

Beachfront Construction Certificate (BCC) – Staff Report Summary

Case No.: BD9109

Applicant: City of Corpus Christi

Site Address: 6510 State Highway 361, Corpus Christi, TX

Project Overview

The applicant proposes construction of a new **Beach Access Road** and associated infrastructure. The new access road will be located **between Beach Access Roads 1 and 2**.

- **Roadway Dimensions:**
 - Approx. **20 feet wide**
 - Approx. **1,650 feet long**
- **Distance from Coastal Features:**
 - **50 feet** from the Line of Vegetation (LOV)
 - **190 feet** from Mean High Tide (MHT)
- **Total Disturbance Area:**
 - Approx. **117,612 square feet**

Scope of Proposed Construction

The project includes both infrastructure installation and soil-disturbing activities:

Construction Activities

- Grading and site preparation
- Installation of drainage improvements
- Placement of storm pipe
- Construction of concrete curb

Soil-Disturbing Activities

- Right-of-way preparation
- Excavation and embankment for roadway construction
- Grading for drainage
- Installation of storm sewer and water line improvements

Public Notification

17 property owners notified within the required notification 200' area

Concurrent Beach Dune/Committee (Committee):

If the following apply, the committee must make a determination as to approval, approval with conditions or denial of this application:

- Proposed construction activities are seaward of the Erosion Area Line
- Proposed construction is located on an existing beach access or future beach access
- Proposed construction encroaches on the public beach
- Proposed construction includes impervious surface within 200 feet landward of the vegetation line
- Proposed construction includes a dune walkover (not to be constructed under GLO standards)

Staff Analysis:

Staff reviewed and considered the following:

- Compliance with all aspects of the City's beach access and erosion response regulations

- Impacts on access to public beaches, off-beach parking, or the size of the public beach due to erosion
- Impacts on the natural drainage patterns of the site and adjacent property
- Whether all practicable alternatives to the proposed activity, proposed site, or proposed methods of construction have been considered
- Any material change between the County No Dune Permit Required Determination (Attachment 1) and this application (Attachment 2)

Staff Recommendation:

Conditional approval pending the following:

- Comments from the Texas General Land Office (GLO)

Attachments:

1. Nueces County No Dune Permit Required Determination
2. BCC Application
3. Letter to GLO – Request for Review (BCC Large-Scale)
4. Site Plan
5. Color Photos
6. Construction Plans

Attachment 1 - Nueces County No Dune Permit Required Determination



Date: Thursday, October 17, 2024

From: Nueces County Coastal Parks

To: City of Corpus Christi
1200 Leopard St.
Corpus Christi, TX 78401

RE: Approval Dune Permit Application required for DPP-20231209, City of Corpus Christi
New Beach Access Road, Nueces County, Texas.

The subject project permit request is approved. The Nueces County Coastal Parks Department, the Nueces County Beach Management Advisory Committee (BMAC), the Nueces County Judge Connie Scott, and the Texas General Land Office (GLO) have reviewed the subject large-scale construction dune protection permit application for a proposed new beach access road on Mustang Island in Port Aransas, Texas, and concluded the proposed project meets county and state requirements for a large-scale dune protection project.

Project Description:

The City of Corpus Christi is proposing construction of a new beach access road. The proposed access road is on a 3.829-acre tract, being a portion of Lot 35, Block 1, Mustang Island Section 2. The road connects State Highway (SH) 361 to the Gulf beach. Portions of the project would lie seaward of the 200-foot erosion line and 350-foot line of vegetation. The proposed Beach Access Road is identified as both a short-term and long-term priority project in the Joint Erosion Response Plan of 2012. This +/- 1,600' concrete road between SH 361 and the beach has been identified by the plan and in emails from the City Manager of Port Aransas as being essential for emergency services access to a current 7-mile stretch of beach between Beach Access Road 1 in Port Aransas and Beach Access Road 2 in Corpus Christi in order to increase public safety. The current roadway plan is a simple two-lane concrete roadway, narrowed to the minimum possible width within the protected dune areas while following applicable codes. Approximately 12,636 square feet (SF) of pavement is proposed to be constructed seaward of the 350' Building Setback Line. The area of vegetation mitigation adjacent to the roadway is 13,982 SF, or approximately 0.32 acres. No impacts to the beach are anticipated and no dune walkovers are present or proposed on the lot.

The following conditions apply to this approval:

1. Offsite fill material, if needed, is clean and free of debris and free of toxic materials listed in Title 40 of the Code of Federal Regulations, §302.4, in concentrations which are

harmful to people, flora and fauna. Fill material will also be of acceptable mineralogy or grain size when compared to the sediments found on the site.

2. Applicant will comply with all rules and regulations of the Nueces County Beach Management Plan and the GLO, and The Joint Erosion Response Plan for Nueces County and the City of Corpus Christi.
3. Upon receipt of this approval, you shall notify the County of the planned schedule for construction, mitigation, and compensation work. This includes a notice at least 10 working days prior to starting work, significant schedule updates, and when the work is initially complete.
4. Allow representatives of Nueces County and the GLO access to the property for inspection purposes, during and upon completion of construction.
5. Applicant will obtain a Beachfront Construction Certificate from the City of Corpus Christi and comply with City of Corpus Christi building codes and ordinances.
6. Applicant understands that any unauthorized adverse impacts to dunes or dune vegetation outside of the permitted impact area are in violation of the Dune Protection Act and may be subject to enforcement action by Nueces County and the GLO, which may include administrative penalties of \$50 to \$2,000 per violation per day.
7. Conduct compensation for any adverse effects to dunes and dune vegetation prior to or concurrent with the commencement of construction. If compensation is not completed prior to commencement of construction, the permittee must provide the County with proof of financial responsibility in an amount necessary to complete the mitigation.
8. Conduct compensation efforts continuously until the repaired, rehabilitated, and restored dunes and dune vegetation are equal or superior to the pre-existing dune vegetation. These efforts shall include preservation and maintenance of restoration activities pending completion of mitigation. The permittee shall be deemed to have failed to achieve mitigation and compensation if a 1:1 ratio has not been achieved within three years after beginning mitigation and compensation efforts.
9. Restore dunes to a similar position, contour, volume, elevation, and vegetative cover of the surrounding naturally formed dunes. Compensate for adverse effects on dune vegetation by planting indigenous vegetation on the affected dunes.
10. Applicant will direct all stormwater inland away from critical dune areas so that construction and fill activities do not result in increased flood damage to the proposed construction site, public beach, or adjacent properties, result in runoff or drainage patterns that aggravate erosion, cause significant changes to dune hydrology, adversely affect dune complexes or dune vegetation, or significantly increase the potential for wash overs or blowouts to occur. Additional information about this condition can be found in the attached letter from the GLO.
11. Applicant will take measures to avoid adversely impacting additional dunes and dune vegetation during construction, such as temporarily installing silt fencing adjacent to the critical dune area to prevent construction equipment or materials from being placed in the dune system.
12. Within thirty (30) days of completion of this project, submit to the County an affidavit signed and sealed by your engineer, architect, or geologist licensed in the State of Texas. The affidavit must attest that the provisions of this approval have been met, and that the permitted work has been completed. The County will then verify that the provisions have been met and will send a letter of acceptance or rejection of the attestation to you.

This approval is valid for three (3) years from the date of issuance. If the proposed construction is changed in any manner which causes adverse effects on dunes, dune vegetation, or public beach use and access, this project shall not be eligible for a renewal but will require the application for a new permit.

The County reserves the right to access the property to inspect and monitor the permitted activity during construction and until expiration of this approval. If at any time the County finds that the activity is not consistent with the conditions of this approval, the County may order the activity to cease until a plan for compliance is agreed upon.

Additional information about the dune permit process, questions about amendments or extensions, and other dune habitat information is available from the Nueces County Beach Management Plan which can be found at <https://www.nuecesbeachparks.com/dune-permitting/nueces-county-beach-management-plan>. For additional support contact Nueces County Coastal Parks at P.O. Box 18608, Corpus Christi, Texas 78408, (361) 949-8122, CoastalParksDunePermits@nuecescountytexas.gov.

Attachments-

GLO letter to the County
County letter to the GLO
BMAC memo to Judge
Copy of Application

Attachment 2 – Beachfront Construction Certificate Application

 <p>CITY OF CORPUS CHRISTI DEVELOPMENT SERVICES</p> <p>Development Services Dept. 2406 Leopard Street Corpus Christi, TX 78469-9277 (361) 826-3240</p>	<h2 style="text-align: center;">BEACHFRONT CONSTRUCTION CERTIFICATE</h2> <p> <input type="checkbox"/> Small Scale <input type="checkbox"/> Large Scale <input type="checkbox"/> Dune Walkover¹ <input checked="" type="checkbox"/> Public Beach Access, or Closure, Relocation, or Reduction </p> <p style="text-align: center;"><i>Submit a record at City of Corpus Christi Rhythm for Civics and upload application form.</i></p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="3" style="text-align: center;">FEE WORKSHEET FOR APPLICANT USE ONLY</th> </tr> <tr> <th></th> <th style="text-align: center;">Small Scale (≤ 5,000 SQF, and ≤ Two Stories)</th> <th style="text-align: center;">Large Scale (> 5,000 SQF, and > Two Stories)</th> </tr> </thead> <tbody> <tr><td>Base Application</td><td></td><td></td></tr> <tr><td>Master Planned Development</td><td></td><td></td></tr> <tr><td>Erosion Response Permit</td><td></td><td></td></tr> <tr><td>Total Fees</td><td></td><td></td></tr> <tr><td>Administrative Surcharge (4.5%)</td><td></td><td></td></tr> <tr><td>Public Notice Surcharge</td><td></td><td></td></tr> <tr><td>Total</td><td></td><td></td></tr> </tbody> </table> <p style="text-align: right; font-size: small;"><i>* Refer to Development Services Beachfront Construction Certificate Fees Year 4</i></p>	FEE WORKSHEET FOR APPLICANT USE ONLY				Small Scale (≤ 5,000 SQF, and ≤ Two Stories)	Large Scale (> 5,000 SQF, and > Two Stories)	Base Application			Master Planned Development			Erosion Response Permit			Total Fees			Administrative Surcharge (4.5%)			Public Notice Surcharge			Total		
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<p>1. Applicant: <u>City of Corpus Christi</u> Applicant Type: <u>City itself</u> Contact <u>Mai-Theresa Bernal, P.E.</u> Mailing Address: <u>1201 Leopard</u> City <u>Corpus Christi</u> State <u>TX</u> Zip <u>78401</u> E-mail: <u>MaiB@corpuschristitx.gov</u> Cell: (<u>361</u>) <u>244</u> - <u>2004</u></p>																												
<p>2. Property Owner (s): <u>City of Corpus Christi</u> Contact Person : <u>Mai-Theresa Bernal, P.E.</u> Mailing Address: <u>1201 Leopard</u> City <u>Corpus Christi</u> State <u>TX</u> ZIP <u>78401</u> E-mail: <u>MaiB@corpuschristitx.gov</u> Cell: (<u>361</u>) <u>244</u> - <u>2004</u></p>																												
<p>2. Engineer/Surveyor: <u>Freese & Nichols</u> Contact Person : <u>Brian Bresler, P.E.</u> Mailing Address: <u>800 N. Shoreline Blvd., Suite 1600N</u> City <u>Corpus Christi</u> State <u>TX</u> ZIP <u>78401</u> E-mail: <u>bdb@freese.com</u> Cell: (<u>361</u>) <u>537</u> - <u>6816</u></p>																												
<p>3. Subject Property Address (es): <u>No address, but approx. 6510 SH 361</u> Current Zoning District: <u>RM-AT</u> Geographic ID (Tax ID): <u>5491 - 0002 - 3510</u> ; parent tract for City ROW/E for City roadway 3.759 ac. tract, being a portion of Lot 35, Block 1, Mustang Island Section 2, a map of which is recorded in Vol. 38, pp. Legal Description: <u>183-185, of the Map of Records of Nueces Co. (additional description in attached easement exhibit)</u> Proposed Construction Description: <u>This application is for the City's new Beach Access Road authorized by Bond 2020</u> Number of Stories: <u>0</u> ; Height of lowest habitable floor: <u>none</u> ; FEMA Base Flood Elevation: <u>9'</u> Area of Proposed Construction (including area of temporary impact on dunes and dune vegetation): <u>107,982</u> ^{Per Sheet 34, area of proposed construction is 2.7 acres or 117,612 SF} SQF Distance of proposed construction landward of Mean High Tide (MHT): <u>190</u> Ft; landward of the Line of Vegetation (LOV): <u>50</u> Ft <input checked="" type="checkbox"/> Proposed construction is seaward of the 350-Foot Setback Line³; <input checked="" type="checkbox"/> Construction is seaward of the Dune Protection Line⁴ <u>Erosion response plan is the City's existing plan with Nueces County - Joint Erosion Response Plan (JERP)</u></p>																												
<p>4. Required Documents/Forms: NA <input checked="" type="checkbox"/> Land Use Statement <input type="checkbox"/> Disclosure of Interest <input checked="" type="checkbox"/> DPP Permit <input checked="" type="checkbox"/> Site Plan² <input checked="" type="checkbox"/> Photographs FEMA Certificate Associated Platting/Subdivision, Public Improvement, Building, or other Permit Application Numbers: <u>NA</u></p>																												
<p>5. I certify that I have provided the City of Corpus Christi with a complete application for review; that I am authorized to initiate this rezoning as or on behalf of the Property Owner(s); and the information provided is accurate.</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%; text-align: center; vertical-align: bottom;">  _____ Brian D. Bresler, P.E. <small>Engineer/Surveyor/Designer's Printed Name</small> </td> <td style="width:33%; text-align: center; vertical-align: bottom;">  _____ Mai-Theresa Bernal, P.E. <small>Applicant's Printed Name</small> </td> <td style="width:33%;"></td> </tr> <tr> <td style="width:33%; text-align: center; vertical-align: top;">  _____ City of Corpus Christi <small>Owner or Agent's Printed Name</small> </td> <td style="width:33%;"></td> <td style="width:33%;"></td> </tr> </table>		 _____ Brian D. Bresler, P.E. <small>Engineer/Surveyor/Designer's Printed Name</small>	 _____ Mai-Theresa Bernal, P.E. <small>Applicant's Printed Name</small>		 _____ City of Corpus Christi <small>Owner or Agent's Printed Name</small>																							
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 _____ City of Corpus Christi <small>Owner or Agent's Printed Name</small>																												
OFFICE USE ONLY	Case BD _____; Received: __/__/__; Completeness Review: __/__/__; Sent to GLO: __/__/__; Issued: __/__/__ Beach Dune Committee Hearing: __/__/__; Notices: __ Inside; __ Outside; __ In Favor; __ Opposed (__ %); Action: _____																											

¹Construction of walkover (s) to be pursuant to TXGLO's Dune Protection and Improvement Manual of the Texas Gulf Coast; otherwise attach explanation; ²According to Site Plan Requirements Checklist; ³An Erosion Response Permit is required, if seaward of the 350-foot line; ⁴A Dune Protection Permit or Exemption must be provided, if seaward.



LAND USE STATEMENT

1. State the purpose of the request and include applicable background information as to the development plan for the property, i.e., usage of property, number and square footage(s) of existing and/or proposed building(s)/unit(s), building(s)/unit(s) height, parking plans/spaces, phasing schedule of development, number of employee(s) associated with the office, business or industrial development, hours of operation, modification or demolition plans for existing structure(s), type, area and setback of signage, etc.

New Beach Access Road is a 1,600 LF roadway that will provide needed emergency services access to the longest portion of Mustang Island without emergency services access. The New Beach Access Road will be located between the existing Beach Access Road 2 and the existing Beach Access Road 1. This 7-mile stretch of the island is home to many high-density developments, such as Cinnamon Shores, Port Royal, and the twin condos of Sandpiper and Seagull, so that many people utilize the beaches, yet access for emergency services is limited to the existing Beach Access roadways. The concept for this roadway began in the 1980's when Nueces County (County) obtained a roadway easement from a property owner. Unfortunately, that easement is in a jurisdictional wetland and would be difficult and costly to develop. The roadway will now be built at the north end of the same property where there are no wetlands as a result of a three-way easement swap between the County, the landowner, and the City. The County has transferred their 1980's easement to the City. The City, in exchange for an easement at the higher north end of the property from the landowner, will exchange the old County easement for the new easement with the landowner. The proposed roadway will rely on surface drainage across a cement-stabilized shoulder identical to the several most recently rebuilt beach access roadways, eventually draining into the SH 361 roadside drainage system and ultimately into Corpus Christi Bay on the back side of the island. This roadway is shown in the current Transportation Plan, in the old county easement location, as a C1 collector roadway. This project will focus on the permitting and construction of approximately 1,600 LF of new roadway from SH 361 to the beach. At least four permits are required to construct this roadway, to include SW3P (TCEQ), Highway Access Driveway Permit (TxDOT),

2. Identify the zoning and land uses adjoining the area of request, and the designated future land uses.

	<u>Existing Zoning</u>	<u>Existing Land Use</u>	<u>Future Land Use</u>
Site	_____	_____	_____
North	_____	_____	_____
South	_____	_____	_____
East	_____	_____	_____
West	_____	_____	_____



02/24/2026
Via Electronic Mail

Laura Medlin
Manager, Beach Access & Dune Protection Program
Texas General Land Office
1700 N. Congress Avenue, Suite 335
Austin, Texas 78701
Phone: 512-463-5234
Email: lauren.medlin@glo.texas.gov

Application for a Large-Scale Beachfront Construction Certificate

Applicant: City of Corpus Christi, Engineering Department

Case No.: BD9091

Site Address: Generally located at 6510 State Highway 361, Port Aransas, TX 78373

Legal Description: Not applicable

Dear Ms. Medlin:

Please find the the application and all accompanying enclosures for the above-referenced project have been uploded to the GLO DropBox for review and comment. The project is for Large-Scale Beachfront Construction Certificate for a new beach access road and infrastructure, total length of 1,600 feet (0.31 miles), to include grading, drainage, storm pipe, and concrete curb. Soil disturbing activities to include preparing right-of-way, excavation and embankment for roadways, grading, storm sewers, and waterlines. The total site disturbance is estimated to be 2.7 acres or 117,612 square feet. The proposed construction begins approximately 190 feet landward of mean high tide and 50 feet landward of the Line of Vegetation. The proposed construction:

1. Is located seaward of the 200-foot erosion area line or the erosion area restriction line.
2. Is a future beach access as shown in an element of the City's Comprehensive Plan.
3. Does not functionally support, depend on, or otherwise relate to proposed or existing structures that encroach on the public beach.
4. Does not include a retaining wall or impervious surface 200 feet landward of the line of vegetation.

City staff has determined that the proposed construction complies with all aspects of the City's beach access and erosion response regulations.

1. An Erosion Response Permit is not required for this project.
2. The County Dune Protection Permit is required and has been issued.
3. Staff finds that the proposed activity will not impact the community's natural flood protection and protection from storm surges.
4. Staff notes that this project involves the construction of a new beach access road and infrastructure, and therefore does not negatively impact existing public beach access, off-beach parking, or the size of the public beach.

Should you have any questions about this application, please let me know.

Sincerely,



Elena Juárez Buentello, AICP - Planner III

Zoning—Land Development
Development Services Department
City of Corpus Christi
elenab@cctexas.com
361-826-3598

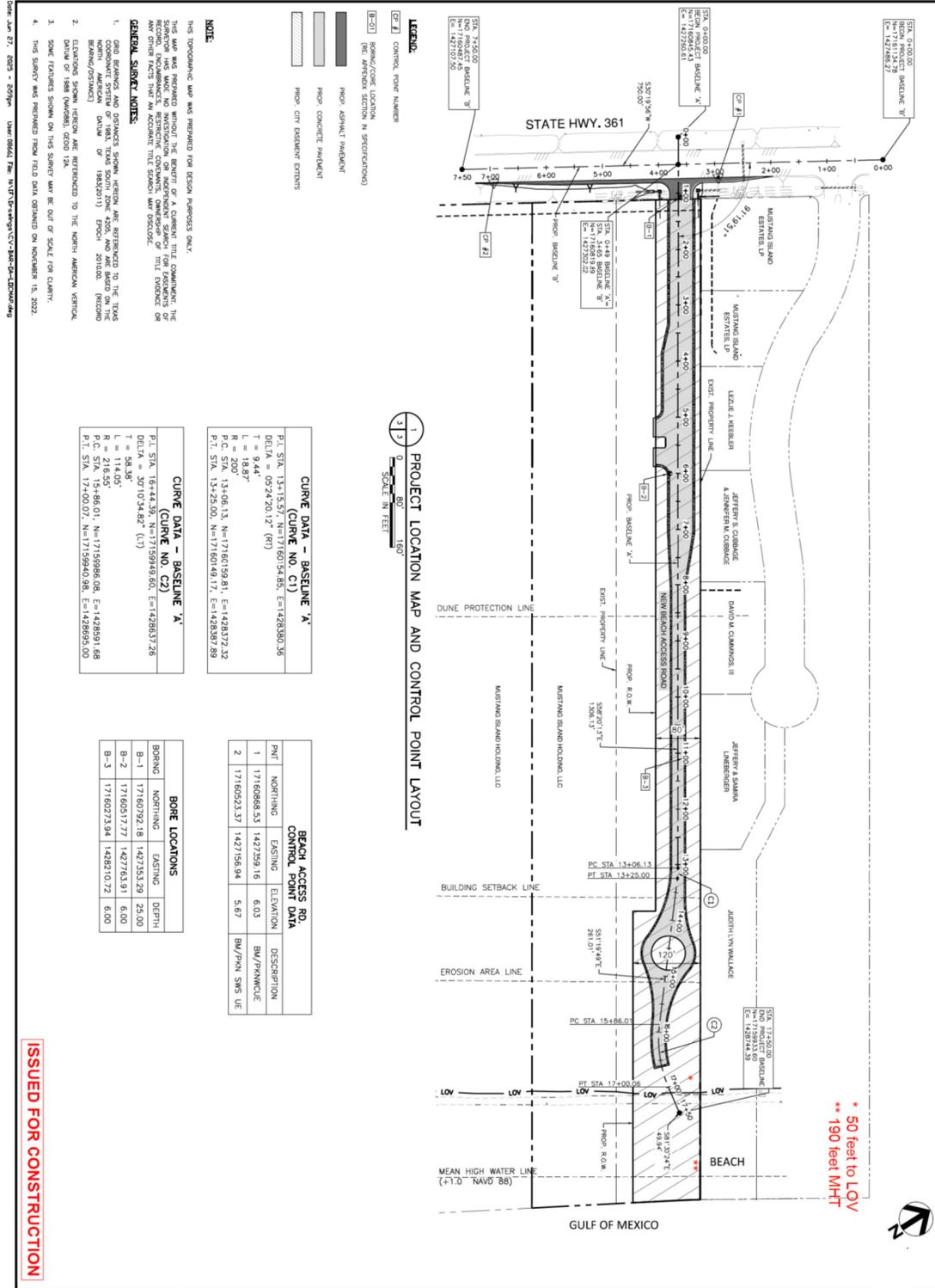
cc: Nueces County; Christine Magers, Scott Cross
City of Corpus Christi; Bria Whitmire, Andrew Dimas

Enclosures

1. BCC Application
2. Dune Protection Permit
3. Color Photos
4. Plat V38P183-185
5. City of Corpus Christi Roadway Master Plan – 18T
6. Construction Plan Set
 - a. Topography
 - b. Proposed Roadway Sections
 - c. Roadway Plan & Profile
 - d. Waterline Plan and Profile
 - e. Drainage Plan
 - f. Stormwater pollution Prevent Plan
 - g. Site Plan
 - h. Dune Mitigation & Compensation Notes & Plan

Attachment 4 – Site Plan

ROAD: 182.26 (LMS TRAIL) User: 02233
 COR1151411\STANDARD\X-PRCC-SATELX.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PLSLS:



VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	REVISION NO.	DATE	BY	DESCRIPTION	REVISION NO.	DATE	BY	DESCRIPTION
SHEET 3 of 55 STR-1019 PROJECT # 21062	NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)				CITY of CORPUS CHRISTI TEXAS Department of Engineering Services			
	PROJECT LOCATION MAP AND CONTROL POINT DATA				FREES NICHOLS 600 N. Shoreline Blvd. Suite 1600N Corpus Christi, Texas 78401-3171 Phone - (361) 561-6500 Fax - (361) 561-6501			
				BRIAN D. BREILER No. 112706 State of Texas Brian D. Breiler Freese and Nichols, Inc. Texas Registered Engineer Form F-2144				
				CONSULTANT'S SHEET NO. PROJECT: CORP151776				

Attachment 5 – Color Photos

Photos – New Beach Access Road from S.H. 361 to the Beach

Photo 1: Location Map



Photo 2: Looking seaward (east) from existing roadway culvert along SH 361



Photo 3: Looking south toward the Seagull and the Sandpiper and the Porto Villageo Walkover



Photo 4: Looking north toward Port Royal and the Mustang Island Estates Walkover



Photo 5: Looking south toward the Seagull and the Sandpiper



Photo 6: Looking north toward Port Royal

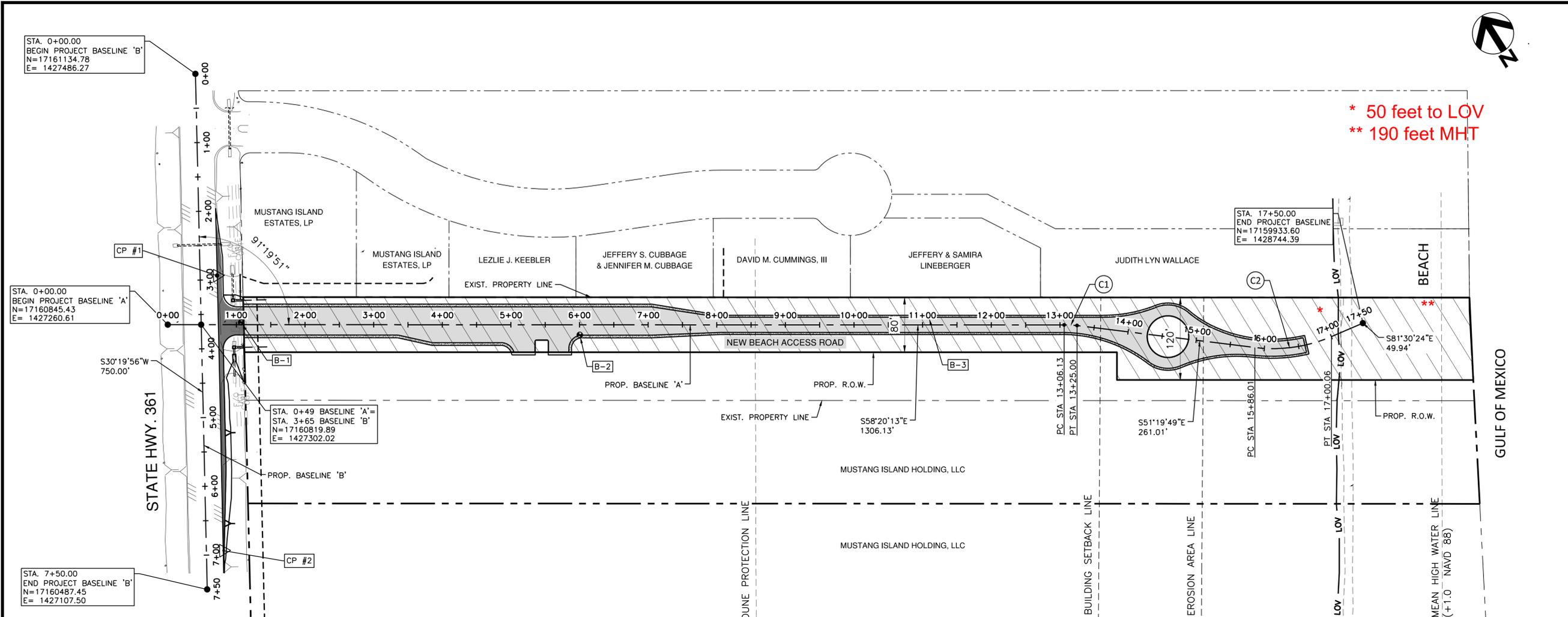


Photo 7: Looking west toward S.H. 361 and inland dune ridges



Photo 8: Looking east from vegetation line





CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576
 6/30/2025
 STATE OF TEXAS
 PROFESSIONAL ENGINEER
 112706
 F. D. BUSH
 Freese and Nichols, Inc.
 Texas Registered Engineering Firm F-2144

FREES & NICHOLS
 800 N. Shoreline Blvd, Suite
 1600N Corpus Christi, Texas
 78401-3717
 Phone - (361) 561-6500
 Fax - (361) 561-6501

CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

1 PROJECT LOCATION MAP AND CONTROL POINT LAYOUT
 3 3
 0 80' 160'
 SCALE IN FEET

- LEGEND:**
- CP # CONTROL POINT NUMBER
 - B-01 BORING/CORE LOCATION (RE: APPENDIX SECTION IN SPECIFICATIONS)
 - PROP. ASPHALT PAVEMENT
 - PROP. CONCRETE PAVEMENT
 - PROP. CITY EASEMENT EXTENTS

NOTE:

THIS TOPOGRAPHIC MAP WAS PREPARED FOR DESIGN PURPOSES ONLY.

THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP OF TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE TITLE SEARCH MAY DISCLOSE.

- GENERAL SURVEY NOTES:**
- GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM OF 1983, TEXAS SOUTH ZONE 4205, AND ARE BASED ON THE NORTH AMERICAN DATUM OF 1983(2011) EPOCH 2010.00. (RECORD BEARING/DISTANCE)
 - ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), GEOID 12A.
 - SOME FEATURES SHOWN ON THIS SURVEY MAY BE OUT OF SCALE FOR CLARITY.
 - THIS SURVEY WAS PREPARED FROM FIELD DATA OBTAINED ON NOVEMBER 15, 2022.

CURVE DATA - BASELINE 'A' (CURVE NO. C1)

P.I. STA. 13+15.57, N=17160154.85, E=1428380.36
DELTA = 05°24'20.12" (RT)
T = 9.44'
L = 18.87'
R = 200'
P.C. STA. 13+06.13, N=17160159.81, E=1428372.32
P.T. STA. 13+25.00, N=17160149.17, E=1428387.89

BEACH ACCESS RD. CONTROL POINT DATA

PNT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	17160868.53	1427359.16	6.03	BM/PKNWCUE
2	17160523.37	1427156.94	5.67	BM/PKN SWS UE

CURVE DATA - BASELINE 'A' (CURVE NO. C2)

P.I. STA. 16+44.39, N=17159949.60, E=1428637.26
DELTA = 30°10'34.82" (LT)
T = 58.38'
L = 114.05'
R = 216.55'
P.C. STA. 15+86.01, N=17159986.08, E=1428591.68
P.T. STA. 17+00.07, N=17159940.98, E=1428695.00

BORE LOCATIONS

BORING	NORTHING	EASTING	DEPTH
B-1	17160792.18	1427353.29	25.00
B-2	17160517.77	1427763.91	6.00
B-3	17160273.94	1428210.72	6.00

REVISION NO.	DESCRIPTION	DATE	BY

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)

PROJECT LOCATION MAP AND CONTROL POINT DATA

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET 3 of 55
 RECORD DRAWING NO.
 STR-1019
 CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

Item	DESCRIPTION	UNIT	ESTIMATED QUANTITY
Part A - General			
A1	MOBILIZATION (MAX 5% PART A)	LS	1
A2	BONDS AND INSURANCE	AL	1
A3	CLEARING AND GRUBBING	AC	4
A4	SURVEY MONUMENT	EA	2
A5	PRE-SURVEY AND STAKING	EA	1
A6	POST SURVEY AND STAKING	EA	1
A7	TRAFFIC CONTROL BY A PROFESSIONAL ENGINEER	LS	1
A8	TRAFFIC CONTROL ITEMS, MOBILIZATION AND ADJUSTMENTS	LS	1
A9	MOBILE MESSAGE BOARD FOR TRAFFIC CONTROL	EA	2
A10	HYDROMULCHING FOR EROSION CONTROL	SY	1,600
A11	SILT FENCE FOR STORM WATER POLLUTION PREVENTION	LF	3,300
A12	UTILITY POLE WITH IT CABINET	EA	1
A13	UNANTICIPATED GENERAL IMPROVEMENTS	AL	1

Item	DESCRIPTION	UNIT	ESTIMATED QUANTITY
Part B - STREET IMPROVEMENTS (per SECTION 01 29 01 MEASUREMENT AND BASIS FOR PAYMENT)			
B1	MOBILIZATION (MAX 5% PART B)	LS	1
B2	STREET EXCAVATION	CY	4,520
B3	ROADWAY EMBANKMENT	CY	2,620
B4	8" CEMENT STABILIZED SUBGRADE	SY	7,998
B5	12" CRUSHED LIMESTONE FLEX BASE (TY A, GR 1-2)	SY	532
B6	ONE-COURSE SURFACE TREATMENT	SY	450
B7	PRIME COAT (0.15 GAL/SY)	GAL	73
B8	2" HMA CP (TYPE D) SURFACE COURSE	SY	485
B9	3" HMA CP (TYPE B) BASE COURSE	SY	485
B10	7" CONCRETE PAVEMENT (CRCP)	SY	6,089
B11	CEMENT-STABILIZED SHOULDER	CY	285
B12	REFL. PAV MRK TY 1 (Y) (4") (SOLID)(090MIL)	LF	992
B13	REFL. PAV MRK TY 1 (Y) (4") (DBL) (SOLID)(090MIL)	LF	1,890
B14	REFL PAV MRK TY I (W) 4"(SLD)(090MIL)	LF	4,502
B15	REFL PAV MRK TY I (W) 4"(BKN)(090MIL)	LF	90
B16	REFL PAV MRK TY C (Y) (12") (GORE)(090MIL)	LF	185
B17	REFL PAV MRK TY I (W) (8") (SOLID)(090MIL)	LF	700
B18	REFL PAV MRK TY C (W) (24") (SOLID)(090MIL)	LF	22
B19	PAV MRK TY I (BLACK)(4")(SHADOW)(090MIL) WITH PRIMER SEALER	LF	90
B20	REFL PAV MRK TY C HEAT APPLIED PREFAB PREFORMED THERMOPLASTIC (W) WORD (SLD) (125MIL) WITH PRIMER SEALER	EA	6
B21	REFL PAV MRK TY C HEAT APPLIED PREFAB PREFORMED THERMOPLASTIC (W) ARROWS (SLD) (125MIL) WITH PRIMER SEALER	EA	8
B22	REFL PAV MRK TY C HEAT APPLIED PREFAB PREFORMED THERMOPLASTIC (W) YIELD TRIANGLE (SLD)(125MIL) WITH PRIMER SEALER	LF	40
B23	FURNISH AND INSTALL ROADSIDE STOP SIGN WITH STREET NAME BLADES AND SIGN SUPPORT ASSEMBLY (TRIANGULAR SLIPBASE)	EA	1
B24	FURNISH AND INSTALL ROADSIDE TRAFFIC SIGN AND SIGN SUPPORT ASSEMBLY (TRIANGULAR SLIPBASE)	EA	16
B25	TY II-C RAISED PAVEMENT MARKER REFLECTORIZED	EA	46
B26	TY II-A-A RAISED PAVEMENT MARKER REFLECTORIZED	EA	275
B27	DEAD END BARRICADE (D&OM(4)-20)	EA	4
B28	UNANTICIPATED STREET IMPROVEMENTS	AL	1

Item	DESCRIPTION	UNIT	ESTIMATED QUANTITY
Part C - STORM WATER DRAINAGE IMPROVEMENTS			
C1	MOBILIZATION (MAX 5% PART C)	LS	1
C2	24-IN Dia. RCP (CLASS III)	LF	8
C3	S.E.T. (24-IN.)(6:1)(PSET-RP)	EA	2
C4	S.E.T. (24-IN.)(6:1)(RELOCATE AND RE-INSTALL EXIST.)	EA	1
C5	3'X3' CONCRETE JUNCTION BOX	EA	2
C6	TIE-IN CONNECTION TO EXIST. PIPE	EA	1
C7	TIE-IN CONNECTION TO NEW JUNCTION BOX	EA	1
C8	6" CONCRETE COLLAR	EA	1
C9	6" CONCRETE CURB	LF	240
C10	GRADE NEW SWALE	LF	70
C11	REGRADE EXIST. DITCH FLOWLINE TO DRAIN	LF	210
C12	SELECT BACKFILL MATERIAL	CY	130
C13	UNANTICIPATED STORM WATER IMPROVEMENTS	AL	1

Item	DESCRIPTION	UNIT	ESTIMATED QUANTITY
Part D - WATER UTILITIES IMPROVEMENTS			
D1	MOBILIZATION (MAX 5% PART D)	LS	1
D2	6-IN Dia. C900 PVC WATERLINE	LF	755
D3	CEMENT STABILIZED SAND BACKFILL	CY	10
D4	6-INCH PVC BLIND FLANGE	EA	1
D5	6" GATE VALVE W/BOX AND COVER	EA	2
D6	6" X 6" TEE	EA	1
D7	6-IN TIE-IN CONNECTION	EA	1
D8	12" X 6" TAPPING SLEEVE W/6" TAPPING VALVE	EA	1
D9	12" TIE-IN	EA	1
D10	FIRE HYDRANT ASSEMBLY (TYPE 1) W/STAINLESS	EA	1
D11	FIRE HYDRANT ASSEMBLY (TYPE 2) W/STAINLESS	EA	1
D12	RE-ESTABLISH PLANT COVER	SY	20
D13	WCID #4 ACCEPTANCE	LS	1
D14	UNANTICIPATED WATER IMPROVEMENTS	AL	1

Item	DESCRIPTION	UNIT	ESTIMATED QUANTITY
Part E - DUNE MITIGATION IMPROVEMENTS			
E1	MOBILIZATION (MAX 5% PART E)	LS	1
E2	STRIPPING EXISTING PLANT MATERIAL + TOPSOIL	SY	5,000
E3	PROTECTING EXISTING PLANT MATERIAL FOR	SY	5,000
E4	PROTECTING IN-PLACE PLANT MATERIAL FROM	SY	4,000
E5	DUNE FILL FROM ON SITE, RELOCATED AND PLACED	CY	1,800
E6	DUNE FILL PURCHASED OFF SITE/HAULED/PLACED	CY	1,200
E7	REPLANTING/MULCHING USING ON-SITE MATERIALS	SY	5,000
E8	BURLAP NETTING	SY	5,000
E9	WATERING AND MAINTAINING	MO	12
E10	UNANTICIPATED DUNE MITIGATION IMPROVEMENTS	AL	1
E11	DUNE MITIGATION SIGNAGE	EA	4

TESTING SCHEDULE

DESCRIPTION	RATE	EST. QUANT.
SOILS:		
STANDARD PROCTOR - TRENCH BACKFILL	PER MATERIAL SOURCE	1
STANDARD PROCTOR - SUBGRADE	PER STREET/MATERIAL	1
DENSITIES - TRENCH BACKFILL	PER 200 LF TRENCH/LIFT	22
DENSITIES - SUBGRADE (ASPHALT STREET)	PER 100 LF/LANE/LIFT	1
DENSITIES - SUBGRADE (CONCRETE STREET)	PER 200 LF/LANE/LIFT	16
DENSITIES - SUBGRADE (DRIVEWAYS)	PER 2 DRIVEWAYS	-
DENSITIES - SUBGRADE (SIDEWALKS)	PER 5000 SF	-
DENSITIES - BEHIND CURB AND GUTTER	PER 200 LF	-
FLEXIBLE BASE:		
SIEVE ANALYSIS	PER 3000 CY	1
ATTERBURG LIMITS	PER 3000 CY	1
MODIFIED PROCTOR	PER 3000 CY	1
L.A. ABRASION	PER 3000 CY	1
CBR (STANDARD)	PER MATERIAL SOURCE	1
WET BALL MILL TEST	PER MATERIAL SOURCE	1
TRIAxIAL TEST	PER MATERIAL SOURCE	1
DENSITIES OF COMPACTED BASE (ASPHALT STREET)	PER 100 LF/LANE/LIFT	1
DENSITIES OF COMPACTED BASE (CONCRETE STREET)	PER 200 LF/LANE/LIFT	-
DENSITIES OF COMPACTED BASE (C&G)	PER 200 LF C&G	-
HOT-MIX ASPHALT (HMA):		
EXTRACTION, SIEVE ANALYSIS	PER 500 TONS OR DAY	1
LAB DENSITY & STABILITY	PER 500 TONS OR DAY	1
THEORETICAL DENSITY (RICE METHOD)	PER 500 TONS OR DAY	1
TEMPERATURE - DURING LAY-DOWN	CONTINUOUS AS NEEDED	-
THICKNESS - IN PLACE (CORE)	PER 1000 LF STREET	1
% AIR VOIDS - IN PLACE (CORE)	PER 1000 LF STREET	1
% THEORETICAL DENSITY - IN PLACE (CORE)	PER 1000 LF STREET	1
CONCRETE:		
(UNCONFINED COMPRESSION, 7, 14, & 28 DAY)		
CURB & GUTTER / CURB	PER 500 LF C&G/CURB	1
SIDEWALKS AND CURB RAMPS	PER 4000 SF	-
DRIVEWAYS	PER 2500 SF	-
CURB, POST & GRATE INLETS	PER 6 EACH	1
BOX CULVERTS (CAST-IN-PLACE)	PER 100 LF	-
WINGWALLS	PER EACH	-
STORM MANHOLES (CAST-IN-PLACE)	PER 2 EACH	-
RIPRAP, APRONS & S.E.T.s	PER 4000 SF	1
MANHOLE BASE/FOOTING	PER 10 EACH	-
RIGID CONCRETE PAVEMENT:		
COMPRESSION STRENGTH (7 & 28 DAY)	PER 2500 SY OR DAY	2
FLEXURAL (BEAM) STRENGTH (7 & 28 DAY)	PER 2500 SY OR DAY	2
AIR CONTENT	PER 2500 SY OR DAY	2
SLUMP	PER 2500 SY OR DAY	2

NOTES:

- THE TESTING RATES ARE ONLY ANTICIPATED GUIDELINES. THE ENGINEER RESERVES THE RIGHT TO CONDUCT ADDITIONAL TESTING AT THE ENGINEER'S DISCRETION. RE-TEST FOR FAILURES ARE NOT INCLUDED.
- MOISTURE CONTENTS TO BE INCLUDED WITH DENSITY TEST.
- IN THE EVENT OF FAILURES, ADDITIONAL TESTS WILL BE REQUIRED. IF EXCESSIVE RAIN OR DRY PERIOD OCCURS ON A PREVIOUSLY TESTED SECTION, THE CITY MAY ORDER RE-TESTS AS NECESSARY.
- OFFSITE DUNE MITIGATION FILL MATERIAL, IF NEEDED, SHALL BE CLEAN AND FREE OF DEBRIS AND FREE OF TOXIC MATERIALS LISTED IN TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, 3.02.4, IN CONCENTRATIONS WHICH ARE HARMFUL TO PEOPLE, FLORA, AND FAUNA.
- DUNE MITIGATION FILL MATERIAL SHALL BE OF ACCEPTABLE MINERALOGY AND GRAIN SIZE WHEN COMPARED TO THE SEDIMENTS FOUND ON THE SITE. A COMMERCIAL BORROW SITE EXISTS WITHIN A MILE OF THE SITE ON SH. 361 THAT MAY HAVE ACCEPTABLE FILL.

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
800 N. Shoreline Blvd. Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
DESCRIPTION	DATE	REVISION NO.	BY
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)			
ESTIMATED QUANTITIES SUMMARY AND TESTING SCHEDULE			
SHEET 4 of 55			
RECORD DRAWING NO. STR-1019			
CITY PROJECT # 21062			

ISSUED FOR CONSTRUCTION

GENERAL NOTES

A. STREETS

- UNLESS NOTED OTHERWISE, STREET DIMENSIONS SHOWN ON THE PLANS ARE TO BACK OF CURB.
- "CLEAR RIGHT-OF-WAY" CONSISTS OF CLEARING, GRUBBING AND STRIPPING OF OBJECTIONABLE MATTER IN ACCORDANCE WITH SPECIFICATION SECTION 021020, AND REMOVING ABANDONED STRUCTURES IN ACCORDANCE WITH SPECIFICATION SECTION 021080, WITHIN THE LIMITS OF CONSTRUCTION, WHICH MAY EXTEND BEYOND THE RIGHT-OF-WAY IN SOME AREAS OF THE PROJECT.
- "STREET EXCAVATION" IS MEASURED FROM ONE FOOT BEHIND PROPOSED CURB TO ONE FOOT BEHIND THE OPPOSITE PROPOSED CURB.
- EMBANKMENTS FOR STREETS, WHERE REQUIRED TO ACHIEVE THE SPECIFIED ELEVATIONS, SHALL BE SELECT EXCAVATED MATERIAL OR BORROW MATERIAL, AND SHALL MEET THE FOLLOWING REQUIREMENTS:
 FREE OF HARD LUMPS, ROCK FRAGMENTS, OR OTHER DEBRIS, NO CLAY LUMPS GREATER THAN 2" DIAMETER, LIQUID LIMIT (L.L.) LESS THAN 35, PLASTICITY INDEX (P.I.) BETWEEN 8 AND 20, MOISTURE CONTENT BETWEEN 0% AND +3% OF OPTIMUM.
- WHERE EXISTING ASPHALT OR CONCRETE PAVEMENT IS TO BE CUT, THESE CUTS SHALL BE VERTICAL AND MADE WITH A SAW.
- ASPHALT-LAYING MACHINE SHALL BE CAPABLE OF LAYING A 14-FT. WIDTH.
- PRIOR TO PLACEMENT OF LIMESTONE BASE, THE SUBGRADE SHALL BE CEMENT STABILIZED WITH MIN. 11% CEMENT TO TXDOT STD. 275.
- FLEXIBLE BASE SHALL BE TYPE A GRADE 1-2 CRUSHED LIMESTONE, IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATION ITEM 247 AND STANDARD SPECIFICATION SECTION 025223. FLEXIBLE BASE SHALL BE COMPACTED TO NOT LESS THAN 98% MODIFIED PROCTOR DENSITY (ASTM D1557) UNDER FLEXIBLE (H.M.A.C.) PAVEMENTS, OR NOT LESS THAN 98% STANDARD PROCTOR (D698 OR AASHTO T99) UNDER RIGID (CONCRETE) PAVEMENTS, WITHIN ±2% OF OPTIMUM MOISTURE CONTENT.
- PRIME COAT SHALL BE MC-30 MEDIUM-CURING CUTBACK ASPHALT OR AE-P ASPHALT EMULSION PRIME, AND SHALL BE APPLIED AT A RATE OF 0.15 GALLON PER SQUARE YARD. TACK COAT SHALL BE SS-1 SLOW-SETTING EMULSIFIED ASPHALT AND SHALL BE APPLIED AT A RATE OF 0.05 TO 0.15 GALLON PER SQUARE YARD.
- HOT MIX ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF TXDOT STANDARD SPECIFICATION ITEM 340 AND CITY SPECIFICATION SECTION 025424.
- CARE SHALL BE TAKEN TO PROTECT HIGHWAY STRIPING AND OTHER CONCRETE SURFACES FROM ASPHALT SPLATTER DURING PRIMING AND SEALING OPERATIONS.
- LOCATIONS OF H.M.A.C.P. LONGITUDINAL CONSTRUCTION JOINTS FOR FINAL SURFACE COURSE SHALL COINCIDE WITH LANE STRIPING UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- H.M.A.C.P. TRANSITIONS TO EXISTING PAVEMENTS SHALL BE TRANSITIONED OVER 10 FEET TO PRODUCE A SMOOTH RIDE AND SHALL BE CHECKED WITH A 10-FT. STRAIGHT EDGE PRIOR TO COMPLETION. VALLEY GUTTERS SHALL NOT BE CONSTRUCTED USING ASPHALT PAVEMENT.
- CONCRETE FOR RIGID (CONCRETE) PAVEMENTS SHALL BE CLASS 'P' WITH A MINIMUM FLEXURAL (BEAM) STRENGTH OR A MINIMUM COMPRESSIVE STRENGTH AS SPECIFIED IN CITY SPECIFICATION SECTION 025620 AND TXDOT STANDARD SPECIFICATION ITEM 360.

B. UTILITIES AND STORM WATER

- THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY OWNER TO ADJUST OR RELOCATE UTILITIES THAT WILL INTERFERE WITH THE PROPOSED IMPROVEMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO EXISTING GAS LINES, PRODUCT PIPELINES, FIBER OPTIC LINES, UTILITY POLES, TELEPHONE/CABLE TV PEDESTALS, ELECTRICAL DUCT BANKS, JUNCTION BOXES, ETC. WHERE FEASIBLE, THESE EXISTING UTILITIES SHOULD BE ADJUSTED OR RELOCATED PRIOR TO BEGINNING WORK ON THE AFFECTED CONSTRUCTION PHASE. EXISTING WATERLINES AND WASTEWATER LINES THAT INTERFERE WITH THE PROPOSED IMPROVEMENTS SHALL BE RELOCATED BY THE CONTRACTOR.
- EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON A COMBINATION OF INFORMATION OBTAINED FROM THE SURVEY, SUE AND FROM AVAILABLE UTILITY RECORDS AND RECORD DRAWINGS, AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ACCURACY AND COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED. IT IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY TO INVESTIGATE AND LOCATE ALL UNDERGROUND UTILITIES AND STRUCTURES SUFFICIENTLY IN ADVANCE OF TRENCHING AND EXCAVATION OPERATIONS TO AVOID DAMAGING EXISTING UTILITIES OR CAUSING UNNECESSARY DELAYS. THIS INCLUDES EXPOSING UTILITY TIE-INS AND CROSSINGS FOR VERIFICATION PRIOR TO LAYING NEW LINES. THERE SHALL BE NO SEPARATE PAYMENT FOR THE EXPLORATORY EXCAVATIONS, WHICH ARE SUBSIDIARY TO THE COST OF THE RELATED UTILITY OR APPLICABLE FEATURE.
- EXISTING STORM WATER PIPES, BOXES, MANHOLES, INLETS, ETC. TO BE REMOVED SHALL BE PAID FOR UNDER ITEM "CLEAR RIGHT-OF-WAY". ALL EXCAVATIONS TO REMOVE THESE PIPES AND STRUCTURES SHALL BE BACKFILLED AND COMPACTED TO CITY DETAILS AND SPECIFICATIONS. ALL BACKFILLING AND CEMENT STABILIZED SAND SHALL BE SUBSIDIARY TO "CLEAR RIGHT OF WAY" SHALLOW ABANDONED PIPES (OLD WATERLINES, DITCH CULVERTS, UTILITY SERVICES, ETC.) WITHIN LIMITS OF R.O.W. SHALL BE REMOVED AND PROPERLY DISPOSED OF. THIS GENERALLY APPLIES TO ALL UNWANTED PIPES THAT ARE WITHIN ONE FOOT OF SUBGRADE, DITCH CULVERTS, AND ANY ABANDONED PIPES WHICH COULD IMPACT THE PROPOSED WORK. ALL ABANDONED LINES TO

- REMAIN IN PLACE SHALL BE FILLED WITH FLOWABLE GROUT MATERIAL AS REQUIRED TO ACCOMMODATE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. EXCEPT AS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS, THIS ACTIVITY WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY WORK.
- IF ACTIVE SHALLOW BURIED PIPELINES OR UTILITIES ARE ENCOUNTERED WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. THESE LINES MAY REQUIRE ENCASUREMENT OR RETROUTING.
- ALL STORM WATER PIPE SHALL BE CLASS IV REINFORCED CONCRETE PIPE WITH TYPE B WALL AND TONGUE-AND-GROOVE JOINTS PER ASTM C-76, UNLESS NOTED OTHERWISE ON THE DRAWINGS. CLASS IV REINFORCED CONCRETE PIPE SHALL BE USED WHERE TOP OF PIPE EXTENDS INTO BASE COURSE OR COMPACTED SUBGRADE.
- STORM WATER MAN HOLES, INLETS, JUNCTION BOXES ARE TO BE BID AS CAST-IN-PLACE. AT THE OAR'S DISCRETION, SOME PRE-CAST ITEMS MAY BE AUTHORIZED BASED ON CONTRACTOR'S VERIFICATION AND ASSURANCE THAT THE FINAL CONNECTIONS AND ANGLES HAVE BEEN CONFIRMED AND THAT DELIVERY SCHEDULE WILL NOT HOLD UP THE CONSTRUCTION SCHEDULE. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL FLOWLINES, CONNECTIONS, AND CONFLICTS. NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR THIS SUBSIDIARY WORK.
- MITERED ENDS FOR REINFORCED CONCRETE PIPES AND BOX CULVERTS MAY BE PRECAST SECTIONS OR FIELD CUT, AT THE CONTRACTOR'S OPTION. NO SEPARATE PAYMENT WILL BE MADE FOR THESE SUBSIDIARY ITEMS.
- ANGLES, BENDS, AND TRANSITIONS IN REINFORCED CONCRETE PIPES AND BOX CULVERTS SHALL BE PRECAST.
- UTILITY TRENCHES SHALL BE SHEATHED AND BRACED AS REQUIRED TO MAINTAIN A SAFE WORKING AREA FOR WORKERS, IN ACCORDANCE WITH O.S.H.A. STANDARDS, 29 CFR PART 1926, SUBPART P "EXCAVATIONS".
- TRENCH EXCAVATION SHALL NOT PRECEDE BACKFILL BY MORE THAN 200 FEET. NO TRENCH SHALL BE LEFT OPEN AFTER NORMAL WORKING HOURS.
- ALL OPEN EXCAVATIONS SHALL BE ENCLOSED WITH HIGH-DENSITY POLYETHYLENE 4-FT. HIGH ORANGE SAFETY BARRICADE FENCE (TENSAR UX4050 OR APPROVED EQUIVALENT) AND DRUMS.
- ALL VALVE BOXES AND MANHOLES RIMS REQUIRING ADJUSTMENT SHALL BE LOCATED BY STATION AND OFFSET AND TIED TO EXISTING FEATURES THAT WILL REMAIN IN PLACE. ALL NEW AND EXISTING VALVES AND MANHOLES SHALL BE EXTENDED TO FINISH GRADE. ELEVATION ADJUSTMENTS FOR NEW MANHOLES AND VALVES SHALL BE CONSIDERED SUBSIDIARY AND SHALL NOT BE PAID FOR SEPARATELY.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING WATER AND SANITARY SEWER SERVICE CONNECTIONS ALONG THE PROJECT CORRIDOR BY EXPLORATORY EXCAVATION OR OTHER MEANS. NO DIRECT PAYMENT WILL BE MADE TO THE CONTRACTOR FOR THIS WORK; IT WILL BE CONSIDERED SUBSIDIARY TO THE PAY ITEMS FOR WATER AND WASTEWATER IMPROVEMENTS.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE. ALL PIPES, UTILITIES AND OTHER FACILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE CITY'S SATISFACTION, WITH NO ADDITIONAL PAYMENT TO THE CONTRACTOR.
- PAVEMENT REPAIR FOR UTILITY TRENCH SHALL BE PAID FOR ONLY IF THE REPAIR OCCURS OUTSIDE THE LIMITS OF PROPOSED STREET RECONSTRUCTION. TRENCH RESTORATION ALONG EXISTING PAVEMENTS THAT ARE SCHEDULED FOR SUBSEQUENT RECONSTRUCTION SHALL INCLUDE TEMPORARY REPLACEMENT OF BASE COURSE WITH LOW P.I. MATERIAL THAT IS CONDUCIVE FOR SALVAGE. ANY PAVEMENT REPAIR FOR TRENCHING OUTSIDE THE LIMITS OF THE ROADWAY IMPROVEMENTS WILL REQUIRE A PERMIT FROM DEVELOPMENT SERVICES AND MUST INCLUDE A FULL LANE OVERLAY FOR PARALLEL CUTS AND 12' FOR PERPENDICULAR CUTS, TYPICAL.
- WHERE UTILITY WORK IS PERFORMED UNDER AREAS OF THE EXISTING ROADWAY THAT ARE REQUIRED TO CARRY TRAFFIC PRIOR TO COMPLETION OF THE STREET IMPROVEMENTS, THE CONTRACTOR SHALL APPLY SURFACE TREATMENT ON TOP OF THE BASE OR BACKFILL MATERIAL UNTIL SUCH TIME THAT THE PROPOSED PAVEMENT SECTION IS CONSTRUCTED. THESE TEMPORARY PAVEMENTS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY WORK.
- EXCEPT AS INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS, TIE-INS OR CONNECTIONS OF PROPOSED STORM WATER TO MANHOLES OR EXISTING STORM WATER LINES SHALL BE SUBSIDIARY WORK AND SHALL NOT BE MEASURED FOR PAYMENT.
- PRECAST CURB INLETS, IF ALLOWED, SHALL HAVE CAST-IN-PLACE THROAT AND TOP.
- A PIPE COLLAR SHALL BE USED WHERE PROPOSED STORM WATER PIPE IS TO BE CONNECTED TO LIKE-SIZED EXISTING STORM WATER PIPE. PIPE COLLARS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS. PIPE COLLARS WILL NOT BE REQUIRED AT STRAIGHT (NON-SKEWED) TONGUE-AND-GROOVE CONNECTIONS OF SAME SIZE PIPES UNLESS THE JOINT IS DAMAGED.
- UNLESS INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS, DE-WATERING OF OPEN EXCAVATIONS AND UTILITY OR STORM WATER TRENCHES WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE SUBSIDIARY TO THE ITEMS IT MAY BE ASSOCIATED WITH. REFER TO CITY SPECIFICATION SECTION 022021.
- PROVIDE TEMPORARY OUTFALLS FOR STORM WATER RUNOFF UNTIL DOWNSTREAM STORM WATER IMPROVEMENTS ARE COMPLETED. THIS MAY REQUIRE TEMPORARY PUMPING OF STORM WATER RUNOFF INTO EXISTING STORM WATER SYSTEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS SUBSIDIARY WORK.
- CONTRACTOR SHALL PROVIDE 6" OF CEMENT-STABILIZED SAND BEDDING BENEATH ALL PRECAST CONCRETE BOX CULVERTS, STORM

- WATER MANHOLES AND JUNCTION BOXES. NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR THIS SUBSIDIARY WORK.
- CONTRACTOR SHALL PROVIDE CEMENT-STABILIZED SAND BACKFILL UNIFORMLY MOISTENED AND MIXED (3 FEET MAXIMUM HEIGHT) FOR ALL UTILITY AND STORM SEWER TRENCHES IN PAVEMENT AREAS, AS INDICATED ON THE DRAWINGS. NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR THIS SUBSIDIARY WORK.
- CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER PRIOR TO ACCESSING PRIVATE PROPERTY INCLUDING UTILITY EASEMENTS. ALL PERIMETER FENCE REMOVED TO GAIN ACCESS TO THE SITE SHALL BE REPLACED WITH NEW FENCE OF THE SAME MATERIAL. CONTRACTOR SHALL MAINTAIN SITE SECURITY BY MEANS OF TEMPORARY FENCING UNTIL PERMANENT FENCE HAS BEEN INSTALLED. CONTRACTOR SHALL RESTORE ALL AREAS AFFECTED BY HIS ACTIVITIES TO PRE-CONSTRUCTION CONDITION. RESTORATION EFFORTS INCLUDE, BUT ARE NOT LIMITED TO ALL EQUIPMENT, LABOR AND MATERIALS REQUIRED TO PLACE TOPSOIL AND SOD, CONSTRUCT ASPHALT PAVEMENT REPAIRS, CONCRETE SIDEWALK REPAIRS, CONCRETE DRIVEWAY REPAIRS, AND CONCRETE PAVEMENT REPAIRS, AS NEEDED. UNLESS NOTED OTHERWISE, ALL OF THE WORK LISTED HEREIN SHALL BE SUBSIDIARY TO OTHER PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.
- THIS PROJECT IS LOCATED IN THE CORPUS CHRISTI BAY DRAINAGE BASIN.

E. WASTEWATER

- ABANDONED SERVICES SHALL BE COMPLETELY REMOVED AND CAPPED AT THE MAIN OR MANHOLE.
- NEITHER BLUE PVC PIPE NOR DUCTILE IRON PIPE SHALL BE USED FOR WASTEWATER LINES.
- AN 8-IN VCP GRAVITY W.W. LINE AND A 6-IN. ACP FM EXIST. BELOW THE PROPOSED ROADWAY AND SHALL BE LOCATED, PROTECTED AND PRESERVED BY THE CONTRACTOR DURING CONSTRUCTION.
- THE W.W. LINES IN THIS VICINITY ARE THE RESPONSIBILITY OF WCID #4, SO THE CONTRACTOR SHALL COORDINATE WITH WCID #4 ON ANY W.W. LINE ISSUES.

F. WATERLINES

- THE CONTRACTOR SHALL COORDINATE WITH WCID #4 TO SCHEDULE OPTIMUM TIME FOR WATER CONNECTION TIE-INS.
- VALVE BOXES AND METER BOXES TO REMAIN IN SERVICE SHALL BE ADJUSTED TO FINISH GRADE.
- WHERE A WASTEWATER LINE AND A WATERLINE CROSS, THE WATERLINE SHALL BE PLACED OVER THE WASTEWATER LINE WITH A USUAL VERTICAL CLEARANCE OF 2 FEET AND WITH A 20 FOOT JOINT OF WATERLINE PIPE CENTERED OVER THE WASTEWATER LINE. IF IT IS NOT POSSIBLE FOR THE WASTEWATER LINE TO BE AT LEAST 2 FEET BELOW THE WATERLINE, THE WASTEWATER LINE SHALL BE C900 OR WITH A MINIMUM PRESSURE RATING OF 150 PSI, OR SHALL BE ENCASED WITH A STANDARD 20-FT. LENGTH OF PRESSURE PIPE CENTERED OVER THE WATERLINE. THE CASING PIPE SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO THE CARRIER PIPE.
- WATERLINES SHALL BE PLACED TO DEPTH AS PER WCID #4 WATERLINE MINIMUM COVER REQUIREMENTS ON WATER DETAIL SHEETS, OR AS OTHERWISE SHOWN ON THE DRAWINGS. HOWEVER, IT MAY BE NECESSARY TO PLACE THE WATERLINE DEEPER AT CERTAIN LOCATIONS IN ORDER TO AVOID CONFLICTS.
- PIPE BETWEEN FITTINGS AT VERTICAL AND HORIZONTAL CHANGES IN ALIGNMENT SHALL BE DUCTILE IRON PIPE WITH JOINT RESTRAINT DEVICES. UNLESS INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS, NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR THIS WORK; IT SHALL BE CONSIDERED SUBSIDIARY TO THE BID ITEMS FOR WATER IMPROVEMENTS.
- CONNECTIONS TO THE EXISTING WATER SYSTEM WILL BE PAID FOR AS INDICATED IN THE BID PROPOSAL.
- WATERLINES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE GROUT MATERIAL (SEE MIXTURE NOTE ON THIS SHEET), AND SHALL BE DETACHED AND CAPPED A MINIMUM OF 10 FEET FROM THE CONNECTION POINT.
- ASBESTOS CONCRETE PIPE SHALL NOT BE ABANDONED IN PLACE IN TXDOT ROW, BUT INSTEAD SHALL BE REMOVED AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF PROPERLY.
- CARE SHALL BE TAKEN BY THE CONTRACTOR AROUND THE EXISTING 12-IN. ACP WATERLINE TO NOT DAMAGE THE ADJACENT EXISTING ACP WASTEWATER FORCE MAIN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ANY REPAIRS TO THE FM OR THE 12-IN. WATERLINE.
- WATERLINE TRENCH RESTORATION SHALL BE ACCOMPLISHED BY THE CONTRACTOR CAREFULLY STRIPPING THE TOP 12 INCHES OF ORGANIC MATERIAL (TOP SOIL AND NATIVE PLANT MATERIAL) OFF TO ONE SIDE OF THE TRENCH TO BE RE-USED FOR COVERING OVER THE TRENCH AFTER TRENCH REFILLING FOLLOWING PIPE INSTALLATION. THE REMAINING EXCAVATED TRENCH MATERIAL SHALL BE CAST TO THE OTHER SIDE OF THE TRENCH. TRENCHING, PIPE INSTALLATION, AND BACKFILL SHALL BE ACCOMPLISHED ON THE SAME DAY OR WITHIN 24 HOURS TO PREVENT SPOILAGE OF NATIVE PLANT MATERIAL. THE CONTRACTOR SHALL WATER DAILY UNTIL PLANT GROWTH IS RE-ESTABLISHED OR 45 DAYS, WHICHEVER COMES FIRST.
- RE-FILLING OF THE TRENCH SHALL BE ACCOMPLISHED AFTER PIPE REMOVAL BY RE-COMPACTING THE NATIVE SOIL TO 95% STD. PROCTOR AT +/-2% OPTIMUM MOISTURE CONTENT AND IN LIFTS

- NOT EXCEEDING 10 INCHES.
- THE FIRE DEPARTMENT SHALL BE ENGAGED TO SUPERVISE THE INSTALLATION OF ANY FIRE LINE VALVES.

G. SPECIAL RESTRICTIONS FOR SEQUENCING WORK

- H.M.A.C.P. BASE COURSE SHALL FOLLOW COMPLETED FLEXIBLE BASE COURSE WITHIN 5 DAYS. NO TRAFFIC WILL BE ALLOWED ON UNPROTECTED BASE MATERIAL.
- CONTRACTOR SHALL SPRINKLE FOR DUST CONTROL AS NEEDED OR AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS SUBSIDIARY WORK.
- CONTRACTOR SHALL COORDINATE WATERLINE HYDROSTATIC TESTING AND BACTERIOLOGICAL TESTING WITH THE PROPOSED CONSTRUCTION SEQUENCING FOR THIS PROJECT.
- THE AREA BEHIND THE NEW CURB AND GUTTER MUST BE BACKFILLED AND COMPACTED WITHIN 48 HOURS OF FORM REMOVAL IN ACCORDANCE WITH SPECIFICATION SECTION 025610.

H. TRAFFIC

- THE CONTRACTOR SHALL NOTIFY ALL RESIDENTS AND BUSINESS OWNERS WITHIN THE CONSTRUCTION AREA 5 DAYS PRIOR TO PLACING CONSTRUCTION SIGNS.
- REFLECTORIZED PAVEMENT MARKINGS FOR STREETS SHALL BE TYPE I THERMOPLASTIC.
- OBTLITERATING EXISTING PAVEMENT MARKINGS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE SUBSIDIARY TO THE PAVEMENT MARKING PAY ITEMS.
- TABS, TRAFFIC BUTTONS AND OTHER TEMPORARY OR ABBREVIATED PAVEMENT MARKINGS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE SUBSIDIARY TO THE PAY ITEMS FOR PAVEMENT MARKING AND TRAFFIC CONTROL.
- AT LEAST 48 HOURS PRIOR TO APPLYING PERMANENT PAVEMENT MARKINGS, THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION INSPECTION REPRESENTATIVE AND OBTAIN CITY APPROVAL FOR THE LOCATION, ALIGNMENT AND LAYOUT OF THE PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROLS THROUGHOUT THE DURATION OF THE CONTRACT FOR ALL PHASES OF THE WORK, IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", TRAFFIC CONTROL PLAN, AND BARRICADE AND CONSTRUCTION STANDARDS.
- CONTRACTOR SHALL NOTIFY TXDOT 72 HOURS PRIOR TO APPLYING ANY PERMANENT PAVEMENT MARKINGS TO S.H. 361.
- ALL-WEATHER ACCESS TO LOCAL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL WEATHER MATERIAL INCLUDES LIMESTONE BASE, COLD MIX, OR OTHER MATERIAL APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
- THE CONTRACTOR MAY USE EXCAVATED BASE MATERIAL FOR TEMPORARY TRANSITIONS TO EXISTING DRIVEWAYS DURING CONSTRUCTION, IF MATERIAL IS APPROVED BY THE ENGINEER.

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		GENERAL NOTES 1	
SHEET 5 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062			

ISSUED FOR CONSTRUCTION

(CALICHE IS NOT ACCEPTABLE).

10. CONTRACTOR MUST NOTIFY TXDOT 72 HOURS PRIOR TO ANY WORK IN TXDOT ROW, INCLUDING TRAFFIC CONTROL.

I. MISCELLANEOUS

- 1. CONCRETE SHALL BE SAW-CUT WHERE AN EXISTING CONCRETE STRUCTURE IS TO BE PARTIALLY REMOVED.
2. TREE TRIMMING SHALL BE DONE IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE. TREES, TREE STUMPS AND BRUSH WITHIN THE R.O.W. THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE REMOVED AND HAULED AWAY. PAYMENT FOR THIS WORK IS SUBSIDIARY TO ITEM "CLEAR RIGHT-OF-WAY".
3. PRIMING AND HOT-MIX PLACING OPERATIONS SHALL NOT BE CONDUCTED ON DAYS FOR WHICH AN OZONE ADVISORY HAS BEEN ISSUED, EXCEPT FOR REPAIRS.
4. FENCES SHALL BE RELOCATED PER STANDARD SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOT DISTURB FENCES ALONG THE R.O.W. THAT DO NOT ENCR OACH WITHIN THE R.O.W., UNLESS DIRECTED BY THE ENGINEER AND REQUIRED FOR GRADE ADJUSTMENTS. ALL FENCES ON PRIVATE PROPERTY THAT ARE DISTURBED, REMOVED, ETC., FOR THE CONTRACTOR'S CONVENIENCE, SHALL BE REPLACED WITH LIKE-KIND OR BETTER AT THE CONTRACTOR'S EXPENSE.
5. UNLESS OTHERWISE INDICATED, REMOVAL OF EXISTING FENCE IN AREAS TO RECEIVE NEW FENCE WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS. THE CONTRACTOR SHALL PROVIDE A TEMPORARY FENCE FROM THE TIME AN EXISTING FENCE IS REMOVED TO THE TIME THE PROPOSED FENCE IS REPLACED. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
6. ALL WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 7 A.M. TO 6 P.M. OR AT TIMES THAT ARE SPECIFICALLY APPROVED IN WRITING BY THE CITY REPRESENTATIVE.
7. THE STORM WATER POLLUTION PREVENTION PLAN SHALL CONSIST OF USING THE BID ITEMS, SEEDING, SILT FENCE AND CURB INLET PROTECTION AS SHOWN ON THE PLANS. SHALL BE PLACED AS SOON AS POSSIBLE AFTER COMPLETION OF PAVING SITE GRADING. IF INLETS, MANHOLES OR JUNCTION BOXES ARE BUILT IN STAGES, SILT FENCE FABRIC SHALL BE PLACED AROUND THE STRUCTURE. ONCE INSTALLED, SILT FENCE SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE ACHIEVED AT LEAST 75% VEGETATIVE COVER. CONTRACTOR SHALL PROPERLY MAINTAIN STRUCTURAL B.M.P.S THROUGHOUT THE PROJECT DURATION.
8. ALL PROPOSED EASEMENTS AND RIGHTS-OF-WAY FOR THIS PROJECT WILL BE ACQUIRED PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING ALL LEGALLY REQUIRED PERMITS AND LICENSES, PAY ALL CHARGES AND FEES, GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK, AND ARRANGE FOR ALL INSPECTIONS, PER CONTRACT REQUIREMENTS. THIS INCLUDES FILING FOR AND PROCURING A TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) NOTICE OF INTENT (NOI) FOR LARGE CONSTRUCTION PROJECTS, WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), PRIOR TO BEGINNING CONSTRUCTION. THE NOTICE OF INTENT AND CONSTRUCTION SITE NOTICE SHALL BE PROMINENTLY POSTED AT THE JOBSITE AT ALL TIMES. THE CONTRACTOR SHALL ALSO FILE A NOTICE OF TERMINATION WITH THE TCEQ UPON FINAL COMPLETION OF THE WORK. THIS PROJECT IS NOT EXEMPT FROM CITY PERMITS AND FEES.
9. CONTRACTOR SHALL COORDINATE WITH A.E.P. TO BRACE AND/OR RELOCATE EXISTING POWER POLES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS. CONTRACTOR TO COORDINATE THE SCHEDULE WITH A.E.P. FOR ALL POWER POLES TO BE RELOCATED.
10. THE CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL TCP COSTS IF PROJECT DELAYS OCCUR. ADDITIONAL PAYMENT WILL NOT BE MADE FOR TRAFFIC CONTROL REQUIRED IF THE WORK EXCEEDS THE ALLOWABLE NUMBER OF CONSTRUCTION DAYS UNLESS A CHANGE ORDER IS APPROVED.
11. MATERIALS TESTING SHALL BE PERFORMED WITHIN 24 HOURS OF MATERIALS PLACEMENT.

J. DESIGN CRITERIA

- 1. ROADWAY GEOMETRICS WERE DESIGNED FOR 20 MPH DESIGN SPEED.
2. RIGID PAVEMENT DESIGN: 100,000 E.S.A.L.s/S.N.=1.72/30-YR.

SPECIAL NOTES:

1. CONTRACTOR MUST PROVIDE TV INSPECTION OF ALL STORM WATER LINES PRIOR TO CONSTRUCTION OF FINAL PAVEMENT. THE TV INSPECTION MUST BE SUBMITTED TO THE CITY AND THE CONTRACTOR MUST RECEIVE WRITTEN APPROVAL FROM THE CITY BEFORE ANY PERMANENT PAVEMENT IS PLACED ABOVE THE STORM WATER LINES.

TTC PLAN SUBMITTAL, APPROVAL, AND IMPLEMENTATION

- 1. THE TRAFFIC CONTROL PLAN SUBMITTED BY A CONTRACTOR CAN EITHER BE REVIEWED AND APPROVED:
A. PRIOR TO A NOTICE-TO-PROCEED. THIS IS KNOWN AS AN "IN-PROCESS" REVIEW INTENDED TO HAVE AN APPROVED TRAFFIC CONTROL PLAN PRIOR TO OR CONCURRENT WITH A NOTICE-TO-PROCEED TO THE CONTRACTOR.
B. AFTER A NOTICE-TO-PROCEED. THIS IS KNOWN AS A "DEFERRED" REVIEW THAT DELAYS THE START OF ANY CLOSURES AFTER A NOTICE-TO-PROCEED UNTIL A TRAFFIC CONTROL PLAN IS APPROVED.
2. INITIAL REQUESTS. A TRAFFIC CONTROL PLAN IS REQUIRED FOR ALL WORK ZONES IN CITY RIGHT-OF-WAY. AN INITIAL OR NEW TRAFFIC CONTROL PLAN SHALL BE SUBMITTED BY THE CONTRACTOR TO CITY'S OAR A MINIMUM OF SIX WEEKS PRIOR TO THE PROPOSED START DATE OF THE CLOSURE TO ALLOT TIME FOR INITIAL REVIEW, CITY COMMENTS, CONTRACTOR RESPONSE AND REVISIONS, AND SUBSEQUENT REVIEW TIMEFRAMES. IT ALSO ALLOTS TIME FOR PUBLIC NOTIFICATION OF THE START OF ANY REQUESTED CLOSURE. INITIAL REVIEWS ARE ALLOTTED 21 WORKING DAYS FOR STAFF REVIEW AND PREPARATION OF COMMENTS. SEVEN (7) DAYS MUST BE ALLOTTED TO PROVIDE PUBLIC NOTIFICATION THROUGH A NEWS RELEASE, DOOR HANGERS, AND CHANGEABLE MESSAGE SIGNS (CMS).
3. SUBSEQUENT REVIEW. THE REVIEW TIME FOR SUBSEQUENT TRAFFIC CONTROL PLAN SUBMITTALS WILL VARY, BUT CITY STAFF ALLOTS A MINIMUM OF 14 DAYS FOR SUBSEQUENT REVIEWS.
4. SUBMITTAL REQUIREMENTS ARE DESCRIBED UNDER GENERAL TRAFFIC CONTROL NOTES.

GENERAL TRAFFIC CONTROL NOTES:

- 1. THE CONTRACTOR SHALL PREPARE SPECIFIC TEMPORARY TRAFFIC CONTROL PLANS (TTC) AND TEMPORARY SIGNAL PLANS PER THEIR PROPOSED MEANS AND METHODS. TTC PLANS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), LATEST EDITION. THE MINIMUM PLAN SIZE SHALL BE 11X17; MINIMUM SCALE 1" = 100'.
2. TEMPORARY TRAFFIC CONTROL (TTC) AND TEMPORARY SIGNAL PLANS SUBMITTED FOR OFFICIAL REVIEW BY THE CITY'S TRAFFIC ENGINEERING DEPARTMENT SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF TEXAS. THE SUBMITTED TRAFFIC CONTROL PLAN SHALL CONSIST OF THE FOLLOWING:
- TCP ADVANCE WARNING SIGN SHEETS, INCLUDING:
i. PROJECT LIMITS
ii. APPROACH SIGNAGE TYPE AND LOCATION, WHICH WILL BE IN PLACE PRIOR TO CONSTRUCTION COMMENCING
iii. INITIAL PCMS SETUP LOCATION
iv. SIGNAGE ANNOTATION AND DIMENSIONS SHALL BE AS SHOWN IN THE TMUTCD AND/OR STANDARD HIGHWAY SIGN DESIGN (SHSD) FOR TEXAS.
- TCP SEQUENCE OF CONSTRUCTION (PHASING) IN PLAN VIEW, INCLUDING:
i. BRIEF DESCRIPTION OF THE OVERALL PROJECT CONSTRUCTION SEQUENCE INTENT (EXAMPLE: EAST SIDE OF ROADWAY 1ST, WEST SIDE OF ROADWAY 2ND, ETC.)
ii. ORDER OF PROJECT ACTIVITIES THAT SHALL BE PERFORMED WITHIN EACH SEQUENCE (EXAMPLE: ASSESS EXISTING CONDITIONS 1 ST, DEMOLITION 2ND, PROPOSED IMPROVEMENTS 3RD, ETC.)
iii. WORK ZONE AND TRAFFIC FLOW DIRECTION AROUND THE WORK ZONE.
iv. DETOUR ROUTES WHICH MAY CONSIDER ONE-WAY DESIGNATION ALONG CROSS STREETS
v. LOCATION AND TYPES OF TCDs WITHIN AND ADJACENT TO THE WORK ZONE.
vi. LANE CONFIGURATIONS/DELINEATORS
vii. ROAD AND SITE CONDITIONS AT THE TIME OF EACH SEQUENCE (EXAMPLE: DURING THE FIRST CONSTRUCTION SEQUENCE, IT SHOULD BE SHOWN IN PLAN VIEW THAT TRAFFIC WILL BE TRAVELING ON THE EXISTING UNDISTRUBED ROADWAY OPPOSITE TO THE CONSTRUCTION ZONE. ONCE THE CONSTRUCTION ZONE IS SHIFTED TO THE OPPOSITE SIDE, IT SHOULD BE SHOWN IN PLAN VIEW THAT TRAFFIC WILL BE TRAVELING ON THE NEW TEMPORARY PAVEMENT TYPE 'B' HMAC, ETC.)
viii. REDUCED (CONSTRUCTION) SPEED ZONES.
ix. ADA ACCESSIBLE ROUTES AND PEDESTRIAN CROSSINGS, WHICH SHALL REMAIN OPEN AT ALL TIME ON ONE SIDE OF THE CONSTRUCTED ROAD.
- TCP TYPICAL SECTIONS, INCLUDING:

- i. WORK ZONE
ii. EXISTING AND PROPOSED CONSTRUCTION ELEMENTS (CONDITIONS)
iii. TRAVEL LANE WIDTHS, WHICH SHALL BE INDICATED FROM OUTSIDE OF TCDs TO ADJACENT TCDs.
iv. PAVEMENT MARKINGS
v. LANE DIVIDERS
vi. CHANNELIZING DEVICES
vii. RECOMMENDED TREATMENT TYPES AND LOCATION (WARNING DEVICES OR PROTECTIVE BARRIERS)
viii. BUFFER ZONES
ix. DROP-OFFS; INCLUDING SLOPE, DEPTH AND LATERAL CLEARANCE (DISTANCE FROM TRAVEL LANE TO EDGE CONDITION).
- TXDOT'S "WORKSHEET FOR EDGE CONDITION TREATMENT TYPES" THE WORKSHEET CAN BE FOUND UNDER THE "TRAFFIC CONTROL PLAN STANDARDS" SECTION OF TXDOT'S TRAFFIC STANDARDS. OTHER CHARACTERISTICS TO CONDISER WHEN INCORPORATING THIS WORKSHEET ARE PROJECT DURATION, LENGTH OF PROJECT, AND WORKER EXPOSURE.
- TRAFFIC CONTROL PHASING OVERVIEW, INCLUDING:
i. CALLOUTS FOR BEGIN/END PROJECT LIMITS
ii. ALL PHASES OF TRAFFIC CONTROL IN THE SAME LAYOUT WITH DIFFERENT HATCHING AND CALLOUTS.
iii. NAMES OF STREETS.
- TRAFFIC CONTROL PLANS, INCLUDING:
i. CALLOUTS FOR BEGIN/END PROJECT LIMITS
ii. SIGN CALLOUTS WITH SIGN NOMENCLATURE AND SIGN DIMENSION SHALL BE AS SHOWN IN THE TMUTCD AND/OR STANDARD HIGHWAY SIGN DESIGN (SHSD) FOR TEXAS.
iii. INITIAL PCMS SETUP LOCATION, AND SHOW MESSAGE TO BE DISPLAY.
iv. BEGIN AND END PROJECT LIMITS.
v. NAMES OF STREETS.
vi. EXISTING AND PROPOSED CONSTRUCTION ELEMENTS (CONDITIONS)
vii. TRAVEL LANE WIDTHS, WHICH SHALL BE INDICATED FROM OUTSIDE OF TCDs TO ADJACENT TCDs.
viii. PAVEMENT MARKINGS
ix. LANE DIVIDERS
x. CHANNELIZING DEVICES
xi. RECOMMENDED TREATMENT TYPES AND LOCATION (WARNING DEVICES OR PROTECTIVE BARRIERS)
xii. BUFFER ZONES
xiii. ROAD AND SITE CONDITIONS AT THE TIME OF EACH PHASE (EXAMPLE: DURING THE FIRST CONSTRUCTION SEQUENCE, IT SHOULD BE SHOWN IN PLAN VIEW THAT TRAFFIC WILL BE TRAVELING ON THE EXISTING UNDISTRUBED ROADWAY OPPOSITE TO THE CONSTRUCTION ZONE. ONCE THE CONSTRUCTION ZONE IS SHIFTED TO THE OPPOSITE SIDE, IT SHOULD BE SHOWN IN PLAN VIEW THAT TRAFFIC WILL BE TRAVELING ON THE NEW TEMPORARY PAVEMENT TYPE 'B' HMAC, ETC.)
xiv. ARROWS SHOWING DIRECTION OF TRAFFIC FLOW.
xv. CHEVRON SIGNS SHALL BE INCLUDED ON EVERY OTHER DRUM ALONG MERGING TAPERS, SHIFTING TAPERS, OR SHOULDER TAPERS.
xvi. ADA ACCESSIBLE ROUTE AND PEDESTRIAN CROSSING CLOSURES OR RE-ROUTES. LAYOUTS SHOULD INCLUDE APPLICABLE TRAFFIC CONTROL DEVICES FOR PEDESTRIANS FACILITIES WITHIN THE ROW.
- TEMPORARY SIGNAL PLANS, INCLUDING:
i. PLAN VIEW LAYOUTS SHOWING THE INTERSECTION, AND ALL THE EXISTING SIGNAL INFRASTRUCTURE SUCH AS SIGNAL POLES, VEHICLE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS, MAST ARMS SIGNS.
ii. PLAN VIEW LAYOUTS SHALL INCLUDE ROAD AND SITE CONDITIONS AT THE TIME OF EACH PHASE ((EXAMPLE: DURING THE FIRST CONSTRUCTION SEQUENCE, IT SHOULD BE SHOWN IN PLAN VIEW THAT TRAFFIC WILL BE TRAVELING ON THE EXISTING UNDISTRUBED ROADWAY OPPOSITE TO THE CONSTRUCTION ZONE. ONCE THE CONSTRUCTION ZONE IS SHIFTED TO THE OPPOSITE SIDE, IT SHOULD BE SHOWN IN PLAN VIEW THAT TRAFFIC WILL BE TRAVELING ON THE NEW TEMPORARY PAVEMENT TYPE 'B' HMAC, ETC.)
iii. PLAN VIEW LAYOUTS SHALL SHOW ANY ADJUSTMENTS TO THE EXISTING SIGNAL WITH APPROPRIATE CALLOUTS FOR REMOVAL, RELOCATION, OR INSTALLATION.
iv. PLAN VIEW LAYOUTS SHALL SHOW ANY PROPOSED INSTALLATION OF TEMPORARY SIGNAL ITEMS SUCH AS WOOD POLES, SPAN WIRE, VEHICLE SIGNAL HEADS, PEDESTRIAN SIGNAL HEAD, PUSH BUTTONS, AND MAST ARM SIGNS.

- v. TRAFFIC CONTROL STANDARDS, INCLUDING APPLICABLE TXDOT BARRICADE AND CONSTRUCTION STANDARDS, TXDOT WORK ZONE STANDARDS, AND TRAFFIC CONTROL PLAN STANDARDS.
1. TEMPORARY TRAFFIC CONTROL (TTC) PLANS SHALL INCLUDE CHEVRON SIGNS AT EVERY OTHER DRUM WHEN THERE IS A SHIFTING OR MERGING TAPER.
2. THE CONTRACTOR SHALL COORDINATE WITH THE CITY'S TRAFFIC ENGINEERING DEPARTMENT PRIOR TO IMPLEMENTING A TEMPORARY TRAFFIC CONTROL PLAN AT SIGNALIZED INTERSECTIONS. IT MUST BE DETERMINED IF ADJUSTMENTS TO THE SIGNAL HEADS AND DETECTION ZONES ARE REQUIRED.
3. THE CONTRACTOR SHALL COORDINATE WITH THE CORPUS CHRISTI REGIONAL TRANSPORTATION AUTHORITY (CCRTA) TO DETERMINE IMPACTS TO BUS ROUTES LOCATED WITHIN THE WORK ZONE. THIS INCLUDES DETERMINING THE AMOUNT OF ADVANCED NOTIFICATION REQUIRED FOR THE CCRTA TO ADJUST BUS ROUTES AND SCHEDULES FOR ANY PLANNED STREET CLOSURES.
4. THE CONTRACTOR SHALL COORDINATE WITH THE PUBLIC OR PRIVATE SCHOOLS AND DAYCARE FACILITIES TO DETERMINE TRAFFIC FLOW, DROP-OFF AND PICKUP PROCEDURES.
5. THE MINIMUM LANE WIDTH REQUIRED DURING CONSTRUCTION IS 11 FEET. CHANNELIZING DEVICES CANNOT BE INCLUDED IN THIS WIDTH.
6. ACCESS TO BUSINESS AND RESIDENTIAL DRIVEWAYS AND ALLEYS WITHIN THE PROJECT LIMITS SHALL ALWAYS BE MAINTAINED.
7. IDENTIFYING EXISTENCE OF ANY EDGE CONDITION (SLOPE OF DROP OFF), LATERAL CLEARANCE (DISTANCE FROM TRAVEL LANE TO EDGE CONDITION) AND EDGE HEIGHT ISSUES (DEPTH OF DROP OFF). RECOMMEND THE TREATMENT TYPES (WARNING DEVICES OR PROTECTIVE BARRIERS) THAT MAY BE NEEDED DURING CONSTRUCTION. LOW PROFILE BARRIERS SHALL INCLUDE REFLECTORS.
8. THE LOCATION OF LOW-PROFILE BARRIERS SHALL BE SHOWN ON THE PLANS. THE USE OF BARRIERS SHOULD NOT BE LIMITED TO SOLELY UTILITY TRENCHING, BUT THE DEPTH OF DROP-OFF CONDITIONS. REVIEW AND INCORPORATE TXDOT'S "WORKSHEET FOR EDGE CONDITION TREATMENT TYPES" FOUND UNDER THE "TRAFFIC CONTROL PLAN STANDARDS" SECTION OF TXDOT'S TRAFFIC STANDARDS. OTHER CHARACTERISTIC TO CONSIDER INCLUDE PROJECT DURATION, LENGTH OF PROJECT, AND WORKER EXPOSURE.
9. THE CONTRACTOR SHALL DETERMINE THE LIMITS AND TIMEFRAME OF SCHOOL ZONES WITHIN PROJECT LIMITS.
10. THE CONTRACTOR SHALL PROVIDE A SAFE ROUTE FOR PEDESTRIANS WITHIN THE PROJECT LIMITS. THIS ROUTE SHALL MAINTAIN EXISTING ADA ACCESSIBILITY INFRASTRUCTURE AND SHALL ALWAYS REMAIN OPEN. ANY SIDEWALK CLOSURES OR REROUTES SHALL BE ADDRESSED IN THE TEMPORARY TRAFFIC CONTROL (TTC) PLANS.
11. A REDUCED CONSTRUCTION SPEED ZONE WILL BE REQUIRED.
12. ACCESS TO ALL SIDE STREETS SHALL ALWAYS BE MAINTAINED. THE CONTRACTOR SHALL ALTERNATE THE CLOSURE OF CROSS STREETS TO AVOID TOW OR MOR SIMULTANEOUS ADJACENT CROSS STREET CLOSURES.
13. THE TEMPORARY TRAFFIC CONTROL (TTC) PLANS SHALL CONSIDER ANY ONE-WAY DESIGNATIONS ALONG CROSS STREETS WITHIN THE PROJECT LIMITS.
14. MAINTAINING REFLECTIVE TEMPORARY TABS THROUGHOUT THE DURATION OF THE PROJECT FOR LANE DELINEATION ON TEMPORARY PAVEMENT, TYPE B HMAC PAVEMENT, AND EXISTING PAVEMENT.

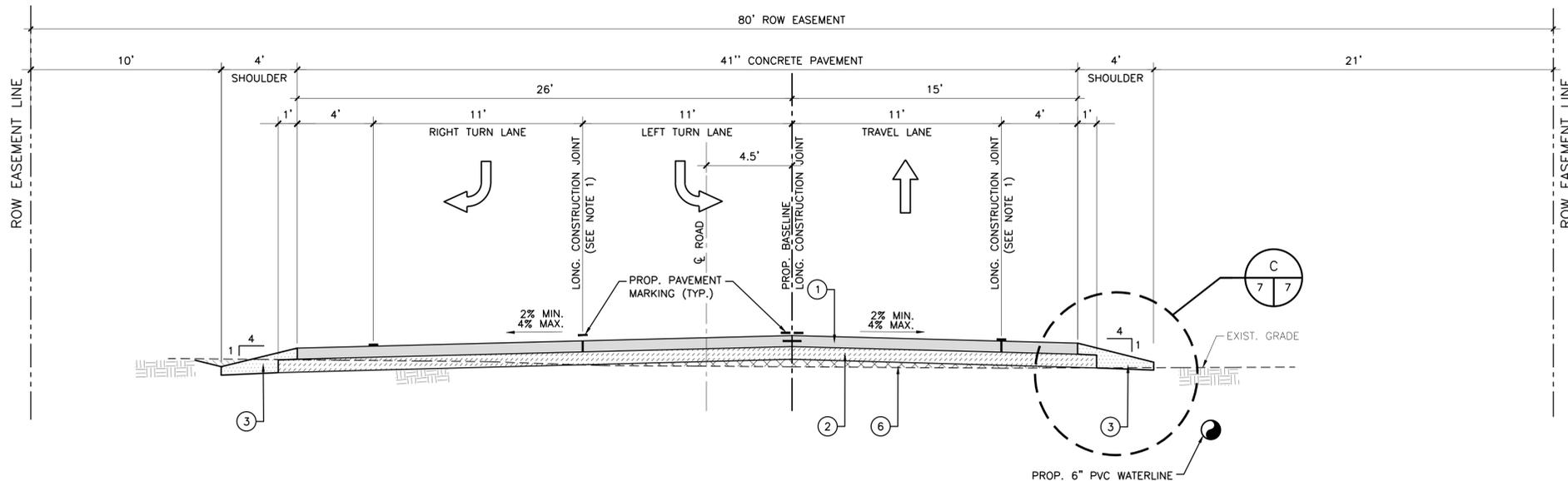
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CONSULTANT'S SHEET No.
FNI PROJECT: COR21576
6/30/2025
FRESE and NICHOLS, Inc.
Texas Registered Engineering Firm F-21144
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CITY of CORPUS CHRISTI TEXAS
Department of Engineering Services
NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH (BOND 2020)
GENERAL NOTES 2
SHEET 6 of 55
RECORD DRAWING NO. STR-1019
CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

Table with columns: REVISION NO., DATE, BY, DESCRIPTION



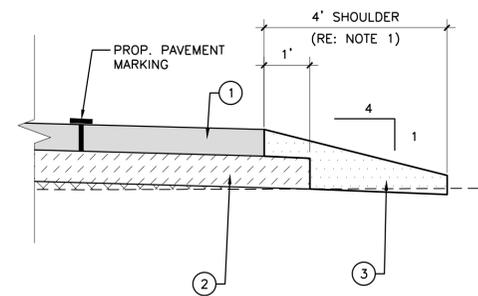
A PROPOSED CONCRETE ROADWAY SECTION @ STATION 1+50
 SCALE: 0 4' 8'
 SCALE IN FEET

GENERAL NOTES:

1. THE LONGITUDE CONTRACTION JOINTS MUST BE SAWS WITHIN 6" OF THE LANE DIVIDING STRIPE FINAL STRIPING SHALL NOT BE PLACED DIRECTLY ON THE JOINT.
2. THE JOINT RESERVOIR FOR SEALANT SHALL BE SAWS UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND THE TWO SAWS JOINTS.
3. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE SEALANT MANUFACTURE'S RECOMMENDATION. PRIOR TO BEGINNING OPERATIONS, THE CONTRACTOR SHALL SUBMIT A STATEMENT FROM THE SEALANT MANUFACTURER SHOWING THE RECOMMENDED EQUIPMENT AND INSTALLATION PROCEDURES TO BE USED.

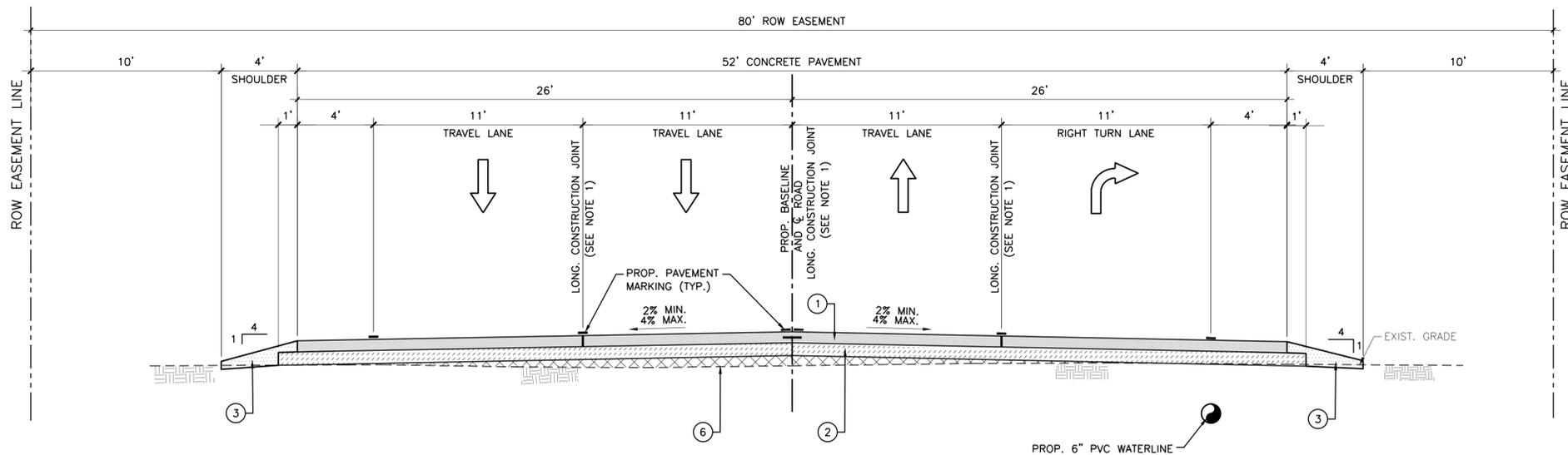
LEGEND:

1. 7" THICK CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (CRCP).(RE:SHT. 45-46).
2. 8" CEMENT STABILIZED SUBGRADE @ 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT.
3. BACKFILL PAVEMENT SHOULDER W/CEMENT STABILIZED SUBGRADE @ 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT.
4. NATIVE COASTAL DUNES, GRASSES, AND PLANTS.
5. PROP. BEACH SAND BACKFILL COMPACTED TO 95% STD. PROCTOR AND ±2% OF OPTIMUM MOISTURE CONTENT.
6. MOISTURE-COCONDITIONED BACKFILL COMPACTED TO 95% STD. PROCTOR DENSITY AND ±2% OF OPTIMUM MOISTURE CONTENT.



C ENLARGED VIEW
 SCALE: 0 2' 4'
 SCALE IN FEET

NOTE:
 1. 4' CEMENT-STABILIZED SHOULDER SHALL BE INSTALLED AFTER PROP. PAVEMENT CONSTRUCTION.

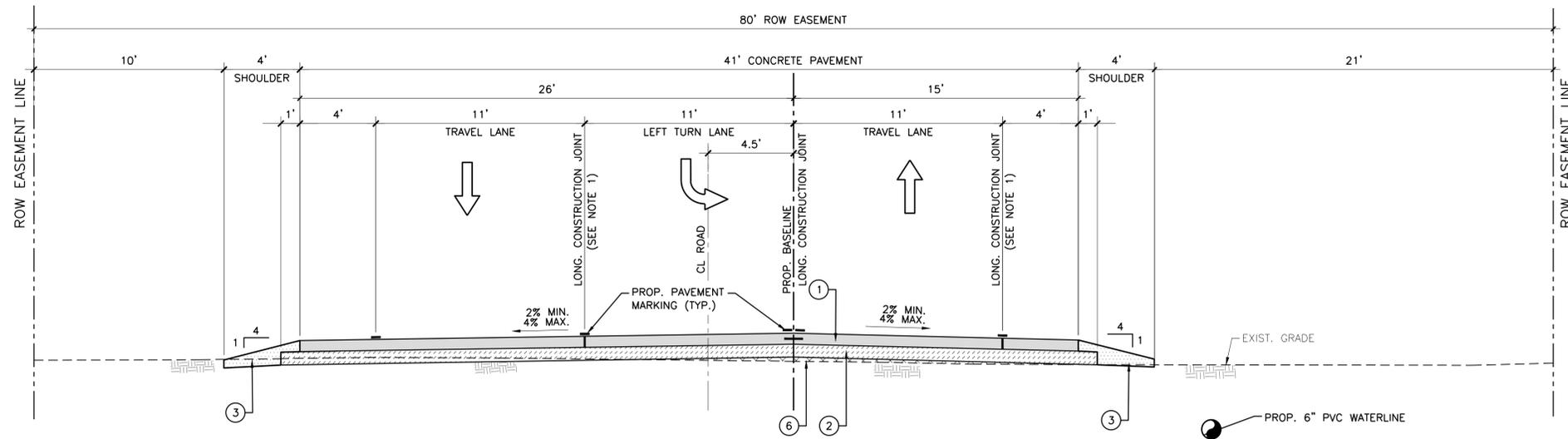


B PROPOSED CONCRETE ROADWAY SECTION @ STATION 4+75
 SCALE: 0 4' 8'
 SCALE IN FEET

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		PROPOSED CONCRETE ROADWAY CROSS SECTIONS STA. 1+50 AND STA. 4+75	
SHEET 7 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	REVISION NO. DATE BY DESCRIPTION	REVISION NO. DATE BY DESCRIPTION	REVISION NO. DATE BY DESCRIPTION

ISSUED FOR CONSTRUCTION

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.



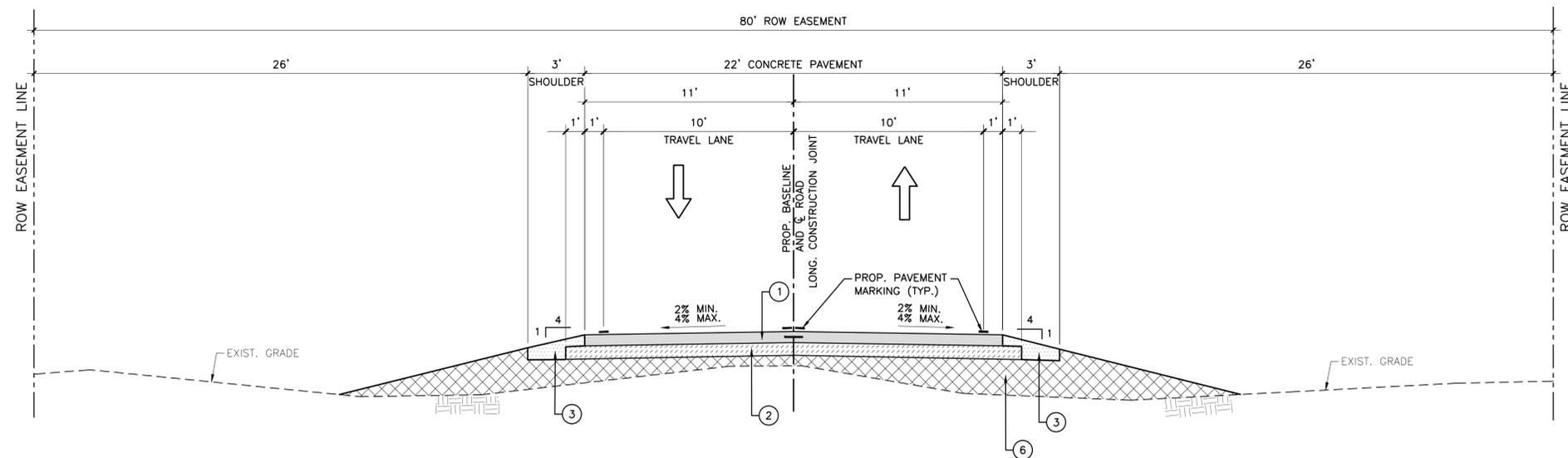
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 19 | 8
 26
PROPOSED CONCRETE ROADWAY SECTION @ STATION 6+50
 SCALE: 0 4' 8'
 SCALE IN FEET

GENERAL NOTES:

1. THE LONGITUDE CONTRACTION JOINTS MUST BE SAWED WITHIN 6" OF THE LANE DIVIDING STRIPE FINAL STRIPING SHALL NOT BE PLACED DIRECTLY ON THE JOINT.
2. THE JOINT RESERVOIR FOR SEALANT SHALL BE SAWED UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND THE TWO SAWED JOINTS.
3. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE SEALANT MANUFACTURE'S RECOMMENDATION. PRIOR TO BEGINNING OPERATIONS, THE CONTRACTOR SHALL SUBMIT A STATEMENT FROM THE SEALANT MANUFACTURER SHOWING THE RECOMMENDED EQUIPMENT AND INSTALLATION PROCEDURES TO BE USED.

LEGEND:

- 1 7" THICK CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (CRCP). (RE: SHT. 45-46).
- 2 8" CEMENT STABILIZED SUBGRADE @ 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT.
- 3 BACKFILL PAVEMENT SHOULDER W/CEMENT STABILIZED SUBGRADE @ 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT.
- 4 NATIVE COASTAL DUNES, GRASSES, AND PLANTS.
- 5 PROP. BEACH SAND BACKFILL COMPACTED TO 95% STD. PROCTOR AND ±2% OF OPTIMUM MOISTURE CONTENT.
- 6 MOISTURE-CONDITIONED BACKFILL COMPACTED TO 95% STD. PROCTOR DENSITY AND ±2% OF OPTIMUM MOISTURE CONTENT.



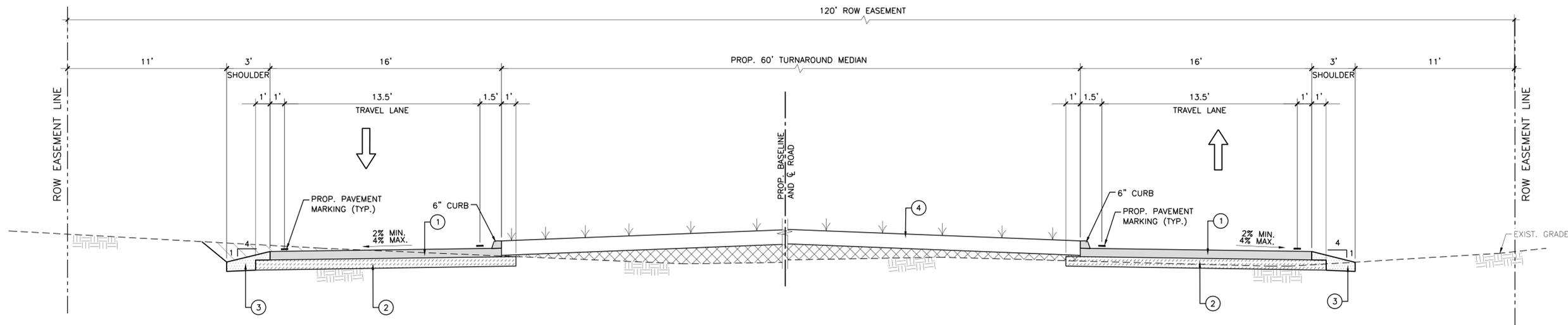
D
 20 | 8
PROPOSED CONCRETE ROADWAY SECTION @ STATION 10+50
 SCALE: 0 4' 8'
 SCALE IN FEET

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		PROPOSED CONCRETE ROADWAY CROSS SECTIONS STA. 6+50 AND STA. 10+50	
SHEET 8 of 55		RECORD DRAWING NO.	
STR-1019		CITY PROJECT # 21062	
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	REVISION NO. DATE BY	DESCRIPTION	REVISION NO. DATE BY

ISSUED FOR CONSTRUCTION

ACAD: Rel 18.2s (LMS Tech) User: 02293
 [COR]13154\JN: STANDARD\X-FNICC-34\BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1

Date: Jun 27, 2025 - 3:01pm User: 08661 File: N:\IF\Drawings\CV-BAR-SEC-CONCRETE.dwg



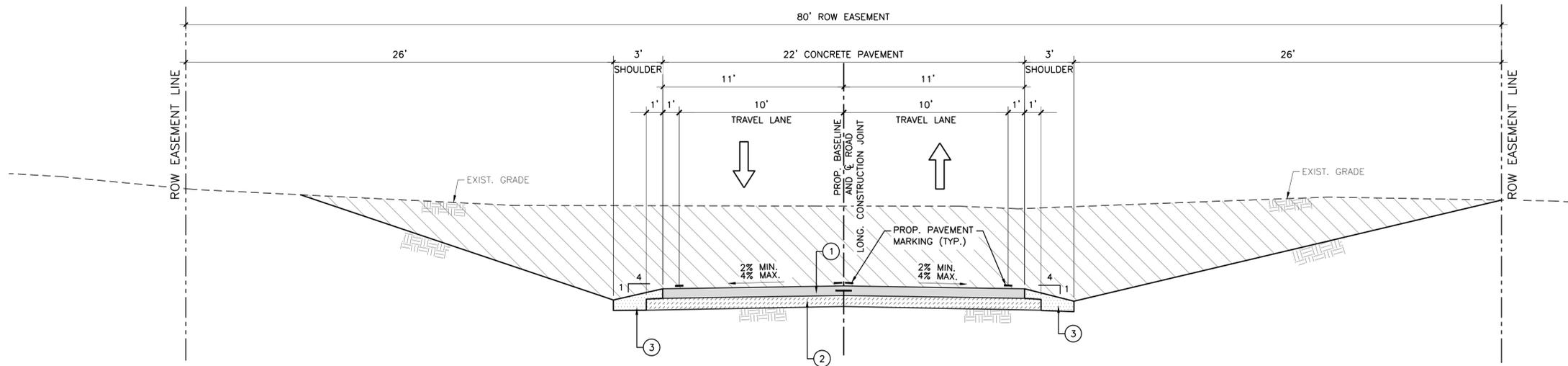
E PROPOSED CONCRETE ROADWAY SECTION @ STATION 14+55
 SCALE: 0 4' 8'
 SCALE IN FEET

GENERAL NOTES:

1. THE LONGITUDE CONTRACTION JOINTS MUST BE SAWED WITHIN 6" OF THE LANE DIVIDING STRIPE FINAL STRIPING SHALL NOT BE PLACED DIRECTLY ON THE JOINT.
2. THE JOINT RESERVOIR FOR SEALANT SHALL BE SAWED UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND THE TWO SAWED JOINTS.
3. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE SEALANT MANUFACTURE'S RECOMMENDATION. PRIOR TO BEGINNING OPERATIONS, THE CONTRACTOR SHALL SUBMIT A STATEMENT FROM THE SEALANT MANUFACTURER SHOWING THE RECOMMENDED EQUIPMENT AND INSTALLATION PROCEDURES TO BE USED.

LEGEND:

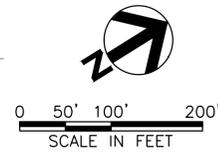
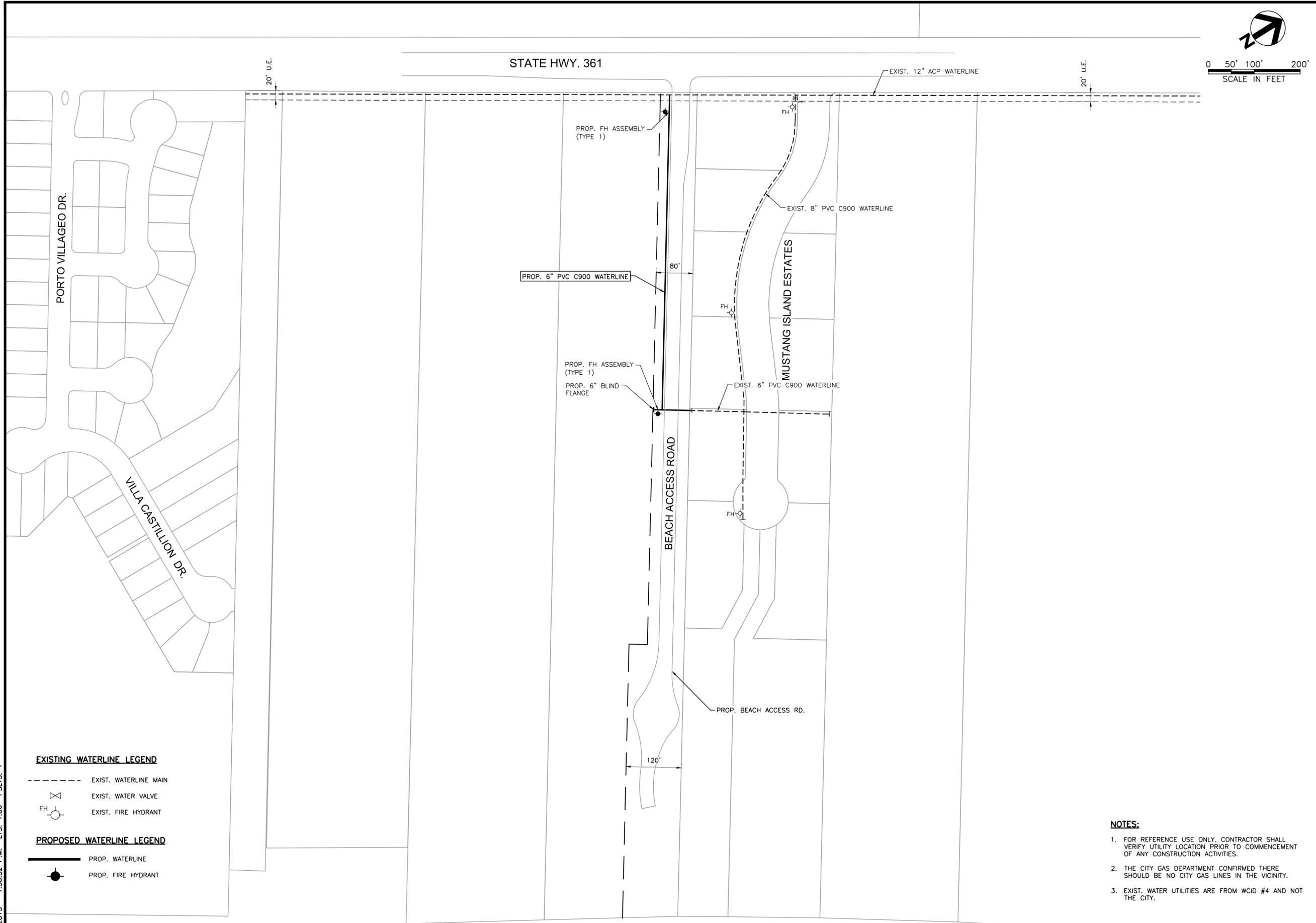
- 1 7" THICK CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (CRCP). (RE: SHT. 45-46).
- 2 8" CEMENT STABILIZED SUBGRADE @ 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT.
- 3 BACKFILL PAVEMENT SHOULDER W/CEMENT STABILIZED SUBGRADE @ 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT.
- 4 NATIVE COASTAL DUNES, GRASSES, AND PLANTS.



F PROPOSED CONCRETE ROADWAY SECTION @ STATION 16+50
 SCALE: 0 4' 8'
 SCALE IN FEET

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		PROPOSED CONCRETE ROADWAY CROSS SECTION STA. 13+79	
SHEET 9 of 55 RECORD DRAWING NO.		STR-1019 CITY PROJECT # 21062	
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	REVISION NO. DATE BY	DESCRIPTION	REVISION NO. DATE BY

ISSUED FOR CONSTRUCTION



EXISTING WATERLINE LEGEND

- EXIST. WATERLINE MAIN
- ⊗ EXIST. WATER VALVE
- FH ○ EXIST. FIRE HYDRANT

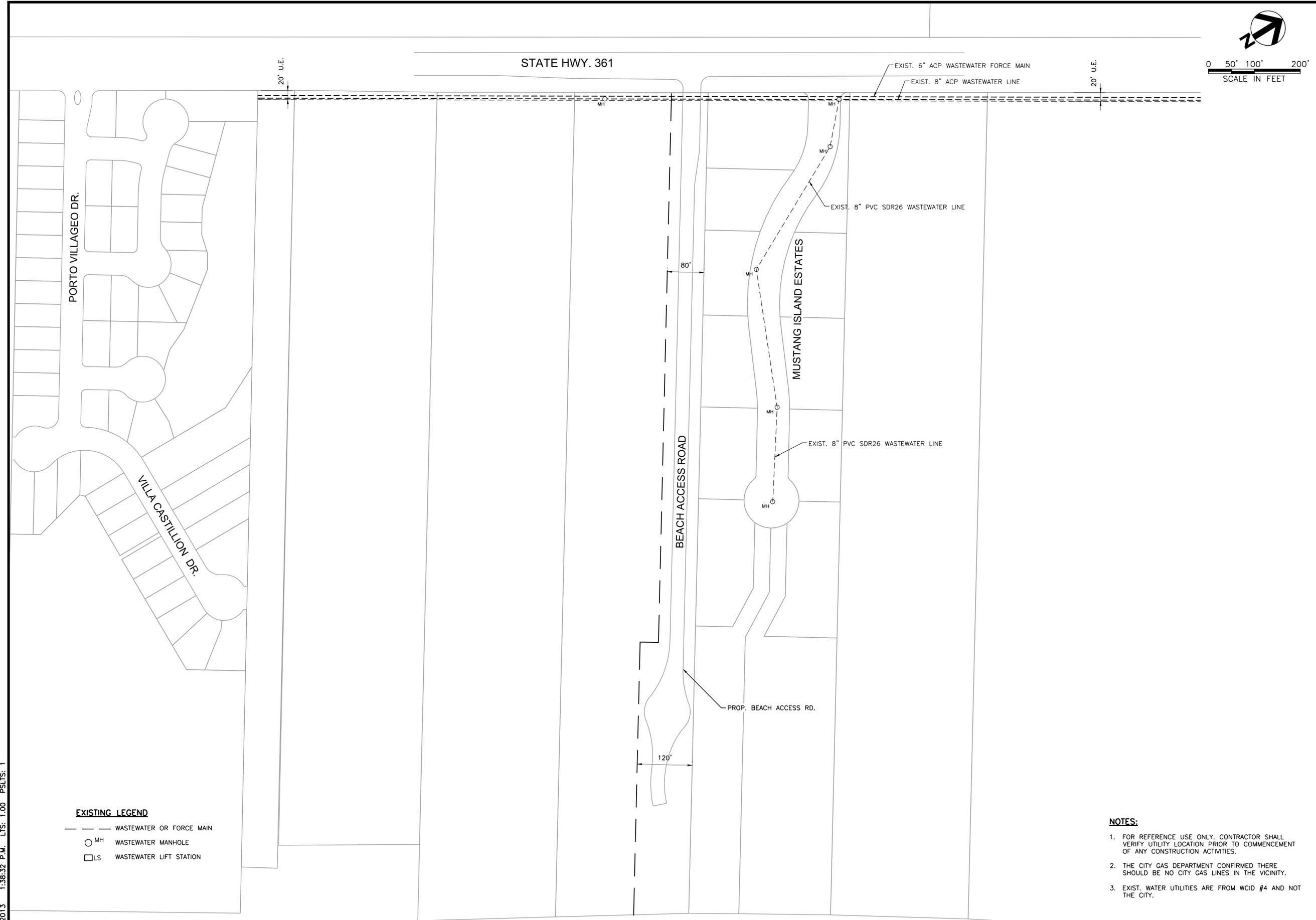
PROPOSED WATERLINE LEGEND

- PROP. WATERLINE
- PROP. FIRE HYDRANT

- NOTES:**
- FOR REFERENCE USE ONLY. CONTRACTOR SHALL VERIFY UTILITY LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
 - THE CITY GAS DEPARTMENT CONFIRMED THERE SHOULD BE NO CITY GAS LINES IN THE VICINITY.
 - EXIST. WATER UTILITIES ARE FROM WCID #4 AND NOT THE CITY.

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
REVISION NO. DATE BY	DESCRIPTION NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)	REVISION NO. DATE BY	DESCRIPTION WATERLINE BASEMAP
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		SHEET 10 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	



EXISTING LEGEND

--- WASTEWATER OR FORCE MAIN

○ MH WASTEWATER MANHOLE

□ LS WASTEWATER LIFT STATION

- NOTES:**
1. FOR REFERENCE USE ONLY. CONTRACTOR SHALL VERIFY UTILITY LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
 2. THE CITY GAS DEPARTMENT CONFIRMED THERE SHOULD BE NO CITY GAS LINES IN THE VICINITY.
 3. EXIST. WATER UTILITIES ARE FROM WCID #4 AND NOT THE CITY.

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
<p>800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas Phone - (361) 561-6500 Fax - (361) 561-6501</p>		<p>CITY of CORPUS CHRISTI TEXAS Department of Engineering Services</p>	
REVISION NO.	DATE	BY	DESCRIPTION
			NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)
			WASTEWATER BASEMAP
<p>Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.</p>		<p>SHEET 11 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062</p>	

EXISTING STORM WATER LEGEND

- RCP OR CMP STORM WATER MAIN
- MH STORM WATER MANHOLE
- STORM WATER INLET



NOTES:

1. FOR REFERENCE USE ONLY. CONTRACTOR SHALL VERIFY UTILITY LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
2. THE CITY GAS DEPARTMENT CONFIRMED THERE SHOULD BE NO CITY GAS LINES IN THE VICINITY.

ISSUED FOR CONSTRUCTION

REVISION NO.	DATE	BY	DESCRIPTION

<p>Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.</p> <p>VERIFY SCALE</p>	<p>NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)</p>	<p>CITY of CORPUS CHRISTI TEXAS Department of Engineering Services</p>	<p>CONSULTANT'S SHEET No. FNI PROJECT: COR21576</p>
<p>STORM WATER BASEMAP</p>	<p>SHEET 12 of 55 RECORD DRAWING NO. STR-1019</p>	<p>Freese and Nichols, Inc. Texas Registered Engineering Firm F-2144</p>	<p>6/30/2025 STATE OF TEXAS PROFESSIONAL ENGINEER 112706 F. D. Bush</p>

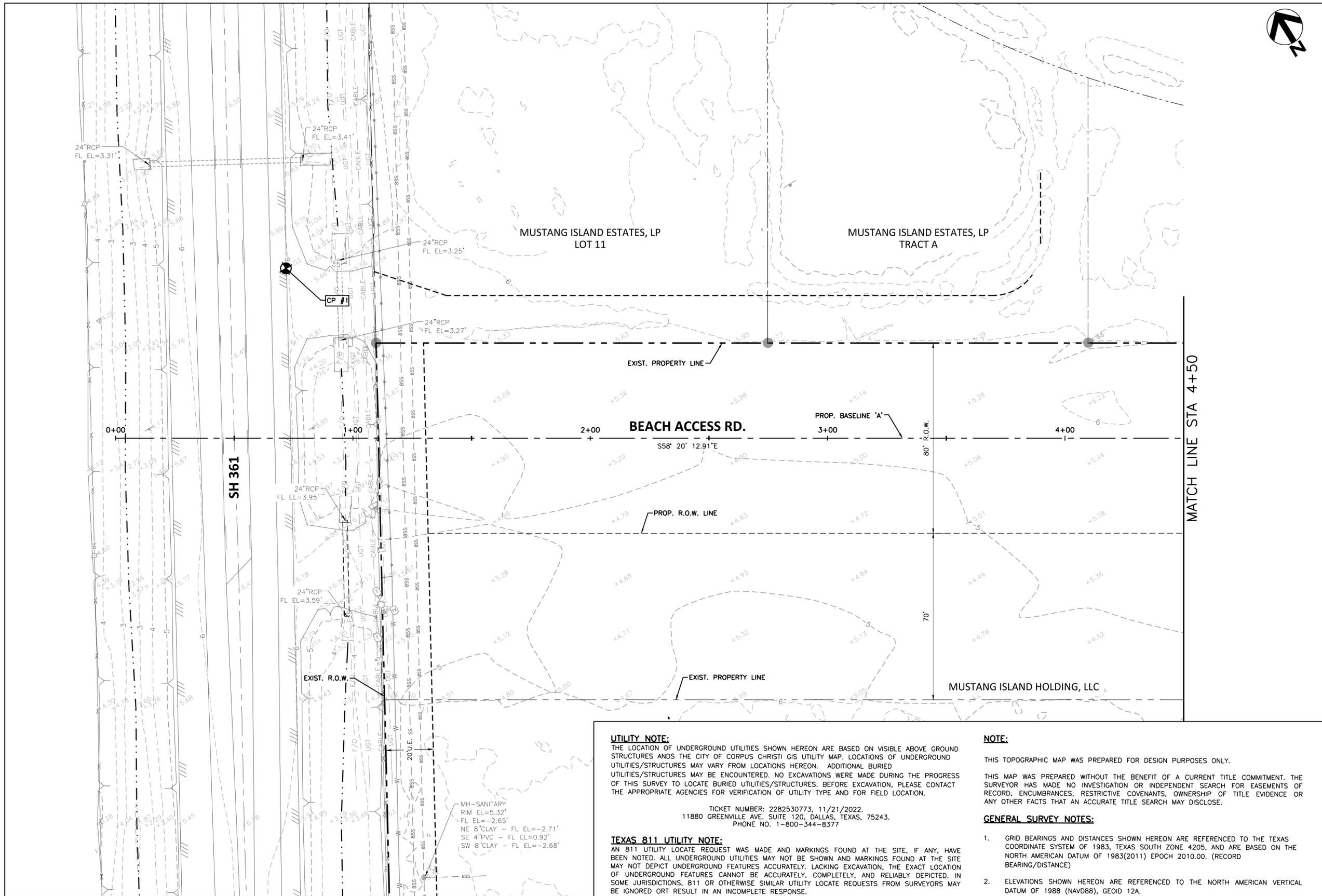


EXISTING GAS LEGEND
 - - - - - EXISTING GAS LINE

- NOTES:**
1. FOR REFERENCE USE ONLY. CONTRACTOR SHALL VERIFY UTILITY LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
 2. THE CITY OF CORPUS CHRISTI GAS DEPARTMENT CONFIRMED THERE SHOULD BE NO CITY GAS LINES IN THE VICINITY.
 3. OTHER GAS PROVIDERS MAY HAVE LINES IN THIS AREA.

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
<p>FREесе AND NICHOLS 800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501</p>		<p>CITY of CORPUS CHRISTI TEXAS Department of Engineering Services</p>	
REVISION NO.	DATE	BY	DESCRIPTION
			NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)
			GAS LINE BASEMAP
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		SHEET 13 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	



UTILITY NOTE:
 THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON VISIBLE ABOVE GROUND STRUCTURES AND THE CITY OF CORPUS CHRISTI GIS UTILITY MAP. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. BEFORE EXCAVATION, PLEASE CONTACT THE APPROPRIATE AGENCIES FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATION.

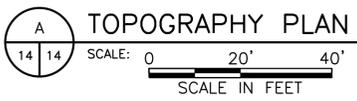
TICKET NUMBER: 2282530773, 11/21/2022.
 11880 GREENVILLE AVE, SUITE 120, DALLAS, TEXAS, 75243.
 PHONE NO. 1-800-344-8377

TEXAS 811 UTILITY NOTE:
 AN 811 UTILITY LOCATE REQUEST WAS MADE AND MARKINGS FOUND AT THE SITE, IF ANY, HAVE BEEN NOTED. ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN AND MARKINGS FOUND AT THE SITE MAY NOT DEPICT UNDERGROUND FEATURES ACCURATELY. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN SOME JURISDICTIONS, 811 OR OTHERWISE SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE.

NOTE:
 THIS TOPOGRAPHIC MAP WAS PREPARED FOR DESIGN PURPOSES ONLY.

THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT. THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP OF TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE TITLE SEARCH MAY DISCLOSE.

- GENERAL SURVEY NOTES:**
- GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM OF 1983, TEXAS SOUTH ZONE 4205, AND ARE BASED ON THE NORTH AMERICAN DATUM OF 1983(2011) EPOCH 2010.00. (RECORD BEARING/DISTANCE)
 - ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), GEOID 12A.
 - SOME FEATURES SHOWN ON THIS SURVEY MAY BE OUT OF SCALE FOR CLARITY.
 - THIS SURVEY WAS PREPARED FROM FIELD DATA OBTAINED ON NOVEMBER 15, 2022.

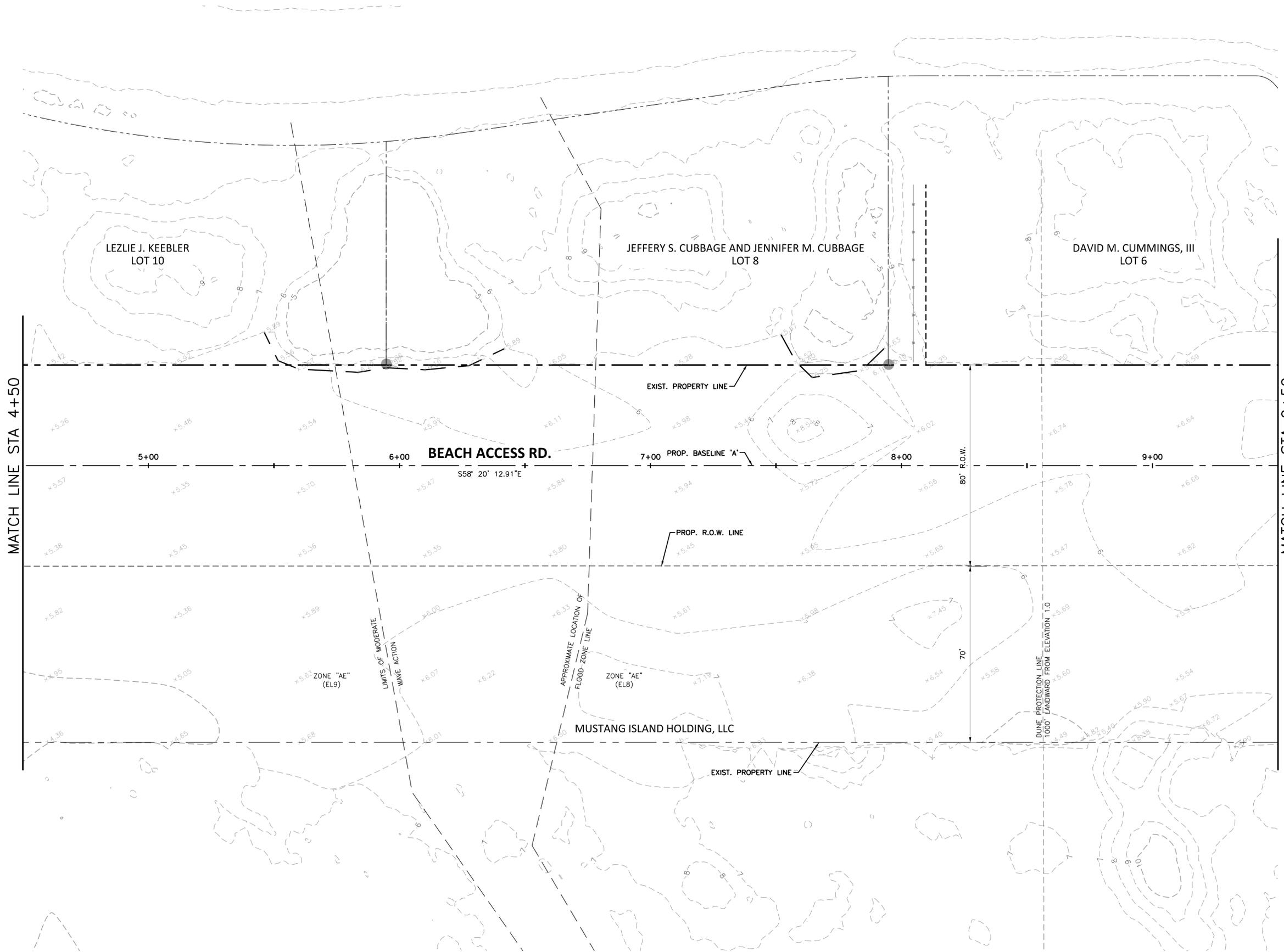


ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
 800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501		6/30/2025  F. D. Park Freese and Nichols, Inc. Texas Registered Engineering Firm F-2144	
DESCRIPTION	REVISION NO.	DATE	BY
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)			
TOPOGRAPHY PLAN STA. 0+00 TO STA. 4+50			
CITY of CORPUS CHRISTI TEXAS Department of Engineering Services			
VERIFY SCALE	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		
SHEET 14 of 55			
RECORD DRAWING NO.			
STR-1019			
CITY PROJECT # 21062			

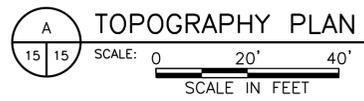
ACAD: Rel 18.2s (LMS Tech) User: 02293
 [COR]13154 [JN] STANDARD XX - FNICC - 347BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1

Date: Jun 27, 2025 - 3:02pm User: 08661 File: N:\IF\Drawings\CV-BAR-PL-TOPO(01).dwg



MATCH LINE STA 4+50

MATCH LINE STA 9+50

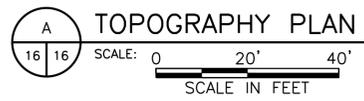
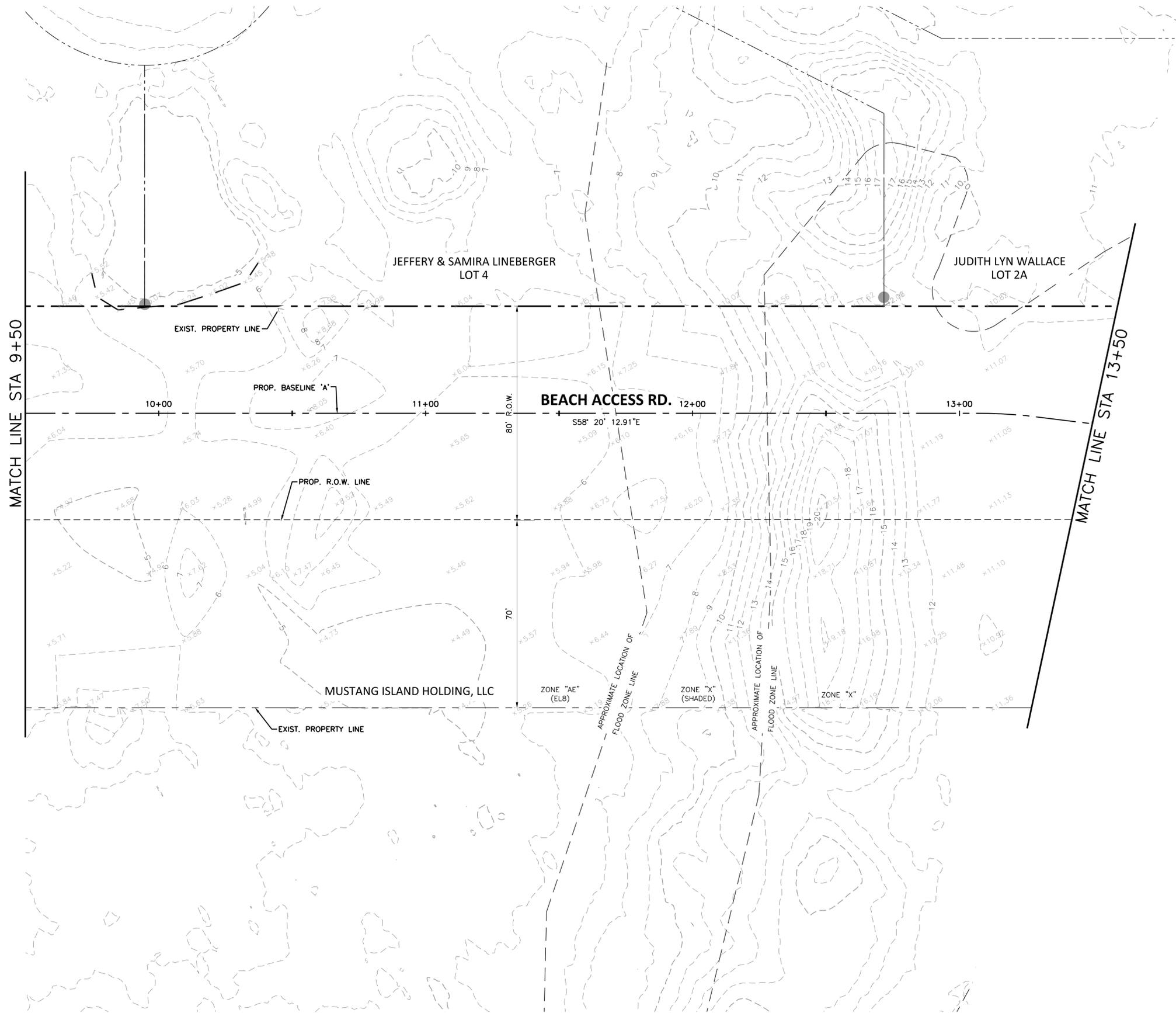


TOPOGRAPHY PLAN

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
		CITY OF CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		TOPOGRAPHY PLAN STA. 4+50 TO STA. 9+50	
SHEET 15 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062		REVISION NO. DATE BY DESCRIPTION	

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

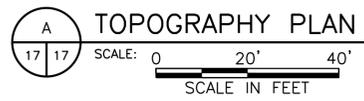
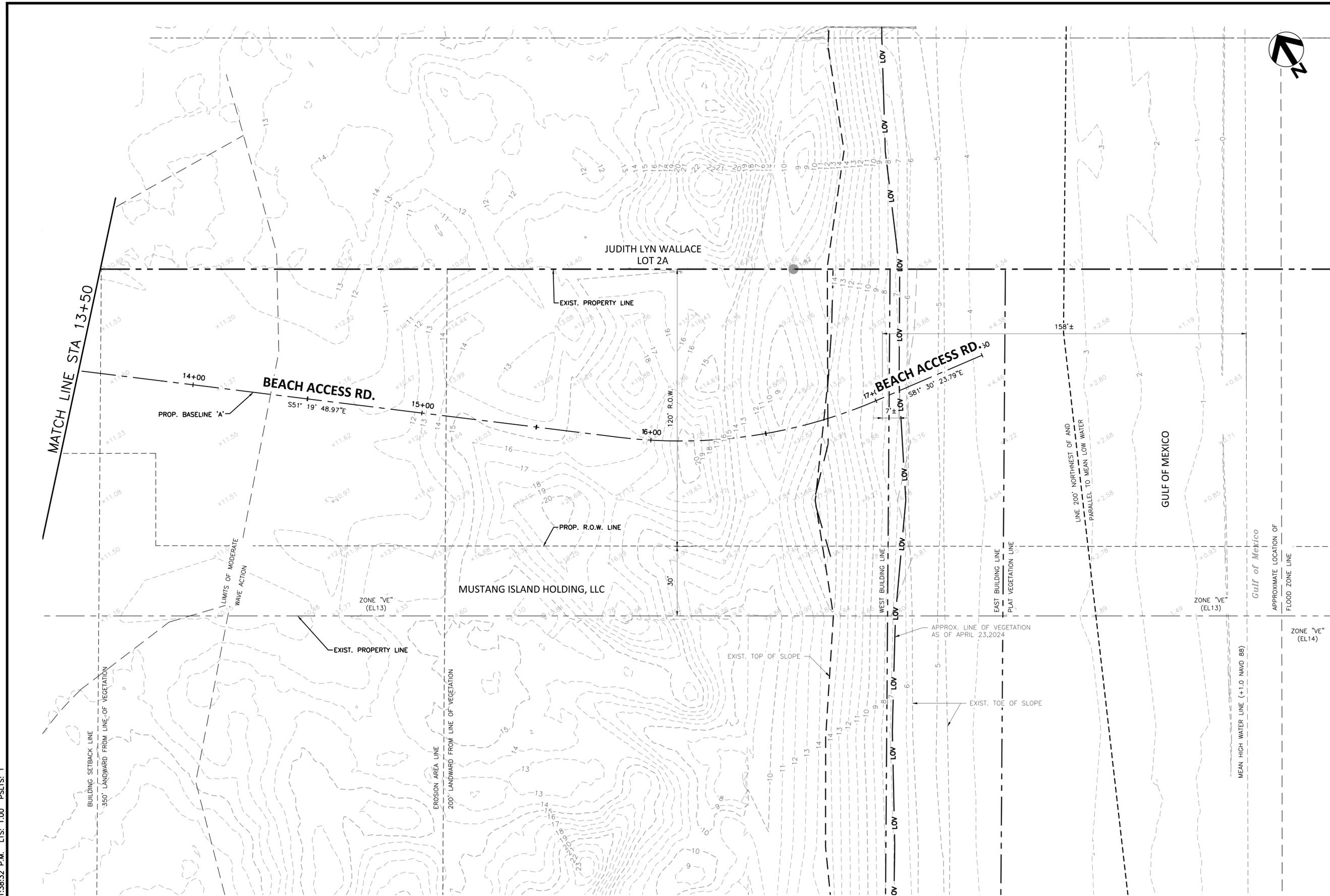


ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
REVISION NO.	DATE	BY	DESCRIPTION
			NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)
			TOPOGRAPHY PLAN STA. 9+50 TO STA. 13+50
SHEET 16 of 55		RECORD DRAWING NO.	
STR-1019		CITY PROJECT # 21062	

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

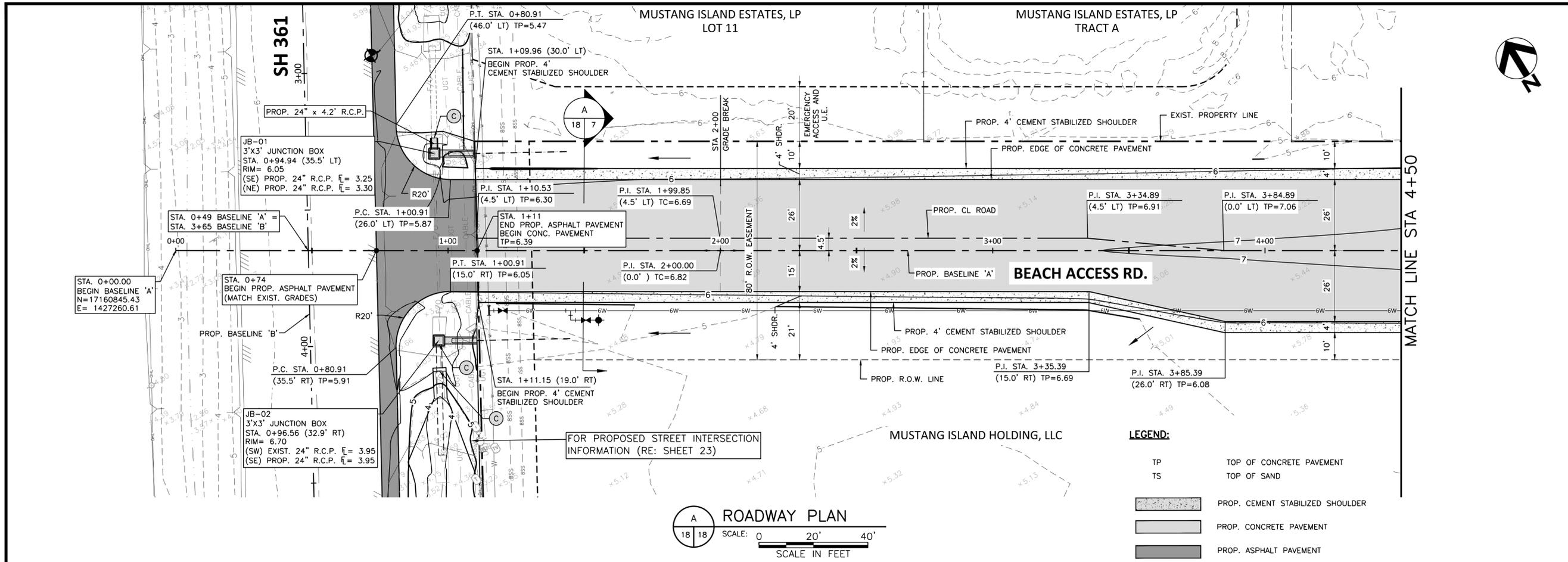
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 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1



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CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
DESCRIPTION	REVISION NO.	DATE	BY
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)			
CITY of CORPUS CHRISTI TEXAS Department of Engineering Services			
TOPOGRAPHY PLAN STA. 13+50 TO END			
SHEET 17 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062			

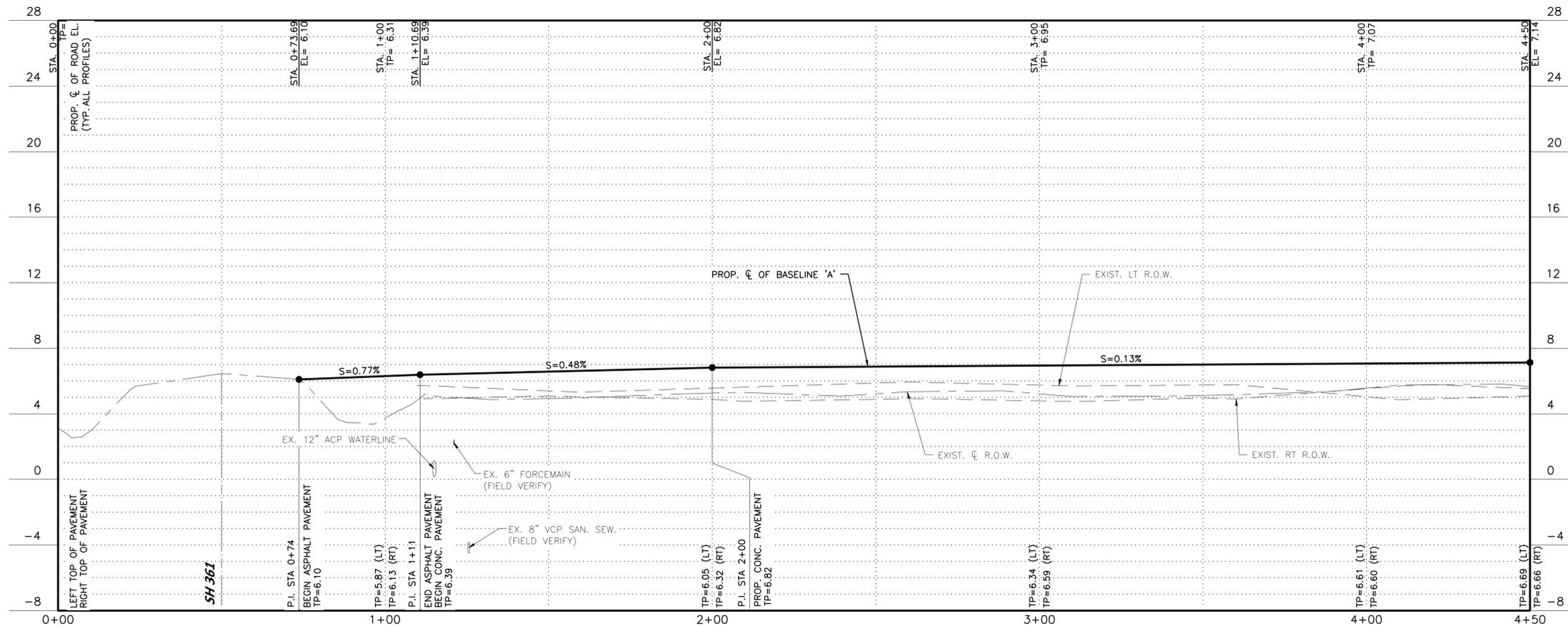
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.



A ROADWAY PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

LEGEND:

- TP TOP OF CONCRETE PAVEMENT
- TS TOP OF SAND
- [Pattern] PROP. CEMENT STABILIZED SHOULDER
- [Pattern] PROP. CONCRETE PAVEMENT
- [Pattern] PROP. ASPHALT PAVEMENT

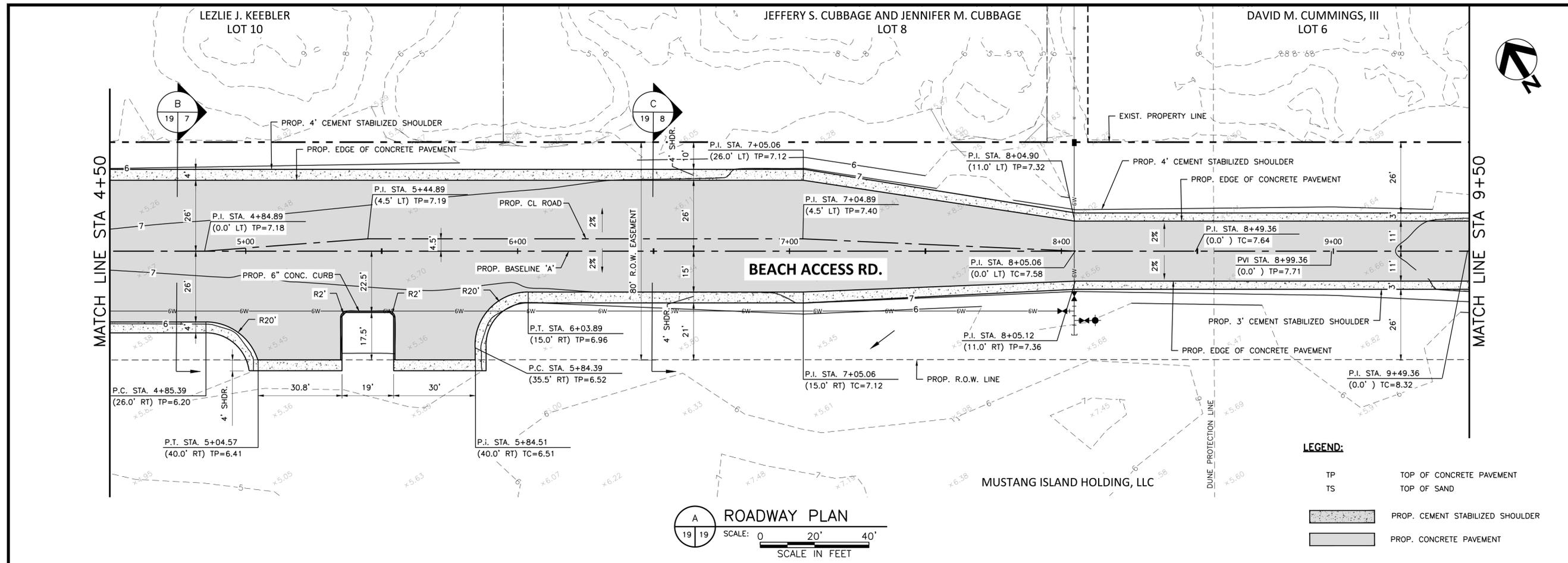


ISSUED FOR CONSTRUCTION

VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

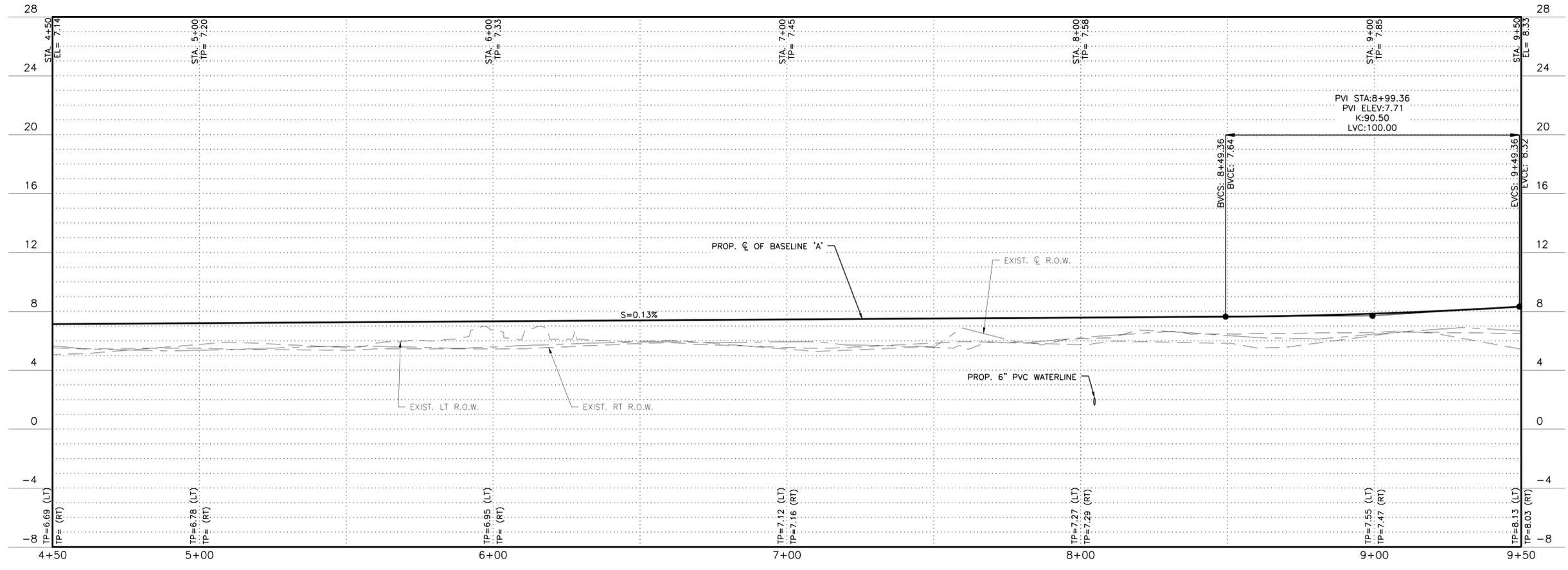
REVISION NO.	DATE	BY	DESCRIPTION

<p>CONSULTANT'S SHEET No. FNI PROJECT: COR21576</p>	
<p>6/30/2025</p> <p>Freese and Nichols, Inc. Texas Registered Engineering Firm F-21144</p>	
<p>Freese and Nichols 800 N. Shoreline Blvd. Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501</p>	
<p>CITY of CORPUS CHRISTI TEXAS Department of Engineering Services</p>	
<p>NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)</p>	
<p>ROADWAY PLAN AND PROFILE STA. 0+00 TO STA 4+50</p>	
<p>SHEET 18 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062</p>	



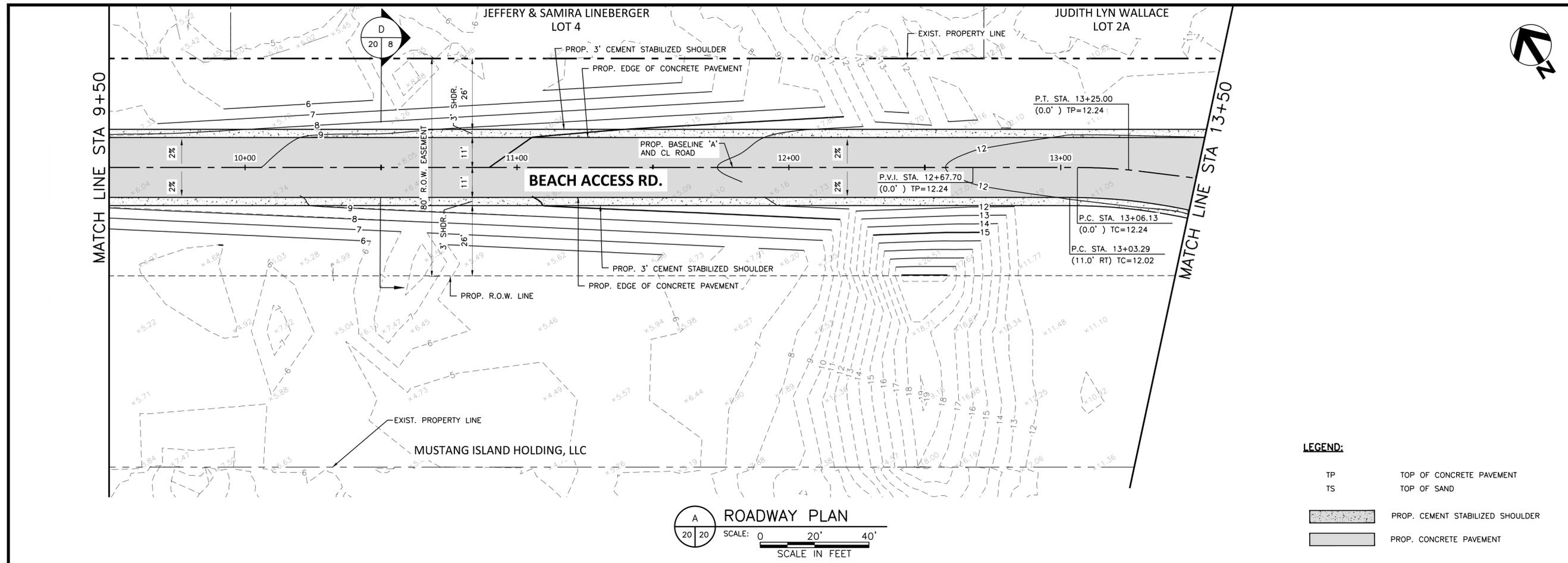
A ROADWAY PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

LEGEND:
 TP TOP OF CONCRETE PAVEMENT
 TS TOP OF SAND
 PROP. CEMENT STABILIZED SHOULDER
 PROP. CONCRETE PAVEMENT



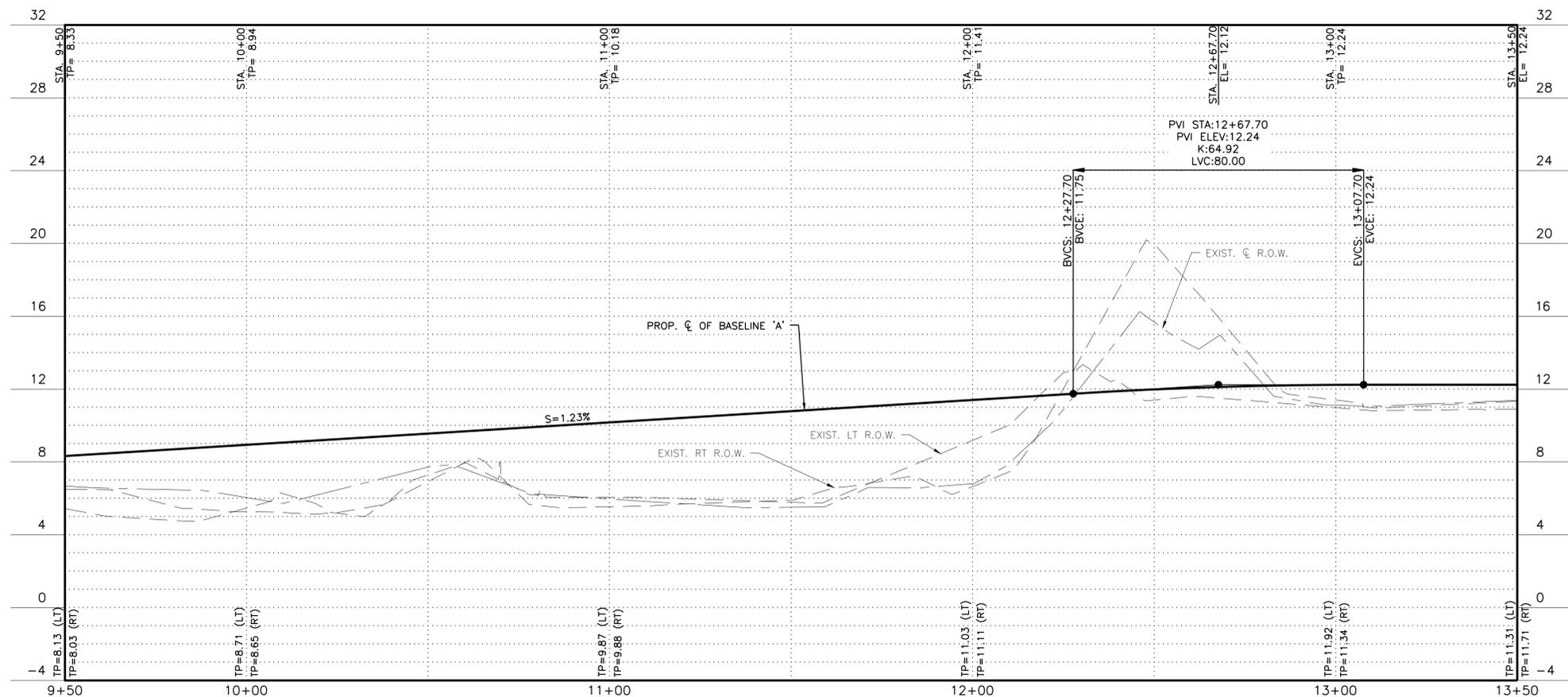
ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No. FNI PROJECT: COR21576			
		Freese and Nichols, Inc. Texas Registered Engineering Firm F-21144 800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
REVISION NO.	DATE	BY	DESCRIPTION
CITY of CORPUS CHRISTI TEXAS Department of Engineering Services			
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)			
ROADWAY PLAN AND PROFILE STA. 4+50 TO STA. 9+50			
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		SHEET 19 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	



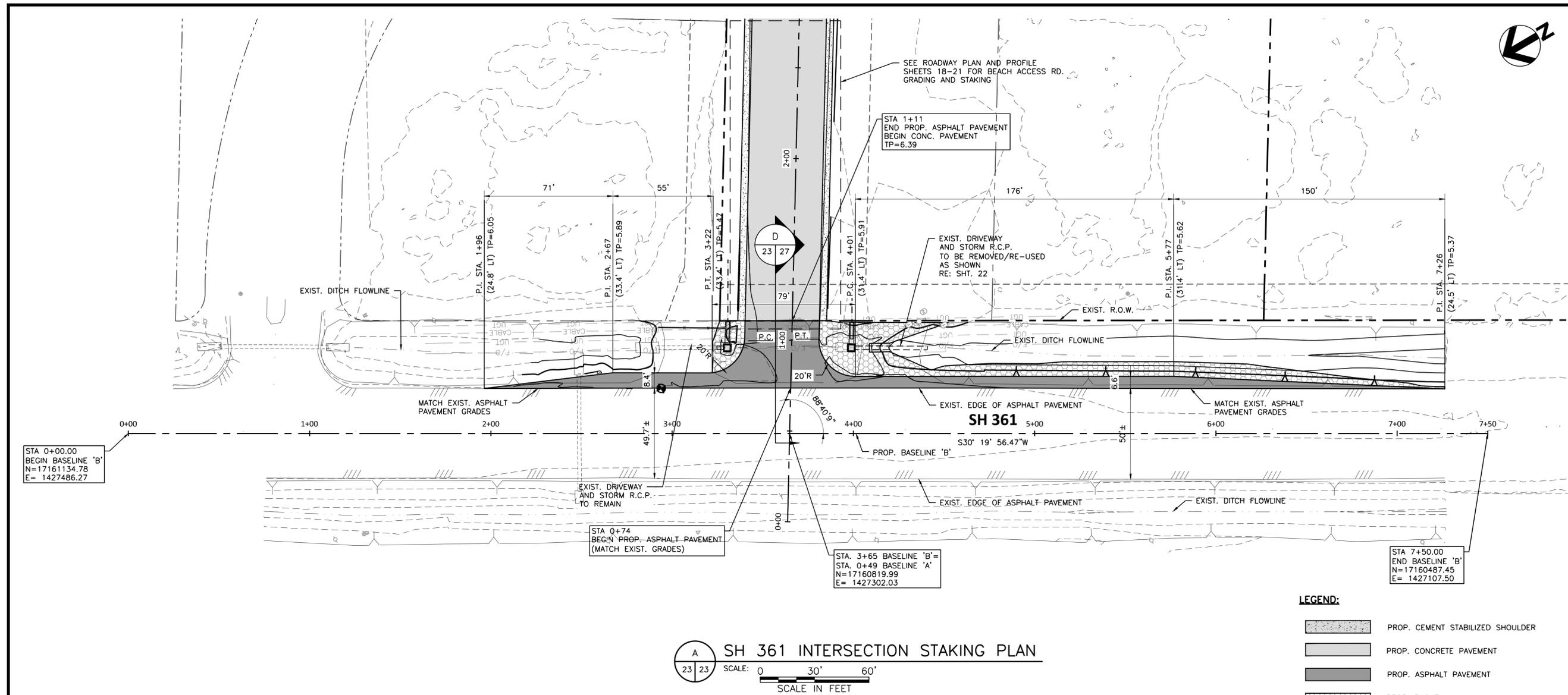
A ROADWAY PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

- LEGEND:**
- TP TOP OF CONCRETE PAVEMENT
 - TS TOP OF SAND
 - [Patterned Box] PROP. CEMENT STABILIZED SHOULDER
 - [Solid Box] PROP. CONCRETE PAVEMENT



CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		ROADWAY PLAN AND PROFILE STA. 9+50 TO STA. 13+50	
SHEET 20 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062		VERIFICATION: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	
REVISION NO.	DATE	BY	DESCRIPTION

ISSUED FOR CONSTRUCTION



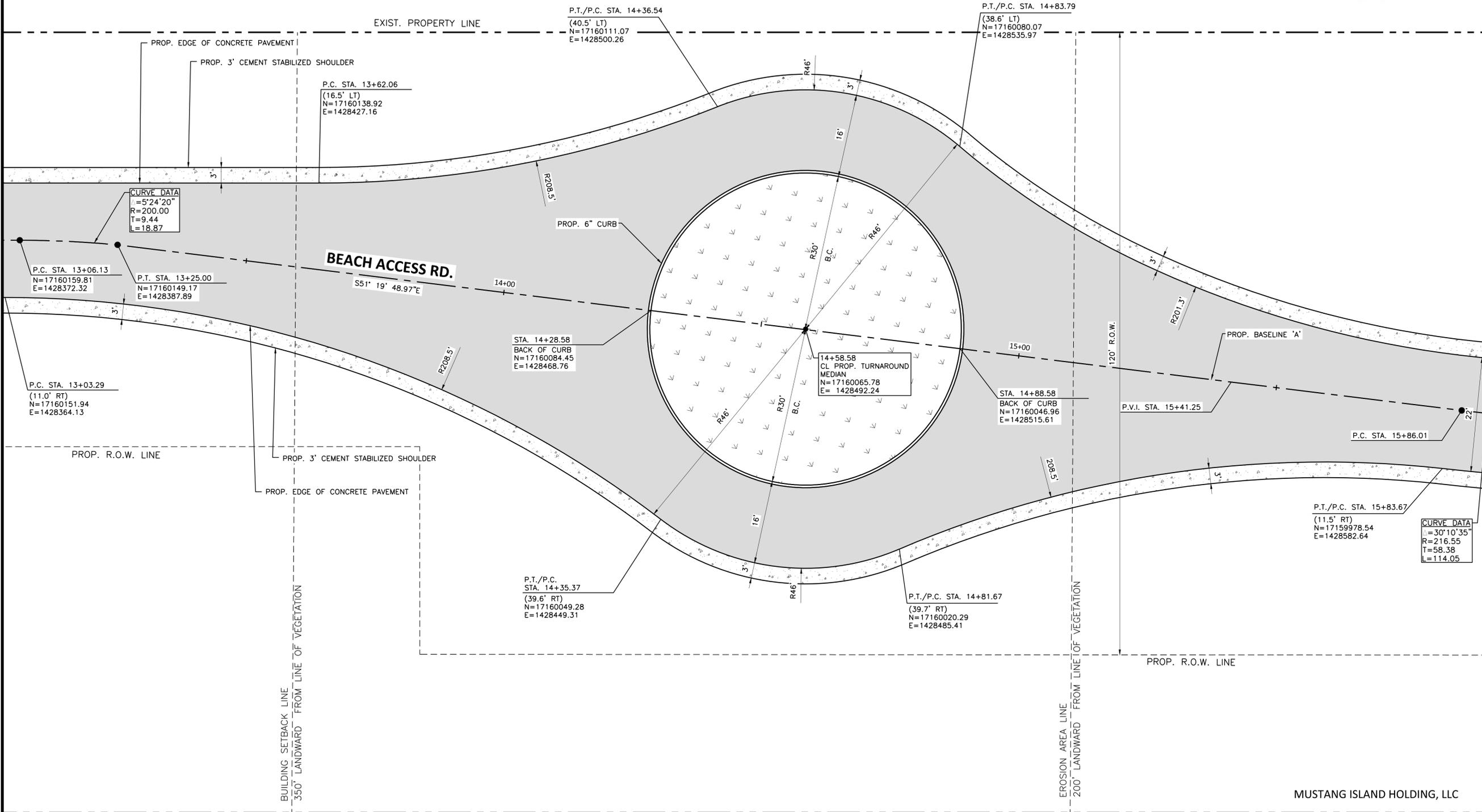
A SH 361 INTERSECTION STAKING PLAN
 SCALE: 0 30' 60'
 SCALE IN FEET

- LEGEND:**
- PROP. CEMENT STABILIZED SHOULDER
 - PROP. CONCRETE PAVEMENT
 - PROP. ASPHALT PAVEMENT
 - PROP. BACKFILL

CONSULTANT'S SHEET No.	
FNI PROJECT: COR21576	
 Freese and Nichols, Inc. Texas Registered Engineering Firm F-2144	 800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501
 CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020) SH 361 ROADWAY PLAN
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.	SHEET 23 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062
VERIFY SCALE 	ISSUED FOR CONSTRUCTION

JUDITH LYN WALLACE
LOT 2A

JUDITH LYN WALLACE
LOT 2A



LEGEND:

	PROP. CEMENT STABILIZED SHOULDER
	PROP. CONCRETE PAVEMENT
	PROP. GRASS AND SAND BACKFILL



NOTE:
1. FOR PROP. TURNAROUND GRADING SEE SHEET 21

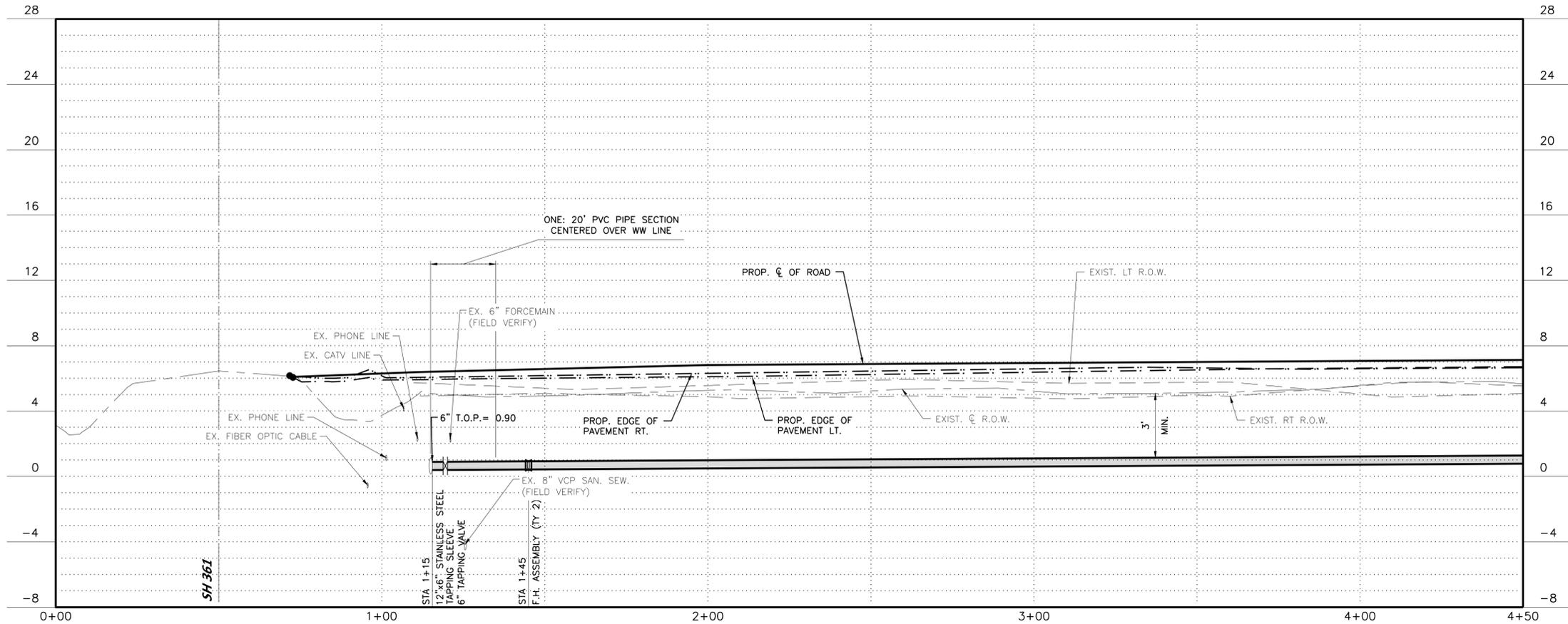
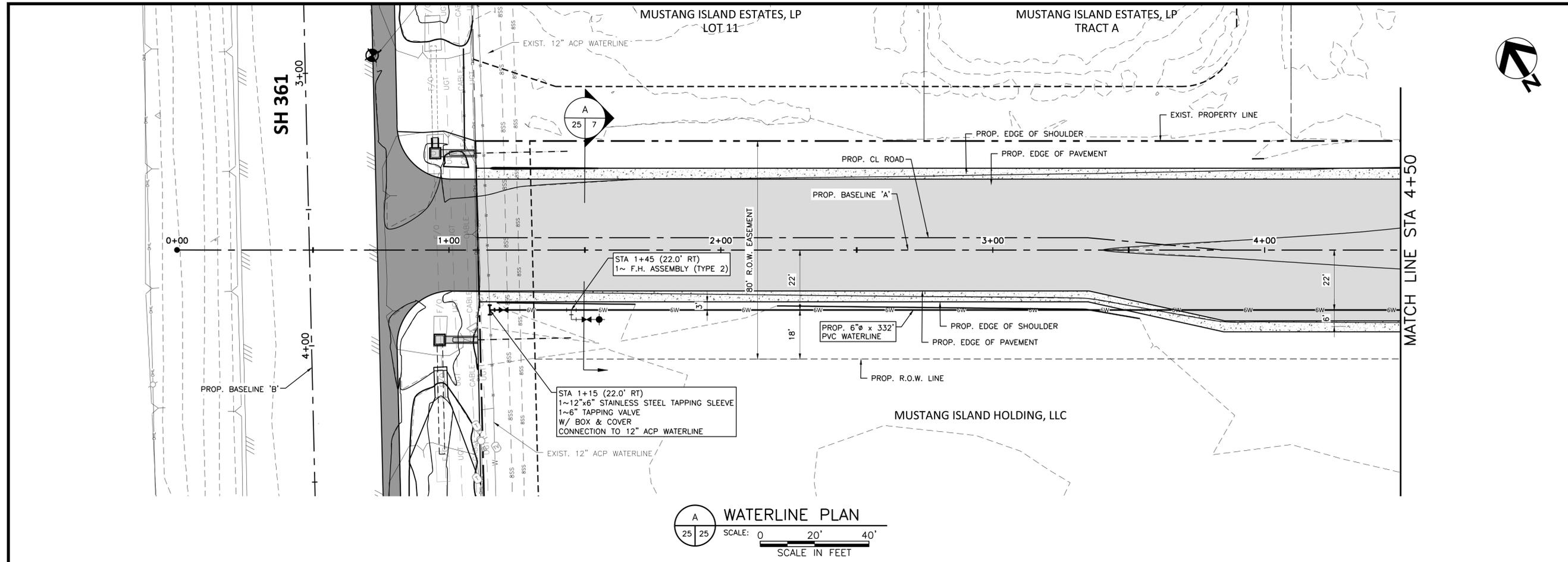
ISSUED FOR CONSTRUCTION

ACAD: Rel 18.2s (LMS Tech) User: 02293
 [COR]13154 [JN] STANDARD Y - FNICC - 347BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PLSITS: 1

CONSULTANT'S SHEET No.	
FNI PROJECT: COR21576	
	Freese and Nichols, Inc. Texas Registered Engineering Firm F-2144
800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
	CITY OF CORPUS CHRISTI TEXAS Department of Engineering Services
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)	PROP. TURNAROUND STAKING PLAN
SHEET 24 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	MUSTANG ISLAND HOLDING, LLC

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

REVISION NO.	DATE	BY	DESCRIPTION



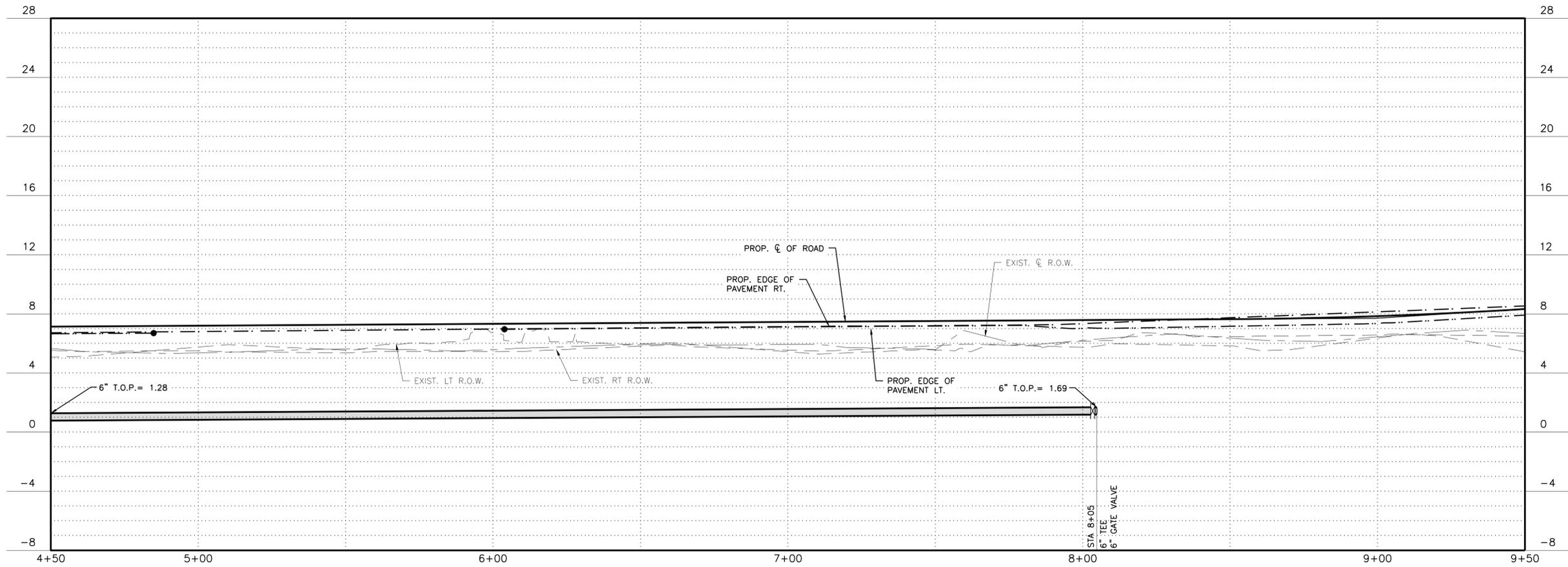
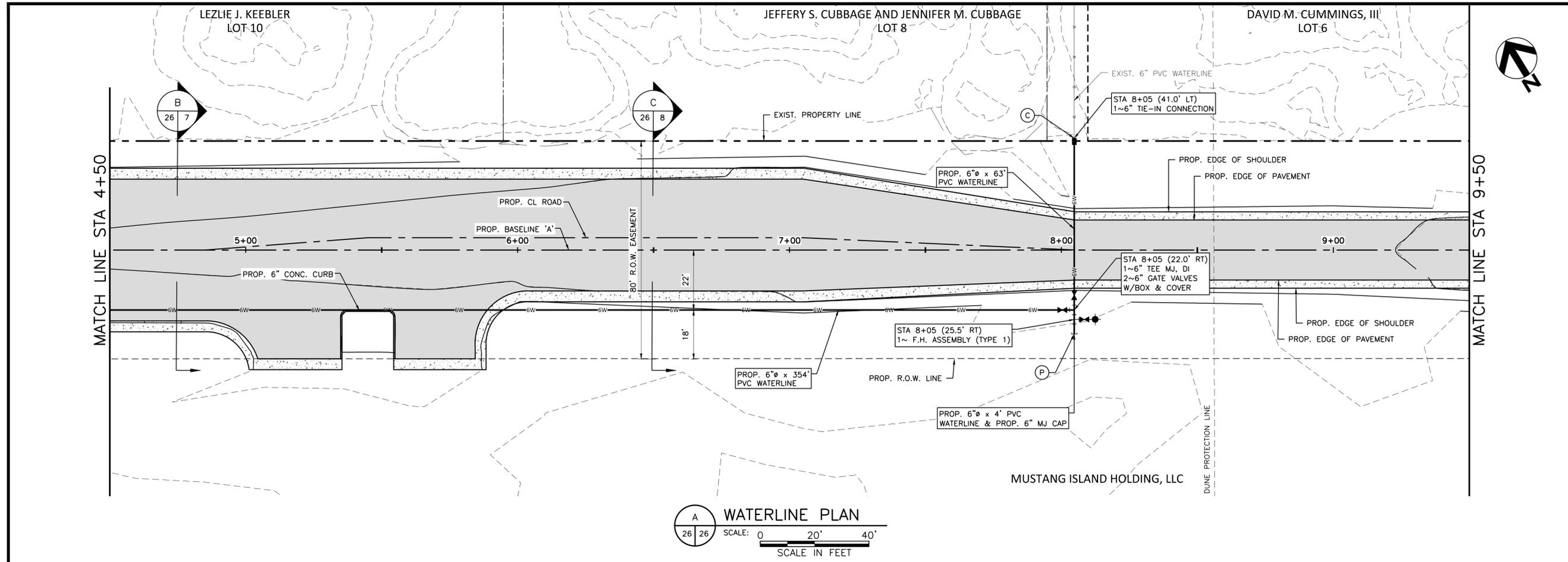
ISSUED FOR CONSTRUCTION

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REVISION NO.	DATE	BY	DESCRIPTION

<p>CONSULTANT'S SHEET No. FNI PROJECT: COR21576</p>	
<p>6/30/2025 Freese and Nichols, Inc. Texas Registered Engineering Firm F-2144</p>	
<p>FREES & NICHOLS 800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501</p>	
<p>CITY of CORPUS CHRISTI TEXAS Department of Engineering Services</p>	
<p>NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)</p>	
<p>WATERLINE PLAN AND PROFILE STA. 0+00 TO STA. 4+50</p>	
<p>SHEET 25 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062</p>	

ACAD: Rel 18.2s (LMS Tech) User: 02293
 [COR]13154 [JN: STANDARD] - FNICC - 347BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1



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REVISION NO.	DATE	BY	DESCRIPTION

CONSULTANT'S SHEET No. FNI PROJECT: COR21576 Freese and Nichols, Inc. Texas Registered Engineering Firm F-2144	
CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)	
WATERLINE PLAN AND PROFILE STA. 4+50 TO STA. 9+50	
SHEET 26 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	



800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas
78401-3717
Phone - (361) 561-6500
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CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

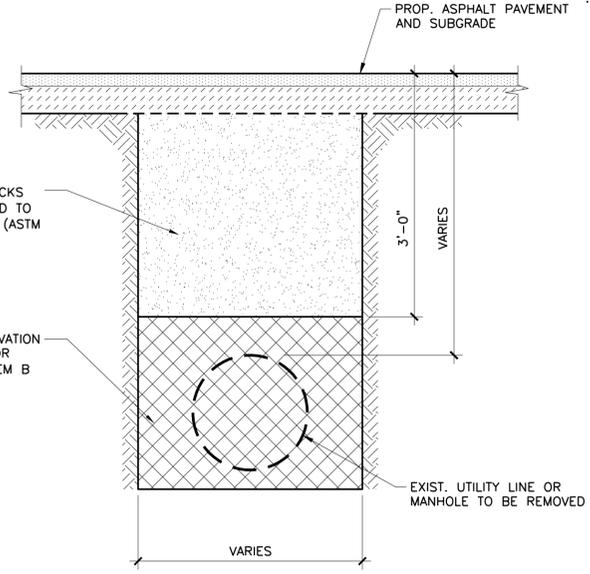
NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH
(BOND 2020)

SHEET 27 of 55
RECORD DRAWING NO.
STR-1019
CITY PROJECT # 21062

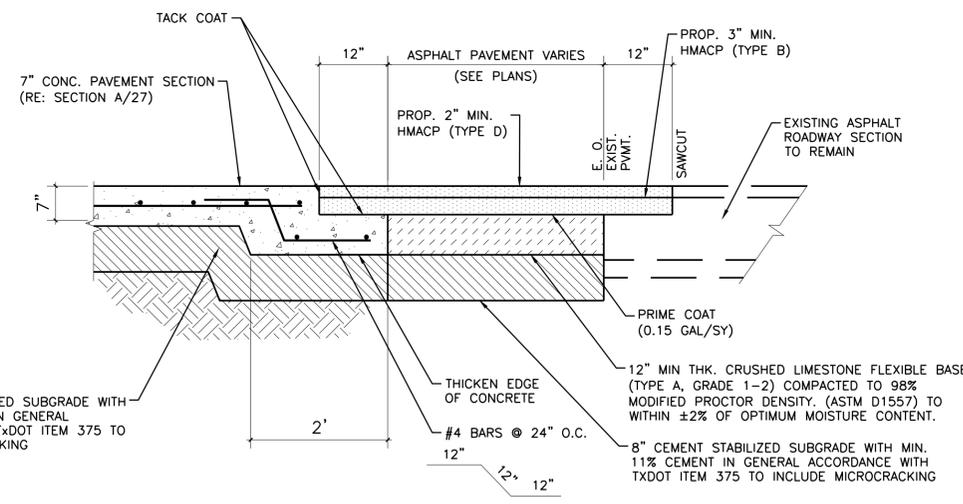
REVISION NO.	DATE	BY	DESCRIPTION

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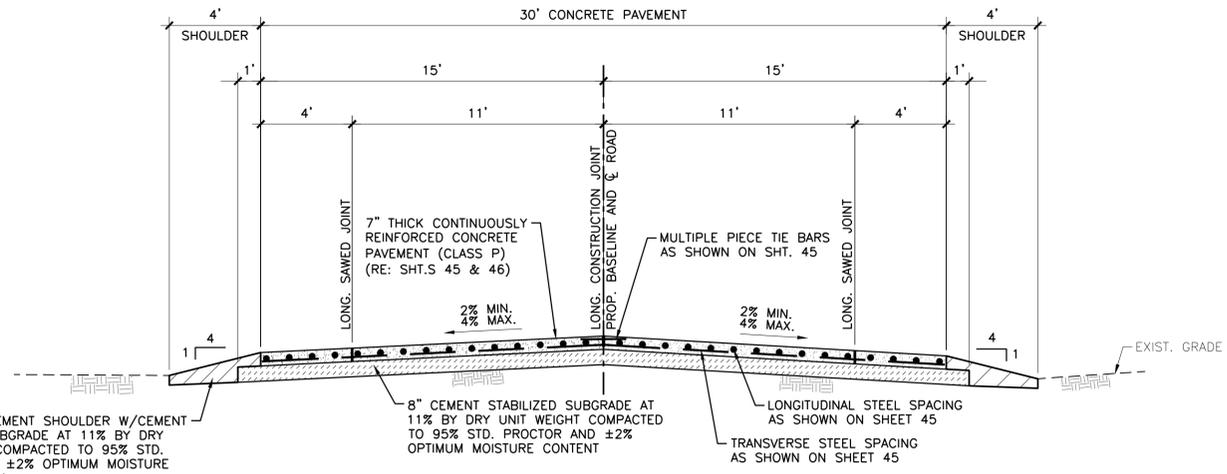


EXIST. UTILITY OR MANHOLE REMOVAL BACKFILL DETAIL BENEATH PAVEMENT
SCALE: N.T.S.



PROP. CONCRETE TO EXIST. ASPHALT PAVEMENT TIE-IN DETAIL
SCALE: N.T.S.

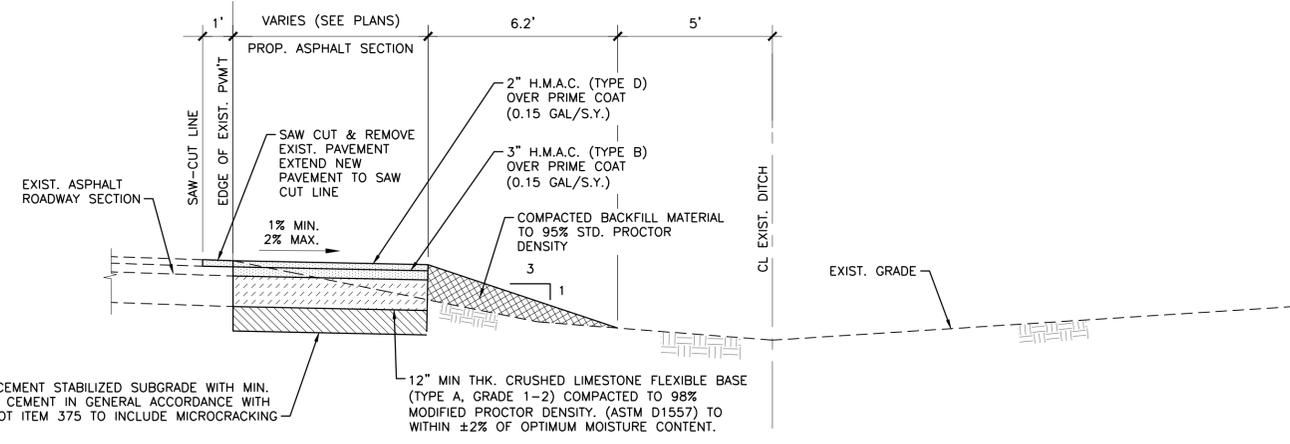
NOTE:
IN NO CASE SHALL THE THICKNESS OF THE ASPHALT OR BASE MATERIAL BE LESS THAN THE THICKNESS OF EXISTING ADJACENT MATERIAL



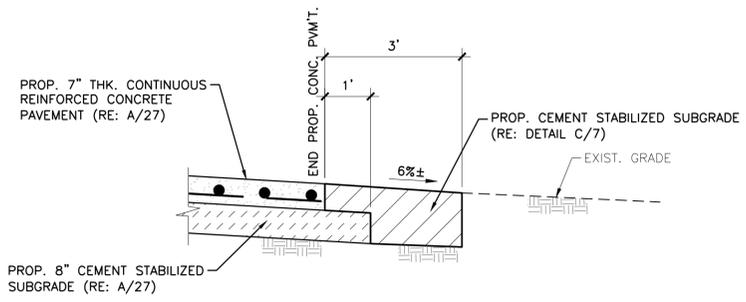
TYP. CONTINUOUSLY REINFORCED CONCRETE PAVEMENT SECTION
SCALE: 1"=4'

BACKFILL PAVEMENT SHOULDER W/CEMENT STABILIZED SUBGRADE AT 11% BY DRY UNIT WEIGHT COMPACTED TO 95% STD. PROCTOR AND ±2% OPTIMUM MOISTURE CONTENT (TYP.)

18-22, 24

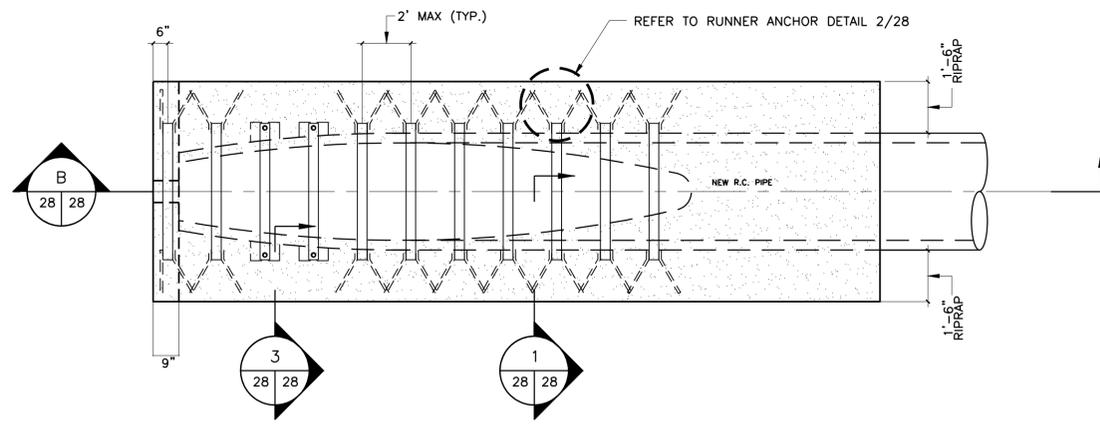


PROP. ASPHALT PAVEMENT SHOULDER SECTION
SCALE: 1"=3'

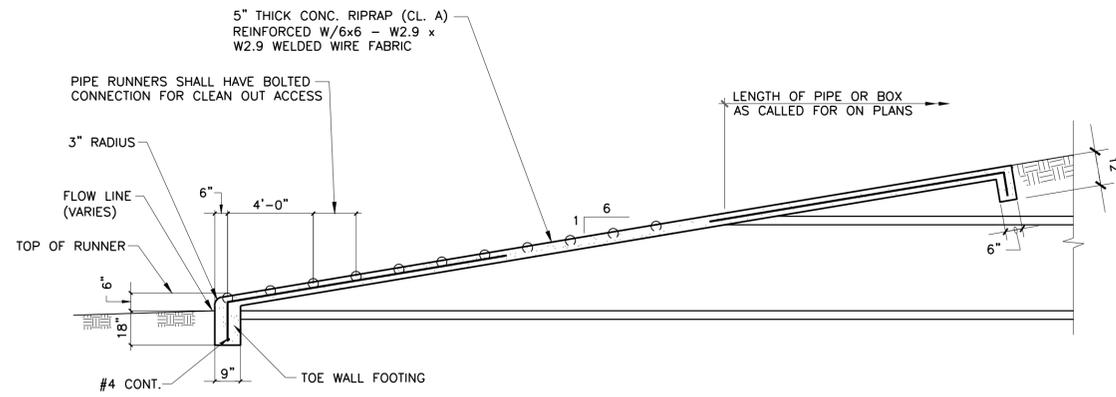


PROP. END OF ROADWAY SECTION
SCALE: 1"=3'

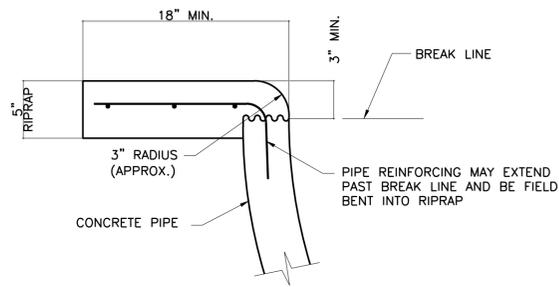
ACAD Ref: 18.2s (LMS Tech) User: 02293
[COR]13154 [JN] STANDARD - FNICC - 34TBLK.DWG LAYOUT: Model
06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1



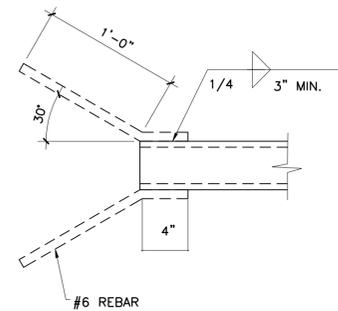
A SAFETY END TREATMENT DETAIL
 SCALE: 3/8"=1'-0"



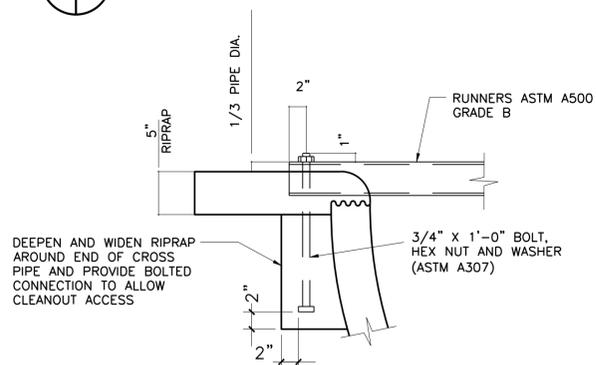
B TYPICAL - SAFETY END TREATMENT SECTION
 SCALE: N.T.S.



1 SECTION
 SCALE: N.T.S.



2 RUNNER ANCHOR DETAIL
 SCALE: N.T.S.



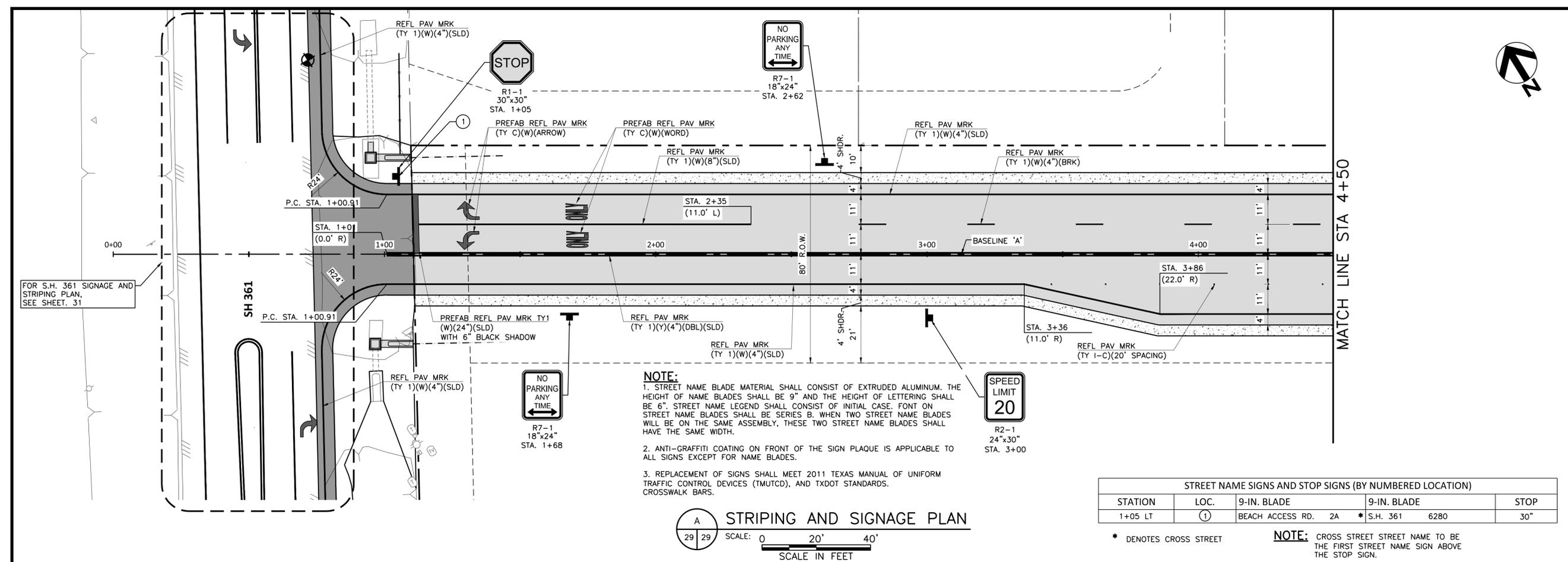
3 SECTION
 SCALE: N.T.S.

PIPE RUNNER SCHEDULE			
CULVERT SIZE	CROSS PIPE SIZE	PIPE O.D.	PIPE I.D.
24"Ø	4"	4.5"	4.026"

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
800 N. Shoreline Blvd., Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		SAFETY END TREATMENT DETAILS	
SHEET 28 of 55 RECORD DRAWING NO.		STR-1019	
CITY PROJECT # 21062		VERIFIED SCALE: 1"=1'-0"	

ISSUED FOR CONSTRUCTION

ACAD File: 18.2s (LMS Tech)
 User: 02293
 [COR]13154 [JIN] STANDARD V - FNICC - 347BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1

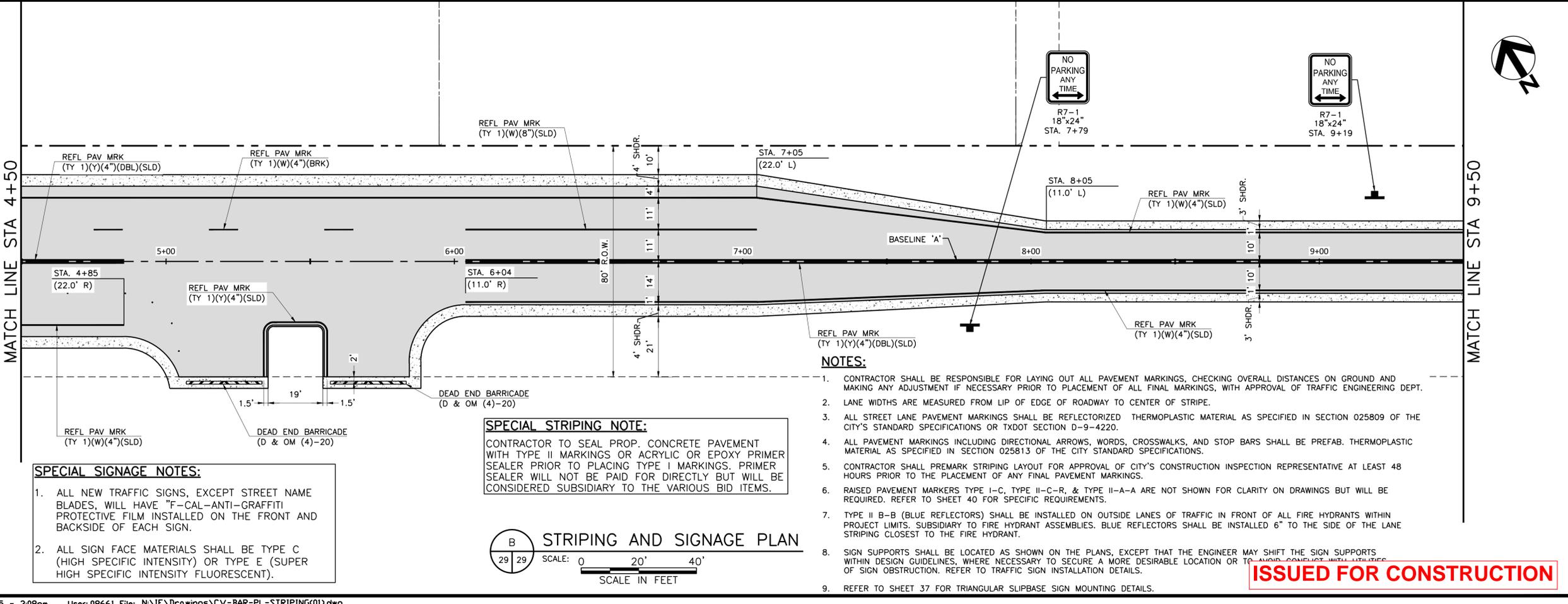


NOTE:
 1. STREET NAME BLADE MATERIAL SHALL CONSIST OF EXTRUDED ALUMINUM. THE HEIGHT OF NAME BLADES SHALL BE 9" AND THE HEIGHT OF LETTERING SHALL BE 6". STREET NAME LEGEND SHALL CONSIST OF INITIAL CASE. FONT ON STREET NAME BLADES SHALL BE SERIES B. WHEN TWO STREET NAME BLADES WILL BE ON THE SAME ASSEMBLY, THESE TWO STREET NAME BLADES SHALL HAVE THE SAME WIDTH.
 2. ANTI-GRAFFITI COATING ON FRONT OF THE SIGN PLAQUE IS APPLICABLE TO ALL SIGNS EXCEPT FOR NAME BLADES.
 3. REPLACEMENT OF SIGNS SHALL MEET 2011 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), AND TxDOT STANDARDS. CROSSWALK BARS.

STREET NAME SIGNS AND STOP SIGNS (BY NUMBERED LOCATION)				
STATION	LOC.	9-IN. BLADE	9-IN. BLADE	STOP
1+05 LT	①	BEACH ACCESS RD. 2A	* S.H. 361 6280	30"

* DENOTES CROSS STREET
NOTE: CROSS STREET STREET NAME TO BE THE FIRST STREET NAME SIGN ABOVE THE STOP SIGN.

A STRIPING AND SIGNAGE PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET



SPECIAL STRIPING NOTE:
 CONTRACTOR TO SEAL PROP. CONCRETE PAVEMENT WITH TYPE II MARKINGS OR ACRYLIC OR EPOXY PRIMER SEALER PRIOR TO PLACING TYPE I MARKINGS. PRIMER SEALER WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.

SPECIAL SIGNAGE NOTES:
 1. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME BLADES, WILL HAVE "F-CAL-ANTI-GRAFFITI PROTECTIVE FILM INSTALLED ON THE FRONT AND BACKSIDE OF EACH SIGN.
 2. ALL SIGN FACE MATERIALS SHALL BE TYPE C (HIGH SPECIFIC INTENSITY) OR TYPE E (SUPER HIGH SPECIFIC INTENSITY FLUORESCENT).

- NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT ALL PAVEMENT MARKINGS, CHECKING OVERALL DISTANCES ON GROUND AND MAKING ANY ADJUSTMENT IF NECESSARY PRIOR TO PLACEMENT OF ALL FINAL MARKINGS, WITH APPROVAL OF TRAFFIC ENGINEERING DEPT.
 - LANE WIDTHS ARE MEASURED FROM LIP OF EDGE OF ROADWAY TO CENTER OF STRIPE.
 - ALL STREET LANE PAVEMENT MARKINGS SHALL BE REFLECTORIZED THERMOPLASTIC MATERIAL AS SPECIFIED IN SECTION 025809 OF THE CITY'S STANDARD SPECIFICATIONS OR TxDOT SECTION D-9-4220.
 - ALL PAVEMENT MARKINGS INCLUDING DIRECTIONAL ARROWS, WORDS, CROSSWALKS, AND STOP BARS SHALL BE PREFAB. THERMOPLASTIC MATERIAL AS SPECIFIED IN SECTION 025813 OF THE CITY STANDARD SPECIFICATIONS.
 - CONTRACTOR SHALL PREMARK STRIPING LAYOUT FOR APPROVAL OF CITY'S CONSTRUCTION INSPECTION REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO THE PLACEMENT OF ANY FINAL PAVEMENT MARKINGS.
 - RAISED PAVEMENT MARKERS TYPE I-C, TYPE II-C-R, & TYPE II-A-A ARE NOT SHOWN FOR CLARITY ON DRAWINGS BUT WILL BE REQUIRED. REFER TO SHEET 40 FOR SPECIFIC REQUIREMENTS.
 - TYPE II B-B (BLUE REFLECTORS) SHALL BE INSTALLED ON OUTSIDE LANES OF TRAFFIC IN FRONT OF ALL FIRE HYDRANTS WITHIN PROJECT LIMITS. SUBSIDIARY TO FIRE HYDRANT ASSEMBLIES. BLUE REFLECTORS SHALL BE INSTALLED 6" TO THE SIDE OF THE LANE STRIPING CLOSEST TO THE FIRE HYDRANT.
 - SIGN SUPPORTS SHALL BE LOCATED AS SHOWN ON THE PLANS, EXCEPT THAT THE ENGINEER MAY SHIFT THE SIGN SUPPORTS WITHIN DESIGN GUIDELINES, WHERE NECESSARY TO SECURE A MORE DESIRABLE LOCATION OR TO AVOID CONFLICT WITH UTILITIES.
 - REFER TO SHEET 37 FOR TRIANGULAR SLIPBASE SIGN MOUNTING DETAILS.

B STRIPING AND SIGNAGE PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

ISSUED FOR CONSTRUCTION

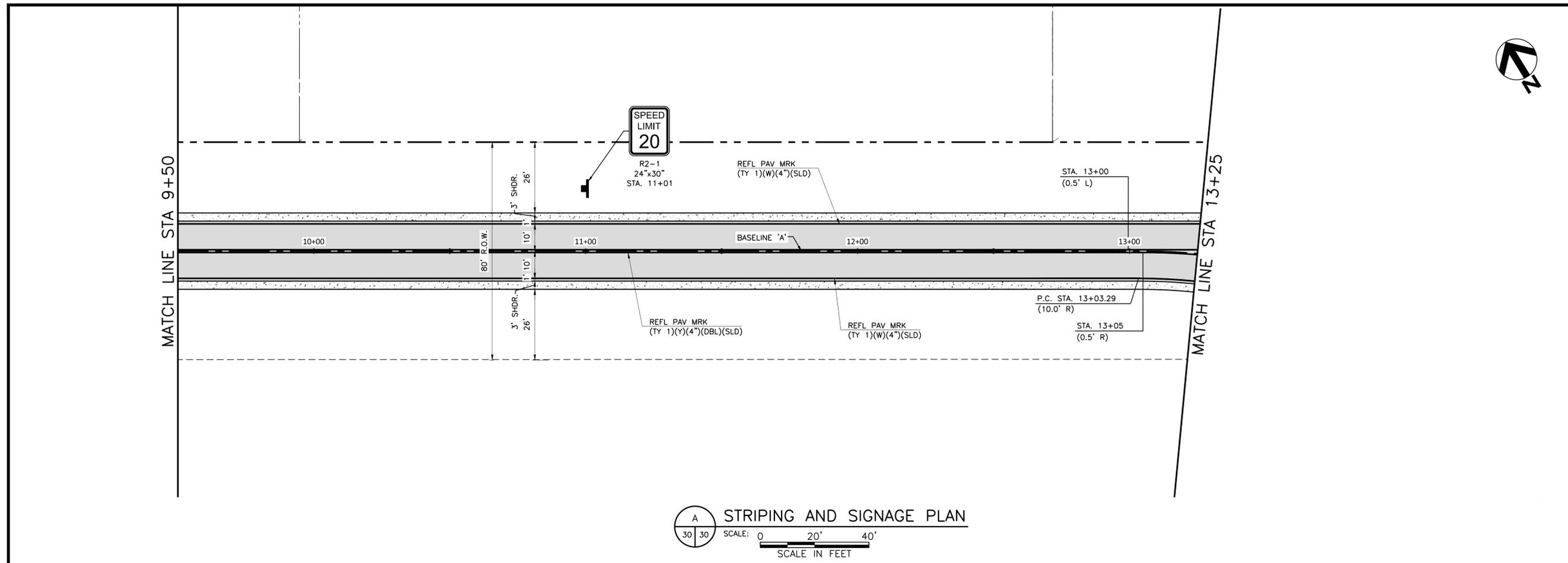
CONSULTANT'S SHEET No.	FNI PROJECT: COR21576
DESCRIPTION	NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)
REVISION NO.	DATE
BY	

CITY of CORPUS CHRISTI TEXAS
 Department of Engineering Services

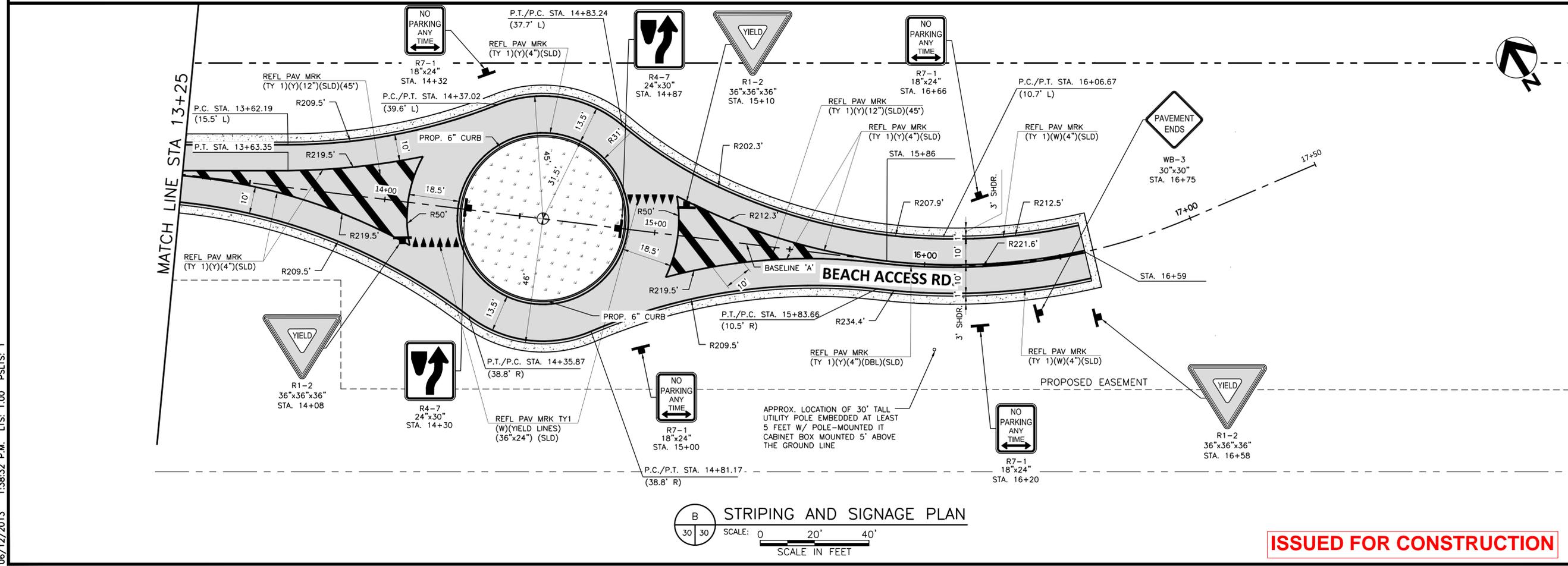
Freesee and Nichols, Inc.
 800 N. Shoreline Blvd, Suite 1600
 Corpus Christi, Texas 78401-3717
 Phone - (361) 561-6500
 Fax - (361) 561-6501

VERIFY SCALE	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
SHEET 29 of 55	RECORD DRAWING NO. STR-1019
CITY PROJECT # 21062	

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 [COR]13154 [JN: STANDARD] - FNICC - 347BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1



A STRIPING AND SIGNAGE PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

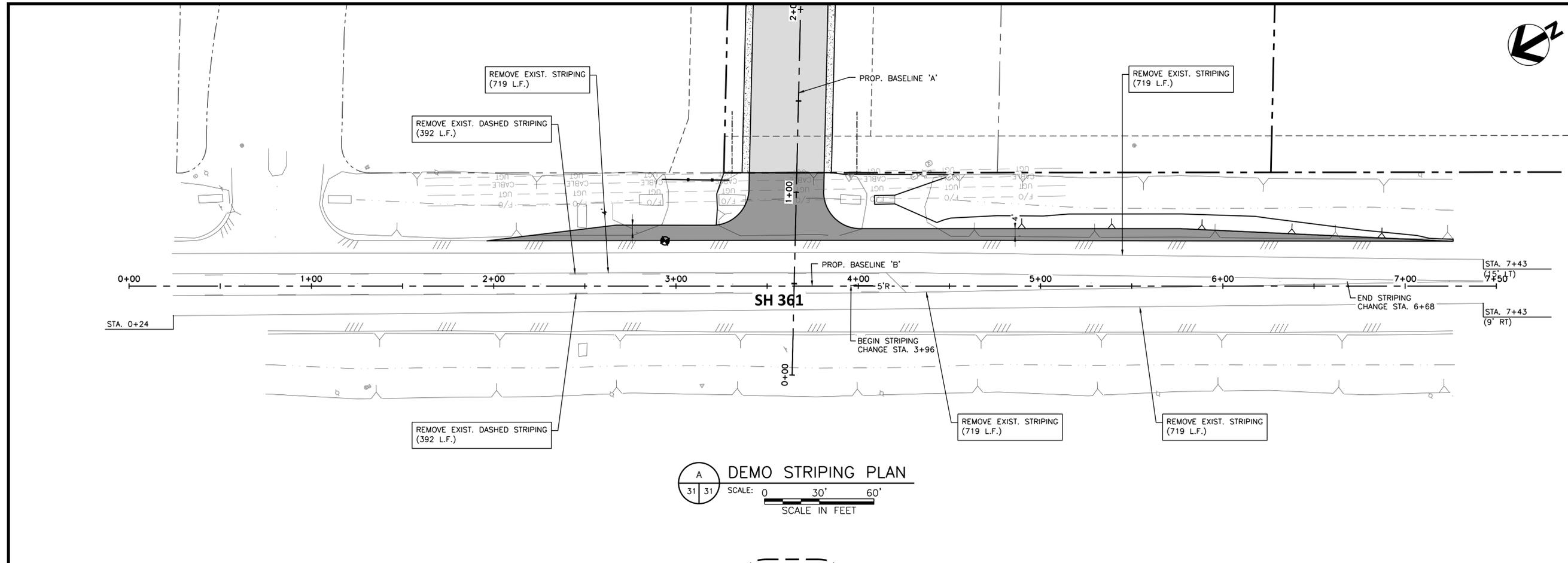


B STRIPING AND SIGNAGE PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

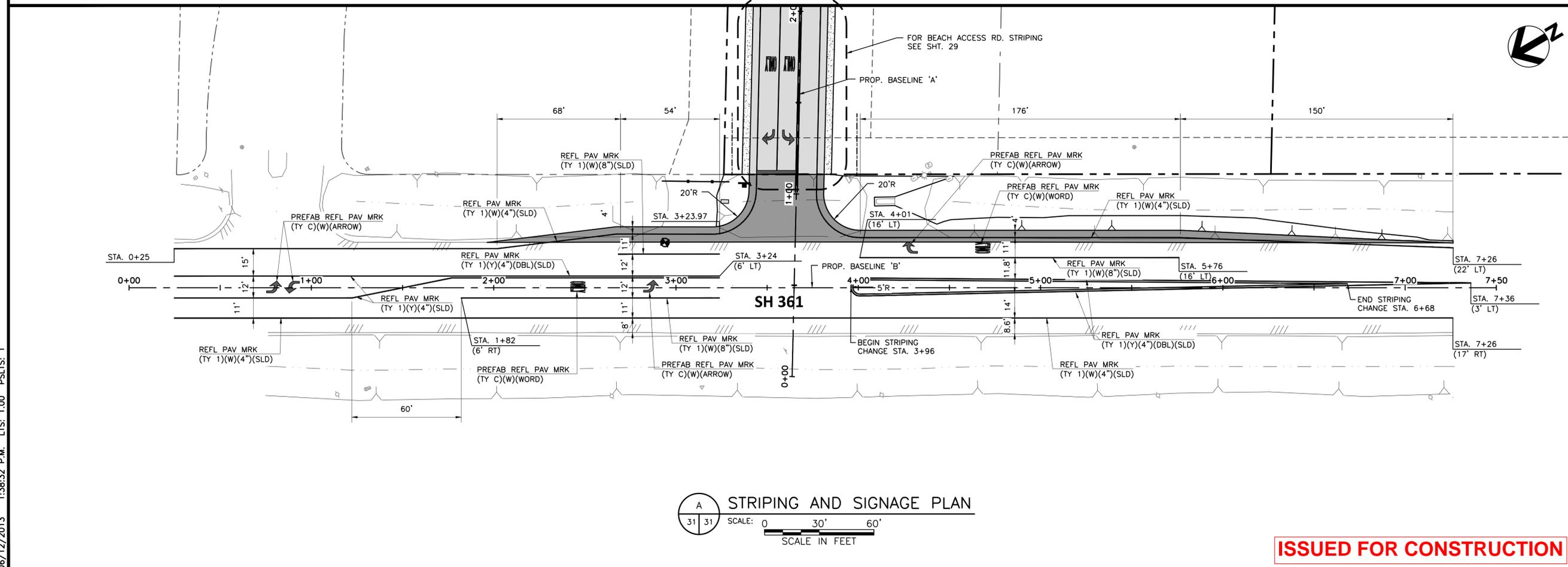
CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
		CITY of CORPUS CHRISTI TEXAS Department of Engineering Services	
DESCRIPTION	REVISION NO.	DATE	BY
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)			
STRIPING & SIGNAGE PLAN STA. 9+50 TO END			
VERIFY SCALE	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.		
SHEET 30 of 55		RECORD DRAWING NO.	
STR-1019		CITY PROJECT # 21062	

ISSUED FOR CONSTRUCTION

ACAD: Rel 18.2s (LMS Tech) User: 02293
 [COR]13154 [JN: STANDARD] - FNICC - 34\BLK.DWG LAYOUT: Model
 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1



DEMO STRIPING PLAN
 SCALE: 0 30' 60'
 SCALE IN FEET

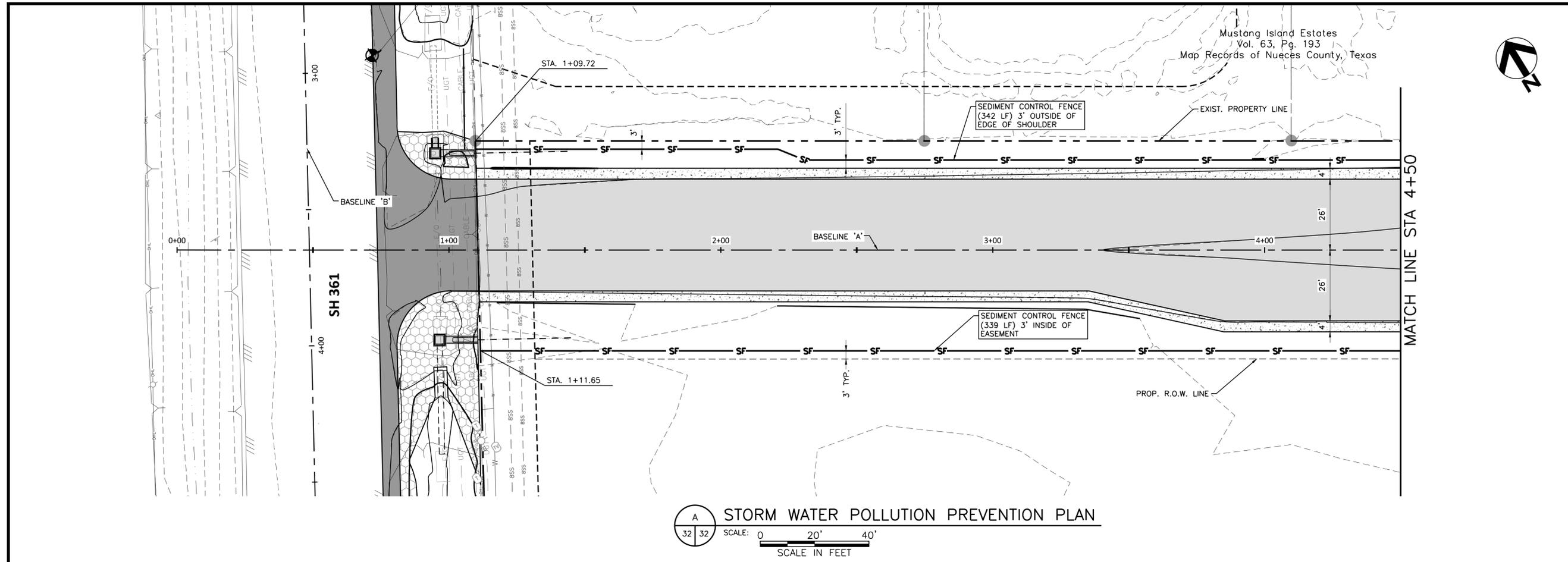


STRIPING AND SIGNAGE PLAN
 SCALE: 0 30' 60'
 SCALE IN FEET

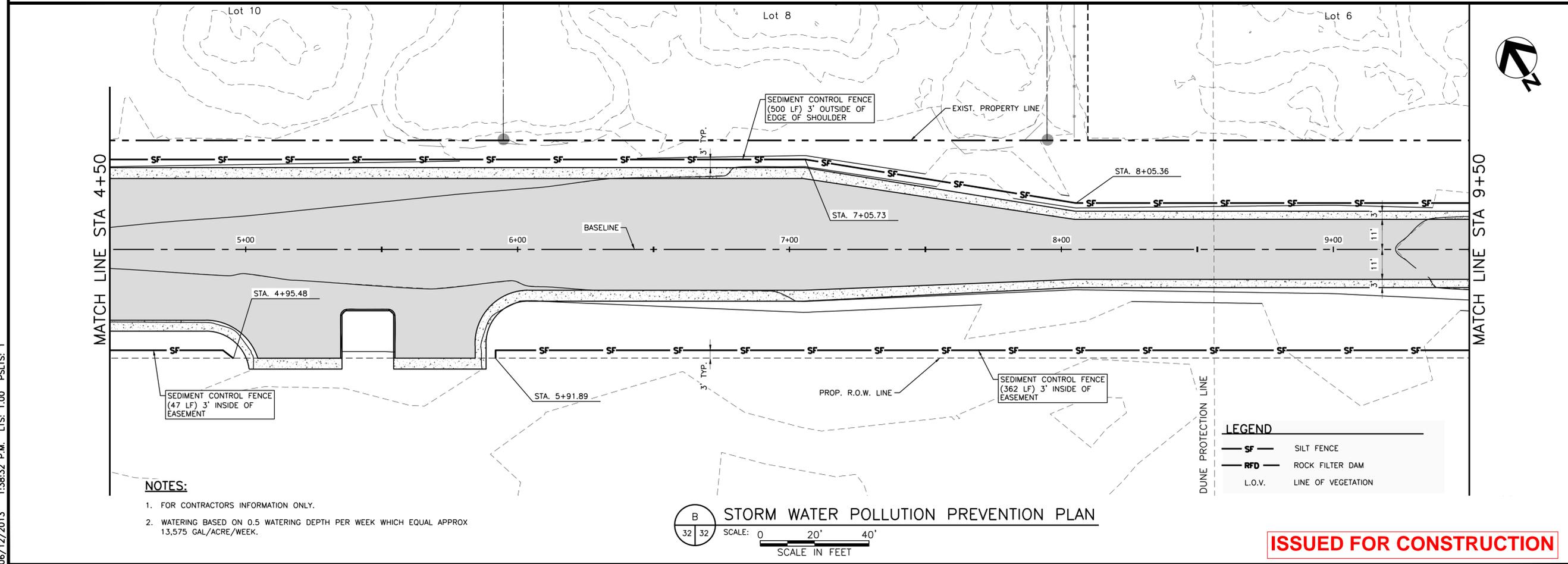
CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
CITY of CORPUS CHRISTI TEXAS Department of Engineering Services		NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)	
SH 361 STRIPING AND SIGNAGE		SHEET 31 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	
REVISION NO.	DATE	BY	DESCRIPTION

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

ISSUED FOR CONSTRUCTION



A STORM WATER POLLUTION PREVENTION PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET



B STORM WATER POLLUTION PREVENTION PLAN
 SCALE: 0 20' 40'
 SCALE IN FEET

LEGEND

	SILT FENCE
	ROCK FILTER DAM
	LINE OF VEGETATION

- NOTES:**
- FOR CONTRACTORS INFORMATION ONLY.
 - WATERING BASED ON 0.5 WATERING DEPTH PER WEEK WHICH EQUAL APPROX 13,575 GAL/ACRE/WEEK.

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
6/30/2025			
		Freese and Nichols, Inc. Texas Registered Engineering Firm F-21144	
		CITY OF CORPUS CHRISTI TEXAS Department of Engineering Services	
NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)		STORM WATER POLLUTION PREVENTION PLAN STA. 0+00 TO STA. 9+50	
SHEET 32 of 55 RECORD DRAWING NO.		STR-1019	
CITY PROJECT # 21062		ISSUED FOR CONSTRUCTION	

SITE DESCRIPTION

PROJECT LIMITS: NEW BEACH ACCESS ROAD FROM STATE HIGHWAY 361 TO BEACH
TOTAL PROJECT LENGTH IS 1,600 FT. = 0.31 MILE

PROJECT DESCRIPTION: GRADING, DRAINAGE, STORM PIPE, WATERLINES, STABILIZED FLEXIBLE
BASE, ASPHALT PAVEMENT, CONCRETE PAVEMENT, AND CONCRETE
CURB.

MAJOR SOIL DISTURBING ACTIVITIES: SOIL DISTURBING ACTIVITIES WILL INCLUDE
PREPARING RIGHT-OF-WAY, EXCAVATION AND EMBANKMENT FOR THE ROADWAYS, GRADING,
STORM SEWERS, AND WATERLINES AT THE TIMES AND LOCATIONS LISTED BELOW.

TOTAL PROJECT AREA: 2.7 AC.

TOTAL AREA TO BE DISTURBED: 2.7 AC.

WEIGHTED RUNOFF COEFFICIENT:
 (AFTER CONSTRUCTION): 0.62

EXISTING CONDITION OF SOIL & VEGETATIVE
 COVER AND % OF EXISTING VEGETATIVE COVER:

PAVEMENT AND FLATWORK 70%
GRASS LANDSCAPING 30%

NAME OF RECEIVING WATERS: CORPUS CHRISTI BAY

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- T TEMPORARY SEEDING
- P PERMANENT PLANTING, SODDING, OR SEEDING
- MULCHING
- SOIL RETENTION BLANKET
- BUFFER ZONES
- P PRESERVATION OF NATURAL RESOURCES

OTHER: DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED SHALL BE
STABILIZED WITHIN 14 DAYS UNLESS ACTIVITIES ARE SCHEDULED TO RESUME OR
BE PERFORMED WITHIN 21 DAYS

STRUCTURAL PRACTICES:

- T SILT FENCES
- HAY BALES
- ROCK BERMS
- DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- DIVERSION DIKE AND SWALE COMBINATIONS
- PIPE SLOPE DRAINS
- PAVED FLUMES
- T ROCK BEDDING AT CONSTRUCTION EXIT
- TIMBER MATTING AT CONSTRUCTION EXIT
- CHANNEL LINERS
- SEDIMENT TRAPS
- SEDIMENT BASINS
- T STORM INLET SEDIMENT TRAP
- STONE OUTLET STRUCTURES
- CURBS AND GUTTERS
- P STORM SEWERS
- VELOCITY CONTROL DEVICES
- EROSION CONTROL LOGS

OTHER: _____

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. Install structural controls at existing structures prior to disturbance of existing topsoil.
2. Install silt fences:
 - A. Around topsoil stockpiles and at embankment and excavation locations
 - B. Around all new and temporary structures as soon as they are functional.
3. Install stabilized construction entrance
4. Construct the proposed improvements in accordance with the plans and specifications.
5. Prepare topsoil and apply grass block sodding to areas specified in the contract documents.
6. Upon completion of construction activities, remove all temporary structural controls and re-seed areas disturbed by their removal.

STORM WATER MANAGEMENT:

During construction of the improvements, storm water runoff will be conveyed
via existing ditches, and storm sewers; and such temporary
drainage structures that may be required to be provided by contractor until the
permanent storm water drainage improvements have been constructed.

OTHER EROSION AND SEDIMENT CONTROLS:

MAINTENANCE: All erosion and sediment controls will be maintained
in good working order. If a repair is necessary
it will be done at the earliest date possible, but
no later than 7 calendar days after the surrounding
exposed ground has dried sufficiently to prevent
further damage from heavy equipment. The area
adjacent to the bay drainageways shall have
priority followed by devices protecting storm sewer inlets.

INSPECTION: An inspection will be performed by the contractor
every 14 days as well as after every half inch or
more of rain (as recorded on a non-freezing rain gauge
to be located at the Project Site). An inspection and
maintenance report should be made per each inspection.
Based on the inspection results, the controls shall be
revised according to the inspection report.

WASTE MATERIALS: The dumpster used to store all waste material
shall meet all state and local city solid waste
management regulations. All trash and construction
debris will be deposited in the dumpster. The dumpster
will be emptied as necessary or as required by local
regulation and the trash will be hauled to a local landfill.
No construction waste material will be buried on site.

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): In the event of a spill which
may be considered hazardous, the contractor must notify immediately
the OAR.

SANITARY WASTE: All sanitary waste will be collected from the portable units as necessary
or as required by local regulations by a licensed sanitary waste
management contractor.

OFFSITE VEHICLE TRACKING:

- X HAUL ROADS DAMPENED FOR DUST CONTROL
- X LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- X EXCESS DIRT ON ROAD REMOVED DAILY
- X STABILIZED CONSTRUCTION ENTRANCE

OTHER: Install stabilized rock construction entrance for work at NEW BEACH ACCESS ROAD
at appropriate point in construction sequence prior to any slope work

REMARKS: Disposal areas, stockpiles, and haul roads shall be constructed in a
manner that will minimize and control the sediment that may enter receiving
waterways. Disposal areas shall not be located in any waterway, waterbody or
streambed. Construction staging areas and vehicle maintenance areas shall be
constructed by the contractor in a manner which minimizes the runoff of all
pollutants. All waterways shall be cleared as soon as practical of temporary
embankments, temporary bridges, matting, falsework, piling, debris, and other
obstructions placed during construction operations that are not part of the
finished work.

PERMITS:

CONTRACTOR SHALL UTILIZE THE STORM WATER POLLUTION PREVENTION PLAN
AND SHALL OBTAIN ALL PERMITS AND FULFILL ALL PERMIT REQUIREMENTS, INCLUDING
FEES, FOR T.C.E.Q. GENERAL PERMIT NO. TXR 150000 RELATING TO DISCHARGES
FROM CONSTRUCTION ACTIVITIES. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED
TO NOTICE OF INTENT (NOI), REQUIRED SITE POSTINGS AND NOTICE OF TERMINATION
(NOT). ALL ACTIVITIES WILL BE PERFORMED AT THE MILESTONES REQUIRED BY THE
T.C.E.Q. NO SEPARATE PAYMENT WILL BE MADE FOR SUCH PERMITS.

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK AND SHEET PROJECT NOTES.

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

F. D. Birk
 Freese and Nichols, Inc.
 Registered Engineering Firm F-2144

800 N. Shoreline Blvd, Suite
 1600N Corpus Christi, Texas
 78401-3717
 Phone - (361) 561-6500
 Fax - (361) 561-6501

CITY of CORPUS CHRISTI
 TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)

CITY OF CORPUS CHRISTI
 STORM WATER POLLUTION PREVENTION
 PLAN NOTES

1 OF 3

REVISION NO.	DESCRIPTION	DATE	BY

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET 34 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

ACAD: Rel 18.2s (LMS Tech) User: 02293 [CORPUS CHRISTI] JIN: STANDARD-X-FNICC-34TBLK.DWG LAYOUT: Model 06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1

Stormwater Pollution Prevention – Clean Water Act Section 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation.

- No Action Required Required Action

- Action No.
1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000
 2. Comply with the SW3P and revise when necessary to control pollution or required by the Engineer.
 3. Post Construction Site Notice, (CSN) with SW3P information on or near the site, accessible to the public and TCEQ, EPA or other inspectors.
 4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, submit NOI to TCEQ and the Engineer.

Work in or near Streams, Waterbodies and Wetlands Clean Water Act Sections 401 & 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas.

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

- No Permit Required
- Nationwide Permit 14 – PCN not Required (less than 1/10th acre waters or wetlands affected)
- Nationwide Permit 14 – PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
- Individual 404 Permit Required
- Other Nationwide Permit Required: NWP# _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1. CONTRACTOR SHALL NOT TRAVERSE BEACH WITH CONSTRUCTION EQUIPMENT BELOW EL. 2.0 OR EXCAVATE BELOW EL. 2.0
- 2.
- 3.
- 4.

Best Management Practices:

- | | | |
|--|---|--|
| Erosion | Sedimentation | Post-Construction TSS |
| <input type="checkbox"/> Temporary Vegetation | <input checked="" type="checkbox"/> Silt Fence | <input type="checkbox"/> Vegetative Filter Strips |
| <input checked="" type="checkbox"/> Blankets/Matting | <input type="checkbox"/> Rock Berm | <input type="checkbox"/> Retention/Irrigation Systems |
| <input checked="" type="checkbox"/> Mulch | <input type="checkbox"/> Triangular Filter Dike | <input type="checkbox"/> Extended Detention Basin |
| <input checked="" type="checkbox"/> Sodding | <input type="checkbox"/> Sand Bag Berm | <input type="checkbox"/> Constructed Wetlands |
| <input type="checkbox"/> Interceptor Swale | <input type="checkbox"/> Straw Bale Dike | <input type="checkbox"/> Wet Basin |
| <input type="checkbox"/> Diversion Dike | <input type="checkbox"/> Brush Berms | <input type="checkbox"/> Erosion Control Compost |
| <input type="checkbox"/> Erosion Control Compost | <input type="checkbox"/> Erosion Control Compost | <input type="checkbox"/> Mulch Filter Berm and Socks |
| <input type="checkbox"/> Mulch Filter Berm and Socks | <input checked="" type="checkbox"/> Mulch Filter Berm and Socks | <input type="checkbox"/> Compost Filter Berm and Socks |
| <input type="checkbox"/> Compost Filter Berm and Socks | <input type="checkbox"/> Compost Filter Berm and Socks | <input type="checkbox"/> Vegetation Lined Ditches |
| | <input type="checkbox"/> Stone Outlet Sediment Traps | <input type="checkbox"/> Sand Filter Systems |
| | <input type="checkbox"/> Sediment Basins | |

III. Cultural Resources

In the event historical issues or archeological artifacts (bones, burnt rock, flint, pottery, etc.) are found during construction, cease work in the immediate area and contact the Engineer immediately.

- No Action Required Required Action

- Action No.
- 1.
 - 2.
 - 3.
 - 4.
 - 5.

IV. Vegetation Resources

Preserve native vegetation to the extent practical.

- No Action Required Required Action

Action No.

1. PRESERVE EXISTING VEGETATION FOR USE IN MITIGATION BY STRIPPING TOPSOIL AND PLANT MATERIAL FOR RE-USE IN MITIGATION AREAS ALONGSIDE ROADWAY AND ENHANCEMENT AREAS ON ADJACENT PROPERTY.
2. RE-PLANTED VEGETATION SHALL BE COVERED WITH A BIODEGRADABLE BURLAP NETTING TO HELP SHADE AND MAINTAIN VEGETATION UNTIL ESTABLISHMENT.
3. WATER VEGETATION DAILY PER WATERING SCHEDULE FOUND IN THE MITIGATION PLAN SHEETS IN THIS PLAN SET.
4. PRESERVE AND PROTECT VEGETATION IN AREAS NOT RECEIVING IMPROVEMENTS BY NOT TRAVERSING WITH EQUIPMENT OR TRUCKS, AND NOT STORING EQUIPMENT, SUPPLIES, OR MATERIALS IN THESE AREAS.

V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Birds.

- No Action Required Required Action

Action No.

1. **SEA TURTLES** – CONDUCT TRAINING TO IDENTIFY SEA TURTLES AND NESTS. ON THE BEACH SIDE OF THE DUNES, BE ON THE LOOKOUT FOR TURTLES AND TURTLE NESTS. DO NOT DISTURB NESTS AND CONTACT TPWD IF TURTLES OR NESTS ARE ENCOUNTERED.
2. **PIPING PLOVERS** – CONDUCT TRAINING TO IDENTIFY PIPING PLOVERS. DO NOT DISTURB PLOVERS RESTING IN DUNES OR FEEDING ON BEACH.
3. **ALPOMADO FALCON** – CONDUCT TRAINING TO IDENTIFY ALPOMADO FALCON AND DO NOT DISTURB IF ENCOUNTERED RESTING OR FEEDING IN DUNES.
- 4.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the Engineer immediately.

VI. Hazardous Materials or Contamination Issues

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets, (MSDS) for all hazardous products used on project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:

- Dead or distressed vegetation (not identified as normal)
- Trash piles, drums, canister, barrels, etc.
- Undesirable smells or odors
- Evidence of leaching or seepage of substances

Any other evidence indicating possible hazardous materials or contamination discovered on site

Hazardous Materials or Contamination Issues Specific to this Project:

- No Action Required Required Action

Action No.

- 1.
- 2.
- 3.
- 4.

VII. Other Environmental Issues

1. DUNE PERMIT FROM TGL0 THROUGH NUECES COUNTY HAS TERMS AND CONDITIONS AND REQUIREMENTS AS SHOWN IN SHEETS 54-55
2. CONTRACTOR SHALL FOLLOW AND ENFORCE ALL DUNES PERMITTING REQUIREMENTS, INCLUDING BUT NOT LIMITED TO:
 - A. MARKING THE BOUNDARY OF THE COMPENSATION AREA ALONG THE SEAWARD EDGE WITH SIGNAGE EVERY 100 LF STATING "DUNES NOURISHMENT AREA. NO ALTERATION OF THIS AREA IS ALLOWED BY LAW."
 - B. WATERING THE DUNES VEGETATION PER THE PRESCRIBED WATERING SCHEDULE IN THIS PLAN SET AND IN THE DUNES MITIGATION PLAN MEMO.
 - C. LIMITING TRAVEL TO WITHIN THE ROADWAY FOOTPRINT PLUS 1 FOOT BEYOND.
 - D. NO STOCKPILING OF EXCAVATED SAND FROM DUNE AREA IS ALLOWED SEAWARD OF THE 1,000-FT DUNE PROTECTION LINE. ALL EXCAVATED SAND TO BE PLACED IMMEDIATELY INTO THE DUNES COMPENSATION AREA TO THE SOUTH TO THE LINES AND GRADES SHOWN IN THESE PLANS.
 - E. TOPSOIL AND PLANT MATERIAL FROM THE ROADWAY EXCAVATION FOOTPRINT SHALL NOT BE STOCKPILED SEAWARD OF THE 1,000-FT DUNE PROTECTION LINE AND MUST BE WATERED AND SHADED BEFORE AND AFTER PLACEMENT ON TOP OF THE DUNES COMPENSATION AREA TO THE LINES AND GRADES SHOWN ON THE PLANS.

- No Action Required Required Action

Action No.

AS DESCRIBED ABOVE

CONSULTANT'S SHEET No. FNI PROJECT: COR21576

6/30/2025



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Corpus Christi, Texas 78401-3717
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Fax - (361) 561-6501

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

FREES & NICHOLS

CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH
(BOND 2020)

CITY OF CORPUS CHRISTI
STORM WATER ENVIRONMENTAL PERMITS
ISSUED AND COMMENTS (EPIC) 2 OF 3

SHEET 35 of 55
RECORD DRAWING NO.
STR-1019
CITY PROJECT # 21062

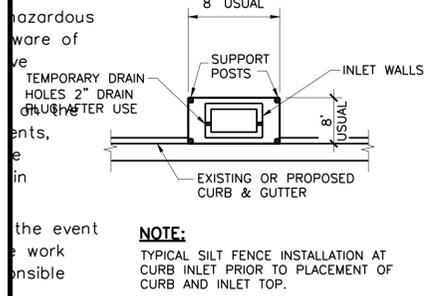
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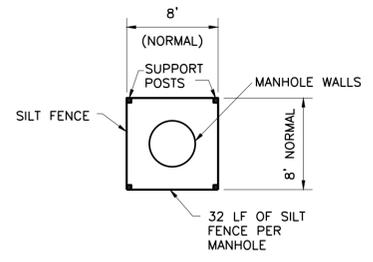
REVISION NO. DATE BY DESCRIPTION

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK AND SHIPP PROJECT NOTES

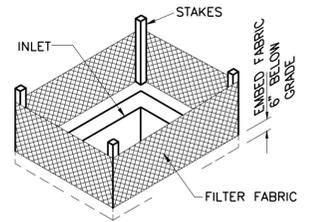
ISSUED FOR CONSTRUCTION



CURB INLET - PLAN
NOT TO SCALE

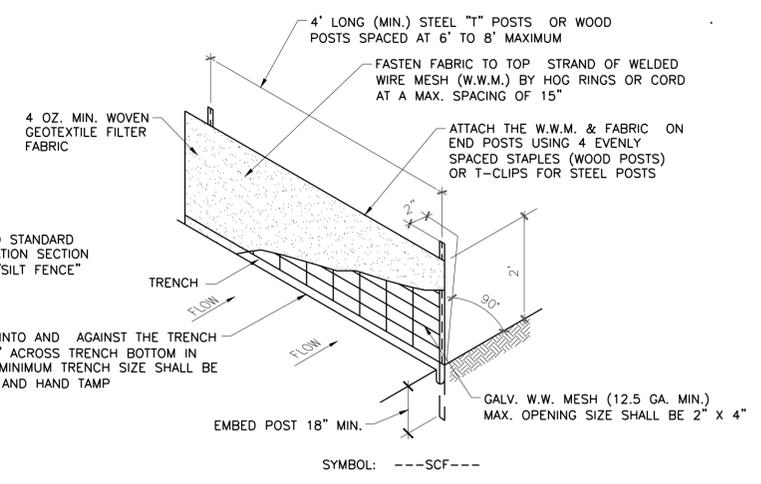


MANHOLE - PLAN
NOT TO SCALE



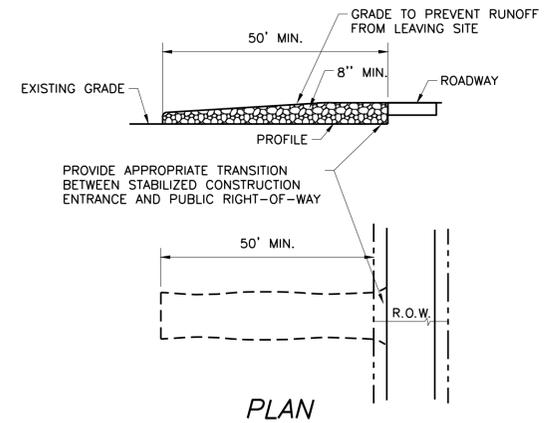
TEMPORARY FILTER FABRIC INLET PROTECTION DETAIL
NOT TO SCALE

- NOTES:**
1. FILTER FABRIC INLET PROTECTION SHALL BE USED DURING CONSTRUCTION TO CONTROL SEDIMENTATION.
 2. PERIMETER SILT FENCING AROUND INLET LOCATIONS SHALL BE INSTALLED AFTER PIPE IS PLACED.
 3. FABRIC MATERIAL SHALL BE A NET-REINFORCED FENCE, USING WOVEN GEOTEXTILE FABRIC.
 4. FENCE SHOULD BE REMOVED UPON COMPLETION OF CONSTRUCTION.



TEMPORARY SEDIMENT CONTROL FENCE DETAIL
NOT TO SCALE

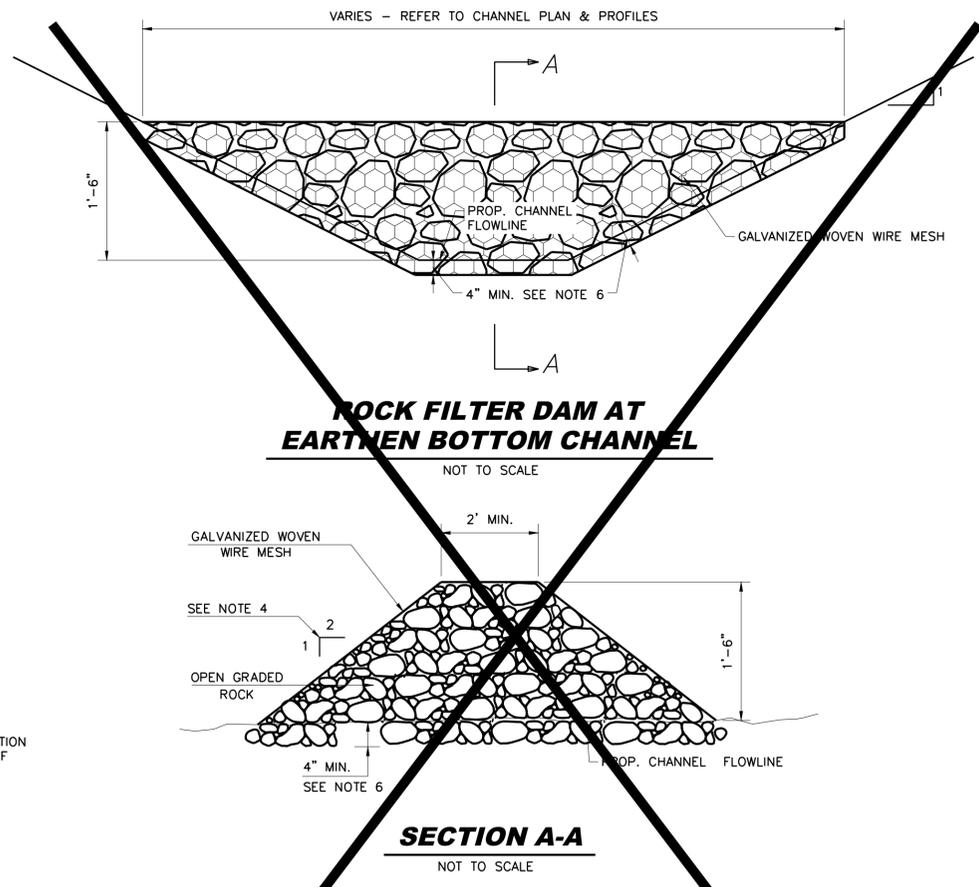
- SEDIMENT CONTROL FENCE USAGE GUIDELINES:**
- SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.
- SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 100 GPM/FT. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE LARGER THEN 2 ACRES.
- * THE GUIDELINES SHOWN HERE ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.



STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

- CONSTRUCTION ENTRANCE NOTES:**
1. STONE SIZE: 3-5" OPEN GRADED ROCK.
 2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 50'.
 3. THICKNESS: NOT LESS THAN 8".
 4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
 5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
 6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
 7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

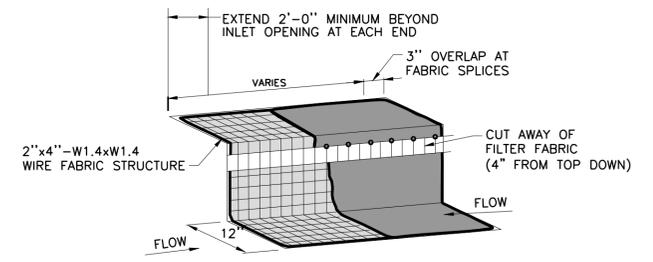
ISSUED FOR CONSTRUCTION



ROCK FILTER DAM AT EARTHEN BOTTOM CHANNEL
NOT TO SCALE

SECTION A-A
NOT TO SCALE

- ROCK FILTER DAM NOTES:**
1. IF SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, FILTER DAMS SHOULD BE PLACED NEAR THE TOE OF SLOPES WHERE EROSION IS ANTICIPATED, UPSTREAM AND/OR DOWNSTREAM AT DRAINAGE STRUCTURES, AND IN ROADWAY DITCHES AND CHANNELS TO COLLECT SEDIMENT.
 2. MATERIALS (AGGREGATE, WIRE MESH, SANDBAGS, ETC.) SHALL BE AS INDICATED BY THE SPECIFICATIONS FOR "ROCK FILTER DAMS FOR EROSION AND SEDIMENT CONTROL."
 3. THE ROCK FILTER DAM DIMENSIONS SHALL BE AS INDICATED ON THE PLANS.
 4. SIDE SLOPES SHOULD BE 2:1 OR FLATTER.
 5. ROCK FILTER DAM SHALL BE A MINIMUM OF TWO FEET IN THICKNESS AT TOP OF DAM.
 6. FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO EXISTING GROUND.
 7. THE SEDIMENT TRAP FOR PONDING OF SEDIMENT LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
 8. ROCK FILTER DAM SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1/2" DIAMETER HEXAGONAL OPENINGS. THE AGGREGATE SHALL BE PLACED ON THE MESH TO THE HEIGHT & SLOPE SPECIFIED. THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM USE THE MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
 9. FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK, ETC.)
 10. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.



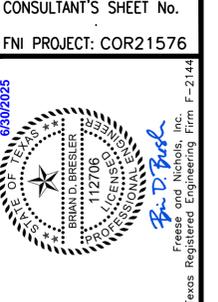
CURB INLET PROTECTION DETAIL
NOT TO SCALE

- CURB INLET PROTECTION NOTES:**
1. TO HOLD THE FILTER DIKE IN PLACE, 20 LB SANDBAGS SHALL BE USED AT 3' O.C. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1"x4" BOARD, SECURED WITH 1/4" OR 3/8" CONCRETE SCREWS. THE 1/4" OR 3/8" CONCRETE SCREWS SHALL BE ATTACHED TO THE GUTTER BY DRILLING AN APPROPRIATE PILOT HOLE WITH A CONCRETE BIT AND INSERT PLASTIC FASTENERS. THE TOP OF THE SCREW SHALL BE RECESSED BELOW THE TOP OF THE BOARD. THE SCREWS SHALL BE PLACED ON 3' O.C. THIS METHOD IS USED IN LIEU OF SANDBAGS, IN THE GUTTER ONLY, TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, EITHER LEAVE THE PLASTIC FASTENERS IN PLACE, OR REMOVE THE PLASTIC FASTENERS, CLEAN ANY DIRT/DEBRIS FROM THE SCREW LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH THE SURFACE OF THE GUTTER. THIS METHOD SHALL NOT BE USED ON THE INLET IN LIEU OF SANDBAGS.
 2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
 3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2". INLET PROTECTION SHALL BE REPLACED AS NECESSARY DURING CONSTRUCTION DUE TO DAMAGE OR DETERIORATION (SUBSIDIARY TO INLET PROTECTION).
 4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND ONLY REMOVE INLET PROTECTION IF DIRECTED BY THE CITY OF CORPUS CHRISTI, OR IF CONTRACTOR OBSERVES AN IMMINENT THREAT OF FLOODING OF SURROUNDING PROPERTY.
 5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

ACAD File: 18.2s (LMS Tech)
User: 02293
[CORPUS CHRISTI] - FNIC - 341BLK.DWG LAYOUT: Model
06/12/2013 1:36:32 P.M. LTS: 1.00 PSLTS: 1

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FNI PROJECT: COR21576
6/30/2025
THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK



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78401-3717
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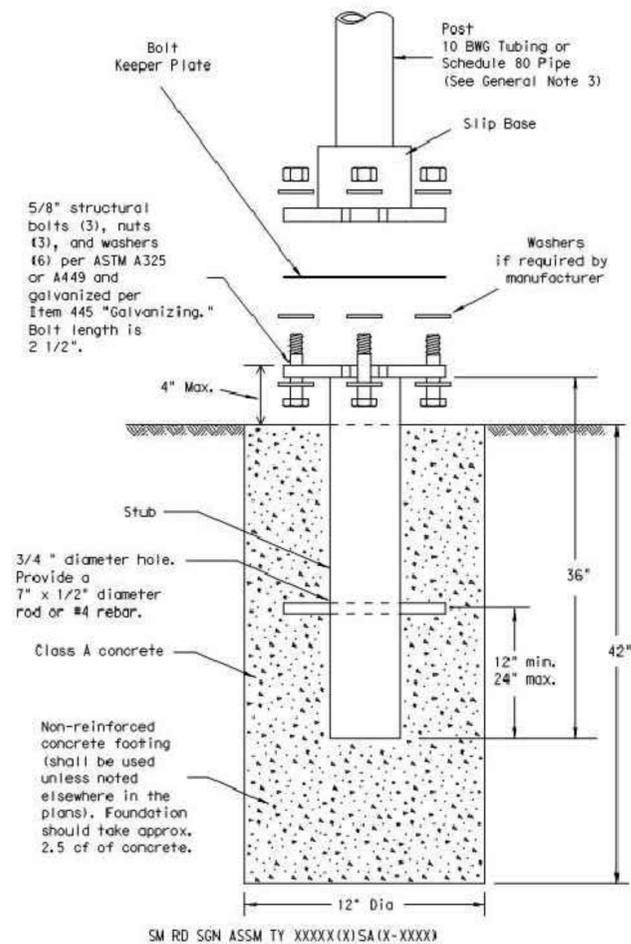
CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH
(BOND 2020)
CITY OF CORPUS CHRISTI
STORM WATER POLLUTION PREVENTION
STANDARD DETAILS 3 OF 3

SHEET 36 of 55
RECORD DRAWING NO.
STR-1019
CITY PROJECT # 21062

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TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

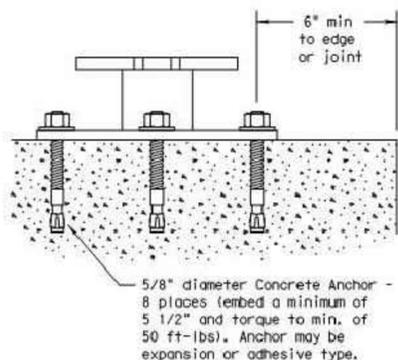


SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxyes and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

GENERAL NOTES:

- Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
- Material used as post with this system shall conform to the following specifications:
 - 10 BWG Tubing (2.875" outside diameter)
 - 0.134" nominal wall thickness
 - Seamless or electric-resistance welded steel tubing or pipe
 - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 - Other steels may be used if they meet the following:
 - 55,000 PSI minimum yield strength
 - 70,000 PSI minimum tensile strength
 - 20% minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
 - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
 - Galvanization per ASTM A123 or ASTM A653 G210. For pre-coated steel tubing (ASTM A653), recast tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
 - Schedule 80 Pipe (2.875" outside diameter)
 - 0.276" nominal wall thickness
 - Steel tubing per ASTM A500 Gr C
 - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
 - 46,000 PSI minimum yield strength
 - 62,000 PSI minimum tensile strength
 - 21% minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
 - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
 - Galvanization per ASTM A123
- See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: <http://www.txdot.gov/publications/traffic.htm>
- Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation

- Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
- The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
- Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
- Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
- The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support

- Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
- Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

Texas Department of Transportation
Traffic Operations Division

**SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM**

SMD(SLIP-1)-08

© TxDOT July 2002		DIR TxDOT	CR1 TxDOT	DIR TxDOT	CR1 TxDOT
9-08	REVISIONS	CONT	SECT	JOB	HIGHWAY
		DIST	COUNTY		SHEET NO.

26B

ISSUED FOR CONSTRUCTION

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK.

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

6/30/2025

Freese and Nichols, Inc.
 Texas Registered Engineering Firm F-21144

FREES & NICHOLS

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 1600N Corpus Christi, Texas
 78401-3717
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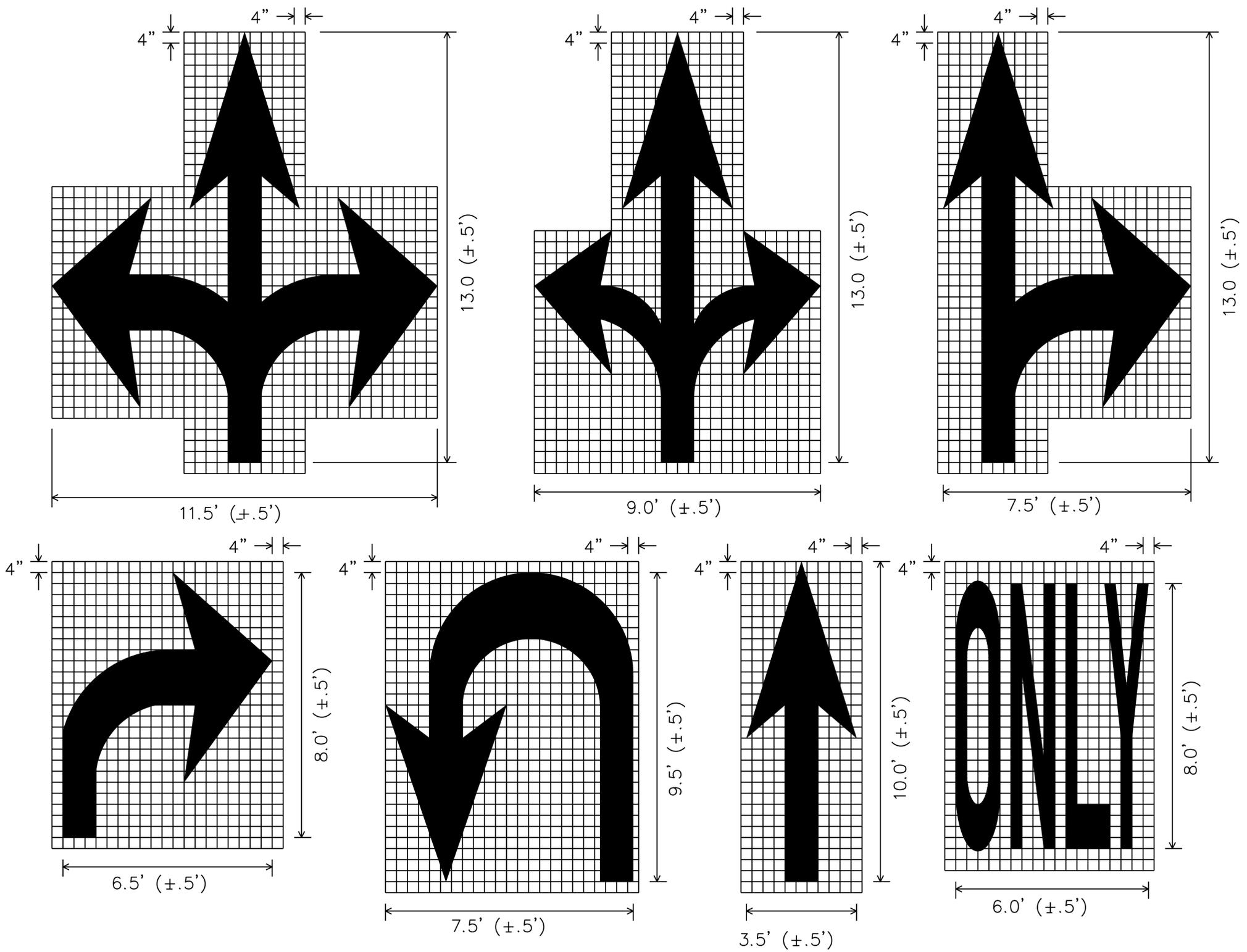
**CITY OF CORPUS CHRISTI
TEXAS**
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)
 SIGN MOUNTING DETAILS
 TRIANGULAR SLIPBASE SYSTEM

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

VERIFY SCALE

SHEET 37 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062



- GENERAL NOTES:
- Minimum 8 foot white markings should be used, unless otherwise noted. If message consists of more than one word, it should be placed with first word nearest the driver.
 - These details are standard size for normal installation; sizes may be reduced approximately one-third for low speed urban conditions; larger sizes may be needed for freeways, above average speed conditions or other critical locations.
 - The longitudinal space between markings should be at least four times the height of the markings, on low speed roads, but should not exceed ten times the height under any condition.
 - Markings considered appropriate for use when warranted include the following:
 - A. Regulatory
 - STOP
 - RIGHT (LEFT) TURN ONLY
 - 25 MPH
 - SYMBOL ARROWS
 - B. Warning
 - STOP AHEAD
 - SIGNAL AHEAD
 - SCHOOL
 - SCHOOL X-ING
 - PED X-ING
 - R X R (see RCPM standard)
 - C. Guide
 - US XXX
 - ROUTE XXX
 - STATE XXX
 Other words or symbols may be necessary under certain conditions.
 - Uncontrolled use of pavement markings can result in driver confusion. Word and symbol markings should be no more than three lines.
 - The word "STOP" shall not be used on the pavement unless accompanied by a Stop line and Stop sign. The word "STOP" shall not be placed on the pavement in advance to a stop line, unless every vehicle is required to stop at all times.
 - Pavement markings should generally be no more than one lane in width, with School messages being the exception. For details of School and School crossing pavement markings, refer to Part VII of the "Texas Manual on Uniform Traffic Control Devices".
 - Spacing between letters should be approximately 4 inches. The width of letters may vary depending on the width of the travel lanes.
 - Lane-Use arrow markings may be used to convey either guidance or mandatory messages. Arrows used to convey a mandatory movement must be accompanied by standard signs and the pavement marking word "ONLY".
 - Pavement markings are to be located as specified elsewhere in the plans.

SPACING BETWEEN LINES OF PAVEMENT MARKINGS	
MPH	SPACING
≤ 45	4 TIMES THE LETTER HEIGHT
> 45	MINIMUM - 4 TIMES THE LETTER HEIGHT MAXIMUM - 10 TIMES THE LETTER HEIGHT

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.
FNI PROJECT: COR21576

6/30/2025


 Paul D. Bush
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 Texas Registered Engineering Firm F-2144


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CITY OF CORPUS CHRISTI
 TEXAS
 Department of Engineering Services

REVISION NO.	DESCRIPTION	DATE	BY

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)

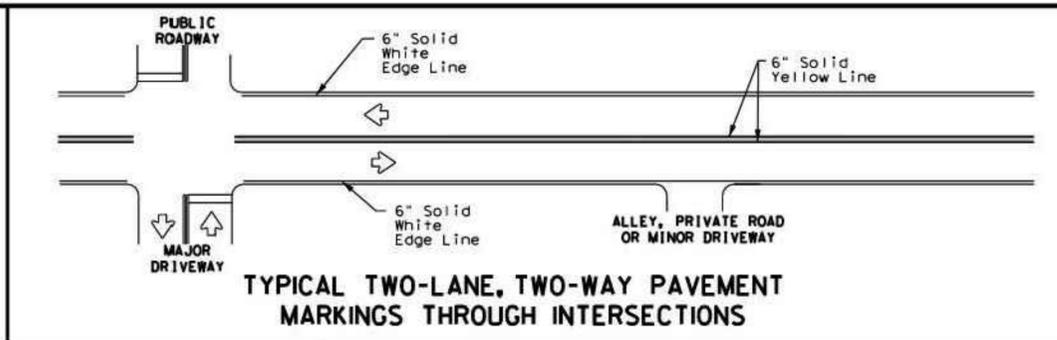
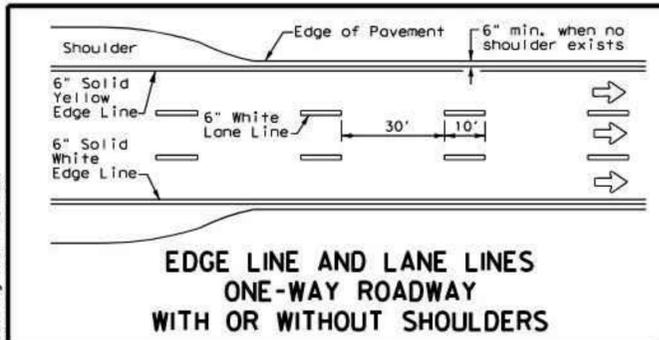
STANDARD PAVEMENT MARKINGS
 ARROWS AND WORDS

SHEET 38 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
 VERIFY SCALE

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DATE: FILE:



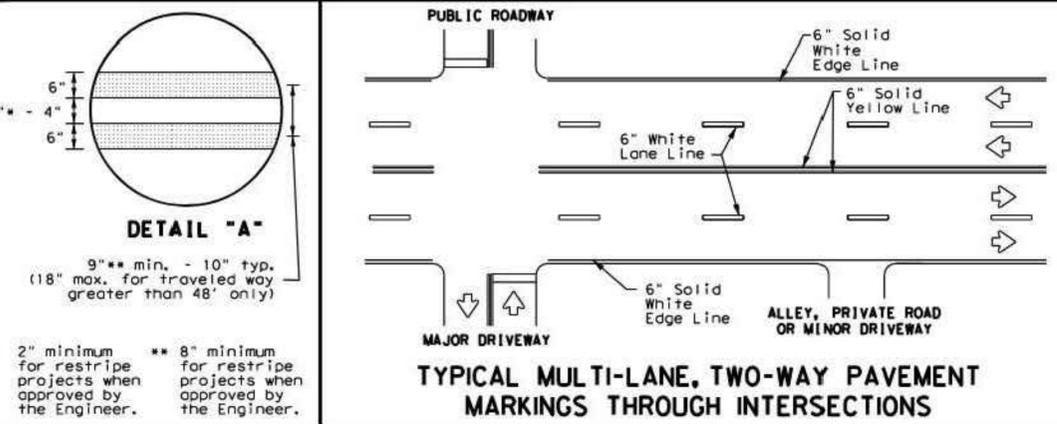
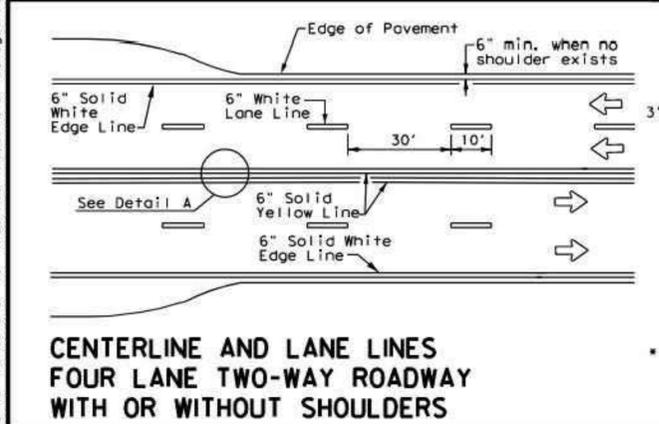
GENERAL NOTES

- Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
- The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

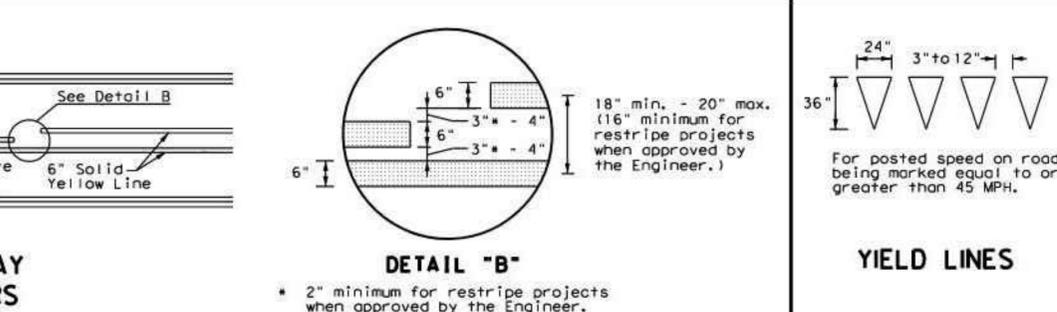
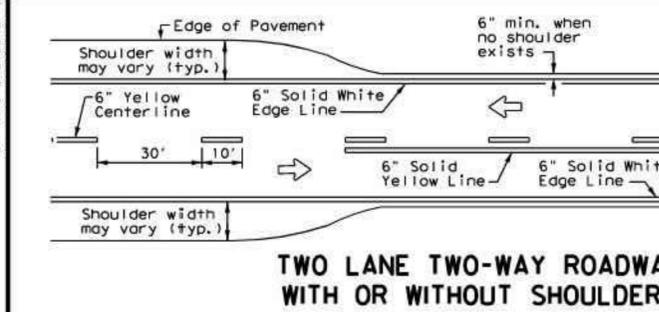
MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

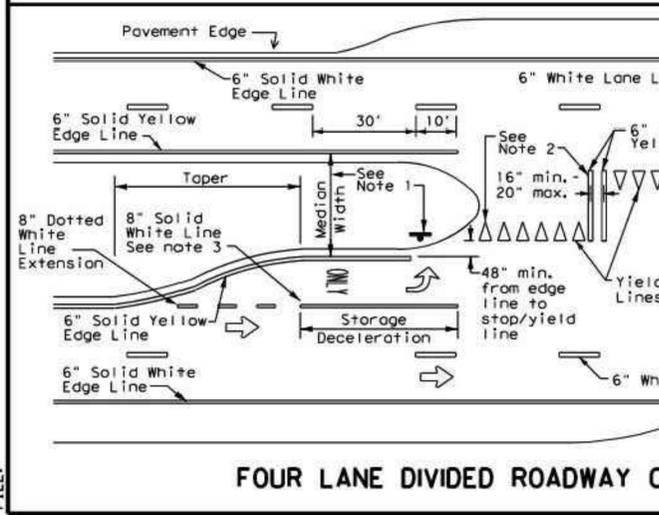
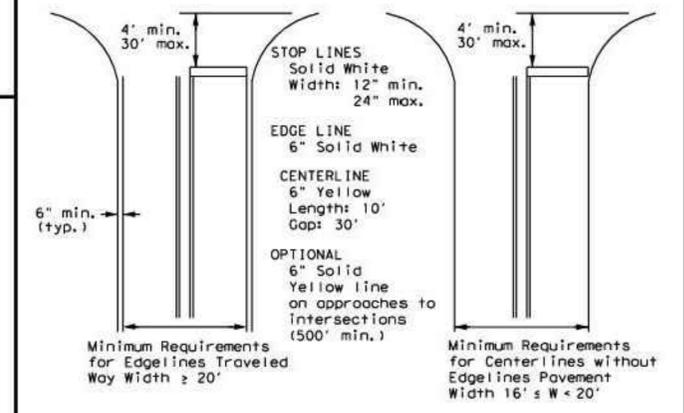
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



* 2" minimum for restripe projects when approved by the Engineer.
 ** 8" minimum for restripe projects when approved by the Engineer.



* 2" minimum for restripe projects when approved by the Engineer.



NOTES

- Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
- Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
- Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

Texas Department of Transportation
 Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-22

FILE: pm1-22.dgn	DN:	CK:	DN:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS				
11-78 8-00 6-20				
8-95 3-03 12-22				
5-00 2-12				
	DIST	COUNTY		SHEET NO.

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

6/30/2025

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CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH (BOND 2020)

TYPICAL STANDARD PAVEMENT MARKING

SHEET 39 of 55
 RECORD DRAWING NO. STR-1019
 CITY PROJECT # 21062

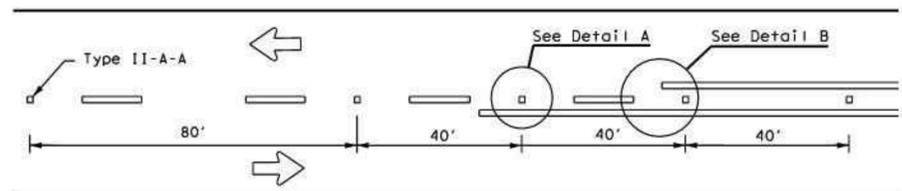
REVISION NO. DESCRIPTION DATE BY

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

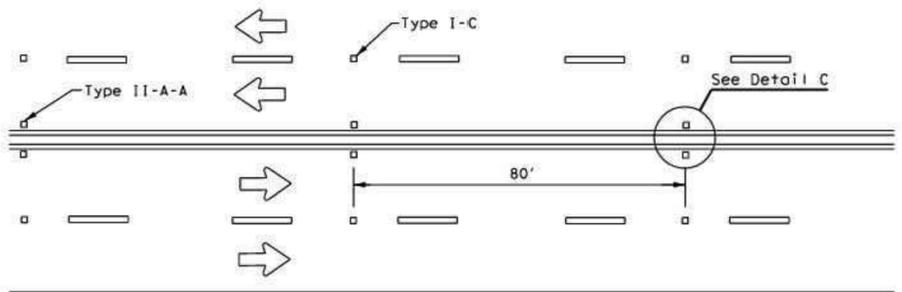
ISSUED FOR CONSTRUCTION

REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

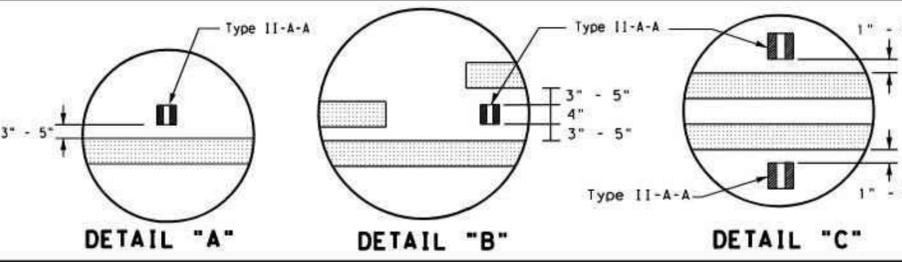
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CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS



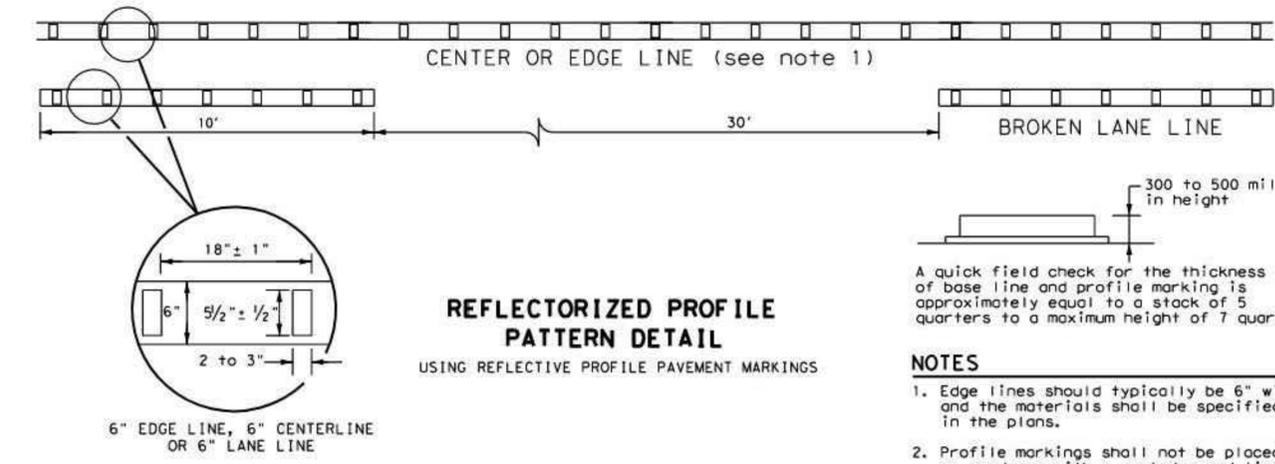
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS



DETAIL "A"

DETAIL "B"

DETAIL "C"

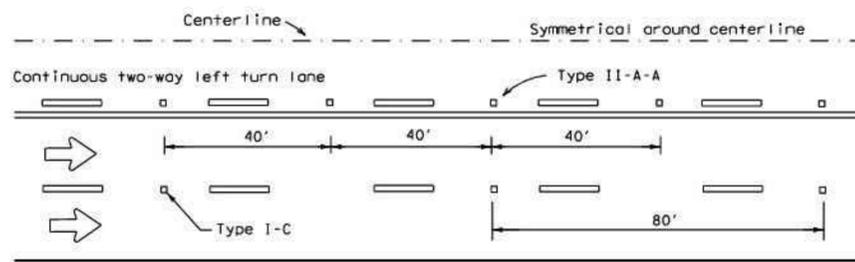


REFLECTORIZED PROFILE PATTERN DETAIL

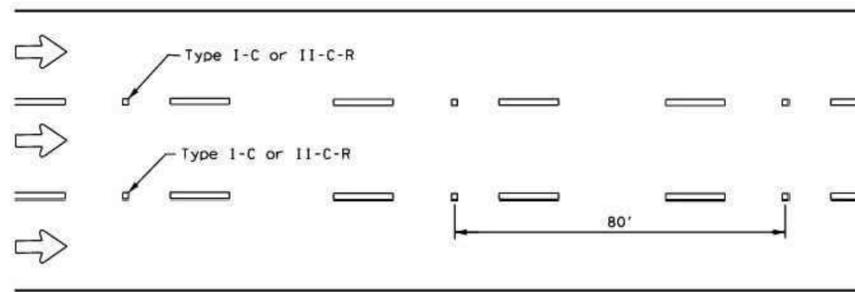
USING REFLECTORIZED PROFILE PAVEMENT MARKINGS

NOTES

- Edge lines should typically be 6" wide and the materials shall be specified in the plans.
- Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.



CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



LANE LINES FOR ONE-WAY ROADWAY (NON-FREWAY FACILITIES)

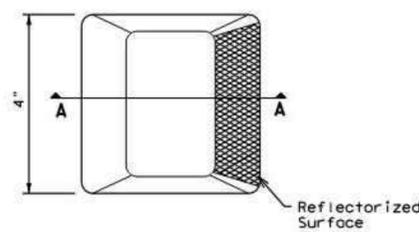
Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.
See Note 3.

GENERAL NOTES

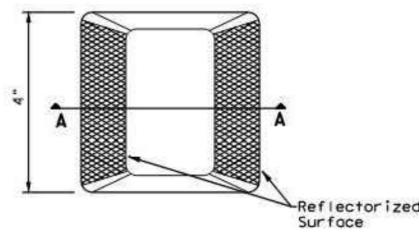
- All raised pavement markers placed along broken lines shall be placed in line with and midway between the stripes.
- On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.
- Use raised pavement marker Type I-C with undivided roadways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

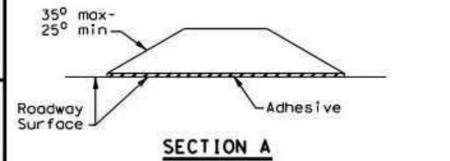
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)



Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS

Texas Department of Transportation
 Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS PM(2) - 22

FILE: pm2-22.dgn	DATE: 12-22-2022	BY: []	DATE: []	BY: []	DATE: []
© TxDOT December 2022		CONT	SECT	JOB	HIGHWAY
4-77	8-00	6-20			
4-92	2-10	12-22			
5-00	2-12				

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK.

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

6/30/2025

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CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH (BOND 2020)

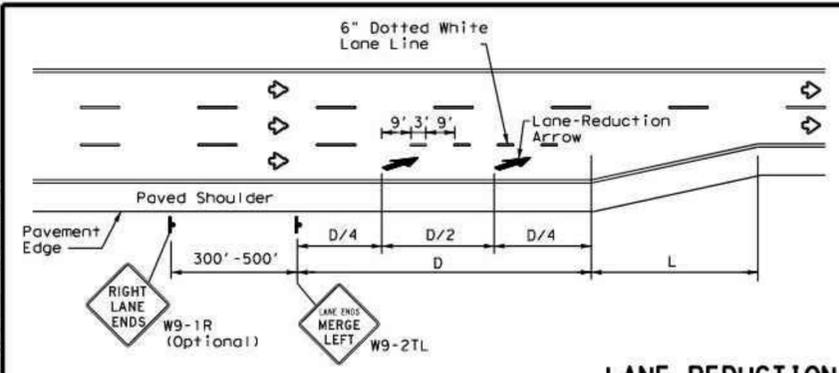
POSITION GUIDANCE USING RAISED MARKERS
 REFLECTORIZED PROFILE MARKINGS

SHEET 40 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

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DATE: FILE:



LANE REDUCTION

NOTES

- Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
- On divided highways, an additional RIGHT LANE ENDS (W9-1R) sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
- Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
- For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

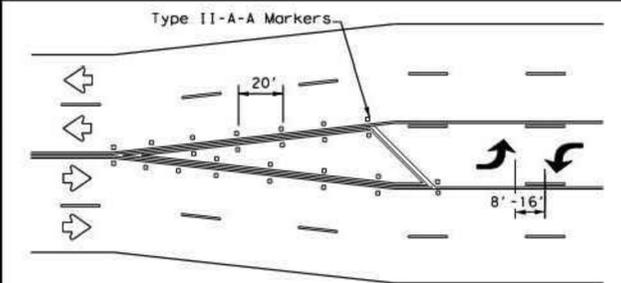
ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed	D (ft)	L (ft)
30 MPH	460	L = WS ² 60
35 MPH	565	
40 MPH	670	L = WS
45 MPH	775	
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

GENERAL NOTES

- Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
- When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
- Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
- Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer. See Chapter 3 of the Roadway Design Manual for additional information on turning lanes or storage lengths.

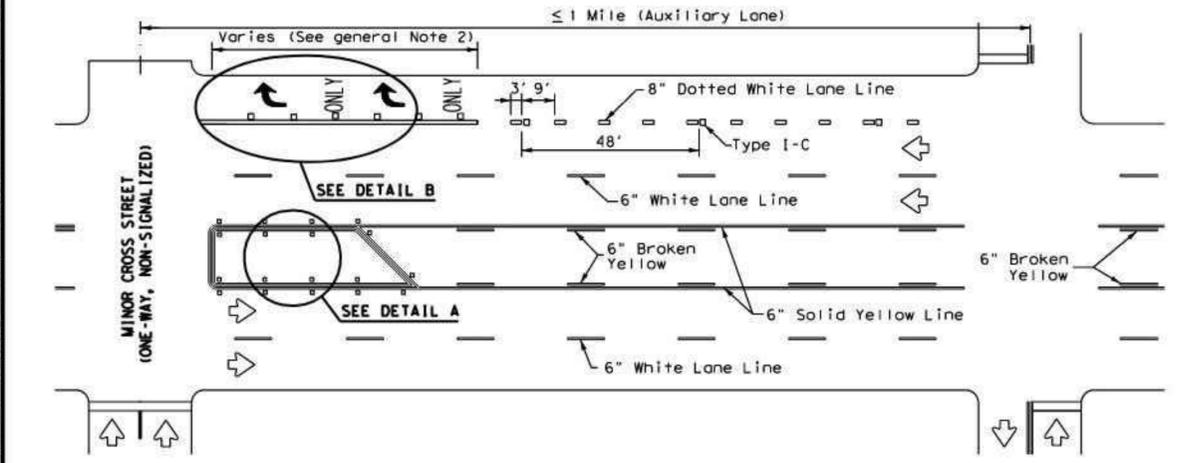
MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

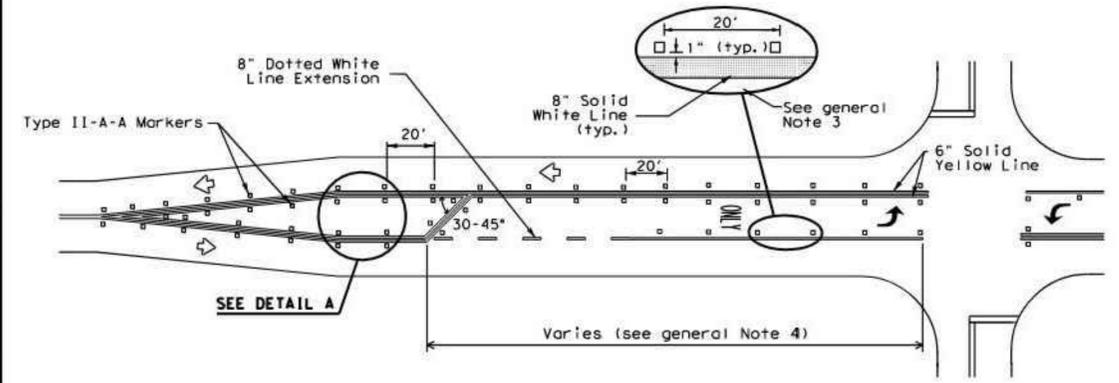


A two-way left-turn (TWLTL) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

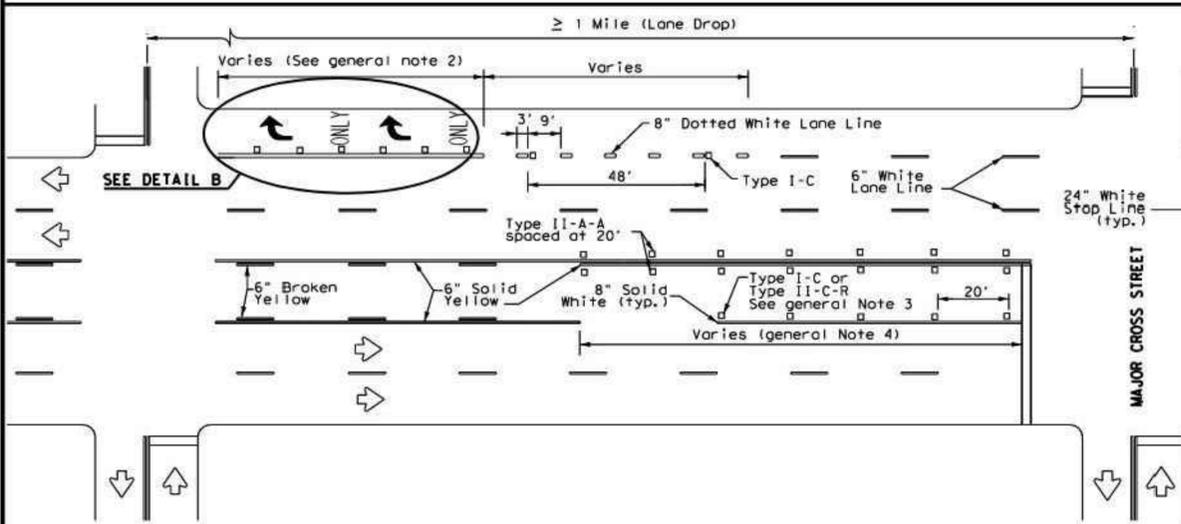
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY



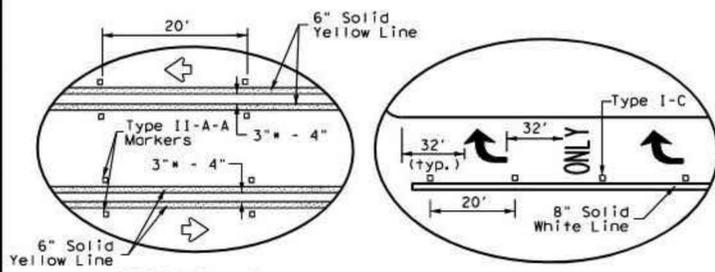
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS



TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



DETAIL A

DETAIL B

* 2" minimum allowed for restripe projects when approved by the Engineer.

Texas Department of Transportation
 Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS PM (3) - 22

FILE: pm3-22.dgn	DATE: 12-22-2022	BY: []	DATE: []	BY: []
© TxDOT December 2022	CONT: []	SECT: []	JOB: []	HIGHWAY: []
REVISIONS:	DIST: []	COUNTY: []	SHEET NO. []	
4-98 3-03 6-20				
5-00 2-10 12-22				
8-00 2-12				

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CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

6/30/2025

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CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)

PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES, DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS

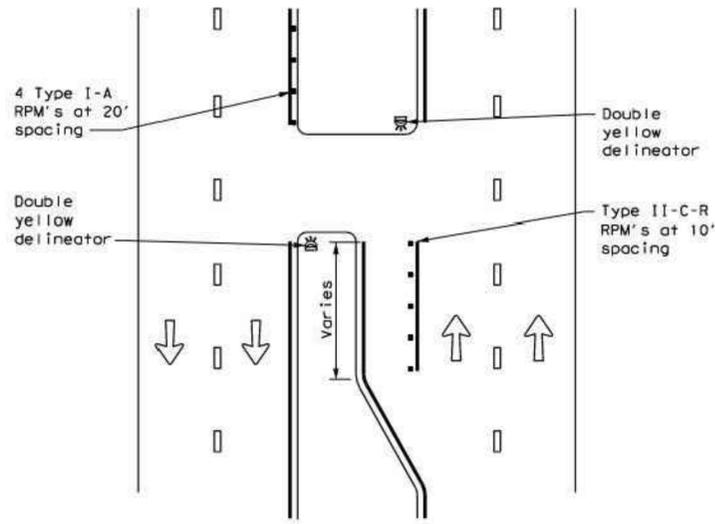
SHEET 41 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

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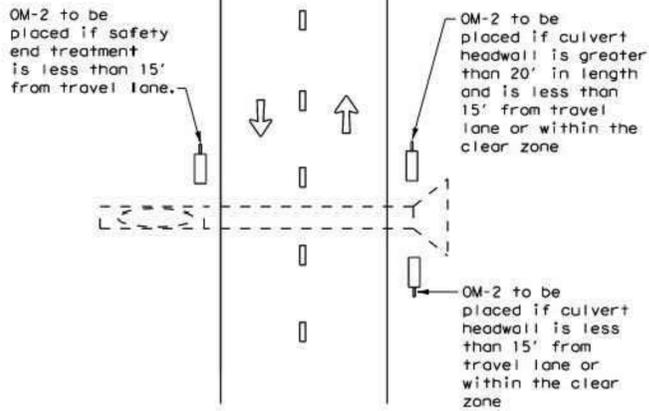
DATE: FILE:

CROSSOVERS



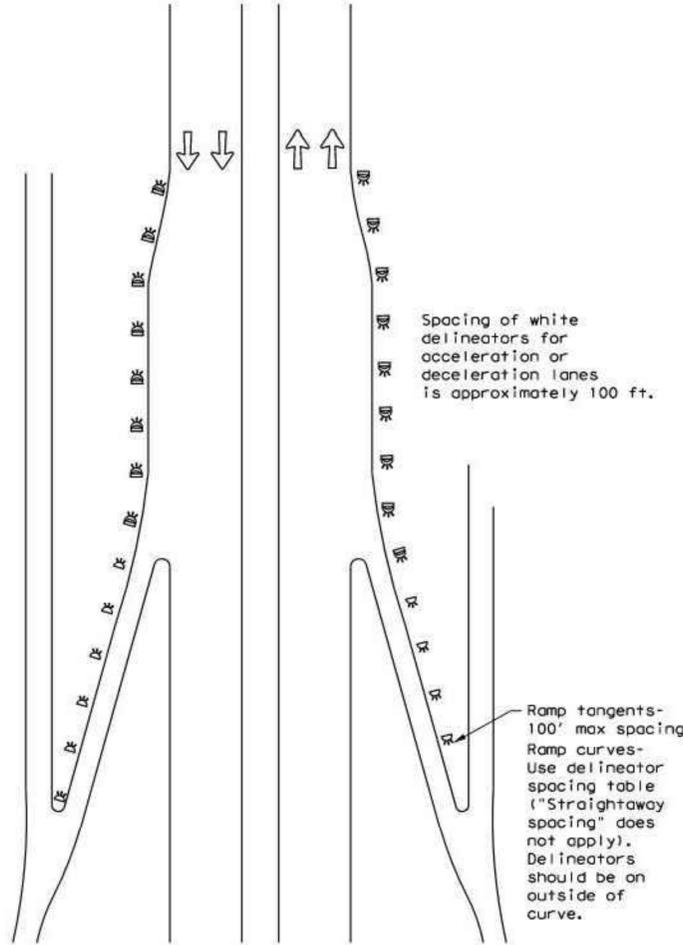
DETAIL 1

FOR CULVERTS WITHOUT MBGF



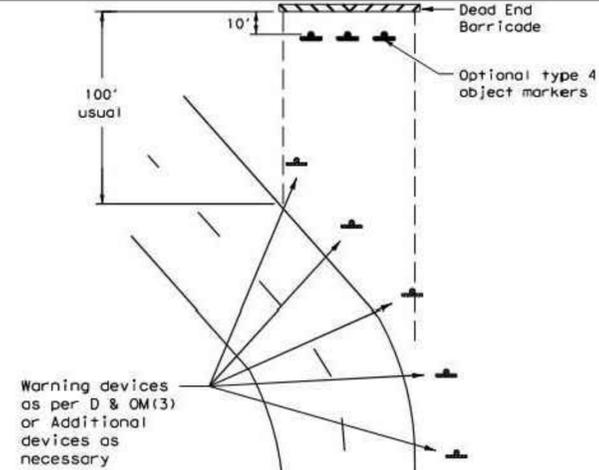
DETAIL 2

FREEWAY DELINEATION FOR RAMPS AND ACCELERATION/DECELERATION LANES



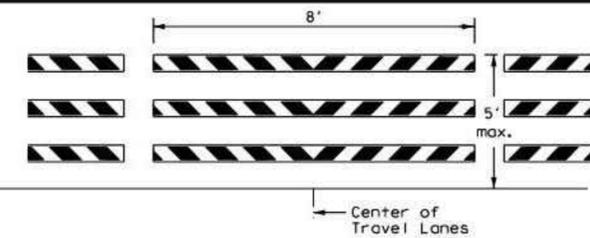
DETAIL 3

TYPICAL APPLICATION OF DEAD END BARRICADE



DETAIL 4

TYPICAL DEAD END BARRICADE INSTALLATION



NOTES

1. Barricade striping shall be red and white reflective sheeting for all permanent road closures.
2. Barricade striping is red and white sloping toward the center of the roadway.
3. Type 3 Barricade Supports should be anchored to soil or pavement as described in compliant Work Zone Traffic Control Devices List, section D.2.f and D.2.g.

DETAIL 5

LEGEND	
	Bidirectional Delineator
	Delineator
	OM-3
	Barricade
	Sign
	OM-2
	Double Delineator

Texas Department of Transportation
 Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(4) -20

FILE: dom4-20.dgn	DN: TXDOT	EN: TXDOT	OW: TXDOT	CR: TXDOT
© TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
3-15	DIST	COUNTY	SHEET NO.	
7-20				

200

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REVISION NO.	DATE	BY	DESCRIPTION

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 FNI PROJECT: COR21576

6/30/2025

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CITY OF CORPUS CHRISTI TEXAS

Department of Engineering Services

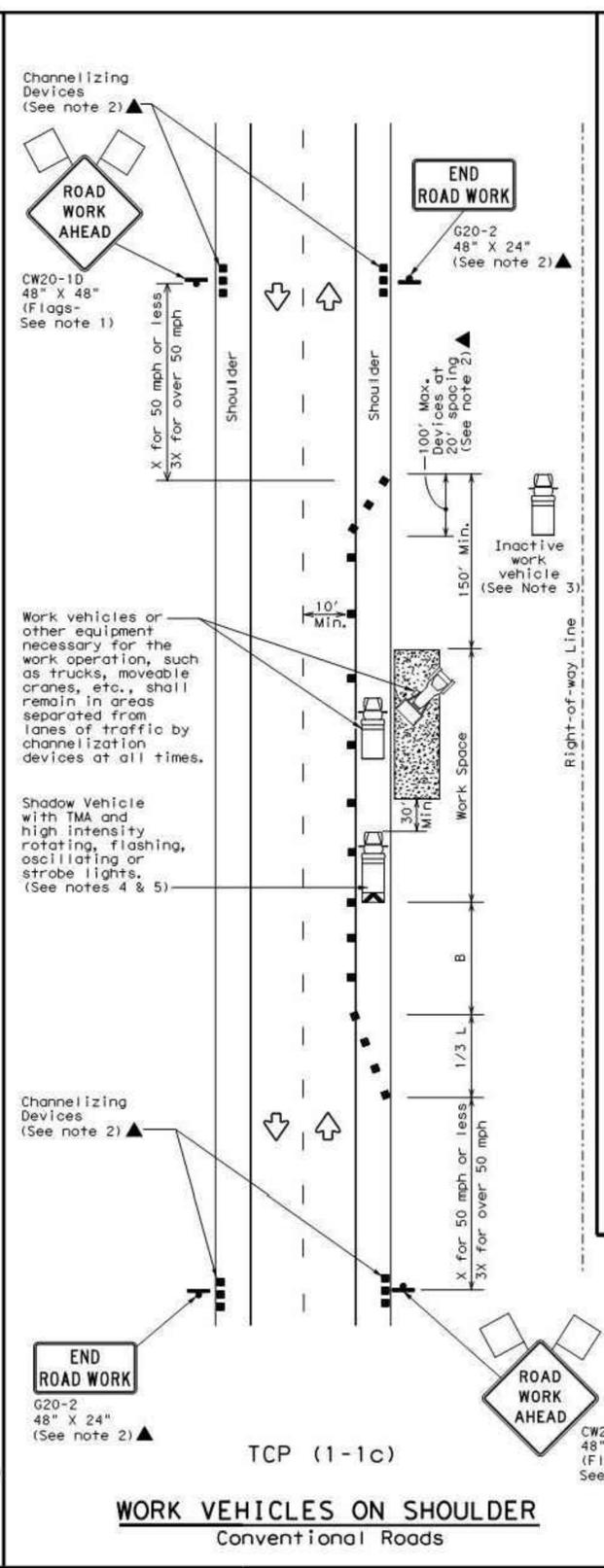
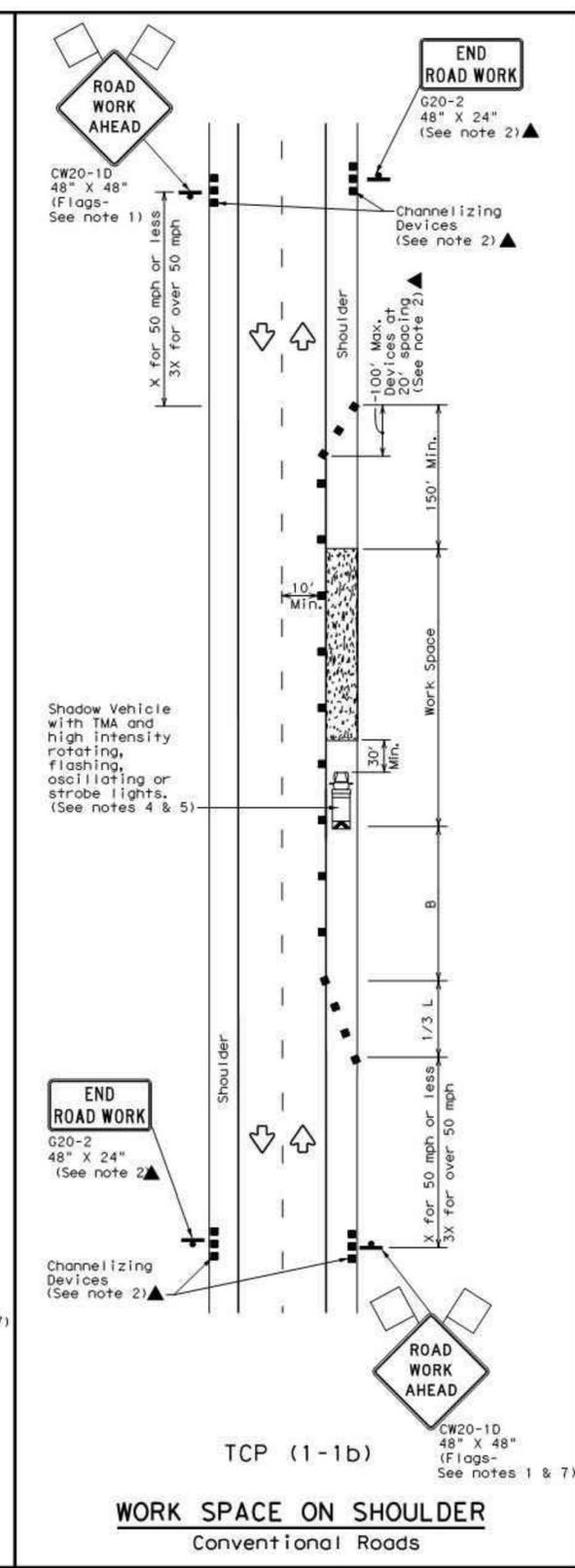
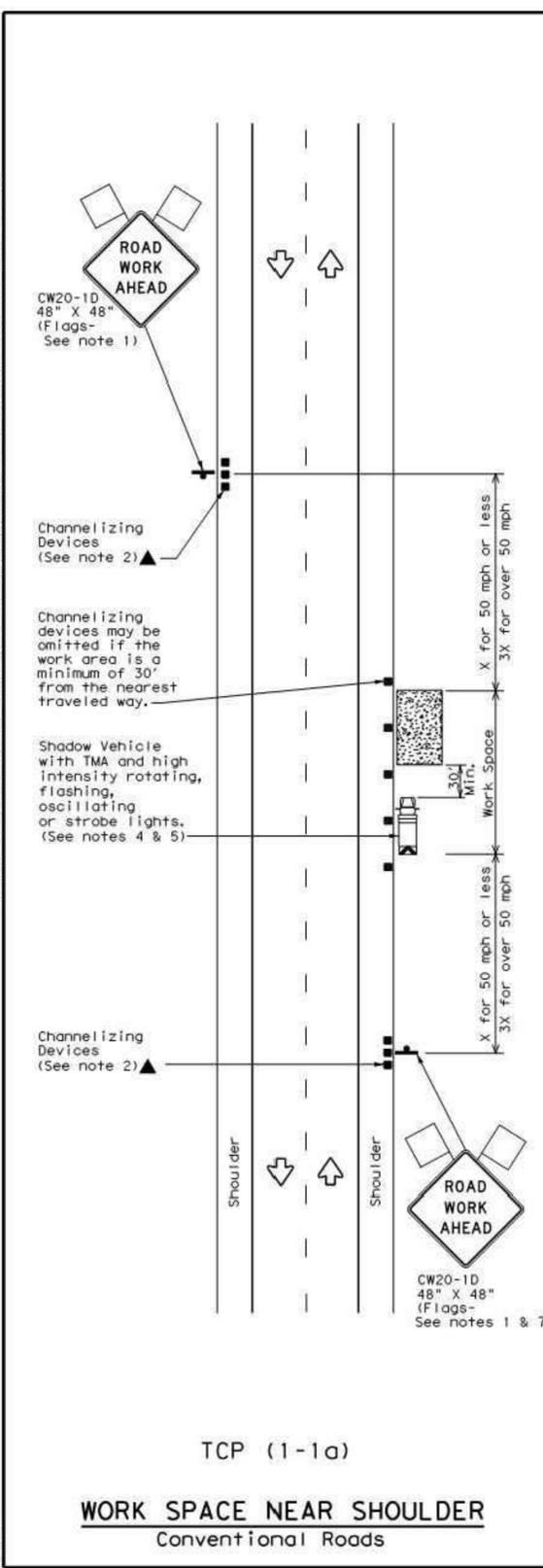
NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH (BOND 2020)

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS (D&OM(4) -20)

SHEET 42 of 55
 RECORD DRAWING NO. STR-1019
 CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

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LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	L = WS ² / 60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60	L = WS	600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75	L = WS	750'	825'	900'	75'	150'	900'	540'
80		800'	880'	960'	80'	160'	1000'	610'

* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓			
		✓		
			✓	
				✓

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
 - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
 - Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
 - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
 - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
 - See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
 - CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.



**TRAFFIC CONTROL PLAN
 CONVENTIONAL ROAD
 SHOULDER WORK**

TCP (1-1) - 18

FILE: tcp1-1-18.dgn	DN: []	CK: []	DN: []	CK: []
© TXDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS:				
2-94 4-98				
8-95 2-12				
1-97 2-18				
151	DIST	COUNTY	SHEET NO.	

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET 43 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

Freese and Nichols, Inc.
 Texas Registered Engineering Firm F-21144

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**CITY of CORPUS CHRISTI
 TEXAS**
 Department of Engineering Services

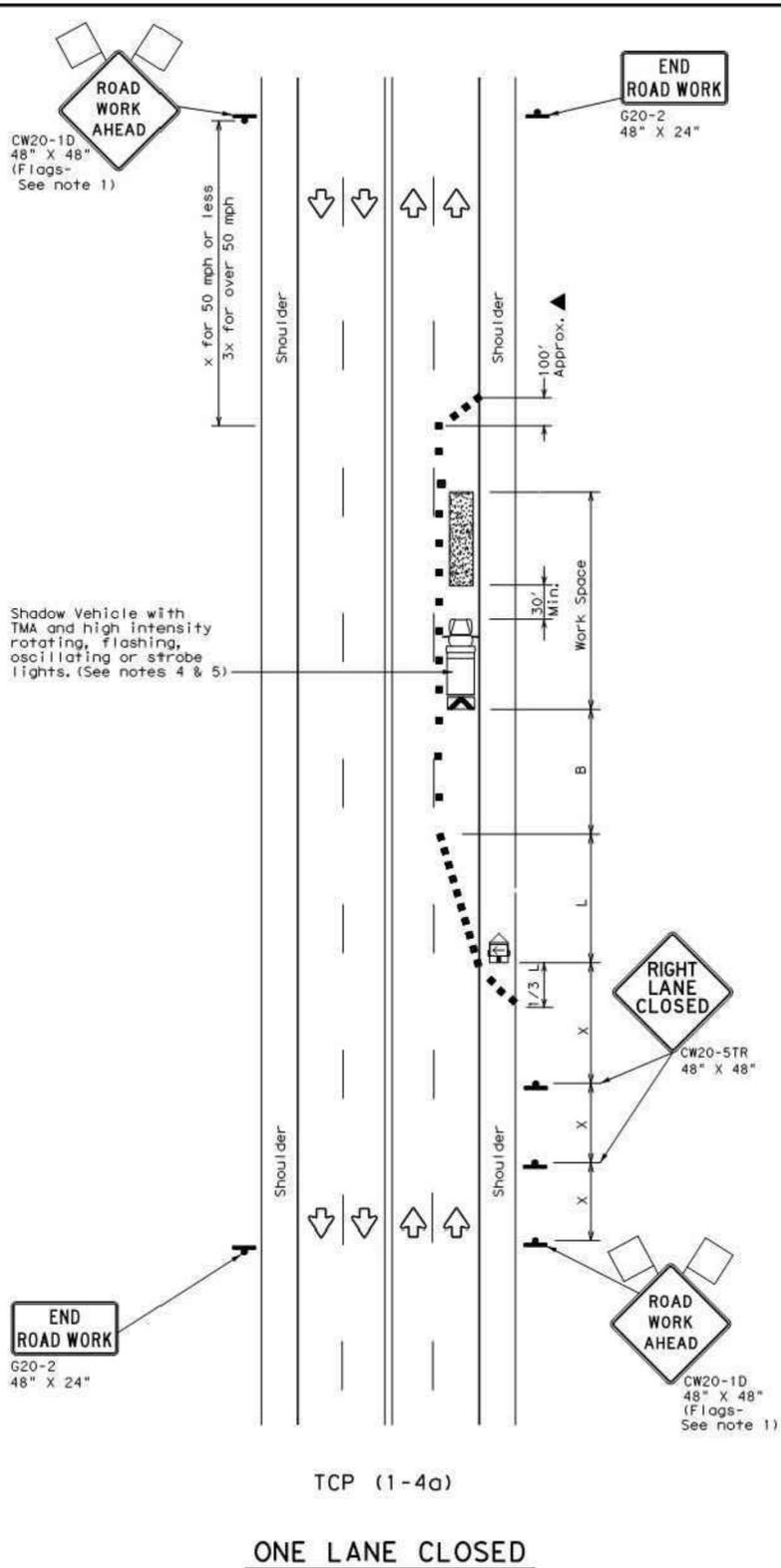
NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)

TXDOT TRAFFIC STANDARD DETAILS

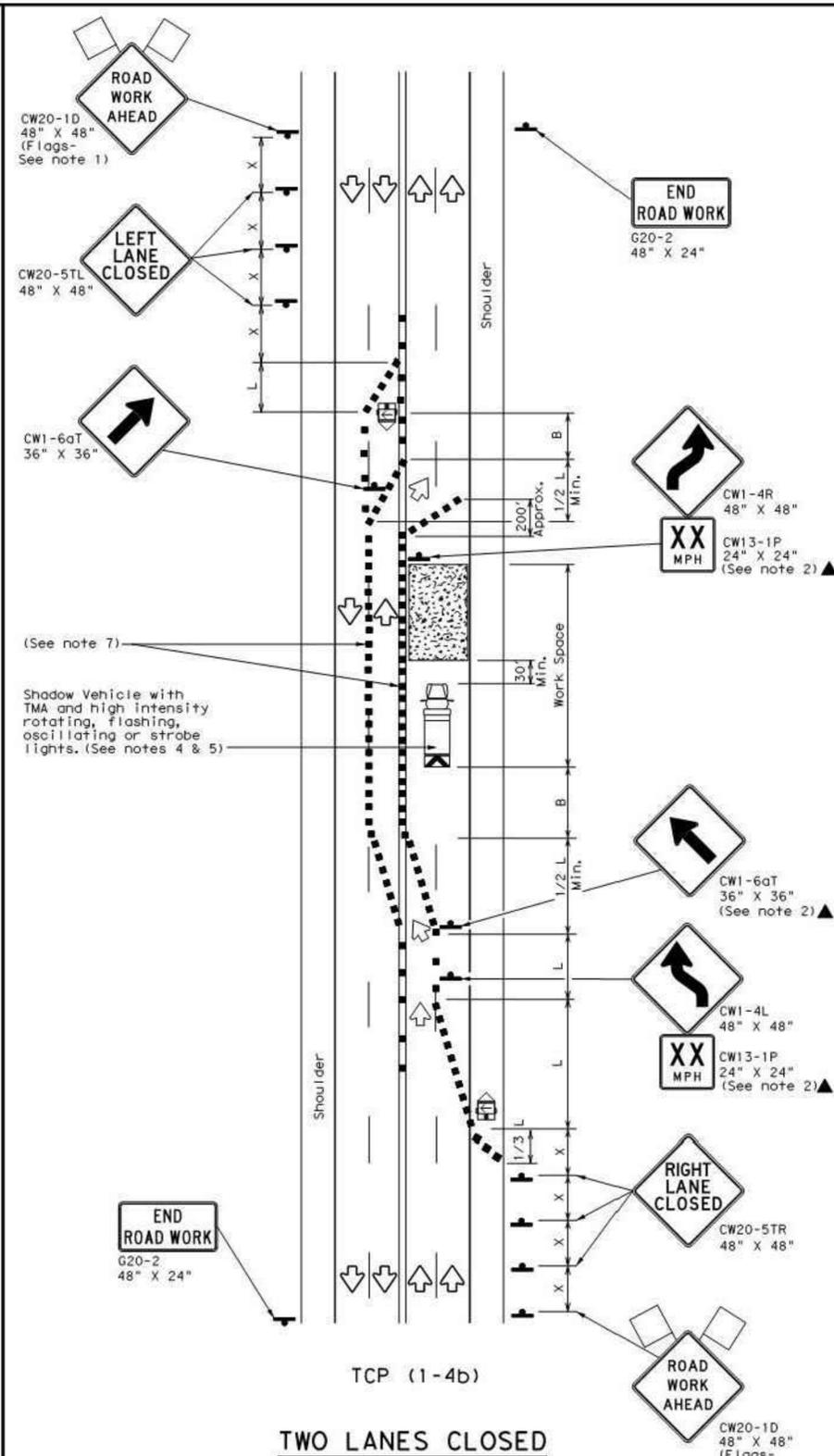
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DATE:
 FILE:



TCP (1-4a)
ONE LANE CLOSED



TCP (1-4b)
TWO LANES CLOSED

LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Flag		Traffic Flow
			Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x"	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	L = WS ² / 60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70	700'	770'	840'	70'	140'	800'	475'	
75	750'	825'	900'	75'	150'	900'	540'	

* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE

	MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
		✓	✓		

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
 - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
 - The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
 - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
 - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
- TCP (1-4a)**
- If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.
- TCP (1-4b)**
- Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

Texas Department of Transportation
 Traffic Operations Division Standard

**TRAFFIC CONTROL PLAN
 LANE CLOSURES ON MULTILANE
 CONVENTIONAL ROADS**

TCP (1-4)-18

FILE: tcp1-4-18.dgn	DN:	CK:	DN:	CK:
© TxDOT December 1985	COAT	SECT	JOB	HIGHWAY
REVISIONS				
2-94 4-98				
8-95 2-12				
1-97 2-18				
	DIST	COUNTY		SHEET NO.

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

6/30/2025

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 Texas Registered Engineering Firm F-2114

DESCRIPTION: NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)

REVISION NO. DATE BY

DESCRIPTION: TXDOT TRAFFIC STANDARD DETAILS

CITY of CORPUS CHRISTI TEXAS
 Department of Engineering Services

SHEET 44 of 55
 RECORD DRAWING NO.
 STR-1019
 CITY PROJECT # 21062

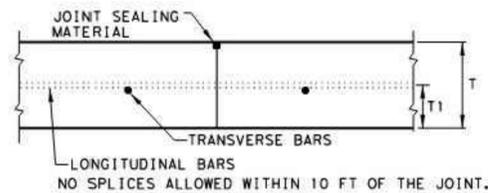
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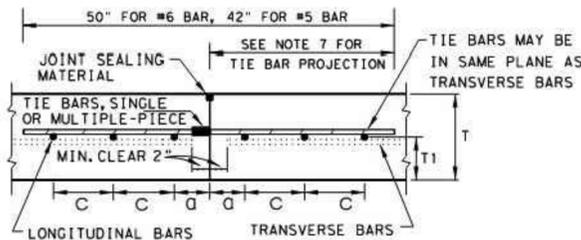
TABLE NO. 1 LONGITUDINAL STEEL				
SLAB THICKNESS AND BAR SIZE		LONGITUDINAL STEEL BARS	FIRST SPACING AT EDGE OR JOINT	LONG. STEEL VERTICAL POSITION FROM BOTTOM OF PAVEMENT
T (IN.)	BAR SIZE	SPACING C (IN.)	SPACING Ø (IN.)	T1 (IN.)
7.0	#5	6.5	3 TO 4	3.5
7.5	#5	6.0	3 TO 4	3.75
8.0	#6	9.0	3 TO 4	4.0
8.5	#6	8.5	3 TO 4	4.25
9.0	#6	8.0	3 TO 4	4.5
9.5	#6	7.5	3 TO 4	4.75
10.0	#6	7.0	3 TO 4	5.0
10.5	#6	6.75	3 TO 4	5.5
11.0	#6	6.5	3 TO 4	6.0
11.5	#6	6.25	3 TO 4	6.5
12.0	#6	6.0	3 TO 4	7.0
12.5	#6	5.75	3 TO 4	7.5
13.0	#6	5.5	3 TO 4	8.0

TABLE NO. 2 TRANSVERSE STEEL AND TIE BARS						
SLAB THICKNESS (IN.)	TRANSVERSE STEEL		TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z)		TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Y-Y)	
	BAR SIZE	SPACING (IN.)	BAR SIZE	SPACING (IN.)	BAR SIZE	SPACING (IN.)
7.0 - 7.5	#5*	48	#5*	48	#5*	24
8.0 - 13.0	#5*	48	#6	48	#6	24

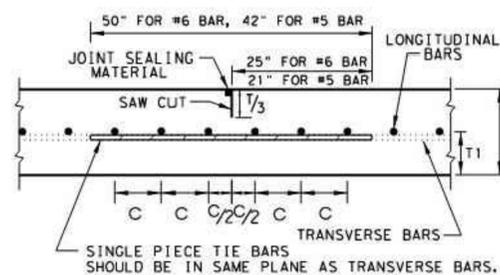
*CONTRACTOR MAY USE #6 REINFORCING STEEL INSTEAD OF #5 REINFORCING STEEL OR COMBINATION OF EACH SIZE



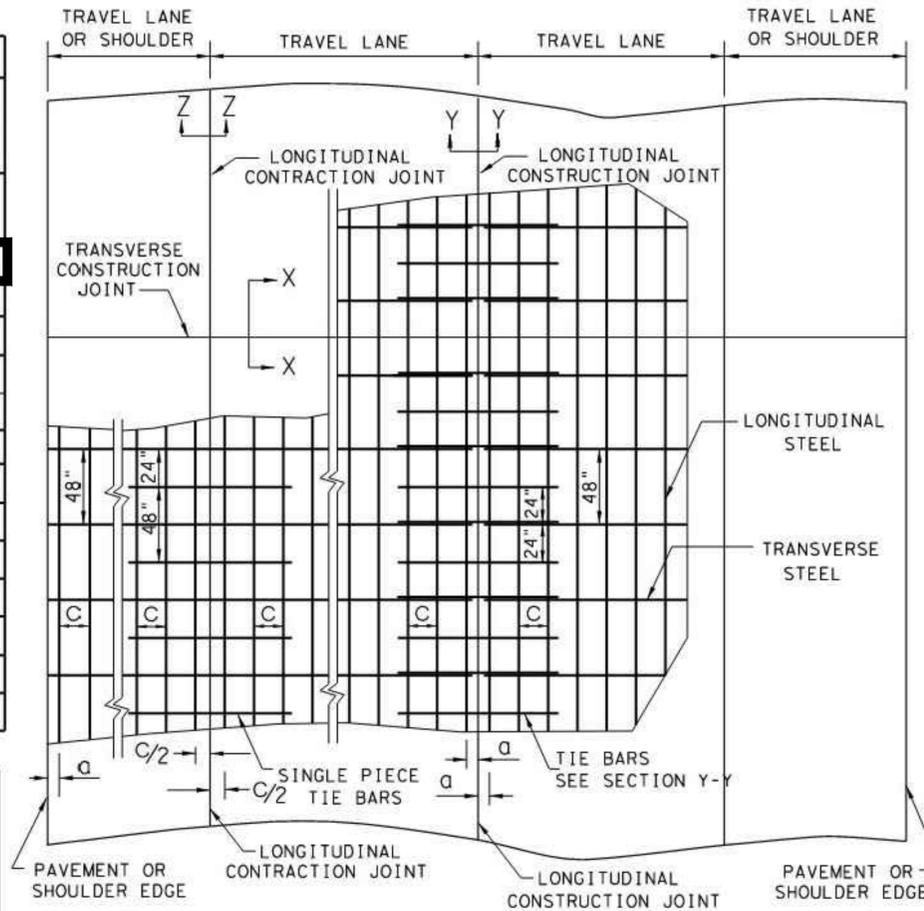
TRANSVERSE CONSTRUCTION JOINT
 SECTION X - X



LONGITUDINAL CONSTRUCTION JOINT
 SECTION Y - Y



LONGITUDINAL CONTRACTION JOINT
 SECTION Z - Z



TYPICAL PAVEMENT LAYOUT
 PLAN VIEW (NOT TO SCALE)

GENERAL NOTES

1. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE SHOWN ELSEWHERE IN THE PLANS. FOR PAVEMENTS WIDER THAN 100 FT. WITHOUT A FREE LONGITUDINAL JOINT, ADDITIONAL DETAIL MAY BE SHOWN ELSEWHERE IN THE PLANS.
2. USE COARSE AGGREGATES WITH A RATED COEFFICIENT OF THERMAL EXPANSION (COTE) OF NOT MORE THAN 5.5×10^{-6} IN/IN/°F AS LISTED IN THE CONCRETE RATED SOURCE QUALITY CATALOG (CRSQC).
3. ALL THE REINFORCING STEEL AND TIE BARS SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615 (GRADE 60) OR ASTM A 996 (GRADE 60) OR ABOVE. STEEL BAR SIZES AND SPACINGS SHALL CONFORM TO TABLE NO.1 AND TABLE NO.2.
4. STEEL BAR PLACEMENT TOLERANCE SHALL BE +/- 1 IN. HORIZONTALLY AND +/- 0.5 IN. VERTICALLY. CALCULATED AVERAGE BAR SPACING (CONCRETE PLACEMENT WIDTH / NUMBER OF LONGITUDINAL BARS) SHALL CONFORM TO TABLE NO.1.
5. ADJUST REINFORCING STEEL VERTICALLY USING SHIMS OR OTHER METHODS, AS APPROVED, TO MEET VERTICAL TOLERANCES PRIOR TO CONCRETE PLACEMENT.
6. PAVEMENT WIDTHS OF MORE THAN 15 FT. SHALL HAVE A LONGITUDINAL JOINT (SECTION Z-Z OR SECTION Y-Y). THESE JOINTS SHALL BE LOCATED WITHIN 6 IN. OF THE LANE LINE UNLESS THE JOINT LOCATION IS SHOWN ELSEWHERE ON THE PLANS.
7. THE MINIMUM PROJECTION OF TIE BARS INTO THE ADJACENT PLACEMENT IS 22.5 IN. FOR #6 BARS AND 18.5 IN. FOR #5 BARS.
8. SEE STANDARD SHEET "CONCRETE CURB AND CURB AND GUTTER," FOR DETAILS WHEN TYING CONCRETE CURB OR CURB GUTTER AT A LONGITUDINAL JOINT.
9. REPLACE MISSING OR DAMAGED TIE BARS WITHOUT ADDITIONAL COMPENSATION BY DRILLING MIN. 10 IN. DEEP AND GROUTING TIE BARS WITH TYPE III, CLASS C EPOXY. MEET THE PULL-OUT TEST REQUIREMENTS IN ITEM 361.
10. OMIT TIE BARS LOCATED WITHIN 18-IN. OF THE TRANSVERSE CONSTRUCTION JOINTS (SECTION X-X). USE HAND-OPERATED IMMERSION VIBRATORS TO CONSOLIDATE THE CONCRETE ADJACENT TO ALL FORMED JOINTS.
11. THE DETAIL FOR THE JOINT SEALANT AND RESERVOIR IS SHOWN ON STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."
12. LONGITUDINAL REINFORCING STEEL SPLICES SHALL BE A MINIMUM OF 25-IN.

SHEET 1 OF 2

Texas Department of Transportation
 Design Division Standard

CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
ONE LAYER STEEL BAR PLACEMENT
T - 7 TO 13 INCHES
CRCP(1) - 24

FILE: crcp124.dgn	DRW: CES	CHK: KM	DRW: CES	CHK: AN
© TxDOT: Sept 2024	CONT: SECT	JOB:	HIGHWAY:	
REVISORS:	DIST:	COUNTY:	SHEET NO.:	

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 78401-3717
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CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

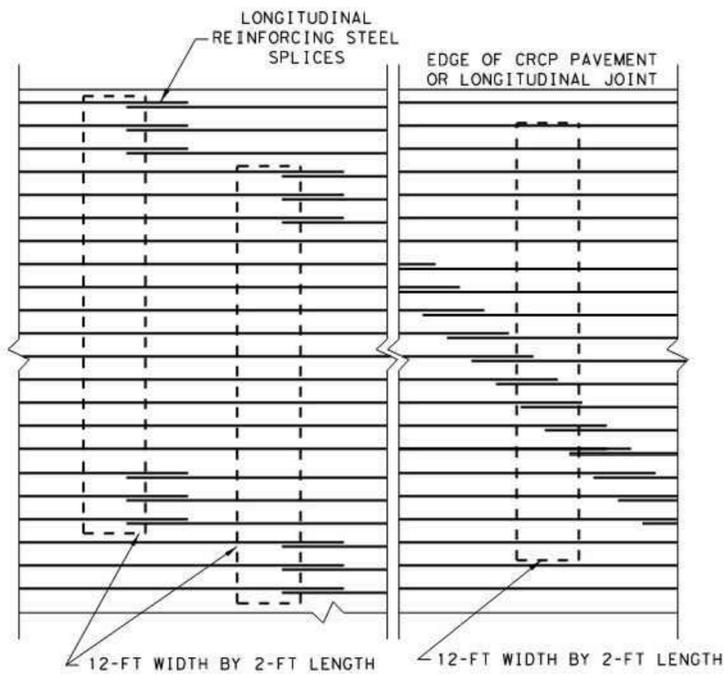
NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)
 CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT
 CRCP(1) - 24

SHEET 45 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

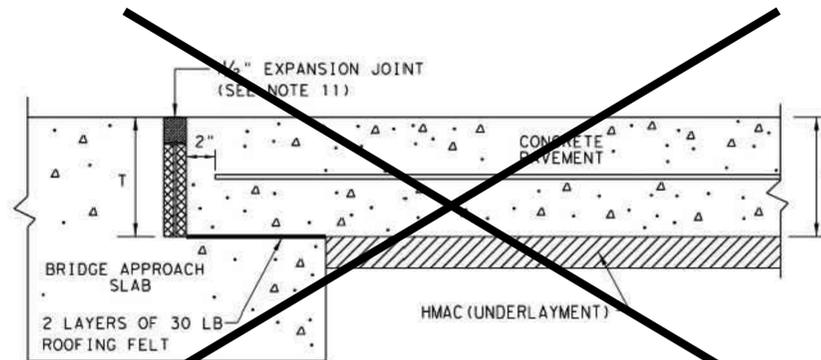
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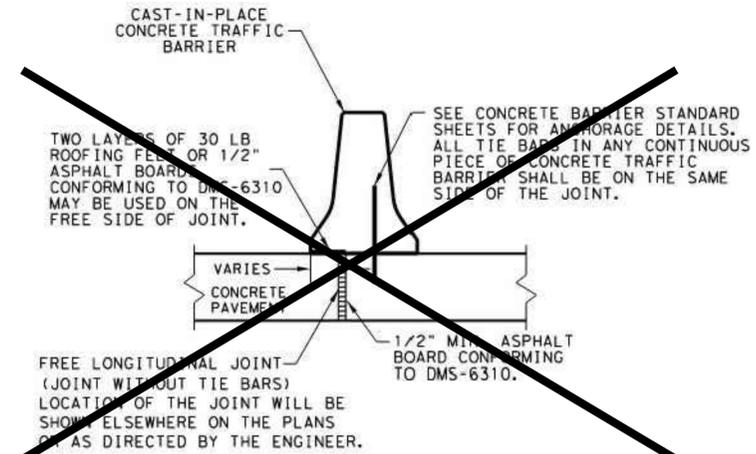


STAGGER THE LAP LOCATIONS SO THAT NO MORE THAN 1/3 OF THE LONGITUDINAL STEEL IS SPLICED IN ANY GIVEN 12-FT. WIDTH AND 2-FT. LENGTH OF THE PAVEMENT. ANY OTHER LAP CONFIGURATION MEETING THIS REQUIREMENT WILL BE ALLOWED.

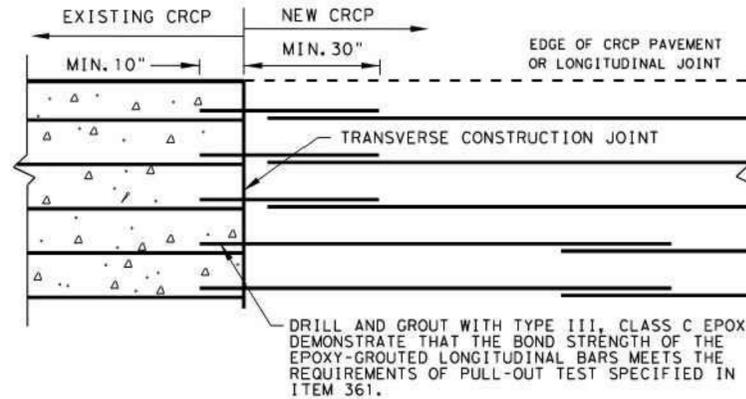
EXAMPLES OF LAP CONFIGURATION
 PLAN VIEW (NOT TO SCALE)



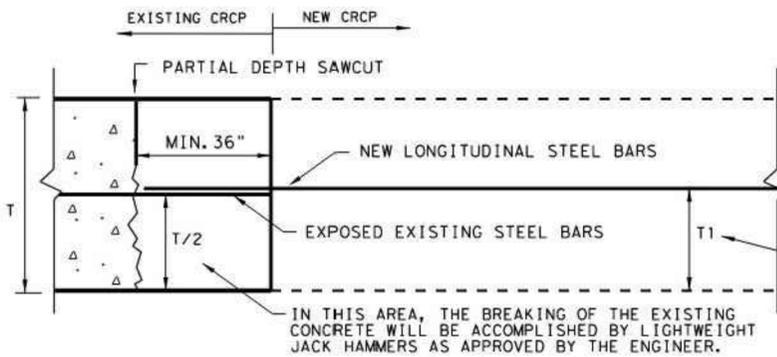
TRANSVERSE EXPANSION JOINT DETAIL
 AT BRIDGE APPROACH



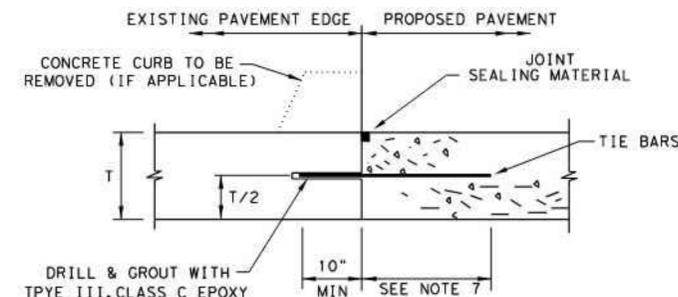
CENTERLINE FREE LONGITUDINAL JOINT DETAIL



OPTION A: DRILL AND EPOXY
 PLAN VIEW (NOT TO SCALE)



OPTION B: BREAKBACK AND LAP
TRANSVERSE TIE JOINT DETAIL
 NEW CRCP TO EXISTING CRCP



LONGITUDINAL WIDENING JOINT DETAIL

1. BEFORE CONCRETE PLACEMENT, PERFORM PULL-OUT TESTS ON EPOXY-GROUTED TIE BARS IN ACCORDANCE WITH ITEM 360.
2. SPACE TIE BARS AT 24" SPACING. USE #6 TIE BARS FOR 8" AND THICKER PAVEMENTS, USE #5 TIE BARS FOR LESS THAN 8" THICK PAVEMENTS.

SHEET 2 OF 2

CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
ONE LAYER STEEL BAR PLACEMENT
T - 7 TO 13 INCHES
CRCP(1)-24

File: crcp124.dgn	DR: TxDOT	CK: KM	DR: CES	CK: AN
© TxDOT: Sep 2024	COM: SECT	JOB	HIGHWAY	
REVISIONS	DIST	COUNTY	SHEET NO.	

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SHEET 46 of 55
 RECORD DRAWING NO.
STR-1019
 CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.
 FNI PROJECT: COR21576

6/30/2025
 112706
 PROFESSIONAL ENGINEER
 Freese and Nichols, Inc.
 Texas Registered Engineering Firm F-2144

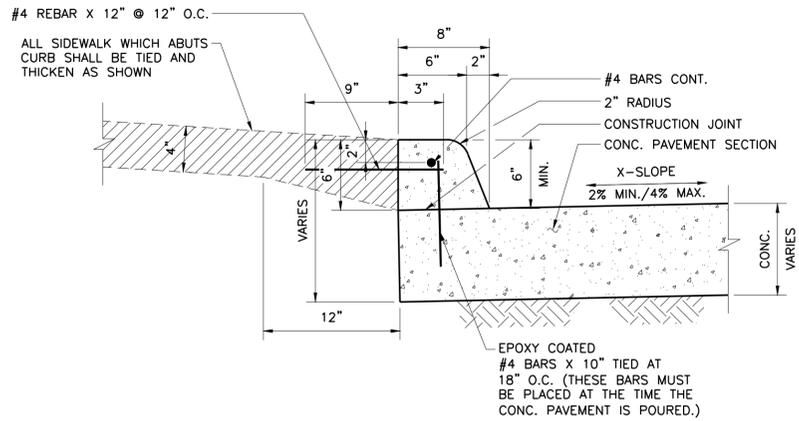
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CITY of CORPUS CHRISTI
 TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)
 CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT
 CRCP(1)-24

REVISION NO.	DATE	BY	DESCRIPTION



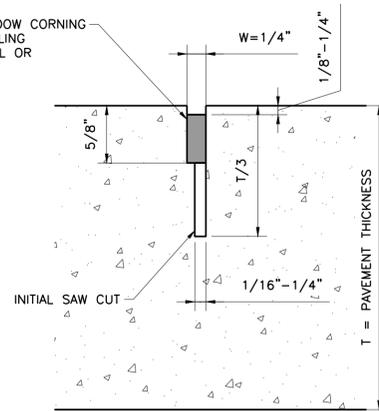
TYPICAL 6" CURB DETAIL

NOT TO SCALE

6" CURB NOTES:

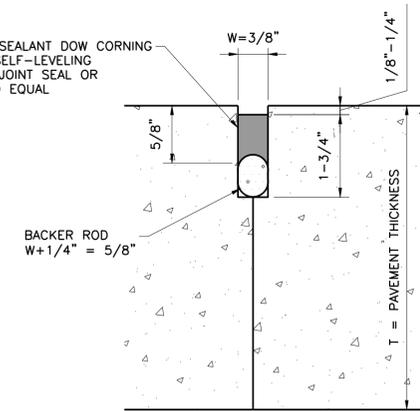
1. EXPANSION AND CONSTRUCTION JOINTS OF THE 6" SEPARATE CURB SHALL MATCH THOSE OF THE TIED SIDEWALK AND/OR CONCRETE PAVEMENT, AND SHALL NOT EXCEED 39' O.C. (MAX) SPACING.
2. TRANSVERSE GROOVES 1/8" WIDE BY 1/2" DEEP SHALL BE MADE AT 10' O.C. (MAXIMUM).
3. WHERE NEW CURB JOINS EXISTING CURB AND GUTTER, TRANSITION THE LAST 10' OF THE NEW TO MATCH THE OLD IN SHAPE.
4. EXPANSION JOINTS ON ALL SIDEWALK AND CURB SHALL BE REDWOOD. ALL JOINTS IN 6" SEPARATE CURB SHALL BE SEALED WITH JOINT SEALANT.
5. TRANSVERSE CONTRACTION JOINTS 1/8" WIDE BY 1/2" DEEP SHALL BE CUT IN ALL SIDEWALKS AT 5'-0" INTERVALS (MAXIMUM).

CLASS 5 SEALANT DOW CORNING
 890-SL SELF-LEVELING
 SILICONE JOINT SEAL OR
 APPROVED EQUAL



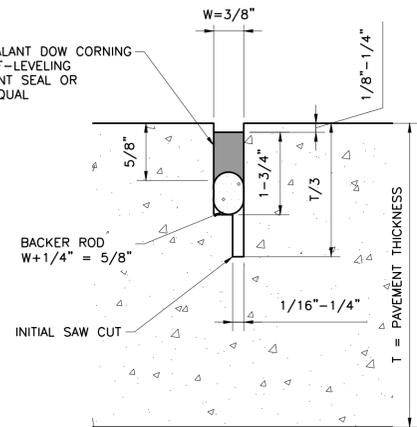
SAWED LONGITUDINAL JOINT

CLASS 5 SEALANT DOW CORNING
 890-SL SELF-LEVELING
 SILICONE JOINT SEAL OR
 APPROVED EQUAL



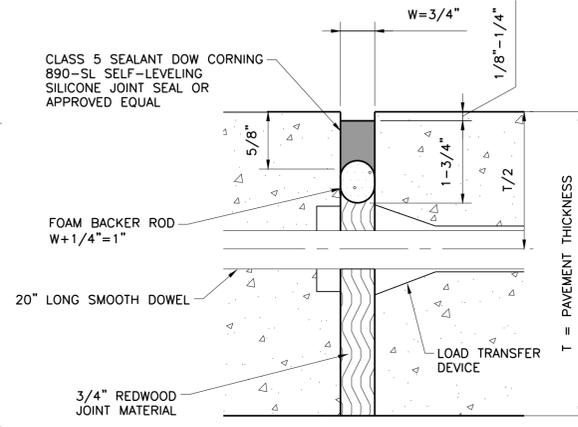
LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT

CLASS 5 SEALANT DOW CORNING
 890-SL SELF-LEVELING
 SILICONE JOINT SEAL OR
 APPROVED EQUAL



TRANSVERSE SAWED CONTRACTION JOINT

CLASS 5 SEALANT DOW CORNING
 890-SL SELF-LEVELING
 SILICONE JOINT SEAL OR
 APPROVED EQUAL



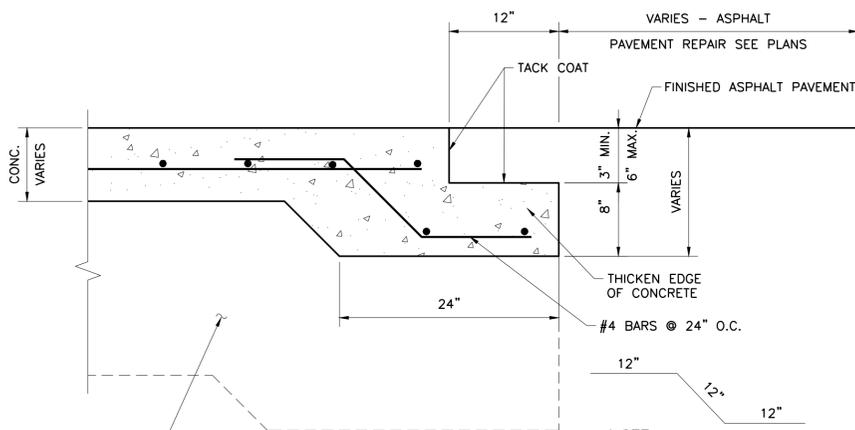
EXPANSION JOINT

JOINT SEALANT COMPOUND

NOT TO SCALE

GENERAL NOTES:

1. THE LOCATION OF JOINTS SHALL BE AS SHOWN ELSEWHERE IN THE DRAWINGS.
2. THE JOINT RESERVOIR FOR SEALANT SHALL BE SAWED UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND THE TWO SAWED JOINTS.
3. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE SEALANT MANUFACTURE'S RECOMMENDATION. PRIOR TO BEGINNING OPERATIONS, THE CONTRACTOR SHALL SUBMIT A STATEMENT FROM THE SEALANT MANUFACTURER SHOWING THE RECOMMENDED EQUIPMENT AND INSTALLATION PROCEDURES TO BE USED.
4. THE SAW CUT FOR THE LONGITUDINAL JOINT SHALL BE ONE FOURTH THE SLAB THICKNESS WHEN CRUSHED LIMESTONE IS USED AS THE COARSE AGGREGATE.



CONCRETE TO ASPHALT PAVEMENT SECTION TIE-IN DETAIL

NOT TO SCALE

NOTE:

IN NO CASE SHALL THE THICKNESS OF THE ASPHALT OR BASE MATERIAL BE LESS THAN THE THICKNESS OF EXISTING ADJACENT MATERIAL.

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK.

CONSULTANT'S SHEET No.

FNI PROJECT: COR21576



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CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)
 CITY OF CORPUS CHRISTI
 CONCRETE PAVEMENT
 STANDARD DETAILS

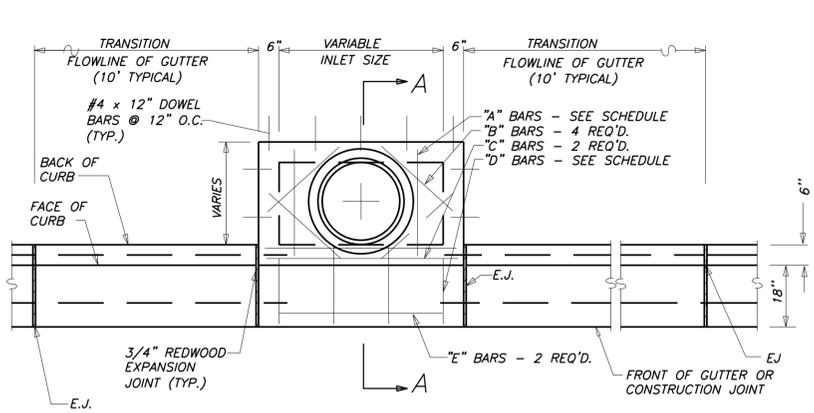
SHEET 48 of 55
 RECORD DRAWING NO.

STR-1019

CITY PROJECT # 21062

REVISION NO.	DATE	BY	DESCRIPTION

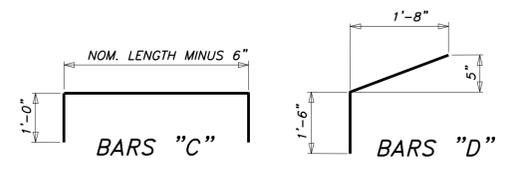
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PLAN OF 5' STANDARD INLET
NOT TO SCALE

SPECIAL NOTE:

- CONTRACTOR TO PROVIDE #4 x 12" DOWELS @ 12" O.C. WHERE PROP. SIDEWALK ABUTS INLET. (NO SEPARATE PAYMENT)
- FOR CURB INLET THROAT EXTENSION DETAILS REFER TO STORM WATER STANDARD DETAIL SHEET 3 OF 3.

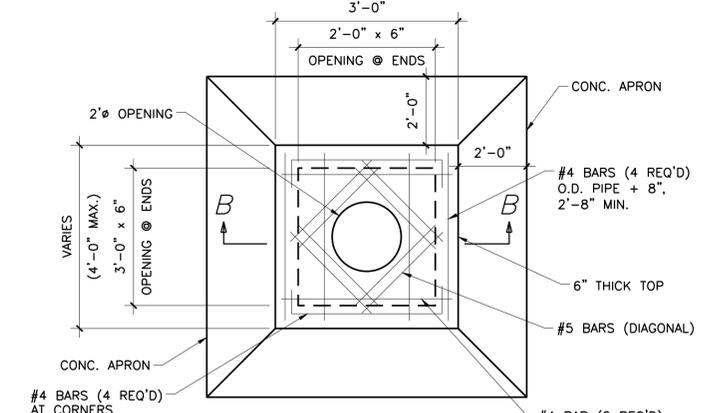


** THROAT OPENINGS SHALL HAVE A 6" X 6" CONCRETE SUPPORT PLACED AT MID-THROAT

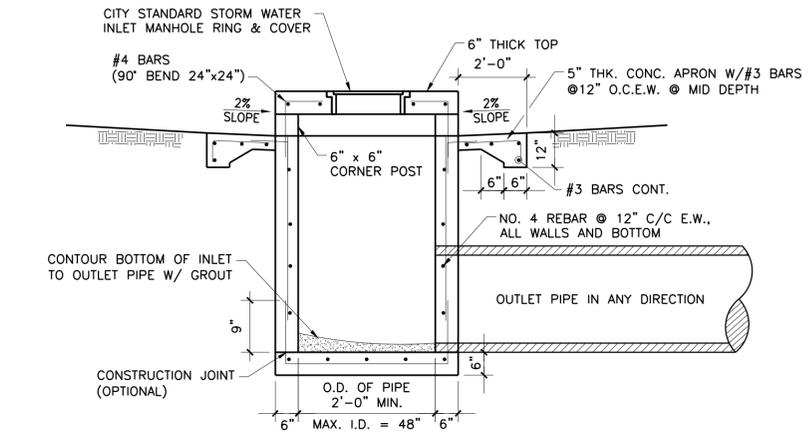
* NOMINAL LENGTH OF INLET SHALL BE DESIGNATED AS THE CLEAR WIDTH OPENING.

STANDARD CURB INLET STEEL SCHEDULE				
ALL BARS No. 4 PREFORMED				
INLET SIZE (Nom. Length)	NO. REQ'D./LENGTH			
	"A" BARS	"B" BARS	"C" BARS	"D" BARS
4'	2/0	4/1'-10"	2/5'-6"	4/3'-2"
5'	2/0	4/3'-2"	2/6'-6"	4/3'-2"
6'	4/0	4/4'-0"	2/7'-6"	6/3'-2"
8'	4/0	4/4'-0"	2/9'-6"	6/3'-2"
10'	6/0	4/4'-0"	2/11'-6"	7/3'-2"
BENDING	STRAIGHT	STRAIGHT	SEE DET.	STRAIGHT

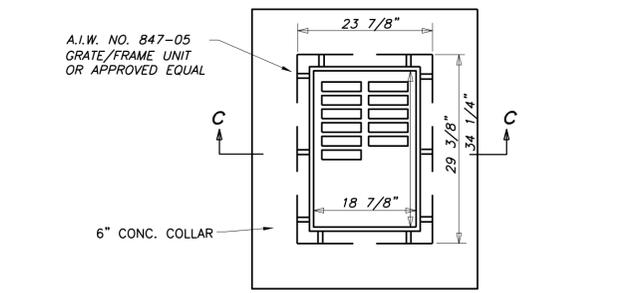
o = O.D. + 8", 2'-8" MIN. MAX. PIPE I.D. = 48 INCHES



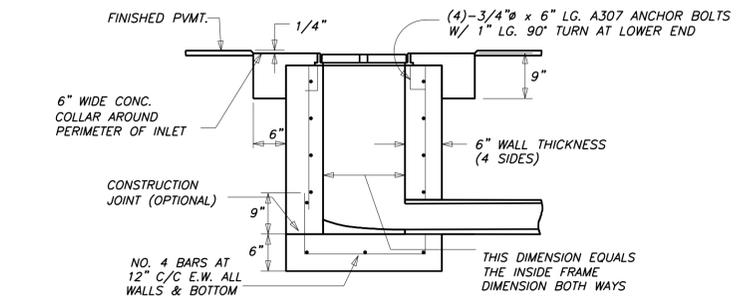
PLAN OF POST INLET
NOT TO SCALE



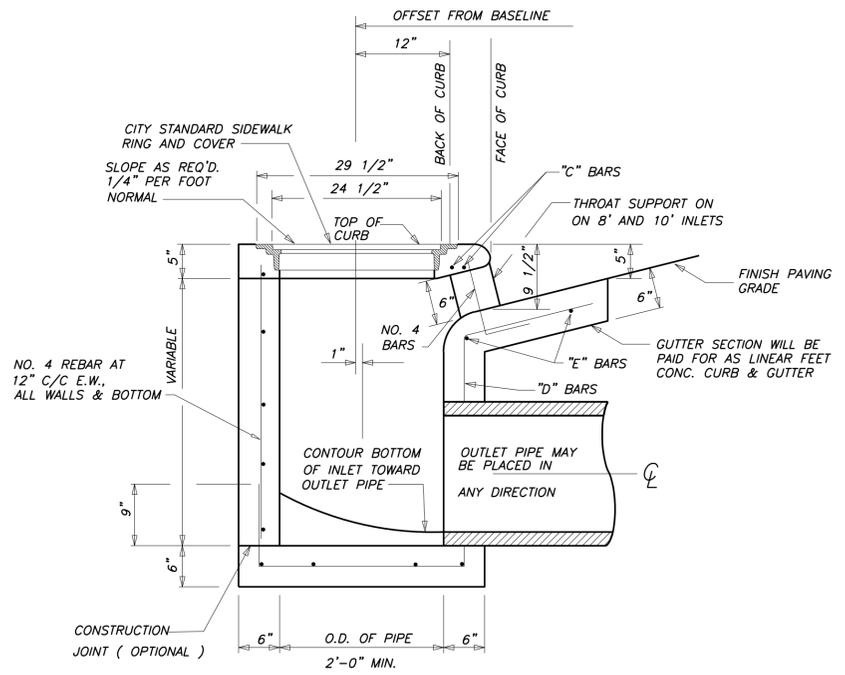
SECTION B-B
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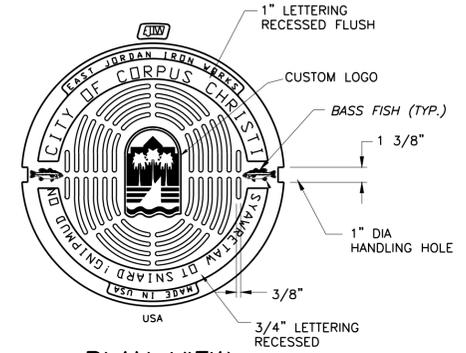
PLAN OF STANDARD GRATE INLET
NOT TO SCALE



SECTION C-C
NOT TO SCALE

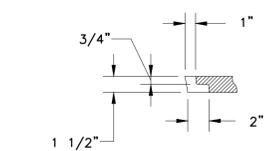


SECTION A-A
NOT TO SCALE

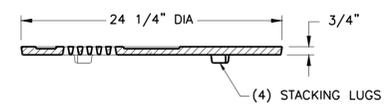


PLAN VIEW

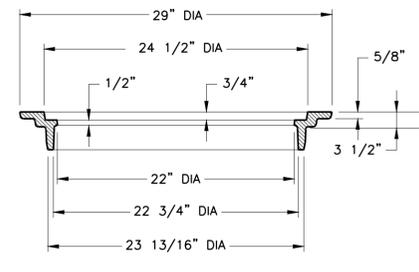
GRATE BLOCK



PICKSLOT DETAIL



GRATE SECTION

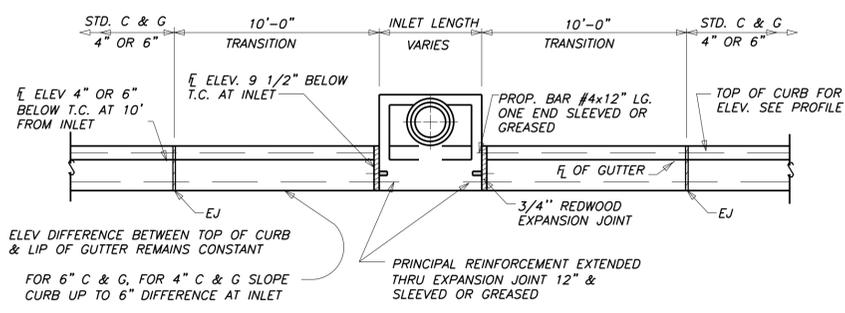


RING SECTION

CITY STANDARD INLET AND SIDEWALK MANHOLE RING & COVER CASTING DETAILS
NOT TO SCALE

INLET AND SIDEWALK MANHOLE RING & COVER NOTES

- MANHOLE RING & COVER SHALL BE EAST JORDAN MANHOLE ASSEMBLY FOR LOAD RATING NON-TRAFFIC.
- THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
- CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
- MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
- TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
- RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
- OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
- MINIMUM WEIGHTS OF FINISHED CASTINGS: THE COVER = 60 POUNDS, THE RING = 135 POUNDS.



FLOWLINE TRANSITION AT INLET FOR 4" OR 6" STD. CURB AND GUTTER
NOT TO SCALE

CONSULTANT'S SHEET No. FNI PROJECT: COR21576

6/30/2025

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK.

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CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH (BOND 2020)

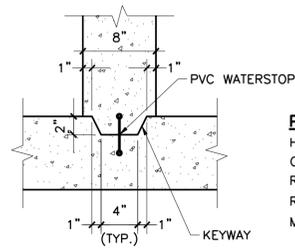
CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS

SHEET 49 of 55
RECORD DRAWING NO. STR-1019
CITY PROJECT # 21062

ISSUED FOR CONSTRUCTION

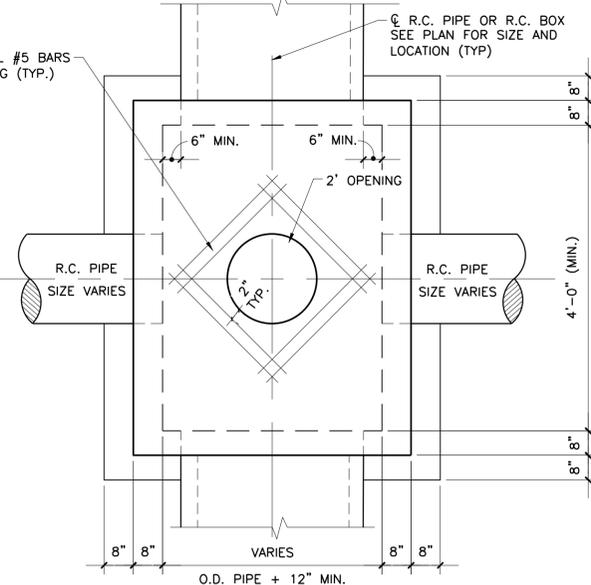
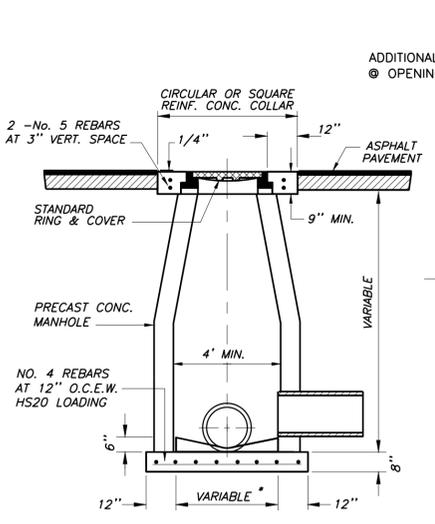
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KEYWAY DETAIL

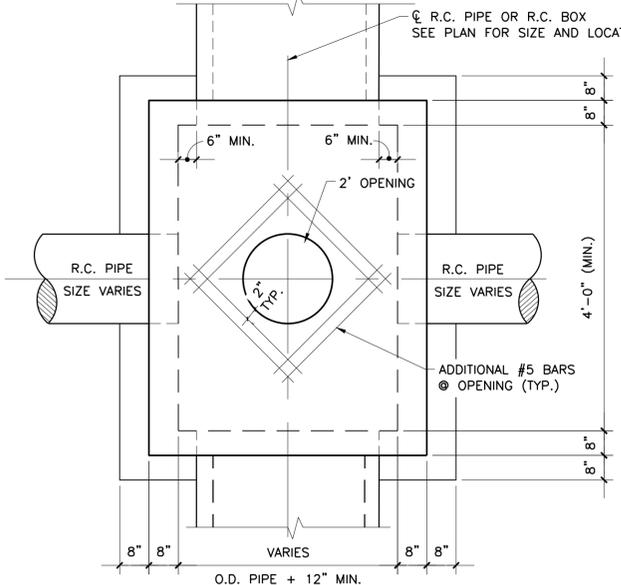


PRE-CAST CONC. MANHOLE NOTES:
 HS20 LOADING
 CONCRETE 28 DAY COMPRESSIVE STRENGTH - 5000 PSI
 REINFORCEMENT STEEL - 60,000 PSI
 REBAR MIN. SPLICE LENGTHS: #4-22" #5-28" #6-33"
 MANHOLE WALL/RISER REINFORCED PER ASTM C-478

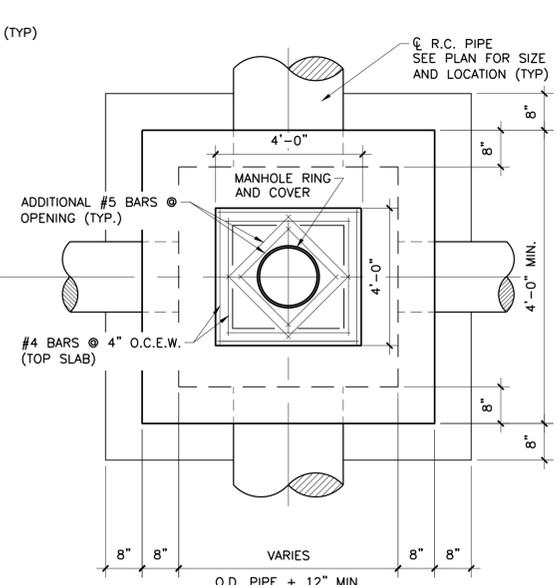
TYPE "A" MANHOLE



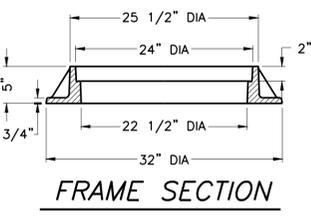
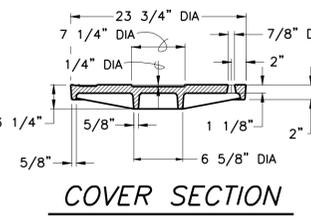
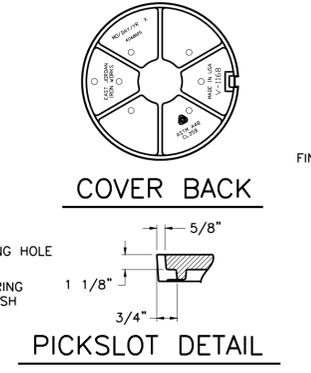
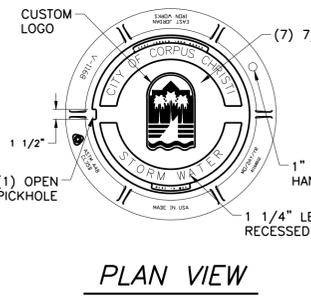
TYPE 'B' MANHOLE



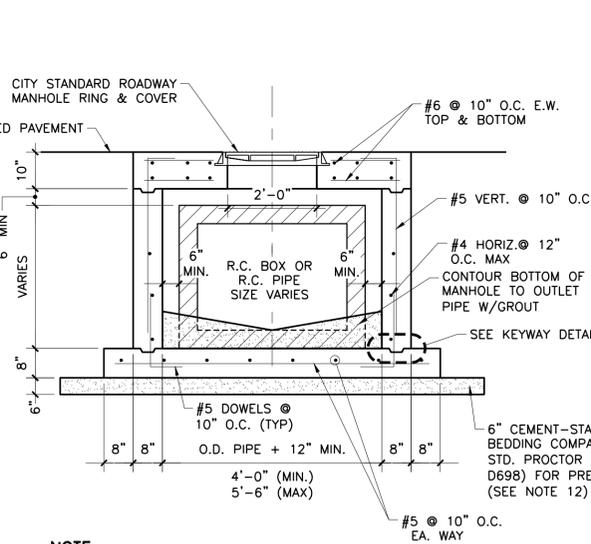
TYPE 'C' MANHOLE



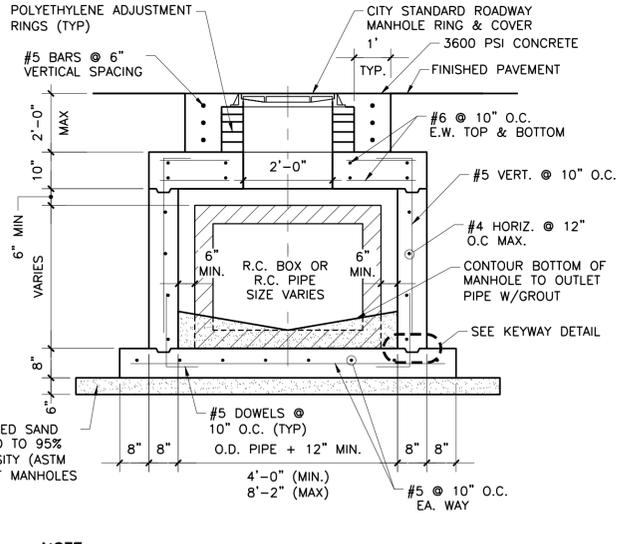
TYPE 'D' MANHOLE



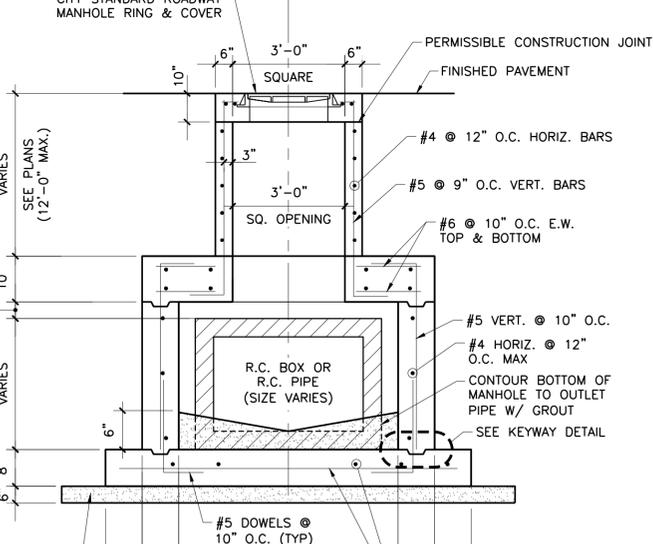
CITY STANDARD ROADWAY MANHOLE RING & COVER CASTING DETAIL



SECTION TYPE 'B' MANHOLE



SECTION TYPE 'C' MANHOLE



SECTION TYPE 'D' MANHOLE

GENERAL NOTES FOR CONCRETE DRAINAGE STRUCTURES:

- ALL CONCRETE SHALL BE CLASS "C" (3600 PSI) EXCEPT CITY STANDARD CURB INLETS AND CONCRETE COLLARS MAY BE CLASS "A".
- ALL REINFORCING STEEL SHALL BE GRADE 60.
- DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
- VERTICAL STEEL MAY BE SPLICED (15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.
- IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
- CHAMFER ALL EXPOSED EDGES 3/4".
- PROVIDE CITY STANDARD SIDEWALK MANHOLE RING AND COVER FOR CITY STANDARD CURB INLET. PROVIDE CITY STANDARD ROADWAY STORM WATER MANHOLE RING AND COVER FOR SPECIAL CURB INLET.
- THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS AND MANHOLES, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION. PRECAST MANHOLE WITHIN THE ROADWAY SHALL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING AND SEALED BY A LICENSED ENGINEER.
- ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
- INVERT OF INLET SHALL BE SLOPED 1:20 WITH GROUT.
- NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED EXCEPT WHERE OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
- IN DEEP EXCAVATIONS (> 20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

- ROADWAY MANHOLE RING & COVER NOTES**
- MANHOLE RING & COVER SHALL BE EAST JORDAN V 1168 ASSEMBLY AND FOR SCHOOL ZONE SHALL BE EAST JORDAN BOLTED-IN 1168 ASSEMBLY LOAD RATING HEAVY DUTY.
 - THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
 - CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
 - MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
 - TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
 - RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
 - OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
 - MINIMUM WEIGHTS OF FINISHED CASTINGS : THE COVER = 160 POUNDS, THE RING = 180 POUNDS.
 - POLYETHYLENE MANHOLE ADJUSTMENT RINGS SHALL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING.

ISSUED FOR CONSTRUCTION

REVISION NO.	DATE	BY	DESCRIPTION

CONSULTANT'S SHEET No. FNI PROJECT: COR21576

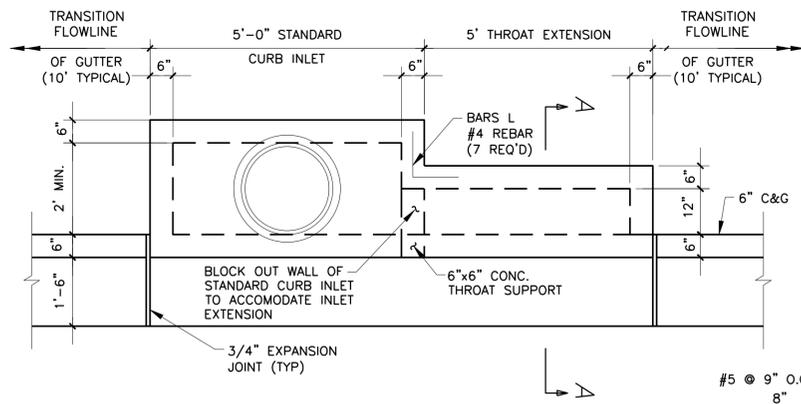
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CITY OF CORPUS CHRISTI TEXAS
 Department of Engineering Services

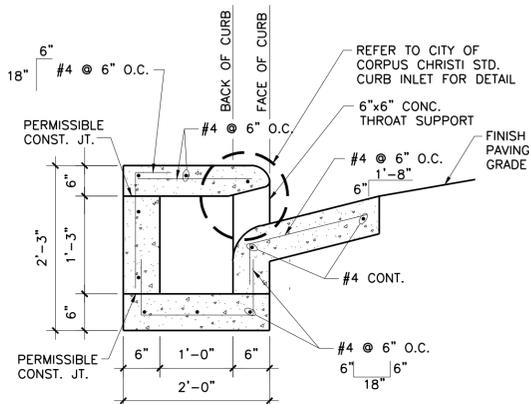
NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH (BOND 2020)

CITY OF CORPUS CHRISTI TEXAS
 STORM WATER STANDARD DETAILS

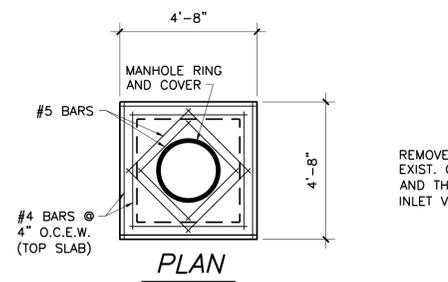
SHEET 50 of 55
 RECORD DRAWING NO. STR-1019
 CITY PROJECT # 21062



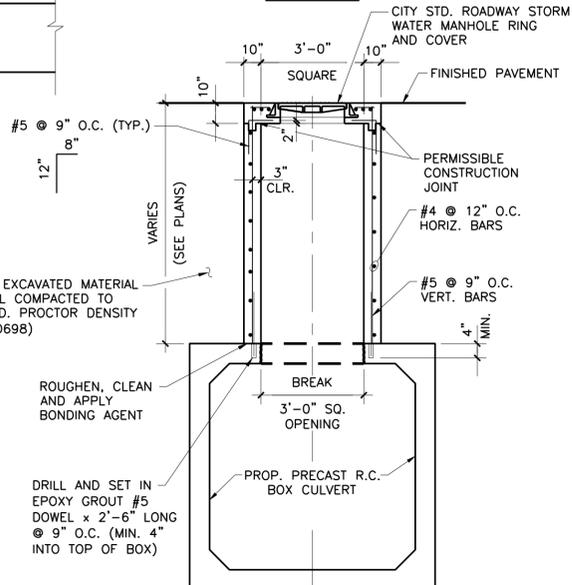
CURB INLET THROAT EXTENSION PLAN
NOT TO SCALE



SECTION A-A
NOT TO SCALE

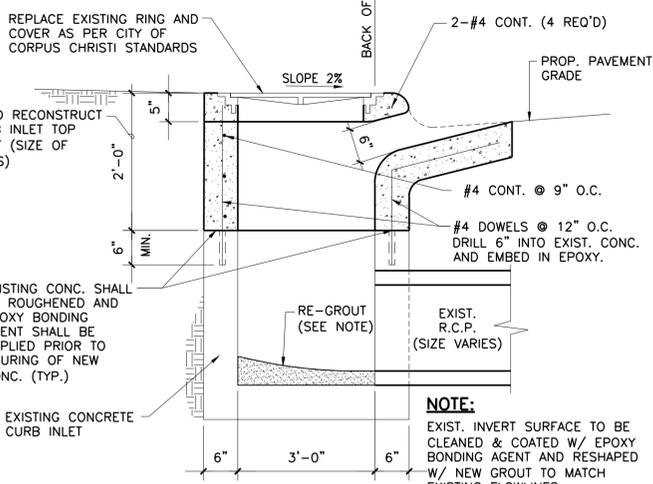


PLAN

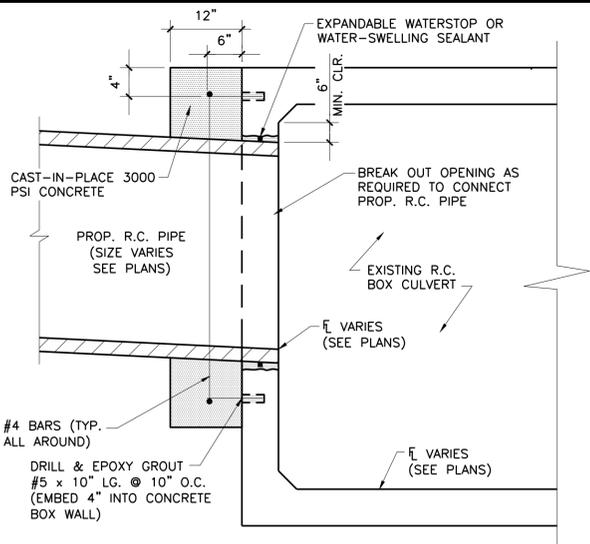


SECTION

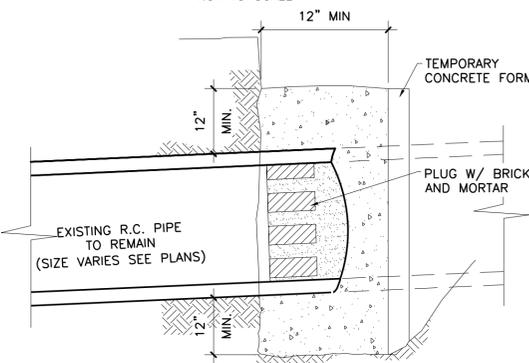
MANHOLE RISER DETAIL
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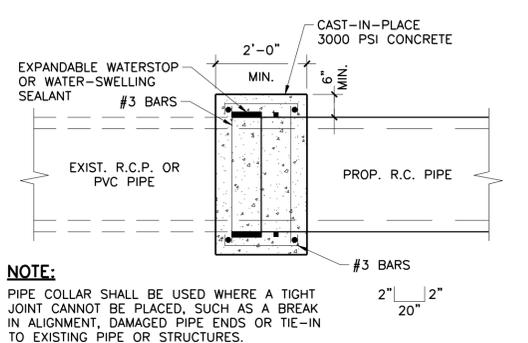
REMOVE AND REPLACE TOP OF EXISTING CURB INLET DETAIL
NOT TO SCALE



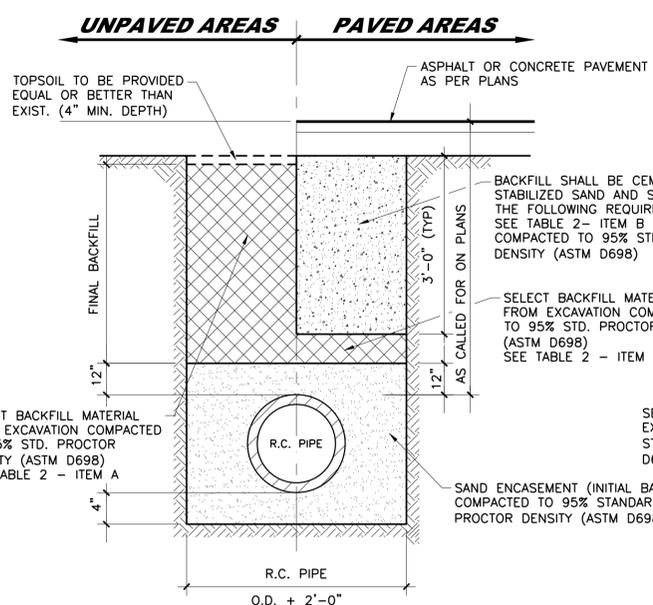
PROP. PIPE TO EXISTING R.C. BOX CONNECTION DETAIL
NOT TO SCALE



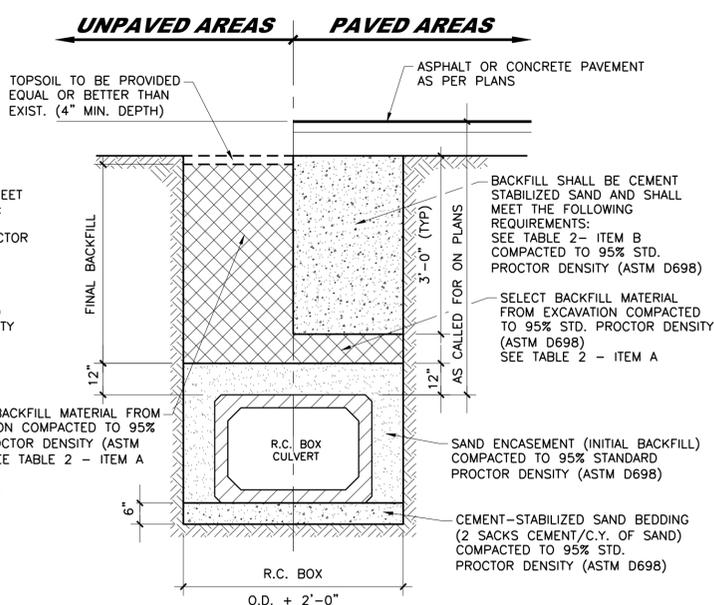
EXISTING R.C. PIPE PLUG
NOT TO SCALE



CONCRETE COLLAR DETAIL
NOT TO SCALE



TRENCH BACKFILL FOR STORM WATER PIPES
NOT TO SCALE



TRENCH BACKFILL FOR STORM WATER R.C. BOX CULVERTS
NOT TO SCALE

GENERAL NOTES FOR BACKFILL

TABLE 1 BEDDING AND INITIAL BACKFILL (BELOW PIPE TO 12" ABOVE PIPE)	TABLE 2 FINAL BACKFILL (GREATER THAN 12" ABOVE PIPE)
<p>ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL. SEWER LINES:</p> <ol style="list-style-type: none"> EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA. MEETING REQUIREMENTS OF ASTM D2487 FOR: SP GP SP-GP GW SP-SM GP-GM SW-SM GW-GM <p>AND IN ADDITION: PASSING 1/2" SIEVE - 100% PASSING #4 SIEVE - 30% MINIMUM PLASTICITY INDEX (PI) - NP TO 10 MAX.</p> <ol style="list-style-type: none"> IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF: A. CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4. <p>FOR ALL UTILITIES:</p> <ol style="list-style-type: none"> FOR PIPE DIAMETER EQUAL TO OR SMALLER THAN 16", USE 4" MINIMUM BEDDING UNDER PIPE. FOR PIPE DIAMETER GREATER THAN 16", USE 6" MINIMUM BEDDING UNDER PIPE. 	<p>UNPAVED AREAS</p> <p>A. FOR 12" ABOVE PIPE TO 3' BELOW BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER. LOOSE LIFTS TO BE PLACED 10" MAX. COMPACT MATERIAL TO 95% STD. PROCTOR (D698). MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.</p> <p>B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH (4" MIN.) COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD TOP SOIL SALVAGED TO BE PLACED ON TOP)</p> <p>PAVED AREAS</p> <p>A. FOR 12" ABOVE PIPE TO 3' BELOW BOTTOM OF ROAD BASE; BACKFILL SHALL BE SELECT MATERIAL FROM EXCAVATION OR TO BE IMPORTED MATERIAL AND SHALL MEET THE FOLLOWING: LL<35 PI 8-20 NO CLUMPS > 2" DIA. MOISTURE 0 TO +3% COMPACT 95% D698 STD PROCTOR</p> <p>LOOSE LIFTS OF 10" MAX OR IF SELECT MATERIAL FROM EXCAVATION DOES NOT MEET REQUIREMENTS, THEN USE CEMENT STABILIZED SAND SEE TABLE 2-ITEM B</p> <p>B. FOR 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE: BACKFILL SHALL BE CEMENT STABILIZED SAND AND SHALL MEET THE FOLLOWING REQUIREMENTS: SAND GRADATION: % PASSING 1/2" 100% #4 55-100 #10 40-100 #40 25-100 #200 10-20 PI NP-10</p> <p>2 SACKS CEMENT/C.Y. OF SAND. COMPACT TO 95% OF D698. MOISTURE TO BE ADJUSTED TO (+/-2%) OF OPTIMUM.</p>

ISSUED FOR CONSTRUCTION

ACAD: 18.2s (LMS Tech) User: 02293
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06/12/2013 1:38:32 P.M. LTS: 1.00 PSLTS: 1

CONSULTANT'S SHEET No. FNI PROJECT: COR21576

6/30/2025

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CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH (BOND 2020)

CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS

3 OF 3

SHEET 51 of 55
RECORD DRAWING NO. STR-1019
CITY PROJECT # 21062

REVISION NO.	DATE	DESCRIPTION

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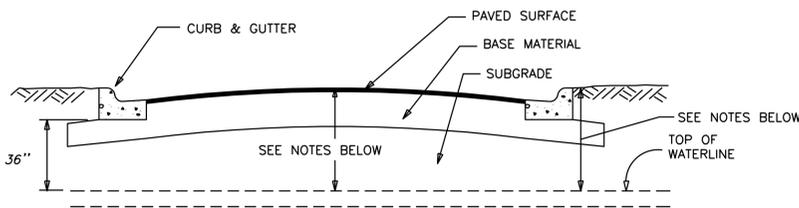
VERIFY SCALE

WATER DISTRIBUTION SYSTEM GENERAL NOTES

- ANY AND ALL WORK ON THE WATER DISTRIBUTION SYSTEM MUST FIRST BE COORDINATED WITH WCID #4.
- PROPOSED WATER DISTRIBUTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH WCID #4 WATER DISTRIBUTION SYSTEM STANDARDS.
- WCID #4 RESERVES THE RIGHT TO ACCEPT THE SYSTEM FOR OPERATION AT ANY TIME, BUT THE DATE OF OFFICIAL ACCEPTANCE OF THE SYSTEM WILL BE UPON COMPLETION OF THE PROJECT AND SATISFACTORY TEST RESULTS.
- THE EXISTING SYSTEM SHALL REMAIN IN SERVICE UNTIL THE PROPOSED SYSTEM IS PUT INTO SERVICE. THE CONTRACTOR SHALL PROTECT THE EXISTING SYSTEM UNTIL IT IS TAKEN OUT OF SERVICE.
- THE CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO INSTALL THE PROPOSED SYSTEM.
- TESTING OF LINES (STERILIZATION AND PRESSURED) SHALL BE DONE BY THE CONTRACTOR UNDER THE SUPERVISION OF WCID #4. WATER FOR FILLING THE NEW WATER LINE AND PERFORMING TESTS WILL BE FURNISHED TO THE CONTRACTOR BY WCID #4 THROUGH A STANDARD WATER CONSTRUCTION METER CONNECTION. STANDARD WATER CONSTRUCTION METER AND GAUGE WILL BE SUPPLIED BY THE CITY AFTER THE CONTRACTOR HAS PAID ALL APPLICABLE FEES FOR THE WATER CONSTRUCTION METER. ALL WATER DISCHARGE MUST BE DECHLORINATED IN ACCORDANCE WITH TCEQ & NPDES REGULATIONS.
- THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH WATERLINE REPAIRS (WHICH RESULT FROM DAMAGE CAUSED BY THE CONTRACTOR) UPON COMPLETION OF PROJECTS. ALL WATER LINES SHALL BE FREE OF ALL PATCHES AND SPLICES.
- ALL PHYSICAL TIES OF THE PROPOSED SYSTEM INTO THE EXISTING WATERLINE SHALL BE RECONNECTED AND BE MADE UNDER SUPERVISION OF THE WCID #4 INSPECTOR. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND ALL EQUIPMENT THAT IS REQUIRED TO MAKE TIE-INS. WCID #4 CREWS WILL MAKE TAPS ON WCID #4 MAINS ARRANGED THROUGH WCID #4 INSPECTOR (72 HOUR NOTIFICATION).
- MINOR LENGTH OF DUCTILE IRON PIPE ADJACENT TO FITTINGS MAY BE REQUIRED AS DIRECTED BY THE WATER DIVISION INSPECTOR BASED ON CONDITIONS ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL USE D.I.P. AS DIRECTED AND SHALL BE PAID AT THE UNIT PRICE BID FOR THE APPROPRIATE SIZE WATERLINE. A MINOR LENGTH IS DEFINED AS A SINGLE LOCATION REQUIRING THE USE OF TWO JOINTS OR LESS.
- MINOR ADJUSTMENTS IN THE LOCATIONS OF FITTINGS, VALVES, FIRE HYDRANTS, ETC. CAN BE ANTICIPATED. THE CONTRACTOR SHALL MAKE SAID MINOR ADJUSTMENTS AS DIRECTED BY THE ENGINEER AND/OR WCID #4 INSPECTOR AT NO INCREASE OF CONTRACT PRICE. WCID #4 WILL BE NOTIFIED PRIOR TO ALL CHANGES.
- ALL NIPPLES BETWEEN FITTINGS AND VALVES ALONG MAINS SHALL BE DUCTILE IRON.
- ALL DUCTILE IRON PIPES, VALVES, AND FITTINGS SHALL BE WRAPPED WITH (2) THICKNESSES OF 8 MIL. POLYETHYLENE AND SHALL BE RESTRAINED WITH "MEGALUG", MECHANICAL JOINT RESTRAINT OR ENGINEER APPROVED EQUAL AT ALL FITTINGS. CONCRETE THRUST BLOCKS SHALL BE PLACED BEHIND ALL FITTINGS EXCEPT WHERE LOCKING OR SWIVEL FITTINGS ARE UTILIZED, UNLESS OTHERWISE SPECIFIED BY WCID #4 ENGINEER.
- ALL OFFSETS ARE TO BE DUCTILE IRON PIPE ASSEMBLIES LOCKED TOGETHER BY RETAINER GLANDS. DUCTILE IRON BENDS SHALL BE UTILIZED FOR ANY CHANGES IN ALIGNMENT OR GRADE.
- CONTRACTOR SHALL COORDINATE WITH WCID #4 INSPECTOR AND NOTIFY ALL AFFECTED CUSTOMERS 24 HOURS PRIOR TO KILLOUT OF EXISTING WATER SYSTEM.
- WATER DISTRIBUTION SYSTEM STANDARDS CALL FOR MAXIMUM 48" COVER ON WATERLINES. WHEN DEPTHS EXCEED 48" COVER TO AVOID OBSTRUCTION, THE USES OF BENDS COULD BE REQUIRED.
- CONTRACTOR SHALL KEEP ALL EXISTING VALVES ACCESSIBLE DURING ALL PHASES OF CONSTRUCTION.
- ALL NEW WATER MAINS SHALL BE INSTALLED SO THAT PIPE IDENTIFICATION MARKINGS ARE LOCATED ON THE TOP OF THE PIPE.
- ALL SERVICE LINES UNDER PAVEMENT SHALL BE ONE INCH, INSIDE DIAMETER, MINIMUM.

SEPARATION OF WATER AND WASTEWATER LINES

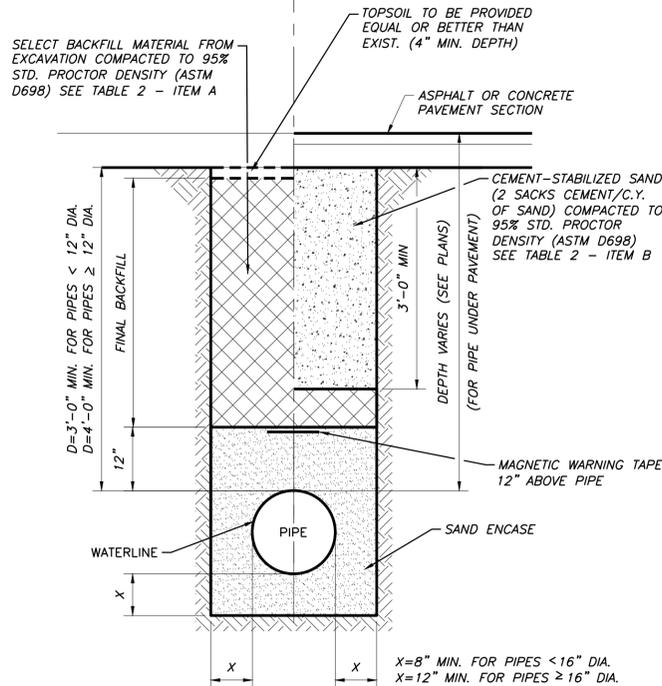
- THE SEPARATION OF WATER AND WASTEWATER LINES AND THE MATERIAL USED SHALL BE IN ACCORDANCE WITH THE "RULES & REGULATIONS FOR PUBLIC WATER SYSTEMS" OF TCEQ AND WCID #4 DETAILS.
- WHENEVER WATER & WASTEWATER LINES CROSS, ONE JOINT OF C900 PVC WATER LINE SHALL BE CENTERED OVER THE WASTEWATER LINE IN ADDITION TO ANY REQUIREMENTS AS DICTATED BY ITEM 1 ABOVE.



WATERLINE MINIMUM COVER REQUIREMENTS

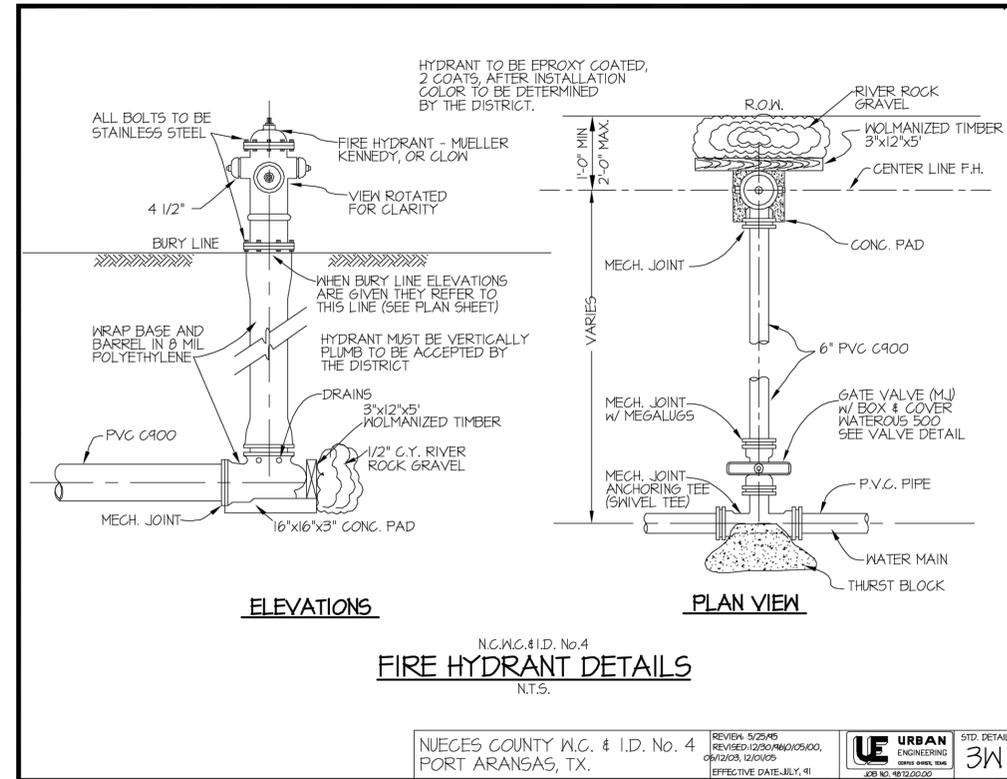
- NOT TO SCALE
- NOTES:**
- ALL MAINS IN THE STREET SHALL HAVE A MINIMUM OF 36" OF COVER AND BE 12" MINIMUM BELOW SUBGRADE AT ALL POINTS AND HAVE VALVE CLEARANCES IN ACCORDANCE WITH THE VALVE DETAIL.
 - ALL TRANSMISSION MAINS (12" DIAMETER & ABOVE) IN THE STREET SHALL HAVE 48" OF COVER AT ALL POINTS.
 - ALL MAINS NOT UNDER THE STREET SHALL HAVE A MINIMUM OF 36" OF COVER AT ALL POINTS.

UNPAVED AREAS PAVED AREAS



TYP. PIPE TRENCHING, BEDDING AND BACKFILL FOR WATERLINE

NOT TO SCALE



GENERAL NOTES FOR BACKFILL

TABLE 1 BEDDING AND INITIAL BACKFILL (BELOW PIPE TO 12" ABOVE PIPE)	TABLE 2 FINAL BACKFILL (GREATER THAN 12" ABOVE PIPE)
	UNPAVED AREAS
ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF THE FOLLOWING OR REFER TO DESIGN ENGINEER REQUIREMENTS: GRANULAR BACKFILL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL.	A. FOR 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER; LOOSE LIFTS TO BE PLACED 10" MAX. COMPACT MATERIAL TO 95% STD. PROCTOR (D698). MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.
WATER LINES: 1. EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA. MEETING REQUIREMENTS OF ASTM D2487 FOR: SP GP SW GW SP-SM GP-GM SW-SM GW-GM AND IN ADDITION: PASSING 1/2" SIEVE - 100% PASSING #4 SIEVE - 30% MINIMUM PLASTICITY INDEX (PI) - NP TO 10 MAX.	B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH. COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL. (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD TOP SOIL SALVAGED TO BE PLACED ON TOP)
2. IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF: A. CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.	B. FOR 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE: BACKFILL SHALL BE CEMENT STABILIZED SAND (2 SK/C.Y.) AND SHALL MEET THE FOLLOWING REQUIREMENTS: SAND GRADATION: % PASSING #4 55-100 #10 40-100 #40 25-100 #200 10-20 PI NP-10 (OR AS PER DESIGN ENGINEER) COMPACT TO 95% OF D698. MOISTURE TO BE ADJUSTED TO (+/-2%) OF

ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No. FNI PROJECT: COR21576

6/30/2025

STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
112706
FREDERICK D. BARK
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

FRESE & NICHOLS
800 N. Shoreline Blvd. Suite 1600N
Corpus Christi, Texas 78401-3717
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Fax - (361) 561-6501

CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH (BOND 2020)

WATER DETAILS
GENERAL NOTES & BACKFILL AND EMBEDMENT DETAILS

SHEET 52 of 55
RECORD DRAWING NO. STR-1019
CITY PROJECT # 21062

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

VERIFY SCALE

DESCRIPTION

REVISION NO. DATE BY

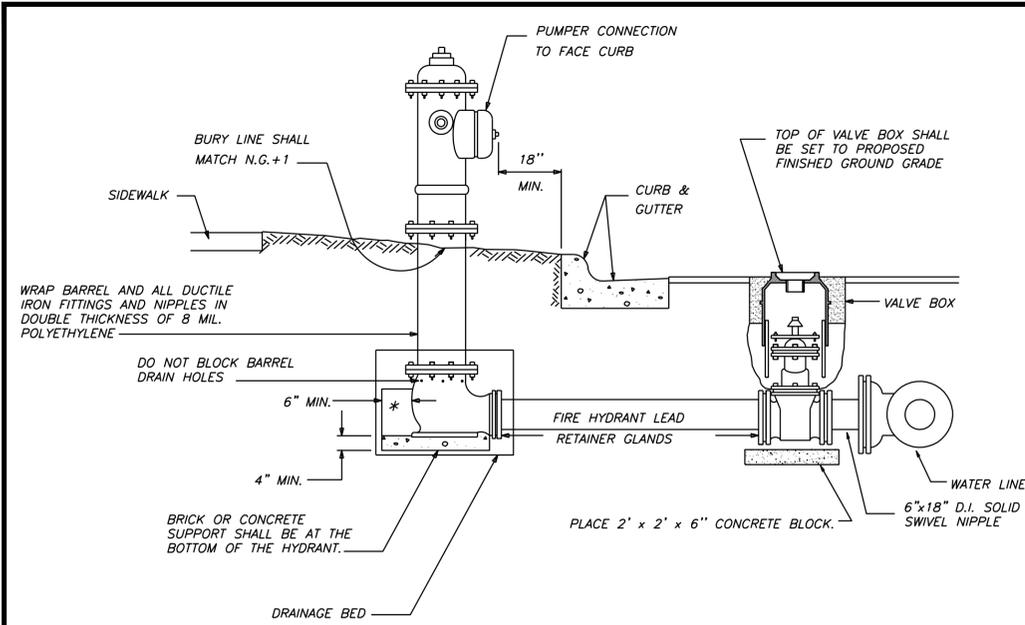
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DATE

DESCRIPTION

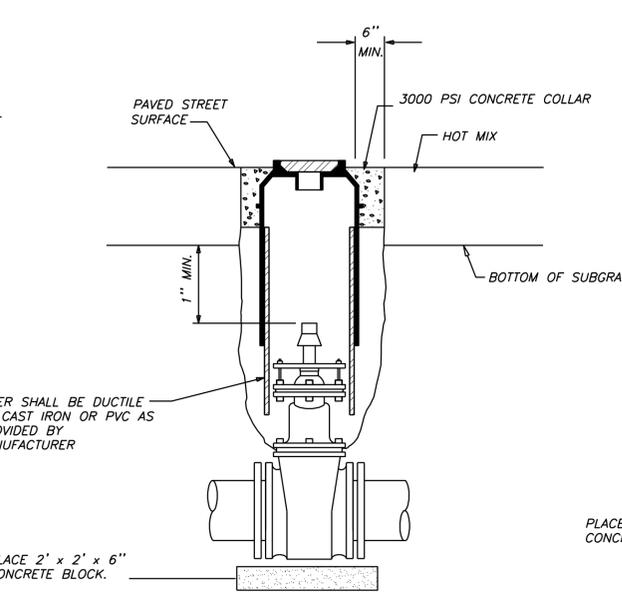
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06/12/2013 1:36:32 P.M. LTS: 1.00 PSLTS: 1



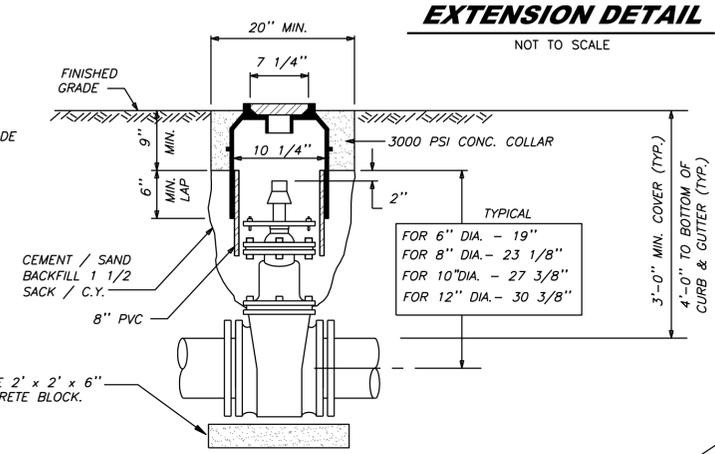
- * NOTE:**
1. ANYTHING LESS THAN 20' WILL BE DUCTILE IRON LOCKED TO THE VALVE.
 2. ANYTHING MORE THAN 20' SHALL REQUIRE CONCRETE THRUST BLOCK BEHIND HYDRANT AGAINST UNDISTURBED SOIL.

FIRE HYDRANT ASSEMBLY DETAIL (TYPE 1)
NOT TO SCALE

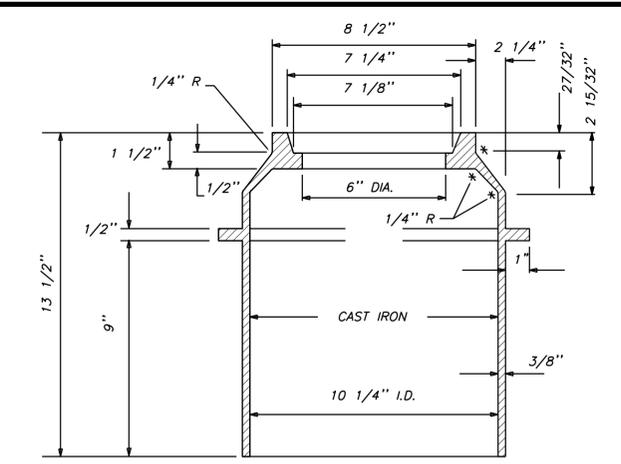
- FIRE HYDRANTS:**
1. DRAINAGE BED SHALL CONSIST OF CRUSHED STONE OR COARSE GRAVEL W/ COARSE SAND, MIN. VOLUME 7 CU. FT., DRAIN BED SHALL EXTEND A MIN. 6" ABOVE DRAIN OUTLET.
 2. ALL FIRE HYDRANT FITTINGS SHALL BE LOCKED TOGETHER BY LOCKING RETAINER GLANDS.
 3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
 4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
 5. LARGE NOZZLE FACES ROAD, UNLESS OTHERWISE NOTED, ROTATE BARREL AS REQUIRED.
 6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
 7. FIRE HYDRANT SHALL BE SET TO MANUFACTURER'S BURY LINE AT PROPOSED/EXISTING GRADE PLUS 1".
 8. NO TAPS ARE TO BE MADE ON FIRE HYDRANT LEAD.



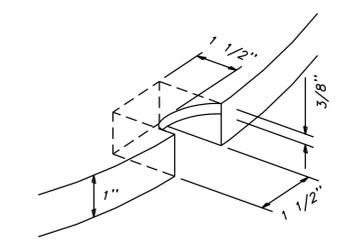
VALVE BOX DETAIL @ PAVEMENT
NOT TO SCALE



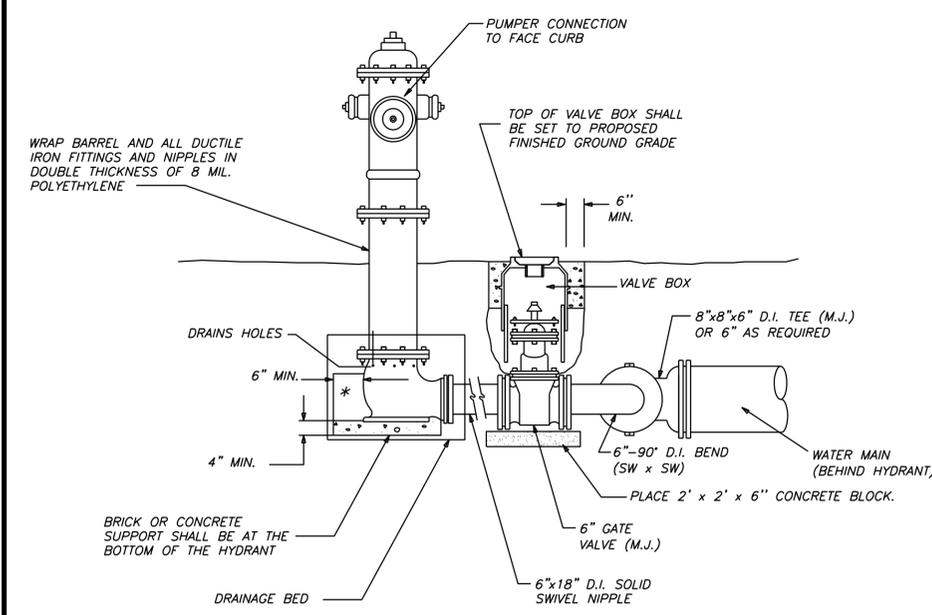
VALVE BOX DETAIL @ NATURAL GROUND
NOT TO SCALE
ALL VALVES SHALL BE HOUSED IN APPROVED VALVE BOXES



EXTENSION DETAIL
NOT TO SCALE

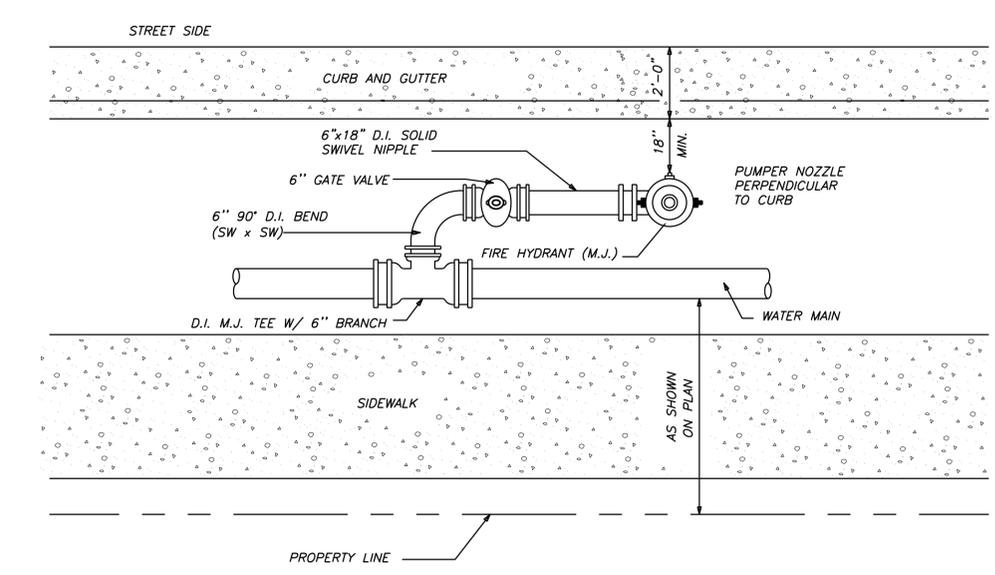


PICK NOTCH
NOT TO SCALE

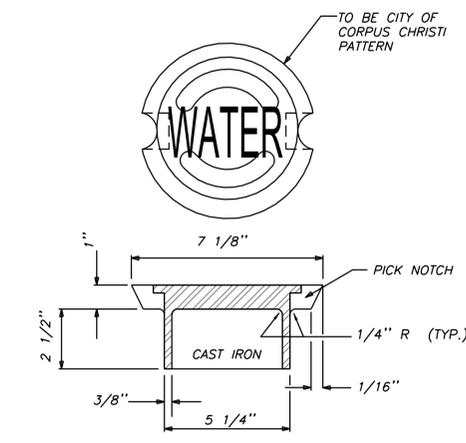


- * NOTE:**
1. ANYTHING LESS THAN 20' WILL BE DUCTILE IRON LOCKED TO THE VALVE.
 2. ANYTHING MORE THAN 20' SHALL REQUIRE CONCRETE THRUST BLOCK BEHIND HYDRANT AGAINST UNDISTURBED SOIL.

FIRE HYDRANT ASSEMBLY DETAIL (TYPE 2)
WATER LINE BEHIND CURB
NOT TO SCALE



FIRE HYDRANT ASSEMBLY DETAIL (TYPE 2)
NOT TO SCALE



LID DETAIL
NOT TO SCALE

THE CITY OF CORPUS CHRISTI STANDARD DETAIL SHEET IS AUTHORIZED FOR USE AS APPLICABLE TO THIS PROJECT BY THE ENGINEER WHO'S SEAL APPEARS ON THIS SHEET. THE ENGINEER AFFIRMS THAT THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED OTHER THAN TO FILL IN THE PROJECT SPECIFIC INFORMATION IN THE TITLE BLOCK.

CONSULTANT'S SHEET No.
FNI PROJECT: COR21576

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-21144

FREES & NICHOLS
800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas 78401-3717
Phone - (361) 561-6500
Fax - (361) 561-6501

CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

REVISION NO.	DESCRIPTION

NEW BEACH ACCESS ROAD
S.H. 361 TO BEACH (BOND 2020)

WATER DETAILS
FIRE HYDRANT, VALVE BOX AND LID

SHEET 53 of 55
RECORD DRAWING NO.
STR-1019
CITY PROJECT # 21062

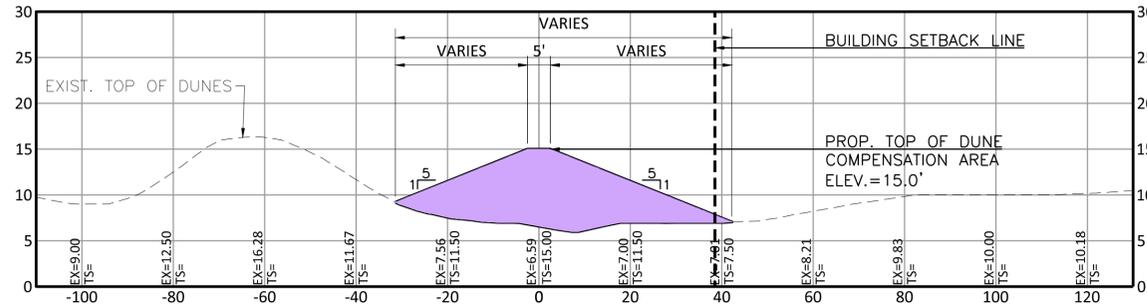
ISSUED FOR CONSTRUCTION

ACAD: 18.2s (LMS Tech) User: 02293
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06/12/2013 1:38:32 P.M. LRS: 1.00 PLS: 1

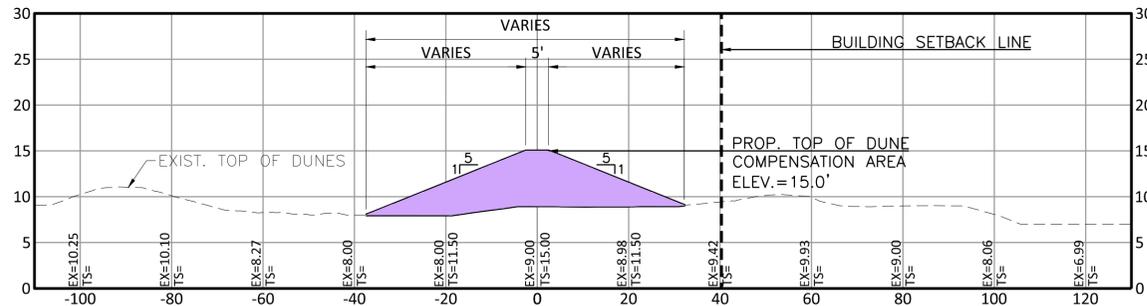
AVOIDANCE/MITIGATION/COMPENASTION NOTES:

- CONTRACTOR SHALL AVOID, PRESERVE, AND PROTECT ALL DUNES VEGETATION DURING CONSTRUCTION AND MITIGATION/COMPENSATION EFFORTS.
- CONTRACTOR SHALL FOLLOW ALL DUNES PERMITTING AND TEXAS GENERAL LAND OFFICE/NUECES COUNTY BEACH MANAGEMENT GUIDELINES FOR WORKING IN DUNES.
- CONTRACTOR SHALL PLAN AND SEQUENCE THE WORK IN SUCH A MANNER THAT STRIPPED AND PROTECTED VEGETATION IS RE-PLANTED IN THE MITIGATION/COMPENSATION AREAS NO MORE THAN 4 DAYS AFTER INITIAL REMOVAL.
- IF CONTRACTOR CANNOT RE-PLANT VEGETATION WITHIN 96 HOURS, CONTRACTOR SHALL PROVIDE EQUIVALENT LIVE INDIGENOUS PLANTS.
- CONTRACTOR SHALL PRESERVE AND PROTECT EXCAVATED NATIVE PLANTS WITH A LIGHT-WEIGHT AND LIGHT-COLORED COVERING THAT WILL PROTECT FROM SUN BURN AND HEAT DAMAGE AND BY WATERING AS NECESSARY UNTIL THEY CAN BE REPLANTED IN THE MITIGATION OR COMPENSATION AREA.
- CONTRACTOR SHALL PROTECT RE-PLANTED VEGETATION WITH A LOOSE WOVEN BURLAP AND HAY-MULCH FOR 1 YEAR OR UNTIL OAR HAS DEEMED THE VEGETATION ESTABLISHED WITH MIN. 10% COVERAGE IN CONCURRENCE WITH NUECES COUNTY BEACH MANAGEMENT.
- CONTRACTOR SHALL WATER THE RE-PLANTED VEGETATION FOR UP TO 12 MONTHS OR UNTIL VEGETATION HAS BEEN DETERMINED TO BE ESTABLISHED BY THE OAR IN CONCURRENCE WITH NUECES COUNTY BEACH MANAGEMENT.
- IN LIEU OF RE-PLANTING EXISTING VEGETATION, THE CONTRACTOR SHALL PROVIDE EQUIVALENT LIVE INDIGENOUS PLANTS FROM A COMMERCIAL SOURCE.
- DURING RELOCATION OF SAND OR PLANT MATERIAL TO MITIGATION OR COMPENSATION AREAS AND DURING SUBSEQUENT MAINTENANCE, THE CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING DUNE VEGETATION, EXISTING GRADES, AS WELL AS ANIMALS LOCATED IN THE AREA THROUGH THE USE OF CRIBBING, MATTING, LONG-ARMED EXCAVATORS, MINITURE EQUIPMENT, REMOTE-CONTROLLED MINI-EQUIPMENT OR VARIOUS OTHER METHODS TO MINIMIZE TRAVEL ACROSS DUNES, EQUIPMENT IN DUNES, AND DISTURBANCE OF THE INTACT DUNES SYSTEM AT THIS LOCATION.
- IF THE CONTRACTOR IS UNABLE TO PLACE THE SAND IN THE COMPENSATION SITE WITHOUT TRAVERSING THE DUNES, THE CONTRACTOR SHALL SEQUENCE THE COMPENSATION WORK SUCH THAT TRAVEL TO THE SOUTH END OF THE COMPENSATION SITE, AND CONSTRUCTION AT THE SOUTH END WILL OCCUR FIRST, WITH THE REMAINING COMPENSATION WORK OCCURRING IN SEQUENCE TO THE NORTH, SUCH THAT WHEN ALL SAND AND VEGETATION HAS BEEN PLACED, NO FURTHER TRAVEL ACROSS THE DUNES IS REQUIRED AND THE COMPENSATION WORK ENDS AT THE NEW ROADWAY WITH NO DISTURBANCE OF ADJACENT DUNES AND VEGETATION.
- FOR THE PURPOSES OF THIS CONTRACT AND THE ASSOCIATED DUNES PERMIT, MITIGATION IS DESCRIBED AS THE RESTORATION OF PLANT MATERIAL ON AREAS THAT HAVE BEEN EXCAVATED FOR THE ROADWAY AFTER THEY HAVE BEEN LAYED BACK AT A SLOPE THAT IS 3:1 OR FLATTER FOR THE PURPOSES OF CONTROLLING EROSION.
- FOR THE PURPOSES OF THIS CONTRACT AND THE ASSOCIATED DUNES PERMIT, COMPENSATION IS DESCRIBED AS THE ADDITION OF SAND AND VEGETATION TO ENHANCE THE EXISTING NEARBY DUNES COMPLEX BY ADDING NEW SAND TO THE SYSTEM THAT IS THEN PROTECTED FROM ADVERSE EROSION BY THE ESTABLISHMENT OF NATIVE DUNES VEGETATION.
- CONTRACTOR SHALL STAKE AND FLAG ALL WORK AREAS IN THE FIELD DURING CONSTRUCTION TO CLEARLY MARK THE BOUNDARIES OF THE PERMITTED PROJECT AREA TO INFORM EQUIPMENT OPERATORS AND CONSTRUCTION CREW OF THE LIMITS TO WHERE THEY CAN TRAVEL AND WORK AND IMPACT EXISTING DUNES AND VEGETATION, AND TO HELP BEACH MAINTENANCE CREWS AND THE PUBLIC AVOID IMPACTS TO THE MITIGATION OR COMPENSATION AREAS.
- A 1-FOOT LIMIT BEYOND THE CEMENT-STABILIZED SHOULDER EDGE SHALL BE STAKED AND MAINTAINED DURING CONSTRUCTION, AND THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN ALL INGRESS, EGRESS WITHIN THE 1-FOOT BOUNDARY.
- OFFSITE DUNE COMPENSATION FILL MATERIAL, IF NEEDED, SHALL BE CLEAN AND FREE OF DEBRIS AND FREE OF TOXIC MATERIALS LISTED IN TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, 3.02.4, IN CONCENTRATIONS WHICH ARE HARMFUL TO PEOPLE, FLORA, AND FAUNA.
- DUNE MITIGATION FILL MATERIAL SHALL BE OF ACCEPTABLE MINERALOGY AND GRAIN SIZE WHEN COMPARED TO THE SEDIMENTS FOUND ON THE SITE. A COMMERCIAL BORROW SITE EXISTS WITHIN A MILE OF THE SITE ON SH. 361 THAT MAY HAVE ACCEPTABLE FILL MATERIAL (SAND).
- CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE NUECES COUNTY BEACH MANAGEMENT PLAN AND THE TGLO, AND THE JOINT EROSION RESPONSE PLAN FOR NUECES COUNTY AND THE CITY OF CORPUS CHRISTI.
- THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION WITHOUT NOTIFICATION TO NUECES COUNTY AND TEXAS GENERAL LAND OFFICE, AND ACKNOWLEDGE OF RECEIPT OF NOTIFICATION PROVIDED BACK TO THE CITY, WITH AT LEAST 10 DAYS OF NOTICE GIVEN.
- THE CONTRACTOR SHALL ALLOW REPRESENTATIVES OF NUECES COUNTY AND TGLO ACCESS TO THE CONSTRUCTION SITE FOR INSPECTION PURPOSES, DURING AND UPON COMPLETION OF CONSTRUCTION.
- NO IMPACTS TO DUNES ARE ALLOWED OUTSIDE OF THE CONSTRAINTS LISTED HEREIN. TYPICALLY NO MORE THAN 1 FOOT BEYOND THE CONSTRUCTED IMPROVEMENTS, AS THOSE IMPACTS WOULD BE IN VIOLATION OF THE DUNE PROTECTION ACT, WITH MAY INCLUDE PENALTIES OF \$50-\$2,000 PER VIOLATION PER DAY PAYABLE ENTIRELY BY THE CONTRACTOR.
- THE CONTRACTOR SHALL ENFORCE THE RESTRICTION OF MOVEMENT BEYOND THE ALLOWABLE DISTURBANCE ZONE BY THE INSTALLATION AND MAINTENANCE OF SILT FENCE AND/OR ORANGE CONSTRUCTION FENCING TO PREVENT TRESPASS OF EQUIPMENT, MATERIALS, OR PERSONNEL ON RESTRICTED DUNE AREAS.
- THE CONTRACTOR SHALL NOT STOCKPILE DUNES SAND, AND SHALL ONLY MOVE SAND FROM THE EXCAVATION TO THE FINAL PLACEMENT LOCATION IN THE DUNES COMPENSATION AREA.
- THE CONTRACTOR SHALL NOT STOCKPILE ANY MATERIALS SEAWARD OF STATION 7+00.
- THE CONTRACTOR SHALL NOT TEMPORARILY OR PERMANENTLY MOVE SAND OFF-SITE OR TO ANY LOCATION LANDWARD OF THE CRITICAL DUNE LINE (APPROXIMATELY STA. 8+50), AND ANY SAND EXCAVATED DURING CONSTRUCTION SAHLL STAY ON SITE AND BE USED IN THE DUNE COMPENSATION AREA.

- THE CONTRACTOR SHALL PERFORM THE DUNES COMPENSATION PORTION OF THE CONSTRUCTION FIRST AND/OR IN CONJUNCTION WITH THE EXCAVATION FOR THE ROADWAY SUCH THAT VEGETATION HARVESTING AND SAND MOVEMENT FROM THE ROADWAY EXCAVATION AREA TO THE DUNES COMPENSATION PLACEMENT AREA CONTINUES WITHOUT DELAY OR STOCKPILING.
- THE CONTRACTOR SHALL CONDUCT THE DUNES COMPENSATION EFFORTS AND DUNES MITIGATION EFFORTS (INCLUDING SAND PLACEMENT AND FINAL VEGETATION PLACEMENT, SHADING, AND WATERING) CONTINUOUSLY UNTIL ALL REPAIRED, REHABILITATED, AND RESTORED DUNES AND DUNE VEGETATION ARE EQUAL OR SUPERIOR TO THE PRE-EXISTING DUNE VEGETATION.
- THE CONTRACTOR SHALL RESTORE DUNES TO A SIMILAR POSITION, CONTOUR, VOLUME, ELEVATION, SEDIMENT COMPOSITION, AND VEGETATIVE COVER AS THE SURROUNDING NATURALLY FORMED DUNES, TO INCLUDE A ROUNDED TOP (NOT FLAT).
- THE CONTRACTOR SHALL COMPENSATE FOR ADVERSE EFFECTS ON DUNE VEGETATION BY PLANTING INDIGENOUS VEGETATION ON THE AFFECTED AREAS.
- THE CONTRACTOR SHALL MINIMIZE CONSTRUCTION TRAFFIC ON OR ACROSS DUNES TO THE GREATEST EXTENT POSSIBLE.



B COMPENSATION AREA SECTION
 SCALE IN FEET



C COMPENSATION AREA SECTION
 SCALE IN FEET

REQUIRED WATERING REGIMEN

WATERING REGIMEN:	¹ DURATION REQUIRED (MONTHS)
DAILY	2 ²
WEEKLY	2 ²
B-WEEKLY	2
MONTHLY	2
B-MONTHLY	2
AS NEEDED	2 ³

¹IF DAILY WATERING IS IN PLACE ON APRIL 31 OF A GIVEN YEAR, THEN DAILY WATERING SHALL BE CONTINUED THROUGH SEPTEMBER 31 OF THE SAME YEAR.

²IF WEEKLY WATERING IS IN PLACE ON APRIL 31 OF A GIVEN YEAR, THEN WEEKLY WATERING SHALL BE CONTINUED THROUGH SEPTEMBER 31 OF THE SAME YEAR.

³AS NEEDED' UNTIL 10% ESTABLISHED VEGETATION COVERAGE CAN BE CONFIRMED IN CONCURRE COUNTY.

ISSUED FOR CONSTRUCTION

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FREES & NICHOLS
 800 N. Shoreline Blvd, Suite
 1600N Corpus Christi, Texas
 78401-3717
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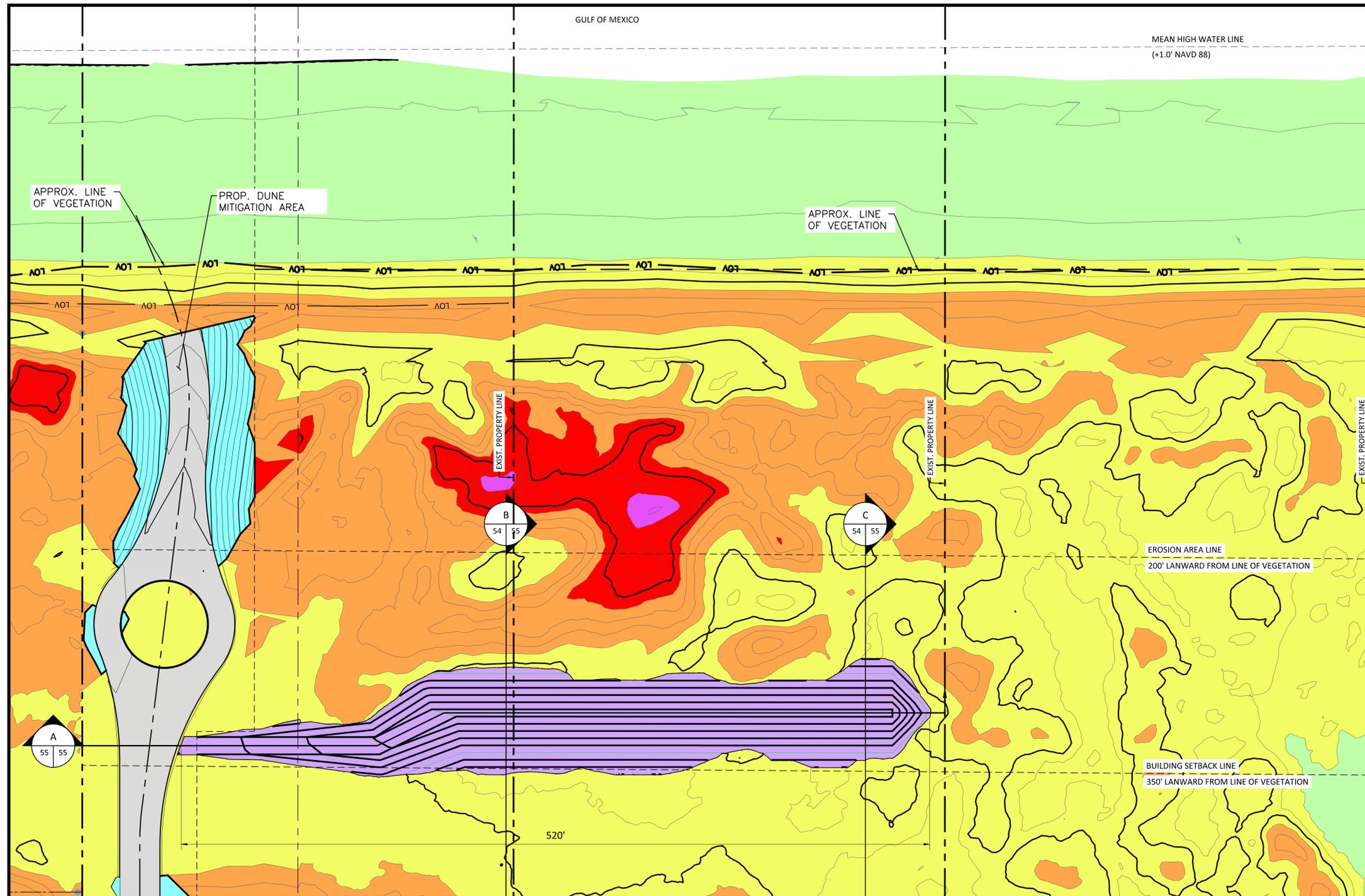
CITY of CORPUS CHRISTI TEXAS
 Department of Engineering Services

NEW BEACH ACCESS ROAD
 S.H. 361 TO BEACH
 (BOND 2020)

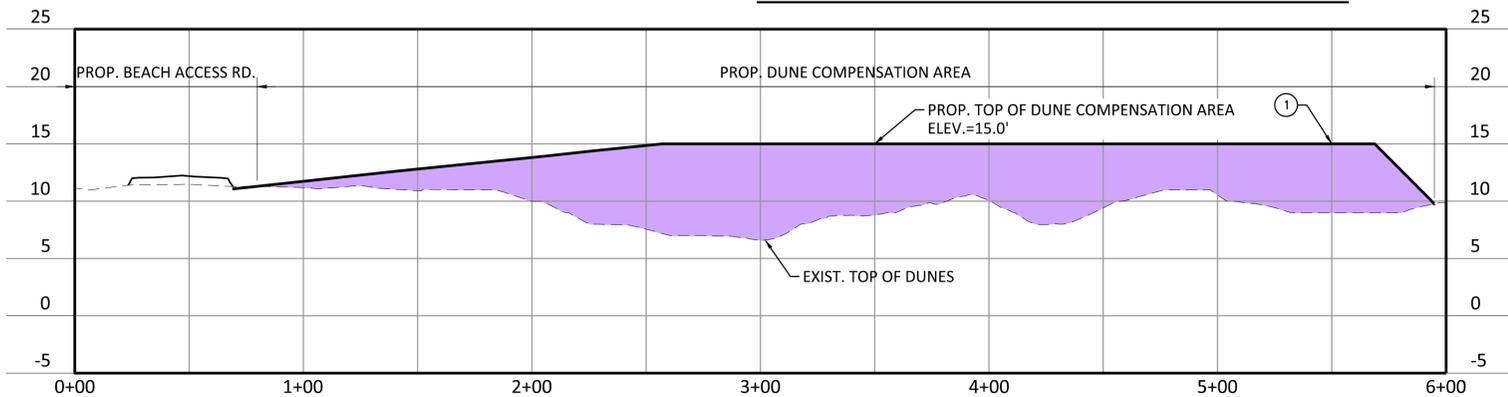
DUNE MITIGATION &
 COMPENSATION NOTES

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

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BEACH ACCESS RD.
 DUNE MITIGATION & COMPENSATION PLAN



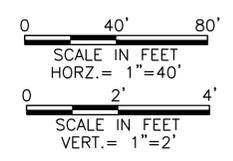
COMPENSATION AREA SECTION

KEY NOTES::

- 1 PLACE 2,983 CY OF SAND IN DUNE COMPENSATION AREA
- PLACEMENT NOTES AND REQUIREMENTS ON PREVIOUS SHEET

LEGEND:

- DUNE MITIGATION AREA
- DUNE COMPENSATION AREA



ISSUED FOR CONSTRUCTION

CONSULTANT'S SHEET No.		FNI PROJECT: COR21576	
		800 N. Shoreline Blvd, Suite 1600N Corpus Christi, Texas 78401-3717 Phone - (361) 561-6500 Fax - (361) 561-6501	
		CITY OF CORPUS CHRISTI TEXAS Department of Engineering Services	
REVISION NO.	DATE	BY	DESCRIPTION
1			NEW BEACH ACCESS ROAD S.H. 361 TO BEACH (BOND 2020)
DUNE MITIGATION & COMPENSATION PLAN		SHEET 55 of 55 RECORD DRAWING NO. STR-1019 CITY PROJECT # 21062	