



Multiple Sewershed Package 5
Solicitation Number: CO-00179
Job No.: 17-4551

ADDENDUM 3
SEPTEMBER 10, 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.

RESPONSES TO QUESTIONS

1. **Question:** I would like to obtain copies of the existing pipe condition videos for this project. It would be very helpful to obtain a copy on flash drive and I will be happy to provide FedEx/UPS shipping number or pickup at your convenience. I didn't see the disclaimer in the specs, but I am happy to sign.

Response: *Yes, there is video. To access video the bidder must complete and submit the attached release form, a password will be provided once form is submitted. Please submit the form to Stella Manzello, Contract Administrator via email at Stella.Manzello@saws.org or fax (210) 233-4293. The video is not considered a part of the contract documents & is provided for informational purposes only. The video depicts the condition at the specific time that the video was taken. Deterioration is continuous so the condition of the pipe at the time of construction could be substantially different than what is depicted in the video.*

2. **Question:** There is a pay item provided for traffic handling on each site. Please prescribe a traffic detail for each site so that all bidders will know what to price and apply. Locations requiring a TxDOT permit should have plan prescribed that TxDOT agrees upon.

Response: *Suggested Traffic Control Plan (TCP) delineation has been added to the plan and is attached to this addendum.. Contractor shall provide detailed TCP in accordance with Standards shown on the plans and per Texas-M.U.T.C.D.*

3. **Question:** There are areas where Mill & Overlay is prescribed. Can there be a pay item provided with a quantity to cover those areas ?

Response: *Mill & Overlay shall be subsidiary to Item 864.S2-BYPASS PUMPING LARGE DIA. SANITARY SEWER at the various project locations.*

4. **Question:** Regarding Location 5 : There is simply not enough room to construct a launch pit at the designated location. If sliplining cannot be done and CIPP used, then the bypass routing would change. A route change that would possibly require a Tx DOT street cut or road bore for the bypass pipe. Will a Tx DOT street cut for bypass be allowed ? If yes, then provide a street cut detail that TxDOT would approve.

Response: *We have confirmed constructability with vendors. Any proposed changes to the plan must be submitted to, and approved by, the engineer.*

5. **Question:** Is video of the pipe available for each location?

Response: *See Response to Question No. 1, above.*

6. **Question:** Can the bid date be postponed again to accommodate a reasonable response after answers to all questions are posted?

Response: *There is no plan to postpone the bid date again.*

7. **Question:** Are there any project areas located in the EARZ? If so, which ones?

Response: *None of the project sites are located in the EARZ.*

8. **Question:** Are there video inspections available of the pipelines? If so, please make them available to the bidders for review as soon as possible.

Response: *See Response to Question No. 1, above.*

9. **Question:** In Article VIII on page SS-2 & SS-3, where liquidated damages are defined, there is no specification for what damages would apply after 42 days. On other contracts, days over 42 days have been specified to also be at the Tier 6 rate. Would the Tier 6 rate apply to any days over 42 days for this contract?

Response: *Any days tallied after 42 days will be assessed as Tier 6 rate.*

10. **Question:** On the Statement of Bidder's Experience form, project A-1 requires the bidder to show at least 1,500 LF of 24" diameter or greater CIPP experience, then project A-3 requires the bidder to show at least 5,000 LF of 48" diameter or greater CIPP experience. Since the experience for project A-3 would also satisfy the experience for A-1, can project A-1 & A-3 be the same project? Also, since the requirements for project A-3 can be satisfied by experience with diameters no greater than 48", and there is 54" & 72" CIPP on this project, we recommend that at least a third project be added to the experience form requiring the bidder to show experience in larger diameters, up to and including 72", since it is much more difficult to successfully install 72" than it is to install 48". Lastly, since the individual 54" & 72" pipe segments on this project are quite long, which will require CIPP installations in excess of 1,000 LF, we recommend that the bidder be required to show 54" & 72" experience with CIPP

installs in excess of 1,000 LF, similar to what is currently required on the upcoming bid for Multiple Sewershed Package 2A.

Response: *Projects A-1, A-2, and A-3 must be different projects. The requirements for Project A-1 , A-2 and A-3 remain unchanged.*

11. **Question:** We did not see any flow data provided in the specifications or drawings for use in bypass sizing and planning. Please provide any sewage flow data available for the pipelines on this project.

Response: *Flow data for the 5 project locations are as follow:*

Project Location 1:

Compkey 1011185

Qmax = 1 MGD

*Qavg = 0 (Overflow main) *VERIFY MAIN DRY DURING NORMAL OPERATION**

Project Location 2:

Compkeys 994155 – 1000135

Qmax = 8 MGD

Qavg = 0.5 MGD

Project Location 3:

Compkeys 1012553-3213784 (72") & 1013240-1011971 (54")

Qmax (72") = 51 MGD (if done before W6 completed), 96 MGD (if done after W6 completed)

Qavg (72") = 32 MGD

Qmax (54") = 22 MGD (if done before W6 completed), 42 MGD (if done after W6 completed)

Qavg (54") = 14 MGD

Project Location 4:

Compkeys 1031861-1012669

Qmax = 6 MGD

Qavg = 1 MGD

Project Location 5:

Compkeys 102181-1012949

Qmax = 31 MGD

Qavg = 8 MGD

12. **Question:** At all 5 Project Locations, the CIPP Design Parameters tables in the drawings require the CIPP to be designed for an internal pressure of 25 psi. Since we understand that these pipes are gravity sewer mains, and not force mains, this would mean that any 25 psi internal pressure would have to result from the system being consistently, and at all project locations, under almost 57 feet of head. This is not possible. We request that the parameter for internal pressure be deleted from all the CIPP Design Parameters tables on the drawings, since an internal pressure is not applicable to CIPP design in a gravity sewer system.

Response: *The 25 psi internal pressure is a minimum requirement to establish the minimum strength of the CIPP liner.*

13. **Question:** At all 5 Project Locations, the CIPP Design Parameters tables in the drawings require the minimum long-term flexural properties to be greater than 50% of the minimum short-term properties, but the industry standard is for the long-term properties to retain a minimum of 50% of the short-term properties. Please revise the required minimum long-term flexural modulus and minimum long-term flexural strength shown in these tables to be no more than 50% of their respective short-term properties.

Response: *The minimum Long-Term Flexible Modulus (EL) shall be revised to 125,000 psi and the minimum Long-Term Flex Strength (SL) has been revised to 2,250 psi.*

14. **Question:** At Project Location 1 on drawing sheet 6 in the CIPP Design Parameters table, while the soil height is shown to be 10 feet, the groundwater height is shown to be 20 feet. This would mean that water would be flowing at least 10 feet deep above the ground surface on a long-term basis, which is not the case at this location. Please revise the depth of the external water level at this location to be no deeper than the soil cover.

Response: *This project location is in the 100yr flood plain. Specification 901, paragraph 901.4.3.e.7 requires groundwater depth shall be ground surface at a minimum or the elevation of the 100-year floodplain water surface, whichever is greater, in order to account for all reasonable anticipated future loadings.*

15. **Question:** For the manholes being reconstructed under bid item 11 (spec 855), please clarify the limits of the reconstruction - what portions of the manholes are required to be removed & replaced?

Response: *The extend of manhole reconstruction shall depend on the extend of manhole removed or demolished to accomplish the work and/or damages due to the construction operations. Interior Coating shall be installed to pass all testing required in Item No. 855.*

16. **Question:** At Project Location 2 on drawing sheet 9, please clarify what is included in the sewer lateral reconnections - are the sewer laterals just being internally reinstated without excavation, or are the lateral pipes being replaced and reconnected externally with new sewer connections? If the lateral pipes are being replaced, what limits will be replaced?

Response: *Unless otherwise directed by the owner or his authorized representative, all laterals will be reinstated. Open cut excavation for service reconnections will only be allowed if it has been approved in writing from a SAWS Inspector.*

17. **Question:** At Project Location 2 on drawing sheets 7 & 8, the manholes 27999 & 26636 shown to be used for the bypass suction and discharge manholes are also required to be reconstructed, which we understand includes coating the entire manhole interior, including benches and channels, and leakage testing the structure. Since this work would require the manhole being reconstructed to be dry, how can manholes that are being reconstructed also be used as the bypass suction &/or discharge manholes? Please either remove the requirement for these manholes to be reconstructed, redefine the reconstruction for these structures to not include coating & leakage testing, or redefine the limits of the

bypass so these manholes are included within the area that is bypassed. Similar questions and issues also apply to the following manholes:

- Project Location 3: The bypass discharge manhole 37102 on drawing sheets 10 & 14 that is shown to be reconstructed.
- Project Location 3: Manhole 51977 on drawing sheets 10 & 11 at the upstream end of the slip-lining section, which is not being bypassed, but is shown to be reconstructed.
- Project Location 5: Manhole 34321 on drawing sheets 18 & 21 at the upstream end of the slip-lining section Line 5C, which is not being bypassed, but is shown to be reconstructed.
- Project Location 5: Manhole 33840 on drawing sheets 18 & 19 at the downstream end of the slip-lining section Line 5A, which is not being bypassed, but is shown to be reconstructed.

Response: *All suction and discharge manholes for sewer bypass systems shall be reconstructed and coated as specified, but do not have to be pressure/vacuum tested. Protective coating shall be applied during low flow period and does not have to extend below the low flow line.*

18. **Question:** At Project Location 2, manhole 26637 on drawing sheets 7 & 8 includes the note “manhole cannot be opened”. Please clarify what this note means.

Response: *The surveyor could not open the ring and cover of this manhole for inspection.*

19. **Question:** Several of the manholes on the drawings include the note “special tool needed” or “need special tool to open”. Please confirm that SAWS will be providing the special tool required.

Response: *This is referring to a Cam Lock Key. SAWS will provide the awarded contractor for this project the information on where they can obtain this tool.*

20. **Question:** Please clarify where we can find a list of acceptable manufacturers for the FRP slip-lining pipe. The standard slip-lining specification section 1100 says to see the current SAWS Material Specifications, but the Material Specifications do not appear to have a section for FRP pipe. Also, FRP pipe does not appear to be included on the SAWS Approved Standard Products list.

Response: *Contractor is to utilize FRP pipes that meet the requirements of SAWS Specification 1100 Slip-Lining as well as the material requirements of SAWS Specification 857 Fiberglass Reinforced Pipe for Large Diameter Gravity Sanitary Sewer. Currently, SAWS does not have an Approved Standard Products list for FRP pipe.*

21. **Question:** At approximately STA 3+30 at Project Location 3 on drawing sheet 11, the drawings show installing a permanent double FRP manhole structure where the two manhole shafts are right next to each other. From our understanding, the upstream MH shaft is intended be used for bypass suction and the downstream one is intended be used as a CIPP installation point, but they are too close together to be used for these purposes. For this size of bypass and CIPP installation operation, these manholes would need to be at least 100 LF apart to allow adequate access for both operations on a 72” diameter pipe. Since there does not appear to be room to move the upstream bypass suction manhole, due to the nearby TxDOT ROW, it appears that the CIPP installation / slip-line termination manhole would be the one that would need to move, which would change the lengths for the associated CIPP and slip-lining runs of pipe. Please revise the manholes being installed in this area to provide at least 100 LF

clearance between the manhole being installed for bypass suction and the manhole being installed for CIPP installation / slip-line termination access, and also revise the associated CIPP and slip-lining quantities accordingly. Also, if these manholes are to be permanent FRP manholes that are paid under pay item 853.0, then why are they shown as being capped below grade and abandoned at the end of the project as per the referenced details on drawing sheet 22?

Response: *It is the contractor option to move the two said manhole further apart to accommodate their equipment as required, however, the pay limits for Slip lining and CIPP shall not be adjusted and shall remain as specified on the plan. The contractor is required to submit any changes to this distance to the Engineer for review and approval as part of their submittals. SAWS has elected to cap any manholes not needed for long term maintenance.*

22. **Question:** At Project Location 4 on drawing sheet 16, there is a mill & overlay area shown. On the Sewer Bypass Crossing Layout detail in the upper right corner, it says the limits of this mill & overlay area are 33 feet minimum, but on the larger drawing, the crosshatched mill & overlay requirement extends much farther than the indicated 33 feet. Please clarify the dimensions of the mill & overlay area required at this project location.

Response: *The 33' dimension is referring to an existing trench line (unknown utility) found at the site. This dimension defines the northern limit of mill & overlay.*

23. **Question:** At Project Location 4, please confirm that TxDOT will allow lane restrictions on the Hunt Lane overpass while the bypass system that is to be placed on that overpass is being set up, and then again when it is being torn down.

Response: *Contractor shall confine the operation of the bypass pipes within the existing shoulder width. If contractor's mean and method requires more space during the setting up of bypass lines, the work shall be performed during night hours between 8:00 PM and 6:00 PM the following morning. Any closure of roadway down to one lane access shall be accomplished with flagmen and a police officer, at no additional cost to the owner.*

24. **Question:** Special Note 1 on drawing sheet 4 says the Contractor shall not perform any excavation in the City of San Antonio property (NCB 18159, Blk 28, Lot 1) at Project Location 4, but we could not find a property with this designation at that project location. Should this note be referring to NCB 18159, Blk 26, Lot 1 instead?

Response: *The property description shall be revised to read NCB 18159, Blk 26, Lot 1.*

25. **Question:** At Project Location 4, there is a boxed note on the left side of the page that says, "Contractor shall not excavate within this property". Please confirm that this is intended to apply to the City of San Antonio property noted as NCB 18159, Blk 26, Lot 1. If that is the correct property, then it appears that manhole 75815 is required to be reconstructed on that property, which will require excavation. Will excavation be allowed to reconstruct that manhole? Please clarify.

Response: *Excavations near and around previously disturbed areas, such as existing manholes, will be allowed. Contractor shall coordinate with SAWS prior to any excavation at this property.*

26. **Question:** At Project Location 5 on drawing sheet 21, there is a note that is pointing to the piping in Castorville Road that says no excavation is allowed in the paved area. However, it appears that manhole 34321 is required to be reconstructed in the paved area of that street, which will require excavation. Will excavation be allowed to reconstruct that manhole? Please clarify.

Response: *This manhole will be the receiving end of the slip lining operation. Grouting of annular space must be accomplished without removing the cone section of this manhole. This particular manhole cone does not have to be removed as part of Item 855.*

27. **Question:** At Project Location 5, there is a new permanent FRP manhole shown to be installed at approximately STA 8+60, but it is indicated to be for bypass. It appears to have references to being installed per pay item 853.0, but also seems to have references to being installed per NSPI. It references Detail A on that same page and the details on drawing sheet 22, which both call for the manhole to be capped below grade and abandoned at the end of the project. Since this manhole is for bypass, will it be temporary or permanent? If it is permanent, will it still be capped below grade and abandoned at the end of the project? Also, will its installation be incidental to the bypass or paid under the pay item for 853.0? Many of these same questions also apply to the proposed permanent FRP manhole to be installed at approximately STA 2+80, since it is also shown to be for bypass. Please clarify.

Response: *All FRP Tee-base manholes are to be paid under Item No. 853. The N.S.P.I. is referring to the Special Shoring required to install these manholes. SAWS has elected to cap any manholes not needed for long term maintenance.*

28. **Question:** At Project Location 5 on drawing sheets 18 & 19, the 14-foot diameter, 28-foot deep slip-lining pit shown at approximately STA 2+80 for slip-lining Line 5A is not constructable at that location. At the depth and diameter that pit will need to be, there is not adequate room to build and safely shore it in that location given the existing construction limits and obstacles. It will not fit between the buffer zone for the existing retaining wall and the existing manhole 33842. Please revise the location of the slip-lining access point for slip-lining of Line 5A.

Response: *We have confirmed the constructability at this site with vendors.*

29. **Question:** At Project Location 5, the bypass plan shows an 8" sewer main also requiring a bypass system, but there is no pay item for small diameter bypass for this project location. Should there be a pay item 864-S1 for small diameter bypass at Project Location 5?

Response: *See bid item no. 13 for Spec Item No. 864-S1 in the bid tabulation.*

30. **Question:** Please confirm that SAWS either has obtained or will be obtaining the required Right-Of-Entry (ROE) agreements for this project and, where applicable, provide the pertinent ROE duration &/or completion deadline for each ROE.

Response: *All construction activities are to be confined within public R.O.W., SAWS easements, or SAWS property. Any additional space beyond what is shown on the plans as one of the above will require the contractor to obtain the ROE at no additional cost to the owner.*

31. **Question:** If the dog-house manholes being installed for bypass are temporary structures that will be capped below grade and abandoned at the end of the project, then why are they required to have FRP interiors that are entirely encased in at least 6 inches of reinforced concrete all the way up the barrel, as shown on the Dog-House Manhole Detail on drawing sheet 5? Can a standard concrete dog-house manhole be installed instead? If a concrete manhole can be installed, since it is being abandoned, will it still be required to be coated? If the dog-house manholes are required to have FRP interiors, then why are they being abandoned and buried?

Response: *Standard concrete dog-house manhole, if used, shall have all interior surfaces of the manhole coated per Item 855.*

32. **Question:** The Phase 1 of Location 5 at MH 33482 for the sliplining – work area as shown does not allow enough room to build as designed. Can additional work area be obtained by SAWS to the East

Response: *See response to question no. 28. Any additional work area beyond what is shown on the plans is the responsibility of the contractor to obtain at no additional cost to the owner.*

33. **Question:** Also for Location 5 – can SAWS define TxDOT expectations for the reconstruction of MH 34321 given there is no paving, etc. limits shown.

Response: *See response to question no. 26.*

34. **Question:** Can SAWS issue details for TCP for each location as a basis of bid?

Response: *Suggested TCP layout is attached with this Addendum.*

35. **Question:** The CIPP design specifications listed indicated pressure rating of 25psi. The design appears to be more aligned to a pressure pipe application not a gravity pipe. Please clarify.

Response: *See Response to Question No. 12, above.*

36. **Question:** Will SAWS please consider postponing the bid due date for the Multiple Sewershed Package 5? Possibly until September 25th? SAWS has another large and complex project out for bid, the Multiple Sewershed Package 2A, that is due on 9/7/18. Having these two projects bidding so close together, may prevent both prime and sub bidders the adequate time needed to review the documents, conduct site visits, and generate the most competitive pricing possible.

Response: *See response to question 6.*

CLARIFICATIONS

See attached 4 sheets for suggested Traffic Control Plan.

END OF ADDENDUM

This Addendum, including these Nine (9) pages, is Eleven (13) pages with attachments in its entirety.
Attachments: Suggested Traffic Control Plans (4 sheets)



Engineer Name

Company



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 PROTECTION 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.

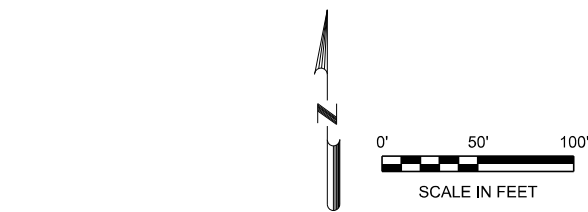
TRENCH EXCAVATION SAFETY PROTECTION SHALL BE APPLIED TO ALL PROTECTIONS AND SHORING FOR EXCAVATIONS WHERE THE WIDTH OF A TRENCH OR EXCAVATION IS NOT GREATER THAN 15 FEET (MEASURE AT THE BOTTOM OF THE EXCAVATION). IF FORMS OR OTHER STRUCTURES ARE INSTALLED OR CONSTRUCTED IN AN EXCAVATION SO AS TO REDUCE THE DIMENSION MEASURED FROM THE FORMS OR STRUCTURE TO THE SIDE OF THE EXCAVATION TO 15 FEET OR LESS (MEASURE AT THE BOTTOM OF THE EXCAVATION), THE EXCAVATION IS ALSO CONSIDERED TO BE A TRENCH. ALL REQUIRED SHORING FOR CIPP & SLIPLINING LAUNCHING AND RECEIVING PITS SHALL BE PAID UNDER ITEM TRENCH EXCAVATION SAFETY PROTECTION. IN ADDITION, TRENCH EXCAVATION SAFETY PROTECTION WILL NOT BE LIMITED TO THESE APPLICATIONS, BUT MAY BE USED WHENEVER DEEMED EXPEDIENT AND PROPER TO ENSURING WORK.

SEWER LEGEND

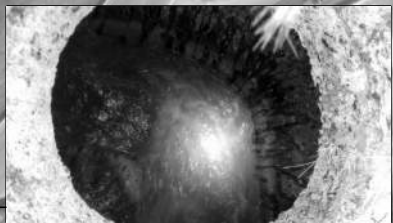
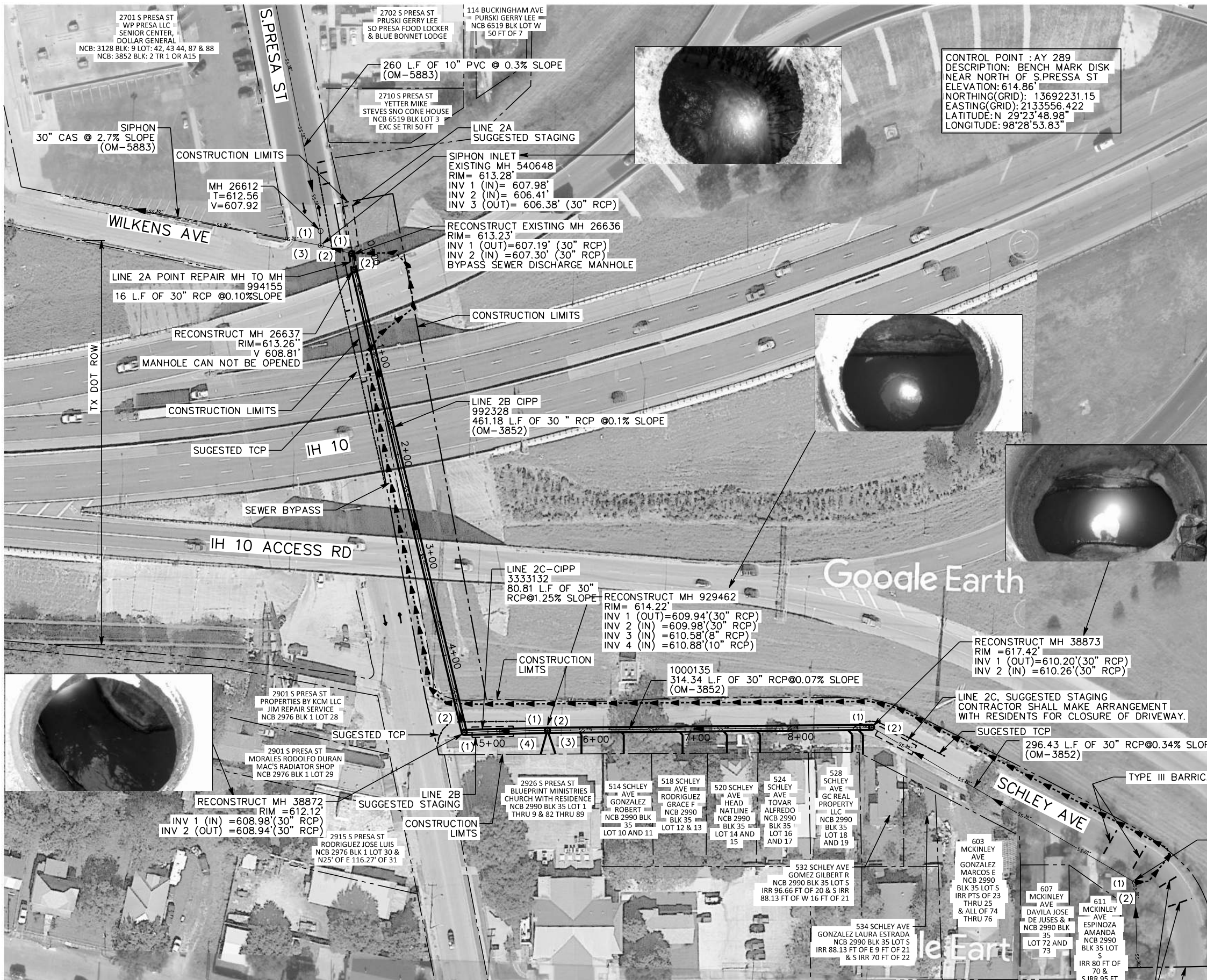
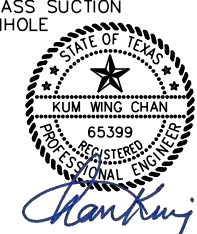
- G 6" — EXISTING GAS
- T — EXISTING TELEPHONE LINE
- E — EXISTING ELECTRICAL LINE
- SD — EXISTING STORM DRAIN
- COM — EXISTING COMMUNICATION
- W 8" — EXISTING WATER MAIN
- (M) — EXISTING METER
- (V) — EXISTING VALVE
- OHE — EXISTING OVERHEAD ELECTRICAL LINE
- SS 8" — EXISTING SEWER MAIN
- - - - - PROPOSED POINT REPAIR
- ==== PROPOSED SLIPLINING
- ==== PROPOSED CIPP
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- ▲—▲—▲— TEMPORARY BYPASS PIPE
- EXISTING R.O.W.
- EASEMENT
- ◆ SUGGESTED TCP

ESTIMATED QUANTITIES - PROJECT LOCATION 2

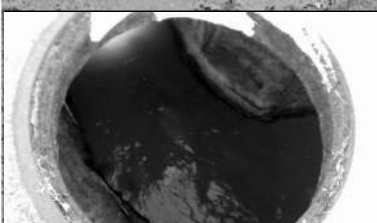
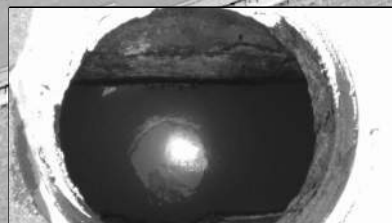
ITEM	DESCRIPTION	UNIT	QUANTITIES
530.1	BARRICADE SIGNS AND TRAFFIC HANDLING (PL #2)	EA.	1
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	16
854.0	SANITARY SEWER LATERALS	L.F.	155
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA.	7
855.0	RECONSTRUCTION OF EXISTING MANHOLE	EA.	6
864-S2	BYPASS PUMPING LARGE DIA. SANITARY SEWERS (LP #2)	EA.	1
866.0	SEWER MAIN PRE-TELEVISION (18" - 30")	L.F.	872
901.0	INSTALL CIPP SANITARY SEWER PIPE-30" DIA. (HOT WATER CURED), ALL DEPTHS	L.F.	856
1103.1	POINT REPAIR, 30" AND SMALLER IN DIA. (0' - 9' LENGTH)	EA.	1
1103.2	EXTRA LENGTH POINT REPAIR, 30" AND SMALLER IN DIA.	L.F.	7
1103.3	OBSTRUCTION REMOVAL, 30" AND SMALLER IN DIA. (0' - 6' LENGTH)	EA.	1
1109.0	SANITARY SEWER LATERAL STUBOUT OR RECONNECTIONS	EA.	9



NO.	DATE	REVISION	APP.
MULTI SEWER SHED PK5 SAWS SEWER WORK			
PROJECT LOCATION 2 LAYOUT BYPASS & CONTROL PLAN			
DEVELOPER:		CONT.	
SUBMITTED			
APPROVED			
MAP No.	164566	BUDGET PROJ.	33
95% SUBMITTAL	PROJECT NO. 17-4551	DATE:	9/6/2018
DRAWN: RP	DESIGN: MP	CHECK: KWC	SHEET NO. 7 OF 31



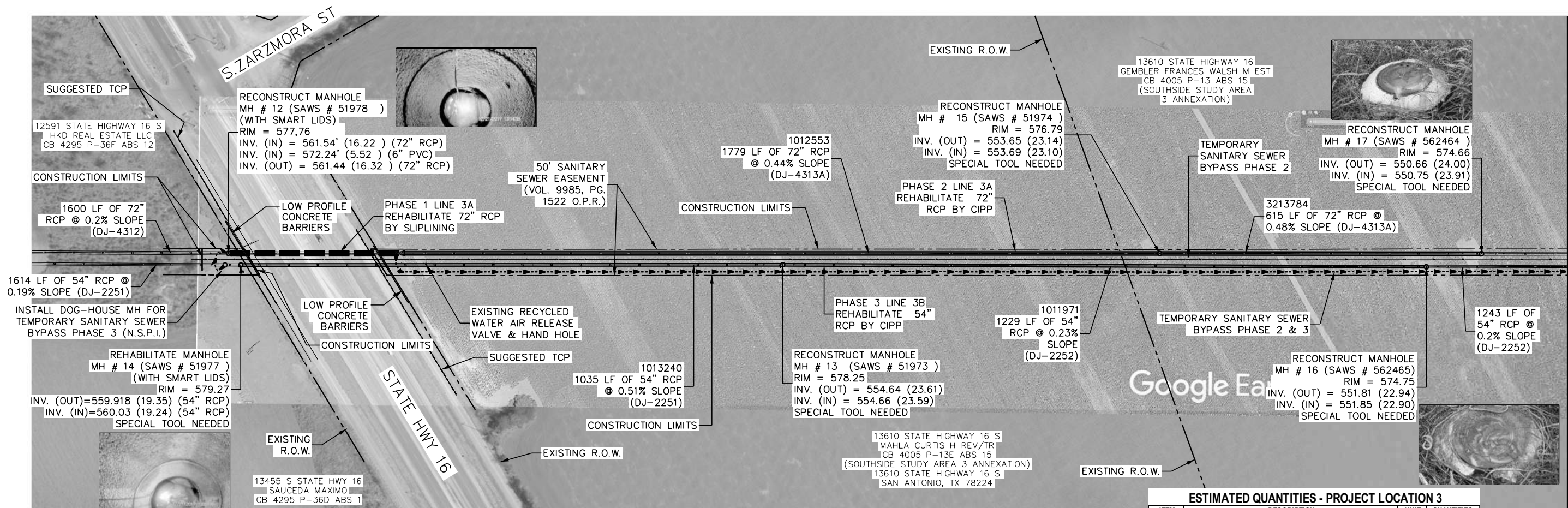
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 DESCRIPTION: BENCH MARK DISK NEAR NORTH OF S.PRESSA ST
 ELEVATION: 614.86'
 NORTHING(GRID): 13692231.15
 EASTING(GRID): 2133556.422
 LATITUDE: N 29°23'48.98"
 LONGITUDE: 98°28'53.83"



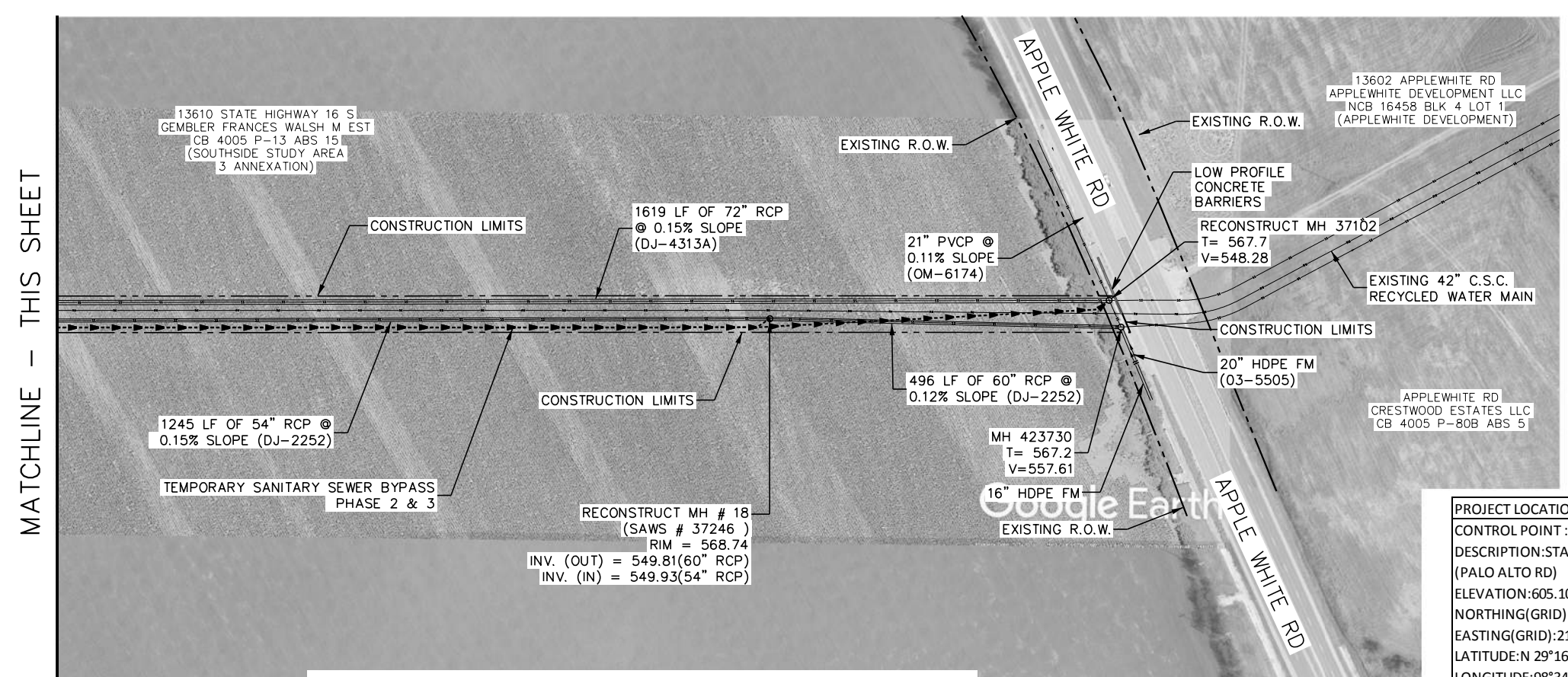
SUGGESTED TRAFFIC CONTROL PLAN

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MATCHLINE - THIS SHEET



SUGGESTED TRAFFIC CONTROL PLAN

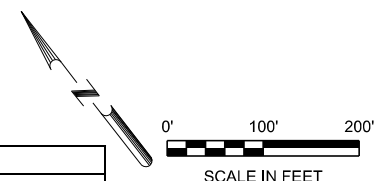


SUGGESTED TRAFFIC CONTROL PLAN

ESTIMATED QUANTITIES - PROJECT LOCATION 3

ITEM	DESCRIPTION	UNIT	QUANTITIES
530.1	BARRICADE,SIGNS AND TRAFFIC HANDLING (PL #3)	EA.	1
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	25
853.0	TEE BASE FIBERGLASS MANHOLE	EA.	2
853.0	TEE BASE FIBERGLASS MANHOLE, EXTRA DEPTH	V.F.	17
855.0	RECONSTRUCTION OF EXISTING MANHOLE	EA.	7
858.0	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	C.Y.	120
864-S2	BYPASS PUMPING LARGE DIA. SANITARY SEWERS (LP #3)	EA.	1
866.0	SEWER MAIN PRE-TELEVISION (36"-72")	L.F.	4658
901.0	INSTALL CIPP SANITARY SEWER PIPE-54" DIA. (HOT WATER CURED), ALL DEPTHS	L.F.	2264
901.0	INSTALL CIPP SANITARY SEWER PIPE-72" DIA. (HOT WATER CURED), ALL DEPTHS	L.F.	2063
1100.0	SLIP-LINING SANITARY SEWERS-72" DIA.(63" FRP)	L.F.	331
1103.1	POINT REPAIR, 54" DIA. (0' - 9' LENGTH)	EA.	1
1103.1	POINT REPAIR, 72" DIA. (0' - 9' LENGTH)	EA.	1
1103.2	EXTRA LENGTH POINT REPAIR, 54" DIA.	L.F.	5
1103.2	EXTRA LENGTH POINT REPAIR, 72" DIA.	L.F.	5
1103.3	OBSTRUCTION REMOVAL, 54" DIA.	EA.	1
1103.3	OBSTRUCTION REMOVAL, 72" DIA.	EA.	1

NOTE:
 1.CONTRACTOR TO GIVE ONE WEEK PRIOR NOTICE TO MR. RONALD GUTIERREZ (Roland.gutierrez@saws.org, 210 233 3194)
 2.RECYCLED WATER LINE CANNOT BE SHUT DOWN BETWEEN 9.00PM TO 10.00 AM
 3.CONTRACTOR TO PROTECT EXISTING RECYCLE WATER MAIN
 4.CONTRACTOR TO REPLACE EXISTING INFRASTRUCTURE TO PRIOR OR BETTER CONDITION IF DISTURBED (N.S.P.I)



PROJECT LOCATION 3
 CONTROL POINT : AY0809
 DESCRIPTION:STAINLESS IRON ROD (PALO ALTO RD)
 ELEVATION:605.10'
 NORTHING(GRID): 13648200.46
 EASTING(GRID):2105206.683
 LATITUDE:N 29°16'34.18"
 LONGITUDE:98°34'16.18"



NO.	DATE	REVISION	APP.

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

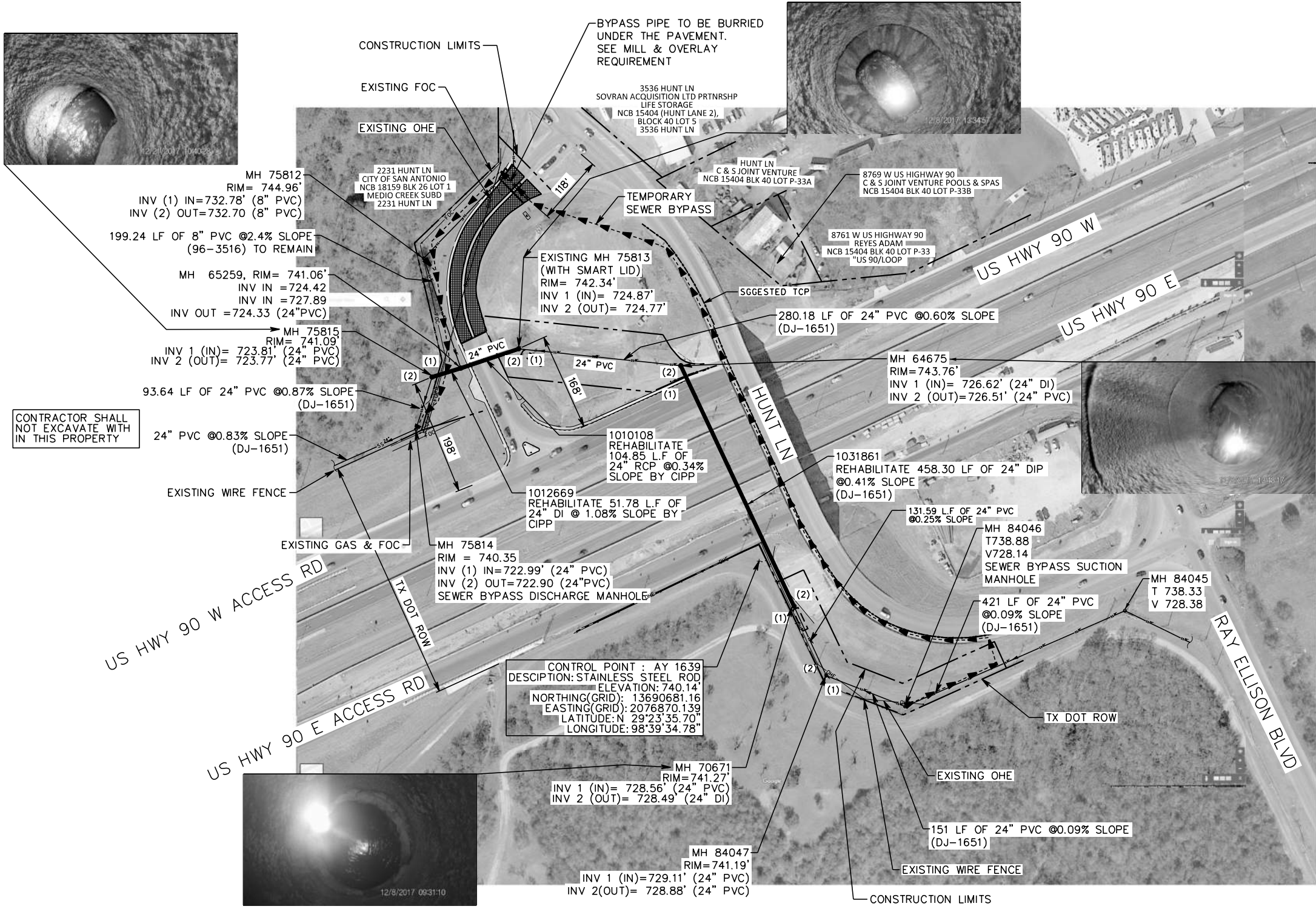
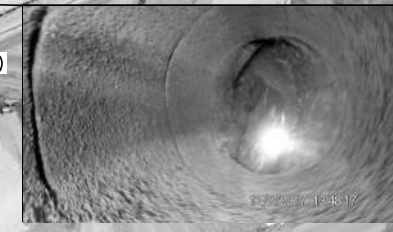
MULTI SEWER SHED PK5
 SAWS SEWER WORK
 PROJECT LOCATION 3 - LAYOUT
 BYPASS AND CONTROL PLAN

DEVELOPER: _____ CONT.
 SUBMITTED _____
 APPROVED _____

MAP No. 140528&140530 BUDGET PROJ. 33
 95% SUBMITTAL PROJECT NO. 17-4551 DATE: 9/6/2018
 DRAWN: RP DESIGN: MP CHECK: KWC SHEET NO. 10 OF 31

9/6/2018 3:32:17 PM V:\17-177-V-SAWS-Multi SewerShed Pk 5\2Design Phase\Drawings\Util-Waste Water\DGN\17-177V-ss-xv-PL3-layout.dgn

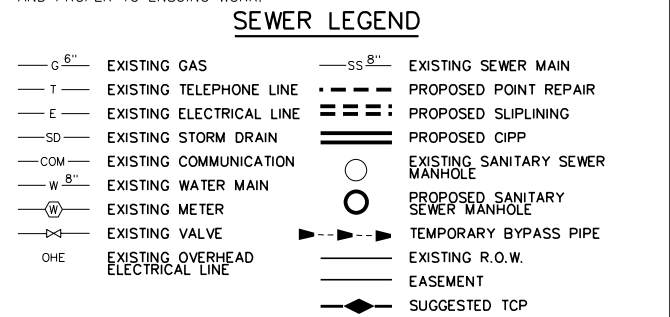
MATCHLINE - THIS SHEET



TRENCH EXCAVATION SAFETY PROTECTION

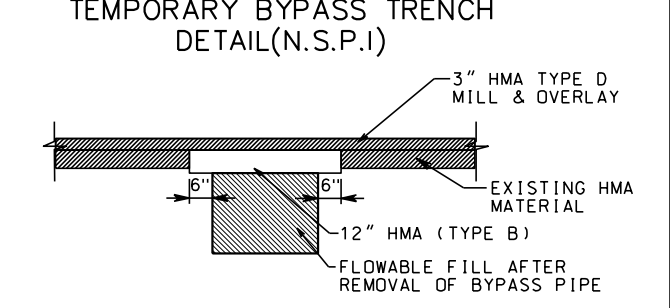
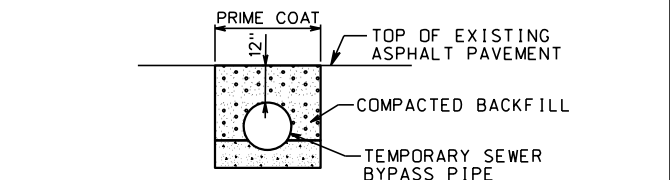
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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.

TRENCH EXCAVATION SAFETY PROTECTION SHALL BE APPLIED TO ALL PROTECTIONS AND SHORING FOR EXCAVATIONS WHERE THE WIDTH OF A TRENCH OR EXCAVATION IS NOT GREATER THAN 15 FEET (MEASURED AT THE BOTTOM OF THE EXCAVATION). IF FORMS OR OTHER STRUCTURES ARE INSTALLED OR CONSTRUCTED IN AN EXCAVATION SO AS TO REDUCE THE DIMENSION MEASURED FROM THE FORMS OR STRUCTURE TO THE SIDE OF THE EXCAVATION TO 15 FEET OR LESS (MEASURED AT THE BOTTOM OF THE EXCAVATION), THE EXCAVATION IS ALSO CONSIDERED TO BE A TRENCH. ALL REQUIRED SHORING FOR CIPP & SPLITTING LAUNCHING AND RECEIVING PITS SHALL BE PAID UNDER ITEM TRENCH EXCAVATION SAFETY PROTECTION. IN ADDITION, TRENCH EXCAVATION SAFETY PROTECTION WILL NOT BE LIMITED TO THESE APPLICATIONS, BUT MAY BE USED WHENEVER DEEMED EXPEDIENT AND PROPER TO ENSURING WORK.

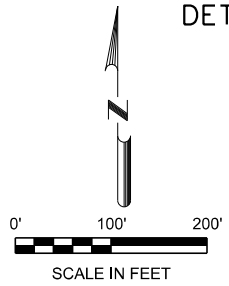
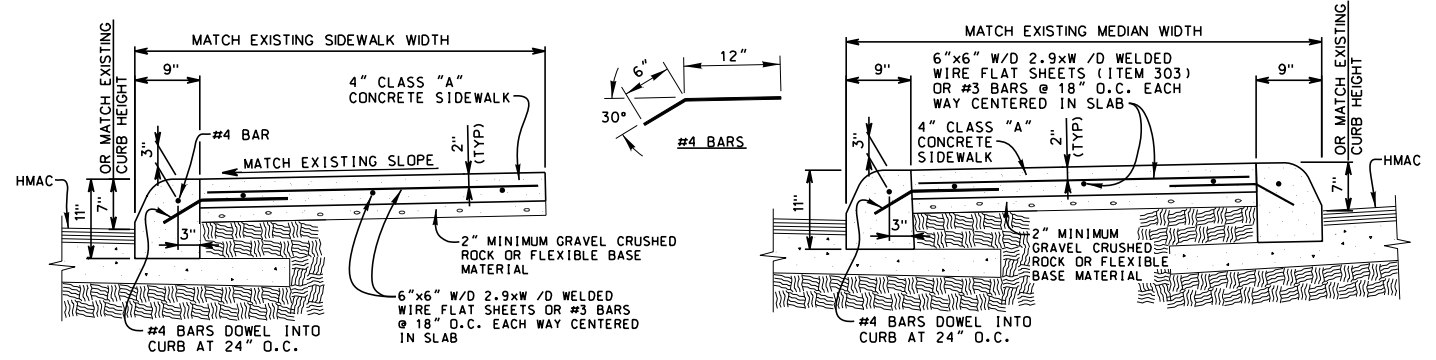


NOTE:

- CONTRACTOR SHALL PROTECT SMART LID AT MH 75813(N.S.P.I)
- CONTRACTOR SHALL REMOVE BYPASS PIPE AND RECONSTRUCT ROADWAY PAVEMENT AS SHOWN BELOW(N.S.P.I)



SUGGESTED TRAFFIC CONTROL PLAN



NO.	DATE	REVISION	APP.

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

STATE OF TEXAS
KUM WING CHAN
REGISTERED PROFESSIONAL ENGINEER
65399

SAWS

MULTI SEWER SHED PK5 SAWS SEWER WORK

PROJECT LOCATION 4 EXISTING CONDITION & CONTROL PLAN

DEVELOPER: _____ CONT.

SUBMITTED: _____

APPROVED: _____

MAP No. 108566&106566 BUDGET PROJ. 33

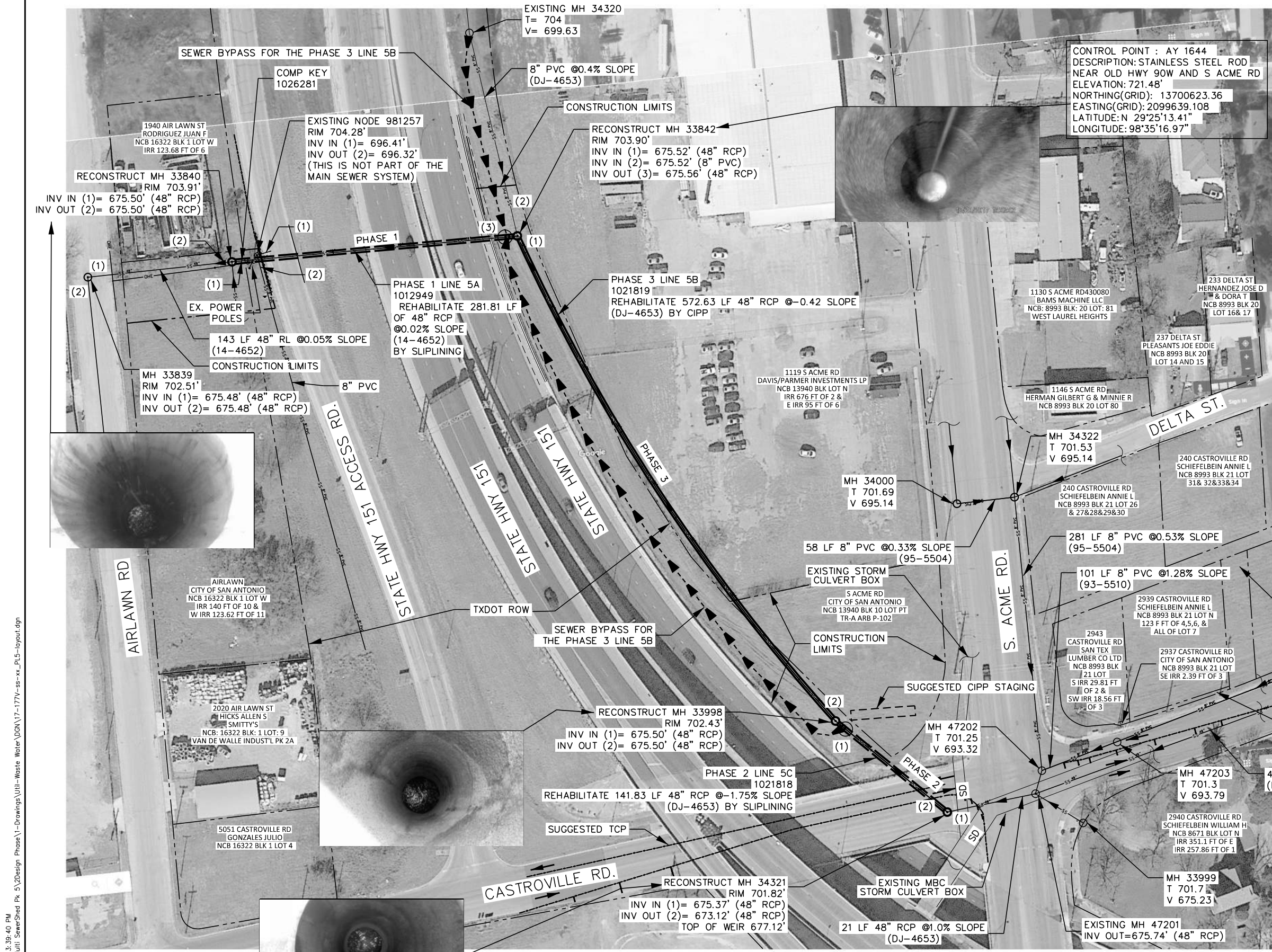
95% SUBMITTAL PROJECT NO. 17-4551 DATE: 9/6/2018

DRAWN: TR DESIGN: MP CHECK: KWC SHEET NO. 15 OF 31

ESTIMATED QUANTITIES - PROJECT LOCATION 4

ITEM	DESCRIPTION	UNIT	QUANTITIES
530.1	BARRICADE, SIGNS AND TRAFFIC HANDLING (PL #4)	EA.	1
855.0	RECONSTRUCTION OF EXISTING MANHOLE	EA.	5
864-S1	BYPASS PUMPING SMALL DIA. SANITARY SEWERS (LP #4)	EA.	1
864-S2	BYPASS PUMPING LARGE DIA. SANITARY SEWERS (LP #4)	EA.	1
866.0	SEWER MAIN PRE-TELEVISION (18"-30")	L.F.	616
901.0	INSTALL CIPP SANITARY SEWER PIPE-24" DIA. (HOT WATER CURED), ALL DEPTHS	L.F.	616
1103.1	POINT REPAIR, 30" AND SMALLER IN DIA. (0' - 9' LENGTH)	EA.	1
1103.3	OBSTRUCTION REMOVAL, 30" AND SMALLER IN DIA. (0' - 6' LENGTH)	EA.	1

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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.

TRENCH EXCAVATION SAFETY PROTECTION SHALL BE APPLIED TO ALL PROTECTIONS AND SHORING FOR EXCAVATIONS WHERE THE WIDTH OF A TRENCH OR EXCAVATION IS NOT GREATER THAN 15 FEET (MEASURE AT THE BOTTOM OF THE EXCAVATION). IF FORMS OR OTHER STRUCTURES ARE INSTALLED OR CONSTRUCTED IN AN EXCAVATION SO AS TO REDUCE THE DIMENSION MEASURED FROM THE FORMS OR STRUCTURE TO THE SIDE OF THE EXCAVATION TO 15 FEET OR LESS (MEASURE AT THE BOTTOM OF THE EXCAVATION), THE EXCAVATION IS ALSO CONSIDERED TO BE A TRENCH. ALL REQUIRED SHORING FOR CIPP & SLIPLINING LAUNCHING AND RECEIVING PITS SHALL BE PAID UNDER ITEM TRENCH EXCAVATION SAFETY PROTECTION. IN ADDITION, TRENCH EXCAVATION SAFETY PROTECTION WILL NOT BE LIMITED TO THESE APPLICATIONS, BUT MAY BE USED WHENEVER DEEMED EXPEDIENT AND PROPER TO ENSURING WORK.

SEWER LEGEND

- G-6" EXISTING GAS
- T EXISTING TELEPHONE LINE
- E EXISTING ELECTRICAL LINE
- SD EXISTING STORM DRAIN
- COM EXISTING COMMUNICATION
- W-8" EXISTING WATER MAIN
- M EXISTING METER
- V EXISTING VALVE
- OHE EXISTING OVERHEAD ELECTRICAL LINE
- SS-8" EXISTING SEWER MAIN
- - - PROPOSED POINT REPAIR
- - - PROPOSED SLIPLINING
- ==== PROPOSED CIPP
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- ▶—▶—▶ TEMPORARY BYPASS PIPE
- EXISTING R.O.W.
- EASEMENT
- ◆ SUGGESTED TCP

ESTIMATED QUANTITIES - PROJECT LOCATION 5

ITEM	DESCRIPTION	UNIT	QUANTITIES
530.1	BARRICADE, SIGNS AND TRAFFIC HANDLING (PL #5)	EA.	1
550.0	TRENCH EXCAVATION SAFETY PROTECTION	L.F.	25
853.0	TEE BASE FIBERGLASS MANHOLE	EA.	2
853.0	TEE BASE FIBERGLASS MANHOLE, EXTRA DEPTH	V.F.	42
855.0	RECONSTRUCTION OF EXISTING MANHOLE	EA.	4
858.0	CONCRETE ENCASMENT, CRADLES, SADDLES AND COLLARS	C.Y.	180
864-S2	BYPASS PUMPING LARGE DIA. SANITARY SEWERS (LP #5)	EA.	1
866.0	SEWER MAIN PRE-TELEVISION (36"-72")	L.F.	997
901.0	INSTALL CIPP SANITARY SEWER PIPE-48" DIA. (HOT WATER CURED), ALL DEPTHS	L.F.	573
1100.0	SLIP-LINING SANITARY SEWERS-48" DIA. (42" FRP)	L.F.	423
1103.1	POINT REPAIR, 48" DIA. (0'-9' LENGTH)	EA.	1
1103.2	EXTRA LENGTH POINT REPAIR, 48" DIA.	L.F.	5
1103.3	OBSTRUCTION REMOVAL, 48" DIA.	EA.	1

NO. DATE REVISION APP.

NO.	DATE	REVISION	APP.

UNINTECH CONSULTING ENGINEERS, INC.

2431 E. Evans Road
San Antonio, Texas 78259
Phone: (210) 641-8003

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

MULTI SEWER SHED PK5 SAWS SEWER WORK

PROJECT LOCATION 5 LAYOUT, BYPASS AND CONTROL PLAN

DEVELOPER: _____ CONT. _____

SUBMITTED: _____

APPROVED: _____

MAP No. _____ BUDGET PROJ. **33**

95% SUBMITTAL PROJECT NO. **17-4551** DATE: **9/6/2018**

DRAWN: TR DESIGN: MP CHECK: KWC SHEET NO. **18 OF 31**

STATE OF TEXAS

KUM WING CHAN

65399 REGISTERED PROFESSIONAL ENGINEER

Chan King

SUGGESTED TRAFFIC CONTROL PLAN

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