# CIVIL CONSTRUCTION PLANS FOR LOW WATER CROSSING IMPROVEMENTS WHARTON'S DOCK ROAD BANDERA, TEXAS

## SHEET INDEX

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VICINITY MAP







84 NE Loop 410, Ste 103 San Antonio, Texas 78232 210.900.2448 TBPE Registration No. F-18275 www.tc0re.com

#### **BANDERA COUNTY NOTES**

- NO CONSTRUCTION SHALL START ON A SUBDIVISION INFRASTRUCTURE UNTIL AFTER THE DATE OF PRELIMINARY PLAT APPROVAL. ANY REQUIRED DRAINAGE PLAN AND ROADWAY PLAN AND PROFILE SHALL HAVE BEEN APPROVED PRIOR TO THE START OF ANY CONSTRUCTION CONCERNING SAME. CLEARING, GRUBBING AND MINOR GRADING WILL BE ALLOWED PRIOR TO PRELIMINARY PLAT APPROVAL, DRAINAGE PLAN APPROVAL AND ROADWAY PLAN AND PROFILES.
- RIGHT OF WAY: ALL PUBLIC RIGHT OF WAYS SHALL BE CLEARED OF ALL IMPEDIMENTS INCLUDING BOULDERS, STUMPS, TREES, OR ANY OTHER DEBRIS.
- SIGNS: THE DEVELOPER SHALL PRESENT A SIGN PLACEMENT PLAN AND HAVE IT APPROVED BY THE COUNTY ENGINEER PRIOR TO FINAL PLAN APPROVAL.
- REFLECTIVE ROAD NAME SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER AT ALL INTERSECTIONS WITHIN OR ABUTTING THE SUBDIVISION. ROAD NAME SIGNS SHALL BE PLACED IN A UNIFORM MANNER THROUGHOUT THE SUBDIVISION. ROAD NAME SIGNS SHALL BE 7 FEET ABOVE THE PAVEMENT TO THE BOTTOM OF THE SIGN ON AN APPROVED METAL POST.
- PRIVATE ROAD NAME SIGNS SHALL BE GREEN WITH A 1 INCH RED TAPE ACROSS THE TOP OF THE SIGN WITH 4 INCHES WHITE REFLECTIVE LETTERS.
- ALL TRAFFIC SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER IN ACCORDANCE WITH THE LATEST ISSUE OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVISED (TMUTCD) ISSUED BY THE TEXAS DEPARTMENT OF TRANSPORTATION.
- ALL PRIVATELY MAINTAINED ROADS SHALL BE SIGNED TO INFORM THE PUBLIC OF THEIR STATUS. THE SIGN SHALL READ "PRIVATELY MAINTAINED ROAD," AND SIGNS MUST BE PLACED AT EACH ENTRANCE TO THE SUBDIVISION. THE SIGN MUST BE A RECTANGULAR SHAPED MINIMUM SIZE OF 24 INCHES. WHITE BACKING WITH BLACK LETTERS AND INSTALLED IN ACCORDANCE WITH THE TMUTCD.
- 8. ALL SUB-GRADE AND ROAD CONSTRUCTION SHALL BE INSPECTED AND TESTED DURING CONSTRUCTION TO INSURE INSTALLATION AND CONSTRUCTION IS IN ACCORDANCE WITH THE APPROVED PLANS AND DESIGN. INSPECTIONS AND TESTING SHALL BE PERFORMED BY OR UNDER THE DIRECTION OF THE DESIGN ENGINEER AT THE SOLE COST AND EXPENSE OF THE DEVELOPER. INSPECTIONS AND TESTING SHALL INCLUDE VERIFICATION OF MATERIALS USED, COMPACTION TESTS, GRADE CALCULATIONS, AND OTHER TESTING REQUIREMENTS AS MAY BE REQUIRED TO VERIFY CONSTRUCTION. A COPY OF ALL TESTING SHALL BE PROVIDED TO THE COUNTY AT LEAST 15 DAYS PRIOR TO THE REQUEST FOR FINAL PLAT APPROVAL
- 9. THE COUNTY SUBDIVISION ADMINISTRATOR SHALL BE NOTIFIED 48 HOURS PRIOR TO AND CONSTRUCTION, INSPECTIONS, OR TESTING.
- 10. THE SUB-GRADE SHALL BE INSPECTED, TESTED, AND APPROVED BY BANDERA COUNTY PRIOR TO THE PLACEMENT OF ANY BASE ON SUB-GRADE. SUBGRADE TESTING WILL BE BY PROOF ROLL WITH 25 TON ROLLER OR FULLY LOADED TANDEM WATER TRUCK AND WITH COUNTY SUBDIVISION ADMINISTRATOR.
- 11. ROAD CONSTRUCTION TESTING SHALL BE ONE TEST FOR EACH 0.1 MILE AND ALTERNATE LANE PATTERN WITH A MINIMUM OF TWO TESTS PER ROAD. TEST SHALL BE FROM A CERTIFIED TESTING LABORATORY.
- 12. ADDITIONAL TESTING MAY BE REQUIRED AT THE DISCRETION OF THE COUNTY SUBDIVISION ADMINISTRATOR WITH CONCURRENCE OF A LICENSED ENGINEER HIRED BY BANDERA COUNTY. IF NECESSARY ADDITIONAL TESTING WILL BE MADE AT THE REQUEST OF THE COUNTY SUBDIVISION ADMINISTRATOR AND COST THEREOF PAID BY THE COUNTY IF THE TEST PASSES AND PAID FOR BY THE DEVELOPER IF THE TEST FAILS.
- 13. EROSION CONTROL: FOR PROJECTS INVOLVING CONSTRUCTION AND EXCAVATION EXCEEDING 1 ACRE IS SUBJECT TO PERMITTING BY TCEQ'S TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) GENERAL PERMIT TXR150000 RELATED TO STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.
- 14. TESTING MATERIAL: PRIOR TO DELIVERY OF BASE MATERIAL TO THE ROAD OR STREET, THE RESULTS OF PHYSICAL TESTS OF THE MATERIAL PROPOSED FOR USE SHALL BE SUBMITTED TO THE COUNTY ENGINEER AND DESIGN ENGINEER FOR APPROVAL. THESE TEST RESULTS SHALL BE CERTIFIED AS CONFORMING TO THE REQUIREMENTS BY AN APPROVED COMMERCIAL LABORATORY. THE CERTIFICATION SHALL DEFINE THE AREA AND COLUMN REPRESENTED BE THE TABULATED RESULTS.
- 15. INSPECTIONS: THE COUNTY ENGINEER, AS AUTHORIZED BY THE COMMISSIONERS' COURT, OR HIS DESIGNATED AGENT, MAY INSPECT ALL PROPERTY SITE WORK AT ANY TIME AND ANY STAGE. DEVELOPER WILL PROVIDE A WRITTEN CONSTRUCTION SCHEDULE FOR DRAINAGE, UTILITY AND ROAD CONSTRUCTION. DEVELOPER WILL PROVIDE WRITTEN AMENDED SCHEDULES ID THE ACTUAL CONSTRUCTION VARIES MORE THAN FIVE (5) DAYS FROM THE DATE SET FORTH IN THE ORIGINAL CONSTRUCTION SCHEDULE. SHOULD THE DEVELOPER FAIL TO COMPLY WITH THIS PROVISION OR BEGIN ANY DRAINAGE, UTILITY, OR ROAD CONSTRUCTION PRIOR TO PROVIDING SUCH SCHEDULE THE DEVELOPER MAY BE REQUIRED TO PERFORM TESTING DEEMED NECESSARY BY THE COUNTY ENGINEER AT THE SOLE COST AND EXPENSE OF THE DEVELOPER.

#### **GENERAL NOTES**

- 1. ALL MATERIALS, CONSTRUCTION, TESTING, AND WORKMANSHIP SHALL COMPLY WITH THE TXDOT OR BANDERA STANDARD SPECIFICATIONS, WHICHEVER IS GREATER, UNLESS
- DURING THE CONSTRUCTION OF THIS PROJECT, ANY INTERPRETATION OF THE STANDARD SPECIFICATIONS OR ANY MATTER WHICH REQUIRES THE APPROVAL OF THE OWNER, MUST BE APPROVED BY THE COUNTY BEFORE ANY CONSTRUCTION INVOLVING THAT DECISION COMMENCES. ASSUMPTIONS ABOUT WHAT THOSE DECISIONS MIGHT BE, WHICH ARE MADE DURING THE BIDDING PHASE, WILL HAVE NO BEARING ON THE DECISION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS BEFORE AND DURING CONSTRUCTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND NOTIFYING ALL AUTHORIZED INSPECTORS AND PERSONS IN CHARGE OF PRIVATE OR PUBLIC UTILITIES AFFECTED BY THIS PROJECT PRIOR TO CONSTRUCTION COMMENCEMENT
- 5. THE ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN. CONTRACTOR SHALL CONTACT CALL LOCATE SERVICE (811) TO MARK UTILITIES NOT SHOWN ON THESE PLANS AND TO CONFIRM UTILITIES SHOWN ON THESE PLANS ARE ACCURATE. ANY UTILITY IN POTENTIAL CONFLICT OF CONTRACTORS WORK SHALL BE POTHOLED AND VERIFIED PRIOR TO COMMENCING WORK. CONFLICTS SHALL BE DOCUMENTED AND NOTIFIED TO OWNER AS SOON AS PRACTICAL. CONTRACTOR IS RESPONSIBLE FOR LOCATES AND PROTECTION OF THOSE UTILITIES.
- 6. THE CONTRACTOR SHALL PROVIDE TRENCH SAFETY IN ACCORDANCE WITH OSHA SPECIFICATIONS AND PROVIDE A TRENCH SAFETY PLAN SIGNED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND PROVIDE DAILY INSPECTIONS TO ENSURE THAT THOSE REQUIREMENTS ARE BEING MET. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THOSE PERSONS WORKING IN AND AROUND THE TRENCH.
- 7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEANOUTS, VALVE BOXES, FIRE HYDRANTS, ETC. MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACEMENT OF FINAL GRADE AND/OR PAVEMENT. ANY REMOVAL OR DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND SHALL BE APPROVED BY THE OWNER OF THE SUBJECT IMPROVEMENT. SAID EXISTING IMPROVEMENTS SHALL ALSO INCLUDE, BUT NOT BE LIMITED TO, BERMS, DITCHES, FENCES, VEGETATION, ETC. 8. CONTRACTOR SHALL IMMEDIATELY REPORT ANY DIFFERENCES BETWEEN THE INFORMATION IDENTIFIED IN THESE PLANS AND THE CONDITIONS IN THE FIELD TO THE
- ENGINEER. 9. TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATION, TITLE 29, PART 1910.180(1) AND PART 1926.550(A)(15) REQUIRE A MINIMUM CLEARANCE OF TEN FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY
- RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. 10. WHERE TRENCHING IS UTILIZED DURING CONSTRUCTION. NO EXCAVATIONS SHALL BE LEFT OPEN OVERNIGHT UNLESS PRIOR APPROVAL IS GRANTED BY OWNER. WHERE A TRENCH IS LEFT OPEN DURING NON-WORKING HOURS, ORANGE SAFETY FENCING SHALL BE INSTALLED AT LEAST 5 FEET AROUND THE TRENCH PERIMETER. ALL EXCAVATIONS IN PAVED AREAS WHICH CANNOT BE COMPLETELY BACKFILLED PRIOR TO BEING SUBJECTED TO TRAFFIC SHALL BE COVERED WITH STEEL SHEETING AND ANCHORED TO PAVEMENT.
- 11. PAVEMENT PRESERVATION TECHNIQUES SHALL BE UTILIZED BY THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION. NO TRACK EQUIPMENT IS ALLOWED ON ANY COUNTY STREET, CURB, OR PRIVATE PAVING UNLESS PRIOR APPROVAL IS GIVEN BY COUNTY, OR AS APPROVED BY ENGINEER.
- 12. CONTRACTOR SHALL NOT CLOSE A HIGHWAY OR HIGHWAY LANE TO TRAFFIC OR INTERFERE WITH TRAFFIC MOVEMENT WITHOUT NOTIFYING THE COUNTY ENGINEER AND SECURING PERMISSION TO DO SO. CONTRACTOR SHALL FURNISH A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) FOR REVIEW AND APPROVAL BY THE TXDOT AND COUNTY ENGINEER OR HIS DESIGNEE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING BARRICADES, WARNING AND DIRECTING SIGNS, LIGHTS, TRAFFIC CONTROL DEVICES, FLAGS AND PROVIDE FLAGMEN ALONG THE ENTIRE STREET WITHIN THE LIMITS OF THE PROJECT IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN AND TMUTCD STANDARDS. ALL BARRICADES SHALL BE EQUIPPED WITH FLASHERS AND BE KEPT BURNING BETWEEN THE HOURS OF SUNSET AND SUNRISE.
- 13. THE CONTRACTOR SHALL AT ALL TIMES KEEP THEIR CONSTRUCTION SITE FREE FROM ACCUMULATION OF WASTE MATERIAL, DEBRIS, OR RUBBISH GENERATED DURING CONSTRUCTION. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO THE COUNTY SCHEDULED WALK-THRU, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL TOOLS, SURPLUS MATERIALS AND DEBRIS AND SHALL LEAVE THE SITE IN A "BROOM CLEAN" CONDITION, UNLESS SPECIAL PERMISSION HAS BEEN GRANTED BY THE COUNTY IN WRITING.
- 14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SANITARY CONVENIENCE FACILITIES AT THE PROJECT SITE FOR USE BY ALL LABORERS. THEY SHALL BE WELL VENTILATED, BUT PROVIDE CONCEALMENT, AND SHALL BE KEPT CLEAN AT ALL TIMES BY THE CONTRACTOR. THE FACILITIES SHALL BE REMOVED AND THE SITE RESTORED TO ITS ORIGINAL CONDITION OR BETTER UPON COMPLETION OF THE PROJECT. ALL SUCH FACILITIES SHALL CONFORM TO THE REQUIREMENTS OF THE STATE AND LOCAL HEALTH AUTHORITIES.
- 15. CONTRACTOR SHALL PROTECT ALL EXISTING TREES AT THE PROJECT SITE. NO EXISTING TREE SHALL BE TRIMMED OR REMOVED WITHOUT AUTHORIZATION FROM THE OWNER UNLESS NOTED OTHERWISE IN THE PLANS.
- 16. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING, TO THE ORIGINAL CONDITION OR BETTER, ANY DAMAGES TO EXISTING PAVEMENTS, SIDEWALKS, DRIVEWAYS, FENCES, OR OTHER STRUCTURES AT HIS EXPENSE, EXCEPT AS NOTED IN THE PLANS.
- 17. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOBSITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND WORKMANLIKE MANNER TO PREVENT INJURIES DURING AND AFTER WORK HOURS.
- 18. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING MATERIALS TESTING FOR THE ROAD BASE IN ACCORDANCE WITH THE APPLICABLE BANDERA COUNTY SPECIFICATIONS. ALL MATERIALS TESTING SHALL BE PERFORMED BY AN INDEPENDENT MATERIALS TESTING LAB APPROVED BY THE COUNTY. SAID LAB SHALL BE CONTRACTED AND PAID BY THE CONTRACTOR AND HAVE A REGISTERED PROFESSIONAL ENGINEER ON STAFF.
- 19. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES (RESIDENTIAL, INDUSTRIAL, COMMERCIAL, ETC.) ADJACENT TO WORK AREAS AT ALL TIMES.
- 20. NO SEPARATE PAY FOR ITEMS COVERED IN THE PLANS, SPECIFICATIONS, OR NOTES UNLESS SPECIFICALLY ESTABLISHED IN THE UNIT COST BREAKDOWN OR BID FORM IF PROVIDED. ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITIES OR IMPROVEMENTS, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS.
- SOON AS REASONABLY POSSIBLE IF ADDITIONAL SCOPE OF WORK IS ANTICIPATED, OR IF THERE IS A DISCREPANCY IN THE PLANS OF THE PROJECT.
- 22. ALL EXISTING SIGNAGE SHALL BE PRESERVED AND RELOCATED TO EQUIVALENT POINTS ALONG THE ROADWAY.
- 23. A TRAFFIC CONTROL PLAN AND CONSTRUCTION SEQUENCING PLAN SHALL BE SUBMITTED AND APPROVED BY THE OWNER PRIOR TO THE START OF CONSTRUCTION.
- 24. CONTRACTOR SHALL REMOVE EXISTING ROADWAY, EXISTING CULVERTS, AND EXISTING CONCRETE AS PART OF THE PROJECT. MATERIAL SHOULD BE HAULED AND PROPERLY DISPOSED.
- 25. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL SECURE ANY AND ALL PERMITS REQUIRED BY REGULATING ENTITIES WITHIN THE PROJECT LIMITS.

SPECIFIED OTHERWISE IN THESE PLANS OR APPROVED BY THE OWNER IN WRITING.

21. ADDITIONAL SCOPE: CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER IN WRITING AS

#### **UTILITIES GENERAL NOTES**

- 1. CONTRACTOR SHALL IDENTIFY AND RELOCATE ACTIVE UTILITIES PRIOR TO STARTING WORK. RELOCATED UTILITIES SHALL BE APPROVED IN ADVANCE BY OWNER.
- 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL IDENTIFIED UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT.
- 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND DEPTH OF LOCATED UTILITIES PRIOR TO CONSTRUCTION.
- 4. THERE WILL BE NO SEPARATE PAYMENT FOR POTHOLING OR OTHER FIELD RECONNAISSANCE TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES.

#### **PAVING GENERAL NOTES**

- 1. ALL PAVEMENT TO BE REMOVED, INCLUDING CURB & GUTTERS, DRIVEWAYS AND SIDEWALKS SHALL BE SAWCUT, REMOVED AND REPLACED, UNLESS SPECIFIED OTHERWISE IN PLANS.
- 2. CONTRACTOR SHALL STAGE THE CONSTRUCTION WORK OUT OF STREET. ALL NECESSARY BARRICADES, TEMPORARY BYPASSES AND DIVERSIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBSIDIARY TO THE TRAFFIC CONTROL.
- 3. THE SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE BANDERA COUNTY SUBDIVISION RULES & REGULATIONS AND EXTEND 12" MINIMUM PAST THE BACK OF CURB OR EDGE OF PAVEMENT WHERE CURB & GUTTER IS NOT PROVIDED.
- DUST GENERATED DURING CONSTRUCTION DUE TO SWEEPING, SAWCUTTING, JOINT CLEANING, HIGH WIND, ETC. SHALL BE KEPT TO A MINIMUM BY USE OF VACUUMS, WATER OR OTHER APPROVED MEASURES.
- 5. CONTRACT PRICE FOR PAVEMENT WORK SHALL INCLUDE THE STANDARD SECTION(S) NOTED IN THESE PLANS.
- 6. CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS FOR PAVING. ANTICIPATED SHOT RATES:
  - -AGGREGATE PRIME: RC-250 AT 0.2 GAL/SY
  - -FIRST COURSE GRADE 4: CRS-2P AT 0.4 GAL/SY
- -SECOND COURSE GRADE 5: CRS-2P AT 0.4 GAL/SY CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS AT ALL EXISTING PAVEMENT TIE-IN LOCATIONS.

#### **GRADING GENERAL NOTES:**

- 1. THE LOCATION OF ALL UTILITIES LOCATED ON THESE PLANS WERE IDENTIFIED BY THE PROJECT SURVEYOR, LINE LOCATES, AND/OR LOCATED FROM EXISTING PUBLIC RECORDS. THE SHOWN LOCATION AND ELEVATION OF ALL UTILITIES MAY NOT BE EXACT, THEREFORE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL LOCATED UTILITIES IN WORK LIMITS PRIOR TO CONSTRUCTION AND/OR DEMOLITION COMMENCEMENT. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING IMPROVEMENTS INCLUDING BUT NOT LIMITED TO FENCING, POLES, AND UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ALL FENCING, FLATWORK, STRUCTURES, MANHOLES, CLEAN- OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO COMPLETION AND/OR FINAL ACCEPTANCE. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THIS DEVELOPMENT.
- CARE SHOULD BE TAKEN THAT FILL MATERIALS AND AREAS TO RECEIVE FILL ARE RELATIVELY FREE OF VEGETATION, ROOTS, DEBRIS, LARGE ROCKS OR OTHER OBJECTIONABLE MATERIAL. PRIOR TO PLACING ANY FILL, SOIL SUBGRADES SHOULD BE SCARIFIED & RECOMPACTED. PLACEMENT OF FILL SHALL BE PER TXDOT SPECIFICATIONS RELATED TO ORDINARY COMPACTION.
- TREES SHALL REMAIN UNLESS SPECIFIED OTHERWISE BY THE OWNER 5. ALL SPOT ELEVATIONS ARE GUTTER ELEVATIONS OR TOP OF PAVEMENT OR SIDEWALK WHERE CURB AND GUTTER ARE NOT PROPOSED OR TOP OF GROUND WHERE PAVING IS NOT PROPOSED UNLESS SPECIFIED OTHERWISE IN THESE PLANS.
- CONTRACTOR TO ADJUST PROPOSED SILT FENCE ALONG REVISED RIGHT OF WAY LIMITS
- CONTRACTOR SHALL VEGETATE ALL DISTURBED AREAS THROUGH ESTABLISHMENT WHICH MAY REQUIRE THE USE OF SOIL RETENTION BLANKET AS NECESSARY.
- 8. ANY FENCING IMPACTED BY PROPOSED GRADES SHALL BE RESTORED TO ITS EXISTING WORKING CONDITION.

#### **CONSTRUCTION STAKIN**

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- CONSTRUCTION STAKING STATION VALUES SHOWN
- WHERE REFERENCED. ALL DIMENSIONS PROVIDE PAVEMENT UNLESS SPECIF

#### **EROSION CONTROL GEN**

- 1. CONTRACTOR IS RESPONS
- TO STARTING WORK.
- 2. EROSION CONTROL DEVICE ACTIVITIES AT THE PROJE 3. CONTRACTOR SHALL INSPI
- **BI-WEEKLEY AND AFTER MA** PROPERLY.
- 4. SEDIMENT SHALL BE REMC CAPACITY HAS BEEN REDU UTILIZE STONE SHALL HAV ROCK BECOME CLOGGED
- 5. IF AN EROSION CONTROL PROPERLY TO ELIMINATE MUST BE REPAIRED, REPL POLLUTION PREVENTION F
- OFF-SITE MATERIAL STORA OFF-SITE SOIL BORROW O AND SHALL BE ADDRESSE THESE AREAS SHALL BE S APPROVAL OF THE PROJE
- LITTER, CONSTRUCTION D EXPOSED TO STORM WATE
- SOURCE FOR STORM WATE STABILIZATION MEASURES OF THE SITE WHERE CONS CEASED, BUT IN NO CASE THAT PORTION OF THE SIT
- 9. THE PROJECT SITE SHALL CONTROL DEVICES REMOV 10. ALL EROSION CONTROL ME
- AND REMOVED IN ACCORD AND POLLUTION PREVENTI 11. CONSTRUCTION SITE NOT
- 12. CONTRACTOR SHALL BE R PREPARATION AND INCLUE EROSION CONTROL AND SV COMPLIANCE WITH NPDES

#### CAUTION:

- EXISTING WATER, SANI FIBER OPTICS, AND OT CONSTRUCTION AREA **RESPONSIBLE FOR LOC** THESE PLANS, PRIOR
- DURING CONSTRUCTIO 2. THE LOCATION OF ALL
- THE PROJECT SURVEY
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- FACILITIES MAY BE PRE
- CALL 811 FOR UTILITY

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D ELEVATIONS ON THESE PLANS HAVE BEEN ESTABLISHED PROVIDED TO THE ENGINEER BY MDS LAND SURVEYING OF RACTOR SHALL ESTABLISH BASELINES PRIOR TO TRUCTION ACTIVITIES AND NOTIFY THE ENGINEER CREPANCIES OR PROBLEMS ASSOCIATED WITH DOING SO. SHALL BE PROVIDED BY CONTRACTOR. ON THE PLANS ARE CENTERLINE OF PROPOSED STREET			JEFF	REY C. 10635 /onal	TYLER 59 EDNG	
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DVED FROM EROSION CONTROL DEVICES WHEN THE DESIGN JCED BY ONE-THIRD. EROSION CONTROL DEVICES THAT /E THE STONE REPLACED WHEN THE VOIDS SPACES IN THE WITH SEDIMENT. DEVICE HAS BEEN DAMAGED OR IF IT IS NOT FUNCTIONING EROSION OR OFF-SITE SEDIMENTATION, THEN THE DEVICE ACED OR MODIFIED. IN ADDITION, THE STORM WATER PLAN SHALL BE REVISED TO INDICATE THE CHANGE. AGE AREAS USED SOLELY BY THE PERMITTED PROJECT (I,E., 'R SPOIL SITES) ARE CONSIDERED A PART OF THE PROJECT D IN THE STORM WATER POLLUTION PREVENTION PLAN. TABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL				DVEMENTS		8003, BANDERA (
CT. EBRIS, WASH PIT AREA AND CONSTRUCTION CHEMICALS ER SHALL BE PREVENTED FROM BECOMING A POLLUTANT ER DISCHARGES OR A SAFETY HAZARD. S SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS STRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN TE HAS TEMPORARILY OR PERMANENTLY CEASED. BE PERMANENTLY STABILIZED AND ALL TEMPORARY EROSION VED PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. EASURES MUST BE PLANNED FOR, INSTALLED, MAINTAINED DANCE WITH COUNTY, STATE, AND FEDERAL STORM WATER TON REQUIREMENTS. ICE AND/OR N.O.I.S MUST BE POSTED AT THE PROJECT SITE. ESPONSIBLE FOR ALL EROSION CONTROL AND SWPPP DE EROSION CONTROL AND SWPPP PREPARATION IN BID. ALL WPPP SHALL BE PROVIDED BY CONTRACTOR AND SHALL BE IN 5, TPDES, AND TCEQ REQUIREMENTS.			TES	<b>CROSSING IMPRC</b>	K ROAD	
ITARY SEWER, GAS, ELECTRIC, TELEPHONE, CABLE TELEVISION, HER MAY BE IN CLOSE PROXIMITY TO PROPOSED THROUGHOUT THE CONTRACT LIMITS. CONTRACTOR SHALL BE CATING ALL UTILITIES, WHETHER SHOWN OR NOT SHOWN IN TO CONSTRUCTION COMMENCEMENT AND PROTECT THE SAME			GENERAL NC	LOW WATER	WHARTON'S DOCH	BANDERA, TEXAS
DN. UTILITIES LOCATED ON THESE PLANS WERE IDENTIFIED FROM Y, LINE LOCATES, AND/OR OBTAINED FROM AVAILABLE RECORDS. VERTICAL LOCATION OF ALL UTILITIES MAY NOT BE EXACT. IT F THE CONTRACTOR TO ASCERTAIN WHETHER ADDITIONAL ESENT.						
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	LINE TABLE: ALIGNMENTS									
LINE #	LENGTH	DIRECTION	START	END	START COORDINATES	END COORDINATES				
L1	57.00	S26° 45' 41.49"E	0+00.00	0+57.00	13801034.60, 1952461.93	13800983.71, 1952487.60				
L2	187.82	S21° 36' 47.40"E	0+57.00	2+44.82	13800983.71, 1952487.60	13800809.09, 1952556.78				
L3	27.30	S23° 56' 26.62"E	2+44.82	2+72.12	13800809.09, 1952556.78	13800784.14, 1952567.86				
L4	37.69	S25° 48' 34.52"E	2+72.12	3+09.81	13800784.14, 1952567.86	13800750.21, 1952584.26				

## **WHARTON'S DOCK ROAD STA.** -0+80.00 - **STA.** 4+00.00

1+60 2+	00 2+	40 2+	80 3+	-20 3+	-60
1+31.58       :1251.99       .88       !9.99	PROPOSEI	© CRADE BREAK STA = 2+63.19 ELEV = 1252.651	EXISTING ROAD (		
PROPOSED 2-40LF 6' x 4' PW US & DS USFL = 1244. DSFL = 1243. (SEE SHEET			END RECONSTRUCTION STA. 2+63.46 MATCH EXITING		
1+60 2+ 1252.27 1252.27	+5 00 1252.34	900 252.54 253.06 24	-80 3+	-20 3+	-60



3 OF 7



		TS DT-02 & DT-03)			
L CURB (1' SPACING BETV Y REINFORCED CONCRE ASE MATERIAL RIPRAP TY RR8 (SEE SHE	VEEN CURB UNITS) TE PAVEMENT (SEE SHEETS ET DT-03)	DT-02 & DT-03)		JEFF	RE OF TELAS REY C. TYLER 106359 CICENSED ONAL ENGLASS 2/3/2023
	REINFORCING PER CRCP DETAILS			ROADWAY DETAILS	LOW WATER CROSSING IMPROVEMENTS WHARTON'S DOCK ROAD BANDERA, TEXAS 780003, BANDERA COUNTY
PAVEMENT SECTION PAVEMENT PASE MATERIAL SUBGRADE	- CONTINUE - COMPACT - COMPACT	OUSLY REINFORCEI TE PAVEMENT TED BASE MATERIAL TED SUBGRADE	D	JOB NO DATE: DRAWN SHEET:	B4 NE Loop 410, Ste 103 • San Antonio, Texas 78232 • 210.900.2448 TBPE Registration No. F-18275 • www.tc0re.com
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SLAB THICKNESS T (IN.)	BAR DIA. AND LENGTH	AVERAGE SPACING (IN.)
6 to 7.5	1" X 18"	12
8 to 10	1 ¼" X 18"	12
>= 10.5	1 <sup> </sup> ∕2" X 18"	12



AM 45



AM

45

/2023

2/3/

## 2 At discharge end, chamfer may be $\frac{3}{4}$ " minimum.

Quantities shown are for two Type PW-1 wings. Adjust concrete volume for Type PW-2 wings. To determine estimated quantities for two wings, multiply the tabulated values by Lw. Quantities shown do not include weight of Bars D.

(5) Provide weepholes for Hw = 5'-0" and greater. Fill around weepholes with coarse gravel. 6 Extend Bars E2 1'-6" minimum into the wingwall footing.

🕖 Lap Bars M1 1'-6" minimum with Bars M2.

 $\overset{\textcircled{0}}{\otimes}$  Place Bars G as shown, equally spaced at 8" maximum. Provide at least two pairs of Bars G per wing.

(9) O" Min to 5'-O" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-O, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 LS talls Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.

For vehicle safety, the following requirements must be met:
 For structures without bridge rail, construct curbs no more than 3" above finished grade.
 For structures with bridge rail, construct curbs flush with finished arade

finished grade. Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

 $\stackrel{(11)}{11}$  ]'-O" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elswhere in the plans.

### DESIGNER NOTES: Type PW-1 can be used for all applications and must be used if railing is to be mounted to the wingwall. Type PW-2 can only be used for applications without a railing mounted to the wingwall.

MATERIAL NOTES: Provide Class C concrete (f'c=3,600 psi). Provide Class C concrete (f'c=3,600 psi). Provide Grade 60 reinforcing steel. Provide galvanized reinforing steel if required elsewhere in the plans.

GENERAL NOTES: GENERAL NOTES: Designed in accordance with AASHTO LRFD Bridge Design Specifications. Depth of toewalls for wingwalls and culverts may be reduced or eliminated when founded on solid rock, when directed by the Engineer. See Box Culvert Supplement (BCS) standard sheet for wingwall twoe and additional dispections and information

wingwall type and additional dimensions and information. Quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.



DIST

COUNTY

SHEET N

5           (ft.)           6	H (ft.) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	N DIME (in.) 8 7 7 7 7 7 7 7 7 7 7 7 7 7	TB           (in.)           7	TS (in.) 7 7 7 7 7 7 7	Fill Height (ft.) 2 < 3 3 - 5	M (Min) (in.) - 43	AS1 0.23	AS2	AS3	NG (Sq. AS4	AS5	AST	A58	Lif Weig
S           (ft.)           6	H (ft.) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3	TT (in.) 8 7 7 7 7 7 7 7 7 7 7 7 7	TB (in.) 7 7 7 7 7 7 7 7 7 7 7	TS (in.) 7 7 7 7 7 7 7	Height (ft.) < 2 2 < 3 3 - 5	(MIN) (in.) - 43	AS1 0.23	A52	A53	AS4	AS5	AS7	AS8	Weig
6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3	8 7 7 7 7 7 7 7 7 7 7	7 7 7 7 7 7 7 7	7 7 7 7 7 7	< 2 2 < 3 3 - 5	- 43	0.23		(					(tor
6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6	2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3	7 7 7 7 7 7 7 7	7 7 7 7 7 7 7	7 7 7 7	2 < 3 3 - 5	43		0.27	0.19	0.17	0.19	0.19	0.17	7.
6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6	2 2 2 2 2 2 2 3 3 3 3 3	7 7 7 7 7 7 7	7 7 7 7 7 7	7 7 7	3 - 5		0.25	0.21	0.17	0.17	-	-	-	6.
6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6           6         6	2 2 2 2 2 3 3 3 3 3	7 7 7 7 7 7	7 7 7 7 7	7		43	0.20	0.17	0.17	0.17	-	-	-	6.
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	2 2 2 2 3 3 3 3	7 7 7 7 7	7 7 7	7	10	39	0.20	0.17	0.17	0.17	-	-	-	6.
6 6 6 6 6 6 6 6 6 6 6 6 6 6	2 2 2 3 3 3	7 7 7	7		15	39	0.26	0.20	0.20	0.17	-	-	-	6.
6 6 6 6 6 6 6 6 6 6 6 6 6 6	2 2 3 3 3	7 7	7	7	20	39	0.34	0.26	0.26	0.17	-	-	-	6.
6 6 6 6 6 6 6 6 6 6 6 6 6 6	2 3 3 3	7		7	25	39	0.43	0.32	0.32	0.17	-	-	-	6.
6 6 6 6 6 6 6 6 6	3 3 3		7	7	30	39	0.52	0.38	0.39	0.17	-	-	-	6.
6 6 6 6 6 6 6 6	3	8	7	7	< 2	-	0.20	0.31	0.22	0.17	0.19	0.19	0.17	7.
6 6 6 6 6 6 6	3	7	7	7	2 < 3	43	0.21	0.24	0.19	0.17	-	-	-	7.
6 6 6 6 6 6	-	7	7	7	3 - 5	39	0.17	0.18	0.17	0.17	-	-	-	7.
6 6 6 6	3	7	7	7	10	39	0.17	0.18	0.19	0.17	-	-	-	7.
6 6 6 6	3	7	7	7	15	38	0.22	0.24	0.24	0.17	-	-	-	7.
6 6 6	3	7	7	7	20	38	0.28	0.31	0.31	0.17	-	-	-	7.
6 6	3	7	7	7	25	38	0.35	0.38	0.39	0.17	-	-	-	7,
6	3	7	7	7	30	38	0.42	0.46	0.46	0.17	-	-	-	7.
6														
	4	8	7	7	< 2	-	0.19	0.34	0.25	0.17	0.19	0.19	0.17	8.
6	4	/	7	7	2 < 3	43	0.19	0.27	0.21	0.17	-	_	-	8.
6	4	7	7	7	3 - 5	39	0.17	0.21	0.19	0.17	-	-	-	8.
6	4	7	7	7	10	39	0.17	0.20	0.21	0.17	-	_	-	0 g
6	4	7	7	7	20	38	0.10	0.27	0.27	0.17	-	_	-	8
6	4	7	7	7	25	38	0.29	0.43	0.42	0.17	-	-	-	8
6	4	7	7	7	30	38	0.35	0.51	0.52	0.17	-	-	-	8
-	· ·		,				0.00		0.51					
6	5	8	7	7	< 2	-	0.19	0.37	0.28	0.17	0.19	0.19	0.17	9
6	5	7	7	7	2 < 3	43	0.17	0.30	0.24	0.17	-	-	-	8.
6	5	7	7	7	3 - 5	43	0.17	0.23	0.21	0.17	-	-	-	8.
6	5	7	7	7	10	39	0.17	0.22	0.23	0.17	-	-	-	8.
6	5	7	7	7	15	38	0.17	0.28	0.29	0.17	-	-	-	8.
6	5	7	7	7	20	38	0.20	0.37	0.38	0.17	-	-	-	8.
6	5	7	7	7	25	38	0.25	0.45	0.46	0.17	-	-	-	8.
б	5	7	7	7	30	38	0.30	0.54	0.55	0.17	-	-	-	8.
6	6	8	7	7	< 2	-	0.19	0.38	0.30	0.17	0.19	0.19	0.17	10
6	6	7	7	7	2 < 3	52	0.17	0.32	0.26	0.17	-	-	-	9.
6	6	7	7	7	3 - 5	52	0.17	0.24	0.22	0.17	-	-	-	9.
6	6	7	7	7	10	43	0.17	0.23	0.24	0.17	-	-	-	9.
6	6	7	7	7	15	39	0.17	0.29	0.31	0.17	-	-	-	9.
6	6	7	7	7	20	39	0.18	0.38	0.39	0.17	-	-		9.
6				-								-		



![](_page_6_Figure_23.jpeg)

(1) For box length = 8'-0''2 AS1 thru AS4, AS7 and AS8 are minimum required areas of

reinforcement per linear foot of box length. AS5 is minimum required area of reinforcement per linear foot of box width.

SHEET:

DT-04