Ordinance authorizing Wastewater Collection Line Construction Reimbursement Agreement with Grangefield Development, LLC for a planned residential subdivision named Grange Park Unit 3 with completion within 18 months; transferring \$140,000 from the Water Arterial Transmission and Grid Main Trust Fund to the Sanitary Sewer Collection Line Trust Fund; and appropriating \$160,164.94 from the Sanitary Sewer Collection Line Trust Fund, to reimburse the developer per the agreement.

WHEREAS, under the UDC, the Developer is eligible for reimbursement of the Developer's costs for the construction of the sanitary sewer collection line;

WHEREAS, the Developer has submitted an application for reimbursement of the costs for installing the collection line; and

WHEREAS, it is to the best interest of the City that the wastewater collection line be constructed to its ultimate capacity under the City's applicable Master Plan;

WHEREAS, after a public hearing pursuant to UDC §8.5.2.I & §8.5.1.C.4, City Council finds the transfer of \$140,000 from the 4030-21805 Water Arterial Transmission and Grid Main Trust Fund to the No.4220-21801 Sanitary Sewer Collection Line Trust Fund is necessary to better carry out the purposes of this Unified Development Code.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CORPUS CHRISTI, TEXAS:

SECTION 1. The City Manager or designee is authorized to execute a Wastewater Collection Line Construction and Reimbursement Agreement attached hereto, with Grangefield Development, LLC for the construction and installation of a master planned collection line associated with the development of the platted property known as Grange Park Unit 3, Corpus Christi, Texas.

SECTION 2. Funding in the amount of \$140,000 is transferred from the No. 4030-21805 Water Arterial Transmission and Grid Main Trust to the No.4220-21801 Sanitary Sewer Collection Line Trust Fund.

SECTION 3. Funding in the amount of \$160,164.94 is appropriated from the No. 4220-21801 Sanitary Sewer Collection Line Trust Fund, to reimburse the Developer for the construction of a master planned wastewater collection line, and construction improvements in accordance with the Agreement.

That the foregoing ordinance was read for the first time a		า this
the day of, 2020, by the following v	vote:	
Joe McComb	Michael Hunter	_
Roland Barrera	Ben Molina	_
Rudy Garza	Everett Roy	-
Paulette M. Guajardo	Greg Smith	_
Gil Hernandez		
That the foregoing ordinance was read for the second tinday of 2020, by the following vote:	me and passed finally on this the	
Joe McComb	Michael Hunter	_
Roland Barrera	Ben Molina	_
Rudy Garza	Everett Roy	_
Paulette M. Guajardo	Greg Smith	_
Gil Hernandez		
PASSED AND APPROVED on this the day of	, 2020.	
ATTEST:		
Rebecca Huerta City Secretary	Joe McComb Mayor	

WASTEWATER COLLECTION LINE EXTENSION CONSTRUCTION AND REIMBURSEMENT AGREEMENT

STATE OF TEXAS § SCOUNTY OF NUECES §

This Wastewater Collection Line Extension Construction and Reimbursement Agreement ("Agreement") is entered into between the City of Corpus Christi ("City"), a Texas home-rule municipality, and Grangefield Development, LLC ("Developer/Owner"), a Texas Limited Liability Company

WHEREAS, the Developer/Owner, in compliance with the City's Unified Development Code ("UDC"), has a plat, approved by the Planning Commission on July 22, 2020 to develop a tract of land, to wit approximately 20.01 acres, known as Grange Park Unit 3, Corpus Christi Texas as shown in the attached Exhibit 1, the content of such exhibit being incorporated by reference into this Agreement;

WHEREAS, under the UDC, the Developer/Owner is responsible for construction of the wastewater collection line extension ("Collection Line");

WHEREAS, under the UDC, the Developer/Owner is eligible for reimbursement of the Developer/Owner's costs for the construction of Collection Line;

WHEREAS, it is to the best interest of the City that the Collection Line be constructed to its ultimate capacity under the City's applicable Master Plan;

WHEREAS, Section 8.5.2.E. of the UDC authorizes the acceptance of applications to be eligible for reimbursement in the future when funds become fully available in the Wastewater Collection Line Trust Fund and are appropriated by the City Council; and

WHEREAS, the Developer/Owner has submitted an application for reimbursement of the costs from the Wastewater Collection Line Trust Fund for installing the Collection Line, as shown in **Exhibit 2**, the content of such exhibit being incorporated by reference into this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained in this Agreement, the parties do covenant and agree as follows:

- 1. TRUSTEE LIABILITY. The City is executing this agreement as trustee of the Wastewater Trust Fund pursuant to UDC §8.5. The City is acting as trustee to further its governmental functions of providing water and sewer service. Texas Constitution Article 11, Section 3 prohibits the City from becoming a subscriber to the capital of any private corporation or association, or make any appropriation or donation to the same, or in anywise loan its credit. As such, the City's participation as Trustee does not create a loan of its credit. Execution of this agreement constitutes a promise to pay only to the extent that the assets and future assets of the trust are sufficient for such purpose and it is expressly agreed that any judgment will only be satisfied out of the assets of the trust and not out of the City's assets. The City is excluded from personal liability.
- 2. <u>REQUIRED CONSTRUCTION</u>. Developer/Owner shall construct the Collection Line in compliance with the City's UDC, the City's Infrastructure Design Manual, and all local, state and

federal laws, codes and regulations, in accordance with the plans and specifications submitted to the City's Development Services Department and reviewed and approved by the City's Development Services Engineer.

3. PLANS AND SPECIFICATIONS.

a. Developer/Owner shall contract with a professional engineer licensed in the State of Texas and acceptable to the City's Development Services Engineer, to prepare plans and specifications for the Collection Line, as shown in the attached **Exhibit 3**, the content of such exhibit being incorporated by reference into this Agreement, with the following minimum requirements:

PARTA - C	GENERAL		
A1	Mobilization	LS	1.00
A2	Payment and Performance Bond	LS	1 00
A2	Storm Water Pollution Prevention Plan	LS	1.00
A 3	Construction Survey	LS	1.00
PART B - S	STORMWATER POLLUTION		
B1	Stabilized Construction Entrance & Exit	EA	1.00
B2	Reinforced Filter Fabric Fence	LF	100.00
B 3	Concrete Washout Fence	EA	1 00
84	Dewatering Fence	EA	1.00
PART C -	SITE WORK		
C1	Site Preparation	AC	1 00
C2	Asphalt Repair	SY	14 00
C3	Site Grading	L\$	1 00
PART D -	WASTEWATER UTILITY		
D1	WW Utility 8* PVC SDR 26	LF	40 00
D2	WW Utility 10" PVC SDR 26	LF	850 00
D3	WW Utility 12" PVC SDR 26	LF	150 00
D4	WW Utility Embedment	L F	1,040.00
D3	WW Utility 4' Diameter Manhole - 12-14 ft	EA	1 00
D4	WW Utility 4' Diameter Manhole - 14-16 ft	EA	2 00
D5	WW Utility 5" Diameter Manhole - 16-18 ft	EA	2 00
D3	Sanitary Utility Trench Safety	ŁF	1,040.00
D4	Sanitary Utility Dewatering	LF	1,040 00
D6	Sanitary Utility - Tie to Existing	EA	1.00
D7	Sanitary Utility End Plug - 8"	EA	4 00
PART E -	ADDITIONAL CONSTRUCTION		
Ei	Additional Construction Items Allowance	AL	1.00

- b. The plan must be in compliance with the City's master plans.
- c. The plans and specifications must comply with the City's Wastewater Standards Detail Sheets and Standard Specifications.

- c. Before the Developer/Owner starts construction, the plans and specifications must be approved by the City's Development Services Engineer.
- 4. <u>SITE IMPROVEMENTS</u>. Prior to the start of construction of the Collection Line, Developer/Owner shall acquire and dedicate to the City the required additional public utility easements ("Easements"), if any, necessary for the completion of the Collection Line. If any of the property needed for the Easements is owned by a third party and the Developer/Owner is unable to acquire the Easements through reasonable efforts, then the City may use its powers of eminent domain to acquire the Easements. Developer will be responsible for cost of acquisition, payable from the reimbursement agreed to in this agreement.
- 5. <u>PLATTING FEES</u>. Developer/Owner shall pay to the City the required acreage fees and prorata fees as required by the UDC.
- 6. <u>DEVELOPER/OWNER TO AWARD CONTRACT FOR IMPROVEMENTS</u>. Developer/Owner shall award a contract and complete the Collection Line, under the approved plans and specifications, by April 30, 2022.
- 7. TIME IS OF THE ESSENCE. Time is of the essence in the performance of this contract.
- 8. PROMPT AND GOOD FAITH ACTIONS. The parties shall act promptly and in good faith in performing their duties and obligations under this Agreement. If this Agreement calls for review or inspections by the City, then the City's reviews or inspections must be completed thoroughly and promptly.
- 9. <u>DEFAULT</u>. The following events shall constitute default:
 - a. Developer/Owner fails to engage a professional engineer for the preparation of plans and specifications by the 10th calendar day after the date of approval of this Agreement by the City Council.
 - b. Developer/Owner's professional engineer fails to submit the plans and specifications to the City's Director of Engineering Services and to the Development Services Engineer by the 60th calendar day after the date of approval of this Agreement by the City Council.
 - c. Developer/Owner fails to award a contract for the construction of the Collection Line, according to the approved plans and specifications, by the 90th calendar day after the date of approval of this Agreement by the City Council.
 - d. Developer/Owner's contractor does not reasonably pursue construction of the Collection Line under the approved plans and specifications.
 - e. Developer/Owner's contractor fails to complete construction of the Collection Line, under the approved plans and specifications, on or before April 30, 2022.
 - f. Either the City or the Developer/Owner otherwise fails to comply with its duties or obligations under this Agreement.

10. NOTICE AND CURE.

- a. In the event of a default by either party under this Agreement, the non-defaulting party shall deliver notice of the default, in writing, to the defaulting party stating, in sufficient detail, the nature of the default and the requirements to cure such default.
- b. After delivery of the default notice, the defaulting party has 15 business days from the delivery of the default notice ("Cure Period") to cure the default.
- c. In the event the default is not cured by the defaulting party within the Cure Period, then the non-defaulting party may pursue its remedies in this section.
- d. Should the Developer/Owner fail to perform any obligation or duty of this Agreement, the City shall give notice to the Developer/Owner, at the address stated in section 12, of the need to perform the obligation or duty and, should the Developer/Owner fail to perform the required obligation or duty within 15 days of receipt of the notice, the City may perform the obligation or duty, charging the cost of such performance to the Developer/Owner by reducing the reimbursement amount due to the Developer/Owner.
- e. In the event of an uncured default by the Developer/Owner, after the appropriate notice and Cure Period, the City has all its common law remedies and the City may:
 - 1. Terminate this Agreement after the required notice and opportunity to cure the default:
 - 2. Refuse to record a related plat or issue any certificate of occupancy for any structure to be served by the project; and/or
 - 3. Perform any obligation or duty of the Developer/Owner under this Agreement and charge the cost of such performance to the Developer/Owner. The Developer/Owner shall pay to the City the reasonable and necessary cost of the performance within 30 days from the date the Developer/Owner receives notice of the cost of performance. In the event the Developer/Owner pays the City under the preceding sentence and is not otherwise in default under this Agreement, then the Agreement shall be considered in effect and no longer in default.
- f. In the event of an uncured default by the City after the appropriate notice and Cure Period, the Developer/Owner has all its remedies at law or in equity for such default.

11. FORCE MAJEURE.

- a. The term "force majeure" as employed in this Agreement means and refers to acts of God; strikes, lockouts, or other industrial disturbances; acts of public enemies; insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; washouts; droughts; arrests; civil disturbances; explosions; or other causes not reasonably within the control of the party claiming the inability.
- b. If, by reason of force majeure, either party is rendered wholly or partially unable to carry out its obligations under this Agreement, then the party claiming force majeure

shall give written notice of the full particulars of the force majeure to the other party within ten (10) business days after the occurrence or waive the right to claim it as a justifiable reason for delay. The obligations of the party giving the required notice, to the extent affected by the force majeure, are suspended during the continuance of the inability claimed but for no longer period, and the party shall endeavor to remove or overcome such inability with all reasonable dispatch.

12. NOTICES.

- a. Any notice or other communication required or permitted to be given under this Agreement must be given to the other party in writing at the following address:
 - 1. If to the Developer/Owner:

Grangefield Development, LLC P.O. Box 271996 Corpus Christi, Texas 78427

2. If to the City:

City of Corpus Christi
Attn: Director, Development Services Department
2406 Leopard Street 78401
P. O. Box 9277
Corpus Christi, Texas 78469-9277

with a copy to:

City of Corpus Christi
Attn: Assistant City Manager, Business Support Services
1201 Leopard Street 78401
P. O. Box 9277
Corpus Christi, Texas 78469-9277

- b. Notice must be made by United States Postal Service, First Class mail, certified, return receipt requested, postage prepaid; by a commercial delivery service that provides proof of delivery, delivery prepaid; or by personal delivery.
- c. Either party may change the address for notices by giving notice of the change under the provisions of this section.
- 13. <u>THIRD PARTY BENEFICIARY</u>. Developer/Owner's contracts with the professional engineer for the preparation of the plans and specifications for the construction of the Collection Line, contracts for testing services, and contracts with the contractor for the construction of the Collection Line must provide that the City is a third-party beneficiary of each contract.
- 14. <u>PERFORMANCE AND PAYMENT BONDS</u>. Developer/Owner shall, before beginning the work that is the subject of this Agreement, furnish a performance bond payable to the City of Corpus Christi if the contract is in excess of \$100,000 and a payment bond if the contract is in excess of \$50,000. Bonds furnished must meet the requirements of Texas Insurance Code

3503, Texas Government Code 2253, and all other applicable laws and regulations. The performance or payment bond must name the City as an obligee. If the Developer/Owner is not an obligor, the Developer/Owner shall be named as a joint obligee. The bond must clearly and prominently display on the bond or on an attachment to the bond:

- (1) the name, mailing address, physical address, and telephone number, including the area code, of the surety company to which any notice of claim should be sent; or
- (2) the toll-free telephone number maintained by the Texas Department of Insurance under Subchapter B, Chapter 521, Insurance Code, and a statement that the address of the surety company to which any notice of claim should be sent may be obtained from the Texas Department of Insurance by calling the toll-free telephone number.
- 15. <u>WARRANTY</u>. Developer/Owner shall fully warranty the workmanship of and function of the Collection Line and the construction of the Collection Line for a period of one year from and after the date of acceptance of the facilities by the City's Director of Engineering Services.

16. REIMBURSEMENT.

- a. The cost for the Collection Line less \$31,435.71 lot/acreage fee credit is \$297,416.54 Subject to the conditions for reimbursement from the Wastewater Collection Line Trust Fund and the appropriation of funds, the City will reimburse the developer, the reasonable actual cost of the Wastewater Collection Line up to an amount not to exceed \$160,164.94 as shown in the attached **Exhibit 4**, the contents of such exhibit being incorporated by reference into this Agreement.
- b. The City agrees to reimburse the Developer/Owner on a monthly basis upon invoicing for work performed. The submitted invoice shall be deemed administratively complete by the City prior to payment. The reimbursement will be made no later than 30 days from the date of the City's administrative approval of the invoice. Developer/Owner shall submit all required performance bonds and proof of required insurance under the provisions of this Agreement.
- c. Cost-supporting documentation to be submitted shall include:
 - 1. Summary of Costs and Work Performed Form provided by the Development Services Department
 - 2. Contractor and professional services invoices detailing work performed
- d. The first reimbursement request requires submittal of invoices for work performed. Future disbursements shall provide evidence of payment by the developer/owner through a cancelled check or bank ACH for the previous submittal. The final reimbursement request shall require evidence that all invoices to date have been paid. To be eligible for reimbursement, the work must be constructed in a good and workmanlike manner and must have been inspected and accepted by the City. The City agrees to conduct periodic inspections and approve the progress of the work at key points during construction.

- The final 5% of the total contract reimbursement amount will be held as retainage until such time the City issues acceptance of public infrastructure in accordance with Unified Development Code.
- e. In the event that this Agreement is terminated by the City as a result of an uncured default by the Developer/Owner and at a time when there has been a partial completion and/or partial payment for the improvements, then the City shall only reimburse the Developer/Owner for its costs that were legitimately incurred towards the completion of the improvements that have been inspected and accepted by the City up to the time that the uncured default occurred.
- 17. PAYMENTS, CREDITS AND DEFERRED REIMBURSEMENT. All payments, credits, priority of reimbursement, and deferred reimbursement shall be made in accordance with UDC §8.5. Developer/Owner understands and agrees that if funds are not available in the Wastewater Collection Line Trust Fund, that reimbursement will not be made until such funds are available, appropriated, and this Agreement has priority per UDC §8.5.2. E.
- Developer/Owner covenants to fully 18. INDEMNIFICATION. indemnify, save and hold harmless the City of Corpus Christi, its officers, employees, and agents, ("indemnitees") against any and all liability, damage, loss, claims, demands suits and causes of action of any nature whatsoever asserted against or recovered from city on account of injury or damage to person including, without limitation on the foregoing, workers compensation and death claims, or property loss or damage of any other kind whatsoever, to the extent any injury, damage, or loss may be incident to, arise out of, be caused by, or be in any way connected with, either proximately or remotely, wholly or in part, the Developer/Owner's failure to comply with its obligations under this agreement or to provide city wastewater service to the development, including injury, loss, or damage which arise out of or are in any manner connected with, or are claimed to arise out of or be in any manner connected with the construction, installation, existence, operation, use, maintenance, repair, restoration, or removal of the public improvements associated with the development described above, including the injury, loss or damage caused by the sole or contributory negligence of the indemnitees or any of them, regardless of whether the injury, damage, loss, violation, exercise of rights, act, or omission is caused or is claimed to be caused by the contributing or concurrent negligence of indemnitees, or any of them, but not if caused by the sole negligence of indemnitees, or any of them, unmixed with the fault of any other person or entity, and

including all expenses of litigation, court costs, and attorney's fees, which arise, or are claimed to arise, out of or in connection with the asserted or recovered incident.

This indemnity specifically includes all claims, damages, and liabilities of whatever nature, foreseen or unforeseen, under any hazardous substance laws, including but not limited to the following:

- (a) all fees incurred in defending any action or proceeding brought by a public or private entity and arising from the manufacture, handling, presence, containment, use, creating, storage, treatment, discharge, release or burial on the property or the transportation to or from the property of any hazardous substance. The fees for which the under developer/owner shall be responsible subparagraph shall include but shall not be limited to the charged bv (i) attornevs. (ii) environmental fees consultants. (iii) engineers. (iv) surveyors, and (v) expert witnesses.
- (b) any costs incurred attributable to (i) the breach of any warranty or representation made by Developer/Owner in this agreement, or (ii) any cleanup, detoxification, remediation, or other type of response action taken with respect to any hazardous substance on or under the property regardless of whether or not that action was mandated by the federal, state or local government.

This indemnity shall survive the expiration or earlier termination of the agreement.

^{19. &}lt;u>ASSIGNMENT OF AGREEMENT</u>. This Agreement or any rights under this Agreement may not be assigned by the Developer/Owner to another without the written approval and consent of the City's City Manager.

^{20. &}lt;u>DISCLOSURE OF INTEREST</u>. Developer/Owner agrees, in compliance with the Corpus Christi Code of Ordinance Sec. 2-349, to complete, as part of this Agreement, the Disclosure of Interest form attached to this Agreement as **Exhibit 5**.

- 21. <u>EFFECTIVE DATE</u>. This Agreement becomes effective and is binding upon and inures to the benefit of the City and the Developer/Owner and their respective heirs, successors, and assigns from and after the date of final execution by all parties.
- <u>22.</u> <u>DEDICATION OF COLLECTION LINE</u>. Upon completion of the construction, dedication of Collection Line will be subject to City inspection and approval.
- 23. CERTIFICATE OF INTERESTED PARTIES. Developer/Owner agrees to comply with Texas Government Code section 2252.908 and complete Form 1295 Certificate of Interested Parties as part of this agreement.

Form 1295 requires disclosure of "interested parties" with respect to entities that enter contracts with cities. These interested parties include:

- (1) persons with a "controlling interest" in the entity, which includes:
 - a. an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock or otherwise that exceeds 10 percent;
 - b. membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or
 - c. service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers.
- (2) a person who actively participates in facilitating a contract or negotiating the terms of a contract with a governmental entity or state agency, including a broker, intermediary, adviser or attorney for the business entity.

Form 1295 must be electronically filed with the Texas Ethics Commission at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm. The form must then be printed, signed, notarized and filed with the City. For more information, please review the Texas Ethics Commission Rules at https://www.ethics.state.tx.us/legal/ch46.html.

- 24. CONFLICT OF INTEREST Developer/Owner agrees to comply with Chapter 176 of the Texas Local Government Code and file Form CIQ with the City Secretary's Office, if required. For more information and to determine if you need to file a Form CIQ, please review the information on the City Secretary's website at http://www.cctexas.com/government/city-secretary/conflict-disclosure/index
- 25. <u>AUTHORITY</u>. All signatories signing this Agreement warrant and guarantee that they have the authority to act on behalf of the entity represented and make this Agreement binding and enforceable by their signature.

Remainder of page intentionally left blank; signature page to follow.

EXECUTED IN ONE ORIG	SINAL this	day of, 20	
ATTEST:		CITY OF CORPUS CHRISTI	
Rebecca Huerta City Secretary		Al Raymond III, AIA, CBO Director of Development Services For City Manager	
APPROVED AS TO LEG	AL FORM:		
Buck Brice Assistant City Attorney For City Attorney	(Date)		

Grangefield Development, LLC.

By: Jackie Azalli

President

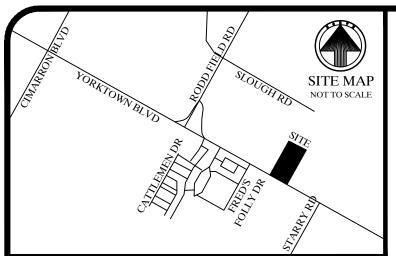
STATE OF TEXAS

§

COUNTY OF Nulces

This instrument was acknowledged before me on <u>Suptember 3</u>, 2020, by Jackie Azalli, President, Grangefield Development, LLC, a Texas limited Liability Company, a Texas Corporation, on behalf of said corporation.

Notary Public's Signature



FINAL PLAT OF GRANGE PARK UNIT 3

A 20.000 ACRE TRACT OUT OF LOT 6 AND LOT 11, SECTION 25, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, AS SHOWN ON A MAP RECORDED IN VOLUME "A", PAGES 41 - 43, MAP RECORDS NUECES COUNTY, TEXAS. SAID 20.00 ACRE TRACT ALSO BEING SHOWN IN A DEED RECORDED IN DOCUMENT NO. 2017042252, DEED RECORDS NUECES COUNTY, TEXAS.

APPROVED BY PLANNING COMMISSION JULY 22, 2020



<u> </u>								
Curve Table								
Curve # Length Radius Delta Chord								
C1	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31				
C2	31.38	20.000	089° 53' 50"	S16° 15' 27"E, 28.26				
C3	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31				
C4	31.38	20.000	089° 53' 50"	S16° 15' 27"E, 28.26				
C5	31.45	20.000	090° 06' 10"	S73° 44' 33"W, 28.31				
C6	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26				
C7	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31				
C8	31.38	20.000	089° 53' 50"	S16° 15' 27"E, 28.26				
С9	31.45	20.000	090° 06' 10"	S73° 44' 33"W, 28.31				
C10	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26				
C11	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31				
C12	8.73	10.000	049° 59' 41"	N03° 41' 38"E, 8.45				
C13	21.59	60.000	020° 36' 57"	N10° 59' 44"W, 21.47				
C14	54.00	60.000	051° 34' 05"	N25° 05' 47"E, 52.20				
C15	40.74	60.000	038° 54' 20"	N70° 19' 59"E, 39.96				
C16	48.28	60.000	046° 06' 06"	S67° 09' 48"E, 46.99				
C17	34.45	60.000	032° 54' 04"	S27° 39' 42"E, 33.98				
C18	8.73	10.000	049° 59' 41"	S36° 12' 31"E, 8.45				
C19	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31				
C20	29.63	70.000	024° 15' 11"	N40° 49' 04"E, 29.41				
C21	80.45	70.000	034° 02' 47"	N85° 52' 00"E, 76.10				
C23	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31				
C24	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26				
C25	31.42	20.000	090° 00' 44"	N73° 41' 50"E, 28.29				
C26	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26				

NOTES:

- 1.) THE SUBJECT SITE IS AND IS NOT LOCATED ON A 100-YEAR FLOOD PLAIN, IN A FLOOD WAY, IN AN IDENTIFIED "FLOOD PRONE AREA", AS DEFINED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, PURSUANT TO THE FLOOD DISASTER PROTECTION ACT OF 1973, AS AMENDED, OR AN AREA IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AS AN AREA HAVING SPECIAL FLOOD HAZARDS. THIS PROPERTY IS LOCATED IN FLOOD ZONE "B" AND FLOOD ZONE "A13" WITH A BASE FLOOD ELEVATION OF 10.0', AS INDICATED ON PANEL NUMBER 485494 0540 C, DATED MARCH 18, 1985, CITY OF CORPUS CHRISTI, TEXAS.
- 2.) BEARINGS ARE BASED ON GLOBAL POSITIONING SYSTEM, TEXAS STATE PLAIN NAD 83 (93), TEXAS SOUTH ZONE 4205.
- 3.) THE YARD REQUIREMENT, AS DEPICTED, IS A REQUIREMENT OF THE UNIFIED DEVELOPMENT CODE (UDC) AND IS SUBJECT TO CHANGE AS THE ZONING MAY CHANGE.
- 4.) SET 5/8" RE-BAR WITH CAPS STAMPED "BRISTER SURVEYING" UNLESS NOTED OTHERWISE.
- 5.) THE TOTAL PLATTED AREA IS 20.000 ACRES INCLUDING STREET DEDICATION.
- 6.) NO ACCESS ALLOWED TO BLOCK 4 LOT 41, BLOCK 4 LOT 42, BLOCK 3 LOT 29 AND BLOCK 3 LOT 30 TO JACK SHUFF DRIVE.
- 7.) NO ACCESS ALLOWED TO BLOCK 4 LOT 36, BLOCK 4 LOT 47, BLOCK 3 LOT 24 AND BLOCK 3 LOT 35 TO NADIA DRIVE.
- 8.) ALL DRIVEWAYS TO PUBLIC STREETS WITHIN THE SUBDIVISION SHALL CONFORM TO ACCESS MANAGEMENT STANDARDS OUTLINED IN ARTICLE 7 OF THE UDC.
- 9.) PUBLIC OPEN SPACE: IF LOTS 70-72 ARE DEVELOPED WITH RESIDENTIAL USES, COMPLIANCE WITH THE OPEN SPACE REGULATION WILL BE REQUIRED DURING THE BUILDING PERMIT PHASE.
- 10.) THE RECEIVING WATER FOR THE STORM WATER RUNOFF FROM THIS PROPERTY IS THE OSO BAY. THE TCEQ HAS CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO BAY AS "EXCEPTIONAL" AND "OYSTER WATERS". TCEQ ALSO CATEGORIZED THE RECEIVING WATER AS "CONTACT RECREATION" USE.
- 11.) CROSS ACCESS SHALL NOT BE OBSTRUCTED BETWEEN LOTS 70 AND 71, BLOCK 5.

STATE OF TEXAS COUNTY OF NUECES	§ §
OWNER OF THE LANDS EMBE MAP; EASEMENTS SHOWN HE	PPMENT, LLC., DO HEREBY CERTIFY THAT I AM THE RACED WITHIN THE BOUNDARIES OF THE FOREGOING EREON ARE HEREBY DEDICATED TO THE PUBLIC FOR ION AND MAINTENANCE OF PUBLIC UTILITIES
BY:JACQUELINE MARIE AZ.	ALLI, MANAGER
BY: ALYEH AZALI HATAMI-H	FARDY, MANAGER
STATE OF TEXAS COUNTY OF NUECES	§ §
PROVEN TO ME TO BE THE FOREGOING INSTRUMENT OF EXECUTED THE SAME FOR EXPRESSED AND IN THE CAPA	KNOWLEDGED BEFORE ME BY HE PERSON WHOSE SIGNATURE IS MADE ON THE F WRITING, AND HE ACKNOWLEDGED TO ME THAT HE R THE PURPOSE AND CONSIDERATIONS THEREIN ACITY STATED. D SEAL OF OFFICE, THIS THE DAY OF
NOTARY PUBLIC MY COMMISSION EXPIRES:	
STATE OF TEXAS COUNTY OF NUECES	§ §
EXPRESSED AND IN THE CAPAGIVEN UNDER MY HAND, 20	R THE PURPOSE AND CONSIDERATIONS THEREIN ACITY STATED. AND SEAL OF OFFICE, THIS THE DAY OF
NOTARY PUBLIC MY COMMISSION EXPIRES:	
STATE OF TEXAS COUNTY OF NUECES	§ §
HEREBY CERTIFY THAT WE ATTHE FOREGOING MAP OF	
BY:	_
STATE OF TEXAS COUNTY OF	§ §
	KNOWLEDGED BEFORE ME BY

STATE OF TEXAS § COUNTY OF NUECES §
THIS PLAT OF GRANGE PARK UNIT 3, APPROVED BY THE CITY OF CORPUS CHRISTI, TEXAS, THIS THE DAY OF, 20
AL RAYMOND III, AIA SECRETARY
CARL CRULL, P.E. CHAIRMAN
STATE OF TEXAS § COUNTY OF NUECES §
THIS GRANGE PARK UNIT 3, APPROVED BY THE DEPARTMENT OF DEVELOPMENT SERVICES OF THE CITY OF CORPUS CHRISTI, TEXAS, THIS THE DAY OF, 20
JALAL SALEH, P.E. DEVELOPMENT SERVICES ENGINEER
STATE OF TEXAS § COUNTY OF NUECES §
I, KARA SANDS, CLERK OF THE COUNTY COURT IN AND FOR SAID NUECES COUNTY, TEXAS, HEREBY CERTIFY THAT THE FOREGOING MAP OF THE PLAT OF GRANGE PARK UNIT 3, DATED THE DAY OF, 20, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE THIS THE DAY OF, 20, AT O'CLOCKM. AND DULY RECORDED IN VOLUME, PAGE, MAP RECORDS OF NUECES COUNTY, TEXAS.
WITNESS MY HAND AND SEAL OF SAID COURT AT OFFICE IN CORPUS CHRISTI, TEXAS, THIS THE DAY OF, 20
NO KARA SANDS
FILED FOR RECORD COUNTY CLERK AT O'CLOCK .M. NUECES COUNTY. TEXAS
STATE OF TEXAS § COUNTY OF NUECES §
I, RONALD E. BRISTER, A REGISTERED PROFESSIONAL LAND SURVEYOR OF BRISTER SURVEYING, HEREBY CERTIFY THAT THIS SURVEY MAP WAS PREPARED FROM AN ACTUAL ON THE GROUND SURVEY MADE UNDER MY DIRECTION AND SUPERVISION, AND REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY, AND THAT THIS SURVEY COMPLIES WITH THE CURRENT STANDARDS ADOPTED BY THE TEXAS BOARD OF PROFESSIONAL LAND SURVEYING.
DATE: RONALD E BRISTER, RPLS

DATE OF MAP: 4 JUNE 2020

NOTARY PUBLIC

MY COMMISSION EXPIRES:

TEXAS REGISTRATION NO. 5407

REGISTERED PROFESSIONAL LAND SURVEYOR

GRAPHIC SCALE SITE MAP NOT TO SCALE (IN FEET) 1 inch = 80 ft.

40.0'

65.0' STREET

DEDICATION

42,900 S.F. 0.985 ACRES

YORKTOWN BOULEVARD
RIGHT OF WAY VARIES

LOT 72

NON-BUILDABLE 0.105 ACRES

4,553 S.F.

N28° 41' 28"E

10' Y.R.

LOT 65

0.146 ACRES

6,368 S.F.

LOT 64

0.131 ACRES

5,720 S.F.

LOT 63

0.131 ACRES

5,720 S.F.

LOT 62

S28° 41' 28"W 1320.00'

14.58 ACRES DOC. NO. 2008038737 D.R.N.C.T. (OWNER: MAGEL

FARMS, LLC)

PARI DRIVE

50' RIGHT OF WAY

LOT 71

1.576 ACRES

LOT 70

91,570 S.F.

2.102 ACRES

277.6' 15' U.E.

ACCESS

EASEMENT

5

Brister Surveying 4455 South Padre Island Drive Suite 51 Corpus Christi, Texas 78411 Office 361-850-1800 Fax 361-850-1802 bristers urveying@corpus.twcbc.com

RANCHO LAS BRISAS UNIT 2 VOL. 67, PGS. 361 - 362 M.R.N.C.T.

20

GRANGE PARK UNIT 2 SUBDIVISION VOL. 69, PGS. 156 - 158 M.R.N.C.T.

LOT 25

APPROVED BY PLANNING FINAL PLAT OF COMMISSION JULY 22, 2020 **GRANGE PARK UNIT 3** A 20.000 ACRE TRACT OUT OF LOT 6 AND LOT 11, SECTION 25, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, AS SHOWN ON A MAP RECORDED IN VOLUME "A", PAGES 41 - 43, Firm Registration No. 10072800 MAP RECORDS NUECES COUNTY, TEXAS. SAID 20.00 ACRE TRACT ALSO BEING SHOWN IN A DEED RECORDED IN DOCUMENT NO. 2017042252, DEED RECORDS NUECES COUNTY, TEXAS. LOS ARROYOS DRIVE PUBLIC PARK 50' RIGHT OF WA 18.30 ACRES DOC. NO. 1999015842 D.R.N.C.T. (OWNER: CAROL SYLVIA SMITH) N28° 41' 28"E 1320.00' LOT 13 0.179 ACRES 7,810 S.F. JBLIC ARK LOT 14 0.178 ACRES 7,746 S.F. (3) WOODHOUSE LANE LOT 15 DEDICATED TO THE CITY CORPUS CHRISTI. S28° 41' 28"V 135.43' DRAINAGE DITCH VOL. 2005, PG. 880 - 886, D.R.N.C.T. 0.243 ACRES 50' RIGHT OF WAY JACK SHUFF DRIVE 10,586 S.F. N28° 41' 28"F ____ 90.0 ___ .0' Y.R./5' U.E. OS RANCHEROS DRIVI 10' Y.R./5' U.E. LOT 42 LOT 30 LOT 16 0.178 ACRES LOT 41 LOT 29 0.145 ACRES 25.00' 25.00' 0.145 ACRES 0.145 ACRES 0.145 ACRES 6,311 S.F. 6,310 S.F. 6,311 S.F. 7,746 S.F. 6,310 S.F. LOT 43 LOT 40 LOT 31 LOT 28 LOT 17 0.131 ACRES 0.131 ACRES 0.131 ACRES 0.131 ACRES 0.178 ACRES 5,720 S.F. 5,720 S.F. 5,720 S.F. 5,720 S.F. 7,746 S.F. 2 NADIA 50' RIGHT SOPHIA 50'RIGHT LOT 39 LOT 27 LOT 44 0.131 ACRES 5,720 S.F. LOT 18 0.131 ACRES 0.131 ACRES 0.131 ACRES

KEIRA'S WAY

50' RIGHT OF WAY DRIVE FOFWAY DRIVE OF WAY LOT 26 0.131 ACRES 0.131 ACRES 5,720 S.F. 0.131 ACRES 0.131 ACRES 0.131 ACRES LOT 19 5,720 S.F. 5,720 S.F. 5,720 S.F. 5,720 S.F. 0.178 ACRES 7,746 S.F. PENNINE WAY LOT 61 LOT 46 LOT 37 LOT 34 LOT 25 50' RIGHT OF WAY 0.131 ACRES | 0.131 ACRES 0.131 ACRES 0.131 ACRES 0.131 ACRES LOT 20 5,720 S.F. 5,720 S.F. 5,720 S.F. 5,720 S.F. 5,720 S.F. 0.178 ACRES 7,746 S.F. LOT 24 LOT 60 LOT 47 LOT 35 0.145 ACRES 0.145 ACRES 0.130 ACRES 0.145 ACRES 0.145 ACRES LOT 21 6,311 S.F. 6,311 S.F. LOT 22 5,665 S.F. LOT 21 6,310 S.F. 6,310 S.F. 0' Y.R./5' U.E.)' Y.R./5' U.E. 0.243 ACRES 5' U.E. <u>87.7'</u> 10,586 S.F. 2<u>8° 41' 28"W</u> 1 NADIA DRIVE LOT 59 50' RIGHT OF WAY N28° 41' 28"E 0.147 ACRES \\ LOT 22 6,425 S.F. 5' E.E. 10' U.E. 0.178 ACRES **PUBLIC** 7,746 S.F. **PARK** DRAINAGE CHANNEL 31, CITY LOT 23 OF CORPUS CHRISTI 0.241 ACRES 10,515 S.F. VOL. 2005, PG. 880, D.R.N.C.T. & VOL. 2046, PG. 721, D.R.N.C.T. 142.0' 135.4'

5,720 S.F.

5,720 S.F.

LOT 33

FOUND 5/8" RE-BAR FOR E.

CORNER OF 14.58 ACRE MAGEL FARMS, LLC TRACT BEARS S28°41'28"W, 589.98'

DATE OF MAP: 4 JUNE 2020

 \bigcirc = SET 5/8" RE-BAR

 \bigcirc = FOUND 5/8" RE-BAR

() = FOUND 1/2" IRON PIPE

= PROPERTY CORNER

NOTE: LOT 72 IS A NON-BUILDABE LOT

LOTS 70 - 71 ARE COMMERCIAL LOTS LOTS 1 - 65 ARE RESIDENTIAL LOTS

0.178 ACRES

7,746 S.F.

ZONE "B"

ZONE "A13"

5,720 S.F. 🛱

LOT 38

LOT 45

APPLICATION FOR WASTEWATER REIMBURSEMENT

We, Grangefield Development, LLC, P.O. Box 271996, Corpus Christi, Texas 78427, owners and developers of proposed Grange Park Unit 3, hereby request reimbursement of \$160,164.94 for the installation of the wastewater collection line in conjunction with said development, as provided for by City Ordinance No. 17396. \$328,852.25 is the construction cost, including 10% Engineering and Surveying, as shown by the cost supporting documents attached herewith.

Jackie Azalli, President Grangefield Development, LLC Date.

THE STATE OF TEXAS

§

COUNTY OF Nuces

This instrument was acknowledged before me on September 3, 202 by Jackie Azalli, President, Grangefield Development, LLC, a Texas limited liability corporation, on behalf of the said corporation.

CHRISTAL NOLTE Notary Public, State of Texas Comm. Expires 04-16-2023 Notary ID 11525110 Notary Public in and for the State of Texas

APPLICATION FOR WASTEWATER CREDIT

We, Grangefield Development, LLC, P.O. Box 271996, Corpus Christi, Texas 78427, owners and developers of proposed Grange Park Unit 3, hereby apply for \$31,435.71 credit towards the waste water acreage fee for the wastewater collection line in conjunction with said subdivision as provided for by City Ordinance No. 17396. \$328,852.25 is the construction cost, including 10% Engineering and Surveying, as shown by the cost supporting documents attached herewith.

Jackie Azalli, President

Grangefield Development, LLC

THE STATE OF TEXAS

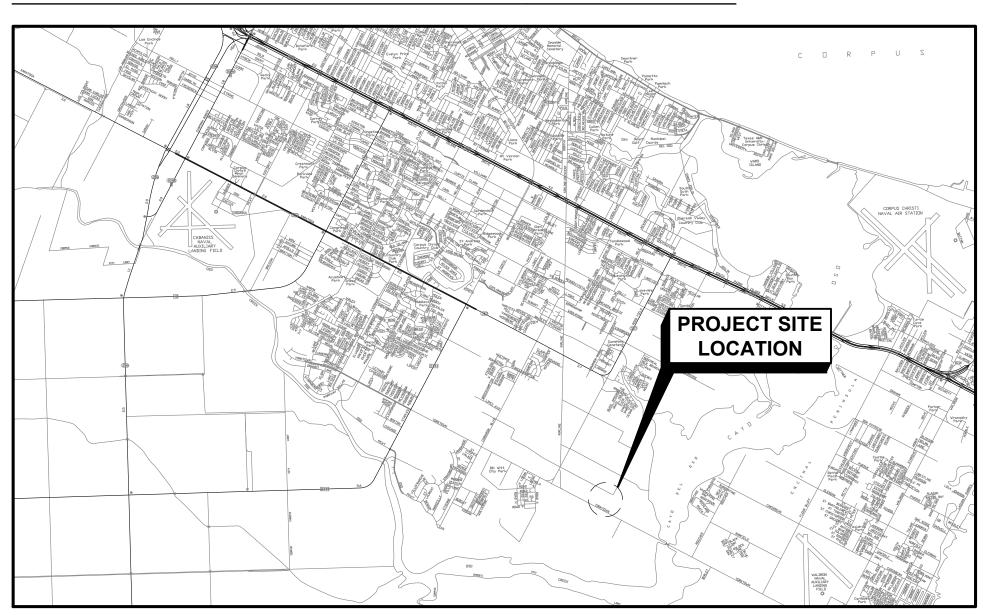
COUNTY OF Nuews §

This instrument was acknowledged before me on September 3 by Jackie Azalli, President, Grangefield Development, LLC, a Texas limited liability corporation, on behalf of the said corporation.

CHRISTAL NOLTE Notary Public, State of Texas Comm. Expires 04-16-2023 Notary ID 11525110

Notary Public in and for the State of Texas

PROJECT LOCATION





1 VICINITY MAP







- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE FOR THE LOCATING AND MARKING OF UNDERGROUND AND ABOVE GROUND
- DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH

UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION.



Know what's below.

Call before you dig.

ABOVE MAGE IS FROM WWW MASSETT OF, TEXAS SECRITATION SAFETY SYSTEM, INC., 17850 GREENVILLE AVENUE, SUITE 120, DALLAS, TEXAS 3508 PT, (872) 23.

811 OR 1-8000-344-8377 OR www.texas811.org
GIVE 4 WORKING DAYS (M-F) NOTICE

CONSTRUCTION DRAWINGS FOR GRANGE PARK DEVELOPMENT UNIT 3

OFF-SITE PUBLIC IMPROVEMENTS
CORPUS CHRISTI, NUECES COUNTY, TEXAS
PROJECT INFORMATION
SHEET INDEX

LOCATION

THIS PROJECT IS LOCATED IN CORPUS CHRISTI, NUECES COUNTY, TEXAS.

PROJECT OWNER

GRANGEFIELD DEVELOPMENT, LLC

PROJECT ENGINEER

MUNOZ ENGINEERING, LLC

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE FOLLOWING, BUT NOT LIMITED TO, INSTALLATION OF WASTEWATER, AND ALL INCIDENTALS. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF CORPUS CHRISTI SPECIFICATIONS AND DETAILS AND ANY PERMITS THAT ARE REQUIRED.

A PERMIT IS REQUIRED FOR ANY EXCAVATION IN THE PUBLIC RIGHT-OF-WAY. EXCAVATION MEANS AN ACTIVITY THAT CUTS, PENETRATES, OR BORES UNDER ANY PORTION OF THE PUBLIC RIGHT-OF-WAY THAT HAS BEEN IMPROVED WITH A PAVED SURFACE FOR STREET, SIDEWALK, SURFACE DRAINAGE, OR RELATED PUBLIC TRANSPORTATION INFRASTRUCTURE PURPOSES. PERMITS WILL NOT BE ISSUED FOR EXCAVATION IN ANY PUBLIC RIGH-OF-WAY THAT HAS BEEN CONSTRUCTED, RECONSTRUCTED, REPAVED, OR RESURFACED IN THE PRECEDING FIVE (5) YEARS FROM THE DATE OF ACCEPTANCE BY THE PUBLIC WORKS CONSTRUCTION ENTITY.

PROJECT SITE LEGAL DESCRIPTION

A 20.000 ACRE TRACT OUT OF LOT 6 AND LOT 11, SECTION 25, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, AS SHOWN ON A MAP RECORDED IN VOLUME "A", PAGES 41 - 43, MAP RECORDS NUECES COUNTY, TEXAS. SAID 20.00 ACRE TRACT ALSO BEING SHOWN IN A DEED RECORDED IN DOCUMENT NO. 2017042252, DEED RECORDS NUECES COUNTY, TEXAS.

PROJECT DATUM

EMERGENCY: 911

THE EXISTING CONDITIONS WERE SURVEYED BY:
BRISTER SURVEYING OF CORPUS CHRISTI, TEXAS
THE PROJECT DATUM SHALL BE VERIFIED BY THE CONTRACTOR WITH THE SURVEYOR INDICATED ABOVE PRIOR TO COMMENCING ANY CONSTRUCTION.

PROJECT NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTION DEPARTMENT AND THE ENGINEER AT LEAST THREE (3) WORKING DAYS (MONDAY - FRIDAY: 8:00AM TO 5:00PM) PRIOR TO COMMENCING CONSTRUCTION.

GENERAL CONTACT INFORMATION

POLICE (NON-EMERGENCY)	886-260
FIRE (NON-EMERGENCY)	826-3900
CITY OF CORPUS CHRISTI	
CITY CALL CENTER	826-2489
DEVELOPMENT SERVICES	826-3240
ENGINEERING SERVICES	826-3500

ENGINEERING SERVICES _______ 826-3500
ENVIRONMENTAL SERVICES ______ 826-4066
GAS DEPARTMENT ______ 885-6900
OR 24HRS - 854-4369 / 885-6942

TRAFFIC ENGINEERING 826-2489
UTILITIES DEPARTMENT 826-2489

OR AFTER 7PM WEEKDAYS AND HOLIDAYS - 885-6942

SHEET NUMBER

C001	COVER SHEET
C010	GENERAL NOTES (1 OF 3)
C020	GENERAL NOTES (2 OF 3)
C030	GENERAL NOTES (3 OF 3)
C040	GENERAL TESTING REQUIREM

CO50 GENERAL LEGEND & ABBREVIATIONS
CU110 WASTEWATER UTILITY PLAN
CU200 WASTEWATER UTILITY PROFILE

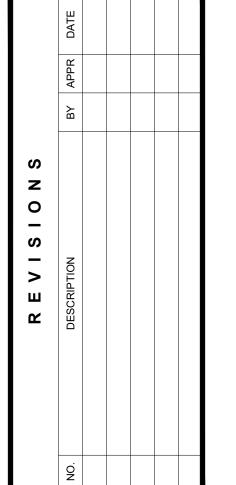
NOTICE

THE FOLLOWING CITY OF CORPUS CHRISTI STANDARD DETAILS ARE A PART OF THIS PROJECT:

SHEET TITLE

WASTEWATER STANDARD DETAILS (SHEETS 1 THRU 4)

THE STANDARD DETAILS ARE TO BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION FROM THE FOLLOWING WEBSITE: http://www.cctexas.com/promo/standard-details



CHK BY:

APP BY:

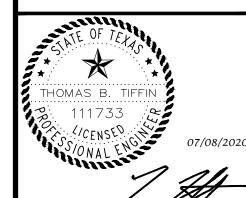
TT

SCALE:

AS NOTED

DATE:





THOMAS B. TIFFIN, P.E. NO.

STATEMENT OF THE PROPERTY OF THE P

F-SITE PUBLIC

ЈОВ NO. **190138**

THIS PAGE DOES NOT CONTAIN ALL PROJECT NOTES OR PROJECT REQUIREMENTS. THIS PAGE MAY CONTAIN NOTES THAT ARE NOT PERTINENT TO THE PROJECT BUT ARE INCLUDED FOR REFERENCE. IT WILL BE THE RESPONSIBILITY OF ALL CONTRACTORS WORKING ON THIS PROJECT TO BE KNOWLEDGEABLE WITH ALL PROJECT CONTRACT DOCUMENTS, WHICH INCLUDES BUT NOT LIMITED TO THE PROJECT GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS. ANY AND ALL COSTS RELATED TO THE CONTRACTOR FAILURE OF BEING KNOWLEDGEABLE WITH THE CONTRACT DOCUMENTS WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.

- 1. A MINIMUM OF ONE (1) COPY OF THE LATEST VERSION OR EDITION OF THE FOLLOWING, BUT NOT LIMITED TO, MUST BE ON THE PROJECT SITE WHEN CONSTRUCTION IS IN PROGRESS:
- 1.1. CONTRACT DOCUMENTS AND SPECIFICATIONS,
- 1.2. ALL CONSTRUCTION DRAWINGS,
- 1.3. ALL REQUIRED PERMITS,
- 1.4. ALL REQUIRED LOCAL, STATE, AND FEDERAL DOCUMENTS.
- 2. ALL WORK ON THIS PROJECT WILL BE REQUIRED TO BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE DRAWINGS, INDUSTRY STANDARDS, ALL PERMITS, AND ALL LAWS AND REGULATIONS.
- 2.1. IN THE EVENT THAT A REGULATION, SPECIFICATION, DETAIL, NOTE, OR OTHER REQUIREMENT IS IN CONFLICT WITH ANOTHER REGULATION, SPECIFICATION, DETAIL, NOTE, OR OTHER REQUIREMENT, THE MOST STRINGENT SHALL BE APPLICABLE, UNLESS
- DIRECTED BY THE OWNER'S REPRESENTATIVE. 3. NOTICE: THE CONTRACTOR SHALL KNOW THE ACTUAL SITE CONDITIONS AND SHALL BE RESPONSIBLE FOR FURNISHING A COMPLETED
- PROJECT AS REPRESENTED IN THE CONTRACT DOCUMENTS, SPECIFICATIONS, AND IN THE DRAWINGS. 4. IF AT ANY POINT THAT SOMETHING IS NOT CLEAR FOR WHAT IS BEING REPRESENTED WITHIN THIS SET OF DRAWINGS, THE GENERAL
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITIONS AND PROPOSED CONDITIONS, SHALL PERFORM FIELD MEASUREMENTS PRIOR TO CONSTRUCTION, FABRICATION, AND/OR PURCHASE OF ANY MATERIAL, AND SHALL CONTACT, PRIOR TO ORDERING MATERIALS, THE OWNER'S REPRESENTATIVE SHOULD CONDITIONS BE DIFFERENT FROM THE CONTRACT DOCUMENTS, SPECIFICATIONS, AND/OR THE DRAWINGS FOR THIS PROJECT.

CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE FOR CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION.

- 5.1. THE CONTRACTOR SHALL FIELD VERIFY BENCHMARK AND CONTROL POINT ELEVATION(S) PRIOR TO COMMENCING ANY CONSTRUCTION.
- 5.2. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION WITHIN THE DRAWINGS.
- 5.3. CONFLICTS ARISING DUE TO LACK OF COORDINATION AND VERIFICATION SHALL BE THE RESPONSIBILITY AND AT THE SOLE EXPENSE OF
- THE CONTRACTOR. 6. THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL NECESSARY CONSTRUCTION PERMITS AND CLEARANCES PRIOR TO COMMENCING
- THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION ACTIVITY TO WITHIN THE LIMITS OF CONSTRUCTION (LOC) AS INDICATED WITHIN THE DRAWINGS INCLUDING, BUT NOT LIMITED TO, JOB SITE FACILITIES, STAGING AREAS, STOCKPILES, EQUIPMENT, ETC., UNLESS PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE IS GIVEN.

CONSTRUCTION AND ANY FEES ASSOCIATED WITH THE PERMIT SHALL BE INCLUDED WITHIN THE BID ITEM(S) REQUIRING THE PERMIT.

- 7.1. ANY CONSTRUCTION ACTIVITIES BEYOND THE CONSTRUCTION LIMITS SHALL BE PRE-APPROVED BY THE OWNER'S REPRESENTATIVE
- 7.2. IF WORK IS DONE BEYOND THE CONSTRUCTION LIMITS WITHOUT APPROVAL, THAT WORK MAY BE SUBJECT TO GETTING REJECTED FOR A CLAIM FOR ADDITIONAL WORK BASED ON NOT OBTAINING PRIOR AUTHORIZATION.
- 8. ALL QUANTITIES INDICATED WITHIN THE DRAWINGS ARE APPROXIMATE AND FOR REFERENCE USE; NOT ALL MATERIALS REQUIRED TO CONSTRUCT THE PROJECT MAY BE INDICATED AND IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INCLUDE ALL MATERIALS AND APPURTENANCES TO CONSTRUCT THE PROJECT WITHIN THE AMOUNT BID.
- A SEQUENCE OF CONSTRUCTION SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE PRIOR TO
- COMMENCEMENT OF CONSTRUCTION AND CHANGES TO THE SEQUENCE SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE. 9.1. THE CONTRACTOR SHALL NOT BE PERMITTED TO COMMENCE WORK ON THE PROJECT BEFORE SUNRISE AND SHALL ARRANGE THE
- WORK SO THAT IT IS COMPLETED BY SUNSET, UNLESS OTHERWISE INDICATED OR DIRECTED BY THE OWNER'S REPRESENTATIVE. 10. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. UNTIL FURTHER USE OF THE STAKES, MARKS, ETC. ARE NOT
- 10.1. ANYTIME THAT CONSTRUCTION STAKES, MARKS, ETC. ARE TO BE REPLACED DUE TO BEING DAMAGED, DESTROYED, OR REMOVED AFTER PLACEMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPLACEMENT.

LOCATION AND PROTECTION OF EXISTING UTILITIES, STRUCTURES, DITCHES, ROADS, AND OTHER IMPROVEMENTS

- NOTICE: THE LOCATION OF EXISTING ABOVE GROUND UTILITIES, UNDERGROUND FACILITIES, STRUCTURES, DITCHES, ROADS, AND OTHER IMPROVEMENTS WITHIN THE DRAWINGS ARE APPROXIMATE IN BOTH HORIZONTAL AND VERTICAL LOCATION(S) AND NOT ALL EXISTING ABOVE GROUND UTILITIES, UNDERGROUND FACILITIES, STRUCTURES, DITCHES, ROADS, AND OTHER IMPROVEMENTS WITHIN AND ADJACENT TO THE SITE MAY BE INDICATED ON THE DRAWINGS. THE OWNER AND THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION FOR THE SAFETY AND PROTECTION THEREOF AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK; THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE
- 1. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL APPROPRIATE PUBLIC AND PRIVATE UTILITY COMPANIES, BY ALL MEANS POSSIBLE, PRIOR TO COMMENCING CONSTRUCTION TO DETERMINE UTILITY LOCATION(S) WITHIN AND ADJACENT TO THE PROJECT
- THE CONTRACTOR(S) SHALL VIDEO TAPE AND PHOTOGRAPH ALL PROPERTIES AND EXISTING IMPROVEMENTS THAT WILL BE AFFECTED BY CONSTRUCTION, WITH COPIES OF THE INFORMATION BEING SUPPLIED TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING
- THE CONTRACTOR(S) IS RESPONSIBLE FOR CONFIRMING THE LOCATION(S) HORIZONTALLY AND VERTICALLY OF ALL BURIED CABLES, CONDUITS, PIPES, AND UNDERGROUND FACILITIES (INCLUDING BUT NOT LIMITED TO STORM SEWER, SANITARY SEWER, WATER, GAS,
- TELEVISION, TELEPHONE, FIBER OPTIC, ETC.) WHICH ARE WITHIN AND ADJACENT TO THE SITE. 3.1. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL
- CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION DRAWINGS PRIOR TO CONSTRUCTION. 3.2. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION(S) HORIZONTALLY AND VERTICALLY OF THE ABOVE
- SAID CABLES, CONDUITS, PIPES, AND UNDERGROUND FACILITIES SHALL BE SOLELY BORNE BY THE CONTRACTOR. 3.3. ADDITIONALLY, THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY ERRORS OR DISCREPANCIES ARE FOUND ON THE
- CONSTRUCTION DOCUMENTS WHICH NEGATIVELY IMPACT THE PROJECT. NOTICE: THE OWNER AND ENGINEER SHALL BE INDEMNIFIED OF PROBLEMS AND/OR COSTS WHICH MAY RESULT FROM THE
- CONTRACTOR'S FAILURE TO VERIFY THE ACTUAL CONDITIONS AND FAILURE TO NOTIFY THE ENGINEER AND OWNER. NOTICE: THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION(S) AND ELEVATION(S) OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR COSTS INCURRED BY PROCEEDING WITH ELEVATION(S) OF EXISTING UTILITIES THAT DIFFER FROM THOSE
- 4.1. DISCREPANCIES SHALL BE PRESENTED TO THE ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH WORK.
- 5. IN THE EVENT THAT A UTILITY LINE NEEDS TO BE ADJUSTED, THE CONTRACTOR SHALL COORDINATE CONSTRUCTION SO THAT THE
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR LOCATING, MARKING (IN ACCORDANCE WITH TEXAS ADMINISTRATIVE CODE (TAC) TITLE 16. PART 1, CHAPTER 18, RULE §18.6 AND AMERICAN PUBLIC WORKS ADMINISTRATION (APWA) UNIFORM COLOR CODE), AND VERIFYING THE ACTUAL LOCATION AND ELEVATION OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE PROJECT AREA PRIOR TO COMMENCING CONSTRUCTION BY ALL MEANS POSSIBLE.
- 6.1. LOCAL WATER, SEWER, STORM SEWER, GAS, AND TRAFFIC DEPARTMENTS SHALL BE NOTIFIED INDIVIDUALLY TO ENSURE LOCATION OF
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING ABOVE GROUND UTILITIES, UNDERGROUND FACILITIES, STRUCTURES, DITCHES, ROADS, AND ALL PROPOSED IMPROVEMENTS WITHIN AND ADJACENT TO THE PROJECT AREA.
- 7.1. IF ANY DAMAGE OCCURS TO ANY OF THE ABOVE MENTIONED ITEMS DURING CONSTRUCTION, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REPAIR, REPLACEMENT, OR REMEDY OF THE DAMAGED ITEM TO EQUAL OR BETTER THAN ITS ORIGINAL CONDITION AS REQUIRED BY THE OWNER OF THE DAMAGED ITEM IN A PROMPT MANNER WITH NO ADDITIONAL TIME ADDED TO THE CONTRACT.
- IF ABANDONED UNDERGROUND FACILITIES ARE ENCOUNTERED, THE CONTRACTOR MUST EXPLORE AND RESEARCH THE SITUATION AND PROVIDE TO THE OWNER'S REPRESENTATIVE THAT THE FACILITY(IES) ARE ABANDONED.
- 8.1. THE CONTRACTOR SHALL REMOVE THE ABANDONED UNDERGROUND FACILITY(IES) REQUIRED TO COMPLETE THE WORK OR SHALL FULLY GROUT THE ABANDONED FACILITY(IES) IN PLACE, UNLESS OTHERWISE INDICATED BY THE OWNER'S REPRESENTATIVE; ALL WORK SHALL BE INCIDENTAL AND NO SEPARATE PAYMENT SHALL BE MADE.
- THE CONTRACTOR SHALL TAKE SPECIAL CONSIDERATION PRIOR TO REMOVING A PORTION OF AN EXISTING DRAINAGE SYSTEM TO FACILITATE ANY WORK TO PREVENT ADVERSE DRAINAGE ISSUES.
- 9.1. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE TO PROVIDE ALL REQUIRED EQUIPMENT AND PERSONNEL TO PREVENT DAMAGE TO PRIVATE PROPERTY, EXISTING IMPROVEMENTS, AND PROPOSED IMPROVEMENTS, WITH ANY DAMAGE BEING REMEDIED BY THE
- 10. THE CONTRACTOR IS TO NOTIFY THE PROPERTY OWNER(S) OF ANY WORK THAT WILL AFFECT ANY PUBLIC OR PRIVATE IRRIGATION SYSTEM. 10.1. TEMPORARY REPAIRS TO THE SYSTEM SHALL BE MADE TO MAINTAIN THE UN-AFFECTED PORTION OF THE SYSTEM IN A WORKING
- 10.2. REPAIRS TO THE SYSTEM SHALL BE COMPLETED AS SOON AS PRACTICABLE BY A LICENSED IRRIGATION SYSTEM INSTALLER.
- 11. THE CONTRACTOR SHALL REMOVE, REPLACE, AND RESTORE TO ORIGINAL CONDITION, ELEVATION, AND LOCATION ALL EXISTING IMPROVEMENTS THAT ARE TO REMAIN THAT ARE ENCOUNTERED DURING CONSTRUCTION, UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE.

PROTECTION OF VEGETATION AND ENVIRONMENTALLY SENSITIVE AREAS

. NOTICE: IF THE PROJECT IS REGULATED BY A U.S. ARMY CORPS OF ENGINEERS (COE) PERMIT OR OTHER ENVIRONMENTAL PERMIT, THE

- CONTRACTOR WILL BE RESPONSIBLE FOR COMPLYING WITH THE PERMIT.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL ENVIRONMENTALLY SENSITIVE AREAS NOTED ON THE DRAWINGS OR AS
- 2.1. IF AN ENVIRONMENTALLY SENSITIVE AREA IS DISTURBED OR DAMAGED, IT WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REMEDY THE DISTURBANCE OR DAMAGE TO THE REQUIREMENTS OF A LOCAL EXPERT APPROVED BY THE OWNER'S REPRESENTATIVE AND IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND REQUIREMENTS AT THE CONTRACTOR'S SOLE EXPENSE.
- OWNER'S REPRESENTATIVE. 3.1. TREES, SHRUBS, AND VEGETATION THAT ARE TO REMAIN SHALL BE TRIMMED IN ACCORDANCE WITH STANDARD HORTICULTURAL

3. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL VEGETATION THAT IS NOTED ON THE DRAWINGS OR AS DIRECTED BY THE

3.2. IF DAMAGE SHOULD OCCUR TO A TREE OR SHRUB THAT IS TO REMAIN, THE CONTRACTOR WILL BE RESPONSIBLE FOR CARING/REPLACING THE ITEM FOR A PERIOD TO BE DETERMINED BY A COMPETENT PERSON AT THE CONTRACTOR'S SOLE EXPENSE.

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT A SAFETY PROGRAM THAT IS IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS FOR ALL WORKERS AND VISITORS FOR THE ENTIRETY OF THE PROJECT.
- 2. THE CONTRACTOR SHALL POST ON-SITE ALL EMERGENCY PHONE NUMBERS FOR:
- 2.1. POLICE, FIRE, AND MEDICAL EMERGENCIES

PRACTICES AND PROTECTED FROM DAMAGE.

- 2.2. PUBLIC UTILITY OPERATORS (FOR EACH OPERATOR WITHIN AND ADJACENT TO THE PROJECT SITE)
- 2.3. PRIVATE UTILITY OPERATORS (FOR EACH OPERATOR WITHIN AND ADJACENT TO THE PROJECT SITE)
- 2.4. STREET OPERATORS (FOR EACH OPERATOR WITHIN AND ADJACENT TO THE PROJECT SITE)
- 2.5. TRAFFIC SIGNAL OPERATORS (FOR EACH OPERATOR WITHIN AND ADJACENT TO THE PROJECT SITE) 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAINING ALL EMPLOYEES AND SUBCONTRACTORS IN THE RECOGNITION AND AVOIDANCE
- OF UNSAFE CONDITIONS AND IN THE REGULATIONS AND HAZARDS WHICH APPLY TO THE AREA IN WHICH THE WORK WILL TAKE PLACE. 4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT AND MATERIALS FOR THE PROTECTION OF PERSONS AND PROPERTY AND FOR PROVIDING SAFE WORKING CONDITIONS THROUGHOUT THE WORK PROGRESS
- 4.1. ALL SAFETY EXPOSURES OR VIOLATIONS SHALL BE RECTIFIED IMMEDIATELY BY THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER EQUIPMENT DO NOT CREATE A SAFETY HAZARD ON ANY PUBLIC OR PRIVATE STREETS.
- 6.1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A TRENCH SAFETY PROGRAM WHICH MEETS OR EXCEEDS THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) AND ANY OTHER LOCAL,
- STATE, AND FEDERAL REGULATIONS THAT PERTAIN TO TRENCH SAFETY. 6.1.1. ALL EXCAVATIONS AND BACKFILL OPERATIONS SHALL BE IN ACCORDANCE WITH THE LATEST OSHA EXCAVATION SAFETY STANDARDS, STATE REGULATIONS, AND LOCAL REGULATIONS. THE CONTRACTOR SHALL PROVIDE AN EXCAVATION PLAN
- PREPARED BY AN ENGINEER REGISTERED IN THE STATE OF TEXAS PRIOR TO BEGINNING TRENCHING OPERATIONS. THE CONTRACTOR SHALL APPOINT A "COMPETENT PERSON" AS DEFINED BY OSHA WHO WILL BE ON-SITE AT ALL TIMES WHILE TRENCHING, PERFORMING EXCAVATIONS, AND WHEN WORKERS ARE IN TRENCHES.
- 6.1.3. THE EXCAVATION PLAN SHALL INDICATE THE PROCEDURES TO BE USED BY THE CONTRACTOR TO COMPLY WITH THE OSHA, STATE,
- THE TRENCH SAFETY PROGRAM AND EXCAVATION PLAN SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR RECORD PURPOSES ONLY AND NOT FOR APPROVAL OR VERIFICATION.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING AND CONTROLLING THE WORK SITE TO PREVENT ACCIDENTS, THEFT, AND VANDALISM
- 7.1. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR REPLACEMENT OR SATISFACTORY REPAIRS TO EXISTING AND NEW IMPROVEMENTS DUE TO ACCIDENTS, THEFT, AND VANDALISM.
- 8. IT WILL NOT BE THE RESPONSIBILITY OF THE OWNER, OWNER'S REPRESENTATIVE, OR ENGINEER TO ENSURE THAT ALL SAFETY REGULATIONS ARE ABIDED BY. HOWEVER, IF THE OWNER, OWNER'S REPRESENTATIVE, OR ENGINEER RECOGNIZES OR IS NOTIFIED OF UNSAFE CONDITIONS, THE WORK BEING ACCOMPLISHED WILL BE STOPPED UNTIL THE CONTRACTOR INDICATES THAT IT IS NOT AN UNSAFE METHOD OR RECTIFIES THE SITUATION AT NO EXPENSE TO THE OWNER, OWNER'S REPRESENTATIVE, OR ENGINEER.

- 1. ONLY EQUIPMENT REQUIRED FOR PERFORMING THE WORK ON THE PROJECT WILL BE ALLOWED AT THE SITE. 2. THE EQUIPMENT USED ON THE PROJECT SHALL HAVE ALL OF THE REQUIRED PARTS FOR OPERATION INSTALLED AS RECOMMENDED BY THE
- 3. ALL EQUIPMENT REQUIRED TO PERFORM THE WORK ON THE PROJECT SHALL BE IN GOOD WORKING ORDER AND MAINTAINED THROUGHOUT
- CONSTRUCTION. 4. ANY EQUIPMENT THAT IS TO BE STORED ON-SITE SHALL BE LOCATED IN AN AREA THAT IS PROTECTED TO PREVENT ACCIDENTS, DAMAGE TO
- MATERIALS, AND ANY ADVERSE ENVIRONMENTAL EFFECTS. 5. ANY EQUIPMENT THAT IS LEAKING FLUIDS SHALL BE FIXED PROMPTLY AND ANY FLUID CONTAMINATED SOIL SHALL BE REMOVED PROMPTLY
- IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
- 6. THE CONTRACTOR SHALL PROTECT AGAINST SOIL/WATER CONTAMINATION BY UTILIZING CONTAINERS OR BARRIERS. 7. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL FLUIDS, CLEANING MATERIALS, AND LIQUIDS IN ACCORDANCE WITH LOCAL, STATE,

AND FEDERAL REGULATIONS.

1. ONLY MATERIALS MEETING THE REQUIREMENTS OF THE SPECIFICATIONS AND REQUIRED FOR PERFORMING THE WORK ON THE PROJECT WILL BE ALLOWED AT THE SITE.

RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL, WITH ALL

- ANY PROPOSED ALTERNATIVES TO THE MATERIALS NOTED WITHIN THE DRAWINGS OR REQUIRED BY THE SPECIFICATIONS ARE TO BE
- SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL SEVEN (7) CALENDAR DAYS PRIOR TO THE BID OPENING. 2.1. ANY CHANGES TO THE DRAWINGS REQUIRED BY ACCEPTANCE OF MATERIAL ALTERNATIVES AND/OR SUBSTITUTIONS ARE THE
- COSTS ASSOCIATED WITH THE CHANGE BEING THE RESPONSIBILITY OF THE CONTRACTOR. 2.2. THE OWNER RESERVES THE RIGHT TO REJECT ANY PROPOSED SUBSTITUTION IN FAVOR OF THAT SPECIFIED.
- 3. MATERIALS THAT ARE TO BE STORED ON-SITE SHALL BE STORED IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS AND PROJECT SPECIFICATIONS AND SHALL BE LOCATED IN AN AREA THAT IS PROTECTED TO PREVENT ACCIDENTS, DAMAGE TO MATERIALS, AND ANY ADVERSE ENVIRONMENTAL EFFECTS.
- 4. ANY DAMAGED MATERIALS SHALL BE PROMPTLY REMEDIED BY THE CONTRACTOR AT THE CONTRACTOR'S SOLE EXPENSE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- 4.1. IF IT IS DETERMINED THAT THE MATERIAL(S) ARE NOT SUITABLE FOR INSTALLATION BY EITHER THE ENGINEER OR THE OWNER, THEN THE MATERIAL(S) ARE TO BE REMOVED FROM THE PROJECT SITE IMMEDIATELY AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATION AT THE SOLE EXPENSE OF THE CONTRACTOR.
- 5. MATERIAL SUBMITTALS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE FOR REVIEW OF MATERIALS TO BE USED ON THE PROJECT. 5.1. SUBMIT MATERIAL DESCRIPTIVE LITERATURE, BULLETINS, TECHNICAL DATA SHEETS, MATERIAL SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS FOR SANITARY SEWER UTILITIES, STORM SEWER UTILITIES, WATER UTILITIES, PAVEMENT, AND OTHER MATERIALS THAT
- WILL BE USED ON THE PROJECT. 5.2. MATERIAL INFORMATION SHALL INDICATE THAT SPECIFICATIONS ARE MET OR EXCEEDED.
- 5.3. SUBMITTALS FOR PREFABRICATED ASSEMBLIES SHALL BEAR THE SEAL OF AN ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS CERTIFYING THAT THE PRODUCT MEETS ALL APPLICABLE DESIGN CONDITIONS AND CONFORMS TO GOVERNING CODE REQUIREMENTS.
- SUBMIT REINFORCING STEEL SHOP DRAWINGS DETAILING REINFORCEMENT FABRICATION AND BAR PLACEMENT. 6.1. SHOP DRAWINGS SHALL INCLUDE A COMPLETE BILL OF MATERIALS FOR ALL REINFORCING STEEL, WHICH IS REFERENCED IN THE
- INFORMATION ON THE SHOP DRAWINGS. 6.2. THE SHOP DRAWINGS SHALL PROVIDE SUFFICIENT DETAIL TO PERMIT PLACEMENT OF THE REINFORCEMENT WITHOUT THE USE OF

SUBMITTAL REQUIREMENTS

- 1. THE FOLLOWING PARTIAL LISTING OF SUBMITTALS SHALL BE FORWARDED TO THE OWNER'S REPRESENTATIVE FOR REVIEW WITH ANY WORK ASSOCIATED WITH THESE ITEMS NOT COMMENCING UNTIL THE SUBMITTALS HAVE BEEN REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE
- 1.1. SUBMIT GRADATION, ATTERBURG LIMITS AND MOISTURE DENSITY CURVES FOR EACH TYPE OF EXISTING SUBGRADE ENCOUNTERED AND FOR EACH TYPE OF FILL MATERIAL TO BE USED.
- 1.2. SUBMIT REINFORCING STEEL SHOP DRAWINGS DETAILING REINFORCEMENT FABRICATION AND BAR PLACEMENT. 1.2.1. SHOP DRAWINGS SHALL INCLUDE A COMPLETE BILL OF MATERIALS FOR ALL REINFORCING STEEL, WHICH IS REFERENCED TO THE
- INFORMATION ON THE SHOP DRAWINGS. SHOP DRAWINGS SHALL PROVIDE SUFFICIENT DETAIL TO PERMIT PLACEMENT OF THE REINFORCEMENT WITHOUT THE USE OF THE
- 1.3. SUBMIT DESCRIPTIVE LITERATURE, BULLETINS, TECHNICAL DATA SHEETS, MATERIAL SAFETY DATA SHEETS (MSDS), AND INSTALLATION INSTRUCTIONS FOR THE FOLLOWING:

1.3.1. SANITARY SEWER UTILITY - INCLUDING BUT NOT LIMITED TO: PIPE, MANHOLES, FRAME AND COVER, CONCRETE, FITTINGS, AND

STORM SEWER UTILITY - INCLUDING BUT NOT LIMITED TO: PIPE, MANHOLES, INLETS, FRAME AND COVER/GRATE, CONCRETE, AND 1.3.2.

STATE OF TEXAS CERTIFYING THAT THE PRODUCT MEETS ALL APPLICABLE DESIGN CONDITIONS AND CONFORMS TO GOVERNING CODE

- APPURTENANCES. WATER UTILITY - INCLUDING BUT NOT LIMITED TO: PIPE, VALVES, FITTINGS, CONCRETE, AND APPURTENANCES 1.4. SUBMITTALS FOR PRECAST OR PREFABRICATED ASSEMBLIES SHALL BEAR THE SEAL OF A ENGINEER LICENSED TO PRACTICE IN THE
- 1.5. SUBMIT ANY PROPOSED SUBSTITUTIONS TO THE ITEMS SPECIFIED HEREIN OR IN THE SPECIFICATIONS.
- 1.5.1. OWNER RESERVES THE RIGHT TO REJECT ANY PROPOSED SUBSTITUTION IN FAVOR OF THAT SPECIFIED.

- 1.5.2. IN THE EVENT THAT A SUBSTITUTED ITEM REQUIRES THE CONSTRUCTION DRAWINGS TO BE REVISED IN ANY MANNER, THE
- CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL ENGINEERING AND REPRODUCTION COSTS. IN THE EVENT THAT A SUBSTITUTED ITEM REQUIRES THE ADJUSTMENT AND/OR REINSTALLATION OF EXISTING OR PROPOSED UTILITIES AND/OR IMPROVEMENTS THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL COSTS
- 1.6. CONTRACTOR SHALL SUBMIT PAVEMENT CONSTRUCTION AND CONTROL JOINT LOCATIONS FOR REVIEW PRIOR TO PLACING ANY PAVEMENT CONCRETE. SUBMITTAL SHALL HIGHLIGHT JOINT LOCATIONS THAT HAVE BEEN CHANGED FROM THE LAYOUT SHOWN IN THE BID DOCUMENTS. IN GENERAL, PAVEMENT CONSTRUCTION JOINT SPACING SHALL NOT EXCEED FORTY-FEET (40') ON CENTER AND PAVEMENT CONTROL JOINT SPACING SHALL NOT EXCEED TEN-FEEET (10') ON CENTER.

EROSION AND POLLUTION CONTROL DURING CONSTRUCTION

- ALL CONSTRUCTION ACTIVITIES SHALL BE SUBJECT TO THE EROSION AND POLLUTION PREVENTION REQUIREMENTS OF THE CITY, COUNTY, TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), ALL APPLICABLE PERMITS, AND ALL LAWS AND REGULATIONS.
- 1.1. A TCEQ STORMWATER PERMIT FOR CONSTRUCTION WILL BE REQUIRED FOR THIS PROJECT. 2. THE CONTRACTOR IS TO OBTAIN ALL REQUIRED PERMITS AND POST REQUIRED COPIES ON-SITE AT ALL ENTRANCES PRIOR TO COMMENCING
- 3. THE CONTRACTOR WILL BE REQUIRED AT ALL TIMES DURING CONSTRUCTION TO PROVIDE AND MAINTAIN ALL REQUIRED CONTROL DEVICES
- THAT ARE INDICATED WITHIN THE DRAWINGS AND ALL REQUIRED DEVICES AS REQUIRED BY ANY PERMIT.
- 4. SEE ALSO TEMPORARY EROSION AND POLLUTION CONTROL NOTES AND PLAN(S) WITHIN THIS DRAWING SET.

TRAFFIC CONTROL AND EXISTING PEDESTRIAN FACILITIES

- 1. THE CONTRACTOR IS SOLELY RESPONSIBLE TO PROVIDE, IMPLEMENT, AND COMPLY WITH A TRAFFIC CONTROL PLAN MEETING THE REQUIREMENTS OF THE COUNTY OR CITY, TXDOT, THE OWNER'S REPRESENTATIVE, AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) (LATEST EDITION) FOR ANY WORK ALONG THE ROAD AND ALL ADJACENT ROADS TO THE PROJECT SITE.
- WARN AND GUIDE MOTORISTS AND PEDESTRIANS THROUGH THE WORK AREA. 1.2. THIS PLAN IS TO BE SUBMITTED TO AND APPROVED BY ALL APPROPRIATE AGENCIES BEFORE CONSTRUCTION ALONG THE ROAD IS TO

1.1. THE PLAN SHALL CONTAIN PROVISIONS FOR ALL PROJECT PHASES AND PROVIDE SUFFICIENT BARRICADES, WARNINGS, AND LIGHTING TO

- 1.3. THIS PLAN AND THE APPROVAL NOTIFICATION ARE TO BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR RECORD KEEPING
- PURPOSES ONLY BEFORE CONSTRUCTION ALONG THE ROAD IS TO COMMENCE.
- 1.4. IF A PLAN IS INCLUDED WITHIN THE DRAWINGS, IT SHOULD BE USED AS A GENERAL GUIDELINE. 2. ANY MODIFICATIONS TO THE APPROVED TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO ALL APPROPRIATE AGENCIES FOR APPROVAL
- PRIOR TO IMPLEMENTATION. 3. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR MAINTAINING AND VERIFYING THAT ALL TRAFFIC CONTROL DEVICES ARE IN THE PROPER POSITION, WORKING ORDER, AND MEET THE SPECIFICATIONS EACH DAY PRIOR TO COMMENCING WORK AND PRIOR TO LEAVING
- FOR THE DAY, AND VERIFYING AT LEAST ONCE PER DAY WHEN NO WORK IS DONE INCLUDING WEEKENDS, HOLIDAYS, AND WEATHER DAYS. 4. MAINTENANCE OF TRAFFIC CONTROL DEVICES ARE TO OCCUR IMMEDIATELY WHEN NOTICED THAT THE DEVICE DOES NOT MEET THE TRAFFIC CONTROL PLAN AND SPECIFICATIONS.
- 5. IF TRAFFIC ON A ROAD IS TO BE DETOURED, OBSTRUCTED, AND/OR ROAD CLOSED, THE CONTRACTOR SHALL PROVIDE DAILY NOTIFICATION TO ALL PUBLIC EMERGENCY DEPARTMENTS (I.E. FIRE, POLICE, EMS) AND ALL PRIVATE EMS.
- 5.1. AT ALL TIMES, THE CONTRACTOR SHALL MAINTAIN INGRESS/EGRESS TO ADJACENT PROPERTIES FOR EMERGENCY VEHICLES AND POSTAL SERVICE IF AN ALTERNATE ROUTE IS NOT AVAILABLE.
- 6. PLACEMENT OF TEMPORARY AND PERMANENT PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE TMUTCD, THE DRAWINGS, AND SHALL BE APPROVED BY THE GOVERNING ENTITY. 7. THE CONTRACTOR SHALL MAINTAIN AND PROVIDE FOR SAFE AND CONVENIENT INGRESS/EGRESS TO THE PROPERTY ADJACENT TO
- CONSTRUCTION, PROTECT EXISTING IMPROVEMENTS, AND SHALL COORDINATE WITH THE PROPERTY OWNER / LESSEE FOR WORK ON THE
- 7.1. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER/LESSEE IN WRITING SEVEN (7) DAYS PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY IN WRITING AT LEAST TWO (2) WEEKS IN ADVANCE OF ANY WORK AFFECTING INGRESS/EGRESS FROM THE PROPERTY.
- THE NOTICE SHALL BE APPROVED OF BY THE OWNER AND THE OWNER'S REPRESENTATIVE. THE NOTICE SHALL BE HAND DELIVERED BY THE CONTRACTOR. THE NOTICE SHALL INDICATE WHAT DISRUPTIONS WILL OCCUR AND PROVIDE DATES AND CONTRACTOR CONTACT INFORMATION IN
- THE EVENT OF EMERGENCIES OR ANY QUESTIONS.
- 8. THE CONTRACTOR SHALL MAINTAIN EXISTING PEDESTRIAN FACILITIES DURING CONSTRUCTION. 9. THE CONTRACTOR SHALL FILL ANY HOLES LEFT WHEN BARRICADES AND SIGNS ARE REMOVED AND RESTORE THE AREA TO THE ADJACENT

DRAINAGE DURING CONSTRUCTION

FEDERAL REGULATIONS.

- THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
- 2. THE CONTRACTOR SHALL PROVIDE INTERIM DRAINAGE BY MEANS OF PUMPS AND TEMPORARY DITCHES DURING CONSTRUCTION AS REQUIRED TO MAINTAIN A WELL-DRAINED SITE FREE OF STANDING WATER AND WATER SOFTENED SOILS, UNLESS OTHERWISE INDICATED BY THE OWNER'S REPRESENTATIVE.
- 3. DRAINAGE FROM ADJACENT PROPERTIES SHALL NOT BE BLOCKED AT ANYTIME PRIOR, DURING, AND AFTER CONSTRUCTION AND WILL BE HANDLED AS SHOWN ON THE DRAWINGS OR AS INDICATED BY THE OWNER'S REPRESENTATIVE.

- EXCESS, DEMOLITION, AND SALVAGED MATERIALS 1. THE PROJECT AREA SHALL AT ALL TIMES BE KEPT FREE OF DEBRIS AND EXCESS MATERIAL TO THE SATISFACTION OF THE OWNER'S
- 2. EXCESS AND DEMOLITION MATERIALS WHICH ARE NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR,
- UNLESS THE OWNER'S REPRESENTATIVE STATES OTHERWISE. 3. DISPOSAL OF ALL EXCESS AND DEMOLITION MATERIALS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
- 4.1. DEMOLITION OF EXISTING IMPROVEMENTS SHALL BE PERFORMED BY THE CONTRACTOR BY SAW-CUTTING AT THE POINT WHERE THE ITEM IS TO REMAIN, UNLESS OTHERWISE INDICATED BY THE OWNER'S REPRESENTATIVE.

4.1.1. CUTS SHALL BE VERTICAL AND TO A DEPTH THAT WILL ALLOW THE PORTION TO BE REMOVED WITHOUT DAMAGING ANY PORTION

- 4.2. DEMOLITION SHALL BE COMPLETED IN A MANNER THAT WILL NOT DAMAGE THE PORTION THAT WILL REMAIN AND SHALL BE DONE IN A
- MANNER THAT IS CONSISTENT WITH INDUSTRY STANDARDS. DAMAGE TO ANY PORTION THAT IS TO REMAIN SHALL BE REPLACED OR REPAIRED TO A LIKE OR BETTER CONDITION BY THE
- CONTRACTOR AT NO EXPENSE TO THE PROJECT. 4.3. CEASE OPERATIONS AND NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY IF ADJACENT IMPROVEMENTS APPEAR TO BE
- 4.4. WELDING OR CUTTING STEEL WITH A TORCH IS NOT PERMITTED UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE. 4.5. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS AND METHODS TO PREVENT THE SPREAD OF DUST AND/OR OTHER DEBRIS FROM ENTERING OCCUPIED AREAS OF ADJACENT BUILDINGS OR FROM DAMAGING EXISTING ITEMS THAT ARE TO REMAIN.

5. MATERIALS THAT ARE DEEMED SALVAGEABLE SHALL BE HANDLED BY THE CONTRACTOR IN A MANNER TO PREVENT DAMAGE AND SHALL BE

STORED AT A LOCATION THAT IS SUITABLE FOR THE OWNER'S REPRESENTATIVE. 6. IF WASTE AREAS OR MATERIAL SOURCE AREAS RESULT FROM THIS PROJECT, THE CONTRACTOR IS TO FOLLOW ALL LOCAL, STATE, AND

NOTICE

• THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE

UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF

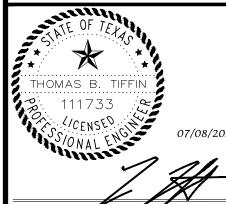
THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH THE UTILITY OWNER.

> 1-800-669-8344 OR www.lonestar811.com **GIVE 4 WORKING DAYS (M-F) NOTICE**



GIVE 4 WORKING DAYS (M-F) NOTICE





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THIS PAGE DOES NOT CONTAIN ALL PROJECT NOTES OR PROJECT REQUIREMENTS. THIS PAGE MAY CONTAIN NOTES THAT ARE NOT PERTINENT TO THE PROJECT BUT ARE INCLUDED FOR REFERENCE. IT WILL BE THE RESPONSIBILITY OF ALL CONTRACTORS WORKING ON THIS PROJECT TO BE KNOWLEDGEABLE WITH ALL PROJECT CONTRACT DOCUMENTS, WHICH INCLUDES BUT NOT LIMITED TO THE PROJECT GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS. ANY AND ALL COSTS RELATED TO THE CONTRACTOR FAILURE OF BEING KNOWLEDGEABLE WITH THE CONTRACT DOCUMENTS WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR..

SITE CLEARING AND EARTHWORK

INDICATED BY THE OWNER'S REPRESENTATIVE.

- 1. THE SITE SHALL BE CLEARED OF ALL TREES, SHRUBS, AND STUMPS UNLESS OTHERWISE NOTED ON THE DRAWINGS OR INDICTED BY THE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH THE SPECIFICATIONS.
- 2. THE SITE SHALL BE CLEARED OF ALL EXISTING CONCRETE, PAVEMENT, WALLS, FENCING, FOUNDATIONS, ETC. AS REQUIRED TO PROPERLY CONSTRUCT THE PROJECT WITH ALL WORK IN ACCORDANCE WITH THE SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS OR AS
- 3. THE TOP SIX-INCHES (6") OF MATERIAL SHALL BE STOCKPILED ON-SITE AND USED FOR FINAL STABILIZATION BETWEEN THE BACK OF CURB / ROAD EDGE AND SIDEWALK / RIGHT-OF-WAY LINE / PROPERTY LINE AND COMPACTED TO ACHIEVE A A DEPTH OF SIX-INCHES (6").
- 3.1. ANY ADDITIONAL MATERIAL SHALL BE EVENLY PLACED ON REMAINING AREAS THAT ARE DISTURBED. 4. ALL EARTHWORK (SITE GRADING, FILLING, HAULING, CUTTING, LOADING, ETC.) REQUIRED TO ACHIEVE THE LINES AND GRADES AS INDICATED
- WITHIN THIS DRAWING SET SHALL BE COMPLETED BY THE CONTRACTOR. 5. FILL BEYOND THE RIGHT-OF-WAY (ON LOTS) SHALL BE PLACED IN SIX-INCH (6") LIFTS AND COMPACTED TO MEET THAT OF THE AVERAGE OF
- THE EXISTING MATERIAL ON SITE PRIOR TO ANY DISTURBANCE. 6. CONTRACTOR SHALL PERFORM ROUGH EARTHWORK (SITE GRADING, FILLING, HAULING, CUTTING, LOADING, ETC.) TO VERIFY ADEQUATE EARTH QUANTITY ON-SITE TO ACHIEVE THE REQUIRED GRADES INDICATED WITHIN THIS DRAWING SET PRIOR TO ANY OTHER
- 6.1. IF MATERIAL IS TO BE HAULED FROM OFF-SITE SOURCES THE MATERIAL SHALL BE OF LIKE MATERIAL COMPOSITION AS TO WHAT IS
- FOUND CURRENTLY ON-SITE AND APPROVED BY THE OWNER'S REPRESENTATIVE. AFTER ROUGH EARTHWORK IS COMPLETE AND CONTRACTOR DETERMINES THAT SUFFICIENT MATERIAL IS AVAILABLE TO ACHIEVE THE
- REQUIRED GRADES, CONSTRUCTION ON THE REST OF THE PROJECT CAN COMMENCE. FINAL GRADES AS INDICATED WITHIN THE DRAWINGS SHALL BE ACHIEVED PRIOR TO FINAL ACCEPTANCE.
- GRADES NOT OTHERWISE INDICATED SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN, OR BETWEEN SUCH POINTS AND EXISTING FINISH GRADES.
- 9.1. ROUND OFF ABRUPT CHANGES IN SLOPE.
- 10. THE CONTRACTOR WILL BE REQUIRED TO LIMIT THE AMOUNT OF DUST AND WIND TRANSPORTED MATERIALS FROM OCCURRING ON AND OFF THE PROJECT SITE DURING AND AFTER WORKING HOURS SEVEN (7) DAYS A WEEK THROUGHOUT THE DURATION OF THE PROJECT. 10.1. THE CONTRACTOR SHALL PHASE WORK ON THE SITE AND USE WATER, TEMPORARY COVER, AND/OR DUST CONTROL AGENTS TO LIMIT
- THE AMOUNT OF DUST AND OTHER WIND-BORNE MATERIALS FROM EXITING THE PROJECT SITE. 10.2. IF DUST FROM THE PROJECT SITE BECOMES EXCESSIVE, THE CONTRACTOR WILL BE REQUIRED TO TAKE ANY AND ALL MEASURES
- POSSIBLE TO CONTROL THE POLLUTION. 11. CONTRACTOR SHALL LIMIT THE AMOUNT OF EROSION DUE TO STORM EVENTS AND ANY EROSION AREAS SHALL BE RESHAPED AND
- REPAIRED TO THE LINES AND GRADES SHOWN IN THE DRAWINGS IN A TIMELY MANNER WHEN CONDITIONS ALLOW.
- 12. WHEN THE FINISHED FLOOR (FF) ELEVATION IS INDICATED ON THE GRADING PLAN, IT IS TO BE UNDERSTOOD THAT IT IS A RECOMMENDATION BASED UPON THE DRAINAGE DESIGN OF THE PROJECT. THIS RECOMMENDED FINISHED FLOOR ELEVATION (FF) IS SUBJECT TO CHANGE UPON FINAL DESIGN OF THE BUILDING.
- 12.1. THE OWNER AND THE DESIGN PROFESSIONAL OF THE BUILDING WILL BE SOLELY RESPONSIBLE FOR ADJUSTING THE FINISHED FLOOR (FF) ELEVATION UPON VERIFICATION OF CURRENT CONDITIONS AND ALL CURRENT APPLICABLE LAWS, STATUTES, RULES, REGULATIONS, ORDINANCES, CODES, AND ORDERS OF ANY AND ALL GOVERNMENTAL BODIES, AGENCIES, AUTHORITIES, AND COURTS HAVING JURISDICTION.

- PRIOR TO COMMENCING GRADING ACTIVITIES, ALL IMPROVEMENTS SHALL BE PROTECTED FROM DAMAGE. 1.1. IF ANY IMPROVEMENT IS DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE ITEM DAMAGED AT NO ADDITIONAL COST TO THE PROJECT.
- 2. THE CONTRACTOR SHALL CONSTRUCT THE SITE TO THE LINES, GRADES, AND ELEVATIONS AS SPECIFIED AND AS INDICATED WITHIN THE
- ANY ADJUSTMENTS TO THE LINES, GRADES, AND ELEVATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- 4. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTROLLING DUST AND SOIL MOVEMENT BY WIND AND WATER ONCE SITE GRADING
- ACTIVITIES HAVE COMMENCED AND SHALL STAGE CONSTRUCTION AND PROVIDE DUST AND SOIL STABILIZATION CONTROL(S). 4.1. IF DUST AND SOIL MOVEMENT BY WIND AND WATER BECOMES EXCESSIVE, THE OWNER'S REPRESENTATIVE MAY CEASE ALL
- CONSTRUCTION ACTIVITIES UNTIL THE CONTRACTOR HAS REMEDIED THE SITUATION. AREAS TO RECEIVE FILL SHALL BE STRIPPED OF ALL VEGETATION, HUMUS, AND OTHER OBJECTIONABLE MATTER ENCOUNTERED WITHIN THE
- TOP SIX-INCHES (6") OF THE SOIL. 5.1. THIS MATERIAL, WITH THE EXCEPTION OF OBJECTIONABLE MATTER, SHALL BE STOCKPILED, IF FEASIBLE, AND REUSED AS SURFACE
- STABILIZATION MATERIAL BEYOND THE RIGHT-OF-WAY. 5.2. OBJECTIONABLE MATTER SHALL BE DETERMINED BY THE OWNER'S REPRESENTATIVE AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS, UNLESS OTHERWISE INSTRUCTED
- IMPORT MATERIAL, WHEN REQUIRED, SHALL BE OF SIMILAR MATERIAL AS TO THE NATURAL OCCURRING MATERIAL ON-SITE AND APPROVED OF BY THE OWNER'S REPRESENTATIVE
- MATERIAL SHALL BE FREE OF LARGE CLODS, LARGE ROCKS, ORGANIC MATTER, CONSTRUCTION MATERIAL, TRASH, AND OTHER OBJECTIONABLE MATERIAL.
- 6.2. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR VERIFICATION OF MATERIAL TYPE AND QUANTITY IMPORTED PER TRUCK. 6.2.1. THE OWNER'S REPRESENTATIVE SHALL BE PROVIDED TRIP TICKETS THAT INDICATE THE TRUCK NUMBER, DATE OF DELIVERY, MATERIAL DELIVERED, AND QUANTITY OF MATERIAL DELIVERED.
- 6.2.2. TRIP TICKETS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE ON A WEEKLY INTERVAL AND AS REQUESTED.
- EXCESS SOIL MATERIAL FROM GRADING ACTIVITIES SHALL NOT BE REMOVED FROM THE SITE, UNLESS DIRECTED BY THE OWNER'S REPRESENTATIVE. 7.1. EXCESS MATERIAL SHALL BE INCORPORATED INTO THE PROJECT OR STOCKPILED IN A MANNER TO PROMOTE POSITIVE DRAINAGE.
- AND WINDROWS SHALL BE MOVED BY BLADING OR SIMILAR METHOD. ALL FILL SHALL BE PLACED IN LAYERS APPROXIMATELY PARALLEL TO THE FINISH GRADE AND IN LAYERS NOT IN EXCESS OF SIX-INCHES (6")

NO FILL THAT IS PLACED BY DUMPING IN A PILE OR WINDROW SHALL BE INCORPORATED INTO A LAYER IN THAT POSITION; ALL SUCH PILES

OF UN-COMPACTED DEPTH, UNLESS INDICATED OTHERWISE BY THE OWNER'S REPRESENTATIVE.

10.1. 5' BEYOND RIGHT-OF-WAY AND WITHIN NON RIGHT-OF-WAY AREAS

- 10.1.1. TO A DENSITY WHICH APPROXIMATES THAT OF THE EXISTING NATURAL GROUND, UNLESS OTHERWISE INDICATED BY THE OWNER'S
- 10.2. 5' BEYOND RIGHT-OF-WAY AND WITHIN RIGHT-OF-WAY AREAS

BY THE OWNER'S REPRESENTATIVE.

- 10.2.1. TO A DENSITY OF NOT LESS THAN 95% STANDARD PROCTOR AT OPTIMUM MOISTURE CONTENT, UNLESS INDICATED OTHERWISE BY THE
- OWNER'S REPRESENTATIVE. 10.3. ALL IRREGULARITIES, DEPRESSIONS, AND SOFT SPOTS WHICH DEVELOP FROM COMPACTION SHALL BE CORRECTED BY THE
- 11. ANY EARTHWORK QUANTITIES SHOWN WITHIN THE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REFLECT THE ACTUAL AMOUNT THAT WILL BE REQUIRED TO COMPLETE THE WORK DUE TO CONSTRUCTION METHODS.

EXCAVATION AND TRENCHING FOR UTILITIES, ROADWAY, AND STRUCTURES ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TRENCH SAFETY PROGRAM THAT HAS BEEN DEVELOPED AND IMPLEMENTED BY THE

- EXCAVATIONS SHALL NOT BE MADE DURING INCLEMENT WEATHER. WATER ACCUMULATION IN EXCAVATIONS EXCEEDING ONE-INCH (1") SHALL BE PUMPED OUT PRIOR TO CONTINUING CONSTRUCTION OR AS
- APPROVED BY THE OWNER'S REPRESENTATIVE. TRENCH EXCAVATION SHALL NOT PRECEDE BACKFILL BY MORE THAN 200 FEET. TRENCHES SHALL NOT BE LEFT OPEN OR UNSECURED AFTER NORMAL WORKING HOURS OR WHILE WORKERS ARE NOT PRESENT ON-SITE.
- 5.1. IF TRENCHES ARE LEFT OPEN, THEY SHALL BE COVERED AND APPROPRIATE AND ADEQUATE BARRICADES SHALL BE PLACED TO PREVENT ACCESS INTO THE TRENCH AREA.
- ALL TOP SOIL, VEGETATION, ORGANIC MATERIAL, AND UNSUITABLE SOIL UNDER CONSTRUCTION AREAS SHALL BE EXCAVATED IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND STOCKPILED AND USED AS STABILIZATION MATERIAL FOR AREAS THAT WILL NOT BE BENEATH ROADS, DRIVEWAYS, SIDEWALKS, STRUCTURES, AND OTHER ITEMS AS INDICATED BY THE OWNER'S REPRESENTATIVE.

- 1. DEWATERING ACTIVITIES MAY BE REQUIRED TO CONSTRUCT PORTIONS OF THE PROJECT 1.1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REQUIRED PERMITS AND EROSION AND POLLUTION CONTROL DEVICES TO CONTROL THE EFFLUENT AND SHALL INSTALL THOSE DEVICES PRIOR TO COMMENCING DEWATERING ACTIVITIES.
- 1.2 THE LOCATION OF THE(SE) DEVICES SHALL BE INSTALLED AT APPROVED LOCATION(S) BY THE OWNER'S REPRESENTATIVE.
- 2. ALL DEWATERING ACTIVITIES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND LOCAL, STATE, AND FEDERAL REGULATIONS. THE CONTRACTOR WILL ALSO BE REQUIRED TO TEST THE SURROUNDING SURFACE WATER(S) AND THE WATER FROM THE DEWATERING

- ACTIVITIES FOR WATER COMPOSITION PRIOR TO DISCHARGING EFFLUENT
- 3.1. THE CONTRACTOR SHALL FURNISH THE OWNER'S REPRESENTATIVE WITH A COPY OF THE TEST REPORT.
- 3.2. IF THE WATER IS DETERMINED TO BE OF A COMPOSITION THAT MAY HARM THE SURROUNDING ENVIRONMENT, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR THE DISPOSAL IN A MANNER THAT IS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. 4. WATER REMOVED FROM EXCAVATIONS SHALL BE HANDLED IN SUCH A MANNER AS TO PREVENT DAMAGE TO ADJACENT PROPERTY AND
- 4.1. DAMAGE CAUSED BY DEWATERING OPERATIONS TO THE ADJACENT PROPERTY OR WORK SHALL BE REPAIRED OR REMEDIED BY THE
- CONTRACTOR AT THE CONTRACTOR'S SOLE EXPENSE. 4.2. IF WATER IS TO BE DISPOSED OF OFFSITE, THE CONTRACTOR WILL BE REQUIRED TO LOCATE AND ACQUIRE THE DISPOSAL SITE, OBTAIN ALL PERMITS, AND DISPOSE OF IT IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

WASTEWATER (SANITARY SEWER) UTILITY NOTES

- 1.1. THE WASTEWATER UTILITY MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES, THE TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 213.5(c) AND 217.51-217.70, 30 TAC CHAPTER 217,
- SUBCHAPTER D, AND THE DRAWINGS, DETAILS, AND SPECIFICATIONS FOR THIS PROJECT 1.2. ALL CONTRACTORS PERFORMING ANY UTILITY WORK MUST BE PROVIDED WITH COPIES OF THE WASTEWATER UTILITY DRAWING(S).
- 1.3. NOTICE: IF ANY PORTION OF THE PROPOSED SEWAGE COLLECTION SYSTEM IS TO BE PRIVATE, THEN THAT PORTION SHALL BE CONSTRUCTED UNDER THE SUPERVISION OF A LICENSED PLUMBER AND HAVE ALL THE REQUIRED PERMITS.
- 1.4. CONSTRUCTION OF THE PROPOSED SYSTEM SHALL BEGIN AT THE TIE-IN POINT TO AN EXISTING SYSTEM, UNLESS OTHERWISE APPROVED BY THE OWNERS REPRESENTATIVE.
- 1.5. ALL WORK SHALL BE VERIFIED BY THE CONTRACTOR AND PASS ALL TESTING REQUIREMENTS PRIOR TO PLACEMENT OF ANY SURFACE IMPROVEMENTS.
- 2.1. ALL MATERIALS AND CONSTRUCTION MUST BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THE TEXAS ADMINISTRATIVE CODE (TAC) §217(c), AND THE DRAWINGS, DETAILS, AND SPECIFICATIONS FOR THIS PROJECT.
- 2.2. ALL SEWER PIPES AND JOINTS MUST MEET THE REQUIREMENTS IN 30 TAC §§217.53(C). 2.3. GRAVITY SEWAGE LINES SHALL BE PVC, MUST HAVE AN SDR OF 26 OR LESS, AND MUST MEET THE ASTM SPECIFICATIONS FOR BOTH PIPES AND JOINTS (NUMBERS: D3034, D1784, D2412, D3212, F477) FOR A PRESSURE RATING OF AT LEAST 150 POUNDS PER SQUARE INCH
- 2.4. SEWAGE LINES SHALL BE INSTALLED AT THE GRADES AND SLOPES INDICATED ON THE DRAWINGS AND NOT LESS THAN THE MINIMUM
- SLOPES NOR GREATER THAN THE MAXIMUM SLOPES ESTABLISHED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).*
- 2.4.1. 6" LINE MINIMUM SLOPE IS 0.50%; MAXIMUM SLOPE IS 12.35%
- 2.4.2. 8" LINE MINIMUM SLOPE IS 0.33%; MAXIMUM SLOPE IS 8.40%
- 2.4.3. 10" LINE MINIMUM SLOPE IS 0.25%; MAXIMUM SLOPE IS 6.23% 2.4.4. 12" LINE - MINIMUM SLOPE IS 0.20%; MAXIMUM SLOPE IS 4.88%
- 2.5. SEWAGE LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY SHALL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL.
- 2.5.1. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL OR THE SEWER LINES MUST BE ENCASED IN
- 2.5.2. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES.
- 2.6. SEPARATION AND CLEARANCES
- 2.6.1. GENERAL UTILITIES 2.6.1.A. PARALLEL - VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO-FEET (2') BETWEEN OUTSIDE DIAMETERS AND HORIZONTAL
- SEPARATION SHALL BE A MINIMUM OF FOUR-FEET (4') BETWEEN OUTSIDE DIAMETERS, UNLESS OTHERWISE INDICATED. 2.6.1.B. CROSSING - VERTICAL SEPARATION SHALL BE A MINIMUM OF SIX-INCHES (6") BETWEEN OUTSIDE DIAMETERS AND HAVE CEMENT STABILIZED SAND PLACED BETWEEN AND TWO-FEET (2') BEYOND UTILITY.
- 2.6.2.A. WHERE WATERLINES AND NEW SEWAGE LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE-FEET (9') (I.E., WATERLINES CROSSING SEWAGE LINES, WATERLINES PARALLELING SEWAGE LINES, OR WATERLINES NEXT TO SEWAGE MANHOLES), THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E)
- (WATER DISTRIBUTION) 2.6.2.B. PARALLEL - VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO-FEET (2') BETWEEN OUTSIDE DIAMETERS AND HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR-FEET (4') BETWEEN OUTSIDE DIAMETERS, WITH IN ALL CASES, THE SEWAGE LINE
- SHALL BE BELOW THE UTILITY. 2.6.2.C. CROSSING - VERTICAL SEPARATION SHALL BE A MINIMUM OF ONE-FOOT (1') BETWEEN OUTSIDE DIAMETERS AND HAVE CEMENT STABILIZED SAND PLACED BETWEEN AND FIVE-FEET (5') BEYOND UTILITY. THE SEWAGE LINE MUST BE BELOW THE WATER
- 2.6.3. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB-OUTS FOR THE CONNECTION OF ANTICIPATED
- 2.6.3.A. THE LOCATION OF SUCH STUB-OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB-OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWAGE LINE AND THE EXTENSION.
- 2.6.3.B. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT.
- ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB-OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING INDUSTRY TECHNIQUES.
- 2.6.3.D. THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE DRAWING(S) AND MARKED AFTER BACKFILLING AS SHOWN IN THE SEWAGE DETAILS WITHIN THESE DRAWINGS.
- 2.6.4. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E). MANHOLES
- 3.1. ALL MATERIALS AND CONSTRUCTION MUST BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THE
- TEXAS ADMINISTRATIVE CODE (TAC) §217(c), AND THE DRAWINGS, DETAILS, AND SPECIFICATIONS FOR THIS PROJECT.* 3.1.1. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT.
- 3.2. THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR-FEET (4') FOR DEPTHS OF 0' TO 13' AND BE A MINIMUM DIAMETER OF
- FIVE FEET (5') FOR DEPTHS OF 13'+. 3.2.1. THE MANWAY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF THIRTY-INCHES (30") (30 TAC §217.55).
- 3.2.2. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED IN THE SEWAGE DETAILS WITHIN THESE DRAWINGS.
- 3.3. ALL MANHOLES WITH SEWAGE LINES ENTERING GREATER THAN THIRTY-INCHES (30") ABOVE THE MANHOLE FLOW LINE WILL BE REQUIRED TO HAVE DROP CONNECTIONS INSTALLED ON THE HIGHER INCOMING LINE. 3.4. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING.
- 3.4.1. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1,500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED.
- 3.5. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.
- 3.6. ALL MANHOLE FLOW LINE AND RIM ELEVATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE WITH THE FINAL ELEVATIONS BEING FIELD VERIFIED BY THE CONTRACTOR.
- 3.6.1. RIM ELEVATIONS CAN HAVE MINOR ADJUSTMENTS(±1') MADE AND INDICATED ON THE AS-BUILTS.
- 4. SERVICE LATERALS
- 4.1. PUBLIC SERVICE CONNECTIONS (FROM MAIN SEWAGE LINE TO PROPERTY LINE CLEANOUT) 4.1.1. ALL MATERIALS AND CONSTRUCTION MUST BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ),
- THE TEXAS ADMINISTRATIVE CODE (TAC) §217(c), AND THE DRAWINGS, DETAILS, AND SPECIFICATIONS FOR THIS PROJECT.* 4.1.2. CONNECTIONS ARE TO BE STAGGERED AT A MINIMUM OF FOUR-FEET (4') AND BE AT LEAST TWO-FEET (2') AWAY FROM JOINTS.

4.1.4. SHALL HAVE A THIRTY-SIX INCH (36") MINIMUM TO SIXTY-INCH (60") MAXIMUM COVER AT THE PROPERTY LINE WITH ANY ADJUSTMENTS

THE TEXAS ADMINISTRATIVE CODE (TAC) §217(c), LOCAL BUILDING CODE, AND THE DRAWINGS, DETAILS, AND SPECIFICATIONS FOR

- 4.1.3. ALL CONNECTIONS SHALL BE SIX-INCH (6") PVC.
- TO STAY BELOW WATER UTILITIES BEING THE RESPONSIBILITY OF THE CONTRACTOR. 4.2. PRIVATE SERVICE CONNECTIONS (FROM PROPERTY LINE CLEANOUT TO RESIDENCE / COMMERCIAL / INDUSTRIAL TIE-IN) 4.2.1. ALL MATERIALS AND CONSTRUCTION MUST BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ),
- THIS PROJECT.* 4.2.2. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I).
- 4.2.3. AFTER INSTALLATION OF AND PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, A TEXAS REGISTERED SANITARIAN, OR AN APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM AND CERTIFY THAT THEY ARE CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS
- 4.2.4. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE (5) YEARS AND FORWARD COPIES TO THE APPROPRIATE TCEQ REGIONAL OFFICE UPON REQUEST.
- 4.3. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

- 1. ALL STORM SEWER SHALL BE AS INDICATED ON THE DRAWINGS AND SHALL BE INSTALLED, BEDDED, AND BACK FILLED IN ACCORDANCE WITH
- THE STANDARDS, DETAILS, INDUSTRY STANDARDS, AND MANUFACTURERS RECOMMENDATIONS 2. ALL TRENCH BACKFILL SHALL BE PLACED IN 6" LIFTS AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE
- MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
- 3. ALL REINFORCED CONCRETE PIPE (RCP) JOINTS SHALL BE WRAPPED WITH GEOTEXTILE.
- 4. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLET LEADS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR INDICATED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 12" CLEARANCE AT STORM SEWER AND WATERLINE CROSSINGS. 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM THAT
- HAS BECOME DISTURBED AS A RESULT OF THIS WORK.
- ALL DITCHES SHALL BE GRADED TO THE PROPOSED ELEVATIONS TO ENSURE PROPER DRAINAGE. 8. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED.
- 9. ALL DRIVEWAYS SHALL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.

FORMULAS FOR PVC PIPE, CAST IRON, AND DUCTILE IRON PIPE.

SUBCHAPTER D.

- 1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290
- 2. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE SYSTEM OWNER'S REPRESENTATIVE MUST NOTIFY THE APPROPRIATE TCEQ REGIONAL
- 3. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO THE AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL
- FOUNDATION (NSF/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-pw) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS.
- 5. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY.
- WATER TRANSMISSION AND DISTRIBUTION LINES MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. 6.1. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 36-INCHES BELOW THE GROUND SURFACE.
- 7. DEFLECTION OF WATERLINE HORIZONTALLY AND/OR VERTICALLY MAY <u>OR</u> MAY NOT BE INDICATED ON THE DRAWINGS. 8. THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA
- 8.1. TESTS SHALL BE MADE ONLY AFTER COMPLETION OF BACKFILL AS SPECIFIED AND NOT UNTIL AT LEAST THIRTY-SIX (36) HOURS AFTER THE LAST CONCRETE THRUST BLOCK HAS BEEN CAST.
- 8.2. EACH SECTION OF PIPELINE SHALL BE SLOWLY FILLED WITH WATER AND THE SPECIFIED TEST PRESSURE, MEASURED AT THE POINT OF LOWEST ELEVATION, SHALL BE APPLIED. 8.3. DURING THE FILLING OF THE PIPE AND BEFORE APPLYING THE SPECIFIED TEST PRESSURE, ALL AIR SHALL BE EXPELLED FROM THE
- 8.4. DURING THE TEST, ALL EXPOSED PIPE, FITTINGS, VALVES, HYDRANTS, AND JOINTS SHALL BE CAREFULLY EXAMINED.
- 8.4.1. IF FOUND TO BE LEAKING, THEY SHALL BE CORRECTED IMMEDIATELY BY THE CONTRACTOR. 8.4.2. IF THE LEAKING IS DUE TO CRACKED OR DEFECTIVE MATERIAL, THE DEFECTIVE MATERIAL SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR WITH SOUND MATERIAL.
- 9. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES IN THE DISTRIBUTION SYSTEM AT ALL POINTS WHERE TOPOGRAPHY OR OTHER FACTORS MAY CREATE AIR LOCKS IN THE LINES. 9.1. ALL VENT OPENINGS TO THE ATMOSPHERE SHALL BE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL,
- OR AN ACCEPTABLE EQUIVALENT.
- SEPARATION

10.3. CROSSING

- 10.1.1. SEPARATION IS TO BE MEASURED FROM THE OUTSIDE SURFACE OF EACH RESPECTIVE PIECE.
- 10.1.2. DEFLECTION OF PIPE MAY BE REQUIRED TO MAINTAIN PROPER SEPARATION AND MAY NOT BE INDICATED ON THE DRAWINGS. 10.2. GENERAL UTILITIES
- 10.2.1. PARALLEL VERTICAL AND HORIZONTAL SEPARATION SHALL BE A MINIMUM OF TWO-FEET (2'), UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
- 10.3.1. SEPARATION OF SIX-INCHES (6") TO TWO-FEET (2') CEMENT STABILIZED SAND (10% CEMENT PER CUBIC YARD OF SAND) SHALL BE PLACED BETWEEN AND TWO-FEET (2') BEYOND EACH UTILITY.
- 10.3.2. SEPARATION OF MORE THAN TWO-FEET (2') BACKFILL SHALL BE AS DRAWINGS INDICATE OR EQUAL TO OR BETTER THAN EXISTING. 10.4. WASTEWATER UTILITIES
- 10.4.1.A. IN ALL CASES, THE WATER UTILITY SHALL BE ABOVE THE WASTEWATER UTILITY.
- 10.4.1.B. WATERLINE PIPE JOINT (18'+) IS TO BE CENTERED ON THE CROSSING.
- 10.4.2. SEPARATION OF NINE-FEET (9') OR MORE IN ALL DIRECTIONS 10.4.2.A. IN ALL CASES THE WATER LINE IS TO BE LOCATED ABOVE THE SEWAGE UTILITY AND INSTALLED AS INDICATED ON THE DRAWINGS
- AND BY THE MANUFACTURER. 10.4.3. SEPARATION OF NINE-FEET (9') OR LESS IN ANY DIRECTION
- 10.4.3.A. NEW WASTEWATER UTILITY 10.4.3.A.1. THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER
- DISTRIBUTION). 10.4.3.A.2. PARALLEL - VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO-FEET (2') AND HORIZONTAL SEPARATION SHALL BE A MINIMUM
- OF FOUR-FEET (4'). 10.4.3.A.3. CROSSING - VERTICAL SEPARATION SHALL BE A MINIMUM OF ONE-FOOT (1') BETWEEN OUTSIDE DIAMETERS AND HAVE CEMENT STABILIZED SAND PLACED BETWEEN AND FIVE-FEET (5') BEYOND UTILITY AND THE SEWAGE LINE MUST BE BELOW THE WATER
- 10.4.3.B. EXISTING WASTEWATER UTILITY 10.4.3.B.1. IF THE WASTEWATER UTILITY LINE IS LEAKING, THE LINE MUST BE REPLACED NINE-FEET (9') IN EACH DIRECTION OF THE
- 10.4.3.B.2. THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER
- 10.4.3.B.2.1. PARALLEL VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO-FEET (2') AND HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR-FEET (4'). 10.4.3.B.2.2. CROSSING - VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO-FEET (2') AND HAVE CEMENT STABILIZED SAND PLACED
- BETWEEN AND FIVE-FEET (5') BEYOND.
- 10.5. UTILITIES CONVEYING HAZARDOUS MATERIALS (OIL, ETC.)

THE UTILITY OWNER.

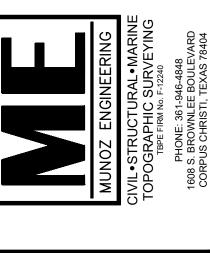
- 10.5.1. CONTACT ENGINEER FOR REQUIREMENTS. 11. THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C651 AND PROJECT SPECIFICATIONS
- AND THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. 11.1. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS.
- 11.2. A MINIMUM OF ONE (1) SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED, UNLESS NOTED OTHERWISE. 12. LOCATION OF WATER LINES, SERVICE CONNECTIONS, VALVES, FIRE HYDRANTS, FITTINGS, AND OTHER ITEMS ARE APPROXIMATE AND ARE
- TO BE LOCATED IN ACCORDANCE WITH THE STANDARD DETAILS. 13. QUANTITIES INDICATED ARE APPROXIMATE AND NOT ALL REQUIRED MATERIALS MAY BE INDICATED.

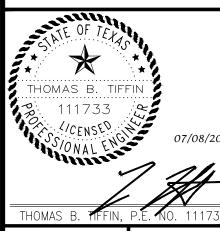
NOTICE

- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE
- UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH









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NOTICE: THIS PAGE DOES NOT CONTAIN ALL PROJECT NOTES OR PROJECT REQUIREMENTS. THIS PAGE MAY CONTAIN NOTES THAT ARE NOT PERTINENT TO THE PROJECT BUT ARE INCLUDED FOR REFERENCE. IT WILL BE THE RESPONSIBILITY OF ALL CONTRACTORS WORKING ON THIS PROJECT TO BE KNOWLEDGEABLE WITH ALL PROJECT CONTRACT DOCUMENTS, WHICH INCLUDES BUT NOT LIMITED TO THE PROJECT GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS. ANY AND ALL COSTS RELATED TO THE CONTRACTOR FAILURE OF BEING KNOWLEDGEABLE WITH THE CONTRACT DOCUMENTS WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.

EXISTING PAVEMENT REMOVAL AND REPAIR

- 1.1. PAVEMENT SHALL BE SAW-CUT FULL DEPTH WHERE EXISTING PAVEMENT IS BEING PARTIALLY REMOVED
- 1.2. AT A MINIMUM, PAVEMENT REPAIR SHALL CONSIST OF TWO-INCH (2") HOT MIX ASPHALTIC CEMENT (HMAC) AND TWELVE-INCH (12") COMPACTED FLEXIBLE BASE IN ACCORDANCE WITH THE SPECIFICATIONS.
- 1.2.1. BASE SHALL BE COMPACTED TO A MINIMUM OF NINETY-EIGHT PERCENT (98%) MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 AT MOSITURE CONTENT -1% TO +3% OF OPTIMUM.
- 1.2.2. IF THE EXISTING PAVEMENT SECTION IS FOUND TO BE THICKER, THE PAVEMENT REPAIR SECTION SHALL BE INCREASED TO MATCH THE EXISTING SECTION.
- 2. CONCRETE PAVEMENT 2.1. PAVEMENT SHALL BE SAW-CUT FULL DEPTH WHERE EXISTING PAVEMENT IS BEING PARTIALLY REMOVED.
- 2.2. AT A MINIMUM, PAVEMENT REPAIR SHALL CONSIST OF SIX-INCH (6") REINFORCED WITH #4 BARS ON TWELVE-INCH (12") ON-CENTERS WITH DOWELS INTO THE EXISTING PAVEMENT EVERY TWENTY-FOUR INCHES (24") OR EVENLY SPACED AND EIGHT-INCH (8") COMPACTED FLEXIBLE BASE IN ACCORDANCE WITH THE SPECIFICATIONS.
- 2.2.1. BASE SHALL BE COMPACTED TO A MINIMUM OF NINETY-EIGHT PERCENT (98%) MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 AT MOSITURE CONTENT -1% TO +3% OF OPTIMUM.
- 2.2.2. IF THE EXISTING PAVEMENT SECTION IS FOUND TO BE THICKER, THE PAVEMENT REPAIR SECTION SHALL BE INCREASED TO MATCH THE

PAVEMENT CONSTRUCTION

- PRIOR TO COMMENCING PAVING ACTIVITIES, ALL IMPROVEMENTS SHALL BE PROTECTED FROM DAMAGE.
- 1.1. IF ANY IMPROVEMENT IS DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE ITEM DAMAGED
- AT NO ADDITIONAL COST TO THE PROJECT. 2. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT TO THE LINES, GRADES, AND ELEVATIONS AS REQUIRED BY THE SPECIFICATIONS AND AS INDICATED WITHIN THE DRAWINGS.
- 2.1. ANY ADJUSTMENTS TO THE LINES, GRADES, AND ELEVATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- 3. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT SECTIONS AS INDICATED WITHIN THE DRAWINGS WITH MATERIALS MEETING OR
- EXCEEDING THE SPECIFICATIONS. 3.1. FLEXIBLE PAVEMENT SECTION
- 3.1.1. PUBLIC IMPROVEMENT AND PRIVATE IMPROVEMENT WITHIN PUBLIC ROW WITH CLAY SOILS
- SUBGRADE SHALL BE LIME TREATED, WHEN INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH LOCAL GOVERNING
- 3.1.1.1.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE THEN AT A MINIMUM THE SUBGRADE MATERIAL SHALL BE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 260 - LIME TREATMENT (ROAD-MIXED).
- AT A MINIMUM THE SUBGRADE SHALL BE TREATED WITH LIME SLURRY TO RESULT IN A PLASTICITY INDEX (P.I.) BELOW TWENTY (20), IN NO CASE SHALL THE PERCENT LIME BY LESS THAN FIVE-PERCENT (5%).
- BASE AND SUBGRADE REINFORCEMENT (GEOGRID), ONLY WHEN INDICATED WITHIN THE DRAWINGS, SHALL BE *TENSAR TRIAX®* TX5 GEOGRID OR APPROVED EQUAL (NOTE: EQUAL MUST INDICATE SAME OR BETTER TESTING RESULTS FROM THE SAME
- TESTS), INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS. BASE MATERIAL SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
 - IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE BASE MATERIAL SHALL BE TYPE A GRADE 1-2 IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE
- OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 FLEXIBLE BASE. 3.1.1.4. HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
- IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE HMAC SHALL BE TYPE D IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT.
- 3.1.2. PRIVATE IMPROVEMENT WITHIN PRIVATE PROPERTY WITH CLAY SOILS
- SUBGRADE SHALL BE LIME TREATED, WHEN INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 260 - LIME TREATMENT
- AT A MINIMUM THE SUBGRADE SHALL BE TREATED WITH LIME SLURRY TO RESULT IN A PLASTICITY INDEX (P.I.) BELOW TWENTY (20), IN NO CASE SHALL THE PERCENT LIME BY LESS THAN FIVE-PERCENT (5%).
- BASE AND SUBGRADE REINFORCEMENT (GEOGRID), ONLY WHEN INDICATED WITHIN THE DRAWINGS, SHALL BE *TENSAR TRIAX*® TX5 GEOGRID OR APPROVED EQUAL (NOTE: EQUAL MUST INDICATE SAME OR BETTER TESTING RESULTS FROM THE SAME
- TESTS), INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS. BASE MATERIAL SHALL BE TYPE A GRADE 1-2, OR AS INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
- HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE TYPE D IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT. 3.1.3. PUBLIC IMPROVEMENT OR PRIVATE IMPROVEMENT WITHIN PUBLIC ROW WITH SAND SOILS
- SUGBRADE SHALL BE AS PER TYPE INDICATED WITHIN THE DRAWINGS AND IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
- BASE MATERIAL SHALL BE AS PER TYPE AS INDICATED WITHIN THE DRAWINGS AND IN ACCORDANCE WITH LOCAL GOVERNING 3.1.3.3. SPECIFICATIONS.
- CEMENT STABILIZED BASE. 3.1.3.3.2. CEMENT STABILIZED BASE

IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE MATERIAL SHALL BE

- 3.1.3.3.2.1. AT A MINIMUM SHALL HAVE A PLASTICITY INDEX (P.I.) BELOW TWENTY (20) AND BE TREATED WITH ELEVEN-PERCENT (11%) CEMENT (CONTRACTOR MAY, AT HIS SOLE COST, HAVE THE SOIL TESTED BY THE TESTING COMPANY TO PROVIDE A RECOMMENDATION OF THE PERCENT CEMENT REQUIRED).
- IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE THEN AT A MINIMUM THE BASE MATERIAL SHALL BE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 275 - CEMENT TREATMENT (ROAD-MIXED).
- 3.1.3.3.3. FLEXIBLE BASE

3.1.3.3.1.

3.1.3.3.1.

- SHALL BE TYPE A GRADE 1-2, OR AS INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TXDOT STANDARD 3.1.3.3.3.1. SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 -FLEXIBLE BASE.
- HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE HMAC SHALL BE TYPE D IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS,
- STREETS, AND BRIDGES ITEM 341 DENSE-GRADED HOT-MIX ASPHALT.
- 3.1.2. PRIVATE IMPROVEMENT WITHIN PRIVATE PROPERTY WITH SAND SOILS
- SUGBRADE SHALL BE AS PER TYPE INDICATED WITHIN THE DRAWINGS. BASE MATERIAL SHALL BE AS PER TYPE AS INDICATED WITHIN THE DRAWINGS.
- 3.1.3.3. CEMENT STABILIZED BASE
- 3.1.3.3.1.1. AT A MINIMUM SHALL HAVE A PLASTICITY INDEX (P.I.) BELOW TWENTY (20) AND BE TREATED WITH ELEVEN-PERCENT (11%) CEMENT (CONTRACTOR MAY, AT HIS SOLE COST, HAVE THE SOIL TESTED BY THE TESTING COMPANY TO PROVIDE A RECOMMENDATION OF THE PERCENT CEMENT REQUIRED) AND SHALL BE IN ACCORDANCE WITH TXDOT
 - STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 275 - CEMENT TREATMENT (ROAD-MIXED).
- 3.1.3.3.2. FLEXIBLE BASE
- SHALL BE TYPE A GRADE 1-2, OR AS INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TXDOT STANDARD 3.1.3.3.2.1. SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 -
- HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE TYPE D IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT. 3.2. RIGID PAVEMENT SECTION
- 3.2.1. PUBLIC IMPROVEMENT AND PRIVATE IMPROVEMENT WITHIN PUBLIC ROW WITH CLAY SOILS
- 3.2.1.1. SUBGRADE SHALL BE LIME TREATED IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS. 3.2.1.1.1.
 - IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE THEN AT A MINIMUM THE SUBGRADE MATERIAL SHALL BE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 260 - LIME TREATMENT (ROAD-MIXED).
- AT A MINIMUM THE SUBGRADE SHALL BE TREATED WITH LIME SLURRY TO RESULT IN A PLASTICITY INDEX (P.I.) BELOW TWENTY (20), IN NO CASE SHALL THE PERCENT LIME BY LESS THAN FIVE-PERCENT (5%).
- BASE MATERIAL SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
- IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, BASE SHALL BE AS INDICATED WITHIN THE 3.2.1.2.1. DRAWINGS, WHEN INDICATED SHALL BE *TYPE A GRADE 1-2* IN ACCORDANCE WITH *TxDOT STANDARD SPECIFICATIONS FOR* CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
- CONCRETE SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS AND THE DRAWINGS.

- IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE AND MATERIALS, THEN AT A MINIMUM THE CONCRETE SHALL BE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 360 - CONCRETE PAVEMENT.
- 3.2.1.3.2. MATERIALS SHALL BE AT A MINIMUM THE FOLLOWING: 3.2.1.3.2.1. CONCRETE SHALL BE MINIMUM 4,000 PSI AT TWENTY-EIGHT (28) DAYS, UNLESS OTHERWISE NOTED.

ADJACENT BAR SPLICES A MINIMUM OF TWENTY-FOUR INCHES (24-INCHES).

- 3.2.1.3.2.2. REINFORCING STEEL SHALL BE MINIMUM ASTM A 615, GRADE 60. 3.2.1.3.2.3. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE ONE-ONE HALF INCH (1-1/2 INCH) AND FINE AGGREGATE SHALL BE CLEAN WITHOUT ANY CLAY PARTICLES
- 3.2.1.3.2.4. ALL CONCRETE SHALL BE AIR ENTRAINED, CONFORMING TO ASTM C-260 MINIMUM AIR CONTENT, 6% ANY OTHER ADDITIVES SHALL BE SUBJECT TO PRIOR APPROVAL BY THE OWNER'S REPRESENTATIVE. 3.2.1.3.2.5. LAP AND SPLICES SHALL BE MINIMUM THIRTY (30) BAR DIAMETERS OF LARGER DIAMETER BAR AND STAGGER
- 3.2.1.3.2.6. REINFORCEMENT SHALL BE SECURELY SUPPORTED TO PREVENT VERTICAL AND HORIZONTAL MOVEMENT DURING CONCRETE PLACEMENT.
- 3.2.1.3.2.7. PROVIDE EXPANSION JOINTS AND CONTROL JOINTS FOR CONCRETE FLATWORK AS INDICATED ON THE DRAWINGS. PROVIDE UNIFORM SLOPE FROM HIGH POINT TO LOW POINT AS INDICATED ON THE DRAWINGS. DO NOT POOL OR 3.2.1.3.2.8.
- 3.2.1.3.2.9. INSTALL PAVING JOINT FILLER BOARD AND EXPANSION JOINT CAPS PER MANUFACTURER'S RECOMMENDATIONS. APPLY A SINGLE BEAD OF EPOXY (GREENSTREAK 7300 GP EPOXY OR EQUAL) BETWEEN ALL ONE-SIDED RETROFIT PVC 3.2.1.3.2.10. EXPANSION JOINT CAP SEALS (628 OR 632) AND EXISTING SLAB, CURB OR FOUNDATION PRIOR TO PLACING NEW
- FLEXIBLE JOINT SEALANT COMPOUND (POLYSPEC 2235 SL POLY-SULFIDE POLYMER OR APPROVED EQUAL) USED 3.2.1.3.2.11. ALONG WITH CELLULAR FOAM PACKING MATERIAL (BACKER ROD) MAY BE USED INSTEAD OF PVC PAVING CAP WITH
- THE CONTRACTOR WILL BE REQUIRED TO HAVE THE SUBGRADE AND PROPOSED BASE MATERIALS TESTED BY AN OWNER'S REPRESENTATIVE
- APPROVED GEOTECHNICAL TESTING LABORATORY FOR THE ESTABLISHMENT OF AN OPTIMUM SOIL MOISTURE AND DENSITY PROCTOR. 4.1. REPORT COPIES SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK REQUIRING THE
- IMPROVEMENTS WITHIN THE PAVEMENT AREA SHALL BE MARKED BY THE CONTRACTOR SO THAT AFTER PAVING ACTIVITIES ARE COMPLETE, THE IMPROVEMENTS CAN BE ADJUSTED TO WITHIN ONE-QUARTER INCH (1/4") OF THE FINAL SURFACE, UNLESS OTHERWISE REQUIRED BY OTHER DETAILS OR THE OWNER'S REPRESENTATIVE.
- PRIOR TO PLACEMENT OF ANY PAVING IMPROVEMENTS, ALL UNDERGROUND IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: SANITARY SEWER UTILITIES, STORM SEWER UTILITIES, WATER UTILITIES, SLEEVES FOR ELECTRICAL UTILITIES, SLEEVES FOR IRRIGATION UTILITIES, SLEEVES FOR COMMUNICATION UTILITIES, AND OTHER UNDERGROUND IMPROVEMENTS THAT ARE REQUIRED AND ARE BENEATH AND ADJACENT TO THE PAVING IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND INDUSTRY STANDARDS,
- VERIFIED BY THE CONTRACTOR, AND PASS ALL TESTING REQUIREMENTS. 6.1. THE CONTRACTOR MAY PROCEED SOLELY AT THE CONTRACTOR'S OWN RISK IN THE PLACEMENT OF PAVING IMPROVEMENTS PRIOR TO THE VERIFICATION AND FINAL TESTING OF UNDERGROUND IMPROVEMENTS WITH ANY COSTS RESULTING FROM THE VERIFICATION OR TESTING FAILURE BEING SOLELY AT THE CONTRACTOR'S EXPENSE.
- 6.2. IF IT IS DETERMINED THAT THE CONTRACTOR HAS FAILED TO PLACE THE UNDERGROUND IMPROVEMENTS AS INDICATED ON THE DRAWINGS AND/OR FAILED TO VERIFY THE LOCATION PRIOR TO THE PLACEMENT OF PAVING IMPROVEMENTS, THEN ANY COSTS RESULTING FROM ACTIVITIES TO REMEDY THE SITUATION SHALL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
- WHERE THE PROPOSED PAVEMENT IMPROVEMENTS MEET THE EXISTING PAVEMENTS, THE CONTRACTOR SHALL SAW CUT THE PAVEMENT IN A LINE THAT IS PARALLEL TO THE PROPOSED PAVEMENT EDGE TO A POINT THAT IS NOT DAMAGED AND AT A MINIMUM DISTANCE OF TWO-FEET (2') BEYOND THE START OF THE PROPOSED PAVEMENT.

SIDEWALK AND ACCESSIBILITY RAMP CONSTRUCTION

- NOTE: ALL SIDEWALKS AND ACCESSIBILITY RAMPS (CURB RAMPS, RAMPS, ETC.) ON THIS PROJECT ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS), LATEST EDITION; WHEN THE DETAILS AND NOTES AS SHOWN IN THE DRAWINGS ARE IN CONFLICT WITH THE TAS, THEN THE TAS REQUIREMENTS SHALL BE USED.
- PRIOR TO COMMENCING PAVING ACTIVITIES, ALL IMPROVEMENTS SHALL BE PROTECTED FROM DAMAGE.
- 1.1. IF ANY IMPROVEMENT IS DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE ITEM DAMAGED AT NO ADDITIONAL COST TO THE PROJECT.
- THE CONTRACTOR SHALL CONSTRUCT THE SIDEWALK TO THE LINES, GRADES, AND ELEVATIONS AS REQUIRED BY THE SPECIFICATIONS AND AS INDICATED WITHIN THE DRAWINGS.
- 2.1. ANY ADJUSTMENTS TO THE LINES, GRADES, AND ELEVATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- 3. THE CONTRACTOR SHALL CONSTRUCT, AS INDICATED WITHIN THE DRAWINGS, WITH MATERIALS MEETING OR EXCEEDING THE
- 3.1. IN ANY CASE THE FOLLOWING SHALL BE USED AS A MINIMUM FOR MATERIALS:
- 3.1.1. EXPANSION BOARD SHALL BE 3/4" REDWOOD WITH APPROPRIATE GREENSTREAK PAVING CAP, UNLESS OTHERWISE INDICATED WITHIN
- 3.1.2. CONCRETE SHALL BE MINIMUM CLASS "A", 3,000 PSI CONCRETE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 421 - HYDRAULIC CEMENT CONCRETE, UNLESS
- OTHERWISE INDICATED WITHIN THE DETAILS. 3.1.3. REINFORCEMENT SHALL BE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS. STREETS. AND BRIDGES ITEM 440 - REINFORCEMENT FOR CONCRETE, UNLESS OTHERWISE INDICATED WITHIN THE
- 4. SURFACE FINISH SHALL BE A BROOM FINISH THAT IS PERPENDICULAR TO THE COMMON PEDESTRIAN PATH, UNLESS OTHERWISE NOTED ON
- 4.1. SURFACE FINISH SHALL BE CONSISTENT THROUGHOUT THE PROJECT. 5. IMPROVEMENTS WITHIN THE SIDEWALK SURFACE SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS ONE-QUARTER INCH (±1/4") OF THE FINAL
- SURFACE WITH THE EDGE BEING ROUNDED, UNLESS OTHERWISE REQUIRED BY OTHER DETAILS OR THE OWNER'S REPRESENTATIVE. PRIOR TO THE PLACEMENT OF ANY SIDEWALK IMPROVEMENTS, ALL UNDERGROUND IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO: SANITARY SEWER UTILITIES, STORM SEWER UTILITIES, WATER UTILITIES, SLEEVES FOR ELECTRICAL UTILITIES, SLEEVES FOR IRRIGATION UTILITIES, SLEEVES FOR COMMUNICATION UTILITIES, AND OTHER UNDERGROUND IMPROVEMENTS THAT ARE REQUIRED AND ARE BENEATH
- SHALL BE VERIFIED BY THE CONTRACTOR, AND PASS ALL TESTING REQUIREMENTS. 6.1. THE CONTRACTOR MAY PROCEED SOLELY AT THE CONTRACTOR'S OWN RISK IN THE PLACEMENT OF SIDEWALK IMPROVEMENTS PRIOR TO THE VERIFICATION AND FINAL TESTING OF UNDERGROUND IMPROVEMENTS WITH ANY COSTS RESULTING FROM THE VERIFICATION OR

AND ADJACENT TO THE SIDEWALK IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND INDUSTRY STANDARDS,

- TESTING FAILURE BEING SOLELY AT THE CONTRACTOR'S EXPENSE 6.2. IF IT IS DETERMINED THAT THE CONTRACTOR HAS FAILED TO PLACE THE UNDERGROUND IMPROVEMENTS AS INDICATED ON THE DRAWINGS AND/OR FAILED TO VERIFY THE LOCATION PRIOR TO PLACEMENT OF SIDEWALK IMPROVEMENTS, THEN ANY COSTS
- RESULTING FROM ACTIVITIES TO REMEDY THE SITUATION SHALL BE SOLELY AT THE CONTRACTOR'S EXPENSE 7. WHERE THE PROPOSED SIDEWALK IMPROVEMENTS MEET THE EXISTING SIDEWALK, THE CONTRACTOR SHALL PERFORM THE FOLLOWING: 7.1. IF THE POINT OF THE EXISTING SIDEWALK EDGE WHERE THE PROPOSED IS TO ABUT TO IS DAMAGED, CRACKED, AND/OR IN A CONDITION THAT WILL NOT ALLOW FOR THE PROPOSED SIDEWALK TO PROPERLY TIE-INTO, THE CONTRACTOR SHALL PERFORM ONE OF THE
- FOLLOWING: 7.1.1. SAW CUT THE SIDEWALK AT A CONTROL JOINT WITH, AT ALL TIMES, LEAVING A MINIMUM OF TWO (2) CONTROL JOINT SECTIONS BETWEEN AN EXPANSION JOINT AND THE PROPOSED SIDEWALK.
- 7.1.2. BREAK OUT THE SIDEWALK AT AN EXPANSION JOINT IN A MANNER THAT WILL NOT DAMAGE THE EXISTING.
- 7.2. INSTALL TWELVE-INCH (12") DOWELS WITH SIX-INCHES (6") BEING WITHIN THE EXISTING SIDEWALK BY DRILLING AND USING EPOXY ADHESIVE ANCHOR (HILTI No. HIT HY150 OR OWNER'S REPRESENTATIVE APPROVED EQUAL) AND THE OTHER PORTION OF THE DOWEL WITHIN THE PROPOSED SIDEWALK.
- 7.3. IF THE SIDEWALK WIDTHS ARE DIFFERENT, THE CONTRACTOR SHALL PROVIDE A TRANSITIONAL AREA AS NOTED ON THE DRAWINGS OR AS REQUIRED BY THE OWNER'S REPRESENTATIVE.
- WHEN THE ELEVATION CHANGES ABRUPTLY BETWEEN THE TOP OF SIDEWALK AND THAT OF THE NATURAL/PROPOSED GRADE, THE CONTRACTOR SHALL INSTALL A HEADER WALL ALONGSIDE THE SIDEWALK OF AN ADEQUATE HEIGHT TO MAINTAIN NO GREATER THAN 3:1 SLOPES OF THE NATURAL/PROPOSED GRADE, UNLESS OTHERWISE INDICATED BY THE OWNER'S REPRESENTATIVE.

SIGNS AND PAVEMENT MARKINGS

- 1. ALL REGULATORY SIGNS, WARNING SIGNS, OBJECT MARKERS, AND BARRICADES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF
- THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD). 2. THE CONTRACTOR SHALL INSTALL ALL REGULATORY SIGNS, WARNING SIGNS, OBJECT MARKERS, BARRICADES, AND PAVEMENT MARKINGS IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AS INDICATED BY THE OWNER'S REPRESENTATIVE, AND MANUFACTURER'S RECOMMENDATIONS AS SOON AS PRACTICABLE AND PRIOR TO OPENING TO THE PUBLIC.
- ALL CONNECTORS AND FASTENERS USED TO ATTACH THE SIGN TO THE POST SHALL BE GALVANIZED STEEL OR STAINLESS STEEL.
- SIGN(S) SHALL BE INSTALLED AT TIME OF POST INSTALLATION TO ENSURE THE SIGN(S) WILL FACE THE CORRECT DIRECTION.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO EXCAVATION. ANY REGULATORY SIGNS, WARNING SIGNS, OBJECT MARKERS, AND BARRICADES DAMAGED PRIOR TO ACCEPTANCE SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

FINAL CLEAN-UP AND SITE PREPARATION

- THE CONTRACTOR WILL BE REQUIRED TO REMOVE EXCESS MATERIALS AND CONSTRUCTION DEBRIS FROM THE PROJECT SITE, CLEAN ALL ROADS AND SIDEWALKS, CLEAR THE STORM SEWER OF SILT AND DEBRIS, CLEAR THE SANITARY SEWER OF DEBRIS, BRING ALL MANHOLES, VALVE BOX COVERS, FIRE HYDRANTS TO PROPER GRADE, AND CLEAR THE SITE OF ALL EQUIPMENT TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE
- MATERIALS LARGER THAN FOUR-INCHES (4") IN SIZE WITHIN THE CONSTRUCTION LIMITS AND NOT INCORPORATED INTO THE PROJECT SHALL

- BE REMOVED BY THE CONTRACTOR FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS, UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- EROSION AND POLLUTION CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, REINFORCED SILT FENCE, INLET PROTECTION, HAY BALES, AND OTHER DEVICES AS DIRECTED BY THE OWNER'S REPRESENTATIVE SHALL BE VERIFIED AND REMEDIED TO MEET THE REQUIREMENTS OF THE DEVICE AND OWNER'S REPRESENTATIVE.
- 3.1. THE CONSTRUCTION ENTRANCE SHALL BE REMOVED IN ITS ENTIRETY UNLESS OTHERWISE STATED BY THE ENGINEER.
- 3.2. ADDITIONAL EROSION AND POLLUTION CONTROL DEVICES MAY BE REQUIRED TO HAVE THE PROJECT SITE IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
- 4. THE CONTRACTOR SHALL GRADE AND STABILIZE THE SITE TO PREPARE THE SITE FOR THE INTENDED USE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

PROJECT COMPLETION AND AS-BUILT DRAWINGS

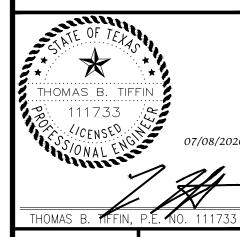
AGREEMENT WITH THE CITY OF CORPUS CHRISTI.

- 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING TWO (2) SETS OF "AS-BUILT" DRAWINGS SHOWING ILLUSTRATIONS AND/OR NOTES OF ALL FIELD CHANGES AND MODIFICATIONS TO THE DRAWINGS AS ISSUED FOR THE PROJECT.
- 1.1. AS-BUILT DRAWINGS SHALL BE SIGNED BY ALL CONTRACTOR DESIGNEE(S) AND INSPECTOR(S).
- 2. AT PROJECT COMPLETION, ALL SETS OF "AS-BUILT" DRAWINGS, COPIES OF ALL TESTING REPORTS, ALL APPROVALS AND /OR DISAPPROVALS FROM LOCAL AND STATE ENTITIES, FOUR (4) HARD COPIES AND ONE (1) DIGITAL COPY OF OPERATIONAL AND MAINTENANCE MANUALS, FOUR (4) COPIES OF WARRANTY INFORMATION, AND TWO (2) COPIES OF AFFIDAVITS OF BILLS PAID FROM EACH SUPPLIER MUST BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO PROJECT FINAL ACCEPTANCE AND FINAL RELEASE OF ANY PAYMENTS.

PROJECT NOTES:

- 1. CONTRACTOR TO REFER TO THE CONSTRUCTION DRAWINGS FOR PUBLIC IMPROVEMENTS, GRANGE PARK SUBDIVISION UNIT 3
- FOR CONSTRUCTION AND LOCATION OF OTHER PROPOSED IMPROVEMENTS. 2. CONTRACTOR TO ABIDE BY REQUIREMENTS OF CONSTRUCTION EASEMENT AGREEMENTS FOR ALL WORK ON DORSAL
- DEVELOPMENT PROPERTY. THE FOLLOWING IMPROVEMENTS ARE WITHIN WASTEWATER REIMBURSEMENT REQUEST: WASTEWATER MANHOLES A04, A05,
- A06, A07, AND WASTEWATER LINES A05, A06, A07. CONSTRUCTION OF ALL ITEMS INDICATED WITHIN THESE CONSTRUCTION DRAWINGS ARE REIMBURSEMENTS THROUGH AN





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NOTICE

• THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE

UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH





811 OR 1-800-344-8377 OR www.texas811.org GIVE 4 WORKING DAYS (M-F) NOTICE

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NOTICE: THIS PAGE DOES NOT CONTAIN ALL PROJECT NOTES OR PROJECT REQUIREMENTS. THIS PAGE MAY CONTAIN NOTES THAT ARE NOT PERTINENT TO THE PROJECT BUT ARE INCLUDED FOR REFERENCE. IT WILL BE THE RESPONSIBILITY OF ALL CONTRACTORS WORKING ON THIS PROJECT TO BE KNOWLEDGEABLE WITH ALL PROJECT CONTRACT DOCUMENTS, WHICH INCLUDES BUT NOT LIMITED TO THE PROJECT GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS. ANY AND ALL COSTS RELATED TO THE CONTRACTOR FAILURE OF BEING KNOWLEDGEABLE WITH THE CONTRACT DOCUMENTS WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.

UTILITY BACKFILL TESTING REQUIREMENTS

1.1. SHALL BE FOR ALL PUBLIC AND PRIVATE WASTEWATER UTILITY, STORM SEWER UTILITY, WATER UTILITY, AND ANY OTHER UTILITY THAT IS REQUIREMENT

2.1. FREQUENCY OF TESTS SHALL NOT BE LESS THAN ONE (1) FOR ANY PIPE SECTION BETWEEN MAIN LINE VALVES AND EVERY ONE-HUNDRED LINEAR FEET (100') OF MAIN PIPE PER TWO-FEET (2') VERTICAL OF BACKFILL MATERIAL TO TOP OF FINAL BACKFILL, NOT INCLUDING TOPSOIL BACKFILL MATERIAL, STARTING AT TWO-FEET (2') ABOVE TOP OF PIPE, IN ACCORDANCE WITH ASTM D2922.

2.2. IF COMPACTION OF THE FILL MATERIAL DOES NOT MEET OR EXCEED THE REQUIREMENTS, THAT PORTION OF FILL MATERIAL IS TO BE FURTHER COMPACTED AND RETESTED AT THE SOLE EXPENSE OF THE CONTRACTOR.

WASTEWATER UTILITY TESTING REQUIREMENTS

1.1. TESTING SHALL BE DONE BY THE CONTRACTOR AND WITNESSED BY THE OWNER REPRESENTATIVE.

1.2. THE CONTRACTOR MAY WISH TO CHECK PIPE IMMEDIATELY AFTER BACKFILLING FOR JOB CONTROL. 1.3. HOWEVER, THIS SHALL NOT QUALIFY AS ACCEPTANCE TESTING.

1.4. NO PIPE CAN BE TESTED FOR FORMAL ACCEPTANCE UNTIL IT HAS BEEN IN PLACE, COMPLETE WITH BACKFILL FOR AT LEAST THIRTY (30)

1.5. RETESTING 1.5.1. ANY DEFECTIVE WORK OR MATERIALS SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTORS SOLE

1.6. THIS SHALL BE REPEATED UNTIL ALL WORK AND MATERIALS ARE ACCEPTABLE.

1.7. TESTING SHALL BE COMPLETED AND ALL WORK SHALL PASS THE REQUIRED TESTING PRIOR TO PLACEMENT OF PAVEMENT

1.7.1. CONTRACTOR MAY PROCEED WITH PLACEMENT OF PAVEMENT AND WILL INCUR ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF PAVEMENT IF UTILITY FAILS TESTING AND NEEDS TO BE REPLACED.

2.1. LOW PRESSURE AIR TEST

2.1.1. GENERAL

2.1.1.A. REQUIRED FOR ALL PIPE

2.1.1.B. EQUIPMENT FOR TEST SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

2.1.1.C. THE CONTRACTOR SHALL TEST THE ENTIRE SANITARY SEWERAGE PIPING SYSTEM FOR LEAKS.

2.1.1.D. THIS WORK SHALL BE WITNESSED BY THE OWNER REPRESENTATIVE OR A REPRESENTATIVE DESIGNATED BY THE OWNER

2.1.2. TESTING 2.1.1.A. SHALL BE TESTED IN ACCORDANCE WITH UNI-BELL PLASTIC PIPE ASSOCIATION "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TEST OF INSTALLED SEWER PIPE" UNI-B-6, AND TEXAS ADMINISTRATION CODE.

2.1.1.B. THE TEST SECTION SHALL BE PLUGGED AND SUBJECTED TO A TEST PRESSURE NOT IN EXCESS OF FIVE (5) PSI.

2.1.1.C. THE TIME REQUIRED FOR A ONE (1) PSI PRESSURE DROP SHALL BE MEASURED AND BE A MINIMUM OF THE VALUE OBTAINED IN EQUATION A AND/OR SHOWN IN TABLE 1.

EQUATION A: $T = 0.0237D^2L$ WHERE: T = MINIMUM ALLOWABLE TIME (SECONDS) FOR A PRESSURE DROP OF ONE (1) PSI GAGE PRESSURE

D = NOMINAL PIPE DIAMETER (INCHES) L = LENGTH OF PIPE RUN (FEET)

MINIMUM TESTING TIMES FOR LOW PRESSURE AIR TEST

	WINNING WITE CHING THE	ILO I OIX LOW I IXLOO	ONE AIN TEOT	
PIPE DIAMETER		MINIMUM TIME	MAXIMUM LENGTH	ADDITIONAL TIME PER FOOT
	INCH	(SECONDS)	FOR MINIMUM TIME	(SECONDS PER FOOT)
	4	226	597	0.380
	6	340	398	0.853
	8	452	298	1.517
	10	567	239	2.370
	12	680	199	3.413

2.2. DEFLECTION TESTING 2.2.1. GENERAL

2.2.1.A. REQUIRED FOR ALL PVC PIPE, EXCEPT FOR PIPE THAT IS A SERVICE LINE.

2.2.1.B. ALL PIPE SHALL BE TESTED FOR DEFLECTION NO LESS THAN THIRTY (30) DAYS AFTER PLACEMENT OF BACKFILL.

2.2.1.C. ALL DEFLECTION TESTING IS TO BE COMPLETED BY MEANS OF PULLING A MANDREL THROUGH THE PIPE.

2.2.2. EQUIPMENT FOR DEFLECTION TESTING 2.2.2.A. ALL EQUIPMENT IS TO BE PROVIDED BY THE CONTRACTOR.

2.2.2.B.A. MANDREL SIZE

2.2.2.B.A.A. SHALL HAVE AN OUTSIDE DIAMETER (OD) OF NOT LESS THAN NINETY-FIVE PERCENT (95%) OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE INSIDE DIAMETER (ID) OF THE PIPE AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTM,

AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE. 2.2.2.B.B. MANDREL DESIGN MANDRELS SHALL BE OF MACHINED RIGID CORROSION RESISTANT PIPE THAT CAN WITHSTAND 200 PSI WITHOUT BEING

2.2.2.B.B.A. DEFORMED AND SHALL BE IN ACCORDANCE WITH TEXAS ADMINISTRATIVE CODE.

WITH A LENGTH NOT LESS THAN ONE AND ONE-HALF (1-1/2) DIAMETERS.

ADJUSTABLE OR FLEXIBLE MANDRELS ARE PROHIBITED. 2.2.2.B.B.D. MANDRELS WILL BE SIZED FOR SDR 26 PVC PIPE AT FIVE-PERCENT (5%) DEFLECTION.

2.2.3. PROCEDURE

2.2.3.A. SHALL BE IN ACCORDANCE WITH TEXAS ADMINISTRATIVE CODE.

2.2.3.B. THE TEST SHALL BE WITNESSED BY THE INSPECTOR AND THE OWNER REPRESENTATIVE.

2.2.3.C. THE MANDREL SHALL NOT BE PULLED BY ANY MECHANICAL PULLING DEVICES.

2.2.3.D. IF A SECTION OF PIPE FAILS THEN THAT PORTION SHALL BE CORRECTED AND A SECOND TEST OF THAT PORTION SHALL BE COMPLETED NO LESS THAN THIRTY (30) DAYS AFTER PLACEMENT OF BACKFILL.

2.3. TELEVISED INSPECTION

2.3.1. ALL NEW AND REHABILITATED PIPING, MANHOLES, AND APPURTENANCES ARE TO BE TELEVISED WITH A CLOSED CIRCUIT TELEVISION

CAMERA THAT IS PULLED THROUGH EACH COMPLETED LINE SEGMENT. 2.3.2. CAMERA CAN BE PULLED IN EITHER DIRECTION AT A SPEED NOT GREATER THAN THIRTY-FEET (30') PER MINUTE, STOPPING AS

NECESSARY TO PERMIT PROPER DOCUMENTATION OF THE WASTEWATER LINE'S CONDITION. 2.3.3. LIGHTING FOR THE CAMERA SHALL BE SUITABLE TO ALLOW A CLEAR PICTURE OF THE ENTIRE PERIPHERY OF THE PIPE.

2.3.4. A CAMERA WITH PAN AND TILT CAPABILITY WILL BE REQUIRED.

2.3.5. THE CAMERA, TELEVISION MONITOR, AND OTHER COMPONENTS OF THE VIDEO SYSTEMS SHALL BE CAPABLE OF PRODUCING PICTURE QUALITY TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AND UTILITY INSPECTOR.

2.3.6. THE CONTRACTOR SHALL PROVIDE TO THE OWNER'S REPRESENTATIVE THREE (3) COPIES AND THE UTILITY INSPECTOR THREE (3) COPIES OF THE TELEVISION INSPECTION REPORT ON A FORM THAT IS APPROVED AND CONTAINS THE FOLLOWING INFORMATION:

2.3.6.A. DATE, START TIME, END TIME

2.3.6.B. PROJECT NAME AND NUMBER 2.3.6.C. INSPECTION COMPANY AND OPERATOR NAME

2.3.6.D. ENTRY AND EXIT POINT IDENTIFICATION, DEPTH, AND PIPE SIZE AND TYPE

2.3.6.E. DVD NUMBER

2.3.6.F. STARTING AND END COUNTER NUMBER 2.3.6.G. CAMERA STARTING AND ENDING FOOTAGE (IN FEET)

2.3.6.H. DETAILED OBSERVATION COMMENTS AND THE FOOTAGE FROM THE ENTRY POINT FOR EACH COMMENT

2.3.7. THE CONTRACTOR SHALL PROVIDE TO THE OWNER'S REPRESENTATIVE THREE (3) COPIES AND THE UTILITY INSPECTOR THREE (3) COPIES OF A COLOR RECORDING IN STANDARD PLAY (SP) MODE FOR EACH LINE OR LINE SEGMENT.

2.3.8. THE CAPTURE SYSTEM SHALL HAVE THE CAPABILITY OF RECORDING, DIGITIZING AND STORING SINGLE FRAMES OF VIDEO IMAGES AND "REAL TIME" LIVE VIDEO, AS WELL AS COLLECTING, STORING AND PRINTING WASTEWATER LINE INSPECTION DATA FOR GRAPHIC DISPLAY AND REPORT GENERATION.

2.3.9. THE IMAGING CAPTURE SYSTEM SHALL STORE DIGITIZED PICTURE IMAGES, HAVE THE ABILITY TO EXPORT PICTURE FILES TO INDUSTRY STANDARD FORMATS (JPG, BMP, AND TIF), BE TRANSFERABLE TO DVD AND BE PRINTED AT NO COST TO THE CITY. USE OF PROPRIETARY SOFTWARE IS DISCOURAGED; HOWEVER, IF THE CONTRACTOR PROVIDES THE SOFTWARE AND THREE LICENSES TO THE CITY, PROPRIETARY SOFTWARE COMPATIBLE WITH THE.

3. MANHOLE 3.1. GENERAL

3.1.1. LEAKAGE TESTING SHALL BE PERFORMED ON EACH MANHOLE AND SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES

TESTING SHALL BE DONE BY EITHER A HYDROSTATIC TEST OR A VACUUM TEST, OR AS DIRECTED BY THE UTILITY OWNER OR OWNER'S REPRESENTATIVE.

3.2. HYDROSTATIC TEST

3.2.1. PLUG ALL PIPES ENTERING THE MANHOLE AND FILL THE MANHOLE COMPLETELY WITH WATER.

3.2.2. THE MINIMUM LENGTH OF THE TEST SHALL BE ONE (1) HOUR.

3.2.3. MAXIMUM LEAKAGE SHALL BE CALCULATED TO BE 0.025 GALLONS PER FOOT DIAMETER OF MANHOLE DEPTH PER HOUR.

4. VACUUM TESTING 4.1. PLUG ALL LIFT HOLES AND EXTERIOR JOINTS BY APPROVED METHODS.

4.2. PLUG ALL PIPES ENTERING THE MANHOLE.

4.3. THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. 4.4. A VACUUM OF TEN-INCHES (10-INCHES) OF MERCURY SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST

HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. 4.5. THE TIME OF THE TEST WILL START ONCE THE VACUUM PUMP IS SHUT OFF.

4.6. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM TEN-INCHES (10-INCHES) OF MERCURY TO NINE-INCHES (9-INCHES) OF MERCURY EXCEEDS TWO (2) MINUTES.

4.7. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE BY AN APPROVED METHOD AND THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.

TESTING AND CERTIFICATION 5.1. TESTING SHALL BE DONE BY THE CONTRACTOR AND WITNESSED BY THE UTILITY OWNER AND OWNERS OR HIS REPRESENTATIVE.

5.2. ALL MANHOLES AND STRUCTURES SHALL BE TESTED AS FINISHED AND COMPLETED FOR FINAL ACCEPTANCE.

5.3. ANY DEFECTIVE WORK OR MATERIALS SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AND RETESTED. 5.4. THIS SHALL BE REPEATED UNTIL ALL WORK AND MATERIALS ARE ACCEPTABLE.

WATER UTILITY TESTING REQUIREMENTS

1.1.1. SHALL BE COMPACTED IN A MANNER AS TO NOT DAMAGE ANY UTILITY OR IMPROVEMENTS

1.2. SELECT BACKFILL MATERIAL

1.2.1. COMPACTED BY USE OF INDUSTRY STANDARD EQUIPMENT AT ZERO TO FIVE-PERCENT (0-5%) OF OPTIMUM MOISTURE CONTENT TO NINETY-FIVE PERCENT (95%) OF MAXIMUM DRY DENSITY DETERMINED ACCORDING TO ASTM D698, OR AS REQUIRED BY THE DRAWINGS OR OWNER

1.3.1. COMPACTED BY USE OF INDUSTRY STANDARD EQUIPMENT TO NINETY-PERCENT (90%) STANDARD PROCTOR, OR AS REQUIRED BY THE DRAWINGS OR OWNER REPRESENTATIVE.

1.4. TOPSOIL BACKFILL MATERIAL 1.4.1. COMPACTED BY USE OF INDUSTRY STANDARD EQUIPMENT TO A FIRM DENSITY, OR AS REQUIRED BY THE DRAWINGS OR OWNER

2. HYDROSTATIC PRESSURE TEST

2.1. GENERAL

2.1.1. ALL PRODUCTS MUST COMPLY WITH NSF/ANSI STANDARD 61.

2.1.2. TESTING IS NOT ALLOWED PRIOR TO COMPLETION OF BACKFILL

2.1.2.A. ANY LOCATION OF EXPOSED PIPING, FITTINGS, VALVES, HYDRANTS, AND JOINTS SHALL BE CAREFULLY EXAMINED AND IF FOUND

LEAKING ALL TESTING SHALL STOP AND REPAIRS SHALL BE MADE. 2.1.3. EACH SECTION OF PIPELINE SHALL BE SLOWLY FILLED WITH WATER AND THE SPECIFIED TEST PRESSURE, MEASURED AT THE POINT OF LOWEST ELEVATION, SHALL BE APPLIED.

2.1.4. ALL REQUIRED TESTING OF THE WATER UTILITY SHALL BE PERFORMED AND PASS ALL REQUIREMENTS PRIOR TO PLACEMENT OF ANY PAVEMENT, INCLUDING, BUT NOT LIMITED TO: SUBGRADE, BASE, ASPHALT, CONCRETE, BRICK PAVERS, CURB AND GUTTER, VALLEY

2.1.5. TEST SHALL BE MADE BY CONTRACTOR AND WITNESSED BY THE INSPECTOR AND OWNER'S REPRESENTATIVE.

2.2.1. ALL PIPES SHALL BE SUBJECTED TO TWO (2) HYDROSTATIC TESTS.

2.2.2. THE FIRST HYDROSTATIC TEST SHALL BE A TWO (2) HOUR TEST AT A PRESSURE OF 150 P.S.I.

2.2.2.A. DUCTILE IRON PIPE

THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE CALCULATED BY THE EQUATION AS FOLLOWS: $L = S(D\sqrt{P}) / 133,200$ L = MAXIMUM ALLOWABLE LEAKAGE (GAL./HR.)

S = LENGTH OF PIPE TESTED (FEET)

N = NUMBER OF JOINTS IN TESTED LINE (PIPE & FITTINGS) $L = N(D\sqrt{P}) / 7,400$

D = NOMINAL DIAMETER OF PIPE (IN.) $P = AVERAGE\ TEST\ PRESSURE\ (P.S.I.)$

2.2.2.B. PLASTIC PIPE (PVC)

AGENT AND OWNER REPRESENTATIVE.

DESIGNATED AGENT AND OWNER REPRESENTATIVE.

THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE CALCULATED BY THE EQUATION AS FOLLOWS:

L = MAXIMUM ALLOWABLE LEAKAGE (GAL./HR.)

N = NUMBER OF JOINTS IN TESTED LINE (PIPE & FITTINGS) D = NOMINAL DIAMETER OF PIPE (IN.)

P = AVERAGE TEST PRESSURE (P.S.I.) 2.2.2.C. THE SECOND HYDROSTATIC TEST SHALL BE FOR A 24-HOUR PERIOD AT CITY OPERATING PRESSURE FOR WATERLINES.

2.2.2.D. THE SECOND TEST SHALL BE NO LESS THAN 48 HOURS AFTER SUCCESSFUL COMPLETION OF THE FIRST HYDROSTATIC TEST.

2.2.2.E. THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE ZERO (0). 2.2.3. IF THE PRESSURE SYSTEM FAILS TO MEET THE LEAKAGE REQUIREMENTS, THE CONTRACTOR SHALL MAKE THE REQUIRED REPAIRS TO

THE SYSTEM AND THE SYSTEM SHALL BE RETESTED. 2.2.4. THIS PROCEDURE SHALL BE REPEATED UNTIL THE SYSTEM COMPLIES WITH LEAKAGE REQUIREMENTS.

2.3. STERILIZATION

2.3.1. GENERAL 2.3.1.A. WHERE SOIL OR OTHER SUBSTANCES HAVE COME IN CONTACT WITH THE WATER SURFACES OF THE PIPE AND ACCESSORIES, THE INTERIOR SHALL BE WASHED AND STERILIZED WITH A TWO-PERCENT (2%) SOLUTION OF CALCIUM HYPOCHLORITE.

2.3.2. TEST 2.3.2.A. AFTER PASSING THE HYDROSTATIC TEST, THE NEW LINE SHALL BE SLOWLY FILLED WITH A SOLUTION OF WATER AND A

CONCENTRATED CALCIUM HYPOCHLORITE SOLUTION, AND ALLOWED TO STAND FOR 48 HOURS. 2.3.2.B. AFTER STERILIZATION PERIOD IS COMPLETED, LINES SHALL BE FLUSHED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION

OF A REPRESENTATIVE OF THE WATER UTILITY. 2.3.2.C. THE CALCIUM HYPOCHLORITE WATER SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH TCEQ REGULATIONS. 3.3.3. AFTER FLUSHING OF THE NEW MAIN, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A SAMPLE AND PERFORM ALL REQUIRED CITY AND TEXAS STATE HEALTH DEPARTMENT PURIFICATION STANDARDS TESTS.

3.3.3.A. AFTER A 24 HOUR INCUBATION PERIOD THE RESULTS OF THE BACTERIOLOGICAL TEST SHALL BE OBTAINED.

3.3.3.B. IF THE SAMPLE DOES NOT PASS TEXAS STATE HEALTH DEPARTMENT PURIFICATION STANDARDS, THE PROCEDURE SHALL BE

3.1.3.C. TWO (2) SERIES OF TEST FAILURES SHALL REQUIRE THE CONTRACTOR TO "PIG" THE SYSTEM BEFORE ANY MORE BACTERIOLOGICAL SAMPLES CAN BE COLLECTED. 4.1.4. THE ENTIRE PROCEDURE SHALL BE COORDINATED UNDER THE SUPERVISION OF THE WATER SUPERINTENDENT OR DESIGNATED

4.1.5. DURING STERILIZATION PROCESS, VALVES SHALL BE OPERATED ONLY UNDER THE SUPERVISION OF THE WATER SUPERINTENDENT OR

9.2. FLEXIBLE BASE DENSITIES OF COMPACTED BASE (ASPHALT STREET)

9.3. PAVEMENT 9.3.1. HOT-MIX ASPHALT (HMA) EXTRACTION, SIEVE ANALYSIS

PER 500 TONS OR IF LESS 1 PER DAY LAB DENSITY & STABILITY PER 500 TONS OR IF LESS 1 PER DAY THEORETICAL DENSITY (RICE METHOD) PER 500 TONS OR IF LESS 1 PER DAY TEMPERATURE - DURING LAY-DOWN CONTINUOUS AS NEEDED THICKNESS - IN PLACE (CORE) PER 1,000 LINEAR FEET OF STREET % AIR VOIDS - IN PLACE (CORE) % THEORETICAL DENSITY - IN PLACE (CORE) 9.3.2. RIGID CONCRETE PAVEMENT

AIR CONTENT SLUMP

1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY SHALL ALL BE UNCONFINED COMPRESSION - 7, 14, AND 28 DAY CURB AND GUTTER / CURB 1 SET PER 500 LINEAR FEET OR LESS PER CURB AND GUTTER / CURB SIDEWALKS AND CURB RAMPS 1 SET PER 4,000 SQUARE FEET OR IF LESS 1 SET PER DAY DRIVEWAYS 1 SET PER 2,500 SQUARE FEET OR IF LESS 1 SET PER DAY CURB, POST AND GRATE INLETS 1 SET PER 6 EACH OR IF LESS 1 SET PER DAY STORM MANHOLES (CAST-IN-PLACE) 1 SET PER 2 EACH OR IF LESS 1 SET PER DAY 1 SET PER 100 LINEAR FEET OR LESS FOR EACH BARREL BOX CULVERTS (CAST-IN-PLACE) 1 SET PER EACH 1 SET PER 4,000 SQUARE FEET RIPRAP, APRONS, AND SAFETY END TREATMENTS (SET's)

MANHOLE BASE / FOOTING 1 SET PER 10 EACH TRASH DUMPSTER PAD 1 SET PER PAD FOUNDATIONS

DISCRETION. RE-TEST FOR FAILURES ARE NOT INCLUDED. MOISTURE CONTENTS TO BE INCLUDED WITH DENSITY TEST. 9.7. IN THE EVENT OF FAILURES, ADDITIONAL TESTS WILL BE REQUIRED. IF EXCESSIVE RAIN OR DRY PERIOD OCCURS ON A PREVIOUSLY TESTED SECTION, THE ENGINEER OR LOCAL ENTITY MAY ORDER RE-TESTS AS NECESSARY.

GENERAL TESTING REQUIREMENTS

- 1. THE OWNER WILL SECURE THE SERVICES OF A COMMERCIAL TESTING LABORATORY TO PERFORM CONSTRUCTION MATERIALS TESTING AND VISUAL INSPECTION SERVICES AS OUTLINED IN THE PROJECT SPECIFICATIONS AND AS LISTED BELOW AND WITHIN THE REQUIREMENTS.
- 1.1. THE CONTRACTOR SHALL PERFORM ALL WORK REQUIRING TESTING IN A MANNER TO MINIMIZE THE QUANTITY OF TESTING REQUIRED. THE OWNER'S REPRESENTATIVE WILL REVIEW ALL TESTS QUANTITIES AGAINST THE ESTIMATED QUANTITY OF TESTING REQUIRED FOR
- THE PROJECT TO ENSURE TESTING IS PERFORMED AT A RESPONSIBLE RATE.
- 1.2. THE OWNER WILL NOT BE PAYING FOR THE FEES ASSOCIATED WITH RETESTS, CANCELLATION, EXPEDITING, AND FEES DUE TO WAITING FOR
- THE CONTRACTOR TO PERFORM TESTS, AND TESTS THAT ARE DEEMED EXCESSIVE BY THE OWNER'S REPRESENTATIVE.
- 2. THE CONTRACTOR WILL BE RESPONSIBLE FOR SCHEDULING TESTING.
- MOISTURE-DENSITY CURVES SHALL BE GENERATED FOR EACH TYPE OF SOIL MATERIAL USED ON THE PROJECT. 4. IN-PLACE COMPACTION DENSITIES SHALL BE TAKEN AT THE RATE DESCRIBED PER LIFT OF COMPACTED MATERIAL.
- 5. A MINIMUM OF THREE (3) TESTS SHALL BE TAKEN FOR ANY LIFT OF COMPACTED MATERIAL
- 6. CONCRETE STRENGTH CYLINDERS SHALL BE MADE AT THE RATE DESCRIBED BELOW, HOWEVER, A MINIMUM OF ONE (1) SET OF CYLINDERS SHALL BE MADE FOR ANY CONCRETE PLACED IN ANY DAY. 6.1. TEST SHALL BE EVALUATED IN ACCORDANCE WITH ACI 318

7. IF WORKMANSHIP IS FOUND TO BE BELOW THE REQUIREMENTS SET FORTH HEREIN, WITHIN THE DRAWINGS, OR IN THE SPECIFICATIONS AS A

- 8. THE CONTRACTOR SHALL COOPERATE AND COORDINATE FULLY WITH THE TESTING LABORATORY AND PROJECT TESTING REQUIREMENTS. BELOW IS A GENERAL TESTING SCHEDULE FOR THIS PROJECT AND MAY NOT INDICATE ALL OF THE REQUIRED TESTING WHICH IS REQUIRED BY

RESULT OF TESTING AND/OR VISUAL INSPECTION, THE CONTRACTOR SHALL CORRECT OR REPLACE MATERIALS AT NO ADDITIONAL COST TO

THE SPECIFICATIONS, CONTRACTOR SHALL SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS: STANDARD PROCTOR - TRENCH BACKFILL PER MATERIAL SOURCE STANDARD PROCTOR - SUBGRADE PER STREET PER MATERIAL SOURCE PER 200 LINEAR FEET TRENCH PER LIFT DENSITIES - TRENCH BACKFILL DENSITIES - SUBGRADE (ASPHALT STREET) PER 100 LINEAR FEET PER LANE PER LIFT DENSITIES - SUBGRADE (CONCRETE STREET) PER 200 LINEAR FEET PER LANE PER LIFT DENSITIES - SUBGRADE (DRIVEWAYS) PER 2 DRIVEWAYS DENSITIES - SUBGRADE (SIDEWALK) PER 5,000 SQUARE FEET DENSITIES - BEHIND CURB AND GUTTER PER 200 LINEAR FEET DENSITIES - BUILDING PAD SUBGRADE PER 4,000 SQUARE FEET PER 4,000 SQUARE FEET PER 12" COMPACTED LIFT DENSITIES - BUILDING PAD SELECT FILL SIEVE ANALYSIS PER 3,000 CUBIC YARDS ATTERBURG LIMITS PER 3,000 CUBIC YARDS MODIFIED PROCTOR PER 3,000 CUBIC YARDS L.A. ABRASION PER 3,000 CUBIC YARDS CBR (STANDARD) PER MATERIAL SOURCE WET BALL MILL TEST PER MATERIAL SOURCE TRIAXIAL TEST PER MATERIAL SOURCE

DENSITIES OF COMPACTED BASE (CONCRETE STREET) PER 200 LINEAR FEET PER LANE PER LIFT DENSITIES OF COMPACTED BASE (CURB & GUTTER) PER 200 LINEAR FEET

PER 1,000 LINEAR FEET OF STREET PER 1,000 LINEAR FEET OF STREET COMPRESSION STRENGTH - 7 DAY AND 28 DAY 1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY FLEXURAL (BEAM) STRENGTH - 7 DAY AND 28 DAY 1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY

PER 100 LINEAR FEET PER LANE PER LIFT

1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY

9.4. CONCRETE

1 SET PER 50 CUBIC YARDS OR IF LESS 1 SET PER DAY

9.5. THE ABOVE TESTING RATES ARE MINIMUM GUIDELINES, THE ENGINEER OR LOCAL ENTITY MAY REQUIRE ADDITIONAL TESTING THEIR

m

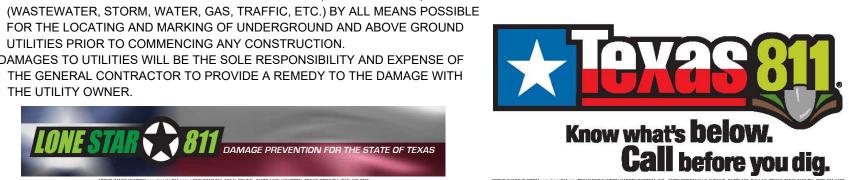
• THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE

NOTICE

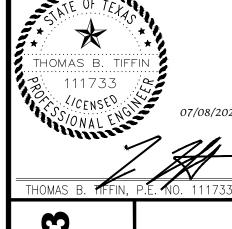
UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH THE UTILITY OWNER.

1-800-669-8344 OR www.lonestar811.com

GIVE 4 WORKING DAYS (M-F) NOTICE



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	END FOR SYMBOLS AND LINES WITHIN THE CONSTRUCTION DRA G IS A GENERAL LEGEND OF THE SYMBOLS AND LINES THAT MA		N THE CIVIL PORTION OF CON	ISTRUCTION DRAWINGS. THE ACTUAL LIN	E WEIGHT, SIZE, COL	OR AND ACTUAL INFORMATIO	ON ON THE LINE MAY	
DIFFER FRO	M SHEET TO SHEET. WHEN LINE TYPE HAS NUMERAL(S) WITHIN PRESENTS IT WILL BE THE RESPONSIBILITY OF THE GENERAL CO	I THE SEQUENCE IT	IS INDICATING THE SIZE OF T	HE ITEM THAT IS BEING REPRESENTED. I	IF AT ANY POINT THA	T AN SYMBOL AND/OR LINE IS	NOT CLEAR FOR	
WHATH KER	IRON ROD FOUND	SNTRACTOR TO RE	WASTEWATER UTILITY - EXIS		ESS	-PROXIMATE AND SHALL BE P WASTEWATER UTILITY - EXIS		
	CALCULATED POINT	S	WASTEWATER UTILITY - PRO		ss	WASTEWATER UTILITY - PRO		
	60D NAIL REFERENCE POINT			STING SINGLE SERVICE CONNECTION		WASTEWATER UTILITY - FUT	URE PIPE	
<u>-</u>	CHISELED "X" IN CONCRETE	_	-	POSED SINGLE SERVICE CONNECTION		WASTEWATER UTILITY - EXIS	STING FORCEMAIN	
	SET 5/8" DIAMETER BY 2 FEET LONG IRON ROD WITH A RED	_ 		STING DOUBLE SERVICE CONNECTION	F SS ———	WASTEWATER UTILITY - PRO		
	PLASTIC CAP STAMPED "NAISMITH ENG. C.C., TX"			POSED DOUBLE SERVICE CONNECTION	E SSS —		STING SERVICE CONNECTION OPOSED SERVICE CONNECTION	
60	BLOCK IDENTIFICATION	C.O.	WASTEWATER UTILITY - EXIS		EST	STORM WATER UTILITY - EXI		
◎		C.O.			st	STORM WATER UTILITY - PRO		
	STORMWATER / DRAINAGE FLOW DIRECTION - EXISTING	<u>E</u> S	WASTEWATER LITHEY - PRO		FST	STORM WATER UTILITY - FUT	TURE GENERAL PIPE	
8 CI 3	STORMWATER / DRAINAGE FLOW DIRECTION - PROPOSED	s	WASTEWATER UTILITY - EXIS		E BOX ST	STORM WATER UTILITY - EXI		
<u>&PB</u> <u>\$</u> &MG	CURB INLET PROTECTION BARRIER - CIPB	E_FM	WASTEWATER UTILITY - PRO		BOX ST	STORM WATER UTILITY - PRO		
%MG % PB \$	MANHOLE / GRATE INLET PROTECTION BARRIER - MGPB		WASTEWATER UTILITY - EXIS		#x#' ST	STORM WATER LITHITY - EXI	OPOSED CONCRETE BOX SIZE	
SCEE	STABILIZED CONSTRUCTION ENTRANCE / EXIT - SCEE		WASTEWATER UTILITY - PRO		E CMP ST	STORM WATER UTILITY - EXI		
10000000000000000000000000000000000000	GRAVEL SURFACE - EXISTING	0	STORM WATER UTILITY - EXIS		CMP ST	STORM WATER UTILITY - PRO	OPOSED CMP PIPE	
	GRAVEL SURFACE - PROPOSED	0	STORM WATER UTILITY - PRO		E HDPE ST	STORM WATER UTILITY - EXI	ISTING HDPE PIPE	
	HMAC SURFACE - EXISTING		STORM WATER UTILITY - EXIS			STORM WATER UTILITY - PRO		
	HMAC SURFACE - PROPOSED		STORM WATER UTILITY - PRO		E HP ST	STORM WATER UTILITY - EXI		
## ## ### ### ### #### ###############	CONCRETE SURFACE - EXISTING	©	STORM WATER UTILITY - EXIS		E PVC ST	STORM WATER UTILITY - PRO STORM WATER UTILITY - EXI		
	CONCRETE SURFACE - PROPOSED	0	STORM WATER UTILITY - PRO		PVC ST	STORM WATER UTILITY - PRO		
The state of the s	CURB AND GUTTER - EXISTING		STORM WATER UTILITY - EXIS		E RCP ST	STORM WATER UTILITY - EXI	ISTING RCP PIPE	
	CURB AND GUTTER - PROPOSED		STORM WATER UTILITY - PRO			STORM WATER UTILITY - PRO		
4 4 4	SIDEWALK / HIKE AND BIKE WAY - EXISTING	<u> </u>	STORM WATER UTILITY - EXIS	STING JUNCTION BOX	E DCL	STORM WATER UTILITY - EXI		
4 4 4	SIDEWALK / HIKE AND BIKE WAY - PROPOSED	<u> </u>	STORM WATER UTILITY - PRO	POSED JUNCTION BOX	DCL	STORM WATER UTILITY - PRO WATER UTILITY - EXISTING G		
	ADA CURB RAMP - EXISTING		STORM WATER UTILITY - EXIS	STING OUTFALL / OPEN END	w	WATER UTILITY - PROPOSED		
	ADA COMPLIANT CURB RAMP - PROPOSED (FIELD VERIFY)		STORM WATER UTILITY - PRO	DPOSED OUTFALL / OPEN END	FW	WATER UTILITY - FUTURE GE		
-0-	TRAFFIC SIGN - EXISTING	E∳□	STORM WATER UTILITY - EXIS	STING MARKER	E AC W	WATER UTILITY - EXISTING A	ASBESTOS COATED PIPE	
•	TRAFFIC SIGN - PROPOSED	<u> </u>	STORM WATER UTILITY - PRO	DPOSED MARKER	E W PVC	WATER UTILITY - EXISTING P	PVC PIPE	
G	GAS UTILITY - EXISTING METER	, w	WATER UTILITY - EXISTING V	ALVE	W PVC	WATER UTILITY - PROPOSED		
G	GAS UTILITY - PROPOSED METER	w w	WATER UTILITY - PROPOSED	VALVE	E WS	WATER UTILITY - EXISTING S WATER UTILITY - PROPOSED		
<u>E</u> dG	GAS UTILITY - EXISTING MARKER	WF	WATER UTILITY - EXISTING F	ITTING	ERE	WATER UTILITY - EXISTING R		
G	GAS UTILITY - PROPOSED MARKER	WF	WATER UTILITY - PROPOSED	FITTING	RE	WATER UTILITY - PROPOSED) REUSE	
-O _{PP}	ELECTRICAL UTILITY - EXISTING POWER POLE		WATER UTILITY - EXISTING F	IRE HYDRANT	FRE	WATER UTILITY - FUTURE RE	EUSE	
-● -	ELECTRICAL UTILITY - PROPOSED POWER POLE	.	WATER UTILITY - PROPOSED	FIRE HYDRANT	——— EG ———	GAS UTILITY - EXISTING GAS	3	
>	ELECTRICAL UTILITY - EXISTING GUY WIRE TERMINATION		WATER UTILITY - EXISTING S	INGLE SERVICE CONNECTION	G	GAS UTILITY - PROPOSED GA		
>	ELECTRICAL UTILITY - PROPOSED GUY WIRE TERMINATION	•	WATER UTILITY - PROPOSED	SINGLE SERVICE CONNECTION	EE	ELECTRICAL UTILITY - EXIST ELECTRICAL UTILITY - PROP		
E	ELECTRICAL UTILITY - EXISTING TRANSFORMER		WATER UTILITY - EXISTING D	OUBLE SERVICE CONNECTION	FE	ELECTRICAL UTILITY - FUTUR		
E	ELECTRICAL UTILITY - PROPOSED TRANSFORMER		WATER UTILITY - PROPOSED	DOUBLE SERVICE CONNECTION	E OHE	ELECTRICAL UTILITY - EXIST	ING OVERHEAD LINE	
E	ELECTRICAL UTILITY - EXISTING PEDESTAL	<u> </u>	WATER UTILITY - EXISTING M	ARKER	OHE	ELECTRICAL UTILITY - PROP	OSED OVERHEAD LINE	
(E)	ELECTRICAL UTILITY - PROPOSED PEDESTAL	<u>w</u>	WATER UTILITY - PROPOSED	MARKER	E UGE	ELECTRICAL UTILITY - EXIST		
**	ELECTRICAL UTILITY - EXISTING LIGHT	LOC	■ LIMITS OF CONSTRUCT	ION (LOC)	UGE ———	ELECTRICAL UTILITY - PROP		
*LP	ELECTRICAL UTILITY - PROPOSED LIGHT		PROPERTY BOUNDARY	LINE	EGW EGW	ELECTRICAL UTILITY - EXIST ELECTRICAL UTILITY - PROP		
<u>= </u>	ELECTRICAL UTILITY - EXISTING MARKER		ADJACENT BOUNDARY	LINE	ET	COMM UTILITY - EXISTING TE		
<u> </u>	ELECTRICAL UTILITY - PROPOSED MARKER		PROPERTY LINE		т —	COMM UTILITY - PROPOSED		
	COMM UTILITY - EXISTING TELEPHONE RISER		ADJACENT PROPERTY	LINE	E OHT	COMM UTILITY - EXISTING O	VERHEAD TELEPHONE	
<u>E</u>	COMM UTILITY - EXISTING TELEPHONE MARKER		ROAD CENTER LINE		ОНТ ———	COMM UTILITY - PROPOSED		
E FC	COMM UTILITY - EXISTING FIBER OPTIC MARKER		- YARD REQUIREMENT		E UGT	COMMUTILITY - EXISTING UN		
Fc	COMM UTILITY - PROPOSED FIBER OPTIC MARKER	x	LAGEMENT	DRAWING NOTE	UGT	COMM UTILITY - PROPOSED COMM UTILITY - EXISTING FI	UNDERGROUND TELEPHONE BEROPTIC	
	COMM UTILITY - EXISTING TELEVISION RISER	x	•	•	FOC	COMM UTILITY - PROPOSED		
E ITV	COMM UTILITY - EXISTING TELEVISION MARKER	X RFFF X	•	,	E OHFOC	COMM UTILITY - EXISTING OV	VERHEAD FIBEROPTIC	
<u> </u>	OTHER UTILITY - EXISTING TELEVISION MARKER OTHER UTILITY - EXISTING UNKNOWN MARKER	FFT FFT FFT		ED FILTER FABRIC FENCE - RFFF	——————————————————————————————————————	COMM UTILITY - PROPOSED	OVERHEAD FIBEROPTIC	
=√- E\P	PIPELINE - EXISTING UNKNOWN MARKER	SB SB	ROCK FILTER - RF		E UGFOC ———	COMM UTILITY - EXISTING UN		
— <u>↓</u> ₽		SBF SBF	PROPOSED STRAW BAI	LE - SB	UGFOC ———		UNDERGROUND FIBEROPTIC	
-	PIPELINE - PROPOSED PIPELINE MARKER	RF RF	PROPOSED STRAW BAI	LE FENCE - SBF	— E OHTV — OHTV —	COMM UTILITY - EXISTING ON COMM UTILITY - PROPOSED		
			ELEVATION - EXISTING		E UGTV	COMM UTILITY - EXISTING UN		
			ELEVATION CONTOUR -	EXISTING	UGTV	COMM UTILITY - PROPOSED	UNDERGROUND TELEVISION	
			- ELEVATION CONTOUR		——— ОНИК ———	OTHER UTILITY- OVERHEAD	UNKNOWN CABLE / PIPE	
		EB E	DRAINAGE BASIN - EXIS		идик		DUND UNKNOWN CABLE / PIPE	
		ESB =	 DRAINAGE BASIN - EXIS 		E PIPELINE	PIPELINE - EXISTING PIPELIN	NE (SEE DRAWINGS FOR INFO.)	
		PSR PSR	DRAINAGE BASIN - PRODRAINAGE BASIN - PRO					
ABBREVIATION		TION TUATAM			7414/14/00 11/20/17	ACEC A ADDDE WATER	IAVE MULTIPLE DESIGNATIONS AND	DD IE AT ANN DOINT THAT AN ADDD ""TO ""
	ING IS A GENERAL ABBREVIATION DEFINITION OF THE INFORMA VHAT IT REPRESENTS IT WILL BE THE RESPONSIBILITY OF THE (ASES A ABBREVIATION MAY H	1AVE MULTIPLE DEFINITIONS AND/C	OK IF AT ANY POINT THAT AN ABBREVIATION IS NOT
A - AREA AC - ACRE	COMM - COMMUNICATION	FC - FE	ENCE CORNER	LF - LINEAR FEET LOC - LIMITS OF CONSTRUCTION	PC - PO	INT OF CURVATURE	SAN - SANITARY / WASTEW	
AC - ASBESTO			NISHED FLOOR	LP - LOW POINT	PG - PA		SS - SANITARY / WASTEW SD - SOLID	TY - TYPE
ACP - ARCH CO ADA - AMERICA	NCRETE PIPE DE - DRAINAGE EASEMENT NS WITH DISABILITIES ACT DI - DUCTILE IRON	_	NISH GRADE RE HYDRANT	LS - LUMP SUM LT - LEFT		OPOSED GRADE INT OF INTERSECTION	SE - SANITARY EASEMEN SF - SQUARE FEET	T TYP - TYPICAL TV - TELEVISION
AE - ACCESS			LOWLINE DRCEMAIN	MAX - MAXIMUM ME - MATCH EXISTING		OPERTY LINE WER POLE	ST - STORM STA - STATION	UE - UTILITY EASEMENT US - UP STREAM

ECP - ELLIPTICAL CONCRETE PIPE

EE - ELECTRICAL EASEMENT

E - ELECTRICAL

EL - ELEVATION

EJ - EXPANSION JOINT

EP - EDGE OF PAVEMENT

EOR - EDGE OF RADIUS

ELEC - ELECTRICAL

ELEV - ELEVATION

EW - EACH WAY

EX - EXISTING

EXP - EXPANSION

F - FUTURE

EXIST - EXISTING

BB - BACK OF CURB TO BACK OF CURB

At - TOTAL AREA

BC - BACK OF CURB

BL - BUILDING LINE

BM - BENCHMARK

BW - BOTH WAYS

CI - CURB INLET

CL - CENTERLINE

CO - CLEANOUT

CONC - CONCRETE

CJ - CONTROL JOINT

C - RUNOFF COEFFICIENT

CMP - CORRUGATED METAL PIPE

BRK - BROKEN

FT - FEET

G - GAS

GT - GUTTER

GW - GUY WIRE

HP - HIGH POINT

I - INTENSITY

IR - IRON ROD

FOC - FIBER OPTIC CABLE

GB - GRADE BREAK

GI - GRATE INLET

HG - HYDRAULIC GRADE

HGL - HYDRAULIC GRADE LINE

HDPE - HIGH DENSITY POLYETHYLENE

HMAC - HOT MIX ASPHALTIC CONCRETE

MH - MANHOLE

MIN. - MINIMUM

DATUM

DATUM

NO. - NUMBER

OC - ON CENTER

O.C. - ON CENTER

PAVE - PAVEMENT

M.J - MECHANICAL JOINT

NG - NATURAL GROUND

OHE - OVERHEAD ELECTRIC

NAVD - NORTH AMERICAN VERTICAL

NGVD - NATIONAL GEODETIC VERTICAL

MR - MAP RECORDS

NOTICE

• THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE

FOR THE LOCATING AND MARKING OF UNDERGROUND AND ABOVE GROUND UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION.

DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH THE UTILITY OWNER.

WE - WATER EASEMENT

YR - YARD REQUIREMENT

VG - VALLEY GUTTER

VOL - VOLUME

W - WATER

W - WHITE

WL - WATER LINE

WV - WATER VALVE

WHT - WHITE

WTR - WATER

YLW - YELLOW

Y - YELLOW

PT - POINT OF TANGENCY

PVC - POLYVINYL CHLORIDE

RC - REINFORCED CONCRETE

RCP - REINFORCED CONCRETE PIPE

S - SANITARY / WASTEWATER

PRO - PROPOSED

PROP - PROPOSED

Q - FLOW

REFL - REFLECTIVE

RT - RIGHT

S - SLOPE

ROW - RIGHT-OF-WAY

R.O.W. - RIGHT-OF-WAY

Qt - TOTAL FLOW

STRM - STORM

STM - STORM

SW - SIDEWALK

SY - SQUARE YARDS

T - TELEPHONE

TC - TOP OF CURB

TEL - TELEPHONE

TG - TOP OF GRATE

TS - TOP OF SLOPE

TW - TOP OF WALK

TP - TOP OF PAVEMENT

TRW - TOP OF RETAINING WALL

TDLR - TEXAS DEPARTMENT OF

LICENSING AND REGULATION





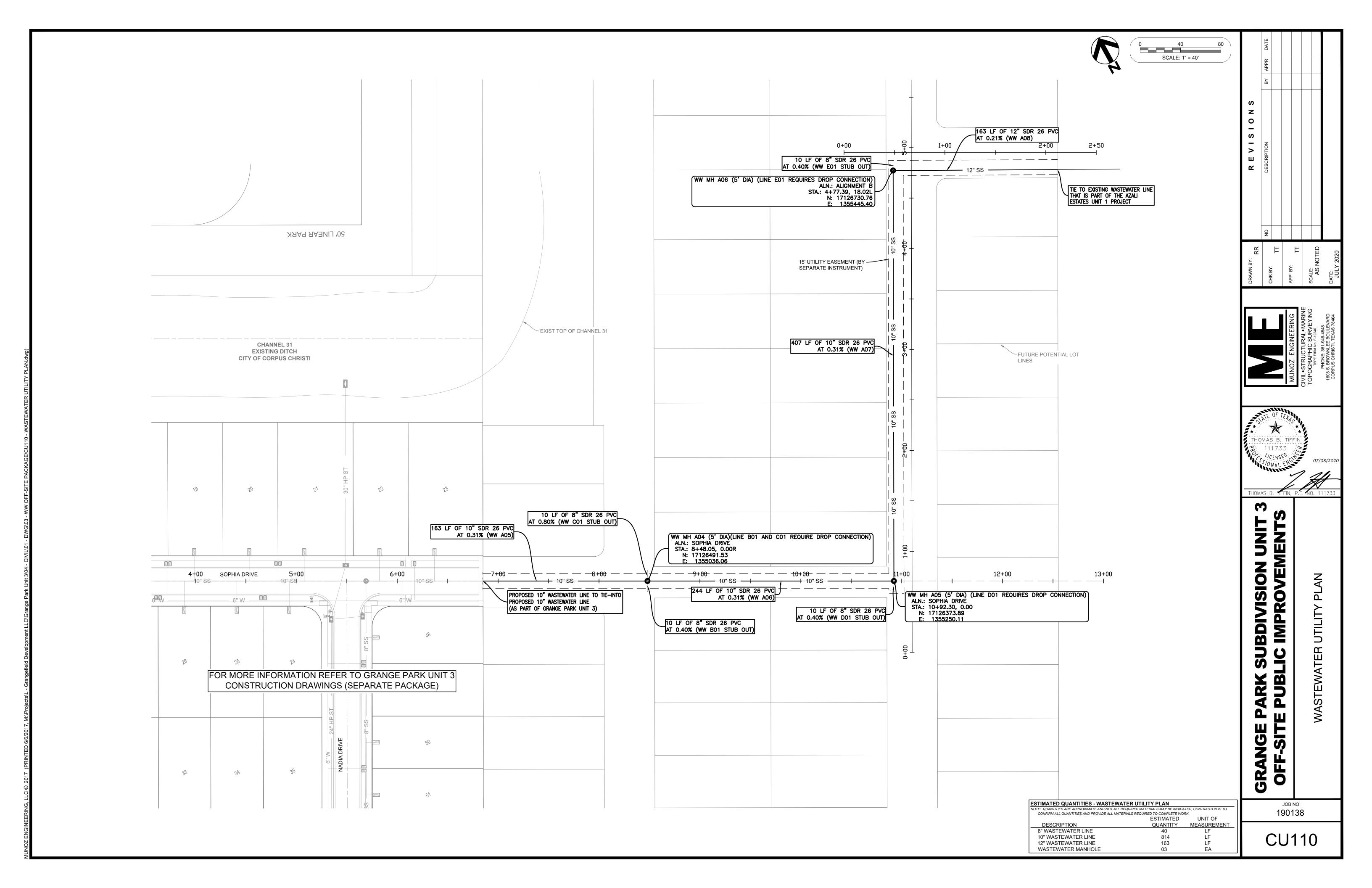
811 OR 1-800-344-8377 OR www.texas811.org GIVE 4 WORKING DAYS (M-F) NOTICE

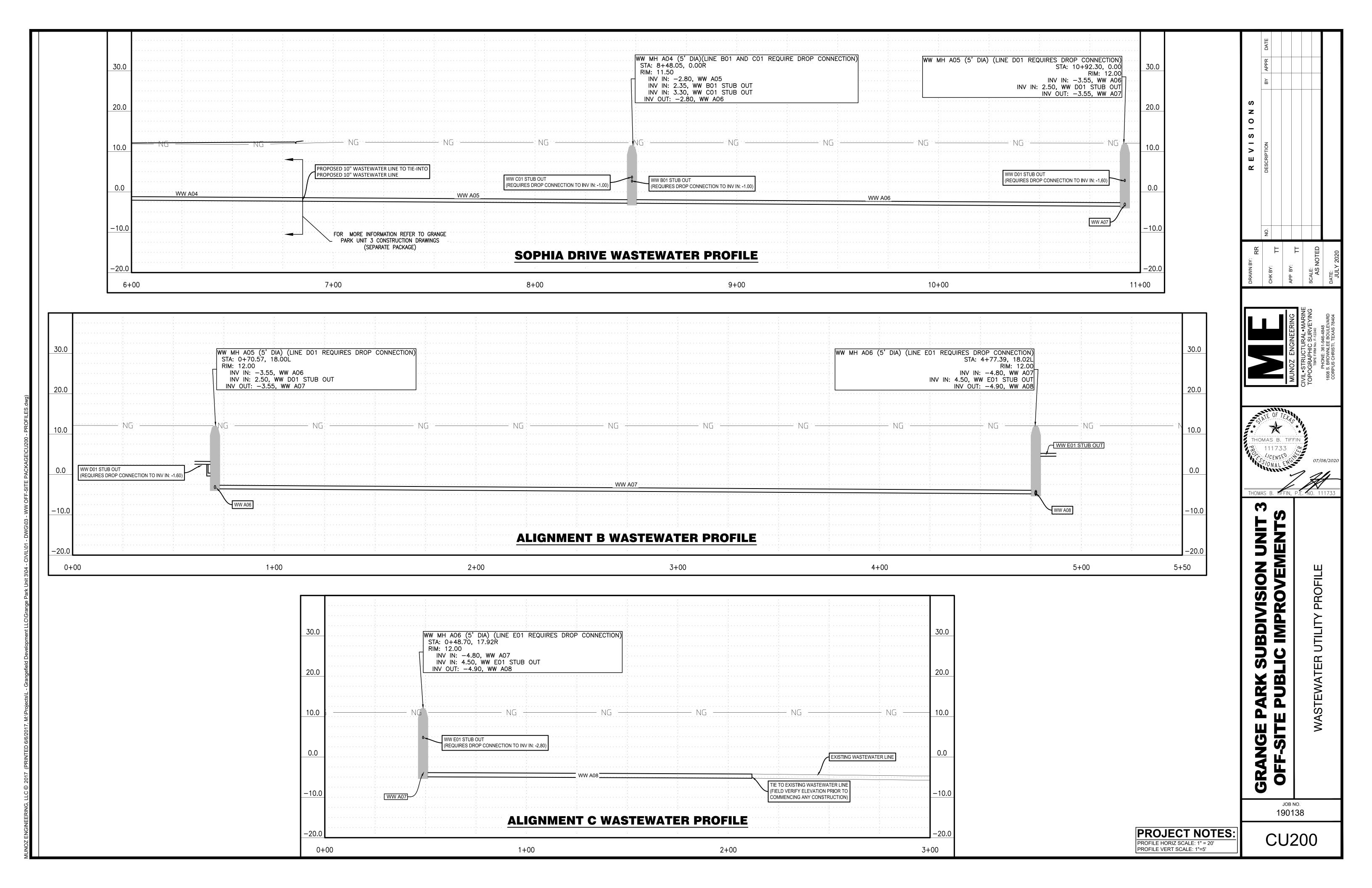
BDIVISION UNIT BDI UB

GRA

190138

VIATION





OPINION OF PROBABLE CONSTRUCTION COST

GRANGE PARK UNIT 3 Project: **WASTEWATER OFF-SITE CONSTRUCTION**

Estimate #:

01

Estimate Date:

August 14, 2020

Owner: Grangefield Development, LLC

Contact: Jackie Azalli

Legend:

AC = Acre

all the section of			PUBL	LIC OFF-S	HEIMB	KU	VEWIENTS
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	EST	MATED UNIT	ESΠΙ	MATED TOTAL COST
PART A - G	ENERAL		407/11/11				
A1	Mobilization	LS	1,00	\$	4,043.00	\$	4,043.00
A2	Payment and Performance Bond	LS	1.00	\$	4,659.34	\$	4,659.34
A2	Storm Water Pollution Prevention Plan	LS	1.00	\$	875.60	\$	875.60
А3	Construction Survey	LS	1.00	\$	3,750.00	\$	3,750.00
PART B - S	TORMWATER POLLUTION						
B1	Stabilized Construction Entrance & Exit	EA	1,00	\$	5,850.00	\$	5,850.00
B2	Reinforced Filter Fabric Fence	LF	100.00	\$	5.25	\$	525.00
B3	Concrete Washout Fence	ĘΑ	1.00	\$	3,125.00	\$	3,125.00
B4	Dewatering Fence	EA	1,00	\$	3,565.00	\$	3,565.00
PART C - S	ITE WORK						
C1	Site Preparation	AC	1.00	\$	1,500.00	Ş	1,500,00
C2	Asphalt Repair	SY	14.00	\$	65.00	\$	910.00
C3	Site Grading	LS	1.00	S	1,500.00	\$	1,500.00
PART D - V	VASTEWATER UTILITY						
D1	WW Utility 8" PVC SDR 26	LF	40.00	\$	99.76	\$	3,990.40
D2	WW Utility 10" PVC SDR 26	LF	850.00	\$	98.10	\$	83,385.00
D3	WW Utility 12" PVC SDR 26	ᄕ	150.00	\$	141.60	\$	21,240.00
D4	WW Utility Embedment	LF	1,040.00	\$	16.30	\$	16,952.00
D3	WW Utility 4' Diameter Manhole - 12-14 ft	EA	1.00	\$	8,839.40	S	8,839.40
D4	WW Utility 4' Diameter Manhole - 14-16 ft	EA	2,00	\$	9,237.40	\$	18,474.80
D5	WW Utility 5' Diameter Manhole - 16-18 ft	EA	2.00	\$	14,300.30	\$	28,600.60
D3	Sanitary Utility Trench Safety	LF	1,040.00	S	3.50	\$	3,640.00
D4	Sanitary Utility Dewatering	LF	1,040.00	\$	57.10	\$	59,384.00
D6	Sanitary Utility - Tie to Existing	EA	1,00	S	1,650.00	S	1,650,00
D7	Sanitary Utility End Plug - 8"	EA	4.00	\$	125.50	\$	502.00
PART E - A	ADDITIONAL CONSTRUCTION						
E1	Additional Construction Items Allowance	AL	1.00	S	12,850.00	\$	12,850.00
		PUBL	IC OFF-SITE IMP	ROVEMENTS	SUBTOTAL	\$	289,811.14
PART F - F	PROFESSIONAL SERVICES						
F1	Engineering	LS	1.00	6.50% \$	18,837.72	\$	18,837,72
E2	Survey	LS	1.00	2.00% \$	5,796.22	\$	5,796.22
E3	Easement Documents	LS	1.00	S	10,060.00	\$	10,060.00
E4	Construction Administration	LS	1.00	1.50% \$	4,347.17		4,347.17
		PART F	- PROFESSION	AL SERVICES	SUBTOTAL	\$	39,041.11
		PUBLIC (OFF-SITE IMP	ROVEMENT	S TOTAL	\$	328,852.25
							,



DISCLOSURE OF INTERESTS

City of Corpus Christi Ordinance 17112, as amended, requires all persons or firms seeking to do business with the City to provide the following information. *Every question must be answered* If the question is not applicable, answer with "NA".

NAME: GRANGEFEELD DOVENO	mont			
STREET: 10 BOF	CITY: Corp	us Christi		ZIP: 78427
FIRM is: Corporation Partnership				
	DISCLOSURE Q	JESTIONS		
If additional space is necessary, please use	the reverse side of	of this page or atta	ch separate	sheet.
1. State the names of each "employe constituting 3% or more of the owner			having ar	n "ownership interest"
Name		Job Title and C	City Departm	ent (if known)
NOW U				
2. State the names of each "official" constituting 3% or more of the owner			having an	"ownership interest
Name		Title		
News				
constituting 3% or more of the owne Name		Board, Comm	ission, or Co	mmittee
	-	\$1.000 (\$2.000 (\$1.000		The second secon
4. State the names of each employee or on any matter related to the subject more of the ownership in the above	of this contract			
Name		Consultant		
Now	·			
	CERTIFIC	ATE		
I certify that all information provided is true withheld disclosure of any information red the City of	ue and correct as i	of the date of this supplemental state	ments will b	at I have not knowingly e promptly submitted to
Certifying Person: TACKEC AT (Print Name)	LALF /	//	Title: PR	ESEDENT
	MIC			. /
Signature of Certifying Person:	<u> </u>		Date:/	1/21/19



CITY OF CORPUS CHRISTI DISCLOSURE OF INTERESTS

City of Corpus Christi ordinance 17112, as amended, requires all persons or firms seeking to do business with the City to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA".

STREE	ET: 1608 S. Brownlee Blvd	CITY: Corpus Chrsiti ZIP: 78404
FIRM I	IS: 41. Corporation 02. Partnership 03. So	ole Owner = 4. Association = 5. Other
	DISCLOSU	RE QUESTIONS
lf addil	tional space is necessary, please use the reverse sic	de of this page or attach separate sheet.
1.	State the names of each "employee" of the City of or more of the ownership in the above named "firm	of Corpus Christi having an "ownership interest" constituting 3% ".
	Name	Job Title and City Department (if known)
	None	
2.	State the names of each "official" of the City of C more of the ownership in the above named "firm".	Corpus Christi having an "ownership interest" constituting 3% or
	Name	Title
	None	
3.	State the names of each "board member" of the C 3% or more of the ownership in the above named	City of Corpus Christi having an "ownership interest" constituting "firm".
	Name	Board, Commission, or Committee
	Ramiro Munoz, III, PE	Building Code Board of Appeals
4.	State the names of each employee or officer of a matter related to the subject of this contract ar ownership in the above named "firm".	a "consultant" for the City of Corpus Christi who worked on any nd has an "ownership interest" constituting 35 or more of the
	Name	Consultant
*	None	
	CEF	RTIFICATE
disclo	ify that all information provided is true and correct as osure of any information requested; and that supp us Christi, Texas as changes occur.	s of the date of this statement, that I have not knowingly withheld lemental statements will be promptly submitted to the City of
Certif	ying Person: Thomas Tiffin, PE	Title: Project Manager
Signs	(Type or Print)	Date: 11/20/2019
Oigilio	and or outrilying reader.	Date.