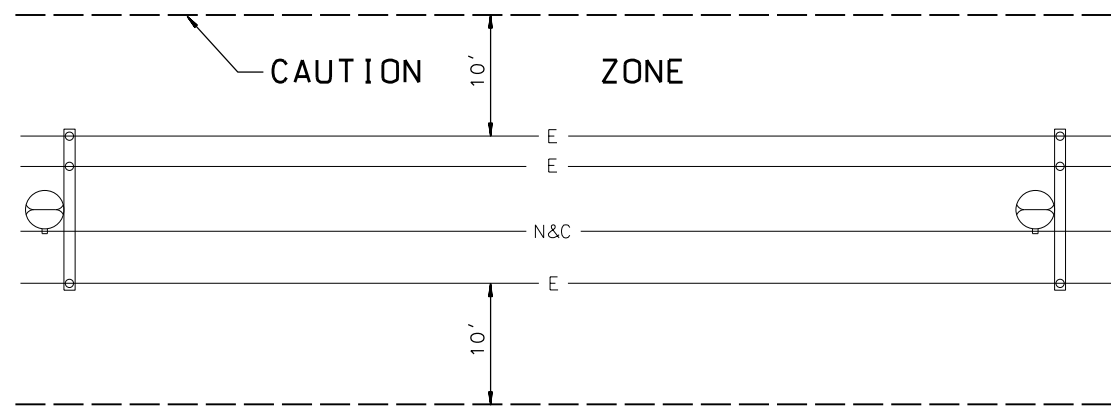
- Special larger size signs may be used as necessary.
- Distance between signs should be increased as required to have 100 foot advance warning.
- Distance between signs should be increased as required to have 1/2 mile or more advance warning.
- 46" x 36" "ROAD WORK AHEAD" (CW2-10) signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
- Only diamond shaped warning sign sizes are indicated.
- See sign size listing in "Traffic" Sign Appendix of the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

SHEET 2 OF 12

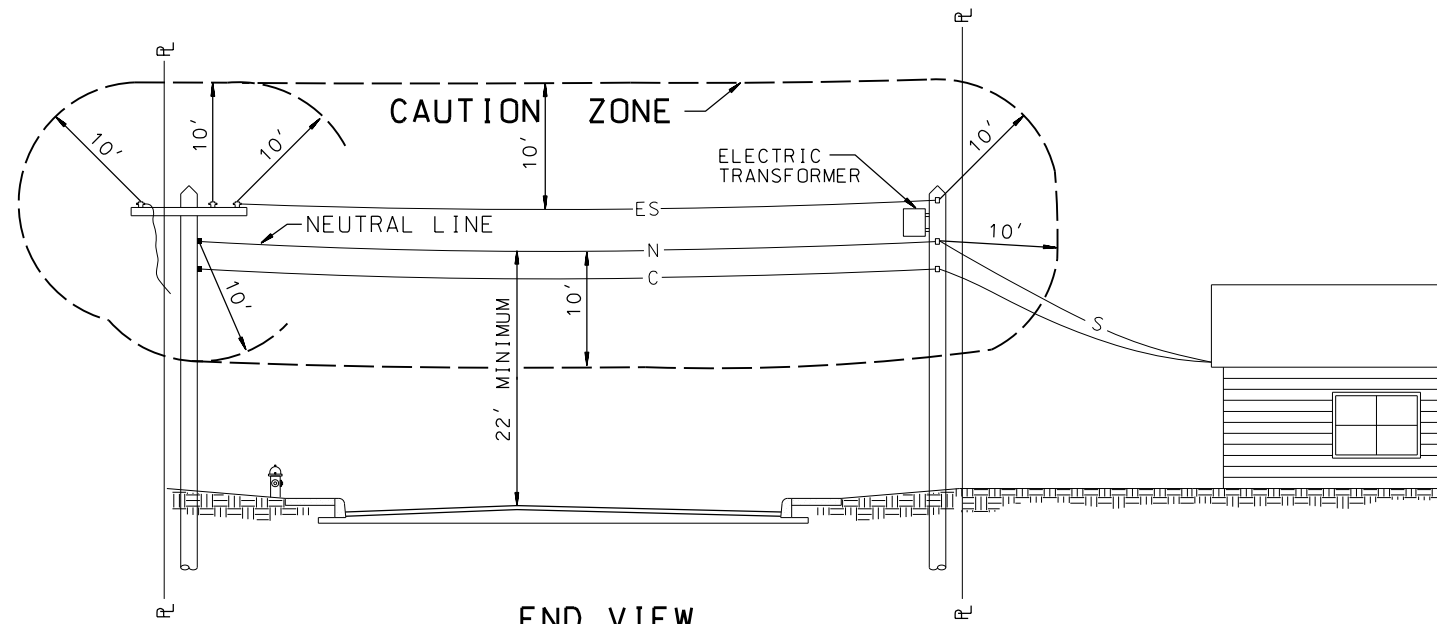
BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-14

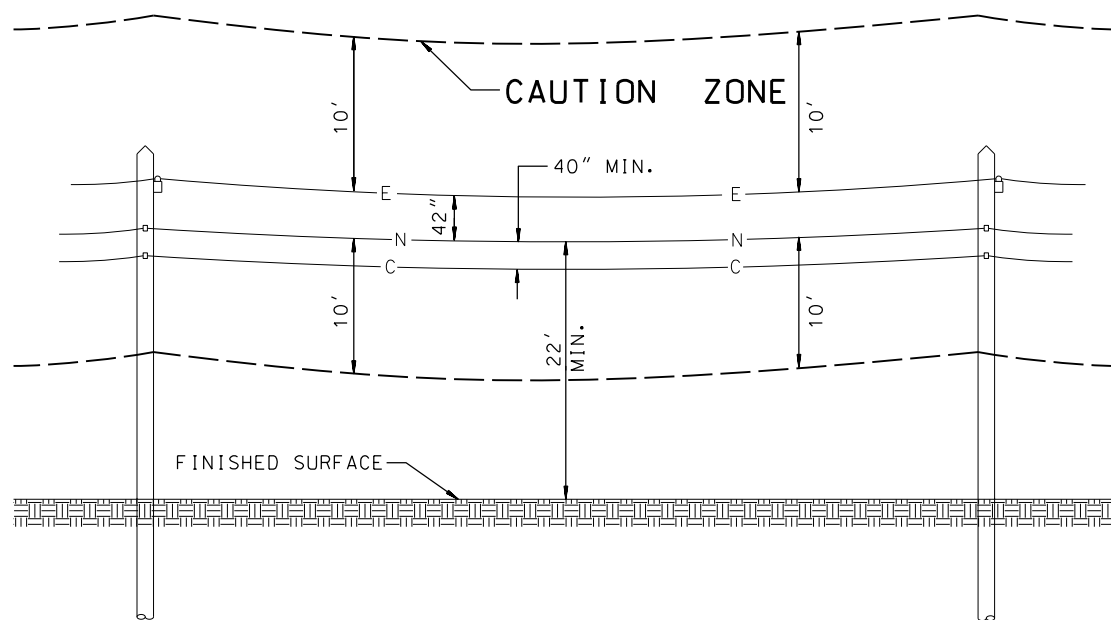
REV	DATE	BY	CHKD	APP'D	REVISION
1	7-13	CSJ	J	HBT	NEW
2	8-14	CSJ	J	HBT	REVISED
3	7-13	CSJ	J	HBT	REVISED
4	8-14	CSJ	J	HBT	REVISED



PLAN VIEW



END VIEW



SIDE VIEW

CAUTION ZONE - OVERHEAD UTILITIES
SEE CPS ENERGY NOTES ON SHEET I

CPS ENERGY NOTES

1. CALL CPS ENERGY LOCATOR AT 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
2. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
3. OVERHEAD LINES EXIST IN THE WORK AREAS. THESE LINES MAY NOT HAVE BEEN MARKED ON THE DRAWINGS SINCE THEY ARE CLEARLY VISIBLE. THE CONTRACTOR SHALL LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN TEN (10) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 3' RADIUS FROM NEUTRAL AND 10' RADIUS FROM PRIMARY BETWEEN PROPOSED TRAFFIC SIGNAL EQUIPMENT, INCLUDING SPAN WIRE, AND EXISTING OVERHEAD ELECTRICAL LINES.
4. THE CONTRACTOR IS LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS CARRIES BOTH CRIMINAL AND CIVIL LIABILITY.
5. CONTRACTOR SHALL NOT BEGIN WORK OR ACTIVITY UNTIL THE CONTRACTOR HAS NEGOTIATED A SATISFACTORY MUTUAL ARRANGEMENT WITH CPS ENERGY TO PROVIDE TEMPORARY DE-ENERGIZATION AND GROUNDING, TEMPORARY RELOCATION OR RAISING OF THE LINE, OR TEMPORARY MECHANICAL BARRIERS TO SEPARATE AND PREVENT CONTACT BETWEEN THE LINE AND THE MATERIAL OR EQUIPMENT OR THE PERSON PERFORMING THE WORK, ACTIVITY, OR FUNCTION.
6. CONTRACTOR SHALL PAY CPS ENERGY THE ACTUAL EXPENSE INCURRED BY THE OPERATOR IN PROVIDING THE CLEARANCE PRESCRIBED IN THE AGREEMENT. CPS ENERGY MAY REQUIRE PAYMENT IN ADVANCE AND IS NOT REQUIRED TO PROVIDE THE CLEARANCE UNTIL THE CONTRACTOR MAKES THE PAYMENT.
7. CONTRACTOR SHALL CONTACT AND COORDINATE WITH CPS ENERGY REPRESENTATIVE FOR POLES TO BE BRACED AND LINES TO BE DE-ENERGIZED AND/OR MOVED. CONTRACTOR IS RESPONSIBLE TO CPS ENERGY FOR ANY COSTS ASSOCIATED WITH BRACING OF POWER POLES OR DE-ENERGIZING AND/OR MOVING ANY CONFLICTING OVERHEAD POWER LINES.
8. WHEN EXCAVATING WITHIN TWENTY FOUR INCHES (24") OF THE INDICATED LOCATION OF CPS ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
9. WHEN CPS ENERGY FACILITIES ARE EXPOSED, CONTRACTOR SHALL PROVIDE SUFFICIENT SUPPORT TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
10. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

LEGEND

- E — ELECTRIC LINE
- N — NEUTRAL LINE
- C — OTHER UTILITY CABLE
- S — SERVICE

WORK CLEARANCE ZONES FOR CPS UTILITIES

DRAWN: J.S.		DATE: 7/27/2018	
CHECKED: C.Z.		SCALE: N.T.S.	
APPROVED: J.K.		SHEET NO: 19 OF 19	
SYSTEM	ID	DRAWING NUMBER	CODE
M	D P	11400	1000

No.	DATE	REVISION	BY	CK'D	APP
2	4-18-90	REMOVED ALL UTILITIES EXCEPT C.P.S.	L.E.	C.Z.	J.K.
1	2/7/90	CHANGES DUE TO 1-24-90 MEETING	J.S.	C.Z.	J.K.