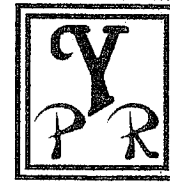


SAN ANTONIO WATER SYSTEM



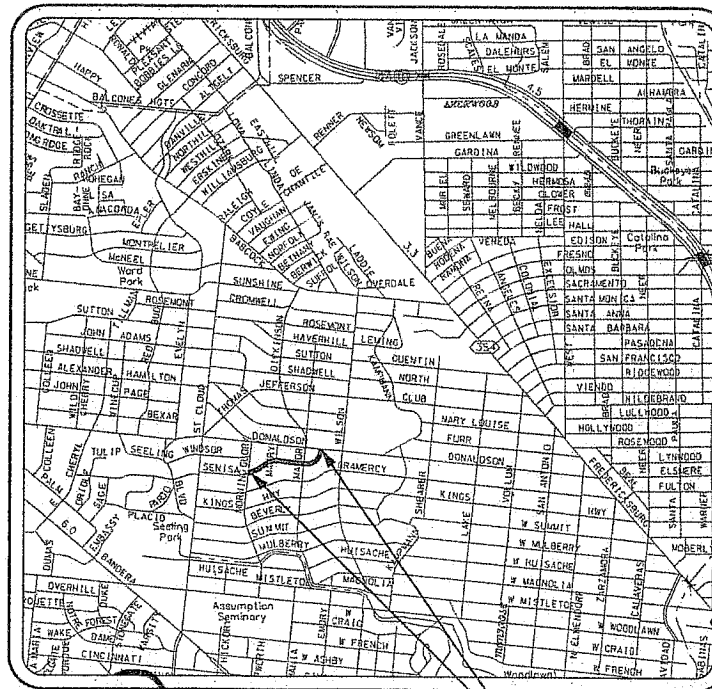
YOUNG PROFESSIONAL RESOURCES
 8100 Roughrider Drive, Suite 101
 Windcrest, TX 78239
 Tel. (210) 590-9215 Fax (210) 590-9346
 Young Professional Resources ©
 Registration No. F-8635

SEWER JOB NO: 10-5602

SENISA DRIVE RECONSTRUCTION MORNING GLORY TO DONALDSON AVE.

ESTIMATED QUANTITIES

FINAL QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
206.1	ASPHALT TREATED BASE - 10 INCHES COMPACTED DEPTH	SY	120
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	542.55
848	8" PVC SANITARY SEWER LINE (6'-10')	LF	542.55
852.1	SANITARY SEWER MANHOLE (0'-6')	EA	3
852.3	EXTRA DEPTH MANHOLES (>6')	VF	6.02
854	SANITARY SEWER LATERALS	LF	210
854.1	ONE-WAY SANITARY SEWER CLEAN-OUT	EA	7
864	BYPASS PUMPING	LS	1
866	FRE SEWER MAIN TELEVISION INSPECTION	LF	542.55
866	SEWER MAIN TELEVISION INSPECTION	LF	542.55



LOCATION MAP
NTS

PROJECT LOCATION:
SENISA DRIVE
DONALDSON AVENUE TO MORNING GLORY

MATERIALS NOTE

PIPE: JM EAGLE
 MANHOLES: CHARLOTTE
 FITTINGS: SIGMA

AS-BUILT / PLAN OF RECORD

SAWS JOB NO.: 10-5502
 COMPLETION DATE: SEPTEMBER 12, 2011
 CONTRACTOR: J3 EXCAVATION CO., LLC
 INSPECTOR: ROMEO CANALES

SHEET INDEX

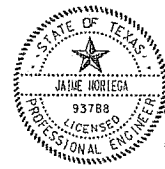
DESCRIPTION	SHEET NO.
COVER SHEET	1
SEWER GENERAL NOTES	2-3
PROJECT LAYOUT SHEET	4
8-INCH PVC SEWER MAIN PLAN & PROFILE SHEETS	5-7
SPECIAL DETAILS	8
STANDARD DETAILS	9-12

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.



LDY
 LEONARD D. YOUNG, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 61852
 DATE: 12-8-11



J. Noriega
 JAIME NORIEGA, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 93788
 DATE: 2011-12-08

SEWER JOB NO: 10-5602

12/8/2011 2:30:33 PM

GENERAL 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 following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) for Sewerage Systems Edwards Aquifer Rules 30 Texas Administrative Code (TAC) 213.5(c) and 217.51 217.70 and 30 TAC Chapter 217, Subchapter D.
 - Current TXDOT Standard Specifications for Construction of Highways, Streets and Drainage.
 - Current San Antonio Water System Standard Specifications for Construction.
 - Current City of San Antonio Standard Specifications for Public Works Construction.
- The Contractor is to notify and make arrangements with the SAWS Construction Inspection Division at 233-3500 and the involved home residents and /or property owners 48 hours prior to excavation.
- The location and depths of existing utilities, including service laterals, shown on the plans are approximate only. Actual locations and depths must be field verified by the contractor 48 hours prior to construction and it shall be the Contractor's responsibility to locate utility service lines as required for it shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction.
- The contractor shall verify the exact location of underground utilities and drainage structures at least 48 hours prior to construction whether shown on plans or not, and to protect the same during construction.

San Antonio Water System:	
Utility Relocates	233-2010
Production Control Center	233-2016
COSA Drainage	207-8048
COSA Traffic Signal Operations	207-7720
Texas State Wide One Call Locator	1-800-545-6005
Bexar Metropolitan Water District	354-6536
- The Contractor shall be responsible for restoring to its original or better condition from damages done to existing fences, curbs, streets, driveways, sidewalks, landscaping and structures.
- The Contractor shall avoid cutting roots larger than one inch in diameter when excavating near existing trees. Excavation in vicinity of trees shall proceed with caution. The Contractor shall contact the City Arborist at 207-8053 for guidance. SAWS Construction Inspector shall also be notified.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
- 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.

GENERAL SEWER NOTES

- The Contractor is responsible to ensure that no overflows or spillage of sewage occurs. Should this occur, the Contractor shall:
 - Identify the source of the spill and attempt to eliminate any additional spillage. Notify Construction Inspections.
 - Contain the spill in place and prevent contamination of streams.
 - Clean up the spill and dispose of contaminated materials.
 - Disinfect the area of the spill with a mixture of HTH chlorine and water.
 - Identify and train personnel responsible for spillage prevention and control.

No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the Texas Commission on Environmental Quality (TCEQ) and the San Antonio Water System.
- Service Lateral Connections:
 - The exact location and elevation of the service laterals and manholes shall be field verified by the Contractor. (NSPI)
 - A minimum of 3 feet of cover is to be maintained over the sanitary sewer laterals at subgrade.
 - All sewer lateral services for future connections as identified on plan and profiles, shall be capped and sealed.
 - The Contractor shall be responsible for disconnecting each existing service line from the existing main and re-connecting the service to the new service main. The Contractor shall be responsible for maintaining continuous service (No separate pay item).
 - Laterals shall be constructed to serve all existing houses and vacant lots.
- The contractor shall provide By-pass pumping of sewage around each segment of pipe to be replaced, in accordance with SAWS special specification "Sanitary Sewer". Payment for such work will be made under the bid item "Sanitary Sewer (By-pass Pumping)" as per SAWS special specification "Sanitary Sewer".
- Prior to tie-ins, any shutdowns of existing force 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.

NON-EDWARDS AQUIFER RECHARGE ZONE SANITARY SEWER SYSTEM
GENERAL NOTES
REVISED JANUARY 26, 2006

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE FOLLOWING AS APPLICABLE:
- CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S DESIGN CRITERIA FOR SEWERAGE SYSTEMS [30TAC CHAPTER 217]
 - CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR CONSTRUCTION".
 - CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
 - CURRENT TXDOT "STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
 - CURRENT CITY OF SAN ANTONIO "RIGHT OF WAY ORDINANCE AND CRITERIA MANUAL".
2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED G.C.P FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED. WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS.
3. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
- | | |
|-----------------------------------|----------------|
| SAN ANTONIO WATER SYSTEM | 233-2010 |
| COSA DRAINAGE | 207-2800 |
| COSA TRAFFIC SIGNAL OPERATIONS | 207-7765 |
| TEXAS STATE WIDE ONE CALL LOCATOR | 1-800-545-6005 |
| CITY PUBLIC SERVICE | |
| SOUTH WESTERN BELL | |
| TIME WARNER CABLE | |
| VALERO ENERGY CO. | |
| BEXAR METROPOLITAN WATER DISTRICT | 354-6536 |
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY ARBORIST AT 207-8053 FOR GUIDANCE. SAWS CONSTRUCTION INSPECTOR SHALL ALSO BE NOTIFIED.
6. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE PROJECT AREAS.
8. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED.
9. ON ALL MANHOLES TO BE ABANDONED, THE RINGS AND COVERS SHALL BE SALVAGED IN ACCORDANCE WITH THE MOST CURRENT SAN ANTONIO WATER SYSTEM'S STANDARD SPECIFICATION FOR CONSTRUCTION, ITEM 101: PREPARATION OF RIGHT OF WAY. THE HOLE SHOULD BE BACKFILLED TO THE SATISFACTION OF THE INSPECTOR.

BLASTING

10. WHEN ALLOWABLE, BLASTING SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE CRITERIA ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION [30 TAC 313.5 (C) (6)].
11. BLASTING FOR SEWER LINE EXCAVATION MUST BE DONE IN SUCH A MANNER AS TO MINIMIZE THE FRACTURING OF ROCK BEYOND THE REQUIRED EXCAVATION. THE CONTRACTOR SHALL CONSIDER THE ELEVATION OF THE EXISTING SANITARY SEWER MAIN IN RELATION TO THE BLASTING CHARGE AND THE RELATIVE DIRECTION OF EXISTING AND PROPOSED TRENCHES. BLASTING WITHIN SUCH AREAS SHALL BE ACCOMPLISHED ONLY BY QUALIFIED BLASTING CONTRACTORS WHO HOLD BLASTING LICENSES FROM A QUALIFIED AGENCY SUCH AS THE SAN ANTONIO FIRE DEPARTMENT IN BEXAR COUNTY. ANY DAMAGE TO EXISTING SANITARY SEWERS RESULTING FROM BLASTING SHALL BE REPAIRED AND RETESTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
12. NO BLASTING SHALL BE PERFORMED WITHIN 75 FEET OF EXISTING UTILITIES.
13. AFTER CONSTRUCTION, TESTING WILL BE DONE BY TV CAMERA BY THE CONTRACTOR AND OBSERVED BY INSPECTOR, AND WASTEWATER ENGINEERING PERSONNEL, AS THE CAMERA IS RUN THROUGH THE LINES. ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED JOINTS, MUST BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. CONTRACTOR TO PROVIDE TV TAPES TO CONSTRUCTION INSPECTION FOR REVIEW PRIOR TO FINAL INSPECTION OF THE PROJECT.

EXCAVATION

14. 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. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.
15. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100 YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
16. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO THE S.A.W.S. STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITEM NO. 550 & 804.

WATER LINE CROSSING

17. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN SEWER LINES AND WATER LINES/MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF SEWER LINES SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES (30 TAC CHAPTER 217).

EROSION AND SEDIMENTATION CONTROL

18. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS.

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

LEONARD D. YOUNG, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 61852

12-8-11
DATE

JAIME NORIEGA, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 93788

2011-12-08
DATE

<p style="text-align: center;">LEGEND</p> <p>EXIST. WATER MAIN — 6" — 1.00'</p> <p>GAS MAIN — 2" — 1.00'</p> <p>SANITARY SEWER — 8" — 1.00'</p> <p>STORM SEWER — 24" — 1.00'</p> <p>UTILITY POLE LINE — 12" — 1.00'</p> <p>ELECTRIC CABLE — 12" — 1.00'</p> <p>TELEPHONE CABLE — 12" — 1.00'</p> <p>FLOW ARROW — [Symbol]</p> <p>PROP CLEANOUT — [Symbol]</p> <p>PROPOSED SANITARY SEWER LATERAL — [Symbol]</p> <p>EOP — [Symbol]</p> <p>EDGE OF PAVEMENT — [Symbol]</p>			<p>YOUNG PROFESSIONAL RESOURCES</p> <p>8100 Rough Rider Drive, Suite 101 Windsor, TX 76799 Tel: (214) 590-9215 Fax: (214) 590-0345 Young Professional Resources © Registration No. F-8935</p>											
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">No.</th> <th style="width: 40%;">Revision</th> <th style="width: 10%;">Drawn</th> <th style="width: 10%;">Approved</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				No.	Revision	Drawn	Approved	Date					
	No.	Revision	Drawn	Approved	Date									
<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center;"> </td> <td colspan="3" style="text-align: center;"> <p>SEWISA DRIVE RECONSTRUCTION MORNING GLORY TO DONALDSON AVE. SEWER SYSTEM 8-INCH PVC SEWER MAIN ADJUSTMENTS GENERAL NOTES</p> </td> </tr> </table>					<p>SEWISA DRIVE RECONSTRUCTION MORNING GLORY TO DONALDSON AVE. SEWER SYSTEM 8-INCH PVC SEWER MAIN ADJUSTMENTS GENERAL NOTES</p>									
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<p>DEVELOPER: _____</p> <p>CONT. _____ BUDGET PROJ. _____</p> <p>SUBMITTED _____</p> <p>APPROVED _____</p> <p>MAP No. _____ SHEET _____</p> <p>SECT. No. _____ 2 _____</p> <p>DR. CB CK. JH JOB No. 10-5602 OF 12</p>														

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19. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE SAN ANTONIO WATER SYSTEM.

SUPPLEMENTARY

20. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

21. THE DEVELOPER DEDICATES THE SANITARY SEWER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE SAN ANTONIO WATER SYSTEM. THE SAN ANTONIO WATER SYSTEM WILL OWN AND MAINTAIN SAID SANITARY SEWER MAINS WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION. (AS APPLICABLE)

22. THE DEVELOPER WILL BE RESPONSIBLE FOR THE LIFT STATION MAINTENANCE FEE IN EFFECT AT THE TIME OF CERTIFICATION. THE CURRENT MAINTENANCE FEE PER LIFT STATION WILL BE COLLECTED PRIOR TO PLAT RECORDATION

23. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH PIPE, MINIMUM STIFFNESS OF 115 PSI.

24. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

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 SITES(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 PROSENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SAWS LOCATOR NOTE:
 LOCATION AND DEPTH OF THE EXISTING WATER AND SEWER MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LOCATOR AT 233-2010. THE CONTRACTOR SHOULD EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING WATER AND SEWER FACILITIES AND SHOULD THEY BE DAMAGED DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR AND REPLACE THE DAMAGED FACILITIES. NECESSARY POTHOLES TO BE PERFORMED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.

NOTE TO CONTRACTOR:

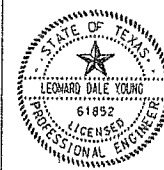
WATER AND SEWER FACILITIES TO BE PROTECTED DURING CONSTRUCTION AT ALL TIMES.

ADDITIONAL NOTES

- Contractor is responsible for maintaining and protecting the integrity of power poles during construction.
- Contractor shall maintain service from existing utilities at all times during construction.
- Contractor shall maintain vehicular access through all driveways for emergency vehicle access.
- Depth of existing utilities shown is approximate. No pothole excavations were performed for this project to locate utilities. It is the contractor's responsibility to locate and protect existing utilities and, repair if damaged, to original condition (NSPI).
- Contractor shall protect and/or repair (if damaged) any existing service laterals and irrigation shown or not shown on the plans (NSPI).
- Any work required to be performed during holidays, weekends, and non-business hours will be at no additional cost to SAWS.
- At any locations where water lines cross sewer lines, separation distance and protection requirements of 30 TAC 290.44(e) and 30 TAC 217 are to be implemented.
- Vertical stacks shall be required where the top of the sewer main is at a depth of eight feet or greater from finished grade. See SAWS standard DWG DD-860-01.
- All manholes and sewer clean-outs are to be constructed to finished grade. Any adjustments required during construction are incidental to manhole installation and one-way sewer clean-out (NSPI).
- CPS gas services located within the project area. Contractor to locate services and use extreme caution when working in the area of gas lines. Gas services are not shown on the plans.
- The Contractor shall be aware that the quantities shown may change. SAWS reserves the right to make adjustments in the field. Payment for performing the work shall be made at the established bid unit price in the contract.
- Other utility work and roadway work to take place concurrently in the area. Close coordination of schedules must occur with utility/roadway Contractors, SAWS Inspector, and COSA personnel within the project limits.
- It is the Contractor's responsibility to see that all signs and barricades are properly maintained. All locations and distances shall be decided upon in the field by the Contractor using the "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." 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 insufficient quantity to protect the general public, the Construction Inspector shall have the option to stop operations until such time as the conditions are corrected.

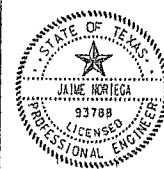
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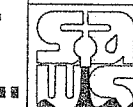
LEONARD D. YOUNG, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 61852

Le. D. Young 12-8-11
 DATE



JAIME NORIEGA, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 93788

Jaime Noriega 2011-12-08
 DATE

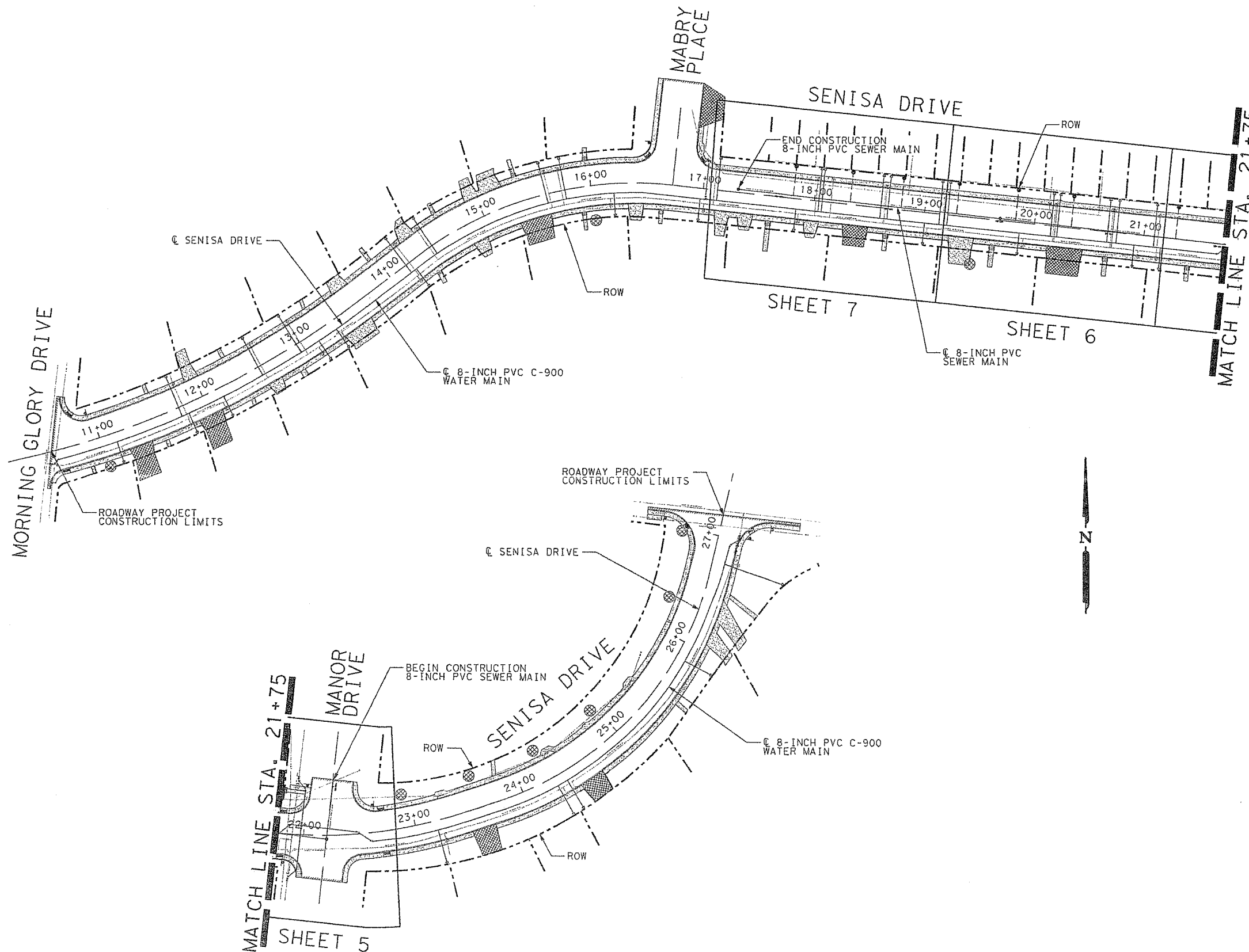
	YOUNG PROFESSIONAL RESOURCES 8100 Roughrider Drive, Suite 101 Windcrest, TX 78239 Tel. (210) 990-8215 Fax (210) 990-8346 Young Professional Resources © Registration No. F-8636			
	LEGEND	CONFORMING SET	CS	6/16/2011
EXIST. WATER MAIN 18" - 5" C.I. GAS MAIN 2" C SANITARY SEWER 8" - 55" STORM SEWER 24" - 51" UTILITY POLE LINE ELECTRIC CABLE 0-6" TELEPHONE CABLE 0-6" FLOW ARROW PROP CLEANOUT PROPOSED SANITARY SEWER LATERAL EOP EDGE OF PAVEMENT	No. Revision Drawn Approved Date	REVISIONS  SENISA DRIVE RECONSTRUCTION MORNING GLORY TO DONALDSON AVE. SEWER SYSTEM 8-INCH PVC SEWER MAIN ADJUSTMENTS GENERAL NOTES		
DEVELOPER: _____ CONT. _____ BUDGET PROJ. _____ SUBMITTED _____ APPROVED _____ MAP No. _____ SECT. No. _____ DR. CB CK. JN JOB No. 10-5602 OF 12				

EXIST SAWS LINES LEGEND

① - SAWS JOB NO. 5968 (1973)

Plotted on: 12/8/2011

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SAWS LOCATOR NOTE:
 LOCATION AND DEPTH OF THE EXISTING WATER AND SEWER MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LOCATOR AT 233-2010. THE CONTRACTOR SHOULD EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING WATER AND SEWER FACILITIES AND SHOULD THEY BE DAMAGED DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR AND REPLACE THE DAMAGED FACILITIES. NECESSARY POTHOLES TO BE PERFORMED AT CONTRACTOR'S EXPENSE.

NOTE:

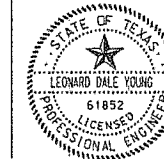
1. ALL EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
2. CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN THE AREA OF EXISTING UTILITIES AND SERVICE LINES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR (NSPI).
3. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING THE INTEGRITY OF POWER POLES DURING CONSTRUCTION.
4. CONTRACTOR SHALL MAINTAIN SERVICE FROM EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION.
5. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS THROUGH ALL DRIVEWAYS FOR EMERGENCY ACCESS.
6. DEPTH OF EXISTING UTILITIES IS APPROXIMATE FROM AVAILABLE AS-BUILT RECORDS. CONTRACTOR TO POTHOLE EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. IF EXISTING UTILITIES' DEPTH AND/OR ALIGNMENT DIFFERS FROM WHAT IS SHOWN ON PLAN, NOTIFY ENGINEER IMMEDIATELY (NSPI).
7. CONTRACTOR SHALL PROTECT AND/OR REPAIR (IF DAMAGED) ANY EXISTING SERVICE LATERALS AND IRRIGATION SHOWN OR NOT SHOWN ON THE PLANS (NSPI).

NOTE TO CONTRACTOR:

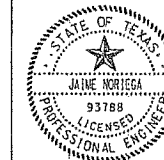
WATER AND SEWER FACILITIES TO BE PROTECTED DURING CONSTRUCTION AT ALL TIMES.

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.



Leonard D. Young
 LEONARD D. YOUNG, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 61852
 DATE: 12-8-11



Jaime Noriega, P.E.
 JAIME NORIEGA, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 93788
 DATE: 2011-12-08

SCALE: 1"=100'

CONTRACTOR SHALL REPLACE ALL LATERALS, SHOWN OR NOT SHOWN. (SEE GENERAL NOTE 14 SHEET 3)

 YOUNG PROFESSIONAL RESOURCES 8100 Roughridger Drive, Suite 101 Windcrest, TX 78239 Tel. (210) 590-8215 Fax (210) 590-8346 Young Professional Resources © Registration No. F-8835	CONFORMING SET CB 6/16/201	
	REVISIONS No. Revision Drawn Approved Date	
LEGEND PROP. WATER MAIN: [Symbol] EXIST. WATER MAIN: [Symbol] GAS MAIN: [Symbol] SANITARY SEWER: [Symbol] STORM SEWER: [Symbol] UTILITY POLE LINE: [Symbol] ELECTRIC CABLE: [Symbol] TELEPHONE CABLE: [Symbol] DUAL BRANCH SERV.: [Symbol] NEW UNMETERED SERVICE: 1" SINGLE: [Symbol] 1" DUAL: [Symbol] SERVICE RECONNECT: 1" OR LARGER: [Symbol] SERVICE RELAY: 1" OR LARGER: [Symbol] SERVICE RELOCATE: 1" OR LARGER: [Symbol] RELOCATE METER: 1" OR LARGER: [Symbol]	DEVELOPER: _____ CONT. BUDGET PROJ.	
	SUBMITTED _____ APPROVED _____	
	MAP No. _____ SECT. No. _____ DR. CB CK. JN JOB No. 10-5102 SHEET 4 OF 12	

Plotted on: 12/8/2011
Design File name: C:\Users\Chris\Documents\Projects\Seni\scs\sewer\1\2\plansheets\As-Built\scs\sewer\01.dgn

EXIST SAWS LINES LEGEND
① - SAWS JOB NO. OM-4938 (1948)

		FINAL QUANTITIES	
ITEM	DESCRIPTION	UNIT	QTY
206.1	ASPHALT TREATED BASE - 10 INCHES COMPACTED DEPTH	SY	120
560	TRENCH EXCAVATION SAFETY PROTECTION	LF	155.97
848	8" PVC SANITARY SEWER LINE (8'-10')	LF	156
852.1	SANITARY SEWER MANHOLE (0'-8')	EA	1
852.3	EXTRA DEPTH MANHOLES (>6')	VF	2.56
854	SANITARY SEWER LATERALS	LF	30
854.1	ONE-WAY SANITARY SEWER CLEAN-OUT	EA	1
864	BYPASS PUMPING	LS	1
866	PRE SEWER MAIN TELEVISION INSPECTION	LF	155.97
866	SEWER MAIN TELEVISION INSPECTION	LF	155.97

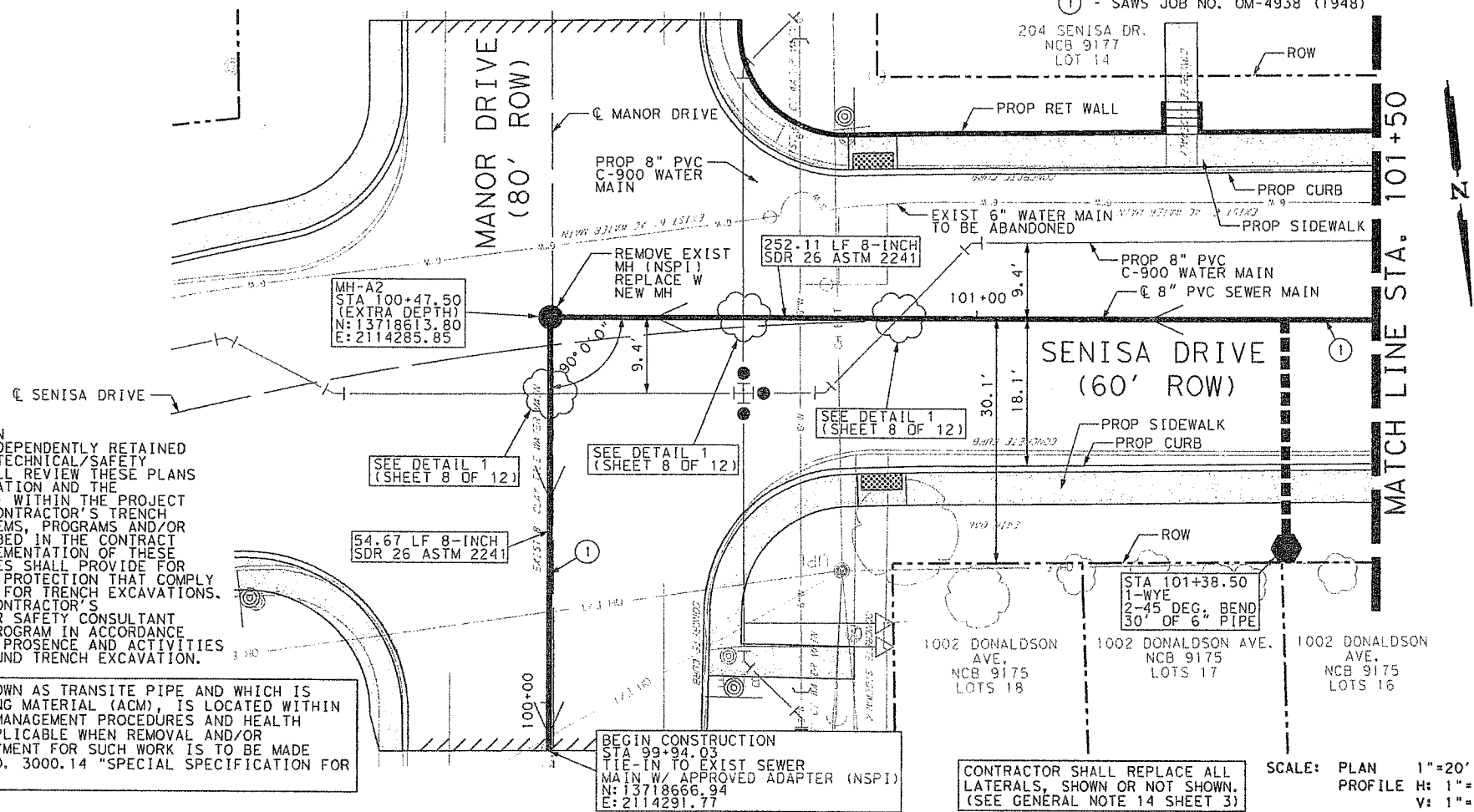
SAWS LOCATOR NOTE:
LOCATION AND DEPTH OF THE EXISTING WATER AND SEWER MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LOCATOR AT 233-2010. THE CONTRACTOR SHOULD EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING WATER AND SEWER FACILITIES AND SHOULD THEY BE DAMAGED DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR AND REPLACE THE DAMAGED FACILITIES. NECESSARY POTHoles TO BE PERFORMED AT CONTRACTOR'S EXPENSE.

- NOTE:**
- ALL EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
 - CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN THE AREA OF EXISTING UTILITIES AND SERVICE LINES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR (NSPI).
 - CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING THE INTEGRITY OF POWER POLES DURING CONSTRUCTION.
 - CONTRACTOR SHALL MAINTAIN SERVICE FROM EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION.
 - CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS THROUGH ALL DRIVEWAYS FOR EMERGENCY ACCESS.
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 - CONTRACTOR SHALL PROTECT AND/OR REPAIR (IF DAMAGED) ANY EXISTING SERVICE LATERALS AND IRRIGATION SHOWN OR NOT SHOWN ON THE PLANS (NSPI).

NOTE TO CONTRACTOR:
WATER AND SEWER FACILITIES TO BE PROTECTED DURING CONSTRUCTION AT ALL TIMES.

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 SITES(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.

ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE AND WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), IS 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 OCCUR. PAYMENT FOR SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000.14 "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE."



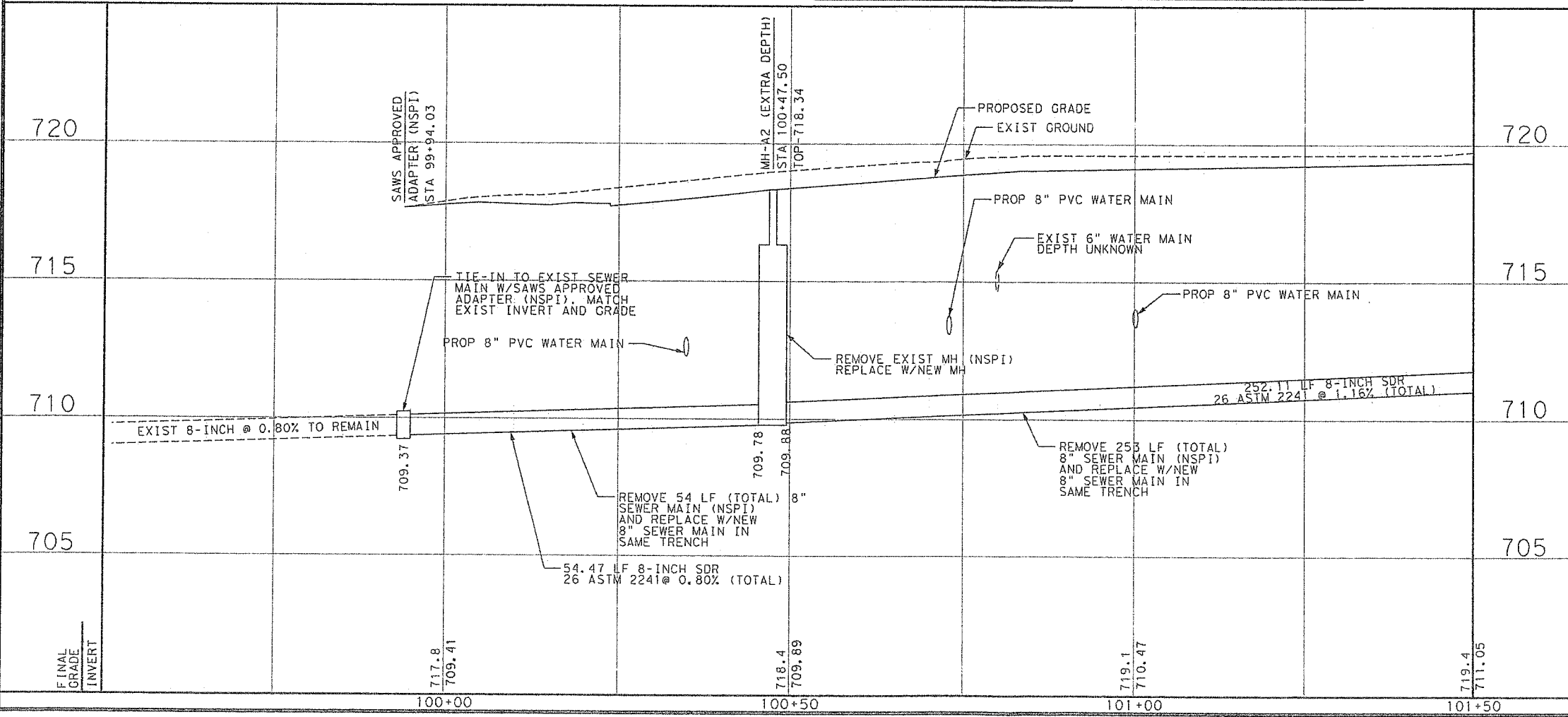
SCALE: PLAN 1"=20'
PROFILE H: 1"=20'
V: 1"=5'

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

Leonard D. Young, P.E.
12-8-11
DATE

Jaime Noriega, P.E.
2011-12-08
DATE



YOUNG PROFESSIONAL RESOURCES
8100 Roughridr Drive, Suite 101
Windcrest, TX 78229
Tel: (214) 590-9215 Fax: (214) 590-9346
Young Professional Resources ©
Registration No. F-8638

LEGEND	
EXIST. WATER MAIN - 6" C.I. W/ 1.5% SLOPE	— 6" C.I. W/ 1.5% SLOPE
GAS MAIN - 2" C.I. W/ 1.5% SLOPE	— 2" C.I. W/ 1.5% SLOPE
SANITARY SEWER - 8" SDR 26 PVC	— 8" SDR 26 PVC
STORM SEWER - 24" ST-15	— 24" ST-15
UTILITY POLE LINE - 4" O.D.	— 4" O.D.
ELECTRIC CABLE - 4" O.D.	— 4" O.D.
TELEPHONE CABLE - 4" O.D.	— 4" O.D.
FLOW ARROW	→
PROP CLEANOUT	⊙
PROPOSED SANITARY SEWER LATERAL	—
EOP	—
EDGE OF PAVEMENT	—

REVISIONS			
No.	Revision	Drawn	Approved
1	CONFORMING SET	CB	6/16/2011

SEWERS DRIVE RECONSTRUCTION
MORNING GLORY TO DONALDSON AVE.
SEWER SYSTEM
8-INCH PVC SEWER
MAIN ADJUSTMENTS
BEGIN TO STA 101+50

DEVELOPER: _____
CONT. _____ BUDGET PROJ. _____
SUBMITTED _____
APPROVED _____
MAP No. _____ SHEET 5
SECT. No. _____ OF 12
DR. CB CK. JN JOB No. 10-5602

Plotted on: 12/8/2011

Design Filename: C:\Users\Chris\Documents\Projects\Seniso\Design\civi\2plansheets\As-Built\SenisoSewer02.dgn

ASBESTOS CEMENT (AC) PIPE ALSO KNOWN AS TRANSITE PIPE AND WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), IS 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 OCCUR. PAYMENT FOR SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000.14 "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE."

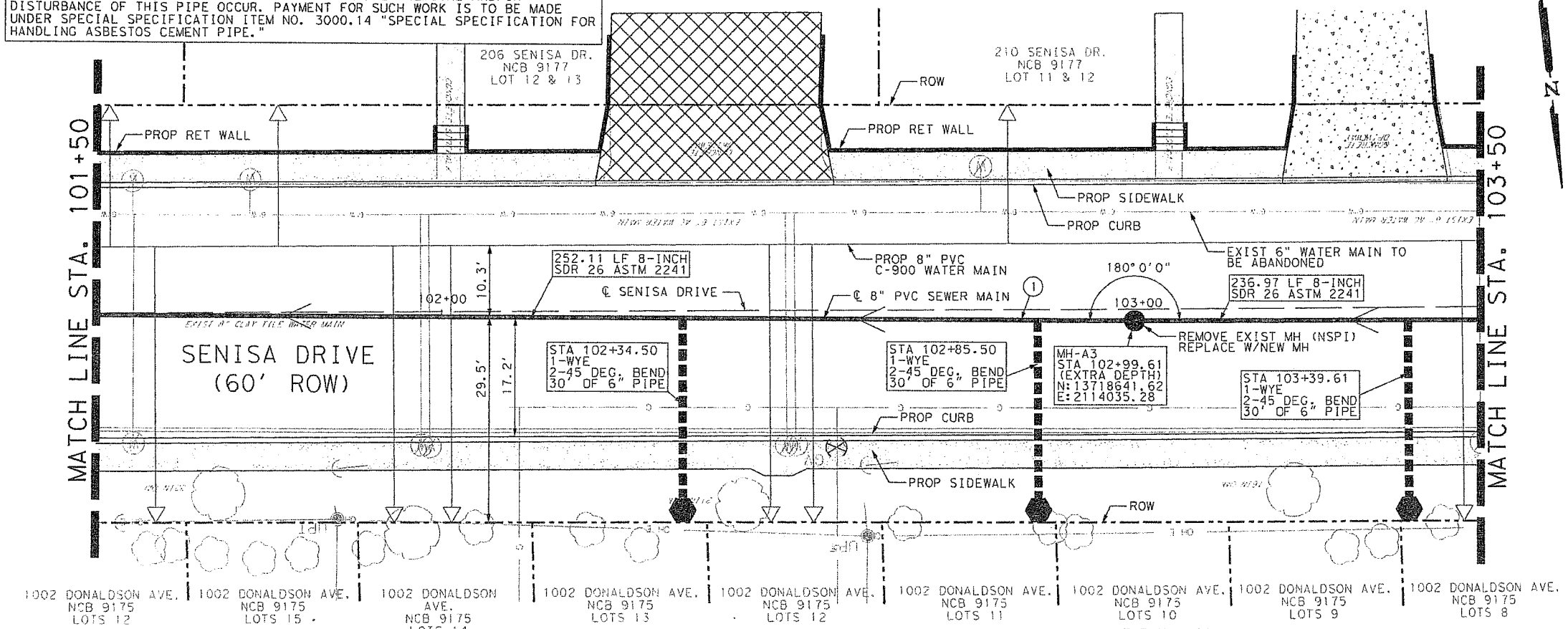
EXIST SAWS LINES LEGEND
① - SAWS JOB NO. OM-4938 (1948)

		FINAL QUANTITIES	
ITEM	DESCRIPTION	UNIT	QTY
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	200
848	8" PVC SANITARY SEWER LINE (6'-10')	LF	200
852.1	SANITARY SEWER MANHOLE (0'-6")	EA	1
852.3	EXTRA DEPTH MANHOLES (>6')	VF	1.97
854	SANITARY SEWER LATERALS	LF	90
854.1	ONE-WAY SANITARY SEWER CLEAN-OUT	EA	3
866	PRE SEWER MAIN TELEVISION INSPECTION	LF	200
866	SEWER MAIN TELEVISION INSPECTION	LF	200

SAWS LOCATOR NOTE:
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NOTE:

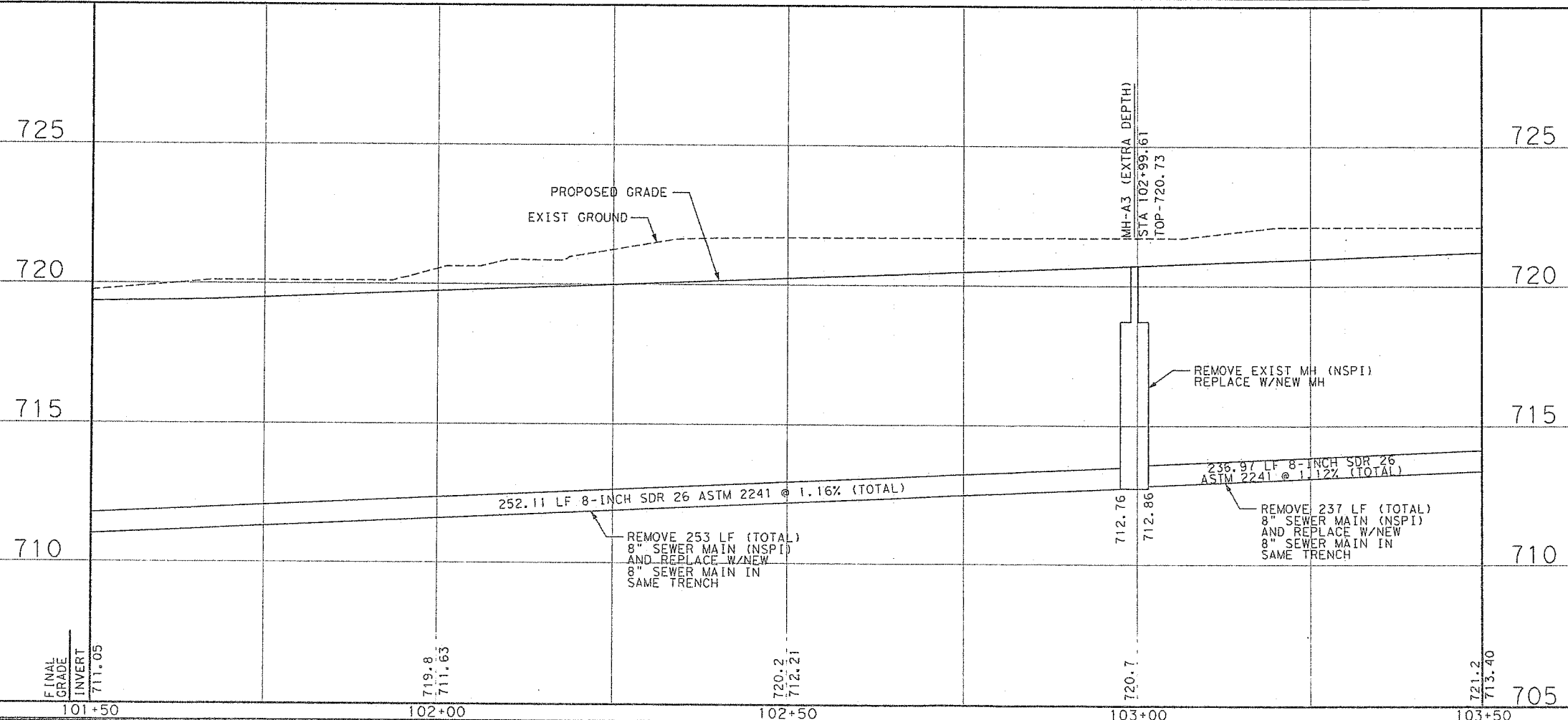
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1002 DONALDSON AVE. NCB 9175 LOTS 12, 1002 DONALDSON AVE. NCB 9175 LOTS 15, 1002 DONALDSON AVE. NCB 9175 LOTS 14, 1002 DONALDSON AVE. NCB 9175 LOTS 13, 1002 DONALDSON AVE. NCB 9175 LOTS 12, 1002 DONALDSON AVE. NCB 9175 LOTS 11, 1002 DONALDSON AVE. NCB 9175 LOTS 10, 1002 DONALDSON AVE. NCB 9175 LOTS 9, 1002 DONALDSON AVE. NCB 9175 LOTS 8

CONTRACTOR SHALL REPLACE ALL LATERALS, SHOWN OR NOT SHOWN. (SEE GENERAL NOTE 14 SHEET 3)

SCALE: PLAN 1"=20', PROFILE H: 1"=20', V: 1"=5'



NOTE TO CONTRACTOR:
WATER AND SEWER FACILITIES TO BE PROTECTED DURING CONSTRUCTION AT ALL TIMES.

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

Leonard D. Young 12-8-11 DATE
LEONARD D. YOUNG, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 61852

Jaime Noriega 2011-2008 DATE
JAIME NORIEGA, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 93788

YOUNG PROFESSIONAL RESOURCES
8100 Roughfork Drive, Suite 101
Wichitoma, TX 78289
Tel. (210) 590-9215 Fax (210) 590-9348
Young Professional Resources ©
Registration No. F-8636

LEGEND

- EXIST. WATER MAIN - 6" C.I. W/ 2" S
- GAS MAIN - 2" S
- SANITARY SEWER - 8" S
- STORM SEWER - 24" S
- UTILITY POLE LINE - 4"
- ELECTRIC CABLE - 4"
- TELEPHONE CABLE - 4"
- FLOW ARROW
- PROP CLEANOUT
- PROPOSED SANITARY SEWER LATERAL
- EOP
- EDGE OF PAVEMENT

No.	Revision	Drawn	Approved	Date
1				6/16/2011

REVISIONS

SENISO DRIVE RECONSTRUCTION
MORNING GLORY TO DONALDSON AVE.
SEWER SYSTEM
8-INCH PVC SEWER
MAIN ADJUSTMENT'S
STA 101+50 TO STA 103+50

DEVELOPER: _____
CONT. _____ BUDGET PROJ. _____
SUBMITTED _____
APPROVED _____
MAP No. _____ SHEET 6
SECT. No. _____
DR. CB CK. JN JOB No. 10-5602 OF 12

ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE AND WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (AC) IS 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 OCCUR. PAYMENT FOR SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000.14 "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE."

EXIST SAWS LINES LEGEND
 ① - SAWS JOB NO. OM-4938 (1948)

		FINAL QUANTITIES	
ITEM	DESCRIPTION	UNIT	QTY
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	186.58
848	8" PVC SANITARY SEWER LINE (6'-10")	LF	187
852.1	SANITARY SEWER MANHOLE (0'-6")	EA	1
852.3	EXTRA DEPTH MANHOLES (±6")	VF	1.49
854	SANITARY SEWER LATERALS	LF	90
854.1	ONE-WAY SANITARY SEWER CLEAN-OUT	EA	3
866	PRE SEWER MAIN TELEVISION INSPECTION	LF	186.58
866	SEWER MAIN TELEVISION INSPECTION	LF	186.58

SAWS LOCATOR NOTE:
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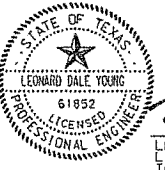
NOTE:

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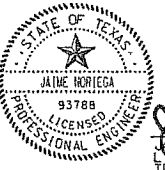
AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.



LEONARD D. YOUNG, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 61852

12-8-11
DATE



JAIME NORIEGA, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 93788

2011-03
DATE

YPR YOUNG PROFESSIONAL RESOURCES

8100 Roughwater Drive, Suite 101
 Winters, TX 75729
 Tel. (210) 890-9215 Fax (210) 890-9346
 Young Professional Resources ©
 Registration No. F-8836

LEGEND		1		CONFORMING SET		CB	6/16/2011
EXIST. WATER MAIN	— 6" c.i. —						
GAS MAIN	— 2" —						
SANITARY SEWER	— 8" ss —						
STORM SEWER	— 24" st —						
UTILITY POLE LINE	— —						
ELECTRIC CABLE	— —						
TELEPHONE CABLE	— —						
FLOW ARROW	→						
PROP CLEANOUT	⊙						
PROPOSED SANITARY SEWER LATERAL	— — — —						
EOP	— — — —						
EDGE OF PAVEMENT	— — — —						

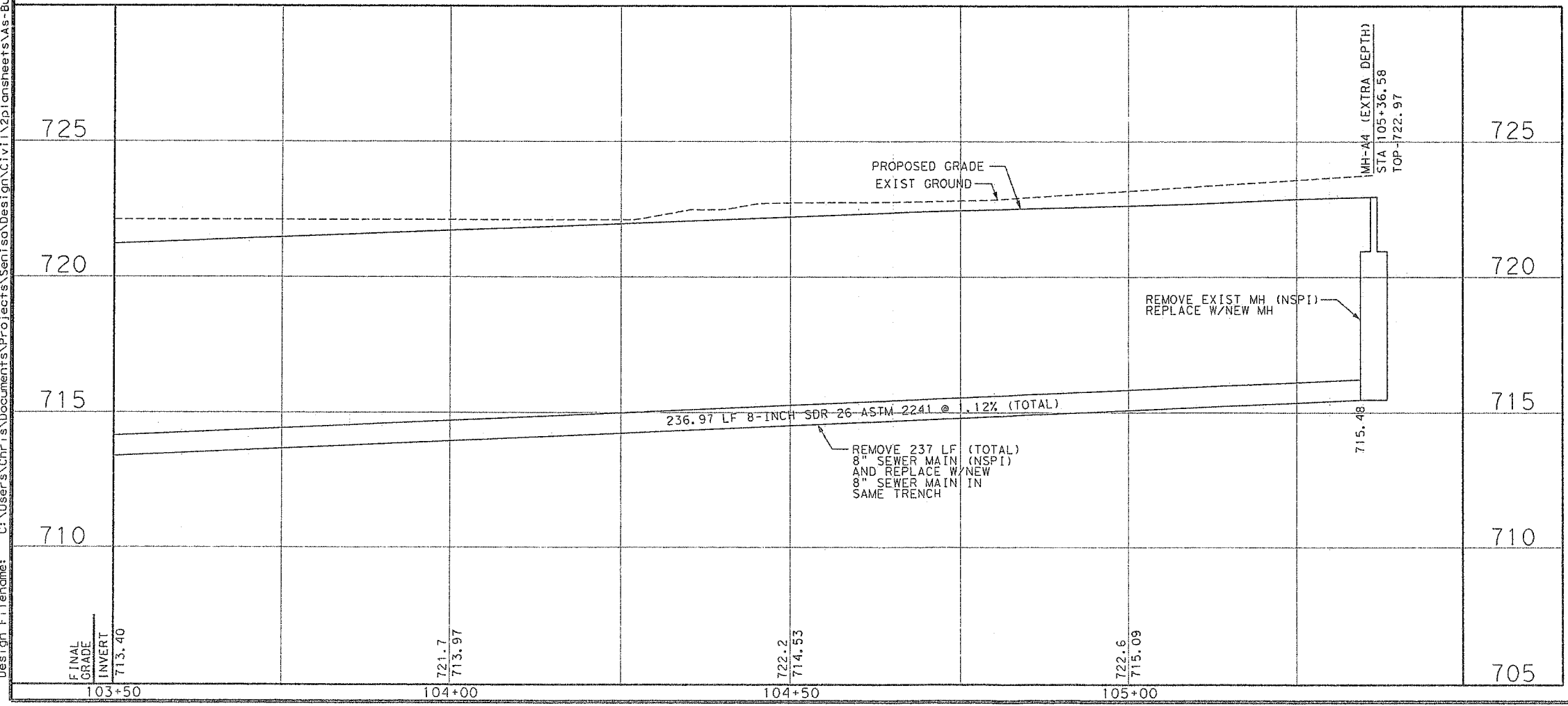
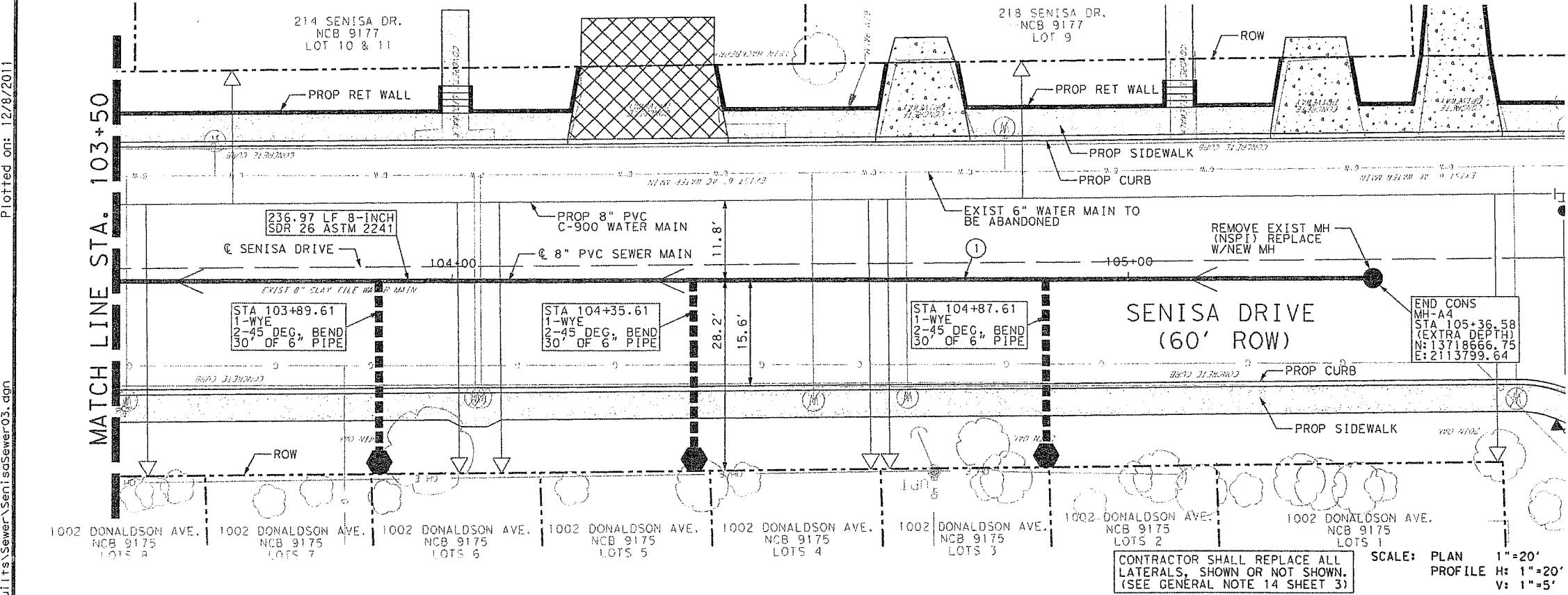
SENER DRIVE RECONSTRUCTION
 MORNING GLORY TO DONALDSON AVE.
 SEWER SYSTEM
 8-INCH PVC SEWER
 MAIN ADJUSTMENTS
 STA 103+50 TO END

DEVELOPER: _____
 CONT. BUDGET PROJ. _____

SUBMITTED: _____
 APPROVED: _____

MAP No. _____ SHEET 7
 SECT. No. _____
 DR. CB CK. JN JOB No. 10-5602 OF 12

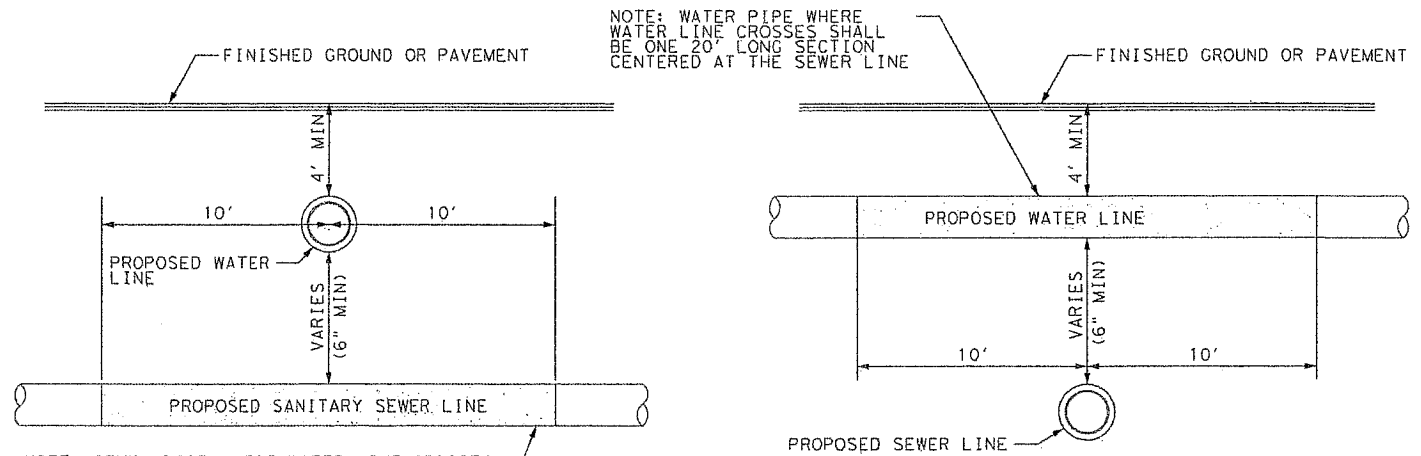
Design Filename: C:\User\s\Chris\Documents\Projects\Senisa\Design\Civil\2\plansheets\As-Built\SenisaSewer\SenisaSewer03.dgn Plotted on: 12/8/2011



CONTRACTOR SHALL REPLACE ALL LATERALS, SHOWN OR NOT SHOWN. (SEE GENERAL NOTE 14 SHEET 3)

Plotted on: 12/8/2011

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NOTE: WATER PIPE WHERE WATER LINE CROSSES SHALL BE ONE 20' LONG SECTION CENTERED AT THE SEWER LINE

NOTE: SEWER PIPE WHERE WATER LINE CROSSES SHALL BE SDR 26 (160 PSI) AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' LONG SECTION CENTERED AT THE WATER LINE. SEWER MAIN SHALL BE EMBEDDED IN CEMENT STABILIZED SAND. (NSPI)

- NOTES:
- WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE. BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE), THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF 6 INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.
 - SEPARATION DISTANCE AND PROTECTION REQUIREMENTS OF 30 TAC §§217.53(d) AND 290.44(e) ARE TO BE IMPLEMENTED.

DETAIL 1
**TYPICAL SANITARY SEWER/
 WATER CROSSING DETAILS**
 SCALE: NTS

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS 'PLAN OF RECORD' IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

LEONARD D. YOUNG, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 61852

Leonard D. Young

12-8-11
 DATE

JAIME NORIEGA, P.E.
 LICENSED PROFESSIONAL ENGINEER
 TEXAS REGISTRATION NO. 93788

Jaime Noriega

2011-12-08
 DATE

YOUNG PROFESSIONAL RESOURCES
 8100 Roughrider Drive, Suite 101
 Warendorf, TX 78729
 Tel. (210) 590-9215 Fax (210) 590-9346
 Young Professional Resources ©
 Registration No. F-8836

No.	Revision	Drawn	Approved	Date
1	CONFORMING SET	CB		6/16/2011

LEGEND

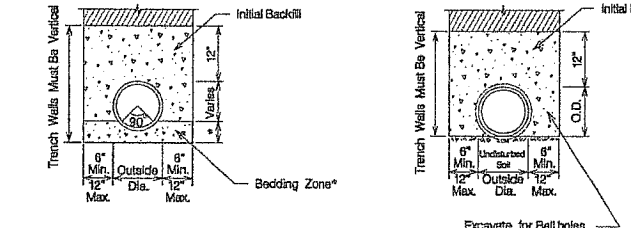
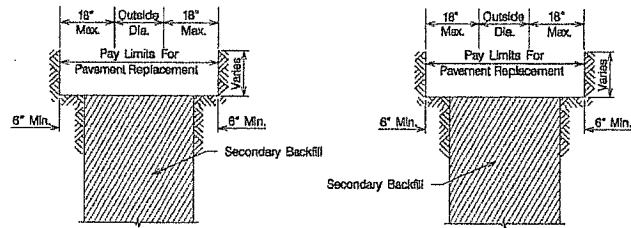
- EXIST. WATER MAIN 8"-6" C.I.
- GAS MAIN 2"
- SANITARY SEWER 8"-5"
- STORM SEWER 24"-5"
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- FLOW ARROW
- PROP CLEANOUT
- PROPOSED SANITARY SEWER LATERAL
- EOP EDGE OF PAVEMENT

REVISIONS

SEWISA DRIVE RECONSTRUCTION MORNING GLORY TO DONALDSON AVE. SEWER SYSTEM 8-INCH PVC SEWER MAIN ADJUSTMENTS SPECIAL DETAILS

DEVELOPER: _____
 CONT. BUDGET PROJ.
 SUBMITTED _____
 APPROVED _____

MAP No. _____ SHEET 8
 SECT. No. _____ OF 12
 DR. CB CK. JN JOB No. 10-5602

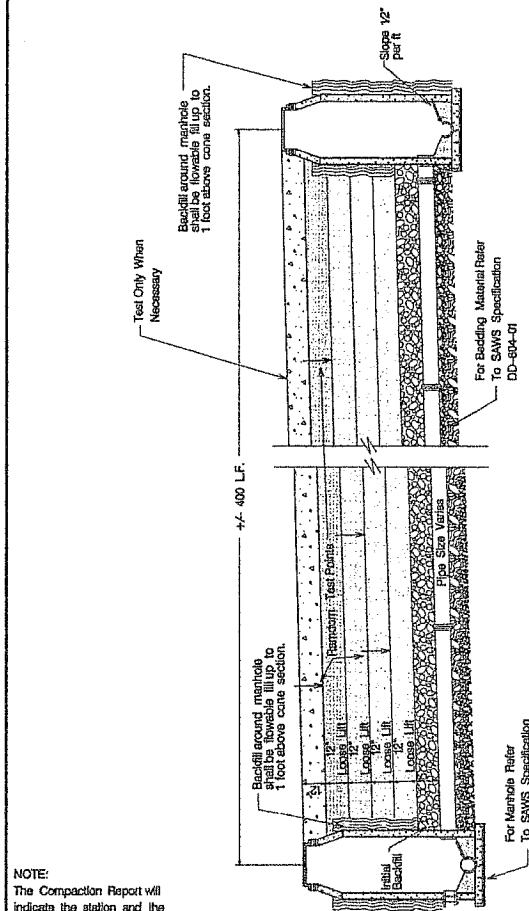


* Sewer Gravel 6" Min. or 1/8 O.D. of the pipe, whichever is greater as directed by the Inspector

* In areas of over excavation, encasement shall extend from trench wall to trench wall. Pay Limits shall not exceed 12" max. as shown on detail. Additional encasement shall be incidental.

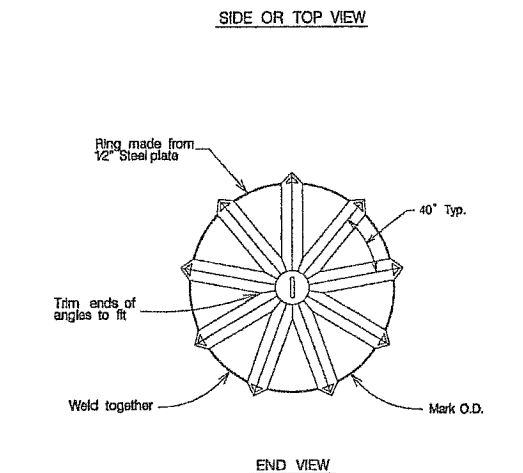
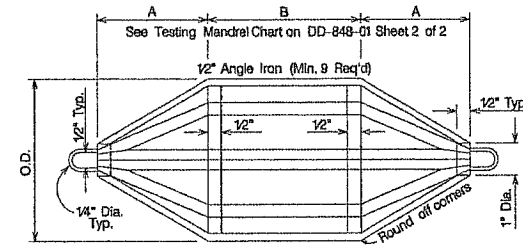
- 1) RIGID PIPE - UNSTABLE OR UNACCEPTABLE CONDITIONS
- 2) RIGID PIPE - EXISTING STABLE BEDDING CONDITIONS
- FLEXIBLE PIPE - ALL CONDITIONS

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SANITARY SEWER PIPE LAID IN TRENCH	APPROVED March 2008	REVISED
DD-804-01		SHEET 1 OF 1	



NOTE:
The Compaction Report will indicate the station and the depth of each test point

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TRENCH COMPACTION DETAIL	APPROVED MARCH 2008	REVISED JUNE 2009
DD-804-02		SHEET 1 OF 1	



Note:
All mandrels must be approved by SAWS Construction Inspections and stamped before use.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GO, NO GO DEFLECTION TESTING MANDREL	APPROVED March 2008	REVISED
DD-848-01		SHEET 1 OF 2	

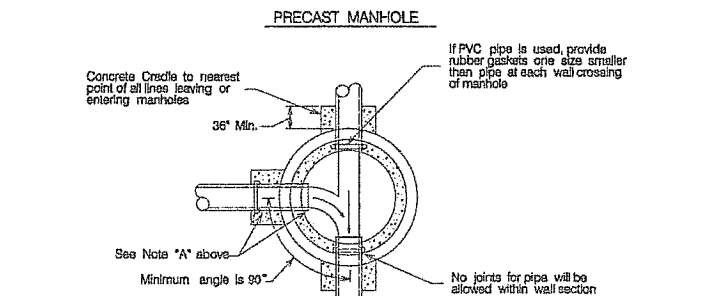
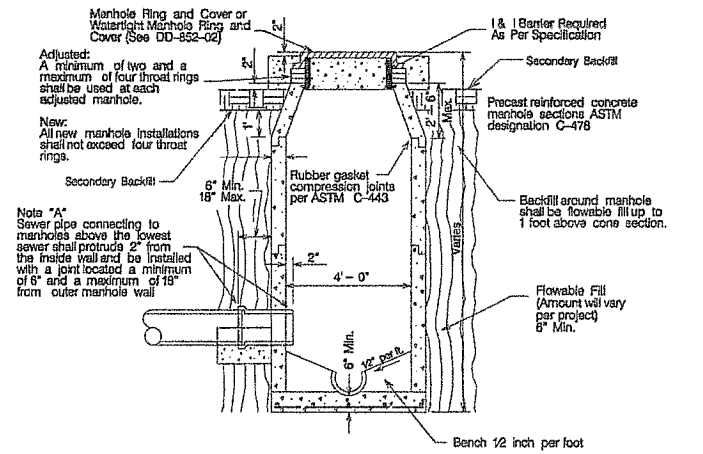
SIZE	MANDREL O.D.		RING O.D.
	A	B*	
6"	4.0"	4.5"	5.50
8"	5.5"	6"	7.37
10"	7.0"	7.5"	9.21
12"	8.0"	9"	10.98
16"	10.0"	11"	13.42
18"	12.0"	13.5"	—
21"	14.0"	16"	—
24"	18.0"	18"	—
27"	18.0"	20"	—

* Minimum Length
CHART

Notes:
PVC pipe and fittings 6" to 15" in diameter shall conform to ASTM D-3034.
PVC pipe and fittings 18" to 27" in diameter shall conform to ASTM F-679.

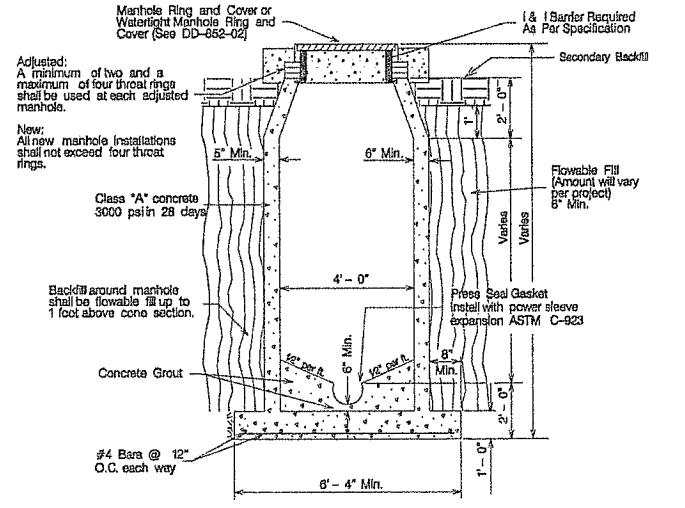
This information is provided as a reference. All deflection testing shall be done in accordance with TCEQ Chapter 817.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GO, NO GO DEFLECTION TESTING MANDREL CHART	APPROVED March 2008	REVISED
DD-848-01		SHEET 2 OF 2	



- General Notes:
- 1) Material for sanitary sewer pipe must be the same from manhole to manhole. Changes in type of pipe may be made only at manholes, or special structures, except as approved by the SAWS project Engineer.
 - 2) Adaptors and Concrete Collars shall be used as directed by the Engineer and as approved by the SAWS project Engineer.
 - 3) Watertight manhole rings and covers shall be Trans-Tex A77 "O" Ring or approved equal.
 - 4) The minimum angle of flow for a connecting sewer to the direction of flow defined by a collection system is 90 degrees, unless approved by SAWS.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD PRECAST MANHOLE	APPROVED March 2008	REVISED June 2009
DD-852-01		SHEET 1 OF 2	



- General Notes:
- 1) Material for sanitary sewer pipe must be the same from manhole to manhole. Changes in type of pipe may be made only at manholes, or special structures, except as approved by the SAWS project Engineer.
 - 2) Adaptors and Concrete Collars shall be used as directed by the Engineer and as approved by the SAWS project Engineer.
 - 3) Watertight manhole rings and covers shall be Trans-Tex A77 "O" Ring or approved equal.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD MONOLITHIC MANHOLE	APPROVED March 2008	REVISED June 2009
DD-852-01		SHEET 2 OF 2	

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

Leonard D. Young 12-8-01
LEONARD D. YOUNG, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 81882

Gene Noriega, P.E. 2011-12-02
GENE NORIEGA, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 93788

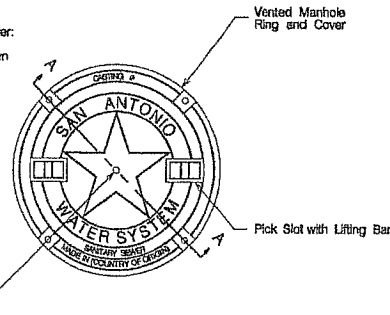
YOUNG PROFESSIONAL RESOURCES
8100 Rough Rider Drive, Suite 101
Windsor, TX 78239
Tel. (210) 590-9215 Fax (210) 590-9346
Young Professional Resources ©
Registration No. F-8636

1	CONFORMING SET	CB	6/16/2011
No.	Revision	Drawn	Approved

**SEWIS DRIVE RECONSTRUCTION
MORNING GLORY TO DONALDSON AVE.
SEWER SYSTEM
8-INCH PVC SEWER
MAIN ADJUSTMENTS
STANDARD DETAILS**

DEVELOPER:	BUDGET PROJ.
CONT.	
SUBMITTED	
APPROVED	
MAP No.	SHEET
SECT. No.	9
DR. CB CK. JN	JOB No. 10-5602
	10 OF 12

Note:
Standard Manhole Ring and Cover.
All applicable dimensions shall
conform to the dimensions shown
here



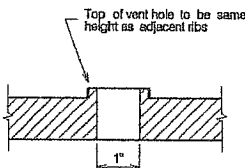
VENTED MANHOLE RING AND COVER

Note:
The bearing surfaces and
O-ring groove shall be
Machine ground

Slots or holes may be cut in
top of insert to provide access
for bolts in watertight lids



WATERTIGHT MANHOLE
INSERT DETAIL



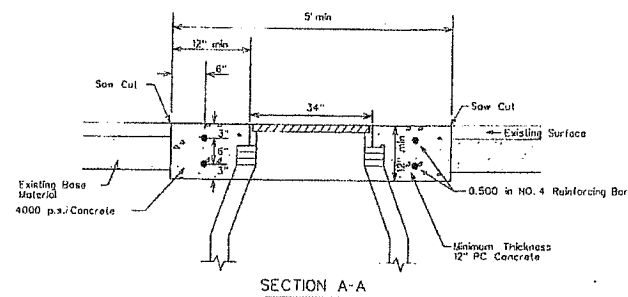
VENT HOLE DETAIL
SECTION A-A

Manhole cover inserts shall be FRW Industries, Inc., "Inflow Protector-Cover", Preco Industries, Ltd., "Sewer Guard", or approved equal, and shall be installed in strict accordance with the manufacturer's recommendations. The contractor shall be responsible for making the necessary field measurements for the manufacturer prior to production.

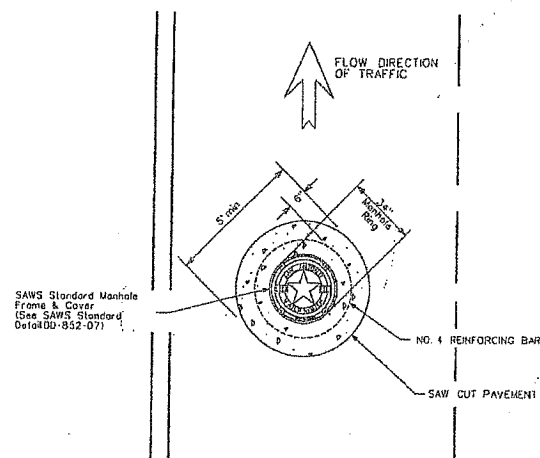
PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

VENTED MANHOLE RING
AND COVER DETAIL

APPROVED	REVISED
JANUARY 2005	JUNE 2008
DD-852-02	
SHEET 1 of 1	



SECTION A-A

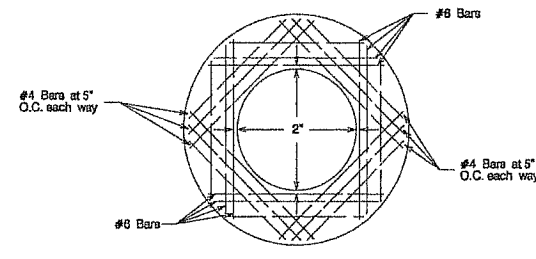


NOTE:
1. The concrete shall be 4000 psi, min, and reinforced with No. 4 bars, as shown.
2. The concrete shall extend to edge of saw cut pavement.
3. Manhole Ring Encasement is required on all manholes.

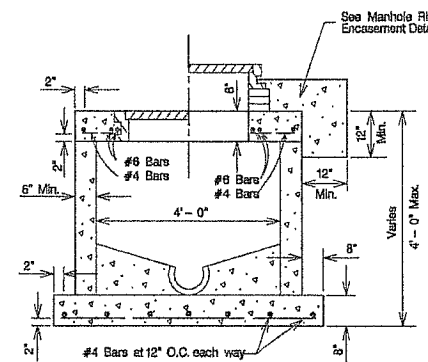
PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

MANHOLE RING
ENCASEMENT DETAIL

APPROVED	REVISED
DRAFT	AUGUST 2009
DD-852-03	
SHEET 2 of 2	



TOP SLAB



SHALLOW MANHOLE
PRECAST OR MONOLITHIC

PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

SHALLOW MANHOLE
DETAIL

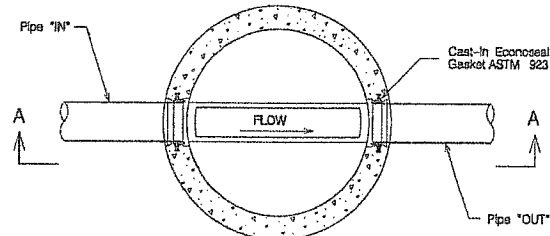
APPROVED	REVISED
March 2008	
DD-852-04	
SHEET 1 of 1	

AS-BUILT / PLAN OF RECORD

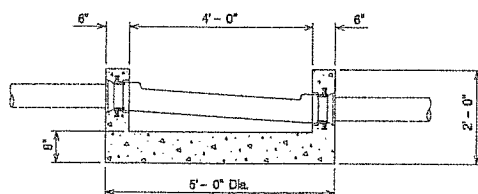
I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

Leonard D. Young 12-8-11
LEONARD D. YOUNG, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 61852

Gene Noriega, P.E. 2011-12-08
GENE NORIEGA, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 93789



PLAN

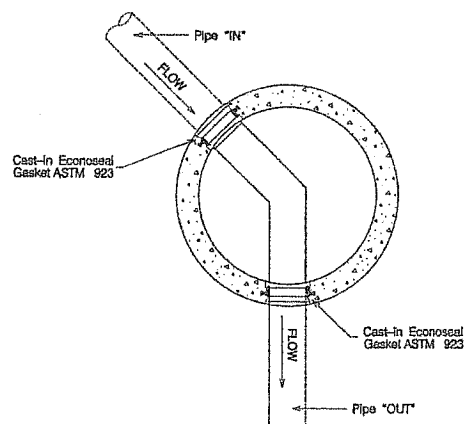


SECTION A-A

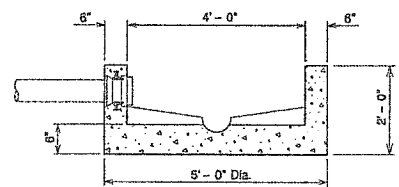
PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

PRECAST MANHOLE BASE
STRAIGHT THROUGH

APPROVED	REVISED
March 2008	
DD-852-05	
SHEET 1 of 1	



PLAN

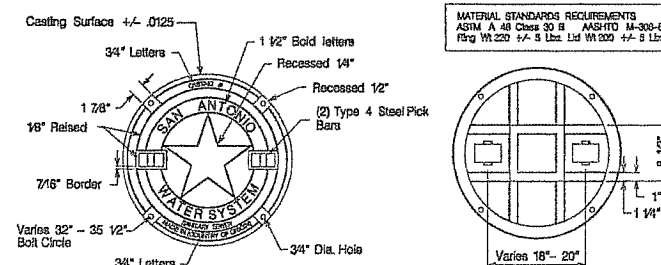


ELEVATION

PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

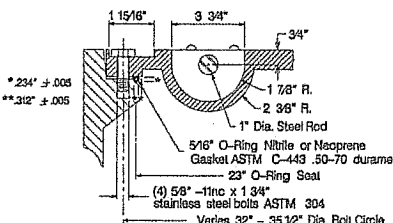
PRECAST MANHOLE BASE
45° ANGLE

APPROVED	REVISED
March 2008	
DD-852-06	
SHEET 1 of 1	

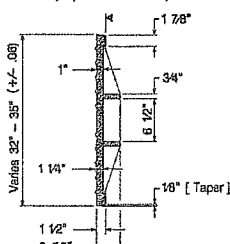


COVER FACE
(Unpainted +/- .125)

COVER BACK
(Unpainted +/- .125)



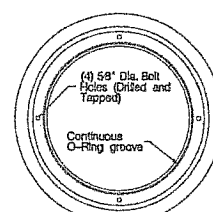
WATERTIGHT AND PICK BAR DETAIL



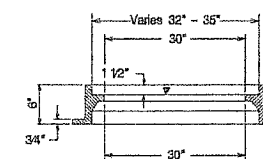
COVER SECTION
(Unpainted +/- .125)

Manhole shall be proof-load tested to 40,000 lbs. in accordance with AASHTO M-305-89

Covers and Rings shall be interchangeable with approved manufacturers.
All casting surfaces shall be machined +/- .05.



FRAME TOP VIEW



FRAME SECTION
(Unpainted +/- .125)

PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

MANHOLE RING
AND COVER DETAIL

APPROVED	REVISED
March 2008	June 2009
DD-852-07	
SHEET 1 of 1	

YPR YOUNG PROFESSIONAL RESOURCES
8100 Roughsholder Drive, Suite 101
Windsor, TX 75339
Tel. (214) 590-9215 Fax (214) 590-9346
Young Professional Resources ©
Registration No. F-5638

1	CONFORMING SET	CB	6/16/2011
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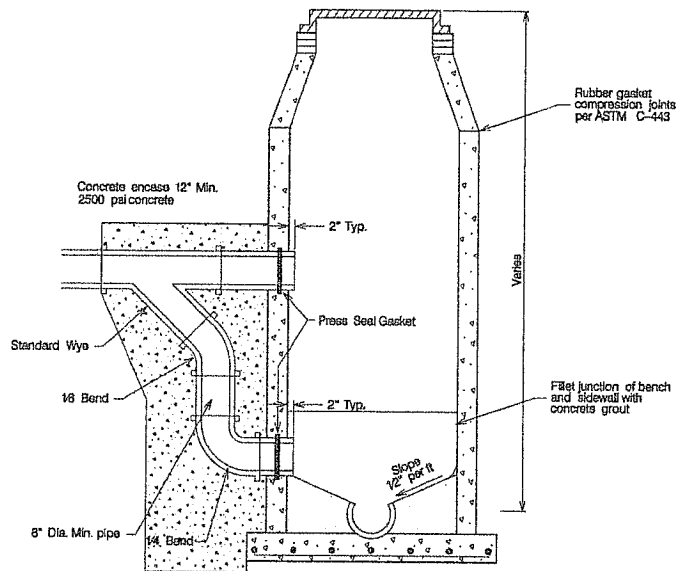
No.	Revision	Drawn	Approved	Date
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SAW SENISA DRIVE RECONSTRUCTION
MORNING GLORY TO DONALDSON AVE.
SEWER SYSTEM
8-INCH PVC SEWER
MAIN ADJUSTMENTS
STANDARD DETAILS

DEVELOPER:
CONT. BUDGET PROJ.

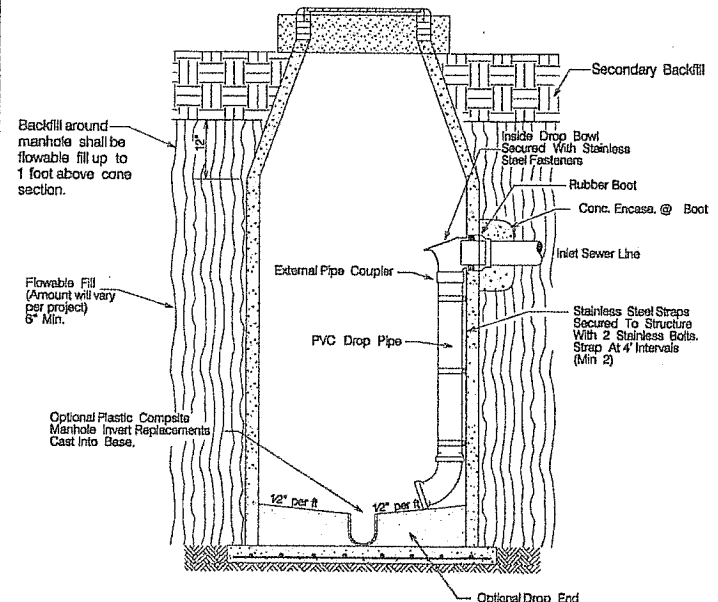
SUBMITTED
APPROVED

MAP No.	SHEET
SECT. No.	10
DR. CB CK. JN	JOB No. 10-5602
	OF 12



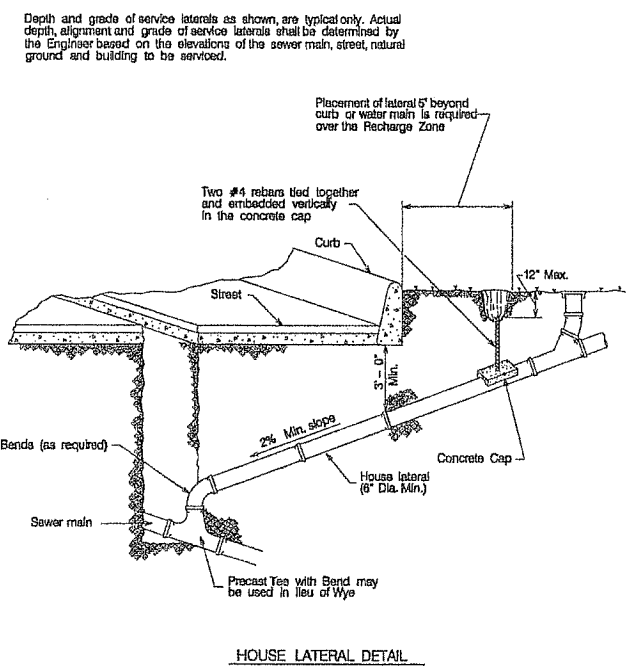
Note:
Price for drop fittings and encasement to be included with the price of manhole.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	DROP MANHOLE DETAIL	APPROVED March 2008	REVISED	SHEET 1 OF 1
		DD-852-08		



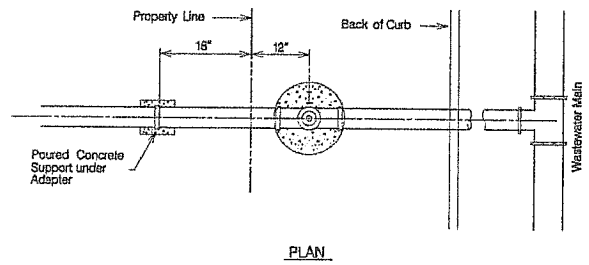
NOTE:
THIS MANHOLE IS TO BE APPROVED BY SAWS INSPECTION AND ENGINEERING PRIOR TO CONSTRUCTION.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE INSIDE DROP SYSTEM	APPROVED March 2008	REVISED	SHEET 1 OF 1
		DD-852-09		

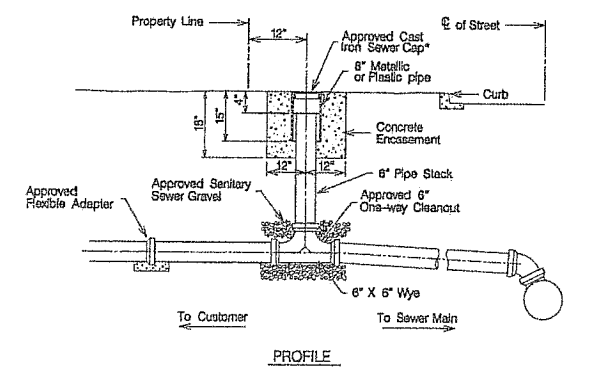


Note:
A minimum of 3\"/>

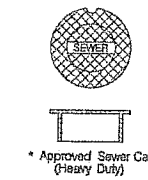
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	HOUSE LATERAL DETAIL	APPROVED March 2008	REVISED	SHEET 1 OF 1
		DD-854-01		



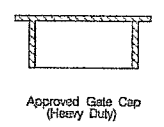
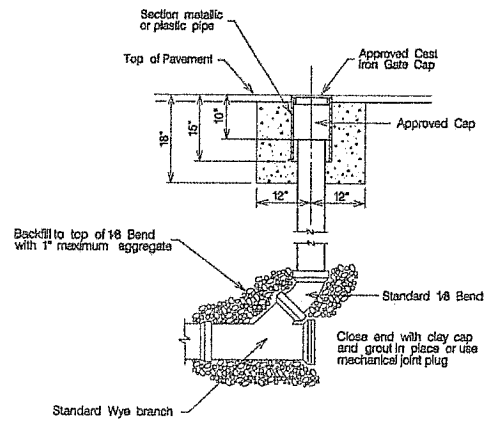
PLAN



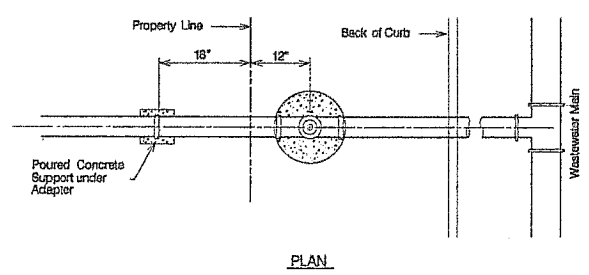
PROFILE



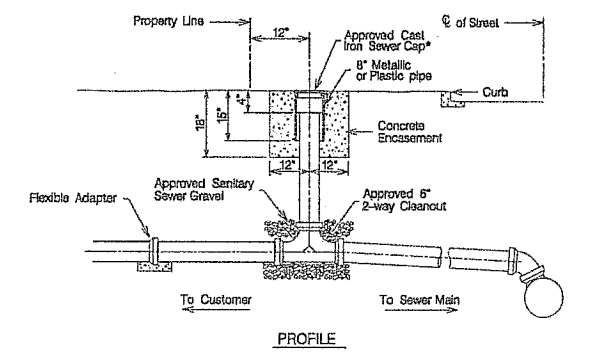
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL CLEANOUT DETAIL	APPROVED March 2008	REVISED APRIL 1999	SHEET 1 OF 1
		DD-854-02		



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL CLEANOUT DETAIL	APPROVED March 2008	REVISED	SHEET 1 OF 1
		DD-854-02		



PLAN



PROFILE



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL CLEANOUT DETAIL	APPROVED March 2008 (NOT)	REVISED	SHEET 2 OF 2
		DD-854-02		

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

Leonard D. Young 12-8-11
LEONARD D. YOUNG, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 61852

Jose Noriega 2011-12-03
JOSE NORIEGA, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 93788

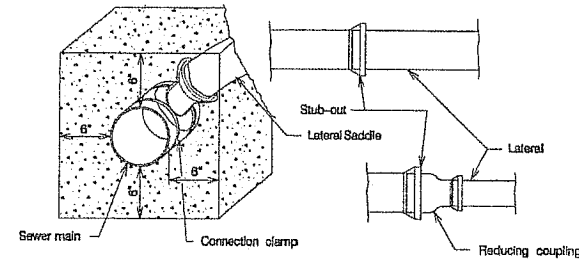
YOUNG PROFESSIONAL RESOURCES
8100 Rough Rider Drive, Suite 101
Windsor, TX 78225
Tel: (210) 590-9215 Fax: (210) 590-9345
Young Professional Resources ©
Registration No. F-8639

1	CONFORMING SET	CB	6/16/2011
No.	Revision	Drawn	Approved

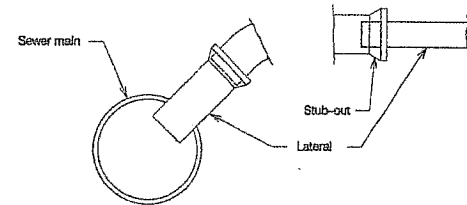
SAWS SENSA DRIVE RECONSTRUCTION
MORNING GLORY TO DONALDSON AVE.
SEWER SYSTEM
8-INCH PVC SEWER
MAIN ADJUSTMENTS
STANDARD DETAILS

DEVELOPER:	BUDGET PROJ.
CONT.	
SUBMITTED	
APPROVED	
MAP No.	SHEET 11
SECT. No.	11
DR. CB CK. JN	JOB No. 10-5602 OF 12

LATERAL CONNECTION TO EXISTING SEWER MAINSTUB-OUT



ACCEPTABLE



UNACCEPTABLE

Note:
The saddle shall be permanently bonded to the existing main by the use of compounds or clamps as recommended by the manufacturer.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	LATERAL CONNECTION	APPROVED	REVISED
		March 2008	
		DD-854-03	SHEET 1 OF 1

AS-BUILT / PLAN OF RECORD

I HEREBY CERTIFY THAT THIS "PLAN OF RECORD" IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

Leonard O. Young 12-8-11
LEONARD O. YOUNG, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 61852 DATE

Jaime Noriega 2011-12-08
JAIMÉ NORIEGA, P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 93788 DATE

YPR YOUNG PROFESSIONAL RESOURCES
8100 Roughwater Drive, Suite 101
Windsor, TX 78239
Tel. (210) 590-9215 Fax (210) 590-9346
Young Professional Resources ©
Registration No. F-2036

1	CONFORMING SET	CB		6/16/201
No.	Revision	Drawn	Approved	Date

REVISIONS

SAWS SENISA DRIVE RECONSTRUCTION
MORNING GLORY TO DONALDSON AVE.
SEWER SYSTEM
8-INCH PVC SEWER
MAIN ADJUSTMENTS
STANDARD DETAILS

DEVELOPER: _____
CONT. BUDGET PROJ. _____
SUBMITTED _____
APPROVED _____
MAP No. _____ SHEET
SECT. No. 12
DR. CB CK. JW JOB No. 10-5602 OF 12