

**TORNILLO-GUADALUPE PORT OF ENTRY
PROJECT ZONE SEWER FACILITY
Bid # 12-0222
ADDENDUM NO. 1**

BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT		
Item No.	Page or Drawing No.	Location and Description of Change
1.01	Page 1	SUB CONSULTANT SEAL SHEET. ADD the "Seal Sheet," after the Cover Page as shown in "Attachment A."
1.02	Page 11 - 12	UNIT PRICES. REMOVE Pages 11 and 12 in their entirety and REPLACE with the Attached Pages 11 and 12 in "Attachment B".
1.03	Page 34 - 35	GENERAL CONDITONS. REMOVE Section 134. Time For Completion in its entirety and REPLACE with the <u>Section 134. Time For Completion</u> in "Attachment C".

TECHNICAL SPECIFICATIONS		
Item No.	Page or Drawing No.	Location and Description of Change
1.04	01025	MEASUREMENT AND PAYMENT. REMOVE Section 01025 in its entirety and REPLACE with the Section 01025 in "Attachment D".
1.05	15000	<p>PUMP STATION PIPING AND FITTINGS. PART 2 PRODUCTS, 2.01 MATERIALS.</p> <p>ADD the following:</p> <p>E. DISMANTLING JOINT</p> <p>A. QUALITY ASSURANCE: All Dismantling Joints are designed and manufactured under quality management systems to ISO 9001:1994. They have been tested in accordance with the requirements of NSF 61 and the American Water Works Association Standard C.219 for bolted couplings.</p> <p>B. GENERAL: The Dismantling Joint shall be a self-contained flanged restrained joint fitting, including both flanged components and sufficient harness bars to withstand the imposed thrust. The Dismantling Joint will allow for up to 2" of longitudinal adjustment. The pressure rating will be determined by the flange configuration and all commonly used flanges shall be available. As standard, flanges to AWWA C207 Table D shall be used. The Dismantling Joint shall be furnished as a complete assembly consisting of spigot piece, flange adapter, tie bars, and gasket. The Dismantling Joint shall be designed so that no part of the restraint system extends outside the flange diameter. The internal bore shall match that of the pipe system. The diamrntling fitting shall be a Romac DJ400 Series (dismantling joint wuth tie-rods). Substitutions will not be allowed.</p> <p>C. MATERIALS OF CONSTRUCTION: The spigot piece shall be of steel to ASTM A283 Grade C. The Flange Adapter shall be either steel to ASTM A283 Grade C or ductile iron to ASTM A536 Grade 65-45-12. Tie bars shall be ASTM A193 Grade B7 threaded rod with rolled threads. MB7 may be used as an alternative. Gasket shall be EPDM Grade E. The Dismantling Joint shall be supplied with an in-house applied fusion bonded Epoxy or Rilsan Nylon coating applied by fluidized bed method. The coating shall comply with the requirements of NSF 61 and AWWA C550 as applicable. As an alternative, a shop-coat primer suitable for field applied</p>

		<p>coatings can be supplied.</p> <p>D. DESIGN & PERFORMANCE: The Dismantling Joint shall comply with AWWA C.219 where applicable, and the manufacturer shall operate an accredited quality management system to ISO 9001. The manufacturer must have manufactured the Dismantling Joint for a minimum of 5 years. The design pressure rating shall be equal to or greater than the mating flanges. The gasket seal and compression stud and nut arrangement shall be independent of the tie rod restraint system. Tie Rod diameter shall be compatible with the corresponding bolt diameter of the mating flange. The Tie Rod restraint system shall be capable of withstanding the full pressure thrust that the pipe system can develop at no more that 50% of the yield strength of the tie rod material. The Dismantling Joint shall be as manufactured by Viking Johnson.</p> <p>E. MATERIAL SPECIFICATION:</p> <ol style="list-style-type: none"> 1. SPIGOT PIECE: Steel to ASTM A283 Grade C 2. FLANGE ADAPTER (UP TO 12"/DN300): Ductile Iron ASTM A536 Grade 65-45-12 or Steel to ASTM A283 Grade C 3. FLANGE ADAPTER (ABOVE 12"/DN300): Steel ASTM A283 Grade C 4. TIE BARS: Tie Bars – High Tensile Steel to ASTM A 193 Grade B7 Nuts – Heavy Hex to ASTM A194 Grade 2H Hardened Washers – to ASTM F436 5. GASKETS: EPDM compound conforms to ASTM D2000. Suitable for water, sewage, many strong and oxidizing chemicals and food applications. 6. COATING: Flange adapter and flange spigot: Fusion bonded epoxy or Rilsan. Tie Bars, nuts and washers: Zinc plated to ASTM B633 Type SC1.
1.06	15100	<p>VALVES FOR PUMP STATION. Item 2.06 SEWAGE COMBINATION AIR VALVE, A.</p> <p>ADD the following</p> <p>3. Manufacture Representative – Jeff Weigers, EGQ Utilities, 1406 Hutton Dr., Carrollton, TX 75006, 972-446-1655.</p>

DRAWINGS		
Item No.	Item No.	Item No.
1.07	C1.3 Sheet 9 of 50	LIFT STATION NO. 1 SECTIONS. ADD the with the following: <u>KEY NOTE 11</u> – 2” VENT-O-MAT 050-RGXB-1021 AIR/VACUUM VALVE. NO SUBSTITUTES WILL BE ALLOWED. The location of the 2” vent-o-mat 050-rgxb-1021 air/vacuum valve shall be the same as shown on Sheet C3.3 lift station no. 3 sections.
1.08	C2.3 Sheet 21 of 50	LIFT STATION NO. 2 SECTIONS. ADD the with the following: <u>KEY NOTE 11</u> – 2” VENT-O-MAT 050-RGXB-1021 AIR/VACUUM VALVE. NO SUBSTITUTES WILL BE ALLOWED. The location of the 2” vent-o-mat 050-rgxb-1021 air/vacuum valve shall be the same as shown on Sheet C3.3 lift station no. 3 sections.
1.09	C2.6 Sheet 29 of 50	6-INCH FORCE MAIN PLAN & PROFILE FROM STA. 43+00 TO STA. 63+00. REMOVE Sheet C2.6 in its entirety and REPLACE with the Attached Sheet C2.6R in “Attachment E”.
1.10	C2.6R Sheet 29 of 50	ADD TEMPORARY EARTHEN IRRIGATION DITCH PLAN DURING CONSTRUCTION, detail as shown in “Attachment F.”
1.11	C2.6R Sheet 29 of 50	ADD NEW EARTHEN IRRIGATION DITCH PLAN AFTER CONSTRUCTION, exhibit as shown in “Attachment G.”
1.12	C3.3 Sheet 33 of 50	LIFT STATION NO. 3 SECTIONS. REMOVE <u>KEY NOTE 3</u> – 4” GATE VALVE in its entirety and REPLACE with the following: <u>KEY NOTE 3</u> – 4” PLUG VALVE.
1.13	C3.3 Sheet 33 of 50	LIFT STATION NO. 3 SECTIONS. REMOVE <u>KEY NOTE 11</u> – 2” VENT-O-MAT SERIES RGX AIR/VACUUM VALVE in its entirety and REPLACE with the following: <u>KEY NOTE 11</u> – 2” VENT-O-MAT 050-RGXB-1021 AIR/VACUUM VALVE. NO SUBSTITUTES WILL BE ALLOWED.
1.14	C3.3 Sheet 33 of 50	LIFT STATION NO. 3 SECTIONS. REMOVE <u>KEY NOTE 12</u> – 6” HARNESS COUPLING ADAPTER, REFER TO DETAIL in its entirety and REPLACE with the following: <u>KEY NOTE 12</u> – 6” DISMANTLING JOINT.
1.15	E3.4 Sheet 39 of 50	RF NETWORK COMMUNICATIONS BLOCK DIAGRAM. REMOVE Sheet E3.4 in its entirety and REPLACE with the Attached Sheet E3.4R in “Attachment H”.
1.16	C4.6 Sheet 46 of 50	SANITARY SEWER PIPE CONNECTION DETAILS. REMOVE Detail 1/C4.6 “Combination Air Release Valve Installation Detail,” in its entirety and REPLACE with the Attached Detail 1R/C4.6 “Combination Air Release Valve Installation Detail,” in “Attachment I”.
1.17	C4.7 Sheet 47 of 50	PIPE CASING THRUST BLOCKING & CONCRETE FLUME DETAILS. REMOVE Detail 5/C4.7 “Typical Harnessed Flexible Coupling Detail,” in its entirety.

ATTACHMENTS:

- A. Sub-consultant Seal Sheet
- B. Unit Prices, Pages 11-12
- C. General Conditions, Section 134. Page 34-35
- D. Section 01025, Entire Section
- E. Sheet C2.6, Entire Sheet
- F. Sheet C2.6R, Temporary Earthen Irrigation Ditch Plan During Construction
- G. Sheet C2.6R, New Earthen Irrigation Ditch Plan After Construction
- H. Sheet E3.4R, Entire Sheet
- I. Sheet 4.6, Detail 1R/C4.6

--- END OF ADDENDUM NO. 1 ---

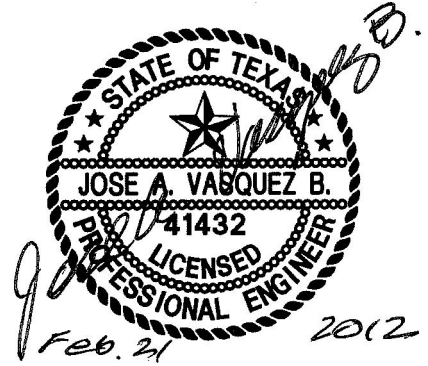
ATTACHMENT A

SEALS PAGE

SPECIFICATIONS

- DIVISION 03 – CONCRETE
- DIVISION 04 – MASONRY
- DIVISION 05 – METALS
- DIVISION 07 – THERMAL AND MOISTURE PROTECTION
- DIVISION 08 – DOORS AND WINDOWS
- DIVISION 09 – FINISHES

Jose A. Vasquez B.



SPECIFICATIONS

- DIVISION 25 – SCADA
- DIVISION 26 – ELECTRICAL

Gonzalo Aguilar



ATTACHMENT B

UNIT PRICES

For changing quantities of work items from those indicated by the contract drawings upon written instructions from the architect/engineer, the following unit prices shall prevail:

<u>ITEM DESCRIPTION</u>	<u>UNIT</u>	<u>UNIT COST</u>
<u>BASE BID 1</u>		
1. Insurance, Bonds, and Move-in Related Expenses Not to Exceed 5% of Total Bid Item No. 2 through Item No. 20	1 EA	\$ _____.
2. Furnish and Install 6-Inch Diameter Force Main Approved Pipe, Complete in Place	15,050 LF	\$ _____.
3. Furnish and Install 4-Inch Diameter Force Main Approved Pipe, Complete in Place	560 LF	\$ _____.
4. Furnish and Install 8-Inch Diameter Gravity Sewer Approved Pipe, Complete in Place	55 LF	\$ _____.
5. Furnish and Install 12-Inch Diameter Gravity Sewer Approved Pipe, Complete in Place	20 LF	\$ _____.
6. Furnish and Install 8-Inch Diameter Steel Casing by Open Cut Methods, Complete in Place	275 LF	\$ _____.
7. Furnish and Install 12-Inch Diameter Steel Casing by Boring Methods, Complete in Place	870 LF	\$ _____.
8. Furnish and Install 12-Inch Diameter Steel Casing by Open Cut Methods, Complete in Place	220 LF	\$ _____.
9. Furnish and Install 72-Inch Diameter Manhole (6' Standard), Complete in Place	1 EA	\$ _____.
10. Furnish and Install Additional Vertical Depth for 72-Inch Diameter Manhole, Complete in Place	14 VF	\$ _____.
11. Furnish and Install 48-Inch Diameter Manhole (6' Standard), Complete in Place	3 EA	\$ _____.

12. Furnish and Install Additional Vertical Depth for 48-Inch Diameter Manhole, Complete in Place	3 VF	\$ _____.
13. Furnish and Install Lift Station Facilities #1, Including Pumps, Piping, Electrical Controls, Shoring/Sheeting, Odor Control, and all Related Improvements and Appurtenances as Shown in Plan Sheets C1.1-C1.3, S1.1-S1.2, E1.1-E1.3, Complete in Place	1 LS	\$ _____.
14. Furnish and Install Lift Station Facilities #2, Including Pumps, Piping, Electrical Controls, Shoring/Sheeting, And all Related Improvements and Appurtenances as Shown in Plan Sheets C2.1-C2.3, S2.1-S2.2, E2.1-E2.3, Complete in Place	1 LS	\$ _____.
15. Furnish and Install Lift Station Facilities #3, Including Pump, Piping, Electrical Controls, Shoring/Sheeting, Odor Control and all Related Improvements and Appurtenances Shown on Plan Sheets C3.1-C3.3, S3.1-S3.2, E3.1-E3.3, Complete in Place	1 LS	\$ _____.
16. Provide and Maintain Groundwater Dewatering Operation for the Completion And Duration of the Project, Complete in Place	1 LS	\$ _____.
17. Provide and Maintain Trench Safety System, Complete in Place	15,685 LF	\$ _____.
18. Pre/Post Construction Video Taping of Pipeline Route and Lift Station Sites, Complete in Place	1 LS	\$ _____.

ATTACHMENT C

SECTION 134. TIME FOR CONSTRUCTION

The work, which the contractor is required to perform under the Contract, shall be commenced at the time stipulated by the Local Public Agency in the Notice to Proceed to the contractor and shall be fully completed within

	Description of Work	Contract Time
Milestone 1	All improvements, as described in the Contract Documents, requiring a dewatering operation for Lift Station #2, Lift Station #3, and all work between LS#2 and the Tornillo Wastewater Treatment Plant. The removal of wells and discharge pipe for the dewatering operation is included in this milestone.	<i>May 25, 2012;</i>
Milestone 2	All remaining work and all related improvements and appurtenances as described in the Contract Documents and in the related Specification Sections and in Plan Sheets.	Substantial Completion <i>130 Calendar Days</i> Final Completion <i>160 Calendar Days</i>

ATTACHMENT D

SECTION 01025 – MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 REQUIREMENTS

- A. Measurement and payment shall be as specified in this Section.
- B. General scope of work under each bid item includes all labor and materials required for construction of completely functional and operational facilities as shown on the Drawings and in these Specifications.
- C. All estimated quantities for unit price bid items stipulated in the bid proposal are approximate and are to be used only (a) as a basis for estimating the probable cost of the work and (b) for the purpose of comparing the bids submitted for the work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for unit price work and materials will be the actual amount of work done and materials furnished.
- D. All measurements and payments will be based on completed and accepted work performed in strict accordance with the Drawings and Specifications and in accordance with contract-unit prices and schedule of values. Incidental work and items not listed in the contract-unit price schedule will not be paid for separately, but will be included in the payment for the listed item or items and shall be full compensation for all labor, equipment, materials, testing and incidentals necessary to perform the work in accordance with these contract documents.
- F. Cost of work or materials shown on the Drawings, called for in the Specifications and on which no separate payment is made shall be included in the bid price on the various pay items for which they are associated. A claim by the Contractor for extra compensation for an item shown on the Drawings or described in the Specifications will not be considered for any reason including but not limited to the claim that it does not fall within the scope of one of the Bid items.

PART 2 MEASUREMENT AND PAYMENT

2.01 MOBILIZATION/DEMOBILIZATION

- A. Shall include all costs for Contractor's mobilization and demobilization, insurance and bond, construction permits and fees, job trailers, site administration expenses, and utilities to the job trailers including power, telephone, etc. for the entire project. Shall include all costs for contract closeout, site cleanup, and all costs associated with Contractor's demobilization from the site. Payment for mobilization and demobilization shall be on a Lump Sum basis as noted in the Bid Form.

2.02 SANITARY SEWER PIPELINES

- A. Measurement shall be the actual linear feet of new pipeline installed as determined by measurement along the centerline of the pipe using horizontal stationing, with no deduction being made for manholes or fittings.
- B. Payment will be made at the unit price bid for each size and type of pipe as stated in the Proposal and will be compensation in full for furnishing and installing the necessary materials and work as follows:

Construction and easement staking, construction facilities, submittals, coordination, quality control site preparation, traffic control, barricades, excavation, hand excavation, testing, backfilling and successful passing of compaction test for utilities, protection and relocations of adjacent utilities and structures, relocation, removal and replacement and protection of power and/or light poles, filter fabric for trench bedding, furnishing and installation of stub-outs and plugs/caps, temporary water and sewer bypasses, coring existing manholes, removal and replacement or repair of rock walls and fences, repair of driveways, removal and reinstallation of mailboxes, providing uninterrupted mail access, protection and reconstruction of irrigation ditches (concrete lined or otherwise) and culverts, and operation, providing temporary irrigation bypass systems, all pipe bedding material, repair/replacement of curb and gutter, header curb, repair/replacement of sidewalks, all pipe and accessories, concrete, equipment, mechanical and electrical, access outlets, fittings and blind flanges shown and called out on the Drawings, blind flanges or dished heads and appurtenances for pressure testing, field closures, concrete encasements, concrete thrust blocks, all mechanically restrained joints or welded joints, flexible connections, couplings, tie-ins and connections to existing lines or work including the lowering or raising of existing lines to grades of new line if necessary for proper connection and cover, removal and replacement of shrubbery, miscellaneous concrete and reinforcement, brick, stone, miscellaneous painting, temporary cold mix patch where required, restoring natural drainage, protection, hanging, relocation of existing utilities, repairing and replacing broken or interfering utility mains damaged during construction, salvage operations, revegetation of easements or construction limits, flushing and all other items of the project not indicated as being covered under the other specific bid items shown in the Proposal. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications.

2.03 STEEL CASING BY BORING METHODS

- A. Measurement shall be the actual linear feet of various diameters of steel casing installed by boring methods. Payment will be made at the unit price bid for steel casing installed by boring and will be compensation in full for furnishing and installing such casing as shown on the plans, including boring, pits, shoring, insulators, end seals, coordination with right-of-way owners and all material, labor and equipment necessary for the work. Carrier pipe and all installation of the carrier pipe in the casing, complete and in place shall be included in the unit price bid for pipe.
- B. This item will be measured for payment by the linear foot of casing installed.

2.04 MANHOLES

- A. Manholes of the various diameters and types (standard and drop) shall be measured for each type installed to a depth of 6 feet for 48-inch diameter manholes and 6 feet for 72-inch diameter manholes, including bases, pipe penetrations, grout, concrete, sealant, protective coatings, frames, covers, concrete collars, testing and other appurtenances as shown on the drawings. The additional depth of manhole risers shall be measured by the vertical foot as determined by measuring the total depth of a manhole from its base to the top of its frame and subtracting 6 feet from the total measured depth.
- B. Payment for manholes shall be at the unit price bid for each manhole installed and accepted. The additional depth of manhole risers shall be paid at the unit price bid per vertical foot for each accepted manhole, as determined in paragraph 2.04A.

2.05 DROP MANHOLES

- A. Drop-Manholes of the various diameters and types shall be measured for each type installed to a depth of 6 feet for 48-inch diameter manholes and 6 feet for 72-inch diameter manholes, including bases, pipe penetrations, core drilling, additional pipe, grout, concrete, sealant, protective coatings, frames, covers, concrete collars, testing and other appurtenances as shown on the drawings. The additional depth of manhole risers shall be measured by the vertical foot as determined by measuring the total depth of a manhole from its base to the top of its frame and subtracting 6 feet from the total measured depth.
- B. Payment for manholes shall be at the unit price bid for each manhole installed and accepted. The additional depth of manhole risers shall be paid at the unit price bid per vertical foot for each accepted manhole, as determined in paragraph 2.05A.

2.06 AIR RELEASE VALVE

- A. Measurement shall be made each valve of various type installed and accepted.
- B. Payment shall be made at the stated unit bid price per valve of each size and type of valve installed as stated in the Proposal, and shall include all costs associated with all valves and operator supports, gravel sumps, pipe penetrations, valve boxes, vent pipes and other pipe and valve appurtenances as shown on the drawings as they pertain to the particular valve and size of valve installed.

2.07 LIFT STATION #1

- A. Measurement for Lift Station #1 shall be at lump sum. Lift Station #2 shall include all dewatering, excavating, shoring, grading, backfilling, coordination with surrounding home owners, coordination with utility companies, all concrete structures, buildings, rockwall, chain link fence, pavement, monorails, electrical work, pumps, testing, piping, odor control, and any other appurtenances required to complete and install an operable lift station.
- B. Payment will be made at the unit price bid for a completed and accepted facility, complete in place including all material, labor, and material equipment necessary to complete the work as shown on Plan Sheets C1.1 – C1.3; S1.1 – S1.2; E1.1 – E1.3 and as specified in these Technical Specifications.

2.08 LIFT STATION #2

- A. Measurement for Lift Station #2 shall be at lump sum. Lift Station #2 shall include all dewatering, excavating, shoring, grading, backfilling, coordination with surrounding home owners, coordination with utility companies, all concrete structures, buildings, rockwall, chain link fence, pavement, monorails, electrical work, pumps, flow meter, testing, piping and any other appurtenances required to complete and install an operable lift station.
- B. Payment will be made at the unit price bid for a completed and accepted facility, complete in place including all material, labor, and material equipment necessary to complete the work as shown on Plan Sheets C2.1 – C2.3; S2.1 – S2.2; E2.1 – E2.3 and as specified in these Technical Specifications.

2.09 LIFT STATION #3

- A. Measurement for Lift Station #3 shall be at lump sum. Lift Station #3 shall include all dewatering, excavating, shoring, grading, backfilling, coordination with surrounding home owners, coordination with utility companies, all concrete structures, buildings, rockwall, chain link fence, pavement, monorails, electrical work, pumps, testing, piping, odor control, and any other appurtenances required to complete and install an operable lift station.
- B. Payment will be made at the unit price bid for a completed and accepted facility, complete in place including all material, labor, and material equipment necessary to complete the work as shown on Plan Sheets C3.1 – C3.3; S3.1 – S3.2; E3.1 – E3.3 and as specified in these Technical Specifications.

2.10 TRENCH SAFETY SYSTEM

- A. Measurement of trench safety systems shall be determined by the actual length along the centerline of any installed pipe with no deduction being made for manholes or fittings.
- B. Payment shall be made at the unit price bid per linear foot as stated in the Proposal and shall be full compensation for the trench safety system including any design, testing, inspection or additional excavation and backfill required for furnishing, placing, maintaining and removing all shoring, sheeting or bracing for required compaction, and for all other labor, materials, tools, equipment and incidentals necessary to complete the trench safety system work, as specified.

2.11 LUMP SUM ITEMS

- A. Lump sum items include, but are necessarily not limited to:
 - 1. Mobilization, demobilization, insurance, bonds and moving expenses.
 - 2. Traffic Control.
 - 3. Lift Stations.
 - 4. Dewatering for groundwater removal for entire project.
 - 5. Videotape of Project Area Before and After Construction (provide 2 copies in DVD format).

No separate measurement will be made of any materials, equipment, supplies, testing, labor, earthworks or any other individual work item associated with the work for any individual lump sum item noted in the Proposal.

- B. Lump sum items shall be paid for at the lump sum price bid for each individual work item as noted in the Proposal.

END OF SECTION

ATTACHMENT E

BENCHMARK REFER TO SHEET C0.3 FOR ELEVATION CONTROL POINTS AND SURVEYOR DATUM INFORMATION.	UTILITY LOCATOR SERVICES COUNTY OF EL PASO (915) 546-2015 TORNILLO WATER IMPROV. DIST. (915) 764-2966 LOWER VALLEY WATER DISTRICT (915) 791-4480 EL PASO ENERGY CORPORATION (915) 496-5244 EL PASO ELECTRIC COMPANY (915) 543-5720 TEXAS GAS SERVICE (915) 680-7200 TIME WARNER COMMUNICATIONS (915) 772-1123 U.S. SPRINT TELECOMM (800) 521-0579 MCI SURVEILLANCE (800) MCI-WORK AT&T (800) 852-3786	WARNING! BEFORE YOU DIG CALL 1-800-DIG-TESS 1-800-344-8377 FOR FIELD LOCATING EXISTING UTILITIES
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NO. DATE	REVISION	REMARKS
1	5/13/12	ADDENDUM NO. 1 (1-216 ROW & STATIONING ADJUSTED)

osa group
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM #454
4712 Woodrow Wilson, Ste. F, El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.osagroup.net

SCALE: 1"=40' HORIZONTAL
1"=5' VERTICAL
DATE: FEBRUARY 2012
DESIGNED BY: C.S./C.Z.
DRAWN BY: A.B./M.C.
CHECKED BY: A.C.
APP'D BY: U.E.

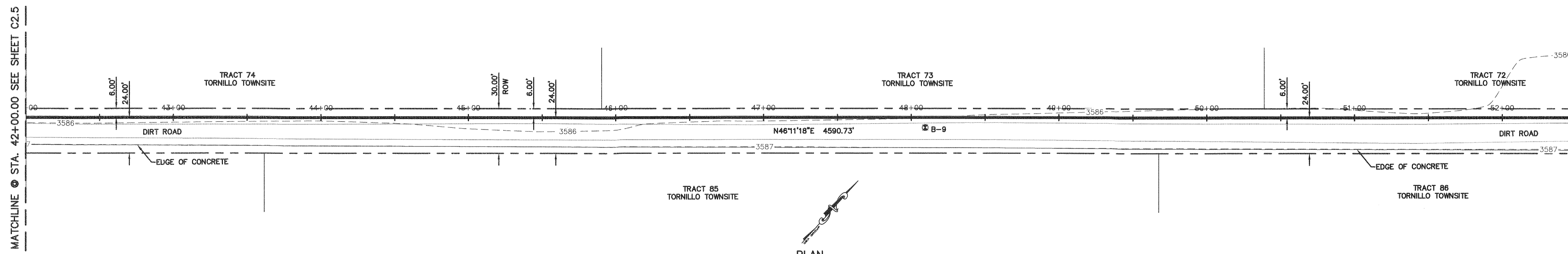
PROJECT NAME
TORNILLO-GUADALUPE
PORT OF ENTRY PROJECT
ZONE SEWER FACILITY

COUNTY OF EL PASO
ROAD & BRIDGE
DEPARTMENT

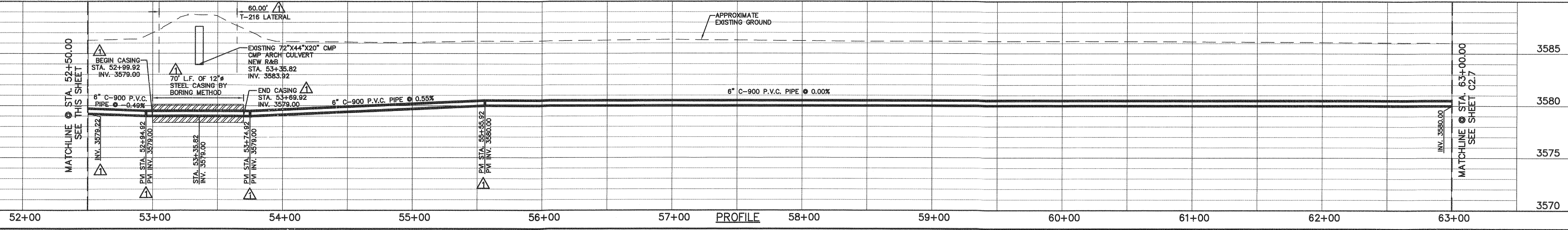
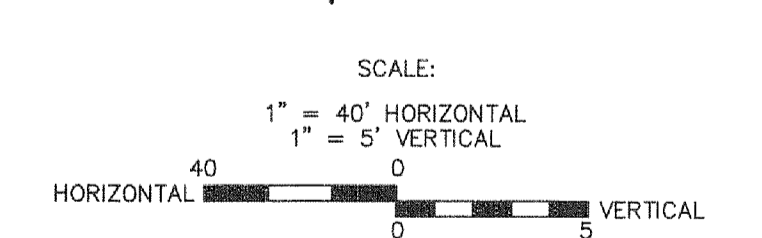
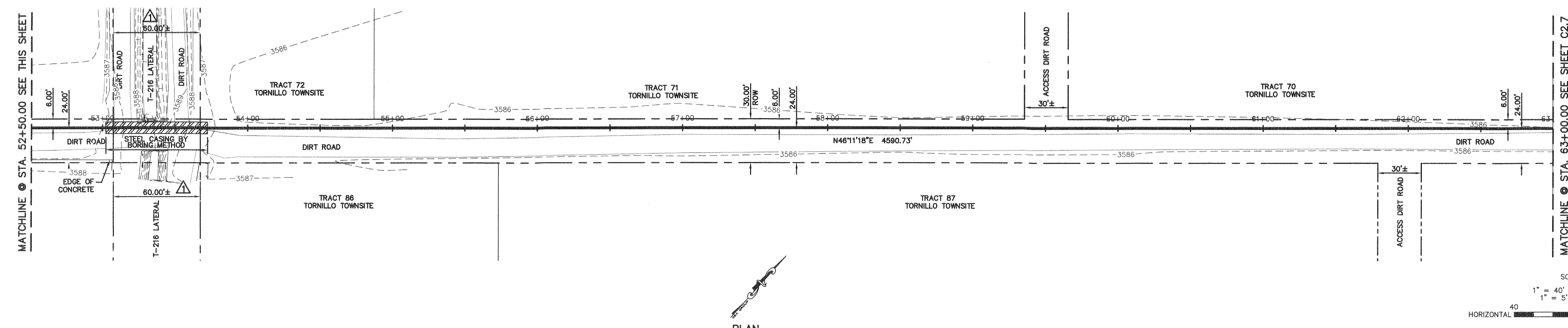
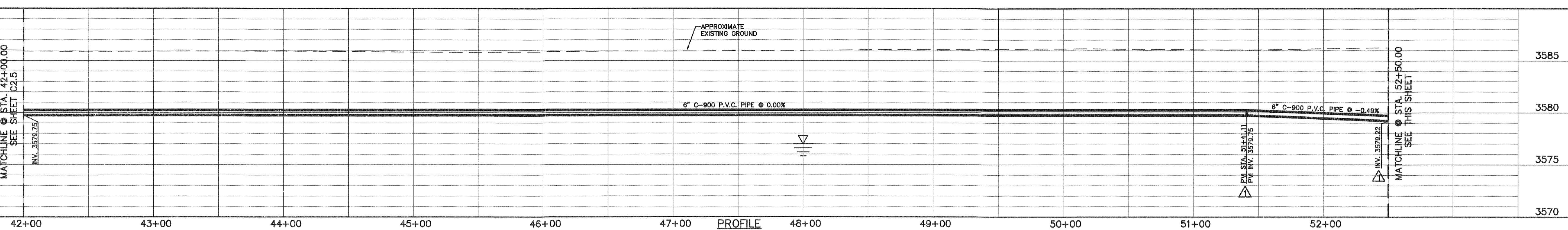
SHEET TITLE
6-INCH FORCE MAIN
PLAN & PROFILE
FROM STA. 43+00
TO STA. 63+00
C2.6R
SHEET 29R OF 50

MATCHLINE @ STA. 42+00.00 SEE SHEET C2.5

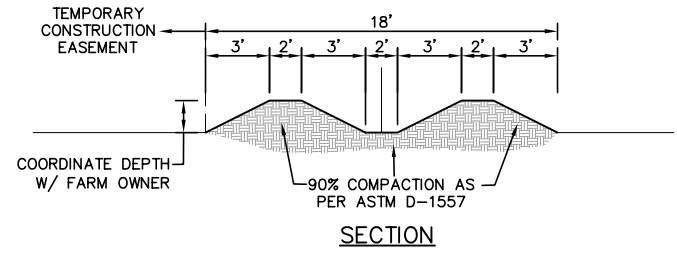
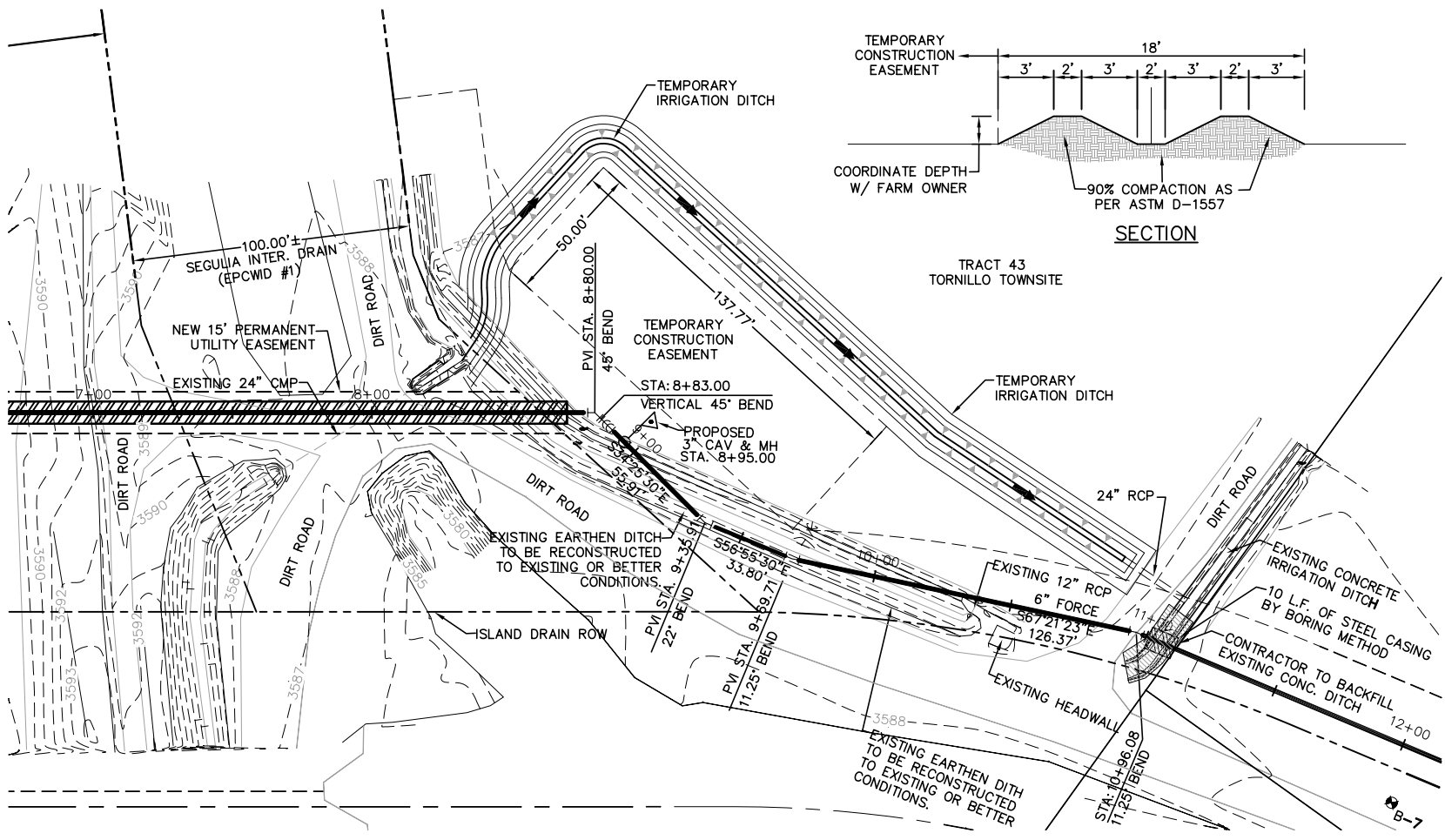
MATCHLINE @ STA. 52+50.00 SEE THIS SHEET



NOTE:
1. ALL FORCE MAIN BENDS SHALL BE EITHER MECHANICALLY RESTRAINED WITH "MEGA-LUGS" OR USING THRUST BLOCK.



ATTACHMENT F




TRACT 43
TORNILLO TOWNSITE



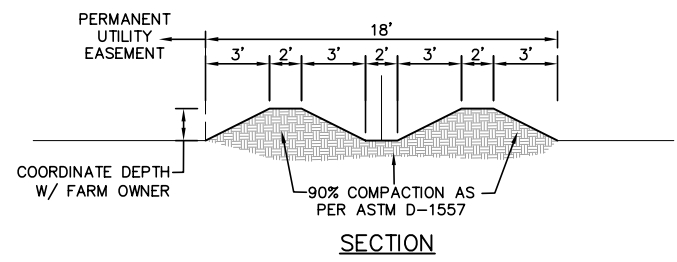
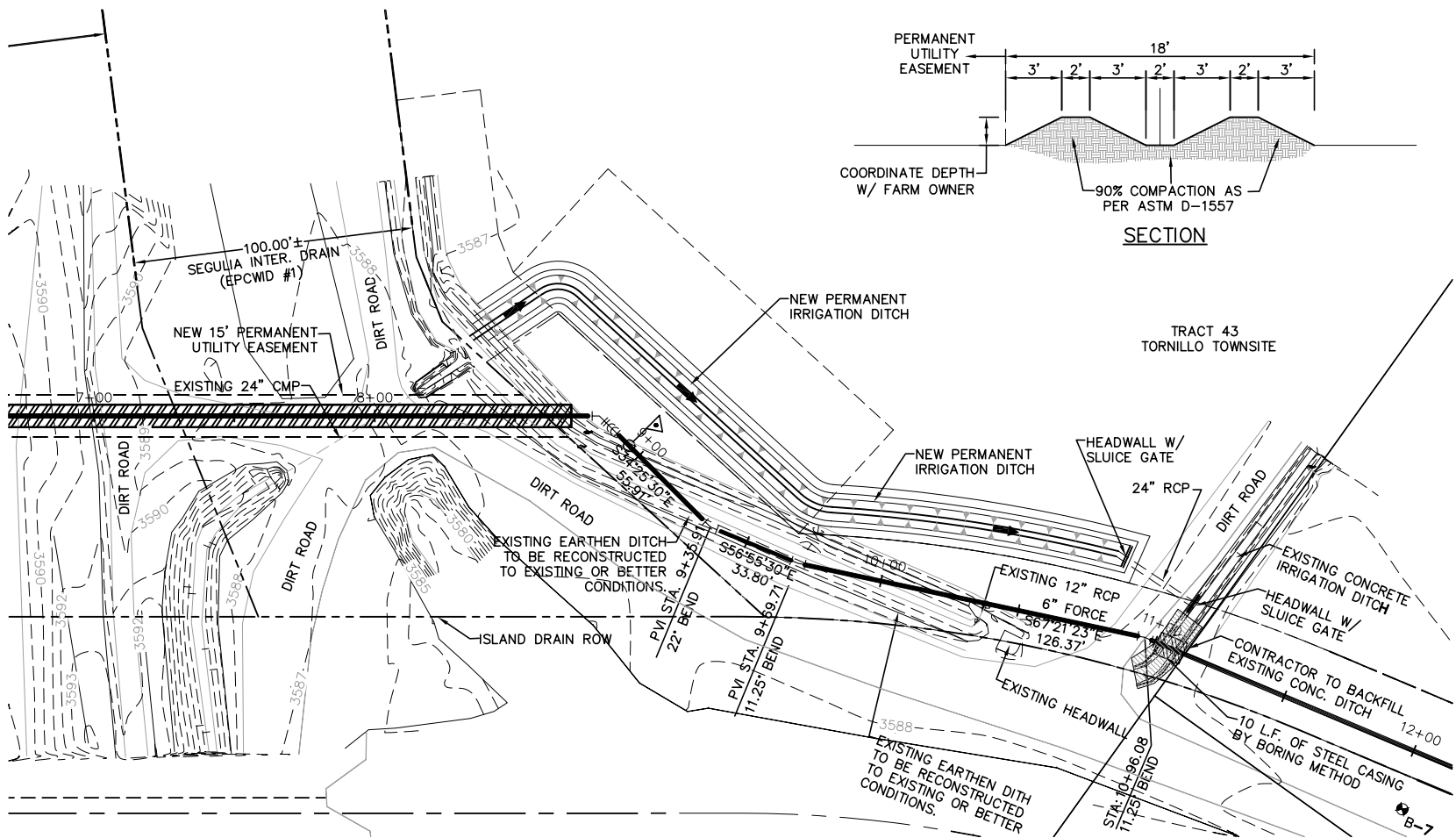
**TEMPORARY EARTHEN IRRIGATION DITCH PLAN
DURING CONSTRUCTION**

NOTE:

1. EXISTING IRRIGATION PIPES WITH GATES TO BE RELOCATED AND INSTALLED IN COORDINATION WITH FARMER.

<p>ADDENDUM NO#1</p>
<p>TORNILLO - GUADALUPE PORT-OF-ENTRY PROJECT ZONE SEWER FACILITY</p>
 <p>cea group</p> <p>engineers • architects • planners TEXAS REGISTERED ENGINEERING FIRM F-4564</p>

ATTACHMENT G



NOTE:

1. CONTRACTOR TO REPLACE DIRT ROAD TO ORIGINAL OR BETTER CONDITIONS.
2. EXISTING IRRIGATION PIPES WITH GATES TO BE RELOCATED AND INSTALLED IN COORDINATION WITH FARMER.



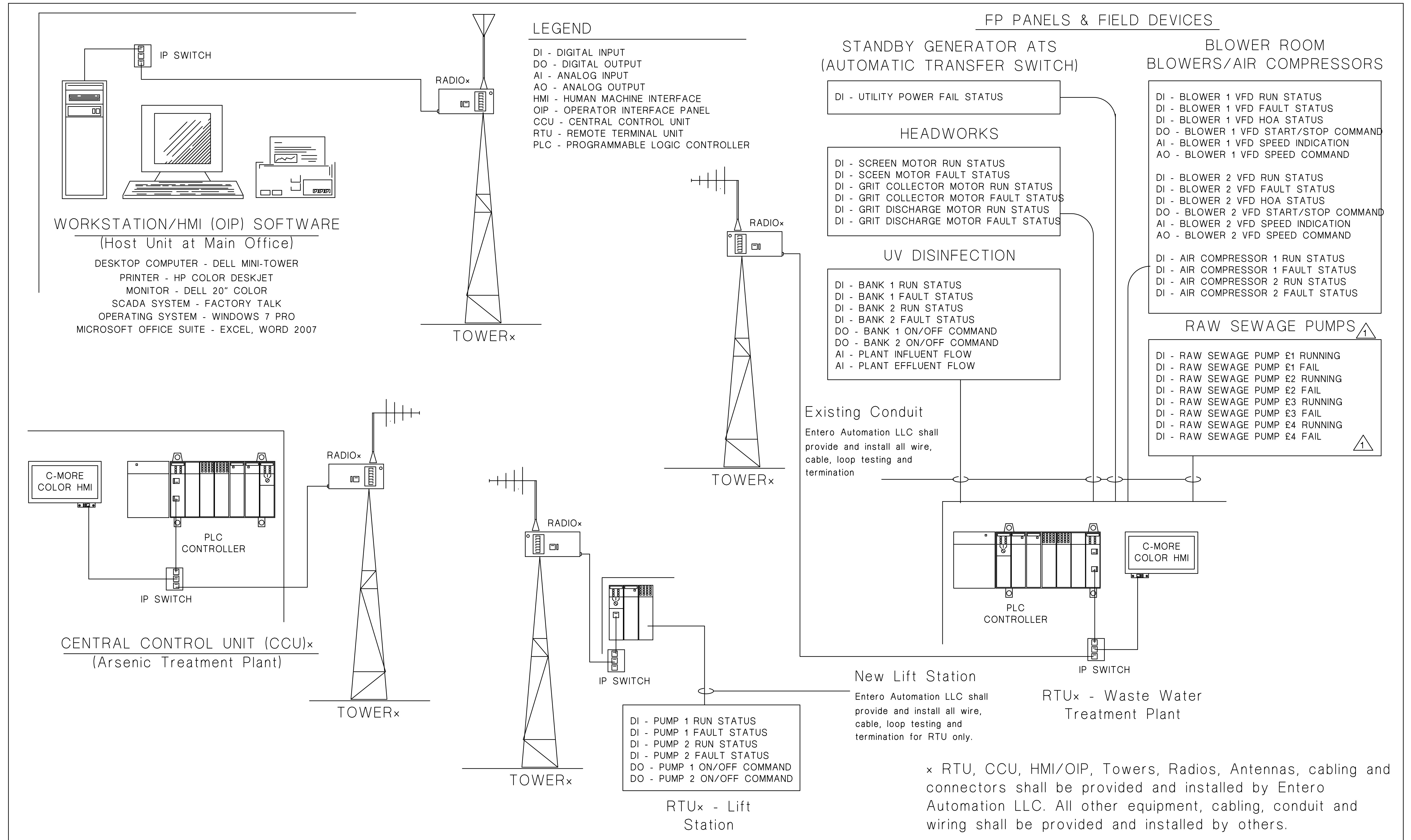
**NEW EARTHEN IRRIGATION DITCH PLAN
 AFTER CONSTRUCTION**

ADDENDUM NO#1

**TORNILLO - GUADALUPE
 PORT-OF-ENTRY PROJECT ZONE
 SEWER FACILITY**

cea
 group
 engineers • architects • planners
 TEXAS REGISTERED ENGINEERING FIRM F-4564

ATTACHMENT H



× RTU, CCU, HMI/OIP, Towers, Radios, Antennas, cabling and connectors shall be provided and installed by Entero Automation LLC. All other equipment, cabling, conduit and wiring shall be provided and installed by others.

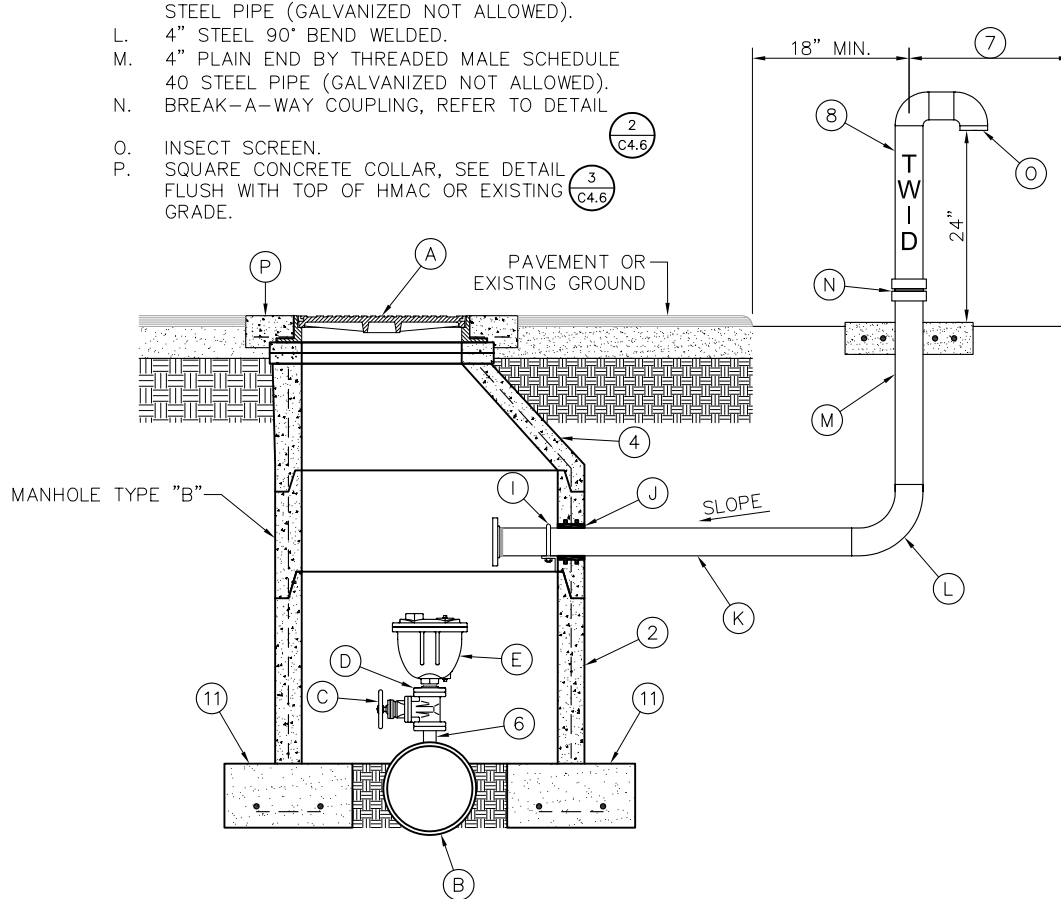
Status	Date	Rev	By	Description	Date	Customer: El Paso County Tornillo Water Improvement District	Loop No:	Proj: TORNILLO WASTE WATER TREATMENT PLANT SCADA/NETWORK SYSTEM	Scale: NTS
Submittal	02/14/12	1	jp	Add Raw Sewage Pump Inputs	03/12/12	Customer Job No.:	Loop No:	Title: RF NETWORK COMMUNICATIONS BLOCK DIAGRAM	Proj No: ENT10701
Approved						Dwn by: YHanson	Chk'd By: JPadilla	Appr'd By:	Sheet: WW01
Construction		2							DwgNo: ENT10701 WW01
As Built		3							

LIFT STATION NO. 3 ONLY

ATTACHMENT I

KEYED NOTES:

- A. REFER TO DETAILS 3
C4.5 6
C4.5.
- B. MAINLINE, SIZE AS SPECIFIED.
- C. 3" FLANGED GATE VALVE (ISOLATION VALVE).
- D. 3" CAST IRON COMPANION FLANGE.
- E. 3-INCH VENT-O-MAT AIR 080-RGX-1031 (NO SUBSTITUTES WILL BE ALLOWED)
- F. (NOT USED)
- G. (NOT USED)
- H. (NOT USED)
- I. ANCHOR PIPING TO VALVE VAULT WITH 3"x3"x1/4" ANGLE & 3/8"Ø STRAP.
- J. PIPE WALL SLEEVE (LINK SEAL OR EQUAL).
- K. 4" FLANGED BY PLAIN END SCHEDULE 40 STEEL PIPE (GALVANIZED NOT ALLOWED).
- L. 4" STEEL 90° BEND WELDED.
- M. 4" PLAIN END BY THREADED MALE SCHEDULE 40 STEEL PIPE (GALVANIZED NOT ALLOWED).
- N. BREAK-A-WAY COUPLING, REFER TO DETAIL 2
C4.6
- O. INSECT SCREEN.
- P. SQUARE CONCRETE COLLAR, SEE DETAIL 3
C4.6 FLUSH WITH TOP OF HMAC OR EXISTING GRADE.



NOTES:

1. INSTALLATION SHALL GENERALLY BE FOR A MAIN-LINE 16" AND SMALLER (3" COMBINATION AIR VALVE SHOWN). INSTALLATION OF OTHER SIZED VALVES IS SIMILAR.
2. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" @ OPENINGS OR KNOCKOUTS, OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
3. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
4. ECCENTRIC CONE SECTION REINFORCEMENT IN ACCORDANCE WITH ASTM C-478.
5. VALVE AND PIPE SIZES AS SPECIFIED.
6. WHERE TOP OUTLET FITTING IS NOT PROVIDED BY MANUFACTURER, PROVIDE TAPPING SLEEVE (DRY TAP MAIN LINE) WITH VERTICAL FLANGE TO SIZE OF AIR VALVE.
7. WHEN INSTALLATION IS WITHIN EPC R.O.W., VENT PIPE SHALL BE LOCATED 6" FROM EPC R.O.W. VENT PIPE SHALL NOT BE PLACED IN SIDEWALK AREA.
8. AIR VENT PIPING (SIZE AS REQUIRED PER COMBINATION AIR VALVE) TO BE SCHEDULE 40 WELDED STEEL WITH FORGED STEEL WELD FITTINGS. BURIED VENT PIPING SHALL HAVE 2 COATS OF EPOXY POLYAMIDE COATING. ABOVE GROUND PIPING TO BE PRIMED AND PAINTED BLUE WITH A SEMI-GLOSS ENAMEL AND LABELED "LVWD" WITH 3-INCH HIGH WHITE LETTERS.
9. AIR VENT PIPING SHALL BE LOCATED CLEAR OF PAVED ROADWAY.
10. PRE-CAST MANHOLE SHALL NOT REST ON PIPE.
11. 12"x24" FOOTING WITH No.5 REBAR AT 12" ON CENTER EACH WAY IS REQUIRED.

1R
C4.6 COMBINATION AIR RELEASE VALVE INSTALLATION DETAILS
SCALE: N.T.S.

ADDENDUM NO#1

TORNILLO - GUADALUPE
PORT-OF-ENTRY PROJECT ZONE
SEWER FACILITY

