



THE COUNTY OF GALVESTON

RUFUS G. CROWDER, CPPO, CPPB
PURCHASING AGENT

GWEN MCLAREN, CPPB
ASST. PURCHASING AGENT

COUNTY COURTHOUSE
722 Moody (21st Street)
Fifth (5th) Floor
GALVESTON, TEXAS 77550

November 14, 2019

PROJECT NAME: Bacliff Villas Drainage Restoration

SOLICITATION NO: B201010

RE: ADDENDUM #1

To All Prospective Bidders:

The following information is being provided to aid in preparation of your proposal submittal(s):

Question #1: *Is a sign-in sheet available from the pre-bid meeting that was held on November 5th at 10:00 a.m.?*

Response: The pre-bid meeting sign-in sheet is attached with this addendum.

Question #2: *If open cut construction is utilized, there will be a lot of extra work required including clearing, fence removal and replacement, temporary fencing, and restoration of the easement. How will this additional work be paid?*

Response: A separate pay item for each intersection and specification will be added in this addendum to compensate for removing and reinstalling any objects needed for open cutting the storm sewer. See attached Bid Proposal and Specification 02201 – SITE PREPARATION, GRADING, RESTORATION AND CLEAN UP.

Question #3: *Will there be a laydown/staging area for this project?*

Response: Yes, the laydown/staging area will be located at 1142 Bacliff Dr., Bacliff, TX 77518.

Question #4: *When installing the B-B inlet, how will the B-B inlet transition to existing conditions?*

Response: The top of the B-B inlet shall be at the same elevation as the adjacent top of curb. The contractor will transition at a constant slope behind the B-B inlet to existing grade.

Question #5: *If open cutting is needed between the houses, how will the contractor be compensated for removing and reinstalling the fences, sheds, Ac units, etc.?*

Response: See response to Question 2

Question #6: *Are off-duty uniformed police officers required?*

Response: No; however, flaggers will be required to be certified by one of the providers shown on the attached pdf (TxDOT Special Provisions to Item 7, paragraph 2.6.5.1.2) or an approved equal. Also, see Note 5 on revised sheet 02 of 19 attached in this addendum.

Question #7: *What pipe material will be required for the Additive Alternate No., 1, Item No. 1 (open cutting between residents)?*

Response: 20" CCFRPM Pipe will be required for the Additive Alternate No. 1, Item No. 1 (open cutting between residents).

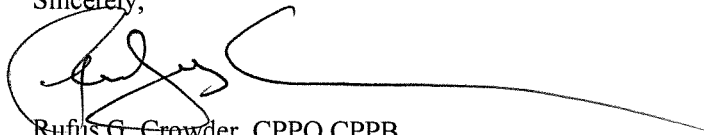
As a reminder, all questions regarding this proposal must be submitted in writing to:

Rufus G. Crowder, CPPO CPPB
Galveston County Purchasing Agent
722 Moody, Fifth (5th) Floor
Galveston, Texas 77550
E-mail: purchasing.bids@co.galveston.tx.us

If you have any further questions regarding this proposal, please address them to Rufus Crowder, CPPO CPPB, Purchasing Agent, via e-mail at purchasing.bids@co.galveston.tx.us, or contact the Purchasing Department at (409) 770-5371.

Please excuse us for any inconvenience that this may have caused.

Sincerely,


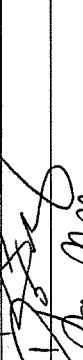

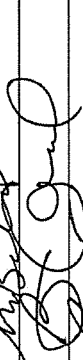


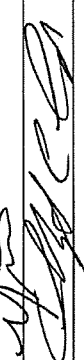



A handwritten signature in black ink, appearing to read 'Rufus', with a long horizontal flourish extending to the right.

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
Galveston County

Bid #B201010
 DATE: 11/05/2019
 TIME: 10:00 A.M.

PRE-BID CONFERENCE
 BACLIFF VILLAS DRAINAGE RESTORATION
 GALVESTON COUNTY, TEXAS

Pre-bid Conference for Bid #B201010 will be held on Tuesday, November 5, 2019 at Galveston County Courthouse, Purchasing Department, 722 Moody, 5th Floor, Galveston, TX

PRINTED NAME	SIGNATURE	COMPANY NAME	E-MAIL ADDRESS	PHONE
Rufus Crowder		Galveston County	rufus.crowder@co.galveston.tx.us	409.770.5372
David Mital		Huitt-Zeckards	DIMITEL@HUITT-ZECKARDS.COM	281-496-0066
Joe Myers		Huitt-Zeckards	myers@Huitt.Zeckards.COM	281-496-0066 x10585
Chris Beanland		GB Road & Bridge	Christopher.Beanland@co.galveston.tx.us	409-682-3985
Brian Conrad		Conrad Const.	brianwconrad@hotmail.com	713-937-3081
Kirk Eager		HOBAS PIPE	Kerger@hobaspipe.com	727-457-6888
MICHAEL SHANNON		GALVESTON COUNTY	Michael.Shannon@co.galveston.tx.us	409 770 5453
Jacob Stagner		Lucas Construction	Jstagner55@gmail.com	832-877-0915
Chris Ochs		KR Allen Const.	cc-ochs73@AOL.com	(601) 995-1783
Larry Allen		K R Allen Const	Larry@krallen.net	281 950-0678

BID PROPOSAL

ADDENDUM # 1

BACLIFF VILLAS DRAINAGE RESTORATION

BASE BID

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE IN WORDS	UNIT PRICE	TOTAL PRICE
1	500	MOBILIZATION & DEMOBILIZATION	LS	1	_____		
					DOLLARS AND _____ CENTS		
2	530	DRIVEWAYS (CONCRETE), 6" DEPTH (COMPLETE IN PLACE)	SY	69	_____		
					DOLLARS AND _____ CENTS		
3	104	REMOVE CONCRETE (DRIVEWAYS), ALL DEPTHS	SY	69	_____		
					DOLLARS AND _____ CENTS		
4	104	REMOVE CONCRETE (PAVEMENT) INCLUDING CURBS AND GUTTERS, ALL DEPTHS	SY	500	_____		
					DOLLARS AND _____ CENTS		
5	N/A	MANDREL	EA	7	_____		
					DOLLARS AND _____ CENTS		
6	027260	20" CCFRPM PIPE (SLIPLINING) (COMPLETE IN PLACE)	LF	837	_____		
					DOLLARS AND _____ CENTS		
7	496	REMOVE STRUCTURE (PIPE), ALL SIZES	LF	529	_____		
					DOLLARS AND _____ CENTS		
8	496	REMOVE STRUCTURE (INLET)	EA	21.00	_____		
					DOLLARS AND _____ CENTS		
9	464	REINFORCED CONCRETE PIPE (ARCHED)(CLASS IV)(DESIGN 1) (13" X 22") (COMPLETE IN PLACE)	LF	173	_____		
					DOLLARS AND _____ CENTS		
10	464	REINFORCED CONCRETE PIPE (ARCHED)(CLASS IV)(DESIGN 3) (18" X 29")(COMPLETE IN PLACE)	LF	248	_____		
					DOLLARS AND _____ CENTS		
11	026310	HDPE PIPE, 24" (COMPLETE & IN PLACE)	LF	108	_____		
					DOLLARS AND _____ CENTS		
12	465	BB INLET (COMPLETE IN PLACE)	EA	21	_____		
					DOLLARS AND _____ CENTS		
13	496	REMOVE STRUCTURE (MANHOLE)	EA	7	_____		
					DOLLARS AND _____ CENTS		
14	465	MANHOLE (TYPE C) (PRE-CAST) (COMPLETE IN PLACE)	EA	7	_____		
					DOLLARS AND _____ CENTS		
15	465	MANHOLE(TYPE C)(CAST IN PLACE) (COMPLETE IN PLACE)	EA	1	_____		
					DOLLARS AND _____ CENTS		
16	530	INTERSECTION, DRIVEWAYS, & TURNOUT(CONCRETE) INCLUDING CURBS & GUTTERS, 6 INCH DEPTH	SY	500	_____		
					DOLLARS AND _____ CENTS		
17	502	TRAFFIC CONTROL TO INCLUDE BARRICADES, SIGNS & FLAGPERSONS	LS	1	_____		
					DOLLARS AND _____ CENTS		
TOTAL BASE BID							

ADDITIVE ALTERNATE NO. 1

ITEM NO.	SPEC. NO.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE IN WORDS	UNIT PRICE	TOTAL PRICE
1	026310	CCFRPM PIPE, 24"OPEN CUT BETWEEN RESIDENTS WITH PROTECTION OF FOUNDATIONS (COMPLETE & IN PLACE)	LF	837	_____ DOLLARS AND _____ CENTS		
2	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF BIG REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
3	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF MOODY REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
4	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF CARANCHUA REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
5	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF DOLLARS REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
6	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF REDFISH REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
7	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF HANNAS REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
8	02201	REMOVING & REINSTALLING ANY OBJECTS NEEDED FOR OPEN CUTTING BETWEEN RESIDENTS AT THE INTERSECTION OF SCOTT REEF DR	EA	1	_____ DOLLARS AND _____ CENTS		
TOTAL ADDITIVE ALTERNATE NO. 1							

**BID PROPOSAL
BACLIFF VILLAS DRAINAGE RESTORATION**

BID SUMMARY

TOTAL - BASE BID: _____

TOTAL BASE BID PLUS ALTERNATE NO. 1: _____

This Proposal consists of a Base Bid, and an additive alternate. For a bid to be considered responsive all sections must be completed. A combination of Base Bid with or without the Additive Alternate may be awarded for contract, however in no case will the additive alternate only be awarded. The award of the contract will be based on the combination considered to be in the best interest of Galveston County.

SECTION 02201

SITE PREPARATION, GRADING, RESTORATION AND CLEAN UP

PART 1 - GENERAL

1.1 SECTION INCLUDES

This Section covers the clearing, grubbing, grading, final clean-up, fence removal and replacement, air conditioner unit removal and replacement, sheds removal and replacement, temporary fencing and restoration of the site in preparation for hydro mulch or sodding, and move out.

1.2 MEASUREMENT AND PAYMENT

This item will be measured by each as stated on the bid form.

1.3 REFERENCES

- A. Federal Seed Act Regulations (Department of Agriculture)

1.4 SUBMITTALS

- A. Submit product data in accordance with Section 01330 - Submittal Procedures.
- B. Submit seed to engineer for approval. Submit certification from supplier that each type of seed conforms to these specifications and the requirements of the Texas Seed Law. Certification shall accompany seed delivery.
- C. Submit a certificate stating that fertilizer complies with these specifications and the requirements of the Texas Fertilizer Law.

1.5 SEQUENCE OF WORK

- A. Restoration of each site shall be completed immediately after all work is completed and the storm sewer pipe is returned to service.
- B. After obtaining approval from the County Engineer of satisfactory site restoration, Contractor shall hydro mulch all areas disturbed during construction. The hydro mulch seeding requirements, together with other necessary related work, shall conform to the requirements of this Section.
- C. All fences, walks, driveways or other permanent facilities are to be completed in place before the finished hydro mulch is applied.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All seed must meet the requirements of U.S. Department of Agriculture Rules and Regulations as set forth in Federal Seed Act and Texas Seed Law. Type of seed, purity and germination requirements, date of application and planting dates are as follows:

Type	Application Rate	
	Pounds Per Acre	Planting Date
Hulled Common Bermuda Grass 98/88	40	January 1 to April 15
Unhulled Common Bermuda Grass 98/88	40	
Annual Rye Grass (Gulf)	50	
Hulled Common Bermuda 98/88	40	April 15 to Grass October 1
Unhulled Common Bermuda Grass 98/88	40	
Annual Rye Grass	40	

- B. Fertilizer:

Fertilizer shall be water soluble with analysis of 10% nitrogen, 20% phosphoric acid and 10% potash. Rate of application shall be 750 pounds per acre except during the period of April 15 through September 1, when the rate shall be reduced to 600 pounds per acre.

- C. Mulch:

Mulch shall be virgin wood cellulose fiber made from whole wood chips.

Within the fiber material at least 20% of the fibers will be 10.7 mm in length and 0.27 mm in diameter. Rate of application shall be 2000 pounds per acre. Soil stabilizers such as Terra type III, (or approved equal) shall be applied at a rate of 40 pounds per acre in the flatter portions of the disturbed areas.

PART 3 - EXECUTION

3.1 DESCRIPTION

- A. The work covered by this Section consists of furnishing all labor, materials, equipment, supplies, supervision, tools, fence removal and replacement, air conditioner unit removal and replacement, sheds removal and replacement, temporary fencing, and performing all work necessary for clearing and protection of facilities during construction and top soiling, finish grading, seeding, fertilizing, watering, maintenance, and clean-up of disturbed areas within the individual water plant areas at the completion of work, in accordance with these specifications and as shown on drawings.
- B. Fences shall be installed in the original location as shown on the plans. All damage to existing fencing occurring during construction activities shall be repaired or replaced at the Contractor's expense to a condition equal to or better than existing prior to such damage. Fencing relocated for the convenience of accommodating construction activities shall be returned to its original location at the completion of the work.
- C. Silt fencing and four (4) foot safety fencing is to be installed as indicated on the plans.
- D. All sites shall be restored to a condition equal to or better than that existing prior to construction activities. All holes and open excavations shall be filled and compacted to the density of the surrounding area. Level all washes, ruts, depressions, and mounds to provide a smooth finish with no large debris, dirt clods, or lumps of size that would interfere with the operation of a standard rotary lawnmower.

3.2 MAINTENANCE

The hydro mulch seeding shall be adequately watered until established . Any areas damaged by erosion or areas that do not have acceptable turfing shall be reapplied to the satisfaction of the Engineer.

END OF SECTION

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 7.2.6.5, "Training," is supplemented by the following:

Coordinate enrollment, pay associated fees, and successfully complete Department-approved Training or Contractor-developed Training. Training is valid for the period prescribed by the provider. If no training period is prescribed by the provider, then training is valid for 3 yrs. from the date of completion. The Engineer may require training at a frequency in lieu of the period prescribed based on the Department's needs. Training and associated fees will not be measured or paid for directly but are considered subsidiary to pertinent Items.

2.6.5.1. Department-approved Training. Department-approved training is listed below. For Section 7.2.6.5.1.4., "Other Work Zone Personnel", the Contractor may use Contractor-developed Training in lieu of Department-approved Training.

2.6.5.1.1 Contractor Responsible Person and Alternate.

Provider	Course Title
American Traffic Safety Services Association	Traffic Control Supervisor
National Highway Institute ¹	Design and Operation of Work Zone Traffic Control, Work Zone Traffic Control for Maintenance Operations
Texas Engineering Extension Service	Work Zone Traffic Control for CRPs
University of Texas Arlington, Division for Enterprise Development	Traffic Control Supervisor

1. Both classes are required in order to equal the level of training taught in a single class by other providers.

2.6.5.1.2. Flagger Instructor Training.

Provider	Course Title
American Traffic Safety Services Association	Flagging Instructor Training
Texas Engineering Extension Service	Train-the-Trainer Flaggers
National Safety Council	Flagger Instructor Training
University of Texas at Arlington, Division for Enterprise Development	Certified Instructor: Qualified Flagger Training

Flagger Training.

Provider	Course Title
Texas Engineering Extension Service	Flaggers in the Work Zone
National Safety Council	Work Zone Flagger (Flagger Novice)
University of Texas Arlington, Division for Enterprise Development	Flaggers in Work Zones
University of Texas at Arlington, Division for Enterprise Development	Work Zone Traffic Control & Qualified Flagger
Associated Builders and Contractors, Austin Chapter	Flagger Training

2.6.5.1.3. Law Enforcement Personnel.

Provider	Course Title
National Highway Institute	Safe and Effective Use of Law Enforcement Personnel in Work Zones

2.6.5.1.4. Other Work Zone Personnel.

Provider	Course Title
American Traffic Safety Services Association	Traffic Control Technician
Texas Engineering Extension Service	Work Zone Traffic Control
National Highway Institute	Maintenance of Traffic for Technicians
National Highway Institute	Maintenance Training Series: Basics of Work Zone Traffic Control
University of Texas at Arlington, Division for Enterprise Development	Temporary Traffic Control

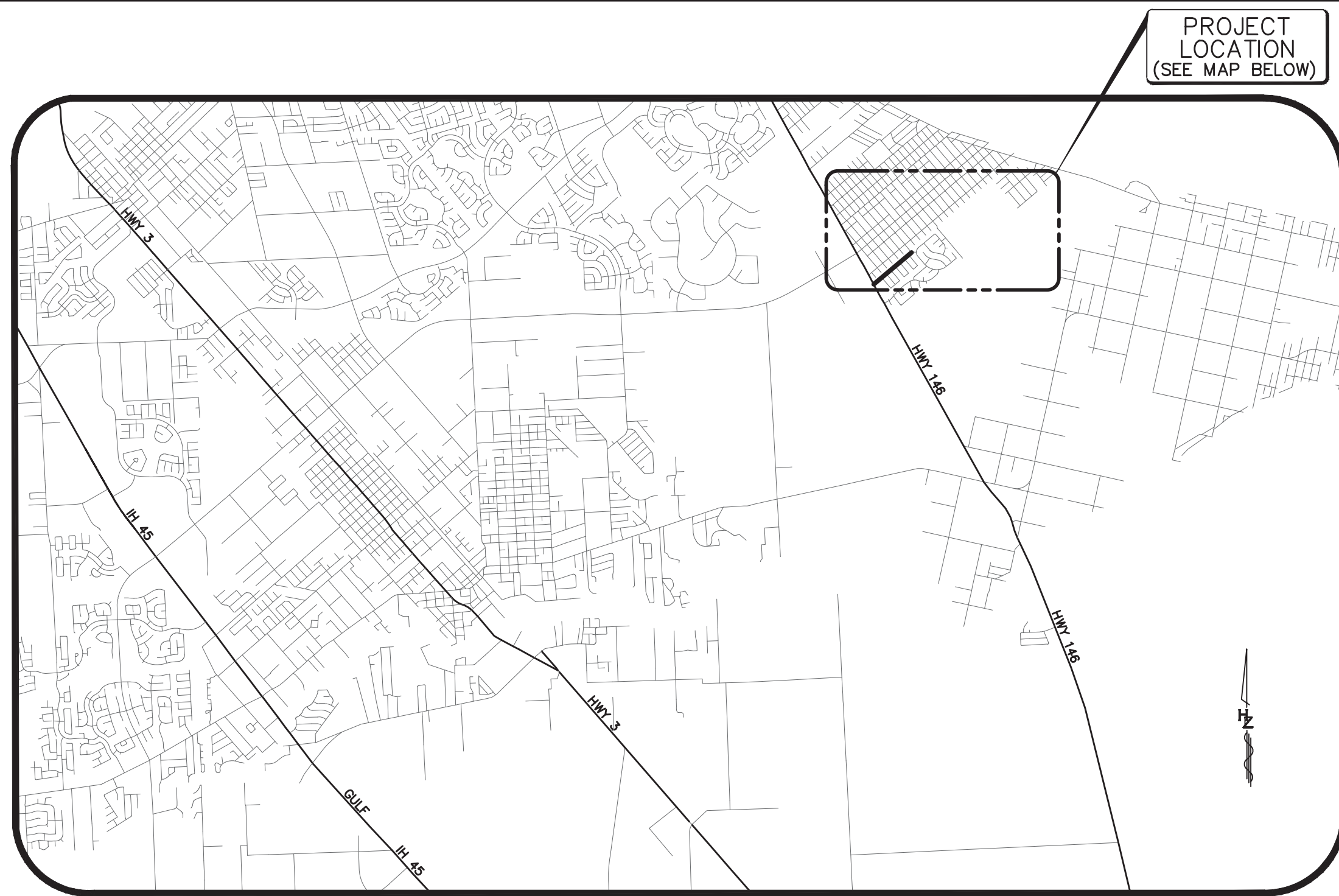
2.6.5.2. Contractor-developed Training. Develop and deliver Contractor-developed Training meeting the minimum requirements established by the Department. The outline for this training must be submitted to the Engineer for approval at the preconstruction meeting. The CRP or designated alternate may deliver the training in lieu of the Department-approved training. The work performed and materials furnished to develop and deliver the training will not be measured or paid for directly but will be considered subsidiary to pertinent items.

2.6.5.2.1 Flagger Training Minimum Requirements. A Contractor's certified flagging instructor is permitted to train other flaggers.

2.6.5.2.2 Other Work Zone Personnel Minimum Requirements. Contractor-developed Training must provide information on the use of personnel protection equipment, occupational hazards and health risks, and other pertinent topics related to traffic management. The type and amount of training will depend on the job duties and responsibilities. Develop training applicable to the work being performed. Develop training to include the following topics:

- The Life You Save May Be Your Own (or other similar company safety motto)
- Purpose of the Training
 - It's The Law

- To make work zones safer for workers and motorist
- To understand what is needed for traffic control
- To save lives including your own
- Personal and Co-Worker Safety
 - High Visibility Safety Apparel: Discuss compliant requirements; Inspect regularly for fading and reduced reflective properties; If night operations are required, discuss the additional and appropriate required apparel in addition to special night work risks; If moving operations are underway, discuss appropriate safety measures specific to the situation and traffic control plan.
 - Blind Areas: A blind area is the area around a vehicle or piece of construction equipment not visible to the operators, either by line of sight or indirectly by mirrors. Discuss the "Circle of Safety" around equipment and vehicles; Use of spotters; Maintain eye contact with equipment operators; Use of hand signals.
 - Runovers and Backovers: Remain alert at all times; Keep a safe distance from traffic; Avoid turning your back to traffic and if you must then use a spotter; Stay behind protective barriers, whenever possible. Note: It is not safe to sit on or lean against a concrete barrier, these barriers can deflect 4+ feet when struck by a vehicle.
 - Look out for each other, warn co-workers
 - Be courteous to motorists
 - Do not run across active roadways
 - Workers must obey traffic laws and drive courteously while operating vehicles in the work zones.
 - Workers must be made aware of company distracted driving policies
- Night Time Operations: Focus should be placed on projects with a nighttime element.
- Traffic Control Training: Basics of Traffic Control.
 - Identify Work Zone Traffic Control Supervisor and other appropriate persons to report issues to when they arise.
 - Work Zone Traffic Control Devices must be in clean and in undamaged condition. If devices have been hit but not damaged, put back in their correct place and report to traffic control supervisor. If devices have been damaged, replace with new one and report to traffic control supervisor. If devices are dirty, faded or have missing or damaged reflective tape clean or replace and report to traffic control supervisor. Show examples of non-acceptable device conditions. Discussion on various types of traffic control devices to be used and where spacing requirements can be found.
 - Channelizing Devices and Barricades with slanted stripes: Stripes are to slant in the direction you want traffic to stay or move to; Demonstrate this with a device.
 - Traffic Queuing: Workers must be made aware of traffic queuing and the dangers created by it. Workers must be instructed to immediately notify the traffic control supervisor and other supervisory personnel if traffic is queuing beyond advance warning sign and devices or construction limits.
 - Signs: Signs must be straight and not leaning. Report problems to the traffic control supervisor or other as designated for immediate repair. Covered signs must be fully covered. If covers are damaged or out of place, report to traffic control supervisor or other as designated.



VICINITY MAP
SCALE: 1" = 5,000'



PROJECT LOCATION
SCALE: 1" = 1,000'
KEY MAP # 661 N

BACLIFF VILLAS SUBDIVISION DRAINAGE RESTORATION BACLIFF, TEXAS

DRAWING INDEX

#	TITLE
01	COVER
02	GENERAL NOTES
03	CONSTRUCTION NOTES
04	OVERALL SITE PLAN
05	SURVEY & CONTROL 01 OF 04
06	SURVEY & CONTROL 02 OF 04
07	SURVEY & CONTROL 03 OF 04
08	SURVEY & CONTROL 04 OF 04
09	PLAN & PROFILE 01 OF 07
10	PLAN & PROFILE 02 OF 07
11	PLAN & PROFILE 03 OF 07
12	PLAN & PROFILE 04 OF 07
13	PLAN & PROFILE 05 OF 07
14	PLAN & PROFILE 06 OF 07
15	PLAN & PROFILE 07 OF 07
16	STANDARD DETAILS 01 OF 03
17	STANDARD DETAILS 02 OF 03
18	STANDARD DETAILS 03 OF 03
19	TRAFFIC CONTROL PLAN

GALVESTON COUNTY
COMMISSIONER COURT



COUNTY JUDGE
PRECINCT #1
PRECINCT #2
PRECINCT #3
PRECINCT #4

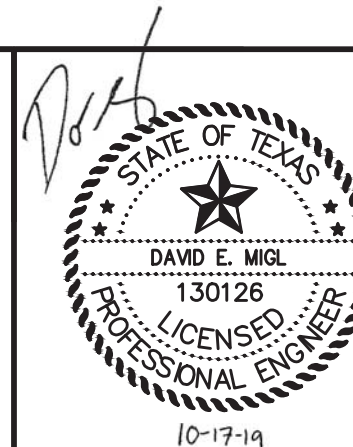
HONORABLE MARK A. HENRY
HONORABLE DARRELL APFFEL
HONORABLE JOE GIUSTI
HONORABLE STEPHEN D. HOLMES
HONORABLE KEN CLARK

4/9/2019
HZI JOB NO. R308005.01

Note: A PRE-CONSTRUCTION MEETING WITH GALVESTON COUNTY ENGINEERING DEPARTMENT IS REQUIRED AT LEAST 10 WORKING DAYS PRIOR TO ON SITE CONSTRUCTION ACTIVITIES. CALL (409) 770-5554 FOR A MEETING DATE AND TIME.

HUITT-ZOLLARS

Huitt-Zollars, Inc.
TBP REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220



GENERAL NOTES AND SPECIFICATION DATA

GENERAL

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS, VISIT THE SITE OF THIS WORK, AND CHECK THE PROPOSED LOCATIONS OF ALL NEW WORK. THE CONTRACTOR SHALL INFORM HIMSELF, IN DETAILS OF ALL EXISTING CONDITIONS, LIMITATIONS, AVAILABLE CLEARANCES, AND SHALL THOROUGHLY CHECK ALL FACILITIES WHICH ARE TO BE REMOVED AND/OR RELOCATED.

WHERE A MATERIAL OR PRODUCT IS REFERRED TO ON THE DRAWINGS BY A MANUFACTURER'S BRAND OR TRADE NAME, IT IS FOR THE PURPOSE OF ESTABLISHING A STANDARD OR QUALITY. SIMILAR MATERIALS OR PRODUCTS OF EQUAL QUALITY (MEETING DESIGN REQUIREMENTS) FROM OTHER MANUFACTURER'S WILL BE GIVEN DUE CONSIDERATION PROVIDED THEY ARE SUBMITTED TO AND APPROVED BY THE ENGINEER AS PER THE PROVISIONS OF THE GENERAL CONDITIONS.

THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE COUNTY'S OR THE MUD'S FACILITIES CAUSED BY HIS OPERATIONS AT THE CONTRACTOR'S EXPENSE AND SHALL RESTORE FACILITIES TO SERVICE IN A TIMELY MANNER. EMERGENCY AFTER-HOURS CONTACT NUMBERS IN CASE OF CONFLICT OR DAMAGE TO FACILITIES:
MUD: 281-339-1634
NANCY BAHER (GALVESTON COUNTY): 409-770-5556

THE DRAWINGS AND SPECIFICATIONS ARE CORRELATIVE AND HAVE EQUAL AUTHORITY AND PRIORITY. SHOULD THEY DISAGREE IN THEMSELVES, OR WITH EACH OTHER, BASE THE BIDS ON THE MOST EXPENSIVE COMBINATION OF QUALITY AND QUANTITY OF THE WORK INDICATED. THE ENGINEER WILL CLARIFY THE PROJECT REQUIREMENTS IN THE EVENT OF THE ABOVE MENTIONED DISAGREEMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND FURNISHING ALL PERMITS AND LICENSES, RAILWAY, CITY, COUNTY, STATE OR FEDERAL AS ARE REQUIRED FOR THE PERFORMANCE OF THIS CONTRACT.

ALL ITEMS OF WORK REQUIRED UNDER THIS CONTRACT NOT SPECIFICALLY CALLED FOR IN THE PROPOSAL AS PAY ITEMS SHALL BE CONSIDERED INCIDENTAL AND NO SEPARATE PAYMENT SHALL BE MADE FOR SAME.

MIXING OF MATERIALS, STORING OF MATERIALS, STORING OF EQUIPMENT OR REPAIRING OF EQUIPMENT ON TOP OF PAVEMENT OR BRIDGE DECKS WILL NOT BE PERMITTED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. PERMISSION WILL BE GRANTED TO STORE MATERIALS ON SUBJECT SURFACES IF NO DAMAGE OR DISCOLORATION WILL RESULT.

ALL REMOVED, DEMOLISHED, OBLITERATED, EXCESS AND WASTE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE. HANDLING, HAULING AND DISPOSAL SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS AND NO SEPARATE PAYMENT SHALL BE MADE FOR SAME.

TXDOT

ITEM 502: BARRICADES, SIGNS, AND TRAFFIC HANDLING

FOR DETAILS OF SIGNS, BARRICADES AND PLACEMENT OF SUCH SEE "BARRICADE AND CONSTRUCTION STANDARDS"..

FOR THIS PROJECT, THE CONTRACTOR WILL FURNISH AND MAINTAIN ALL BARRICADES AND WARNING SIGNS, INCLUDING TEMPORARY AND PORTABLE TRAFFIC CONTROL DEVICES NECESSARY DURING THE VARIOUS PHASES OF CONSTRUCTION. THESE BARRICADES AND WARNING SIGNS SHALL BE CONSTRUCTED AND PLACED IN ACCORDANCE WITH THE "BARRICADE AND CONSTRUCTION STANDARDS", LATEST TEXAS MUTCD AND TYPICAL CONSTRUCTION LAYOUTS, OR AS DIRECTED BY THE ENGINEER.

TWO WEEKS PRIOR TO ANY ALTERATION IN TRAFFIC PATTERNS, THE CONTRACTOR WILL PROVIDE THE ENGINEER, FOR HIS APPROVAL, A LAYOUT SHOWING ALL SIGNS, BARRICADES, STRIPING AND SIGNALIZATION. THE APPROVAL OF THIS LAYOUT BY THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR THE PROTECTION OF THE TRAVELING PUBLIC.

ALL ADVANCE WARNING SIGNS ARE TO BE SET PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND TO REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND ACCEPTED BY GALVESTON COUNTY. THE CONTRACTOR WILL COORDINATE WITH THE GALVESTON COUNTY ENGINEERING DEPARTMENT IN ESTABLISHING TRAFFIC ROUTES AND LOCATION OF SIGNS.

THE CONTRACTOR SHALL PROVIDE, INSTALL, MOVE, REPLACE AND MAINTAIN IN A CLEAN AND GOOD CONDITION ALL BARRICADES, SIGNS, BARRIERS, CONES, LIGHTS, SIGNALS, AND OTHER SUCH TYPE DEVICES AS MAY BE REQUIRED. UPON COMPLETION OF THE WORK, ALL BARRICADES, SIGNS, BARRIERS, ETC. AND EVIDENCE THEREOF SHALL BE REMOVED BY THE CONTRACTOR.

THE CONTRACTOR WILL NOT BLOCK TRAFFIC WITHOUT PRIOR APPROVAL OF THE ENGINEER.

ACCESS TO ALL BUSINESS AND PRIVATE PROPERTIES SHALL BE CONTINUOUSLY MAINTAINED EXCEPT FOR SHORT PERIODS DURING PAVING OPERATIONS AND AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AT LEAST 48 HOURS PRIOR TO PAVING DRIVEWAY FILLETS.

AT THE END OF THE WORKING DAY THE ROADWAYS SHALL BE OPENED TO TWO-WAY TRAFFIC WITH ADEQUATE PAVEMENT MARKINGS AND SIGNS.

MATERIALS FURNISHED AND WORK PERFORMED UNDER THESE PROVISIONS SHALL NOT BE MEASURED FOR PAYMENT BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.

LOOSE GRAVEL, UNEVEN PAVEMENT AND ROUGH PAVEMENT SIGNS SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE PROJECT ON A CONTINUOUS BASIS AS DIRECTED BY THE ENGINEER.

ALL EQUIPMENT SHALL BE OFF THE ROAD BY DARK AND BEFORE DAWN.

EXISTING DRAINAGE SHALL BE MAINTAINED AT ALL TIMES.

DURING CERTAIN PHASES OF CONSTRUCTION FLAGMEN WILL BE REQUIRED TO DIRECT AND CONTROL TRAFFIC. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS. FLAGGER CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING EXCESS DUST AND LOOSE ROCKS PRODUCED BY THE WORK. THE CONTRACTOR SHALL USE METHODS WHICH ARE REASONABLE AND PRACTICAL TO CONTROL THESE PROBLEMS. USE SIGNING FOR UNEVEN LANES WZ(UL)-03 DURING RESURFACING OPERATIONS FOR ELEVATION DIFFERENCES BETWEEN ADJACENT LANES OF GREATER THAN 1 IN.

TRAFFIC CONTROL NOTES

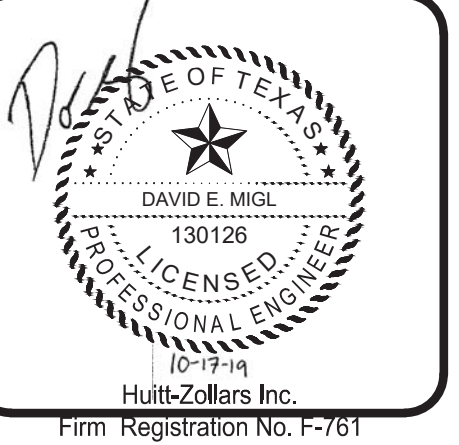
1. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD, MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION.
2. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING AND MAINTAINING PAVEMENT MARKINGS WHICH INCLUDE CENTERLINE, BARRIER LINES, LANE LINES AND RAISED PAVEMENT MARKINGS.
3. THIS TRAFFIC CONTROL PLAN REPRESENTS THE MINIMUM REQUIRED BY TRAFFIC CONDITIONS IN THE FIELD. CONTRACTOR TO MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES. 4A. NO LANES SHALL BE CLOSED FROM 7:00 A.M. TO 9:00 A.M. AND 4:00 P.M. TO 6:00 P.M. MONDAY THRU FRIDAY. 4B. NO LANES SHALL BE BLOCKED BETWEEN 7:00 A.M. TO 6:00 P.M. MONDAY THRU FRIDAY IN DOWNTOWN AREA. EXCEPTION TO THESE TIMES, IF NECESSARY, SHOULD BE SOUGHT DURING LANE CLOSURE PERMIT APPLICATION.
4. CONTRACTOR SHALL COVER OPEN PAVEMENT EXCAVATIONS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC FLOW.
5. OFF-DUTY UNIFORMED POLICE OFFICERS ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.
6. LANE CLOSURE TIME(S) SHALL BE SPECIFIED ON THE LANE CLOSURE PERMIT.
7. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF "TRAFFIC CONTROL PLANS" DURING THE CONSTRUCTION THAN WHAT IS OUTLINED IN THE CONTRACT DRAWINGS, THEY SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT AN ALTERNATE SET OF PLANS* TO PLAN REVIEW SECTION FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION. *THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLARS AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT DRAWINGS.
8. APPROVED COPIES OF TRAFFIC CONTROL PLANS AND LANE CLOSURE PERMITS SHALL BE AVAILABLE FOR INSPECTION AT JOB SITE AT ALL TIMES. CONTRACTOR MUST SECURE 'LANE CLOSURE PERMITS' FROM CITY'S TRAFFIC MANAGEMENT AND MAINTENANCE BRANCH BEFORE CLOSING A LANE/SIDEWALK. THE REQUEST MUST BE MADE AT LEAST THREE BUSINESS DAYS PRIOR TO THE DATE FOR WHICH THE CLOSURE IS SOUGHT. NOTE THAT WORKING HOURS MAY BE RESTRICTED OR THE REQUEST MAY BE DENIED. CALL 713-837-7280 FOR AN APPLICATION.
9. LANES SHALL BE KEPT CLOSED DURING PAVEMENT SURFACE RESTORATION AND OPENED ONLY AFTER PAVEMENT IS RESTORED COMPLETELY.

NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



GENERAL NOTES
 BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION



Huitt-Zollars Inc.
 Firm Registration No. F-761
 DATE: 05-29-2019
 SCALE: N/A (H)
 N/A (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 02 OF 19

CONSTRUCTION NOTES:

1. THE PROJECT PLANS ARE INTENDED AS A GUIDE. THE PROJECT LIMITS WILL BE DETERMINED IN THE FIELD BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION ACTIVITIES. DUE TO THE DYNAMIC CONDITIONS IN THE FIELD, PROJECT SCOPE AND QUANTITIES MAY VARY FROM THE PLANS AND/OR CROSS SECTIONS. GALVESTON COUNTY RESERVES THE RIGHT TO ADJUST PLANS AND QUANTITIES AS NECESSARY.
2. FENCES AND/OR OTHER ENCROACHMENTS IN THE GALVESTON COUNTY RIGHT-OF-WAY ARE NOT TO BE REMOVED UNLESS OTHERWISE STATED ON THE PLANS. ACCESS IS LIMITED TO THE AVAILABLE GALVESTON COUNTY RIGHT-OF-WAY UNLESS OTHERWISE STATED ON THE PLANS. ANY ADDITIONAL OR ALTERNATIVE ACCESS IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. DO NOT ENTER PRIVATE PROPERTY WITHOUT PROPER AUTHORITY FROM THE PROPERTY OWNER AND GALVESTON COUNTY.
4. CONTRACTOR SHALL PROTECT ALL TREES WITHIN PROJECT LIMITS.
5. LENGTHS, AND DIAMETERS REPRESENTED ON THE PLANS ARE APPROXIMATE. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD VERIFICATION PRIOR TO ORDERING MATERIAL.
6. ROW REPRESENTED ON THE PLANS ARE APPROXIMATE. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD VERIFICATION.
7. CONTRACTOR SHALL MAINTAIN STORM SEWER PIPES FREE OF DEBRIS AND EXTRANEOUS MATERIALS.
8. CONTRACTOR SHALL MAINTAIN STORM SEWER PIPE FLOW DURING HIGH FLOW BY ALLOWING FLOW THROUGH CONSTRUCTION AREA.
9. PAYMENT FOR CEMENT STABILIZED SAND FOR BEDDING PIPE IS INCIDENTAL TO THE RESPECTIVE PIPE SIZE BID ITEM.
10. DRIVEWAYS DESIGNATED TO BE REMOVED AND REPLACED SHALL MATCH EXISTING DRIVEWAYS' DIMENSIONS AND MATERIALS.
11. ANY MAIL BOXES REQUIRING REMOVAL SHALL BE RELOCATED SO THAT MAIL SERVICE IS NOT INTERRUPTED. TEMPORARY MAIL BOXES MEETING USPS REGULATIONS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR. AFTER CONSTRUCTION, MAILBOXES SHALL BE REINSTALLED BY THE CONTRACTOR PER USPS REGULATIONS.
12. THE REQUIREMENTS OF THE TEXAS UTILITY CODE CHAPTER 251 FOR LOCATING UNDERGROUND UTILITIES SHALL BE ADHERED TO IN THE PERFORMANCE OF THIS WORK. IN ACCORDANCE WITH SECTION 251.151, THE CONTRACTOR PERFORMING THE EXCAVATION SHALL REQUEST LOCATES NOT EARLIER THAN THE 14TH DAY BEFORE AND NO LATER THAN 48 HOURS BEFORE THE INTENDED EXCAVATION EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS. THE CONTRACTOR SHALL ENFORCE THESE REQUIREMENTS ON ITS FORCES AS WELL AS ITS SUBCONTRACTORS.
13. CENTERPOINT, COMCAST, TELECOMMUNICATION COMPANIES, & BACLIFF MUD HAVE EXISTING FACILITIES WITHIN OR IMMEDIATELY ADJACENT TO THE LIMITS OF WORK. CONTRACTOR SHALL COORDINATE WITH EACH OWNER TO DETERMINE THE DISPOSITION OF EACH UTILITY STRUCTURE. CONTRACTOR SHALL PROTECT ANY UTILITY STRUCTURE THAT WILL REMAIN. CONTRACTOR WILL ALLOW ENTRY TO THE LIMITS OF WORK BY OWNERS OR THEIR CONTRACTORS TO REMOVE, RELOCATE, INSTALL OR ADJUST UTILITY STRUCTURES AS REQUIRED FOR THE WORK.
14. CONTRACTOR SHALL NOTIFY BILL LEOPARD OF COMCAST AT 281-624-3022 ONE WEEK BEFORE START OF CONSTRUCTION AND COORDINATE WITH HIM THE RELOCATION OF COMCAST'S LINE. THE RELOCATION OF COMCAST'S LINE WILL BE PREFORMED BY OTHERS DURING CONSTRUCTION.

CENTERPOINT NOTES:

CAUTION: UNDERGROUND GAS FACILITIES
THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

- WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 945-8036 OR (713-945-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
- FOR EMERGENCIES REGARDING GAS LINES CALL (713) 659-3552 OR (713) 207-4200.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

WARNING: OVERHEAD ELECTRICAL LINES
OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:
• ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX(6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
• OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.

ACTIVITIES ON/OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6348 OR (713) 207-5769.

ABBREVIATIONS:

- D.R.G.C.T. = DEED RECORDS GALVESTON COUNTY TEXAS
- M.R.G.C.T. = MAP RECORDS GALVESTON COUNTY TEXAS
- O.P.R.R.P.G.C.T. = OFFICIAL PUBLIC RECORDS REAL PROPERTY GALVESTON COUNTY TEXAS
- F.C. No. = FILM CODE NUMBER
- A.E. = AERIAL EASEMENT
- U.E. = UTILITY EASEMENT
- B.L. = BUILDING SETBACK LINE
- VOL. = VOLUME
- PG. = PAGE
- ESMT. = EASEMENT
- C.M. = CONTROL MONUMENT
- T.B.M. = TEMPORARY BENCHMARK
- R.O.W. = RIGHT-OF-WAY
- I.R. = IRON ROD
- I.P. = IRON PIPE
- T.H.# = TEST HOLE NUMBER

LEGEND:

- Ⓣ = TELEPHONE JUNCTION BOX
- Ⓜ = SANITARY MANHOLE
- Ⓦ = WATER METER
- Ⓢ = FIRE HYDRANT
- ⓔ = ELECTRIC JUNCTION BOX
- Ⓜ = ELECTRIC METER
- ⓔ = ELECTRICAL PEDESTAL
- Ⓜ = GAS METER
- Ⓜ = TRANSFORMER
- Ⓜ = GRATE INLET
- Ⓜ = BOLLARD
- Ⓜ = WATER VALVE
- Ⓜ = TEMPORARY BENCHMARK/CONTROL POINT
- = FOUND IRON ROD
- = FOUND IRON PIPE/OTHER
- — — — — = WOODEN FENCE
- — — — — = SANITARY LINE
- — — — — = BUILDING EDGE
- — — — — = FLOW LINE
- — — — — = TOP OF DITCH
- — — — — = BOTTOM OF DITCH
- — — — — = PAVEMENT EDGE- ASPHALT
- — — — — = OVERHEAD ELECTRIC
- — — — — = UNDERGRADE TELEPHONE
- — — — — = GRAVEL PAVEMENT
- Ⓜ = SIGN
- Ⓜ = DOUBLE SUPPORT SIGN
- Ⓜ = POWER/SERVICE POLE
- Ⓜ = GUY ANCHOR
- Ⓜ = SIGNAL POLE
- Ⓜ = MAILBOX
- Ⓜ = CLEANOUT
- Ⓜ = BUSH
- Ⓜ = OAK TREE
- Ⓜ = PINE TREE
- Ⓜ = MAGNOLIA TREE
- Ⓜ = CREPE MYRTLE TREE
- Ⓜ = MULBERRY TREE
- Ⓜ = HACKBERRY TREE
- Ⓜ = PALM TREE
- Ⓜ = STUMP
- Ⓜ = CEDAR TREE
- Ⓜ = TREE (OTHER)

I:\R308005.01 - BacCliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\Sheet Files\03 CONSTRUCTION NOTES.dwg Plotted 10/17/2019--9:53 AM fsofo

NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBE REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220

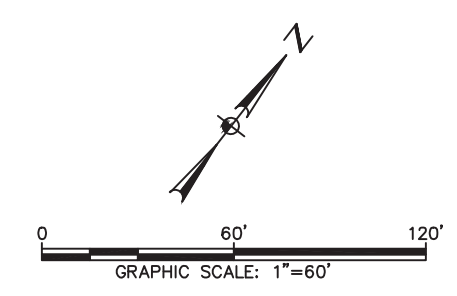
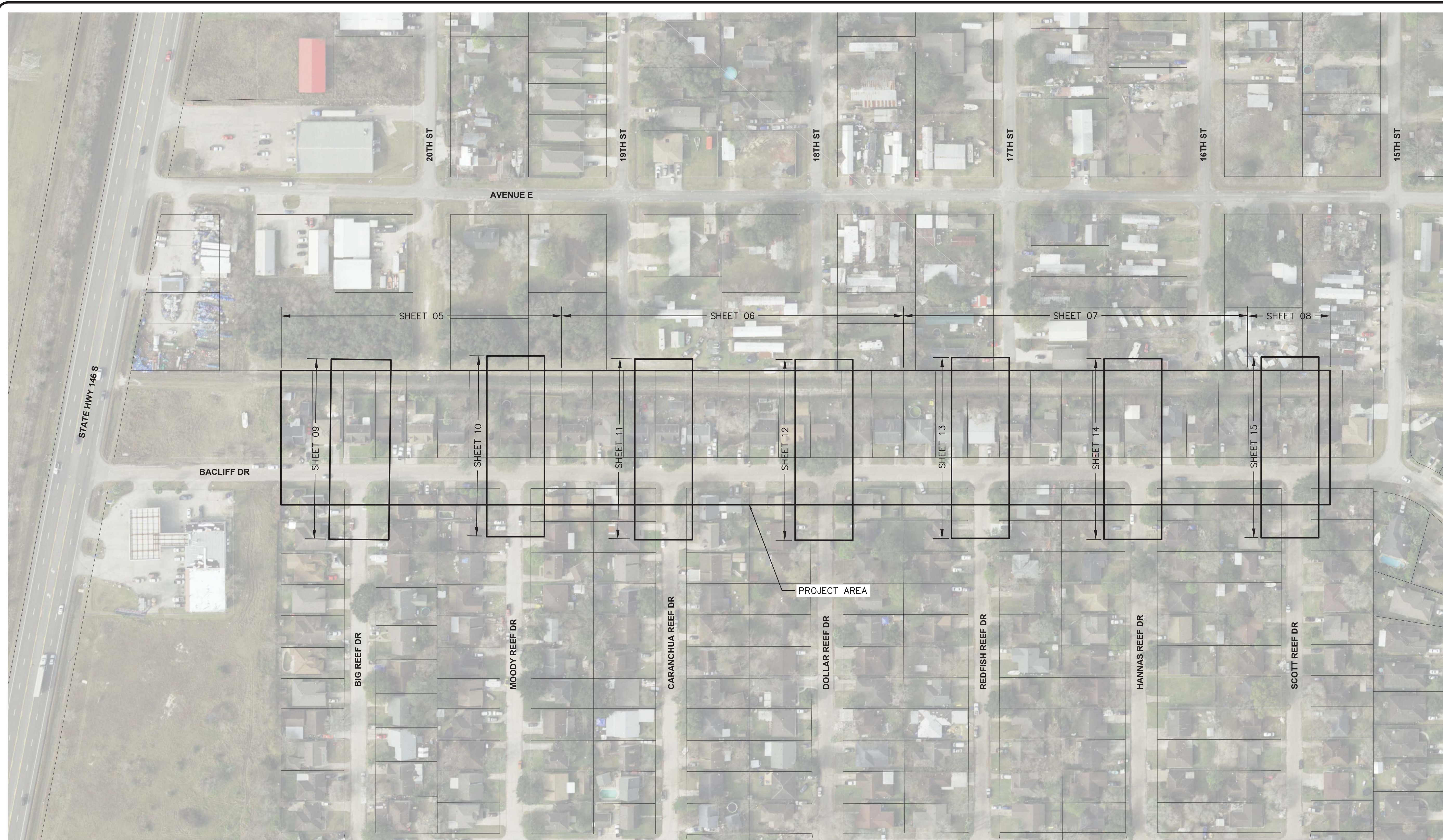


CONSTRUCTION NOTES

BACLIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION

DAVID E. MUGL
130126
LICENSED PROFESSIONAL ENGINEER
Huitt-Zollars Inc.
Firm Registration No. F-761

DATE:	05-29-2019
SCALE:	N/A (H) N/A (V)
DRAWN:	F.J.S.
DESIGNED:	D.E.M.
CHECKED:	G.W.
PROJ. NO.:	R308005.01
SHEET	03 OF 19



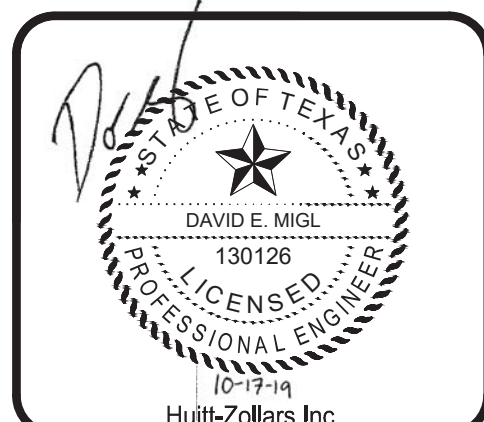
NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



OVERALL SITE PLAN

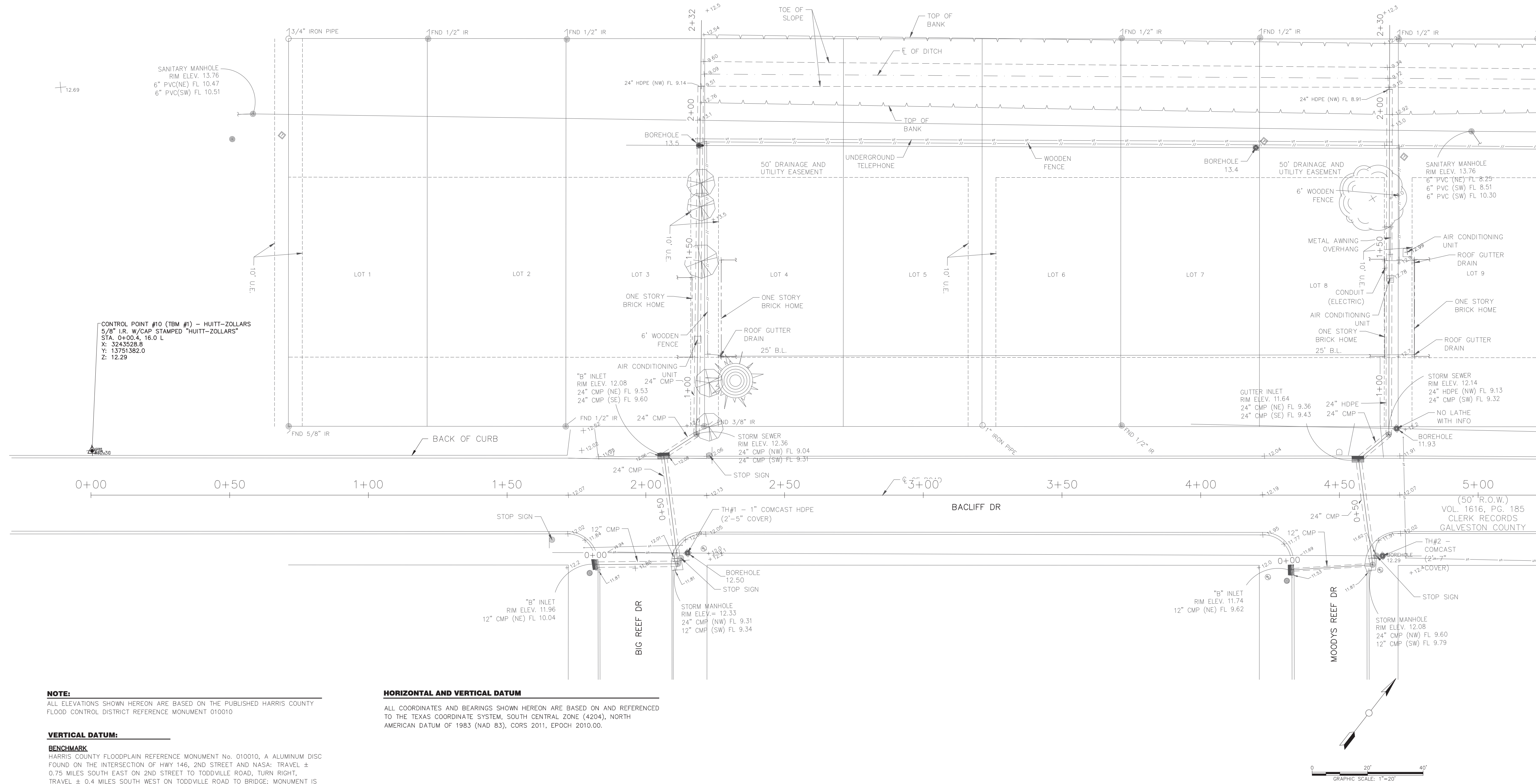
BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION



Huitt-Zollars Inc.
 Firm Registration No. F-761

DATE: 05-29-2019
 SCALE: N/A (H)
 N/A (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 04 OF 19

I:\R308005.01 - Baciff Villis Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\10.1 AutoCAD SHEET FILES\05-08 SURVEY & CONTROL.dwg Plotted 10/17/2019-9:54 AM mvega



NOTE:
ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE PUBLISHED HARRIS COUNTY FLOOD CONTROL DISTRICT REFERENCE MONUMENT 010010

VERTICAL DATUM:
BENCHMARK
HARRIS COUNTY FLOODPLAIN REFERENCE MONUMENT No. 010010, A ALUMINUM DISC FOUND ON THE INTERSECTION OF HWY 146, 2ND STREET AND NASA; TRAVEL ± 0.75 MILES SOUTH EAST ON 2ND STREET TO TODDVILLE ROAD, TURN RIGHT, TRAVEL ± 0.4 MILES SOUTH WEST ON TODDVILLE ROAD TO BRIDGE; MONUMENT IS AT CENTER OF BRIDGE ON THE BAY (EAST) SIDE.
ELEV. 5.69 FEET NAVD 88, GEOID 99 (CONUS), 2001 ADJUSTMENT

I.B.M. #1 (CONTROL POINT #10)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" 195' SOUTH WEST OF THE INTERSECTION OF BACLIFF DRIVE AND BIG REEF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV. = 12.29'

I.B.M. #2 (CONTROL POINT #11)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" IN BETWEEN THE INTERSECTIONS OF REDFISH REEF DRIVE AND HANNAS REEF DRIVE ON BACLIFF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV. = 12.00'

I.B.M. #3 (CONTROL POINT #8)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" 115' NORTH EAST OF THE INTERSECTION OF BACLIFF DRIVE AND SCOTT REEF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV. = 12.85'

HORIZONTAL AND VERTICAL DATUM
ALL COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON AND REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (NAD 83), CORS 2011, EPOCH 2010.00.

NOTE:
1. SEE SHEET 03 OF 19 FOR CONSTRUCTION NOTES & SURVEY LEGEND

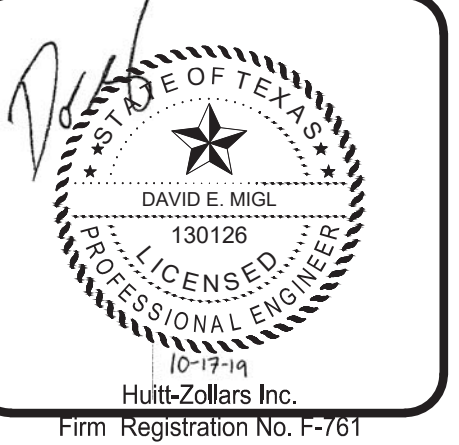
NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBPE REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220



SURVEY & CONTROL 01 OF 04

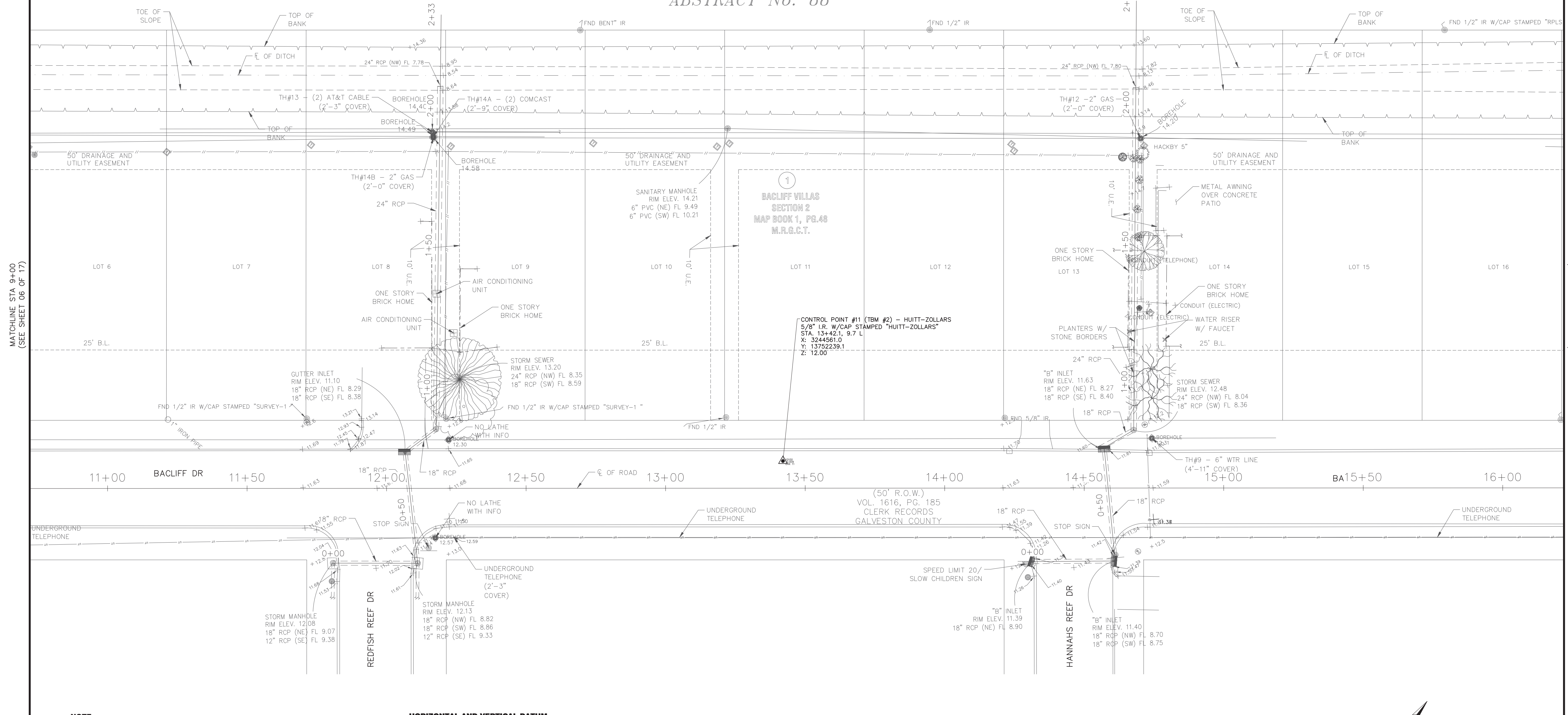
BACLIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION



Huitt-Zollars Inc.
Firm Registration No. F-761
DATE: 05-29-2019
SCALE: 1"=20' (H)
DRAWN: F.J.S.
DESIGNED: D.E.M.
CHECKED: G.W.
PROJ. NO.: R308005.01
SHEET 05 OF 19

MATCHLINE STA 5+00
(SEE SHEET 06 OF 17)

ANTHONY HATCH SURVEY,
ABSTRACT No. 88



NOTE:
ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE PUBLISHED HARRIS COUNTY FLOOD CONTROL DISTRICT REFERENCE MONUMENT 010010

HORIZONTAL AND VERTICAL DATUM
ALL COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON AND REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (NAD 83), CORS 2011, EPOCH 2010.00.

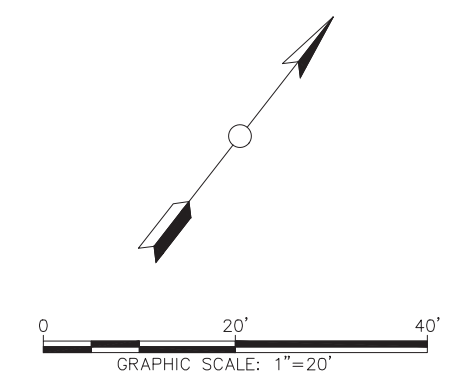
VERTICAL DATUM:
BENCHMARK
HARRIS COUNTY FLOODPLAIN REFERENCE MONUMENT No. 010010, A ALUMINUM DISC FOUND ON THE INTERSECTION OF HWY 146, 2ND STREET AND NASA; TRAVEL ± 0.75 MILES SOUTH EAST ON 2ND STREET TO TODDVILLE ROAD, TURN RIGHT, TRAVEL ± 0.4 MILES SOUTH WEST ON TODDVILLE ROAD TO BRIDGE; MONUMENT IS AT CENTER OF BRIDGE ON THE BAY (EAST) SIDE.
ELEV. 5.69 FEET NAVD 88, GEOID 99 (CONUS), 2001 ADJUSTMENT

I.B.M. #1 (CONTROL POINT #10)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" 195' SOUTH WEST OF THE INTERSECTION OF BACLIFF DRIVE AND BIG REEF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV.= 12.29'

I.B.M. #2 (CONTROL POINT #11)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" IN BETWEEN THE INTERSECTIONS OF REDFISH REEF DRIVE AND HANNAH REEF DRIVE ON BACLIFF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV.= 12.00'

I.B.M. #3 (CONTROL POINT #8)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" 115' NORTH EAST OF THE INTERSECTION OF BACLIFF DRIVE AND SCOTT REEF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV.= 12.85'

NOTE:
1. SEE SHEET 03 OF 19 FOR CONSTRUCTION NOTES & SURVEY LEGEND



I:\R308005.01 - Baccliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\05-08 SURVEY & CONTROL.dwg Plotted 10/17/2019 - 9:54 AM mvega

NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBPE REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220



SURVEY & CONTROL 03 OF 04

BACLIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION

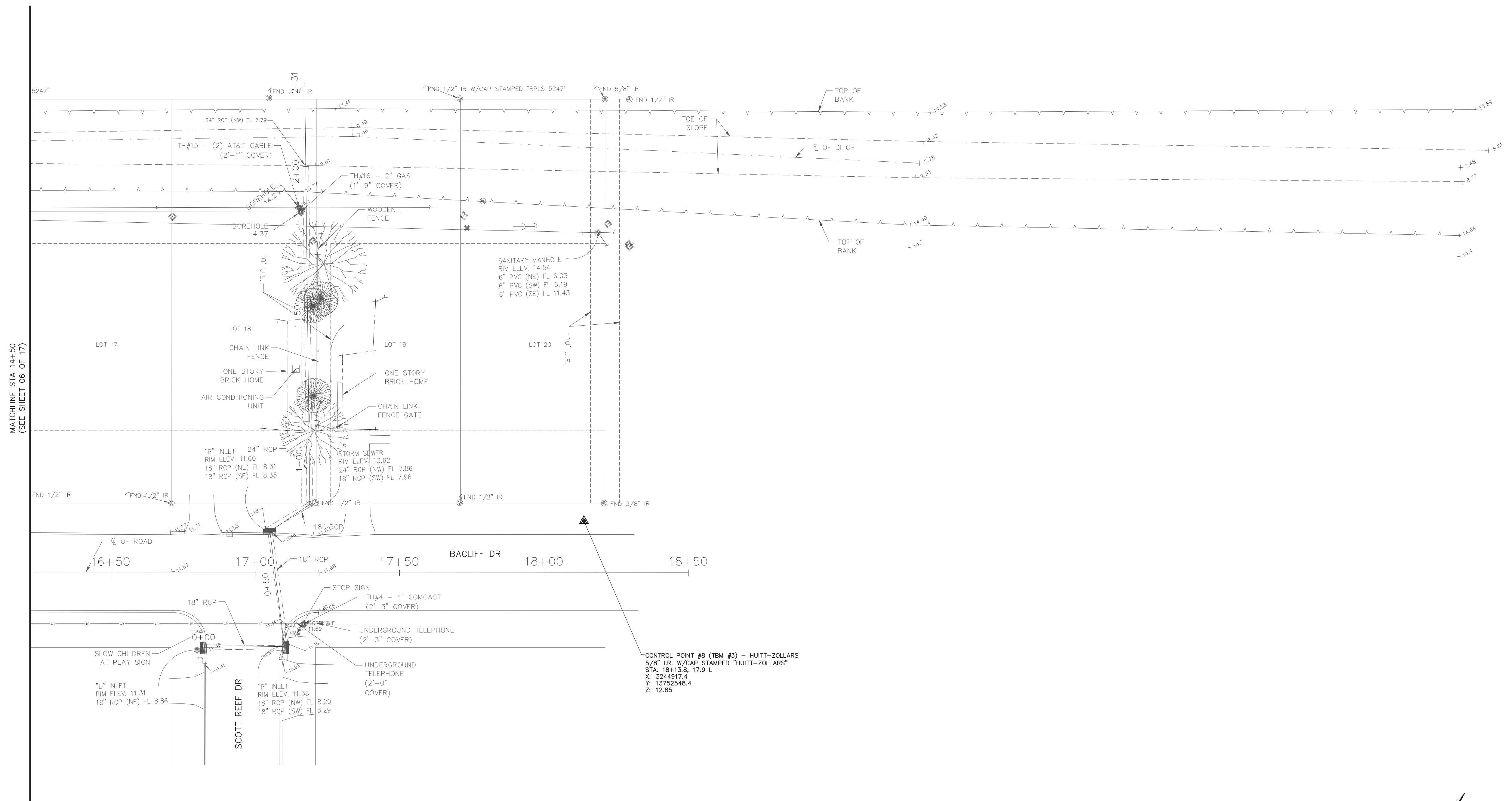


Huitt-Zollars Inc.
Firm Registration No. F-761

DATE: 05-29-2019
SCALE: 1"=20' (H)

DRAWN: F.J.S.
DESIGNED: D.E.M.
CHECKED: G.W.
PROJ. NO.: R308005.01
SHEET 07 OF 19

I:\R308005.01 - BacCliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\05-08 SURVEY & CONTROL.dwg, Plotted 10/17/2019-9:54 AM mvega



MATCHLINE STA 14+50
(SEE SHEET 06 OF 17)

NOTE:
ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE PUBLISHED HARRIS COUNTY FLOOD CONTROL DISTRICT REFERENCE MONUMENT 010010

VERTICAL DATUM:
BENCHMARK
HARRIS COUNTY FLOODPLAIN REFERENCE MONUMENT No. 010010, A ALUMINUM DISC FOUND ON THE INTERSECTION OF HWY 146, 2ND STREET AND NASA: TRAVEL ± 0.75 MILES SOUTH EAST ON 2ND STREET TO TODDVILLE ROAD, TURN RIGHT, TRAVEL ± 0.4 MILES SOUTH WEST ON TODDVILLE ROAD TO BRIDGE; MONUMENT IS AT CENTER OF BRIDGE ON THE BAY (EAST) SIDE.
ELEV. 5.89 FEET NAVD 88, GEOID 99 (CONUS), 2001 ADJUSTMENT

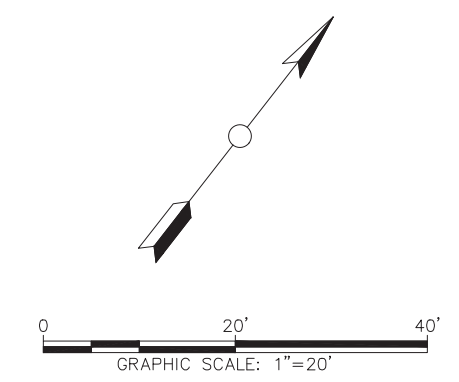
I.B.M. #1 (CONTROL POINT #10)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" 195' SOUTH WEST OF THE INTERSECTION OF BACLIFF DRIVE AND BIG REEF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV. = 12.29'

I.B.M. #2 (CONTROL POINT #11)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" IN BETWEEN THE INTERSECTIONS OF REDFISH REEF DRIVE AND HANNAS REEF DRIVE ON BACLIFF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV. = 12.00'

I.B.M. #3 (CONTROL POINT #8)
SET 5/8" I.R. WITH CAP STAMPED "HUITT-ZOLLARS" 115' NORTH EAST OF THE INTERSECTION OF BACLIFF DRIVE AND SCOTT REEF DRIVE.
(AS SHOWN IN THE DRAWING)
ELEV. = 12.85'

HORIZONTAL AND VERTICAL DATUM
ALL COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON AND REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (NAD 83), CORS 2011, EPOCH 2010.00.

CONTROL POINT #8 (TBM #3) - HUITT-ZOLLARS
5/8" I.R. W/CAP STAMPED "HUITT-ZOLLARS"
STA. 18+13.8, 17.9 L
X: 3244917.4
Y: 13752548.4
Z: 12.85



NOTE:
1. SEE SHEET 03 OF 19 FOR CONSTRUCTION NOTES & SURVEY LEGEND

NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBPE REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220



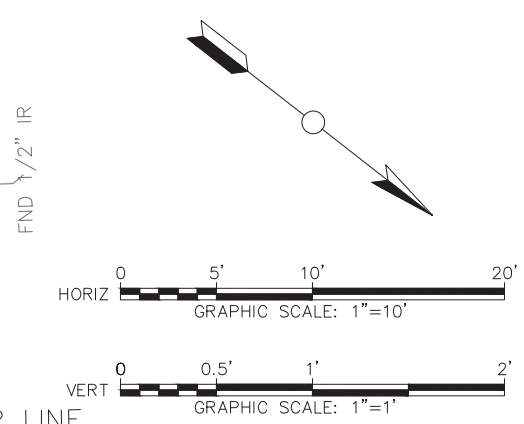
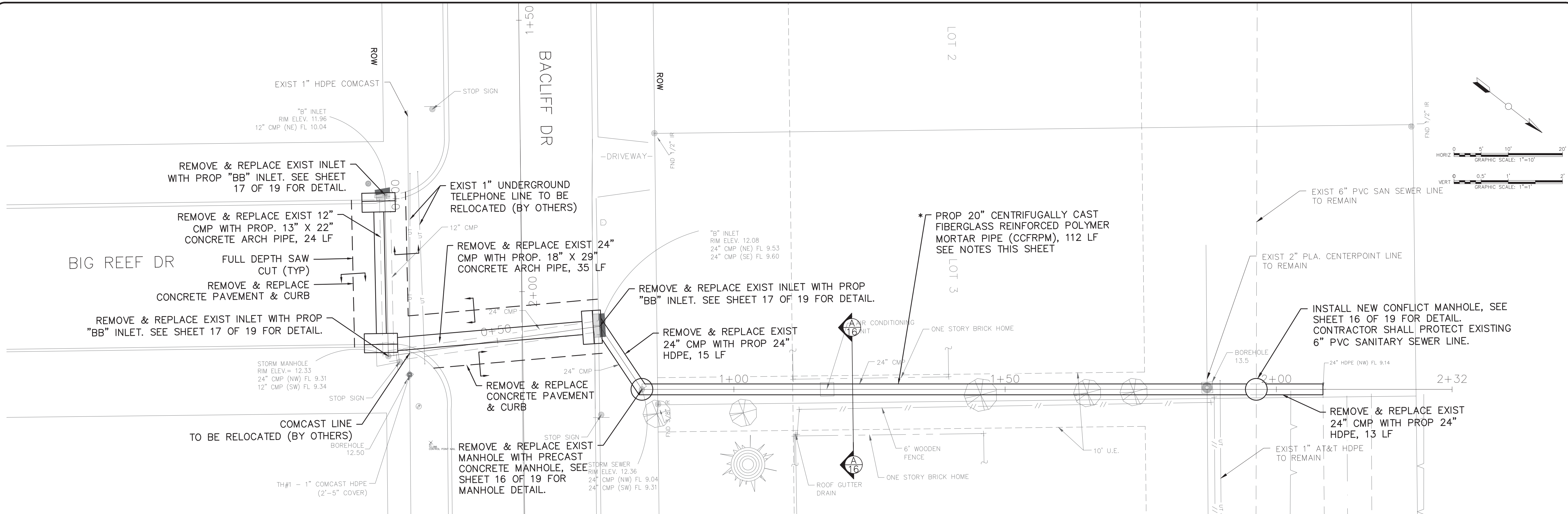
SURVEY & CONTROL 04 OF 04

BACLIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION



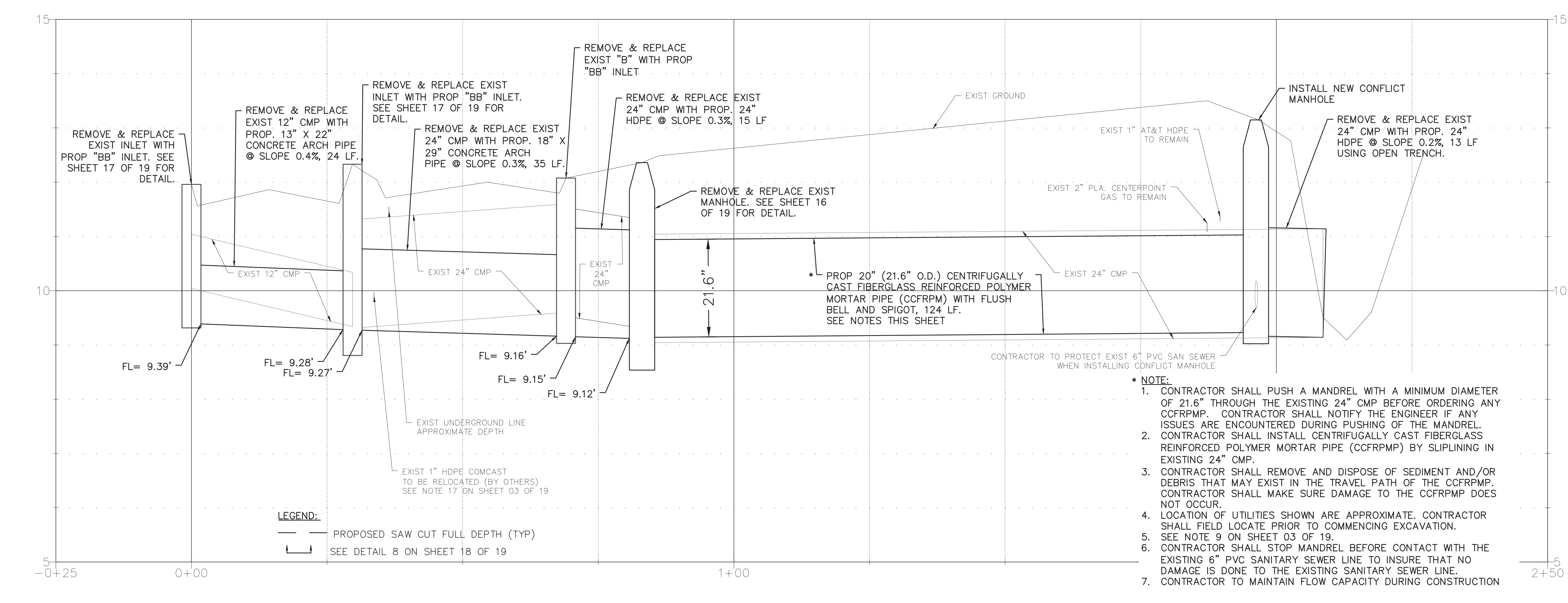
DATE: 05-29-2019
SCALE: 1"=20' (H)
DRAWN: F.J.S.
DESIGNED: D.E.M.
CHECKED: G.W.
PROJ. NO.: R308005.01
SHEET 08 OF 19

I:\R308005\01 - Baciff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\10.1 AutoCAD SHEET FILES\09-15 P&P.dwg Plotted 10/17/2019-9:54 AM dmgl



NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBP REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220

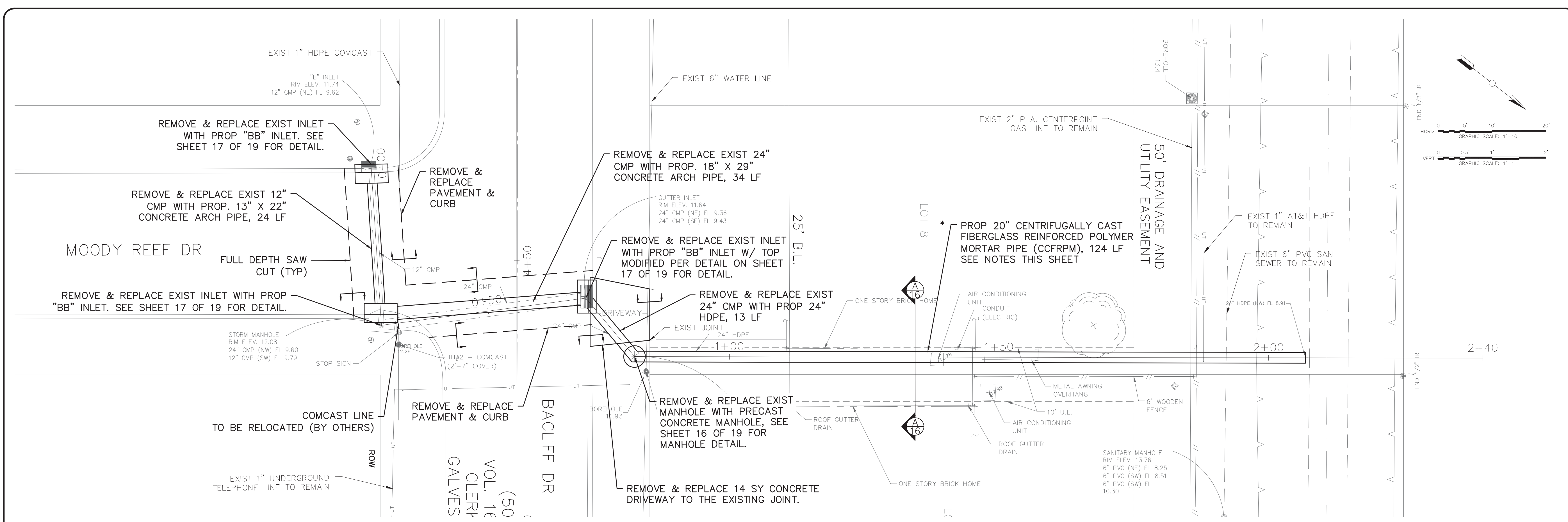


PLAN & PROFILE 01 OF 07
BACIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION



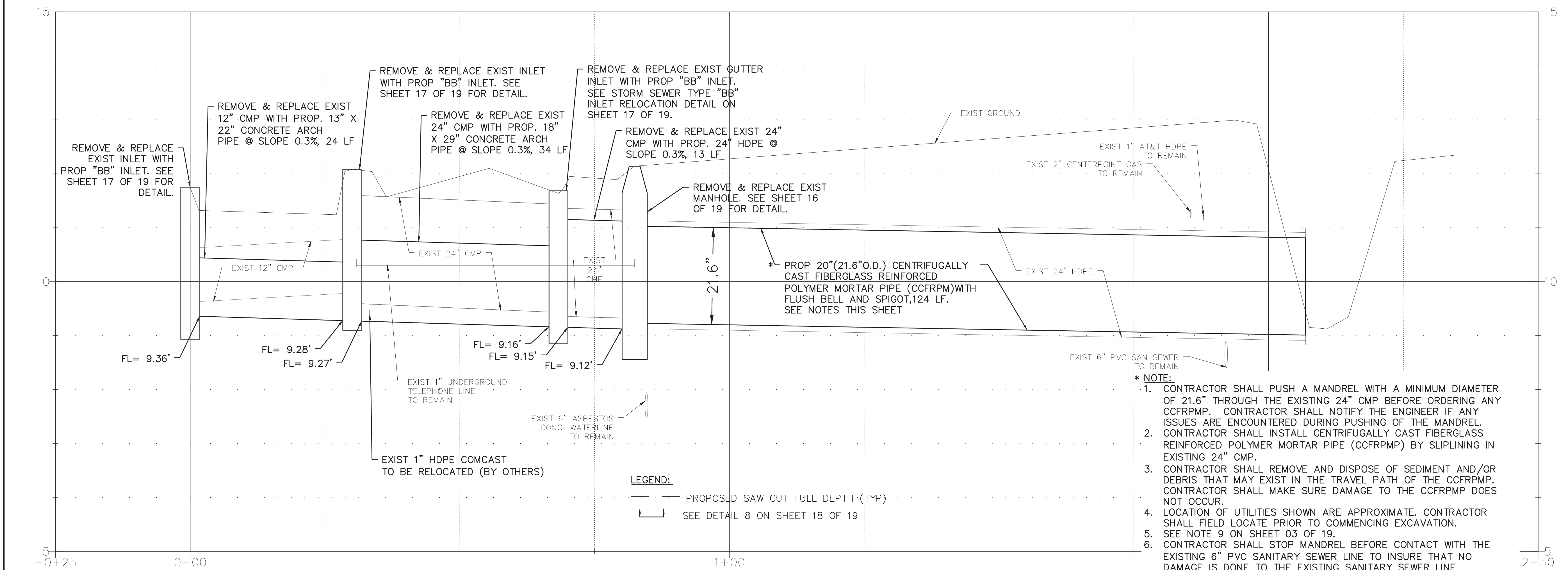
DATE: 05-29-2019
SCALE: 1"=10' (H)
1"=1' (V)
DRAWN: F.J.S.
DESIGNED: D.E.M.
CHECKED: G.W.
PROJ. NO.: R308005.01
SHEET 09 OF 19

I:\R308005.01 - BacCliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\Sheet Files\09-15 P&P.dwg Plotted 10/17/2019--9:55 AM dimgl



NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



PLAN & PROFILE 02 OF 07

BACCLIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION

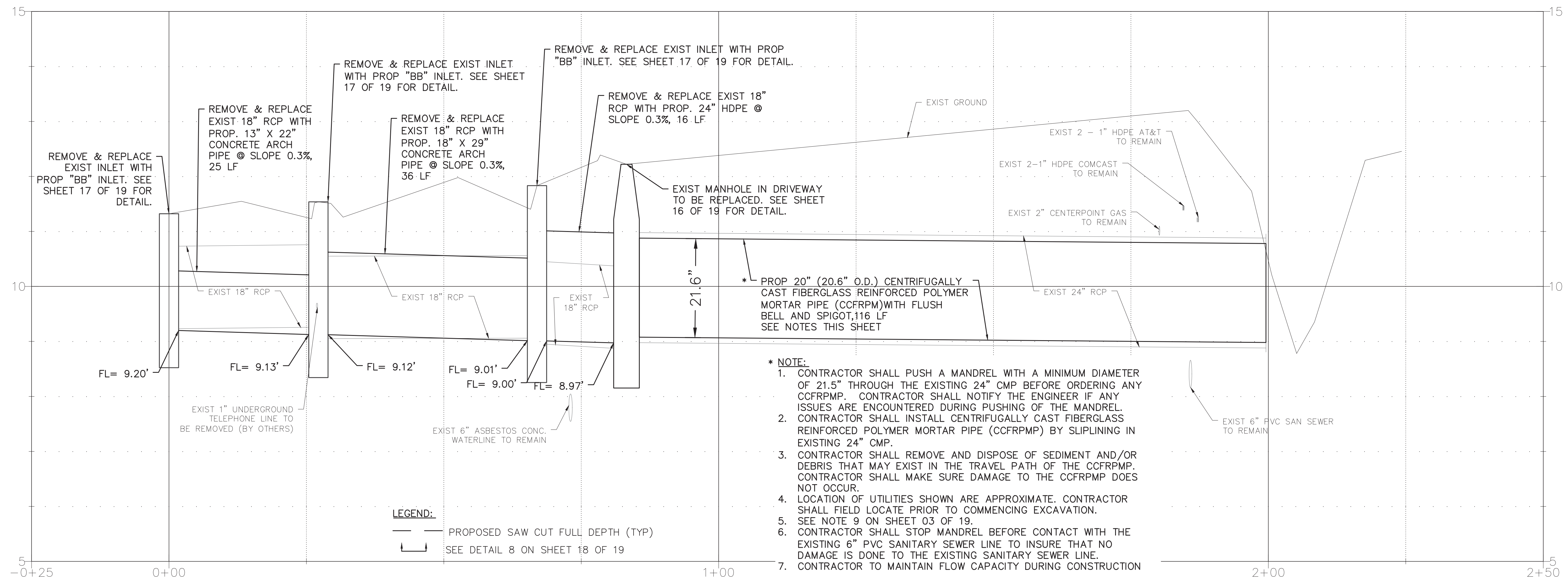
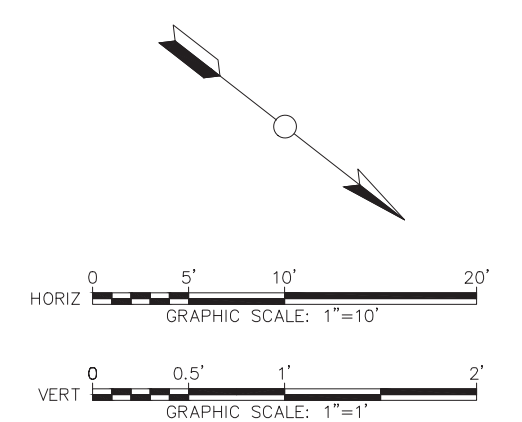
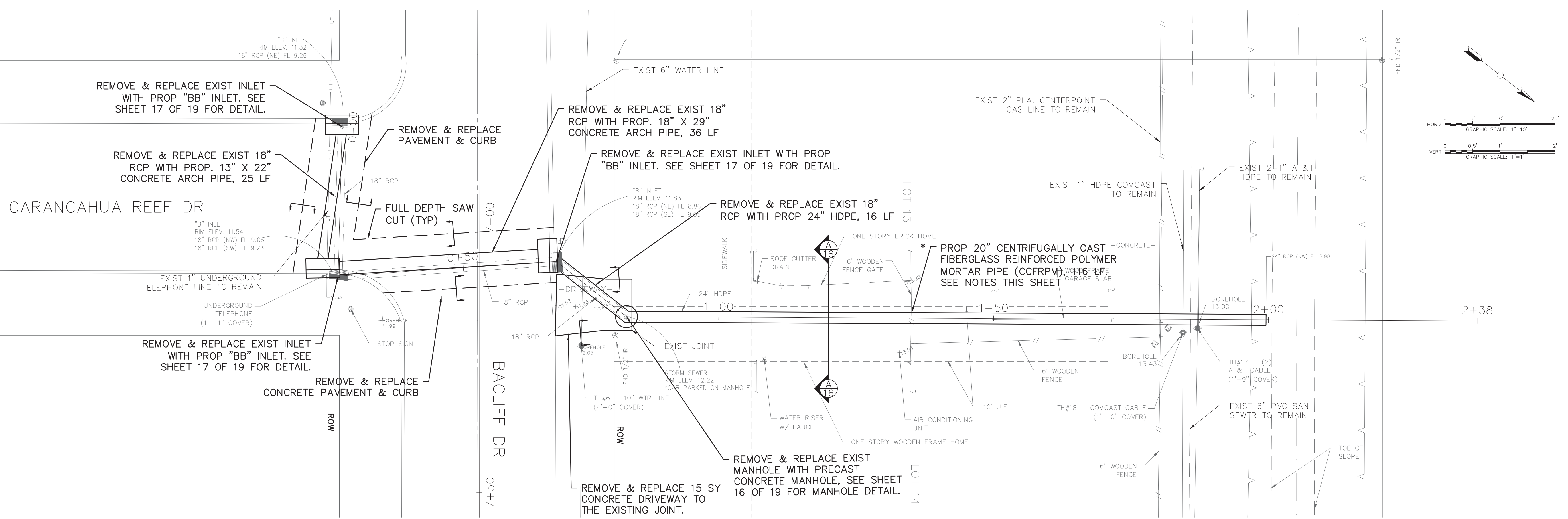


Huitt-Zollars Inc.
 Firm Registration No. F-761
 DATE: 05-29-2019
 SCALE: 1"=10' (H)
 1"=1' (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 10 OF 19

- * NOTE:**
- CONTRACTOR SHALL PUSH A MANDREL WITH A MINIMUM DIAMETER OF 21.6" THROUGH THE EXISTING 24" CMP BEFORE ORDERING ANY CCFRPM. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY ISSUES ARE ENCOUNTERED DURING PUSHING OF THE MANDREL.
 - CONTRACTOR SHALL INSTALL CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPM) BY SLIPLINING IN EXISTING 24" CMP.
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF SEDIMENT AND/OR DEBRIS THAT MAY EXIST IN THE TRAVEL PATH OF THE CCFRPM. CONTRACTOR SHALL MAKE SURE DAMAGE TO THE CCFRPM DOES NOT OCCUR.
 - LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE PRIOR TO COMMENCING EXCAVATION.
 - SEE NOTE 9 ON SHEET 03 OF 19.
 - CONTRACTOR SHALL STOP MANDREL BEFORE CONTACT WITH THE EXISTING 6" PVC SANITARY SEWER LINE TO INSURE THAT NO DAMAGE IS DONE TO THE EXISTING SANITARY SEWER LINE.
 - CONTRACTOR TO MAINTAIN FLOW CAPACITY DURING CONSTRUCTION

LEGEND:
 — PROPOSED SAW CUT FULL DEPTH (TYP)
 — SEE DETAIL 8 ON SHEET 18 OF 19

I:\R308005.01 - BacCliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\09-15 P&P.dwg Plotted 10/17/2019-9:55 AM dmgl



- * NOTE:**
- CONTRACTOR SHALL PUSH A MANDREL WITH A MINIMUM DIAMETER OF 21.5" THROUGH THE EXISTING 24" CMP BEFORE ORDERING ANY CCFRPM. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY ISSUES ARE ENCOUNTERED DURING PUSHING OF THE MANDREL.
 - CONTRACTOR SHALL INSTALL CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPM) BY SLIPLINING IN EXISTING 24" CMP.
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF SEDIMENT AND/OR DEBRIS THAT MAY EXIST IN THE TRAVEL PATH OF THE CCFRPM. CONTRACTOR SHALL MAKE SURE DAMAGE TO THE CCFRPM DOES NOT OCCUR.
 - LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE PRIOR TO COMMENCING EXCAVATION.
 - SEE NOTE 9 ON SHEET 03 OF 19.
 - CONTRACTOR SHALL STOP MANDREL BEFORE CONTACT WITH THE EXISTING 6" PVC SANITARY SEWER LINE TO INSURE THAT NO DAMAGE IS DONE TO THE EXISTING SANITARY SEWER LINE.
 - CONTRACTOR TO MAINTAIN FLOW CAPACITY DURING CONSTRUCTION

LEGEND:
 PROPOSED SAW CUT FULL DEPTH (TYP)
 SEE DETAIL 8 ON SHEET 18 OF 19

NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



PLAN & PROFILE 03 OF 07

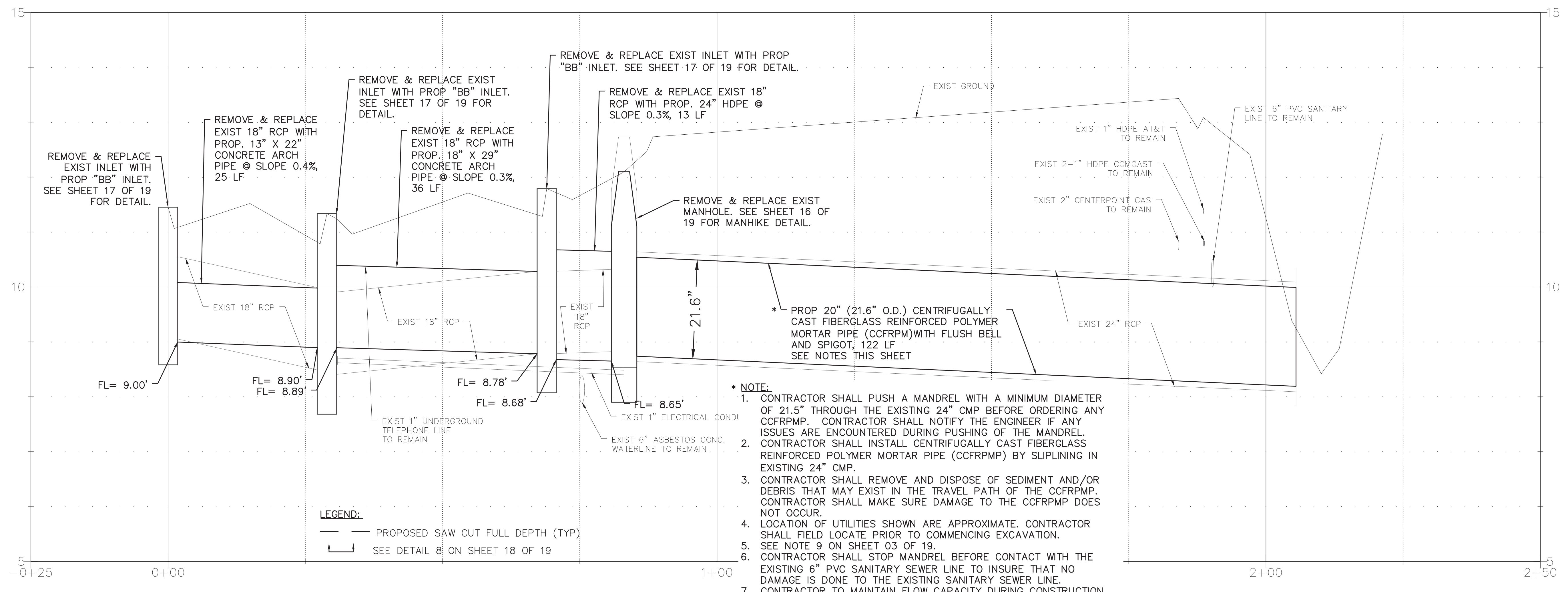
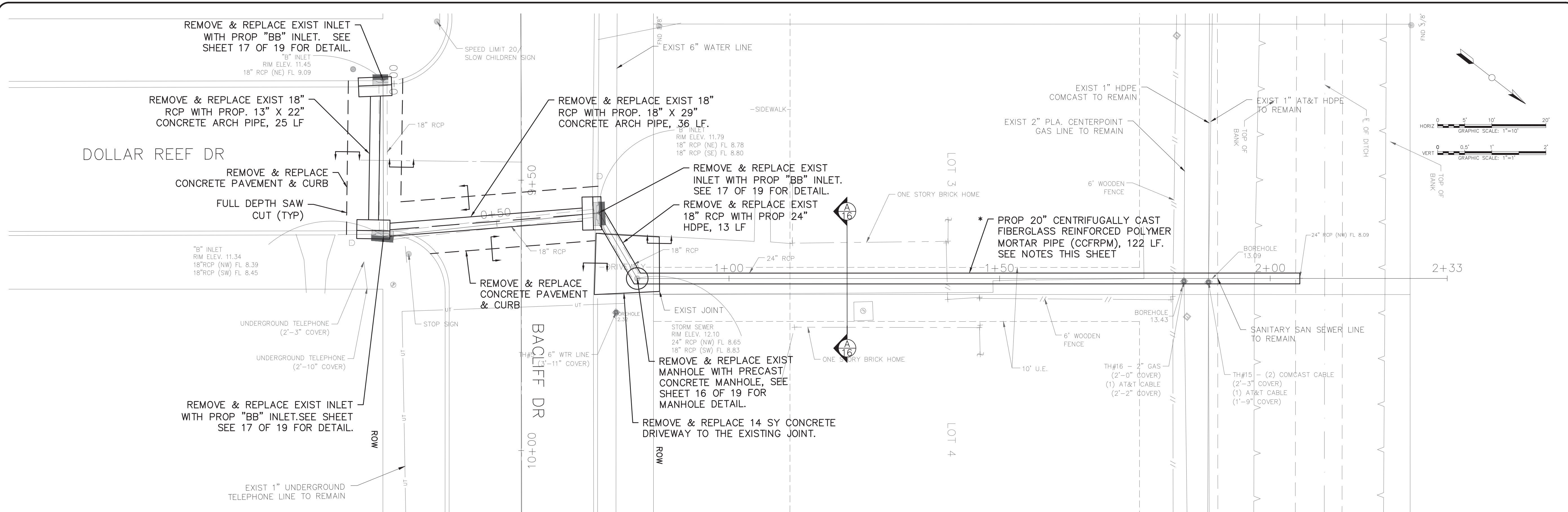
BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION



Huitt-Zollars Inc.
 Firm Registration No. F-761

DATE: 05-29-2019
 SCALE: 1"=10' (H)
 1"=1' (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 11 OF 19

I:\R308005.01 - Bacloff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\Sheet Files\09-15 P&P.dwg Plotted 10/17/2019-9:55 AM dmig



- * NOTE:**
- CONTRACTOR SHALL PUSH A MANDREL WITH A MINIMUM DIAMETER OF 21.5" THROUGH THE EXISTING 24" CMP BEFORE ORDERING ANY CCFRPM. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY ISSUES ARE ENCOUNTERED DURING PUSHING OF THE MANDREL. CONTRACTOR SHALL INSTALL CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPM) BY SLIPLINING IN EXISTING 24" CMP.
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF SEDIMENT AND/OR DEBRIS THAT MAY EXIST IN THE TRAVEL PATH OF THE CCFRPM. CONTRACTOR SHALL MAKE SURE DAMAGE TO THE CCFRPM DOES NOT OCCUR.
 - CONTRACTOR SHALL FIELD LOCATE PRIOR TO COMMENCING EXCAVATION. SEE NOTE 9 ON SHEET 03 OF 19.
 - CONTRACTOR SHALL STOP MANDREL BEFORE CONTACT WITH THE EXISTING 6" PVC SANITARY SEWER LINE TO INSURE THAT NO DAMAGE IS DONE TO THE EXISTING SANITARY SEWER LINE.
 - CONTRACTOR TO MAINTAIN FLOW CAPACITY DURING CONSTRUCTION

LEGEND:
 — PROPOSED SAW CUT FULL DEPTH (TYP)
 — SEE DETAIL 8 ON SHEET 18 OF 19

NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TPBE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



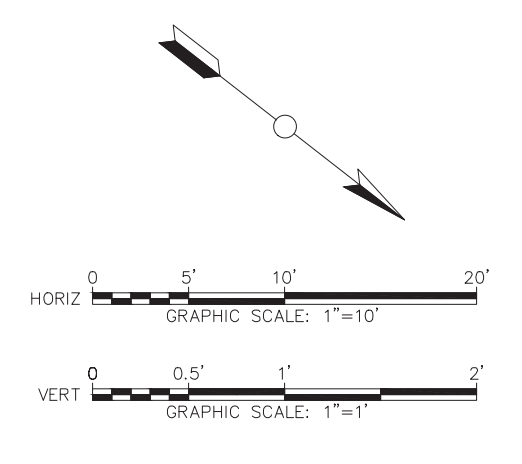
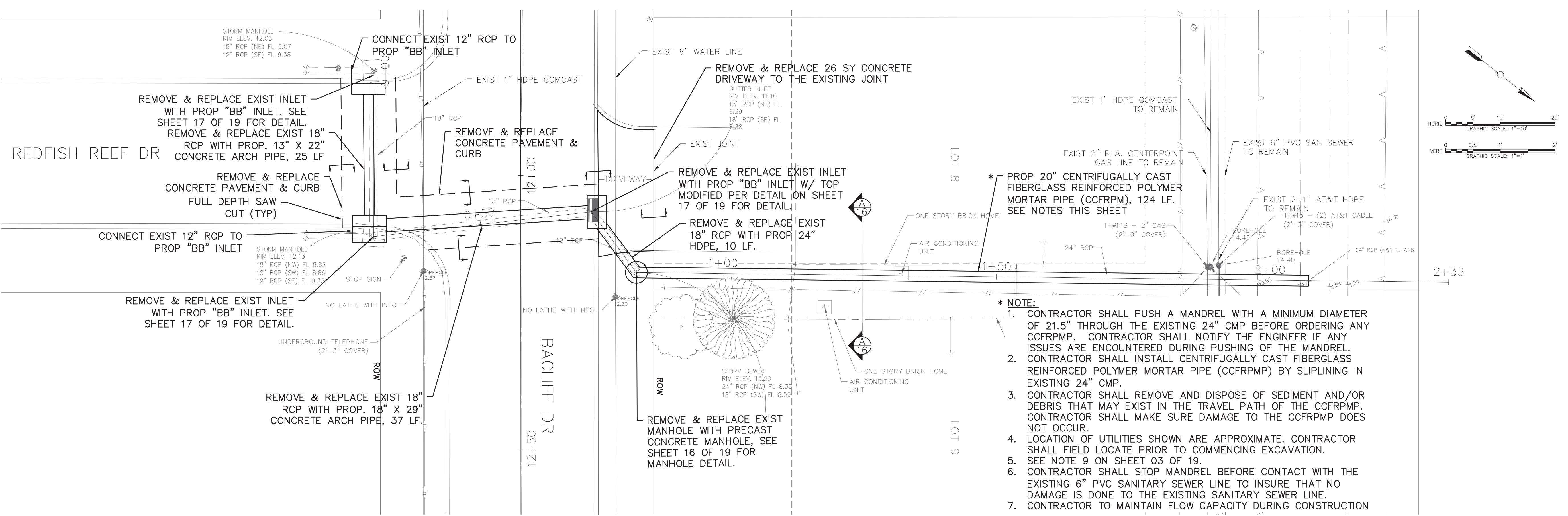
PLAN & PROFILE 04 OF 07

BACLOFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION

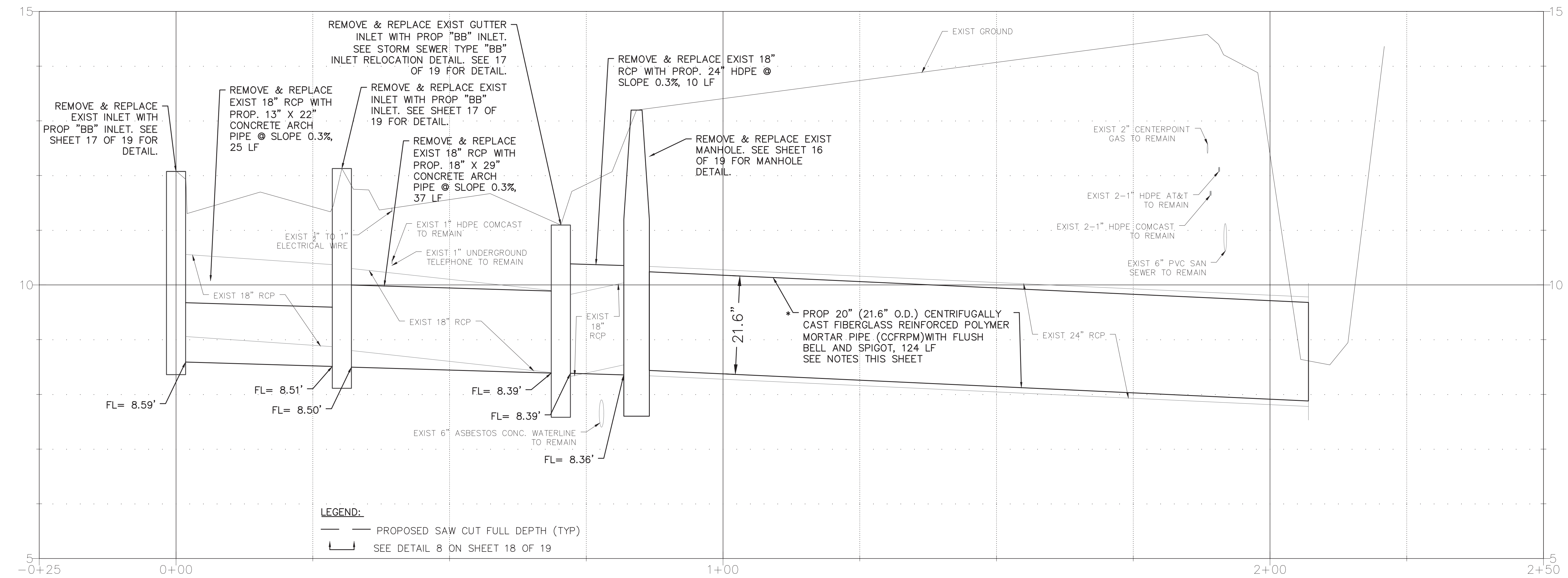


DATE: 05-29-2019
 SCALE: 1"=10' (H)
 1"=1' (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 12 OF 19

I:\R308005.01 - BacCliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\09-15 P&P.dwg Plotted 10/17/2019--9:55 AM dmjg



- * NOTE:**
1. CONTRACTOR SHALL PUSH A MANDREL WITH A MINIMUM DIAMETER OF 21.5" THROUGH THE EXISTING 24" CMP BEFORE ORDERING ANY CCFRPM. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY ISSUES ARE ENCOUNTERED DURING PUSHING OF THE MANDREL.
 2. CONTRACTOR SHALL INSTALL CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPMP) BY SLIPLINING IN EXISTING 24" CMP.
 3. CONTRACTOR SHALL REMOVE AND DISPOSE OF SEDIMENT AND/OR DEBRIS THAT MAY EXIST IN THE TRAVEL PATH OF THE CCFRPM. CONTRACTOR SHALL MAKE SURE DAMAGE TO THE CCFRPM DOES NOT OCCUR.
 4. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE PRIOR TO COMMENCING EXCAVATION.
 5. SEE NOTE 9 ON SHEET 03 OF 19.
 6. CONTRACTOR SHALL STOP MANDREL BEFORE CONTACT WITH THE EXISTING 6" PVC SANITARY SEWER LINE TO INSURE THAT NO DAMAGE IS DONE TO THE EXISTING SANITARY SEWER LINE.
 7. CONTRACTOR TO MAINTAIN FLOW CAPACITY DURING CONSTRUCTION



LEGEND:
 - - - PROPOSED SAW CUT FULL DEPTH (TYP)
 [Symbol] SEE DETAIL 8 ON SHEET 18 OF 19

NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TPBE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220

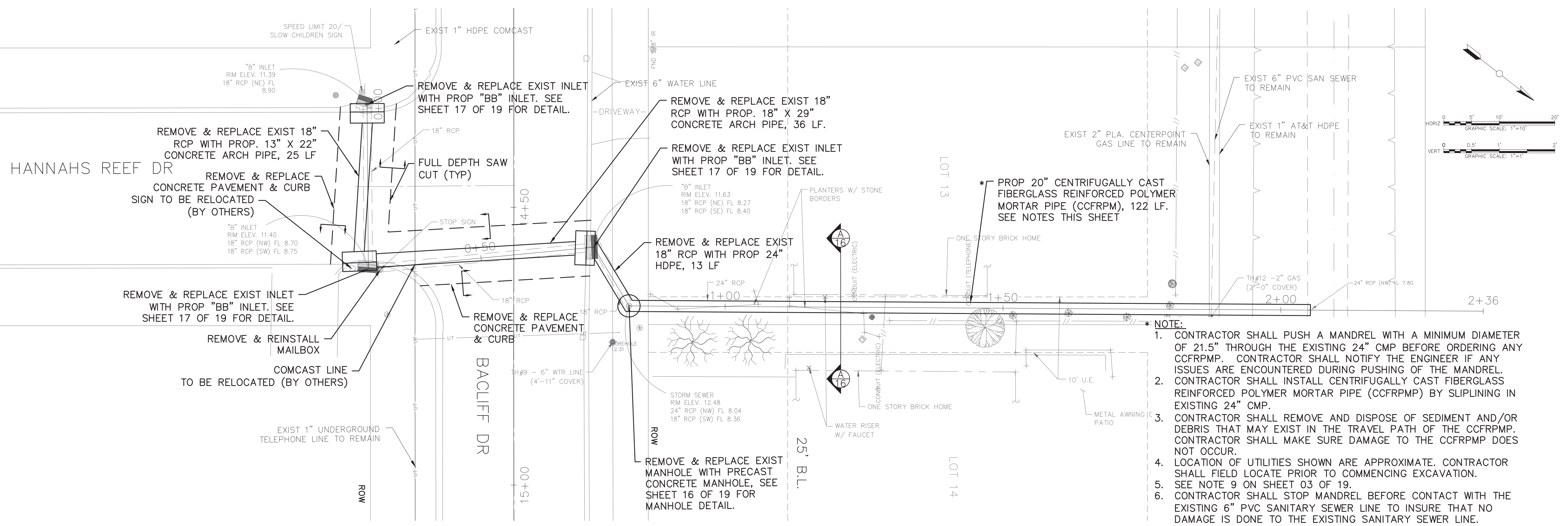
PLAN & PROFILE 05 OF 07

BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION

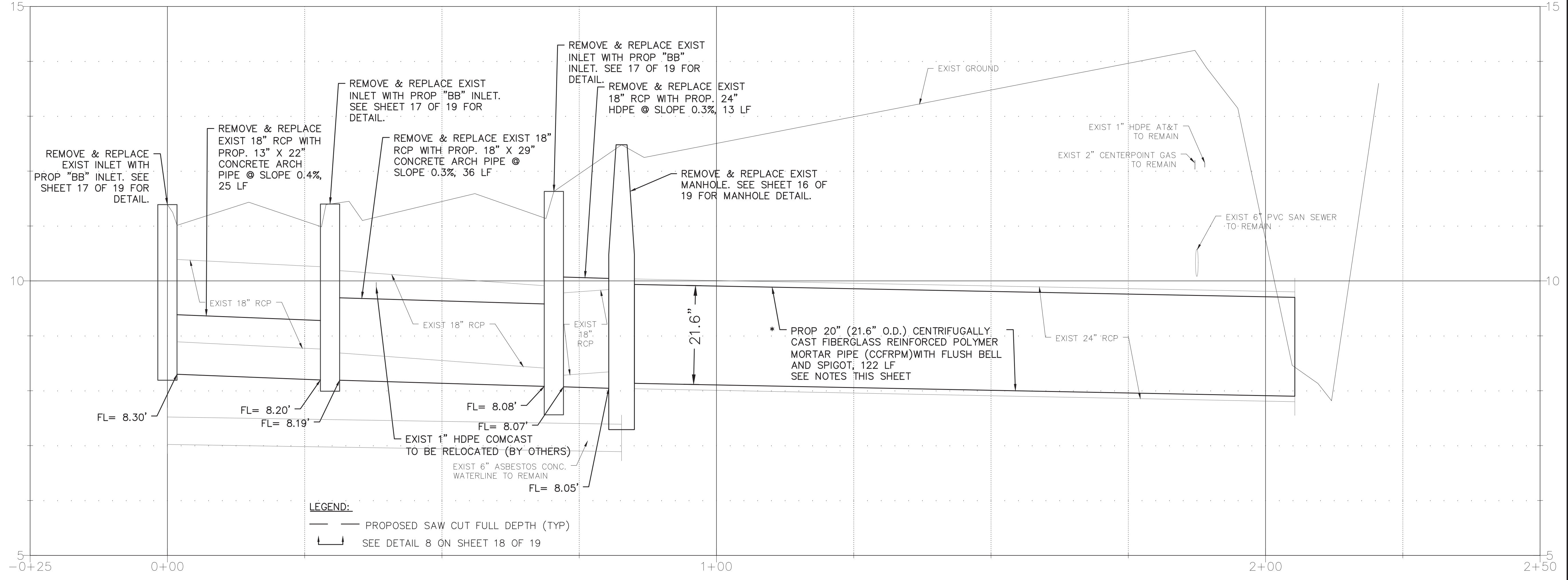
Huitt-Zollars Inc.
 Firm Registration No. F-761

DATE: 05-29-2019
 SCALE: 1"=10' (H)
 1"=1' (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 13 OF 19

I:\R308005\01 - Baccliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\Sheet Files\09-15 P&P.dwg Plotted 10/17/2019--9:55 AM dmig



- * NOTE:**
1. CONTRACTOR SHALL PUSH A MANDREL WITH A MINIMUM DIAMETER OF 21.5" THROUGH THE EXISTING 24" CMP BEFORE ORDERING ANY CCFRPM. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY ISSUES ARE ENCOUNTERED DURING PUSHING OF THE MANDREL.
 2. CONTRACTOR SHALL INSTALL CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPMP) BY SLIPLINING IN EXISTING 24" CMP.
 3. CONTRACTOR SHALL REMOVE AND DISPOSE OF SEDIMENT AND/OR DEBRIS THAT MAY EXIST IN THE TRAVEL PATH OF THE CCFRPM. CONTRACTOR SHALL MAKE SURE DAMAGE TO THE CCFRPM DOES NOT OCCUR.
 4. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE PRIOR TO COMMENCING EXCAVATION.
 5. SEE NOTE 9 ON SHEET 03 OF 19.
 6. CONTRACTOR SHALL STOP MANDREL BEFORE CONTACT WITH THE EXISTING 6" PVC SANITARY SEWER LINE TO INSURE THAT NO DAMAGE IS DONE TO THE EXISTING SANITARY SEWER LINE.
 7. CONTRACTOR TO MAINTAIN FLOW CAPACITY DURING CONSTRUCTION



LEGEND:
 — PROPOSED SAW CUT FULL DEPTH (TYP)
 — SEE DETAIL 8 ON SHEET 18 OF 19

NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220

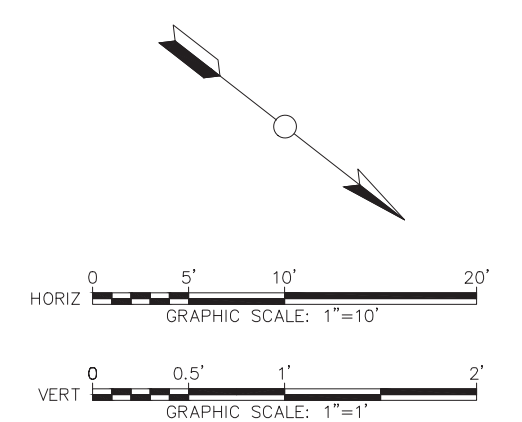
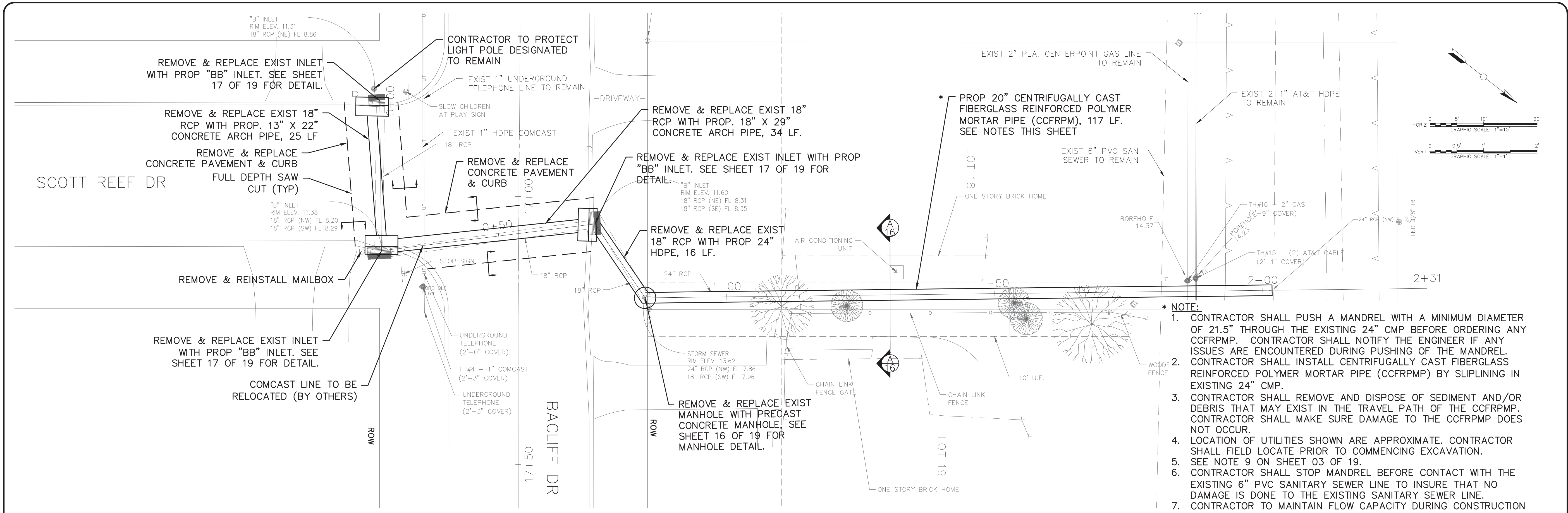


PLAN & PROFILE 06 OF 07
 BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION

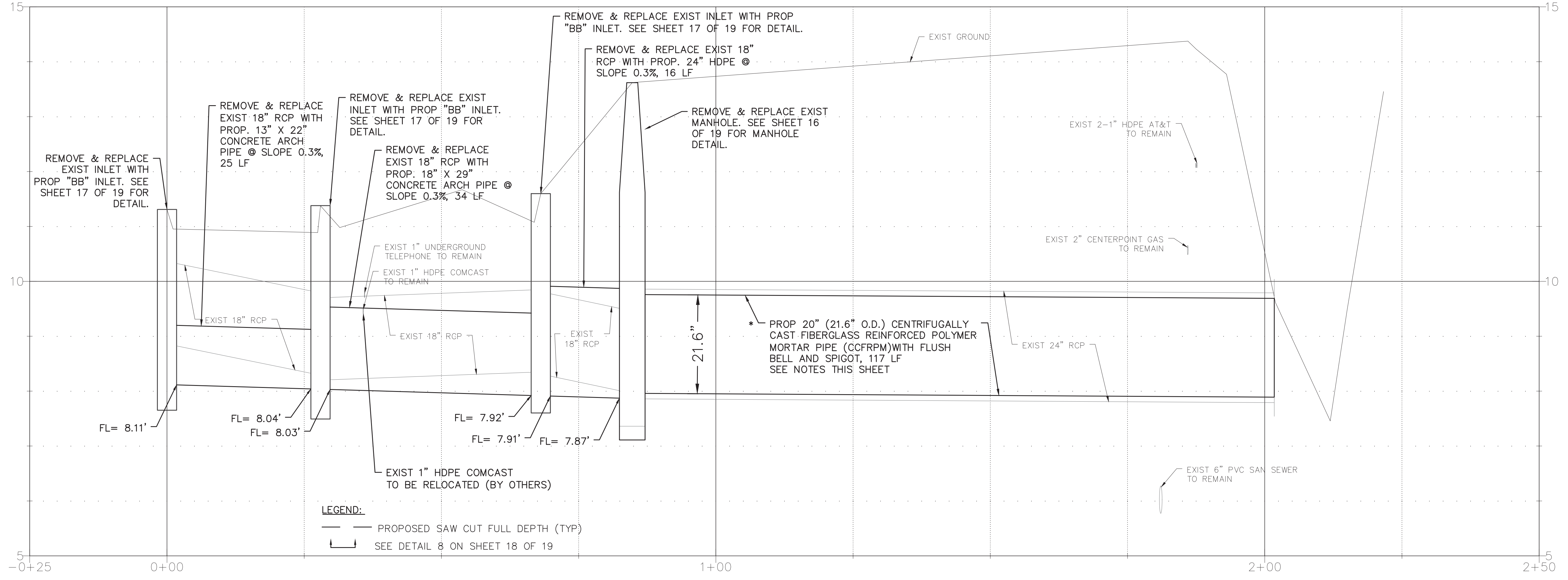


DATE: 05-29-2019
 SCALE: 1"=10' (H)
 1"=1' (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 14 OF 19

I:\R308005.01 - Bacloff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\Sheet Files\09-15 P&P.dwg Plotted 10/17/2019--9:55 AM dmgl



- * NOTE:**
- CONTRACTOR SHALL PUSH A MANDREL WITH A MINIMUM DIAMETER OF 21.5" THROUGH THE EXISTING 24" CMP BEFORE ORDERING ANY CCFRPM. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY ISSUES ARE ENCOUNTERED DURING PUSHING OF THE MANDREL.
 - CONTRACTOR SHALL INSTALL CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPM) BY SLIPLINING IN EXISTING 24" CMP.
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF SEDIMENT AND/OR DEBRIS THAT MAY EXIST IN THE TRAVEL PATH OF THE CCFRPM. CONTRACTOR SHALL MAKE SURE DAMAGE TO THE CCFRPM DOES NOT OCCUR.
 - LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE PRIOR TO COMMENCING EXCAVATION.
 - SEE NOTE 9 ON SHEET 03 OF 19.
 - CONTRACTOR SHALL STOP MANDREL BEFORE CONTACT WITH THE EXISTING 6" PVC SANITARY SEWER LINE TO INSURE THAT NO DAMAGE IS DONE TO THE EXISTING SANITARY SEWER LINE.
 - CONTRACTOR TO MAINTAIN FLOW CAPACITY DURING CONSTRUCTION



LEGEND:

— PROPOSED SAW CUT FULL DEPTH (TYP)

— SEE DETAIL 8 ON SHEET 18 OF 19

DATE	
REVISION	
NO.	

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



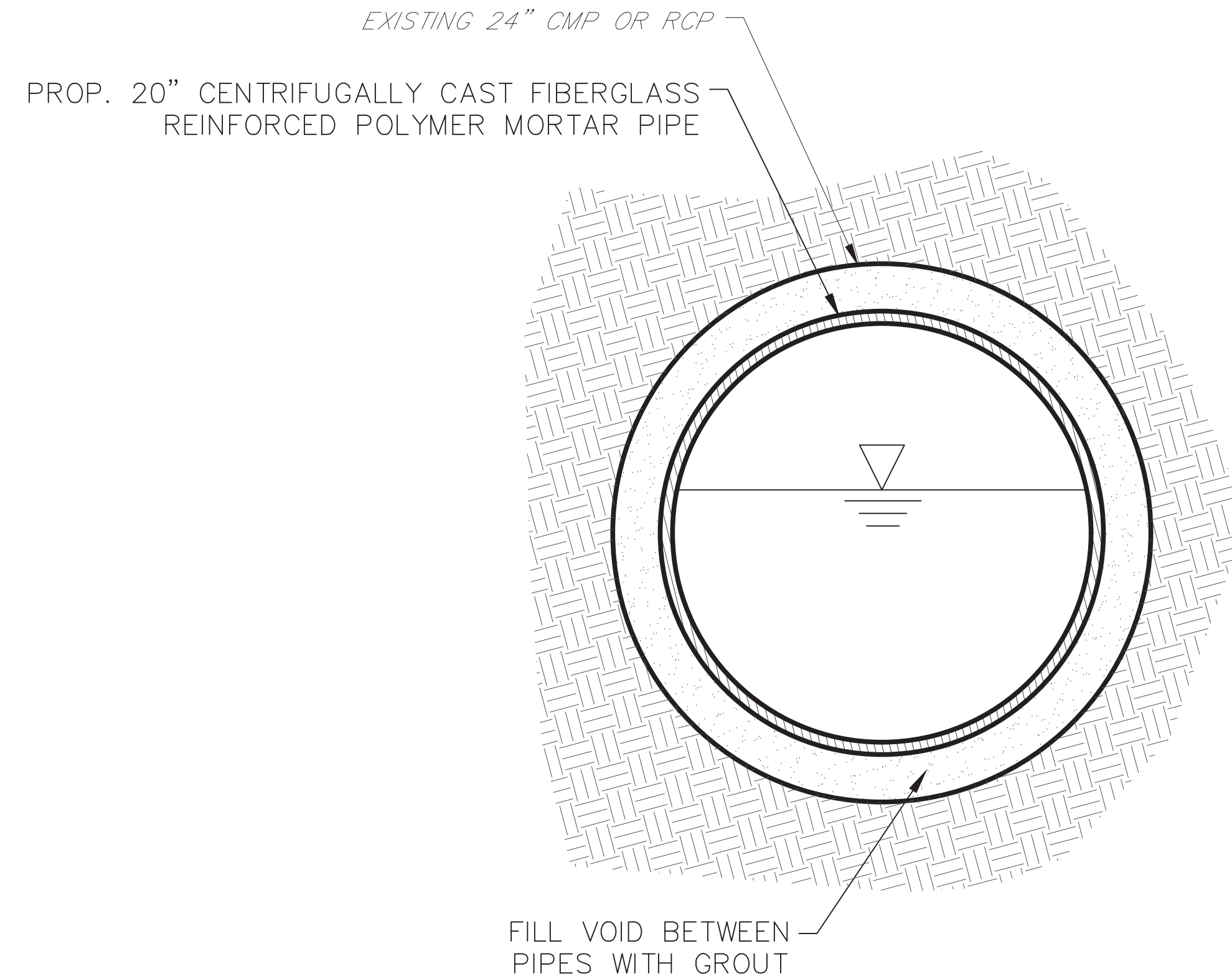
PLAN & PROFILE 07 OF 07

BACLOFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION



Huitt-Zollars Inc.
 Firm Registration No. F-761

DATE: 05-29-2019
 SCALE: 1"=10' (H)
 1"=1' (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 15 OF 19

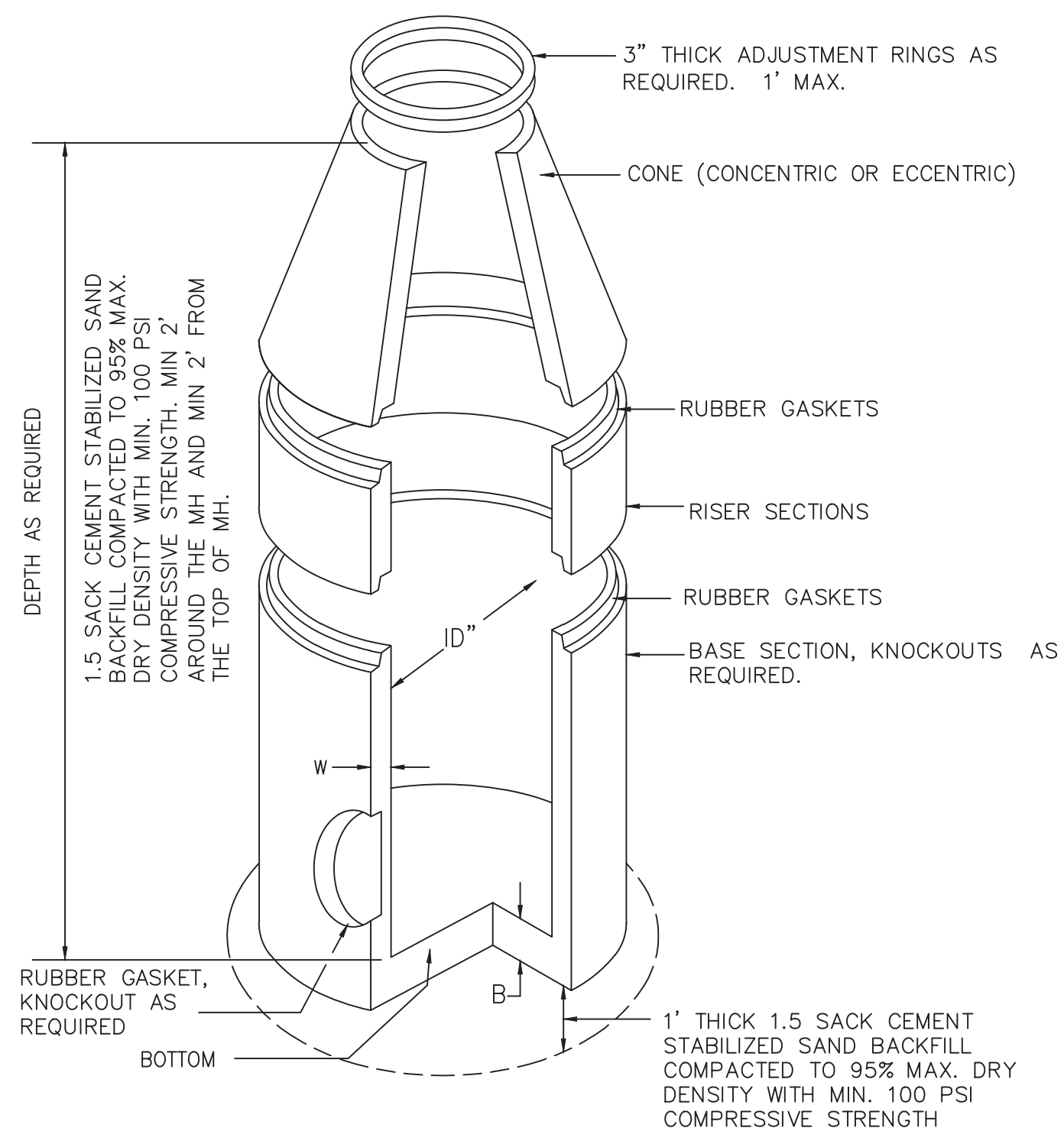


A SECTION OF PIPES
16 SCALE: N.T.S.

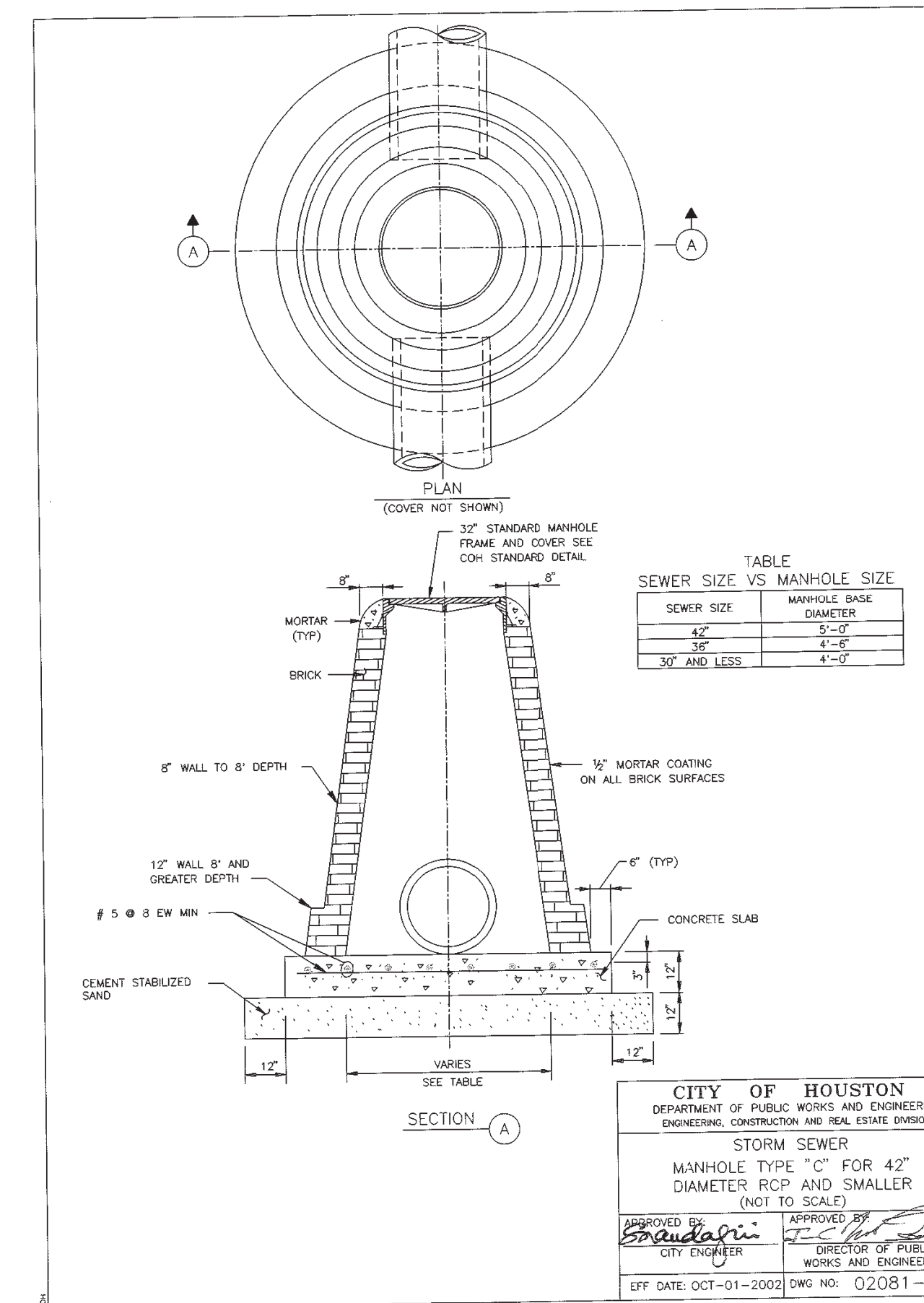
DIMENSIONS AND WEIGHTS			
I.D. SIZE (in)	W (in)	B (in)	RISER WT/LF (lb)
48	5	6	868
60	6	8	1300
72	7	8	1811
96	9	8	3090

NOTE:

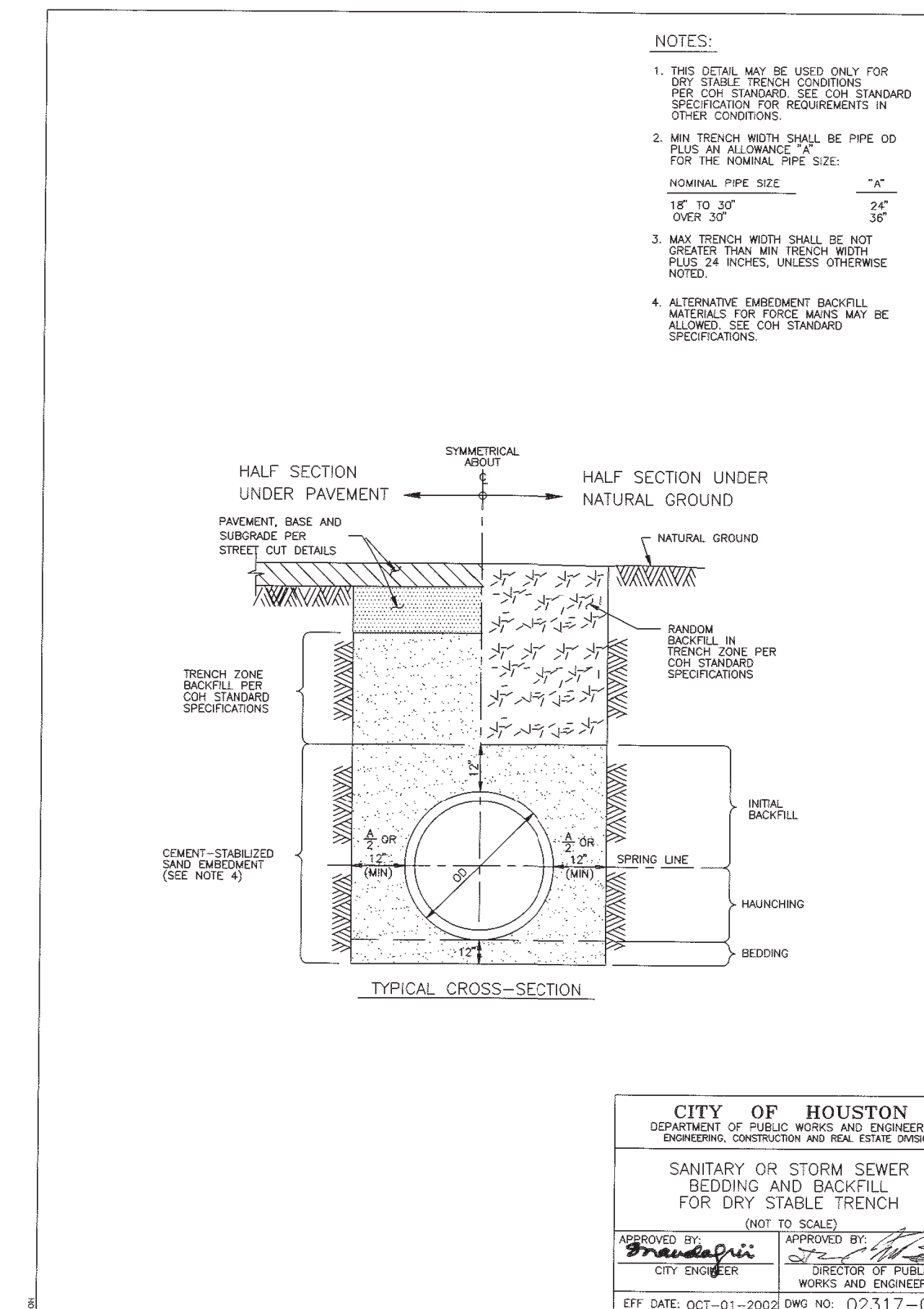
- CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4000 PSI AT 28 DAYS. RATES FOR H-20 LOADING.
- PRECAST CONCRETE MANHOLE CONFORMING TO ASTM C478. STRUCTURAL REINFORCEMENT CONFORMING TO ASTM 615A.
- LIFTING INSERTS AS REQUIRED.
- ALL JOINTS SHALL BE SEALED WITH APPROVED GASKET.
- LARGER INSIDE DIAMETER MANHOLES SHALL BE REQUIRED IF LESS THAN 1' OF WALL SURFACE IS LEFT BETWEEN OPENINGS OR AS SPECIFIED BY ENGINEER.
- ALL MANHOLES IN OPEN DITCH AND ABOVE FINISHED GRADE SHALL HAVE HINGED FRAME AND COVER.
- ALL MANHOLES IN PAVED AREAS SHALL HAVE BLOCK OUT (SEE MISC. DETAIL SHEET).



B TYPE "C" PRECAST STORM SEWER MANHOLE
16 SCALE: N.T.S.



C CONFLICT MANHOLE DETAIL
16 SCALE: N.T.S.



I:\R308005.01 - Baciliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\16-18 STANDARD DETAILS.dwg Plotted 10/17/2019-9:56 AM dmjgl

NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBPE REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220



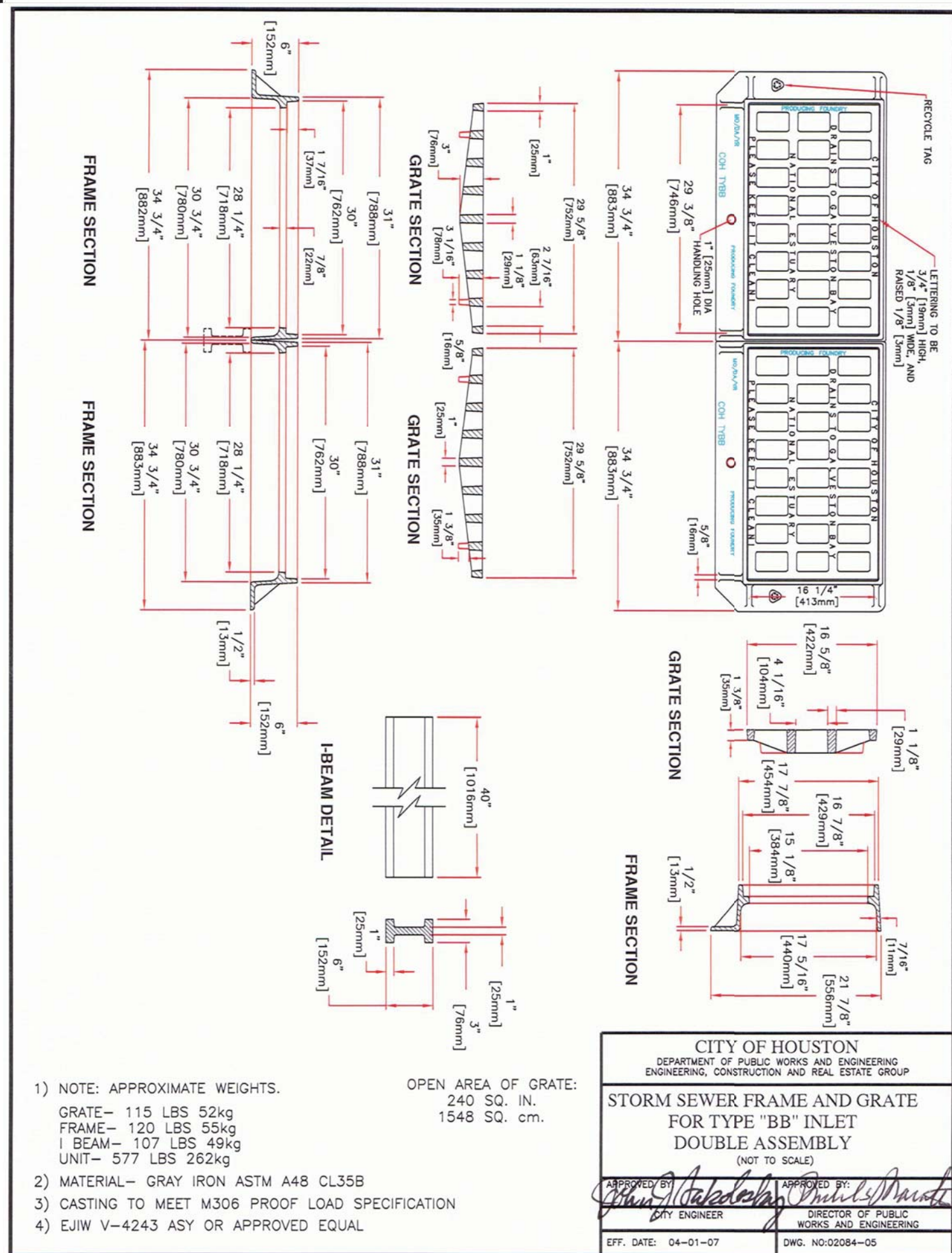
STANDARD DETAILS 01 OF 03

BACILIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION



Huitt-Zollars Inc.
Firm Registration No. F-761

DATE: 05-29-2019
SCALE: N/A (H)
N/A (V)
DRAWN: F.J.S.
DESIGNED: D.E.M.
CHECKED: G.W.
PROJ. NO.: R308005.01
SHEET 16 OF 19



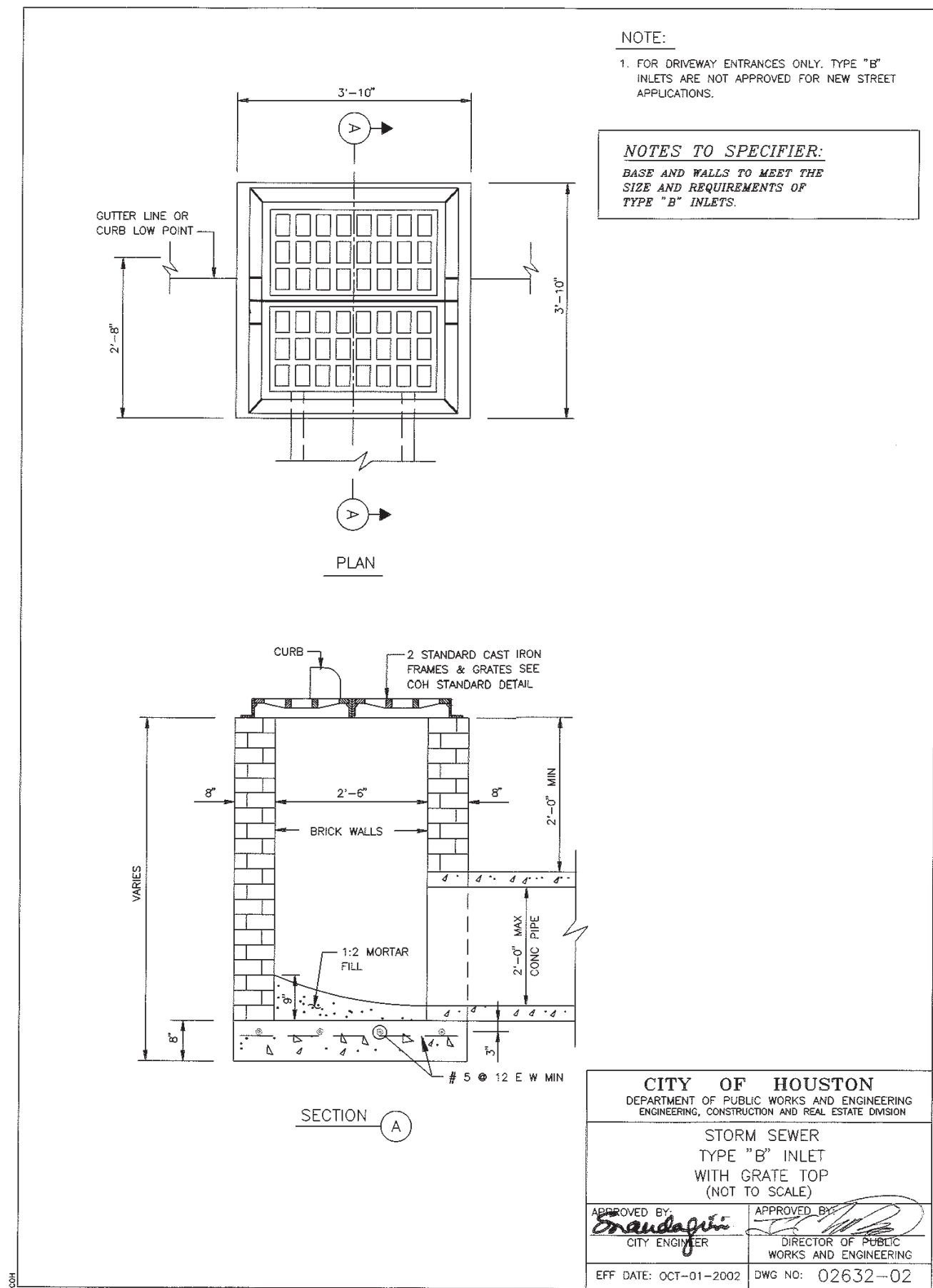
1) NOTE: APPROXIMATE WEIGHTS.
 GRATE - 115 LBS 52kg
 FRAME - 120 LBS 55kg
 I BEAM - 107 LBS 49kg
 UNIT - 577 LBS 262kg

2) MATERIAL - GRAY IRON ASTM A48 CL35B

3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION

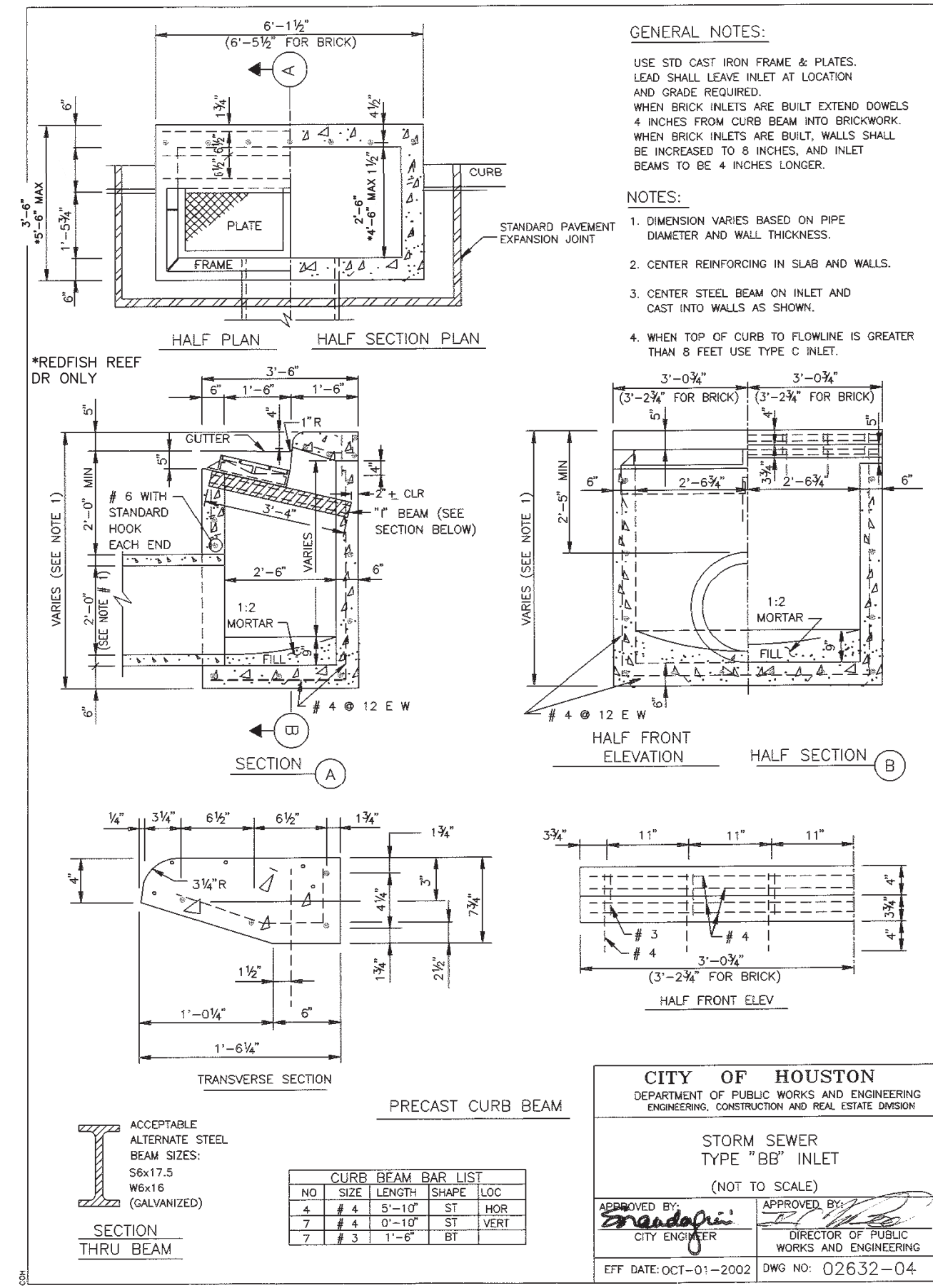
4) EIJV V-4243 ASY OR APPROVED EQUAL

OPEN AREA OF GRATE:
 240 SQ. IN.
 1548 SQ. CM.



NOTE:
 1. FOR DRIVEWAY ENTRANCES ONLY TYPE "B" INLETS ARE NOT APPROVED FOR NEW STREET APPLICATIONS.

NOTES TO SPECIFIER:
 BASE AND WALLS TO MEET THE SIZE AND REQUIREMENTS OF TYPE "B" INLETS.

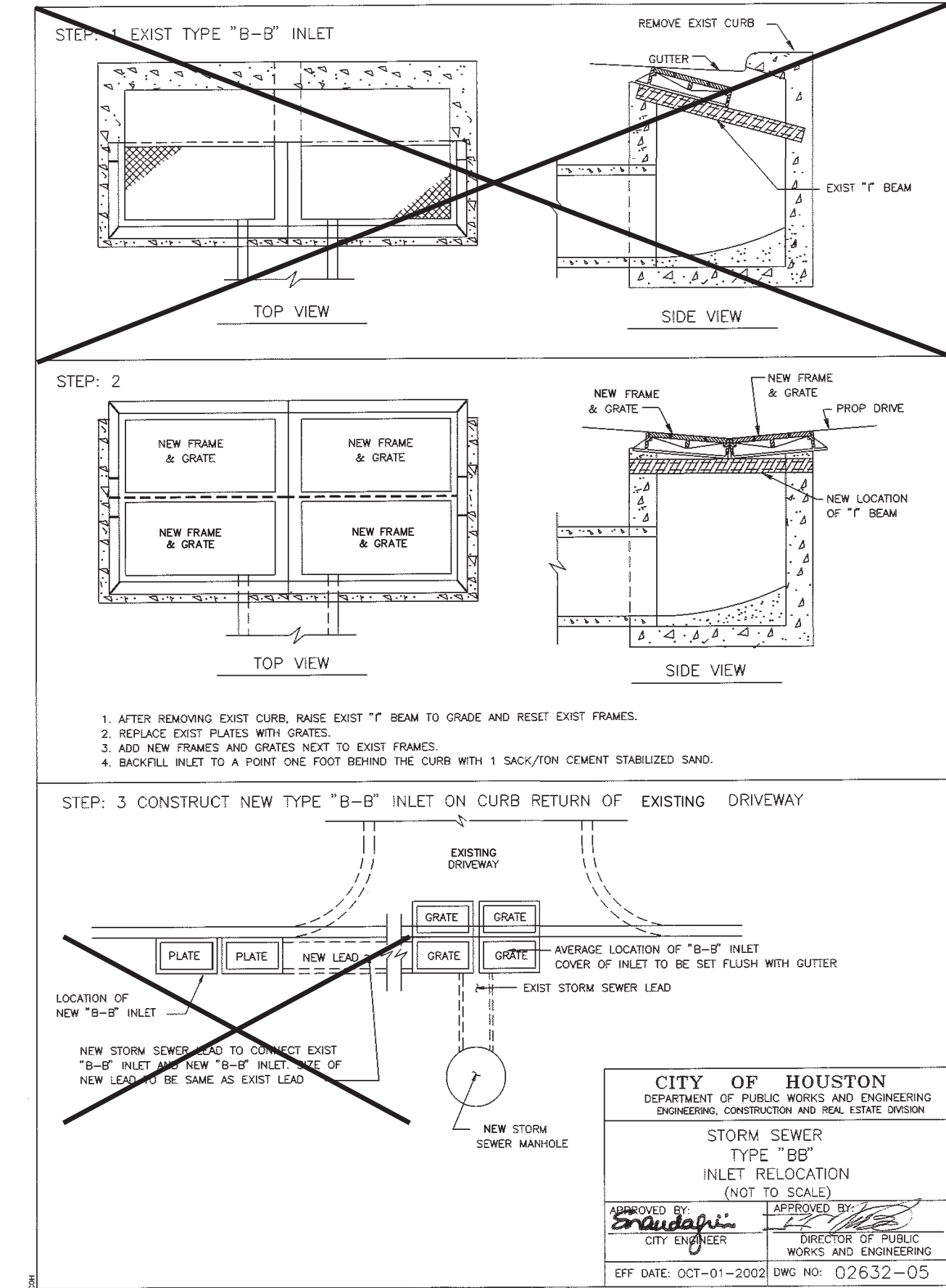
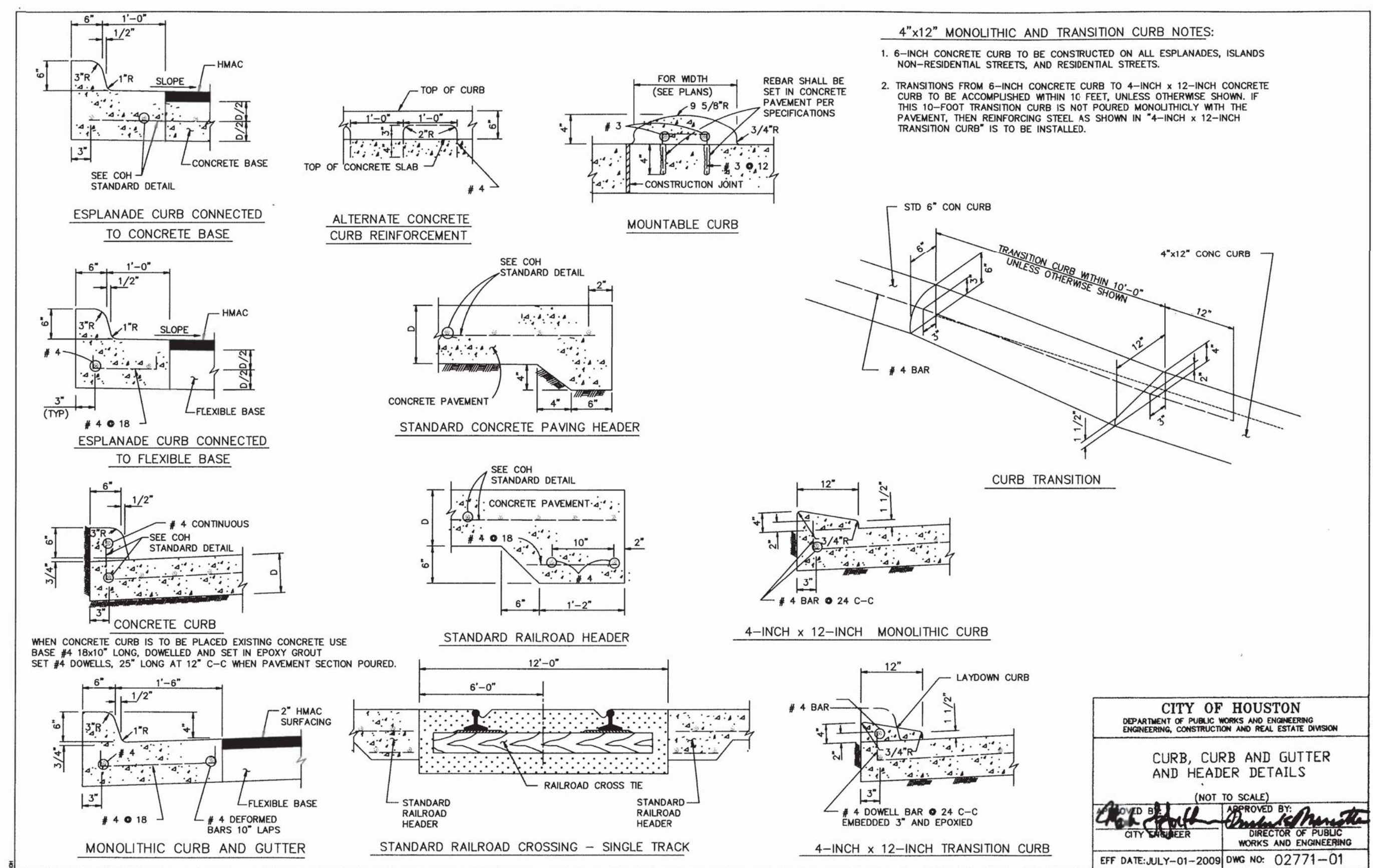


GENERAL NOTES:
 1. USE STD CAST IRON FRAME & PLATES. LEAD SHALL LEAVE INLET AT LOCATION AND GRADE REQUIRED.
 2. WHEN BRICK INLETS ARE BUILT, EXTEND DOWELS 4 INCHES FROM CURB BEAM INTO BRICKWORK.
 3. WHEN BRICK INLETS ARE BUILT, WALLS SHALL BE INCREASED TO 8 INCHES, AND INLET BEAMS TO BE 4 INCHES LONGER.

NOTES:
 1. DIMENSION VARIES BASED ON PIPE DIAMETER AND WALL THICKNESS.
 2. CENTER REINFORCING IN SLAB AND WALLS.
 3. CENTER STEEL BEAM ON INLET AND CAST INTO WALLS AS SHOWN.
 4. WHEN TOP OF CURB TO FLOWLINE IS GREATER THAN 8 FEET USE TYPE C INLET.

CURB BEAM BAR LIST

NO	SIZE	LENGTH	SHAPE	LOC
4	# 4	5'-10"	ST	VERT
7	# 4	0'-10"	ST	VERT
7	# 3	1'-6"	BT	



NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TPBE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220

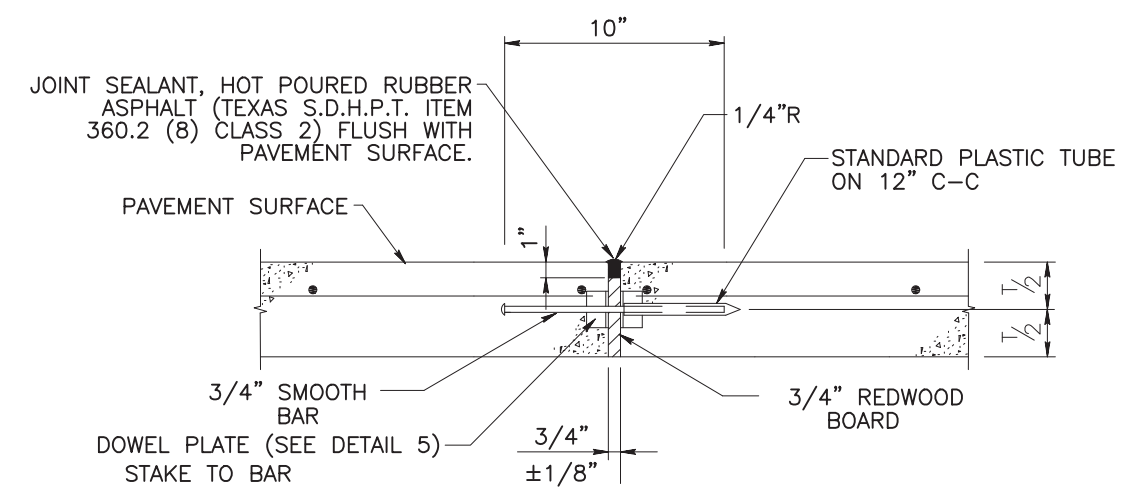
STANDARD DETAILS 02 OF 03

BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION

Huitt-Zollars Inc.
 Firm Registration No. F-761

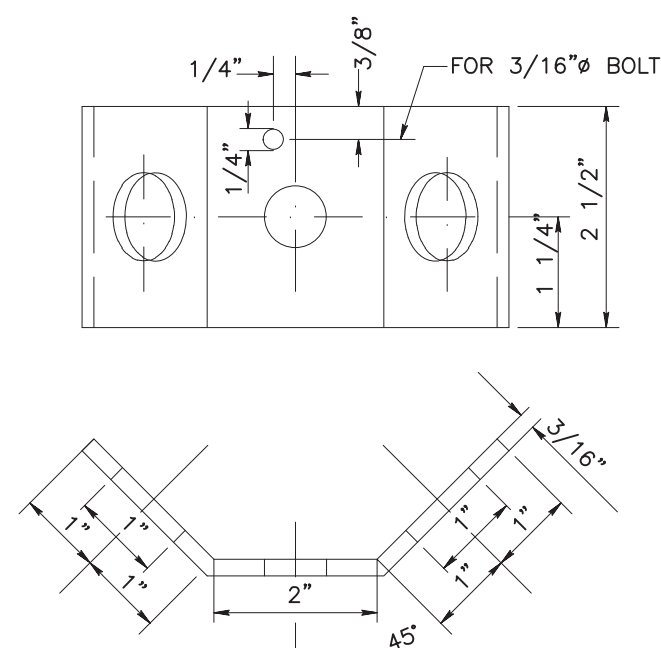
DATE: 05-29-2019
 SCALE: N/A (H)
 N/A (V)
 DRAWN: F.J.S.
 DESIGNED: D.E.M.
 CHECKED: G.W.
 PROJ. NO.: R308005.01
 SHEET 17 OF 19

I:\R308005.01 - Baciff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\16-18 STANDARD DETAILS.dwg Plotted 10/17/2019 9:56 AM dmjgl

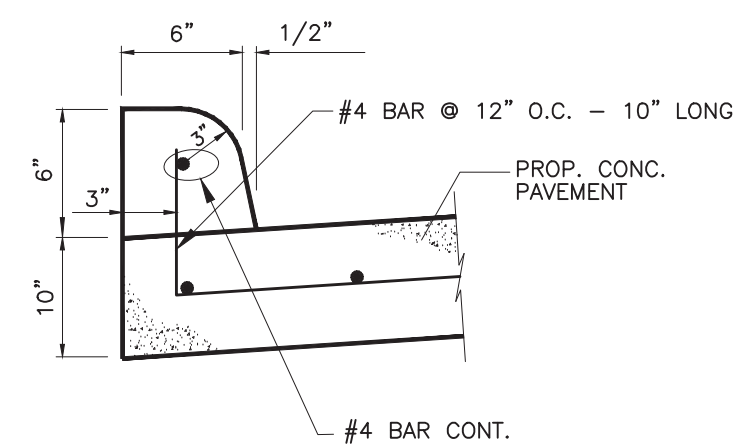


1. EXPANSION JOINTS SHALL MATCH LOCATIONS IN EXIST. CONC. PAVEMENT, SHALL BE PLACED AT THE END OF EACH CURB RADIUS, AND SHALL BE SPACED AT A MAXIMUM OF 60'-0" APART.
2. STAKES FOR TRANSVERSE JOINTS SHALL NOT BE PLACED CLOSER THAN 6" TO A LONGITUDINAL JOINT. THE TOP OF EACH STAKE SHALL NOT BE LESS THAN 1" BELOW THE FINISH SURFACE.
3. ALTERNATIVE DOWEL IS A CANTILEVER TYPE, CAST MALLEABLE IRON LOAD TRANSMISSION UNIT, STAR-LUG, MODEL D-27, OR EQUAL, ON 12" C-C.

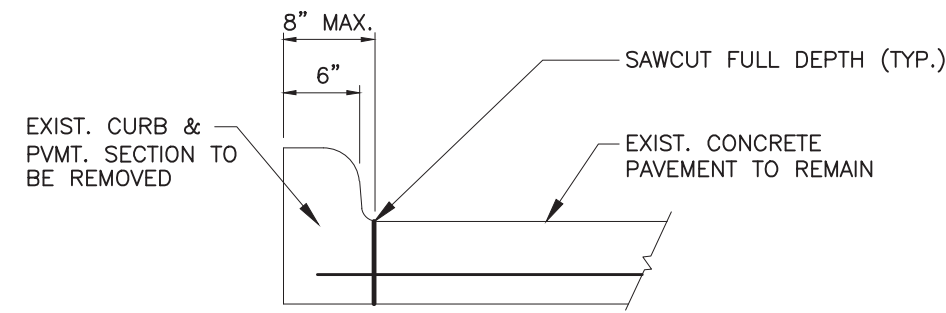
1 SECTION - TYP. EXPANSION JOINT
NOT TO SCALE



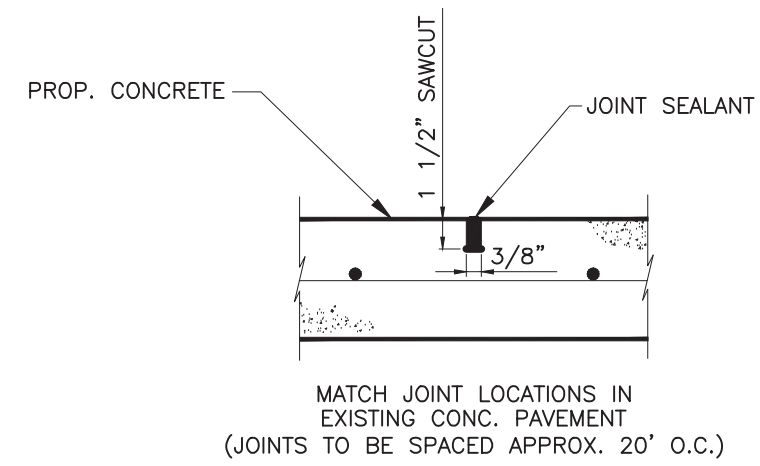
2 DETAIL - DOWEL PLATE
NOT TO SCALE



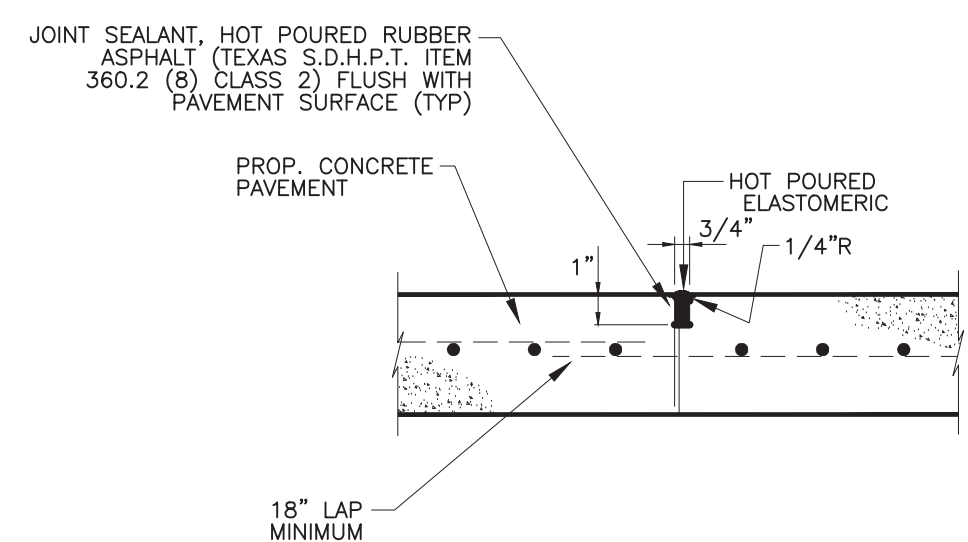
3 SECTION - TYP. CONCRETE CURB
NOT TO SCALE



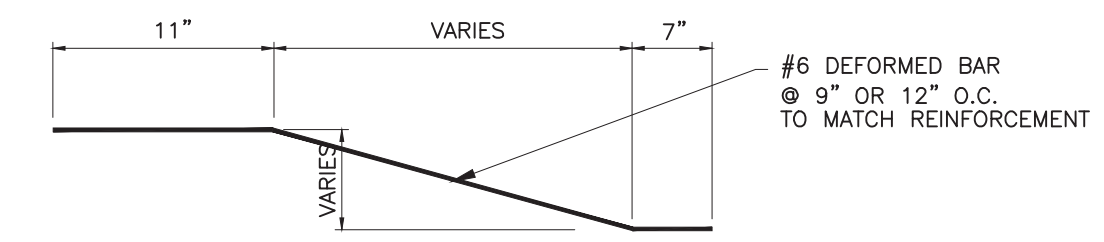
4 TYP. SAWCUT DETAIL (EXCEPT FOR SITE 4, SEE SHEET 18)
NOT TO SCALE



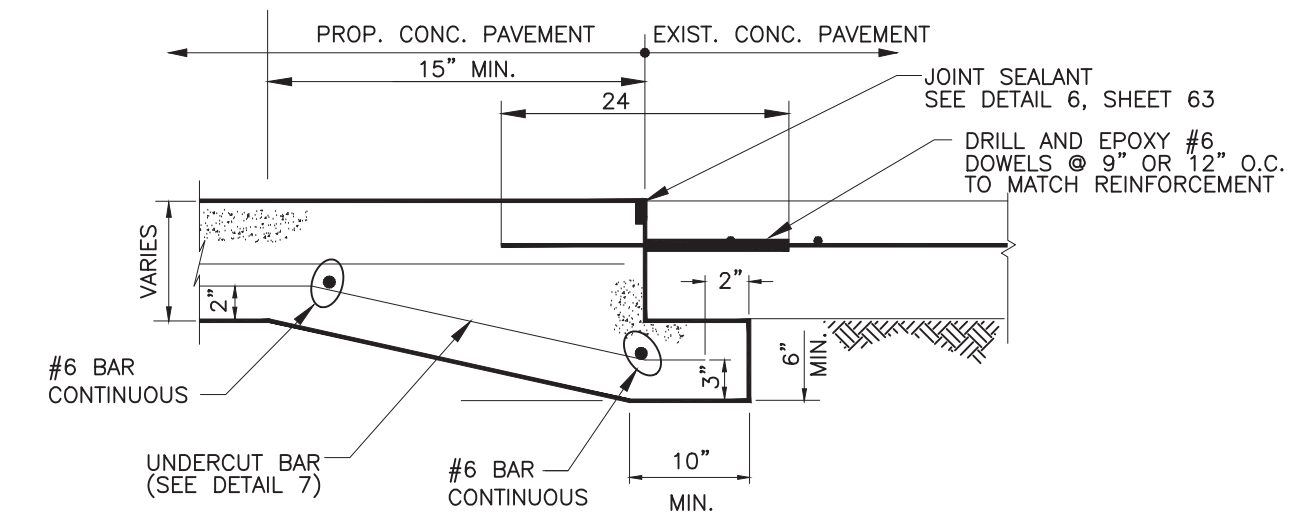
5 SAWCUT CONTROL JOINT
NOT TO SCALE



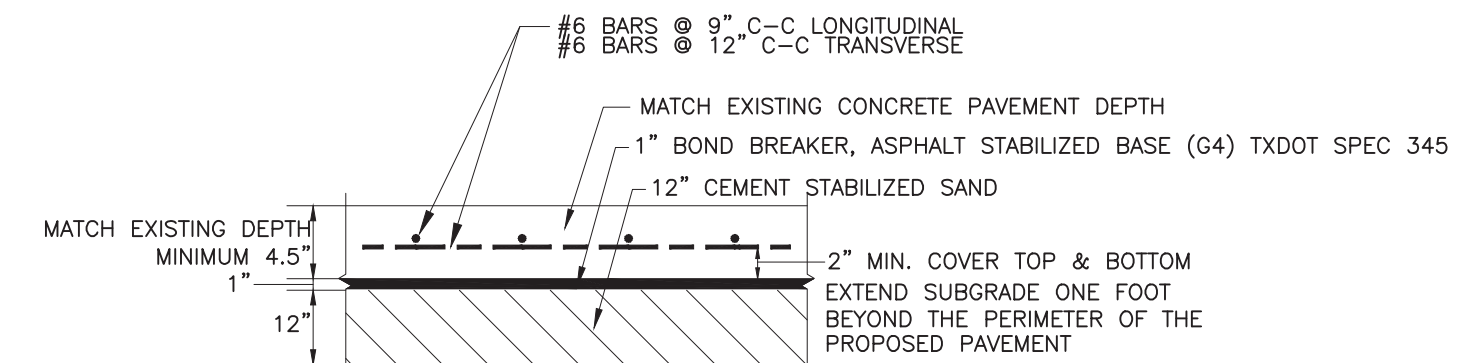
6 CONSTRUCTION JOINT
NOT TO SCALE



7 DETAIL - UNDERCUT BAR
NOT TO SCALE



8 SECTION - TYP. PAVEMENT TIE-IN
NOT TO SCALE



9 SECTION - TYP. CONCRETE PAVEMENT
NOT TO SCALE

NO.	REVISION	DATE

HUITT-ZOLLARS
Huitt-Zollars, Inc.
TBPE REG NO F-761
10350 Richmond Ave, Suite 300
Houston, Texas 77042
Phone (281) 496-0066
Fax (281) 496-0220



STANDARD DETAILS 03 OF 03

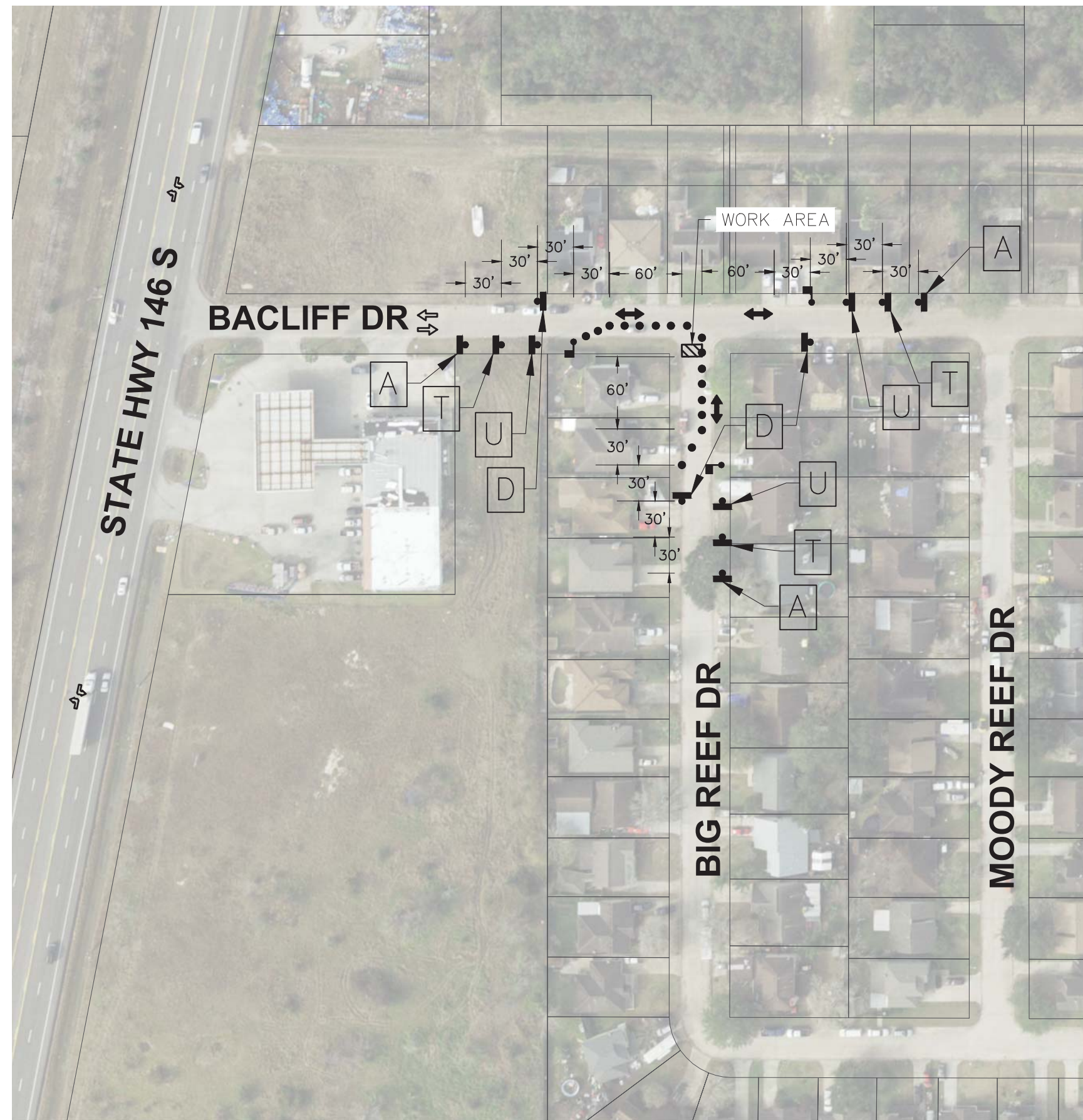
BACLIFF VILLAS SUBDIVISION
DRAINAGE RESTORATION



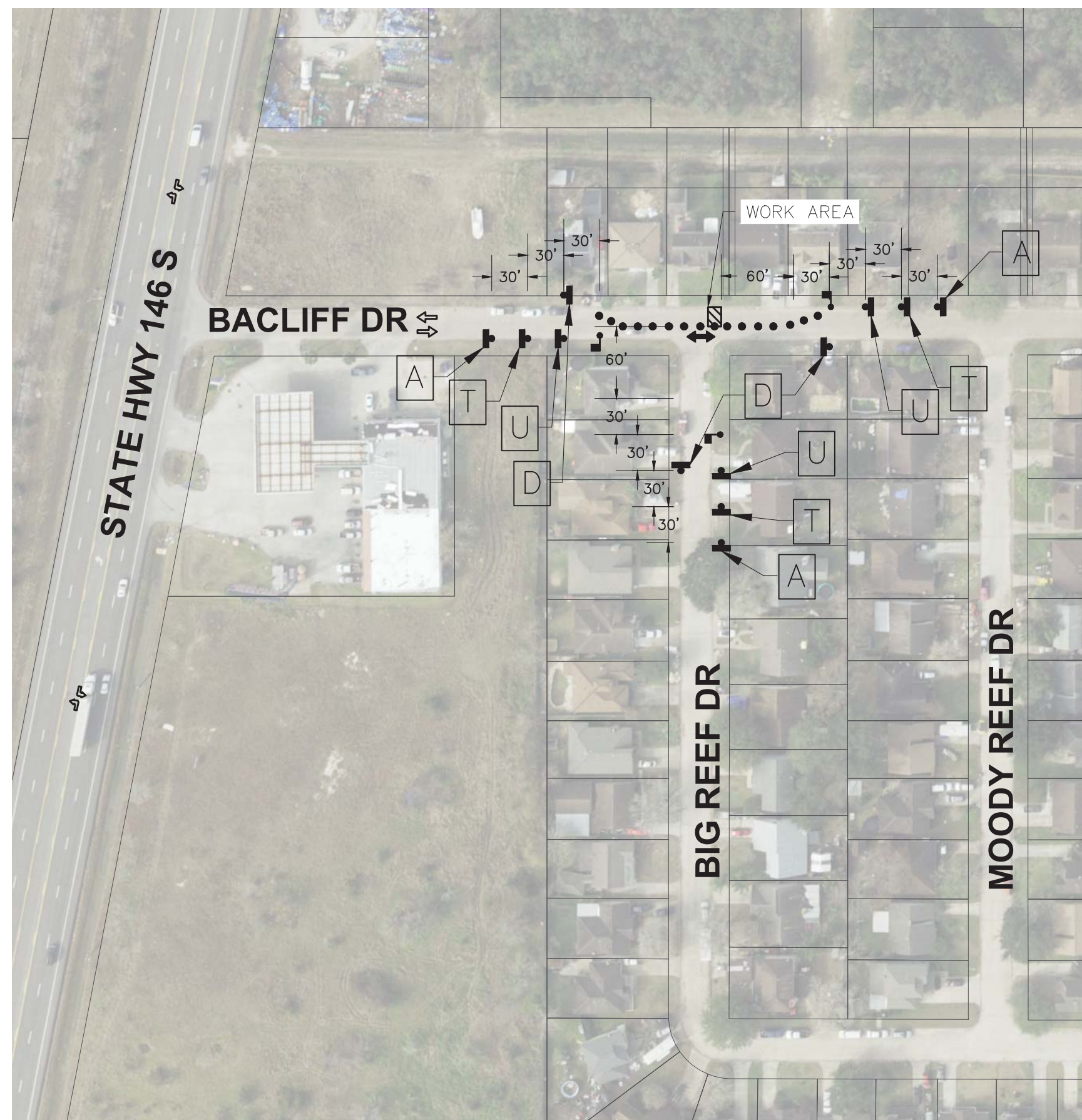
Huitt-Zollars Inc.
Firm Registration No. F-761

DATE: 05-29-2019
SCALE: N/A (H)
N/A (V)
DRAWN: F.J.S.
DESIGNED: D.E.M.
CHECKED: G.W.
PROJ. NO.: R308005.01
SHEET 18 OF 19

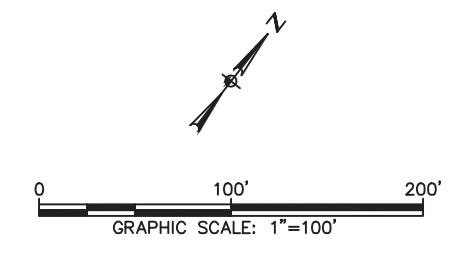
TRAFFIC CONTROL PLAN PHASE I (TYP)



TRAFFIC CONTROL PLAN PHASE III (TYP)



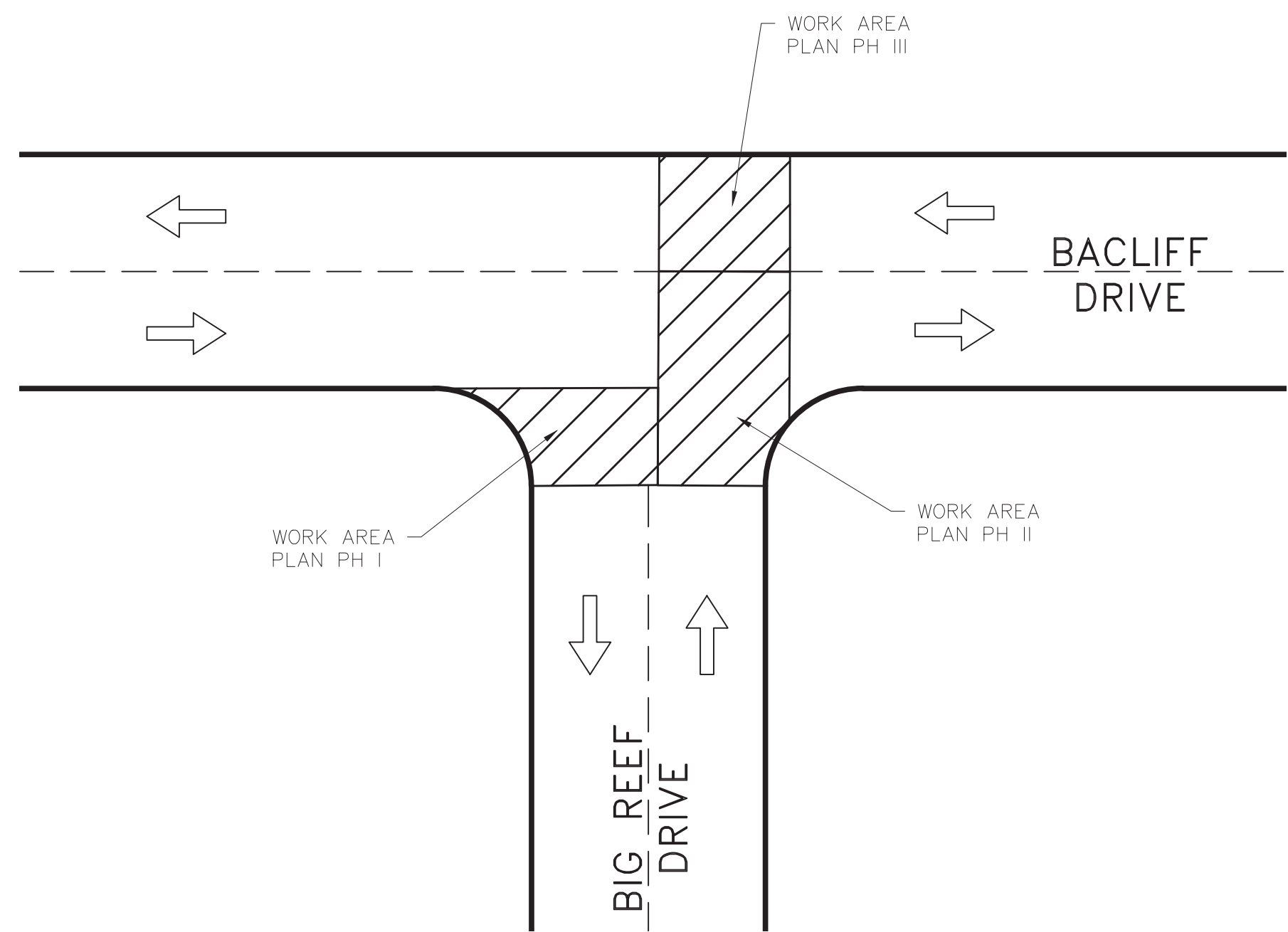
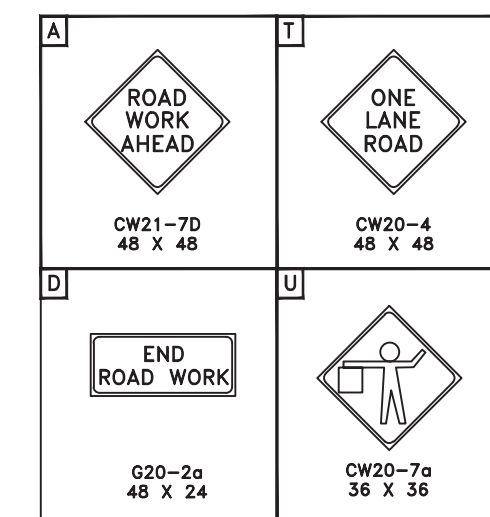
TRAFFIC CONTROL PLAN PHASE II (TYP)



LEGEND

- DETOUR FLOW
- TRAFFIC FLOW
- APPROVED CHANNELIZATION DEVICE
- TYPE III BARRICADE WITH TO FLASHERS SIGN
- CONSTRUCTION AREA
- FLASHING ARROW PANEL
- OFF DUTY UNIFORMED POLICE OFFICER OR FLAGGER

STREET NAME	LANE WIDTH
BACLIFF DRIVE	28 FEET



1 TRAFFIC CONTROL PLAN WORK AREA LAYOUT N.T.S. (TYP)

NOTE:

1. TRAFFIC CONTROL PLAN FOR BIG REEF DR. AND BACLIFF DR. ALL OTHERS ARE SIMILAR.
2. ALL WORK GIVEN MUST BE COMPLETED BEFORE BEGINNING WORK ON A DIFFERENT INTERSECTION

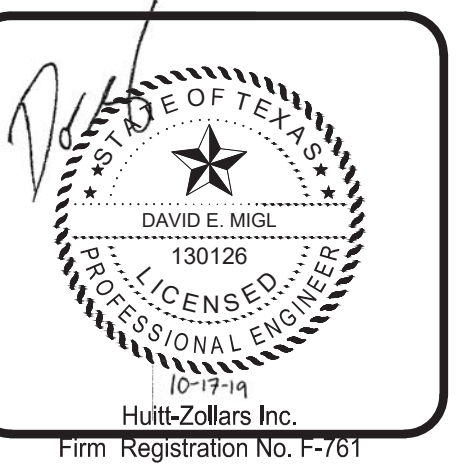
I:\R308005.01 - Baccliff Villas Sub Drainage Restoration\10 CAD & BIM\10.1 AutoCAD\SHEET FILES\19 TRAFFIC CONTROL PLAN.dwg Plotted 10/17/2019 9:56 AM dmjg

NO.	REVISION	DATE

HUITT-ZOLLARS
 Huitt-Zollars, Inc.
 TBPE REG NO F-761
 10350 Richmond Ave, Suite 300
 Houston, Texas 77042
 Phone (281) 496-0066
 Fax (281) 496-0220



TRAFFIC CONTROL PLAN
 BACLIFF VILLAS SUBDIVISION
 DRAINAGE RESTORATION



DATE:	05-29-2019
SCALE:	N/A (H) N/A (V)
DRAWN:	F.J.S.
DESIGNED:	D.E.M.
CHECKED:	G.W.
PROJ. NO.:	R308005.01
SHEET	19 OF 19