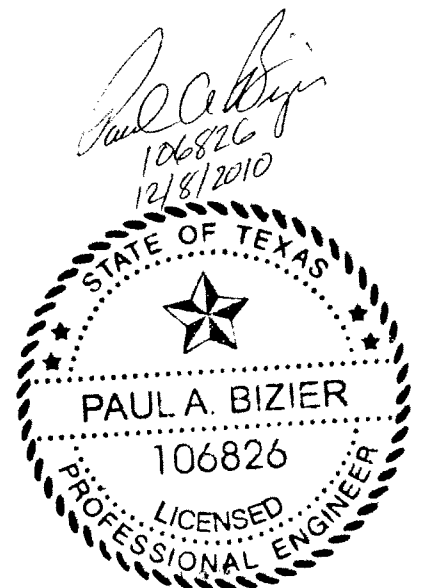


**ADDENDUM NO. 5**  
**to**  
**PLANS and SPECIFICATIONS**  
**for**

**Medina River Sewer Outfall, Segment 2**  
**SAWS Job No. 11-2503**

**Issue Date: December 8, 2010**



**SAN ANTONIO WATER SYSTEM  
MEDINA RIVER SEWER OUTFALL, SEGMENT 2  
SAWS PROJECT # 11-2503  
ADDENDUM NO. 5**

**December 8, 2010**

This addendum, applicable to the project noted above, is an amendment to the bidding and specification documents and as such shall be a part of and included in the Contract. Acknowledge receipt of this addendum by entering the addendum number and issue date in the spaces provided on all submitted copies of the proposal.

**1.0 Addendum Purpose**

The purpose of this addendum is to include additional bid items for the Medina River Sewer Outfall (MRSO), Segment 2 (SAWS Job No. 11-2503).

The existing design calls for 78-inch sewer main for the entire length of Segment 2. There may be a need to install 1,800 feet of 96-inch sewer main in place of the 78-inch main from approximately Sta. 306+14.19 to Sta. 353+59.38. The owner will make the final determination on which size of sewer main to install by February 2011, therefore bidders are being asked to price 96-inch sewer main and related items for this length.

Should the owner's final determination identify that the 96-inch sewer main and related items should not be installed, the contractor shall install the 78-inch sewer main and payment will be made by the existing bid items for that sewer main size. The bid items for the 96-inch sewer main and related items will be deducted in the final recap change order.

**2.0 Specifications**

- A. Bid Proposal – Additional bid items have been included in the Bid Proposal. Remove and replace the bid proposal with the one attached to this addendum.
- B. Section 01025, Measurement and Payment – A description of work for Bid Items 4.A, 5.A, 8.A, 9.A, 14.A and 15.A have been added to the applicable items in the Measurement and payment section. Remove and replace the Section 01025 with the one attached to this addendum.

**3.0 Plans**

- A. Drawing No. D-02A, Sheet No. 42A – Include the attached sheet with the plan set. This sheet to be referenced when installing the 96-inch Tee Base manhole at Sta. 353+59.38.

Addendum No. 5  
Medina River Sewer Outfall, Segment 2  
Saws Project # 11-2503  
December 8, 2010

**ACKNOWLEDGEMENT BY BIDDER**

Each bidder is requested to acknowledge receipt of this Addendum No. 5 and the associated attachments by his/her signature affixed hereto and to file same and attach with his/her bid.

The undersigned acknowledges receipt of this Addendum No. 5 along with the bid submitted herewith is in accordance with the information and stipulations set forth.

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Date

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Signature

END OF ADDENDUM NO. 5

P:\68\66\00\12.0 Bidding Phase\Segment 2 (11-2503)\ADDENDUM 4\101202-Addendum 5 .doc

**BID PROPOSAL**

PROPOSAL OF \_\_\_\_\_

A corporation \_\_\_\_\_

A partnership consisting of \_\_\_\_\_

An individual doing business as \_\_\_\_\_

**THE SAN ANTONIO WATER SYSTEM**

Pursuant to Instructions and Invitations to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the construction of pipelines and appurtenances, San Antonio Water System Job Number 11-2503 in accordance with the Plans and Specifications for the following prices to wit:

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
1.	Erosion & Sedimentation Controls _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$ _____
2.	Trench Excavation Safety Protection _____ Dollars _____ Cents	LF	21,743	\$ _____	\$ _____
3.	Revegetation _____ Dollars _____ Cents	SY	237,146	\$ _____	\$ _____
4.	78" FRP (all depths) _____ Dollars _____ Cents	LF	18,863	\$ _____	\$ _____
4.A	96" FRP (all depths) _____ Dollars _____ Cents	LF	1,700	\$ _____	\$ _____
5.	78" Tee Base MH _____ Dollars _____ Cents	EA	5	\$ _____	\$ _____



Job No. 11-2503  
 Medina River Sewer Outfall  
 Segment 2

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
12.	Fence Gate 16' (Type 1) _____ Dollars _____ Cents	EA	3	\$ _____	\$ _____
13.	Remove and Replace Fencing _____ Dollars _____ Cents	LF	410	\$ _____	\$ _____
14.	Boring or Tunneling for 78" DIA. FRP _____ Dollars _____ Cents	LF	192	\$ _____	\$ _____
14.A	Boring or Tunneling for 96" DIA. FRP _____ Dollars _____ Cents	LF	100	\$ _____	\$ _____
15.	Carrier Pipe Installed in Steel Casing or Tunnel Liner Plate (78" DIA FRP) _____ Dollars _____ Cents	LF	192	\$ _____	\$ _____
15.A	Carrier Pipe Installed in Steel Casing or Tunnel Liner Plate (96" DIA FRP) _____ Dollars _____ Cents	LF	100	\$ _____	\$ _____
16.	Downstream Siphon Structure No. 2 _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$ _____
17.	Upstream Siphon Structure No. 2 _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$ _____
18.	12" FRP for Siphon No.2 _____ Dollars _____ Cents	LF	530	\$ _____	\$ _____

Job No. 11-2503  
 Medina River Sewer Outfall  
 Segment 2

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
19.	36" FRP for Siphon No.2 _____ Dollars _____ Cents	LF	530	\$ _____	\$ _____
20.	42" FRP for Siphon No.2 _____ Dollars _____ Cents	LF	530	\$ _____	\$ _____
21.	30" HDPE (Air By-Pass Pipe) _____ Dollars _____ Cents	LF	550	\$ _____	\$ _____
22.	Air Bypass Manhole (FRP) _____ Dollars _____ Cents	EA	2	\$ _____	\$ _____
23.	Rock Rip Rap (12" to 18") _____ Dollars _____ Cents	SY	889	\$ _____	\$ _____
24.	Concrete Cap _____ Dollars _____ Cents	LF	250	\$ _____	\$ _____
25.	Concrete Encasement _____ Dollars _____ Cents	LF	373	\$ _____	\$ _____
26.	Bypass Pumping _____ Dollars _____ Cents	LS	1	<del>XXXXXXXXXX</del>	\$ _____
27.	Abandonment of Sanitary Sewer Main and Manholes _____ Dollars _____ Cents	LF	400	\$ _____	\$ _____
28.	Tree Protection _____ Dollars _____ Cents	LS	1	<del>XXXXXXXXXX</del>	\$ _____

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
29.	Connection to MRSO Segment 1 _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$ _____
30.	Connection to MRSO Segment 3 _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$ _____
31.	Gravity Sewer Outfall Testing _____ Dollars _____ Cents	LF	21,084	\$ _____	\$ _____
32.	Disputes Review Board _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$30,000.00

**LINE ITEM "A"**

**SUB TOTAL BASE BID**

\$ \_\_\_\_\_

33.	Mobilization _____ Percent (Maximum of 5% of the Line Item "A" Sub-total Base Bid amount)	LS	1	\$XXXXXXXX	\$ _____
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**LINE ITEM "B"**

**MOBILIZATION SUB TOTAL**

\$ \_\_\_\_\_

**Note:** Mobilization lump sum bid amount shall be limited to a maximum of 5% of the Sub-total base bid amount. **In the event of a discrepancy between the written percentage and dollar amount shown for the Mobilization bid item the written percentage will govern. If the percentage written exceeds the allowable maximum stated for mobilization, SAWS reserves the right to cap the amount at the percentage shown and adjust the extension of the bid item accordingly.**

**TOTAL BID AMOUNT (LINE ITEM "A" + LINE ITEM "B")** \$ \_\_\_\_\_

**DOLLARS AND  
 CENTS**



\_\_\_\_\_  
BIDDER'S SIGNATURE & TITLE

\_\_\_\_\_  
FIRM'S NAME (TYPE OR PRINT)

\_\_\_\_\_  
FIRM'S ADDRESS

\_\_\_\_\_  
FIRM'S PHONE NO./FAX NO.

\_\_\_\_\_  
FIRM'S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID.

The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project with 540 calendar days after the start date, as set forth in the Authorization to Proceed. The Bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the Project if not completed on time.

Complete the additional requirements of the Proposal which are included on the following pages.

## SECTION 01025

### MEASUREMENT AND PAYMENT

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION OF WORK

This section defines the method which will be used to determine the quantities of work performed, or materials supplied, and establish the basis upon which payment will be made for the Medina River Sewer Outfall (MRSO), San Antonio Water System (SAWS) Job No. 11-2503 (Segment 2).

##### 1.02 MEASUREMENT AND PAYMENT

###### Item No. 1 - Erosion and Sedimentation Controls

1. Description - This item shall govern the installation of erosion and sedimentation controls as specified on the plans and within the TPDES to assure effective and continuous erosion and sedimentation control throughout the construction and post-construction period. The controls may include silt fences, rock berms, erosion control matting, stabilized construction entrances, concrete washout pits or other approved non-structural erosion/sediment controls.
2. Measurement - Measurement of the item "Erosion and Sedimentation Controls" will be by the lump sum as the work progresses.
3. Payment - This item will be paid for at the contract lump sum price for Erosion and Sedimentation Controls. The lump sum will be pro-rated based on the percentage of work successfully completed.
4. References - Project Specification Section SS540

###### Item No. 2 - Trench Excavation Safety Protection

1. Description - This item shall govern trench excavation safety protection required for the installation of all trench excavation protection systems to be utilized in the project, and including all additional excavation and backfill required by the protection system. Such work shall include but not be limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, and temporary pumping or diversion and recapture of storm water to provide adequate drainage. The work shall also include any over excavation and additional backfill necessary to accommodate the trench protection system, as well as any jacking or removal of jacks and trench supports after completion.

2. Measurement - Trench excavation safety protection shall be measured along the centerline of the pipeline.
3. Payment - Payment shall be made at the unit price bid per horizontal linear foot regardless of the depth of trench. Crossing trench length is incidental to the longitudinal length of the pipe trenches.
4. References – SAWS Standard Specification Item No. 550 and Project Specification Section SS550

Item No. 3 – Revegetation

1. Description - This item shall govern for preparing ground, final grading, providing for sowing of seeds, mulching with cellulose fiber and other management practices along and across such areas as are designated on the plans and in accordance with plans and specifications. All areas shall be covered with live grass before acceptance as specified in items SS 520 and SS 540.
2. Measurement - Measurement of acceptable "Revegetation", complete in place, shall be made by the square yard as the work progresses.
3. Payment - Payment for "Revegetation" will be made at the contract unit price bid upon completion of the work as the work progresses up to a maximum of 80% of the contract amount for revegetation. The remaining 20% will be paid upon final completion of the project.
4. References – Project Specification Section SS520 and SS 540

Item No. 4 and 4.A – Gravity Sewer Outfall Main – Open Cut (all depths)

1. Description - The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to make the sewer outfall main line complete and operable except for testing specified in Item 31. This shall include, but not be limited to acquisition of the pipe, transportation of the pipe to the site, unloading the pipe from the trucks, preparing right-of-way (shall be conducted in accordance with SAWS Standard Specification Item No.101), relocating existing electric lines, remove and stockpile topsoil, excavation of the trench, pre-installation pipe laying, providing and installing gravel subgrade/filter fabric, providing and installing pipe bedding material, lowering the carrier pipe into the trench, coupling of the pipe, backfilling, compaction, site restoration, and hauling and disposal of surplus excavated material. For bid item No. 4A the Contractor shall provide a cost for installing 1,700 LF of 96" gravity sewer at the same crown elevation and slope as the 78" gravity sewer shown on the current plans from approximately Sta. 306+14.19 to Sta. 353+59.38. The change in pipe size results in a greater depth of excavation from Sta. 306+14.19 to Sta. 353+59.38. All tee base manhole elevations shall be adjusted accordingly.

2. Measurement – Sewer line shall be measured by the horizontal linear foot as shown on the plan stationing for each size and type as follows:
  - a. From the centerline intersection of manholes.
  - b. The measurement of each line of pipe shall be continuous and shall include the horizontal plan lengths as shown in the plan stationing of all fittings and between the ends.
3. Payment - Payment for sewer outfall line installed will be made at the unit price bid per horizontal linear foot of pipe, as shown in the plan stationing, for the various sizes installed by the open cut method. All fittings, unless specified otherwise, are considered subsidiary to the cost of the pipe. Preparation of Right-of-Way is considered incidental to the cost of pipe installation and thus there will be no specific payment item for Preparation of Right-of-Way.
4. References – SAWS Standard Specification Item No. 101, 804, 848 and Project Specification Section SS804 and SS848, 02110, and 02200

Item No. 5, 5.A, 6 and 7 – Tee Base Manhole

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to furnish and install the tee base manholes as shown on the plans and in the specifications. Such work shall include excavation, installation of the tee base manhole, riser pipe, manhole ring and covers, concrete flat tops, concrete ring encasements, throat adjustment rings, concrete encasement, placement of select embedment material, backfill and compaction, vacuum testing and hauling and disposal of surplus excavated materials. (A “Miter” Tee Base Manhole refers to manholes that are located on a horizontal bend when they are fabricated by placing two or more miter sections together. A “Special” Tee Base Manhole refers to the special manufactured tee base manhole MH #83 used in the Toyota Lift Station Tie in. Bid Item 5.A refers to a 96” Tee Base Manhole with a 60” FRP stubout and 78” Reducer that will be installed at approximately Sta. 353+59.38. The elevations of Bid Item 5.A shall be adjusted to match the elevation of the 96” gravity sewer outfall main, Bid Item No. 4.A.)
2. Measurement – Tee base manholes shall be measured by each size and type as shown on the plans. Extra depth of manholes over fifteen (15) feet deep shall be paid by the vertical foot under Item 10.
3. Payment – Payment for this item will be made at the contract unit price bid for each tee base manholes shown on the plans or described herein.
4. References – SAWS Standard Specification Item No. 850, 852, and Project Specification Section SS850

Item No. 8, 8.A, 9 and 9.A – Tee Base Manholes with Drop Pipe Connection

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to furnish and install the tee base structure with drop pipe connections as shown on the plans and in the specifications. Such work shall include excavation, installation of the tee base manholes, riser pipe, drop piping, manhole ring and covers, concrete flat tops, concrete ring encasements, throat adjustment rings, concrete encasement, placement of select embedment material, backfill and compaction, vacuum testing and hauling and disposal of surplus excavated materials. (A “Drop X2” refers to Tee Base Manholes that have two (2) drop pipe connections. Bid item 8.A and 9.A refer to installing a 96” tee base manhole at the location of MH-54 and MH-55 respectively. Bid item 8.A and 9.A elevations shall be adjusted to meet the elevation of the 96” gravity sewer main, Bid item No. 4.A.)
2. Measurement – Tee base manholes with a drop pipe connection shall be measured by each size and type as shown on the plans. Extra depth of manholes over fifteen (15) feet deep shall be paid by the vertical foot under Item 13.
3. Payment – Payment for this item will be made at the contract unit price bid for each tee base manhole with a drop pipe connection shown on the plans.
4. References – SAWS Standard Specification Item No. 850, 852 and Project Specification Section SS850

Item No. 10 – Tee Base Manhole 60” Riser Extra Depth

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to furnish and install the tee base manhole riser having a depth greater than 15 feet as shown on the plans and in the specifications. Such work shall include excavation, installation of the extra depth greater than 15 feet, backfill and compaction, and hauling and disposal of surplus excavated materials.
2. Measurement – Measurement shall be by the vertical foot for the extra depth of each tee base manhole greater than 15 feet in depth.
3. Payment – Payment for this item will be made at the contract unit price bid for each vertical foot of extra depth tee base manholes shown on the plans.
4. References – SAWS Standard Specification Item No. 850, 852 and Project Specification Section SS850

Item No. 11 – Toyota Lift Station (LS #254) Tie In

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to install the special manufactured tee base manhole as shown on the plans and in the project specifications. Such work shall include excavation, cutting of existing 10” sanitary sewer main,

installation of the special manufactured tee base manhole, concrete encasement, placement of select embedment material, backfill and compaction, and hauling and disposal of surplus excavated materials (See construction plans and details for further information).

2. Measurement – The Toyota Lift Station tie in will be by the lump sum as the work progresses.
3. Payment – This item will be paid for at the contract lump sum price for the Toyota Lift Station tie in. The lump sump price will be pro-rated based on the percentage of facilities installed.

#### Item No. 12 – Fence Gates

1. Description - The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to make/purchase and install all gates as specified in the plans. This shall include, but not be limited to acquisition of the new gate and appurtenances, transportation of the gate and appurtenances to the site, unloading the gate and appurtenances from the trucks, Installation of gate and appurtenances, and hauling and disposal of any surplus material.
2. Measurement – Gates shall be measured by the size and type as shown in the plans.
3. Payment – Payment for this item will be made at the contract unit price bid for each gate as shown on the plans.
4. References – Construction Drawings

#### Item No. 13 – Remove and Replace Fencing

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to remove and replace all existing fencing. This shall include, but not be limited to the removal and disposal of existing fencing, acquisition of the new comparable fencing material, transportation of the fencing material to the site, unloading the fencing material from the trucks, Installation of fencing material, and hauling and disposal of any surplus material.
2. Measurement – Fencing shall be measured by the horizontal linear foot and shall be limited to only the fencing that falls within the limits of the Medina River Sewer Outfall easement as shown in the plans. Should fencing beyond the limits of the easement become damaged, the contractor shall replace at no additional cost to the owner.
3. Payment – Payment for removal and replacement of Fencing will be made at the unit price bid per horizontal linear foot of fencing. Temporary livestock



control fencing is considered a no separate pay item and is incidental to the project cost.

#### 4. References – Construction Drawings

##### Item No. 14, and 14.A – Boring or Tunneling

1. Description – This item includes all work associated with furnishing and installing steel casing pipe or steel liner plate as specified in the plans and specifications. The work includes providing all materials, labor, supervision, equipment, tools, and all other incidentals necessary to complete the work in place and restore the site to its original condition. This work does not include installation of the carrier pipe into the casing. (Bid Item No. 14.A refers to installing 100 LF of Boring or Tunneling for a 96" DIA FRP from Sta. 317+00 to 318+00. The work for Bid item 14.A is for the installation of the 96" gravity sewer outfall main, Bid Item No. 4A, around the transmission tower. The line and grade for this work shall be based on the line and grade of Bid Item No. 4.A.)
2. Measurement – Quantities for boring or tunneling shall be determined by the horizontal linear foot of steel casing or steel liner plate, as shown on the plan stationing, for the size and type shown in the plans, from the face of the working pit to the face of the receiving pit.
3. Payment – Payment shall be made at the contract unit price per horizontal linear foot, as shown on the plan stationing, for the size and type shown in the plans.
4. References – SAWS Standard Specification Item No. 856 and Project Specification Section SS856

##### Item No. 15 and 15.A – Carrier Pipe Installed in Steel Casing or Steel Liner Plate

1. Description – This item consists of furnishing carrier pipe of the size and type shown on the plans or covered in the specifications, acquisition of the pipe with joints that comply with the appropriate section of the specifications, and providing all materials, tools, equipment, labor, and supervision necessary to install gravity sewer outfall line within steel casing pipe or liner plate. (Bid Item No. 15.A refers to installing 100 LF of Carrier Pipe Installed in Steel Casing or Tunnel Liner Plate (96" DIA FRP) from Sta. 317+00 to 318+00. The work for Bid Item 15.A is associated with the installation of the 96" gravity sewer outfall main, Bid Item No. 4A, around the transmission tower. The line and grade for this work shall be based on the line and grade of Bid Item No. 4.A.)
2. Measurement – Carrier pipe installed in steel casing pipe or steel liner plate shall be measured by the horizontal linear foot, as shown on the plan stationing, for each size and type shown in the plans or specifications. It shall be measured along the centerline of the steel casing pipe or tunnel liner plate from the beginning to the end of the steel casing pipe and steel liner plate.

3. Payment – Payment will be made at the unit bid price per horizontal linear foot, as shown on the plan stationing, for carrier pipe installed in steel casing pipe or steel liner plate for the various sizes and types shown. All fittings, included but not limited to casing spacers, pipe support materials, and end seals, unless specified otherwise, are considered subsidiary to the cost of the pipe.
4. References – SAWS Standard Specification Item No. 856 and Project Specification Section SS856

Item No. 16, 17 – Inverted Siphon Structures

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to furnish and install the inverted siphon structures as shown on the plans and in the specifications. Such work shall include excavation, special trench protection as required, concrete formwork, and placement of reinforcement, placement of concrete including foundations and mud slabs, finishing, application of protective coating, installation of the sluice gates, stop log frames and any other appurtenances as shown in plans. Work shall also include placement and compaction, select embedment, foundation, sub-grade and base materials, backfill and compaction, grading, hydrostatic testing, hauling, and disposal of surplus excavated materials.
2. Measurement – Inverted Siphon Structures shall be measured by each type as shown on the plans.
3. Payment – This item will be paid for at the contract lump sum price for siphon structures. Payment for the inverted siphon structure will be limited to 90% until the siphon is successfully tested and accepted by the OWNER at which time the remaining ten (10) % will be paid.
4. References – Project Specification Section 3100, 3200, 3300, 3600, 5500, 5501, 5530, 9900, 15112, and 15113

Item No. 18-20 - Inverted Siphon Sewer Pipe – Open Cut (all depths)

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to make the siphon sewer pipe complete and operable. This shall include, but not be limited to acquisition of the pipe, transportation of the pipe to the site, unloading the pipe from the trucks, preparing right-of-way (shall be conducted in accordance with SAWS Standard Specification Item No.101), remove and stockpile topsoil, excavation of the trench, providing and installing gravel subgrade/filter fabric, providing and installing pipe bedding material, lowering the siphon sewer pipe into the trench, coupling of the pipe, testing, backfilling, compaction, and hauling and disposal of surplus excavated material.



2. Measurement – Inverted Siphon Sewer Pipe shall be measured by the horizontal linear foot as shown on the plan stationing for each size and type as follows:
  - a. From the centerline intersection at inside face of inverted siphon structures.
  - b. The measurement of each line of pipe shall be continuous and shall include the horizontal plan lengths, as shown in the plan stationing, of all fittings and valves between the ends.
3. Payment – Payment for inverted siphon pipe installed will be made at the unit price bid per horizontal linear foot of pipe, as shown in the plan stationing, for the various sizes installed by the open cut method. Payment for the inverted siphon sewer pipe will be limited to 90% until the pipe is successfully tested and accepted by the OWNER at which time the remaining ten (10) % will be paid. All fittings, unless specified otherwise, are considered subsidiary to the cost of the pipe.
4. References – SAWS Standard Specification Item No. 101, 804, 848 and Project Specification Section SS804, SS848, 02110, 02200

Item No. 21 – HDPE (Air Bypass Pipe) – Open Cut (all depths)

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to make the air bypass pipe complete and operable. This shall include, but not be limited to acquisition of the pipe, transportation of the pipe to the site, unloading the pipe from the trucks, excavation of the trench, providing and installing pipe bedding material, lowering the air bypass pipe into the trench, coupling of the pipe, testing, backfilling, compaction, site restoration, and hauling and disposal of surplus excavated material.
2. Measurement – air bypass pipe shall be measured by the horizontal linear foot as shown on the plan stationing for each size and type as follows:
  - a. From the inside face of inverted siphon structure, as shown in the plans.
  - b. The measurement of each line of pipe shall be continuous and shall include the horizontal plan lengths, as shown in the plan stationing, of all fittings and between the ends.
3. Payment - Payment for air bypass pipe installed will be made at the unit price bid per horizontal linear foot of pipe, as shown in the plan stationing, for the various sizes installed by the open cut method. Payment for the air bypass pipe will be limited to 90% until the pipe is successfully air and mandrel tested and accepted by the OWNER at which time the remaining ten (10) % will be paid. All fittings, unless specified otherwise, are considered subsidiary to the cost of the pipe.

4. References – SAWS Standard Specification Item No. 804 and Project Specification Section 02731, SS804

#### Item No. 22 – FRP Manholes (Air Bypass Manholes)

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to furnish and install the FRP manholes as shown on the plans and in the specifications. Such work shall include excavation, installation of the manholes, manhole ring and covers, concrete ring encasements, throat ring adjustments, concrete encasement, placement of select embedment material, backfill and compaction, vacuum testing and hauling and disposal of surplus excavated materials.
2. Measurement – FRP manholes shall be measured by each size and type as shown on the plans.
3. Payment – Payment for this item will be made at the contract unit price bid for each FRP manhole shown on the plans.
4. References – SAWS Standard Specification Item No. 853 and Project Specification Section SS853

#### Item No. 23 – Rock Rip Rap

1. Description - This work shall govern the finishing and placement of 12" to 18" rock in diameter per project specification where indicated on plans.
2. Measurement – Rock rip rap will be measured in place to the horizontal length as indicated on the plans.
3. Payment - Rock rip rap will be paid for at the contract unit price bid per square yard upon completion and acceptance.
4. References – Project Specification Section 02272

#### Item No. 24 – Concrete Cap

1. Description - This work shall govern the finishing and placement of concrete cap per project specification where indicated on plans.
2. Measurement - Concrete cap will be measured in place to the horizontal length as indicated on the plans.
3. Payment – Concrete cap will be paid for at the contract unit price bid per horizontal linear foot upon completion and acceptance.
4. References – SAWS Standard Specification Item No. 858

#### Item No. 25 – Concrete Encasement

1. Description – This work shall govern the finishing and placement of concrete encasement per project specification where indicated on plans.
2. Measurement – Concrete encasement will be measured in place to the horizontal length as indicated on the plans.
3. Payment - Concrete encasement will be paid for at the contract unit price bid per horizontal linear foot upon completion and acceptance.
4. References – SAWS Standard Specification Item No. 858

Item No. 26 – Bypass Pumping (See SAWS Item No. 864)

Item No. 27 – Abandonment of Sanitary Sewer Main and Manholes (See SAWS Item No. 862)

Item No. 28 – Tree Protection

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and material necessary to protect the trees within the project easement of the sanitary sewer gravity lines which are shown on the tree protection plans. Tree protection shall comply with the requirements contained in the latest version of the City of San Antonio Tree Ordinance.
2. Measurement – Measurement of the item "Tree Protection" will be by the lump sum as the work progresses.
3. Payment – This item will be paid for at the contract lump sum price for tree protection. The lump sump price will be pro-rated based on the percentage of facilities installed.
4. References – Project Specification Section 02112

Item No. 29 – Connection to MRSO Segment 1

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to complete the Connection to MRSO Segment 1 per project specifications and as indicated on the plans.
2. Measurement – Measurement of the item "Connection to MRSO Segment 1" will be by the lump sum as the work progresses.
3. Payment – This item will be paid for at the contract lump sum price for the Connection to MRSO Segment 1. The lump sump price will be pro-rated based on the percentage of work completed.
4. References – Project Specification Section 01010 and Construction Drawings

## Item No. 30 – Connection to MRSO Segment 3

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to complete the Connection to MRSO Segment 3 per project specifications and as indicated on the plans.
2. Measurement – Measurement of the item “Connection to MRSO Segment 3” will be by the lump sum as the work progresses.
3. Payment – This item will be paid for at the contract lump sum price for the Connection to MRSO Segment 3. The lump sump price will be pro-rated based on the percentage of work completed.
4. References – Project Specification Section 01010 and Construction Drawings

## Item No. 31 – Gravity Sewer Outfall Testing

1. Description – The CONTRACTOR shall provide all labor, supervision, tools, equipment and materials to successfully perform inspection, as well as air and deflection test the entire length of the gravity sewer outfall lines installed. This bid item does not include any work associated with testing required for the inverted siphon structure, inverted siphon sewer pipe, and the air bypass pipes.

All testing shall be witnessed by the OWNER’S representative.

2. Measurement – Measurement of the item “Gravity Sewer Outfall Testing” will be by the Horizontal linear foot.
3. Payment – Gravity Sewer Outfall Testing will be paid for at the contract unit price bid per horizontal linear foot upon completion and acceptance.
4. References – SAWS Standard Specification Item No. 849 and Project Specification Section SS849

## Item No. 32 – Disputes Review Board

1. Description - This item shall govern the fees and expenses of all three members of the Board and shall be shared equally by the OWNER and the CONTRACTOR. The OWNER will provide administrative services, such as conference facilities and secretarial services, and will bear the cost of these services.
2. Measurement - The CONTRACTOR shall pay the invoices, once reviewed and approved by both parties, of all board members. The CONTRACTOR will then bill the OWNER for 50% of the amount of such invoices.

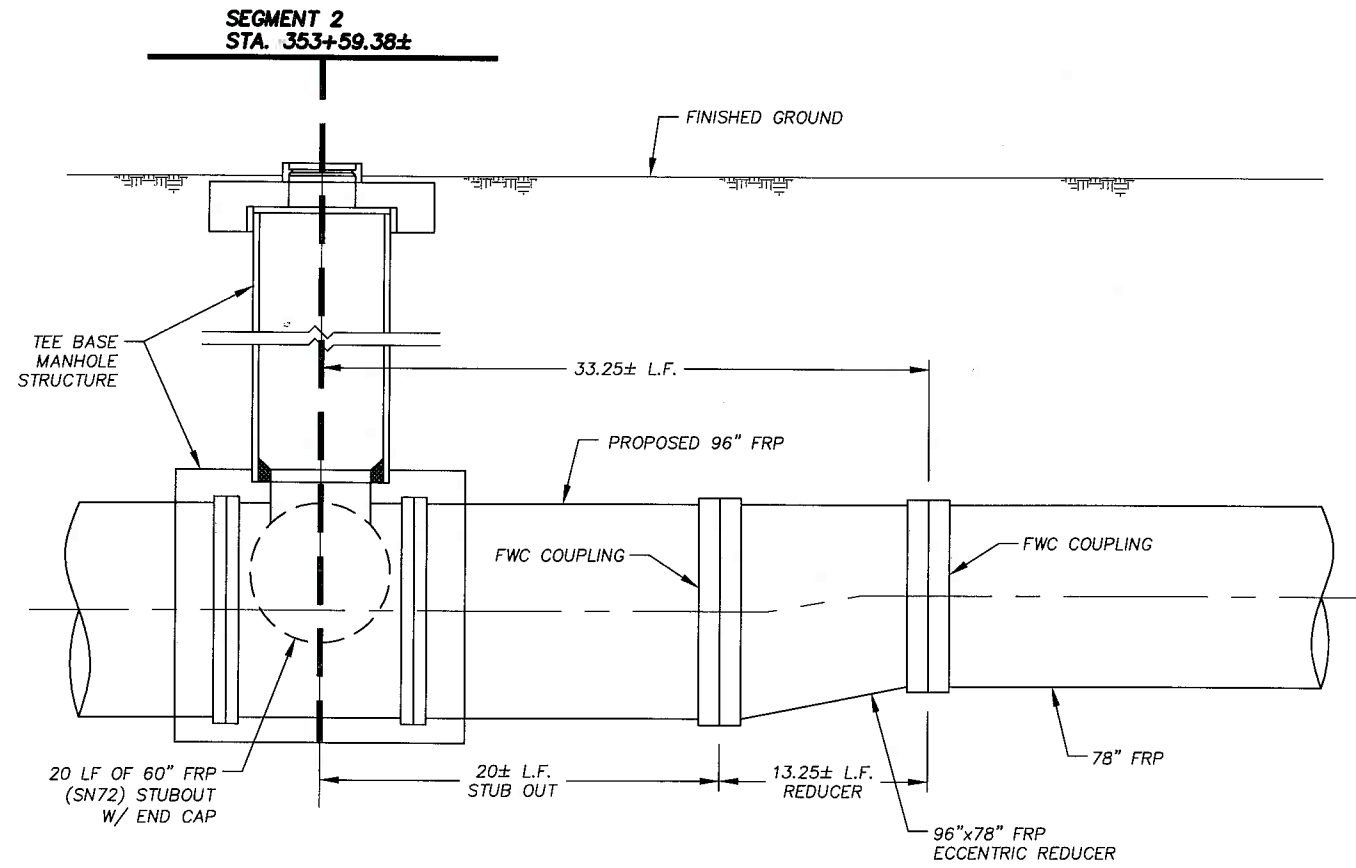
3. Payment – The OWNER has provided for an allowance for the Disputes Review Board as indicated on the Bid Form. The Disputes Review Board will be paid for at the contract lump sum price.
4. References – Project Specification Section 01120

Item No. 33 – Mobilization

1. Description - This item shall govern the mobilization of personnel, equipment and supplies to the project site in preparation for the beginning work on contract items and the acquisition of insurance and bonds. Mobilization shall include, but not be limited to the movement of equipment, personnel, material, supplies, etc. to the project site and the establishment of temporary offices and other facilities necessary to the start of the work.
2. Measurement - Measurement of the item, "Mobilization" will be by the lump sum as the work progresses. "Mobilization" lump sum bid shall be limited to a maximum 5% of the adjusted contract amount bid. The adjusted contract amount is defined as the total contract amount less the lump sum bid total for Item No. 33, Mobilization.
3. Payment - Partial payments of the lump sum bid for mobilization will be in accordance with SAWS Specification Item No. 100.
4. References – SAWS Specification Item No. 100

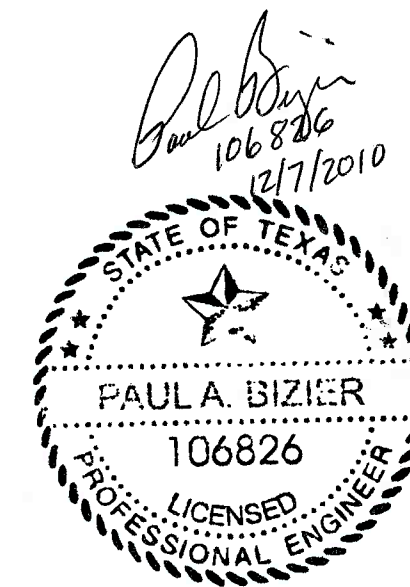
END OF SECTION

1

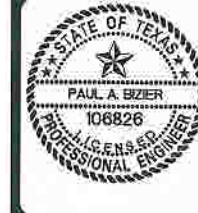


**DETAIL FOR  
FIBERGLASS PIPE REDUCER**  
N.T.S.

D-02A  
A



NO.	DATE	REVISION	APP.
1	12/6/10	ADDITIONAL REVISIONS CREATE NEW DETAIL SHEET	BM



**PAPE-DAWSON  
ENGINEERS**

555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000  
FAX: 210.375.9010  
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

**SAN ANTONIO WATER SYSTEM  
MEDINA RIVER SEWER OUTFALL PROJECT  
SAWS JOB NO. 11-2503**

**CONNECTION DETAILS**

JOB NO.	6886-00
DATE	DECEMBER 2010
DESIGNER	JGM
DRAWN	BS
CHECKED	BM
DRAWING NO.	D-02A
SHEET NO.	42A

Date: Dec 07 2010 1:45PM User ID: BSM/ltk  
File: P:\68\681\00\Design\Chk\SanAnt\Bldg Package 2\176868600-Connections.dwg