



Permit to Construct Access Driveway Facilities on Highway Right of Way

PERMIT NUMBER: 22020001			
REQUESTOR		GPS*	
		LATITUDE, LONGITUDE	
		29.216766, -95.47113	
		ROADWAY	
		HWY NAME	
		FM 521	
		FOR TxDOT'S USE	
		CONTROL	
		0111	
NAME		SECTION	
Anchor Holdings MP, LLC c/o Quiddity Engineering		05	
MAILING ADDRESS			
6330 WEst Loop South, Suite 150			
CITY, STATE, ZIP			
Bellaire, TX 77401			
PHONE NUMBER			
713-777-5337			
<small>*GLOBAL POSITIONING SYSTEM COORDINATES AT INTERSECTION OF DRIVEWAY CENTERLINE WITH ABUTTING ROADWAY</small>			

The Texas Department of Transportation, hereinafter called the State, hereby authorizes Anchor Holdings MP, LLC c/o Quiddity Engineering, hereinafter called the Permittee, to construct / reconstruct a (3) Street Tie-Ins (residential, convenience store, retail mall, farm, etc.) access driveway on the highway right of way abutting highway number FM 521 in Brazoria County, located FM 521 and CR 32

USE ADDITIONAL SHEETS AS NEEDED

Is this parcel in current litigation with the State of Texas? YES NO

Is the Permittee or a family member of Permittee an employee or official of the Texas Department of Transportation? YES NO

Does an employee or official of the Texas Department of Transportation serve as an employee or officer of Permittee or own a controlling interest in Permittee? YES NO

This permit is subject to the Access Driveway Policy described on page 2 and the following:

1. The undersigned hereby agrees to comply with the terms and conditions set forth in this permit for construction and maintenance of an access driveway on the state highway right of way.
2. The Permittee represents that the design of the facilities, as shown in the attached sketch, is in accordance with the Roadway Design Manual, Hydraulic Design Manual and the access management standards set forth in the Access Management Manual (except as otherwise permitted by an approved variance).
3. Construction of the driveway shall be in accordance with the attached design sketch, and is subject to inspection and approval by the State.
4. Maintenance of facilities constructed hereunder shall be the responsibility of the Permittee, and the State reserves the right to require any changes, maintenance or repairs as may be necessary to provide protection of life or property on or adjacent to the highway. Changes in design will be made only with prior written approval of the State.
5. The Permittee shall hold harmless the State and its duly appointed agents and employees against any action for personal injury or property damage related to the driveway permitted hereunder.
6. Except for regulatory and guide signs at county roads and city streets, the Permittee shall not erect any sign on or extending over any portion of the highway right of way. The Permittee shall ensure that any vehicle service fixtures such as fuel pumps, vendor stands, or tanks shall be located at least 12 feet from the right of way line to ensure that any vehicle services from these fixtures will be off the highway right of way.
7. The State reserves the right to require a new access driveway permit in the event of: (i) a material change in land use, driveway traffic volume or vehicle types using the driveway, or (ii) reconstruction or other modification of the highway facility by the State.
8. The State may revoke this permit upon violation of any provision of this permit by the Permittee.
9. This permit will become null and void if the above-referenced driveway facilities are not constructed within six (6) months from the issuance date of this permit.
10. The Permittee will contact the State's representative Robert Etheredge telephone, (979) 864-8551, at least twenty-four (24) hours prior to beginning the work authorized by this permit.
11. The requesting Permittee will be provided instructions on the appeal process if this permit request is denied by the State.

The undersigned hereby agrees to comply with the terms and conditions set forth in this permit for construction and maintenance of an access driveway on the highway right of way.

Date: 10/24/2024

Signed by:

Signed: Brian Guier
DocuSigned By: 588196135136429... (Property owner or owner's representative)

<u>10/23/2024</u>	<u>Maria Pilar Aponte</u>	<u>C8B39625B1F14DE...</u>	District Engineer, or designee Approval
Date of Issuance			
Date of Issuance as per Variance to AMM			District Engineer, or designee Approval
Date of Denial			District Engineer Denial (No Delegation)

Access Driveway Policy

Title 43 Texas Administrative Code (Transportation), Chapter 11 (Design), Subchapter C (Access Connections To State Highways) and the "Access Management Manual" establish policy for the granting of access and the design, materials, and construction of driveways connecting to state highways. All driveway facilities must follow this policy. To the extent there is any conflict between this permit and the policy, the policy shall control. If a proposed driveway does not comply with the access management standards, the owner may seek a variance to a requirement contained in the access management standards by contacting the local TxDOT office.

TxDOT Driveway Permit Request Contact

For a local contact for your TxDOT Driveway Permit Request or variance request, visit: <http://www.txdot.gov/inside-txdot/district.html>. You can click on the section of the map closest to your location to find the local TxDOT office. You can also click on the drop down box below the map to find the district for your county.

Other Conditions

In addition to Items 1 thru 11 on page 1 of this permit, the facility shall also be in accordance with the attached sketch and subject to the following additional conditions stated below:

Provide for a 44' wide street tie-in using a single row of 24" RCP with SETs and 35' radii.
 Provide for a 80' wide street tie-in using a single row of 24" RCP with SETs and 35' radii.
 Provide for a 71' wide street tie-in using a single row of 24" RCP with SETs and 25'/30' radii.
 According to plans dated 10-04-2024. Donation Agreement in progress.
 Also, attached Special Provisions dated July 1, 2022 must be followed.
 Hydraulic re-approval per following specs.:
 Proposed 3 street tie in on FM 521
 School driveway 1 (Stat 226+40.51)
 Roadway width = 71 ft and radius = 25 ft and 30 ft
 Proposed 106 LF of 24" RCP culvert w/SET.
 Roadway 1: (Sta 235+44.13)
 Roadway width = 44 ft and radius = 35 ft
 Proposed 94 LF of 24" RCP culvert w/SET.
 Roadway 2 (Stat 253+43.01)
 Roadway width = 80 ft and radius = 35 ft and 30 ft
 Proposed 151 LF of 24" RCP culvert w/SET.
 No onsite drainage coming to TXDOT.
 Proposed site development will drain to a tributary of Oyster Creek.

Variance Documentation Justification

For a Variance request, please indicate which of the below are applicable, as required by TAC §11.52(e):

- a significant negative impact to the owner's real property or its use will likely result from the denial of its request for the variance, including the loss of reasonable access to the property or undue hardship on a business located on the property.
- an unusual condition affecting the property exists that was not caused by the property owner and justifies the request for the variance.

For the conditions selected above, provide written justification below. (Attach additional sheets, if needed)

For TXDOT use below:

For Variance denials, please indicate which of the below conditions, as provided in TAC §11.52(e), were determined:

- adversely affect the safety, design, construction, mobility, efficient operation, or maintenance of the highway; or
- likely impair the ability of the state or the department to receive funds for highway construction or maintenance from the federal government.

Attachments:

Sketch of Installation

All Variance Documentation

Permit Special Provisions

Revised July 1, 2022

1. The Permittee is responsible for all costs associated with the construction of this access driveway.
2. All Pipes used shall be Reinforced Concrete Pipe (RCP), unless otherwise specified.
3. Culvert crossings within the 30-foot clear zone (parallel culverts) shall be required to have minimum 6:1 sloping ends known as Safety End Treatments (SETs). The culvert shall have sufficient length to allow the 6:1 slope to be achieved from the edge of pavement to the flowline at the end of the SET. Culverts that exceed 50'f in length shall have a junction box for clean out, or as specified by the TxDOT Area Engineer.
4. Culverts larger than single 33-inch diameter, double 30-inch diameter, or three or more 12-inch diameter shall require safety pipe runners.
5. Riprap or stabilizing material shall be provided and installed by grantee at time of construction, or as directed by the TxDOT Area Engineer.
6. For TxDOT-maintained ASPHALT SURFACED PAVEMENT, no concrete pavement or curbing shall be allowed within State right of way.
7. For TxDOT-maintained CONCRETE SURFACED PAVEMENT, additional full-depth saw cuts may be made as needed to facilitate removal of the concrete within the limits of the required full-depth cuts. Concrete adjacent to the patch shall not be spalled or fractured by the removal procedure.
8. Placement or removal of beautification on State right of way shall be under the direction of TxDOT.
9. The Permittee certifies that its storm water runoff to the State's right of way shall not be contaminated by any industrial processes or significant pollutants, and the State shall not be held liable for any pollutants entering State right of way through storm water connections.
10. The Permittee be in compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Texas Accessibility Standards (TAS), and Texas Department of Licensing and Regulation (TDLR) requirements for items including but not limited to sidewalks, landings, and wheelchair ramps.
11. Permittee shall obtain overall environmental clearance with all appropriate regulatory agencies prior to beginning construction. Approval of this request by TxDOT does not relieve the Permittee or its agents of this obligation.
12. Work performed on railroad right-of-way, or easements controlled by others, is subject to the concurrence of the owner of said properties. Approval of this request by TxDOT does not relieve the Permittee of this obligation.
13. The complete permit package shall be on the project site at all times and available for review by TxDOT.
14. TxDOT will inspect the construction and may provide the flow-line elevation.

Permit Special Provisions

Revised July 1, 2022

15. All work within the State of Texas right-of-way shall be performed in accordance with State standards and specifications as to the installation and materials used. All materials and mix designs to be placed in TxDOT right-of-way must be obtained from TxDOT approved sources and be of approved TxDOT mix designs.
16. At least five (5) working days prior to any excavation, permittee shall request the location of all underground utilities within the work area by calling 811, and contacting local municipalities, utility districts, school districts, or any other utility owners. TxDOT-owned fiber optic, communications, power, illumination, and traffic signal cabling and conduit can be located by calling the TxDOT Houston District Traffic Operations Office at HOU-LocateRequest@txdot.gov. Do not perform underground work on the project until TxDOT – owned facilities have been located and marked. Use caution when working in these areas to avoid damaging or interfering with existing facilities. Permittee shall be responsible for relocating and/or adjusting any utilities within the work area.
17. This permit is subject to a separate traffic control plan being approved by the Area Engineer. All work must follow the [TxDOT Traffic Control Plan Standards](#), Latest Revision, or if approved, Typical Applications shown in the Texas Manual on Uniform Traffic Control Devices, Latest Revision, Chapter 6-H. The advanced warning signage shown on standards BC(1)-21 thru BC(12)-21 will be required. It is mutually agreed and understood that the implementation and maintenance of the traffic control plan shall be the responsibility of the Permittee. Contractor is required to supply all sub-contractors with a copy of this permit and approved traffic control plan.
18. The Permittee shall coordinate the sequence of construction and traffic control plan with any adjacent highway construction or maintenance projects. No overnight lane closures will be permitted, unless otherwise approved by the Area Engineer.
19. Work performed within the waterways, such as rivers, creeks, bayous, and drainage ditches, is subject to the concurrence of appropriate regulatory agencies. Permittee shall use Best Management Practices to minimize erosion and sedimentation resulting from proposed activities. Permittee certifies that its drainage system meets all storm water quality criteria of the County and/or City where the permit is located. Construction and/or maintenance of this project shall not adversely affect the drainage patterns within the area.
20. All excavations within the right-of-way shall be backfilled according to the [TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges](#) (SPECS), Item 400, as currently amended. All surplus material shall be removed from the right-of-way, and the excavation finished flush with surrounding natural ground.
21. In no event will an edge drop-off be permitted during the hours of darkness. If the Contractor is unable to complete a section before the end of the workday, base material capable of vehicle support shall be pulled back to the existing edge on a 4:1 or flatter slope, to provide for driver and pedestrian safety.
22. The Contractor shall not create a dirt nuisance or safety hazard in any roadway. The pavement shall be cleaned daily.

Permit Special Provisions

Revised July 1, 2022

23. All exposed dirt surfaces shall be sodded, unless otherwise approved by the Area Engineer. A slope of 4:1, or flatter, shall be required on the ditch front slope.
24. No trees, vegetation, valves, meter boxes, cleanouts, ground boxes, handholes, manhole covers, etc. will be allowed in the pavement. These appurtenances shall be relocated elsewhere within the right-of-way, unless otherwise approved by the Area Engineer.
25. The Texas Universal Triangular Slip Base Sign Supports shall be required for all signage within TxDOT right-of-way. Proposed signs, or those which require relocation, shall be done in accordance with the following [TxDOT Sign Mounting Details Standards](#): SMD (GEN)-08, SMD (SLIP-1)-08, SMD (SLIP-2)-08, and SMD (SLIP-3)-08.
26. All work zone pavement markings shall meet the requirements of SPECS, Item 662. All permanent pavement markings shall meet the requirements of SPECS, Item 666, and be placed in accordance with the following [TxDOT Pavement Standards](#): PM(1)-20, PM(2)-20, PM(3)-20, and PM(4)-22. All raised pavement markers shall meet the requirements of SPECS, Item 672.
27. Existing pavement markings shall be removed according to the requirements of SPECS, Item 677, or to the satisfaction of the Area Engineer. All pavement surfaces shall be cleaned and prepared in accordance with SPECS, Item 678.
28. For roadway improvements and Street Tie-Ins, the Contractor shall employ at his/her expense, an approved commercial testing laboratory to perform testing on concrete to determine the in-situ strength. Make at least one set of test specimens for each element cast each day. Cure these specimens under the same conditions as the portion of the structure involved for all stages of construction. Ensure safe handling, curing, and storage of all test specimens. Sample and test the hardened concrete in accordance with SPECS, Item 421. Certified reports of all test results shall be submitted to the Area Engineer.
29. Should the existing roadway pavement or other feature be damaged, it shall be repaired as specified by the Area Engineer.
30. Construction Access Permits are to expire after 12 months, unless renewed.
31. The Permittee acknowledges and fully accepts responsibility and liability for the design, construction, maintenance, and operation of this project, which shall be the responsibility of the Grantee for the life of the project. The Permittee shall indemnify and save harmless the State from any and all damages or losses that may develop due to this project.
32. All TxDOT Standard Sheets are available online for free download:
Statewide <http://www.dot.state.tx.us/business/standardplanfiles.htm>
Houston District <http://www.dot.state.tx.us/hou/specinfo/specs.htm>

Permit Special Provisions

Revised July 1, 2022

33. The contractor or sub-contractor is required to contact the TxDOT [Local Maintenance Office](#) Supervisor a minimum of 72 hours prior to commencing any work.
- Brazoria Maintenance Office – Permit Section 2: 979-864-8550
 - Galveston Maintenance Office – Permit Section 3: 409-978-2551
 - Fort Bend Maintenance Office – Permit Section 4: 281-238-7950
 - Montgomery Maintenance Office – Permit Section 5: 936-538-3350
 - Southeast Harris Maintenance Office – Permit Section 6: 281-464-5540
 - Waller Maintenance Office – Permit Section 7: 979-921-2400
 - West Harris Maintenance Office – Permit Section 8: 713-934-5900
 - Metro Houston Maintenance Office – Permit Section 9: 713-636-7400
 - North Harris Maintenance Office – Permit Section 10: 281-319-6450

TRACKING NO. TR22020001 Rev 3 **ROADWAY** FM 521

Area Office Review Form

What does the AO recommend?	1	2	3	4
Driveway or Street-Tie Width:	44'	80'		
Culvert / Pipe Size:	24"	24"		
Number of Rows of Pipe:	One	One		
SETs Required (yes/no):	Yes	Yes		
Radii Returns:	35'	35'		

Please answer the following questions:

What is the pavement material of the adjacent TxDOT roadway? Asphalt

Does the drawing accurately show the features of the right-of-way? Yes

What is the posted speed limit of the adjacent TxDOT roadway? 60 MPH

Does your office believe this application will have an adverse effect on the safety, efficient operation, or maintenance of the highway? Circle yes or no. If yes, please explain below.

YES
NO

What is the date on the final / revised plans? 10/04/24

Additional Comments:

Street Tie-In (2)
Turn Lanes
Traffic Signals
Donation Agreement in progress

Inspected by: *Scott O'Brien* Date: 10-10-24

AE / AAE Approval: *[Signature]* *Joshua Bailey* Date: 10-10-24



Houston District Access Permit

[Application Help](#)

Application

[Submit by Email](#)

DF-M200 2-2022

Date of Submittal:	<input type="text" value="Aug 17, 2022"/>	Version	<input type="text" value="1.0"/>		
Name of Applicant:	Anchor Holdings MP, LLC <small>Permittee (Property Owner)</small>	Ashton Gray Development <small>Name of Site</small>			
	Quiddity Engineering Brian Geier <small>Consulting Firm Contact Person</small>	0 FM 521 <small>Site Address / Location / Limits</small>			
Email Permit To:	bgeier@quiddity.com (713) 777-5337 <small>Contact Email Address Contact Phone</small>	Angleton TX 77515 <small>City State Zip Code</small>			
	6330 West Loop South, Suite 150 <small>Contact Address</small>	Latitude <input type="text" value="29.216766"/>	Longitude <input type="text" value="-95.47113"/>		
	Bellaire TX 77401 <small>City State Zip Code</small>	Is this parcel in current litigation with the State of Texas? <input type="radio"/> Yes <input checked="" type="radio"/> No			

Type of Permit Request: Street Tie-In Commercial Drainage Only Low Use Construction Sidewalk TIA Traffic Signal Preliminary Controlled Access (ADL Break)

[Help](#)

Highway: FM0521 Name of closest cross street: CR 32

Is Highway within an incorporated city? Yes No City: _____ County: Brazoria

[Maint Map](#)

Property on which side of highway? Northbound Southbound Eastbound Westbound

Number of requested driveway(s): Number of requested street tie-in(s):

Number of Existing access(s) to be modified:

Date of Sign and Seal Plans Submittal: Tracking No: Revision No:

(Except Preliminary)

Type of highway design? Curbed Open Ditch Both

If open ditch, inside diameter of nearest upstream and downstream pipes: 24.00

Is there an existing roadway median opening, ramp, or traffic signal located within 1000 feet of the proposed driveway? If yes, indicate distance and direction in all plans. Yes No

Does this request include any drainage coming to TxDOT? Yes No

If no, provide name of entity/agency/authority that will receive any drainage outfall / storm discharge after the site has been developed: _____

Upon request, please provide a copy of the approval letter from the drainage authority.

[Please complete and attach the Drainage/Hydraulic Checklist.](#)

The drainage / hydraulic checklist must be completed and submitted for street tie-in, commercial access and drainage-only permit applications.

Houston District Access Permit Application

DF-M200 2-2022

1. Purpose of Request: Explain the need for proposed access. Proposed operations / facilities, frequency of use of proposed access, approximate types and sizes of vehicles using proposed access for each individual year of the next three years.

Quiddity is construction a street tie-in on the east side of FM 521 across from CR 32 South and a street tie-in on the east side of FM 521 approximately 2600 feet north of CR 32 South, into the proposed Ashton Gray Development tract. Refer to the TIA for more information.

2. Background: Date chronology of previous correspondence, meetings, or discussions about proposed access, identification of property zoning or approved platting, if applicable. Include any previous approved permits, permit applications, preliminary approvals, and tracking numbers, if applicable.

3. Existing roadway characteristics: At location(s) of proposed access: Number of roadway lanes in each directions, Approximate width of roadway lanes / shoulders, Posted speed of roadway, Roadway pavement material (asphalt, concrete, gravel, dirt). Also, is there an existing roadway median opening, entrance / exit ramp, or traffic signal within one-thousand feet of the proposed access?

FM 521 is an undivided asphalt roadway with 2 12-foot lanes, a 10.5-foot shoulder, and a roadside ditch. The posted speed limit is 60 mph. See the attached plans for dimensions.

4. Environmental Clearance Requirements: *If the access request includes work on right turn lanes, roadway widening, excavation or median opening changes, please provide the environmental requirements/reports that will be needed to be completed once design is approved by TxDOT. (Please complete form [Environmental Review for Permit Level Actions](#)).*

The Environmental Permit has been attached.

5. Agreements: *An agreement between TxDOT and the applicant will also be needed once all plans are finalized if the application includes roadway improvements such as Traffic Signals, Turn Lanes, Widening, and Median Openings. Please refer to the [Agreement Type Table](#) to identify the type of agreement needed and describe below, if applicable.*

This will be completed under a Donation Agreement. The Division "Owner" of Agreement is Contract Services and a private entity (Ashton Gray Development) will be entering into an agreement with TxDOT.



REQUEST FOR APPROVAL TO ACCEPT GIFTS OR DONATIONS

Form 2294
(Rev. 7/17)
Page 1 of 1

The department may accept a gift or donation if the gift or donation will further the department's responsibilities.

1. Requesting District/Division/Office: Houston - HOU - 12

DD Contact: Sue-Ning Lee

Phone: 713-504-2685

2. Value of the Proposed Gift/Donation:

Estimated Value

\$525,000.00

3. Description of the Proposed Gift/Donation:

The donation consists of the design and construction of a right turn lane, 2 left turn lanes, and 2 street tie-ins from northbound/southbound FM 521 into the SH 288 Tract development in Brazoria County, Texas. All design and construction work will be provided by the donor, it's consultant, or its contractor. The District has determined there will be no direct costs for this project. There will be no exchange of right of way or utilities.

4. Donor Name: Ashton Gray Development

Donor Contact: Sudharshan Vembutty

Phone: 281-617-6302

Authorized Signer: Sudharshan Vembutty. Title: Manager

Mailing Address, City, State, Zip Code:

101 Parklane Blvd, Suite 102, Sugar Land, Texas 77478

Donor's Physical Address if Different than Mailing Address (cannot be a P.O. Box):

Same as mailing address above

5. Intended Use of Proposed Gift/Donation:

The purpose of the donation is to allow the donor to construct a right turn lane, 2 left turn lanes, and 2 street tie-ins on FM 521 in order to provide safe access by the traveling public into the donor's development.

6. Describe the Donor's Relationship, if any, to TxDOT

- a. No Is the donor a party to a contested case before the department that will not be final at least 30 days prior to the donation?
- b. No Is the donor subject to department regulation or oversight or interested in or likely to become interested in any contract, purchase, payment, or claim with or against the department?

7. If "Yes" was selected for either a or b or both in item 6 above, complete a, b, and c below. If "No" was selected for a and b, enter N/A in a, b, and c below:

a. Describe the donor's relationship to TxDOT:

N/A

b. How will the donation provide a significant public benefit?

N/A

c. How will the donation not influence nor reasonably appear to influence the department in the performance of its duties?

N/A

Approved By: _____

Date: _____

3/12/22

Printed Name: _____

Sudharshan Vembutty

Title: _____

Manager ANCHOR AND HOZORANGS

Access Driveway Policy

Title 43 Texas Administrative Code (Transportation), Chapter 11 (Design), Subchapter C (Access Connections To State Highways) and the "Access Management Manual" establish policy for the granting of access and the design, materials, and construction of driveways connecting to state highways. All driveway facilities must follow this policy. To the extent there is any conflict between this permit and the policy, the policy shall control. If a proposed driveway does not comply with the access management standards, the owner may seek a variance to a requirement contained in the access management standards by contacting the local TxDOT office.

TxDOT Driveway Permit Request Contact

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Other Conditions

In addition to Items 1 thru 11 on page 1 of this permit, the facility shall also be in accordance with the attached sketch and subject to the following additional conditions stated below:

Variance Documentation Justification

For a Variance request, please indicate which of the below are applicable, as required by TAC §11.52(e):

- a significant negative impact to the owner's real property or its use will likely result from the denial of its request for the variance, including the loss of reasonable access to the property or undue hardship on a business located on the property.
- an unusual condition affecting the property exists that was not caused by the property owner and justifies the request for the variance.

For the conditions selected above, provide written justification below. (Attach additional sheets, if needed)

For TXDOT use below:

For Variance denials, please indicate which of the below conditions, as provided in TAC §11.52(e), were determined:

- adversely affect the safety, design, construction, mobility, efficient operation, or maintenance of the highway; or
- likely impair the ability of the state or the department to receive funds for highway construction or maintenance from the federal government.

Attachments:

Sketch of Installation

All Variance Documentation

From: [Tan Luong](#)
To: [HOU-Braz-InternalPermitReview](#)
Cc: [Michelle Howe](#)
Subject: TR22020001 FM 521 at CR 32_ HYDRAULIC RE-APPROVAL_10-23-2024
Date: Wednesday, October 23, 2024 1:38:15 PM

Michelle,

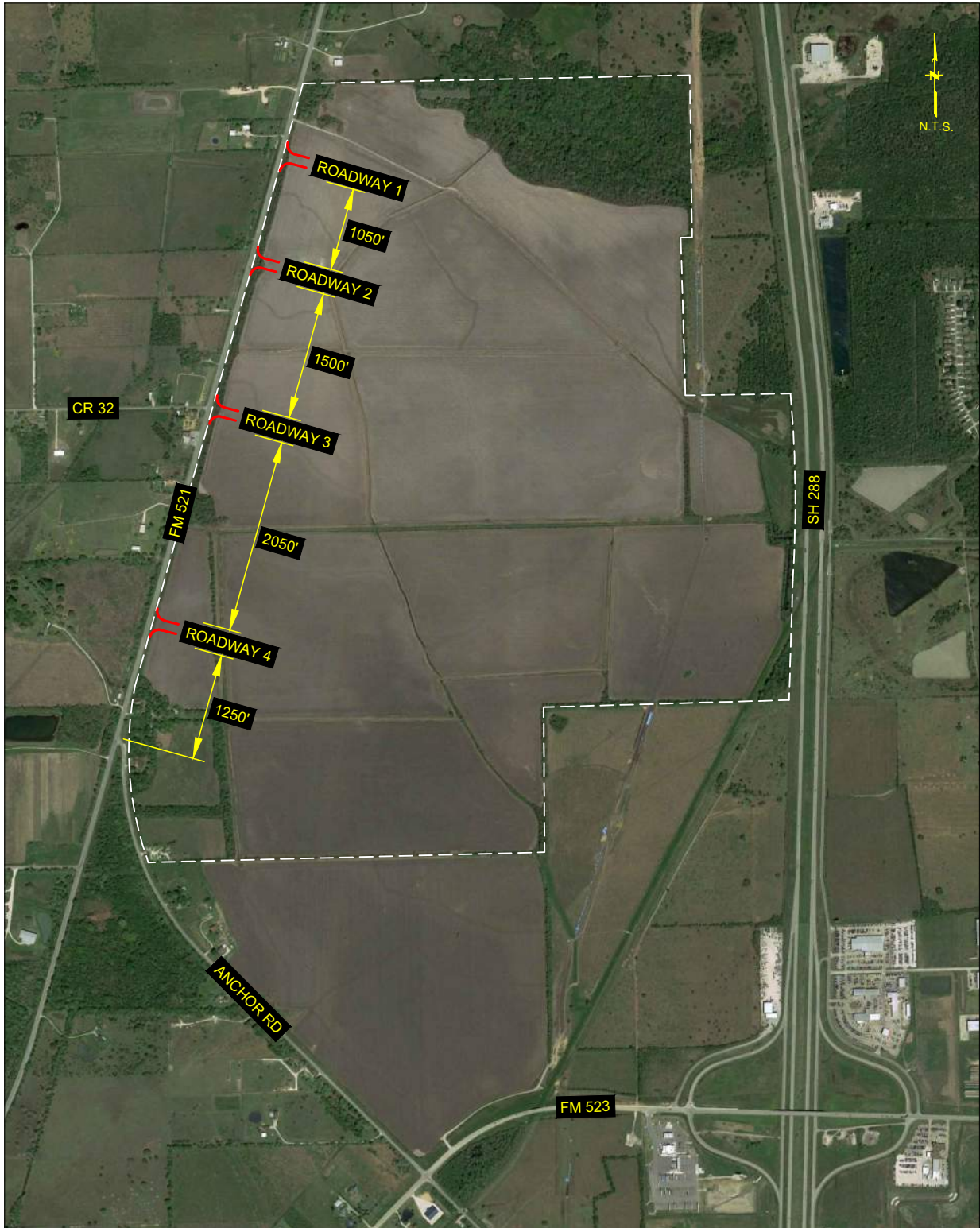
Here is hydraulic re-approval for revision. Please note that hydraulic did not ask for ROW donation before because this plan submitted before Oct 2022. From begin of Nov 2022 we start to ask for ROW donation for any widening project. It is up to the AO decision if ROW donation is asking for this project.

Hydraulic re-approval per following specs.:



- **Proposed 3 street tie in on FM 521**
 - **School driveway 1 (Stat 226+40.51)**
 - **Roadway width = 71 ft and radius = 25 ft and 30 ft**
 - **Proposed 106 LF of 24" RCP culvert w/SET.**
 - **Roadway 1: (Sta 235+44.13)**
 - **Roadway width = 44 ft and radius = 35 ft**
 - **Proposed 94 LF of 24" RCP culvert w/SET.**
 - **Roadway 2 (Stat 253+43.01)**
 - **Roadway width = 80 ft and radius = 35 ft and 30 ft**
 - **Proposed 151 LF of 24" RCP culvert w/SET.**
- **No onsite drainage coming to TXDOT.**
- **Proposed site development will drain to a tributary of Oyster Creek.**
- **Last updated plans: 10/04/2024.**
- Plan is stored at the following directory:
[P:\02 - Brazoria\2022 Permits\TR22020001\FM 521 Ashland Signals_Flashing Beacon_...gned and Sealed_Compiled Plans \(3\).pdf](#)

Thanks,

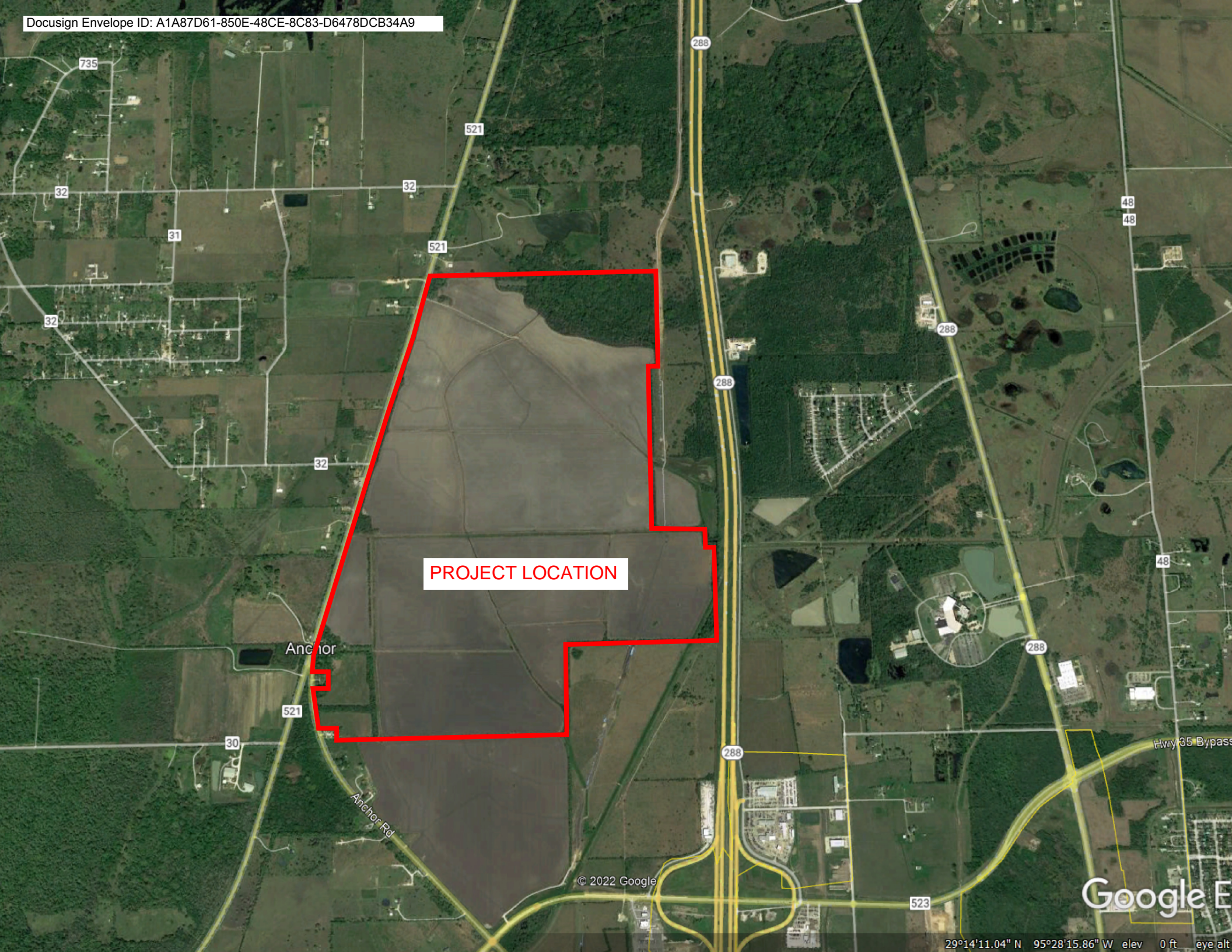
Tan Luong, P.E.
Houston District Hydraulic Section
(713) 802-5565 (office)
(281) 685-5830 (cell)
Email: tan.luong@txdot.gov



LEGEND:

-  PROPOSED DRIVEWAY
-  SITE BOUNDARY

DRIVEWAY SPACING DIAGRAM



PROJECT LOCATION

Anchor

Anheer Rd

Hwy 35 Bypass

From: [Tan Luong](#)
To: [HOU-Braz-InternalPermitReview](#)
Subject: TR22020001 FM 521 at CR 32_ HYDRAULIC RE-APPROVAL_11-14-2023
Date: Tuesday, November 14, 2023 10:04:00 AM

Michelle,

Revision No 3 of TR22020001 adding TIA, hydraulic is unchanged. Onsite drainage will drain to Oyster Creek. Here is hydraulic re-approval for revision. Please note that hydraulic did not ask for ROW donation before because this plan submitted before Oct 2022. From begin of Nov 2022 we start to ask for ROW donation for any widening project. It is up to the AO decision if ROW donation is asking for this project.

Hydraulic re-approval per following specs.:

- **Proposed 2 street tie in on FM 521**
 - **Location 1 (Stat 513)**
 - **Roadway width = 80 ft and radius = 35 ft**
 - **Proposed 151 LF of 24" RCP culvert w/SET.**
 - **Location 2: (Sta 531)**
 - **Roadway width = 44 ft and radius = 35 ft**
 - **Proposed 94 LF of 24" RCP culvert w/SET.**
- **No onsite drainage coming to TXDOT.**
- **Proposed site development will drain to a tributary of Oyster Creek.**
- **Per plans dated: 07/18/2023.**

The plan is too large to attach along with this email. I placed the final hydraulic approval plan set on the following directory in P drive:

P:\02 - Brazoria\2022 Permits\TR22020001\Hydraulic Approval Plan

Thanks,

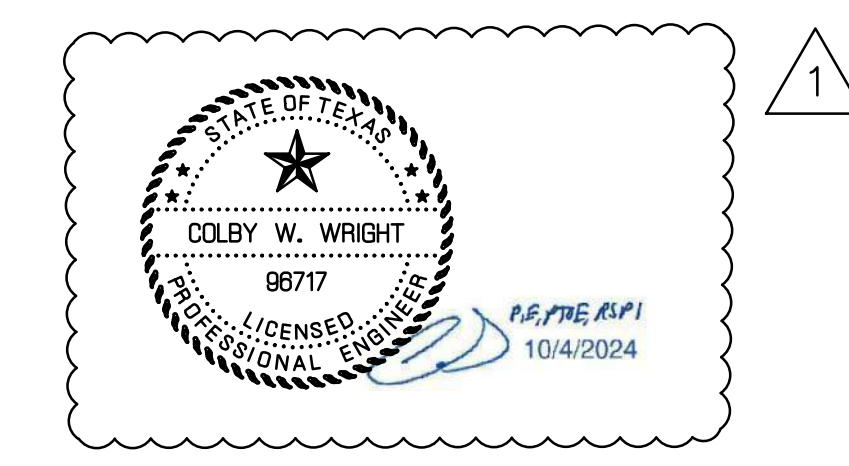
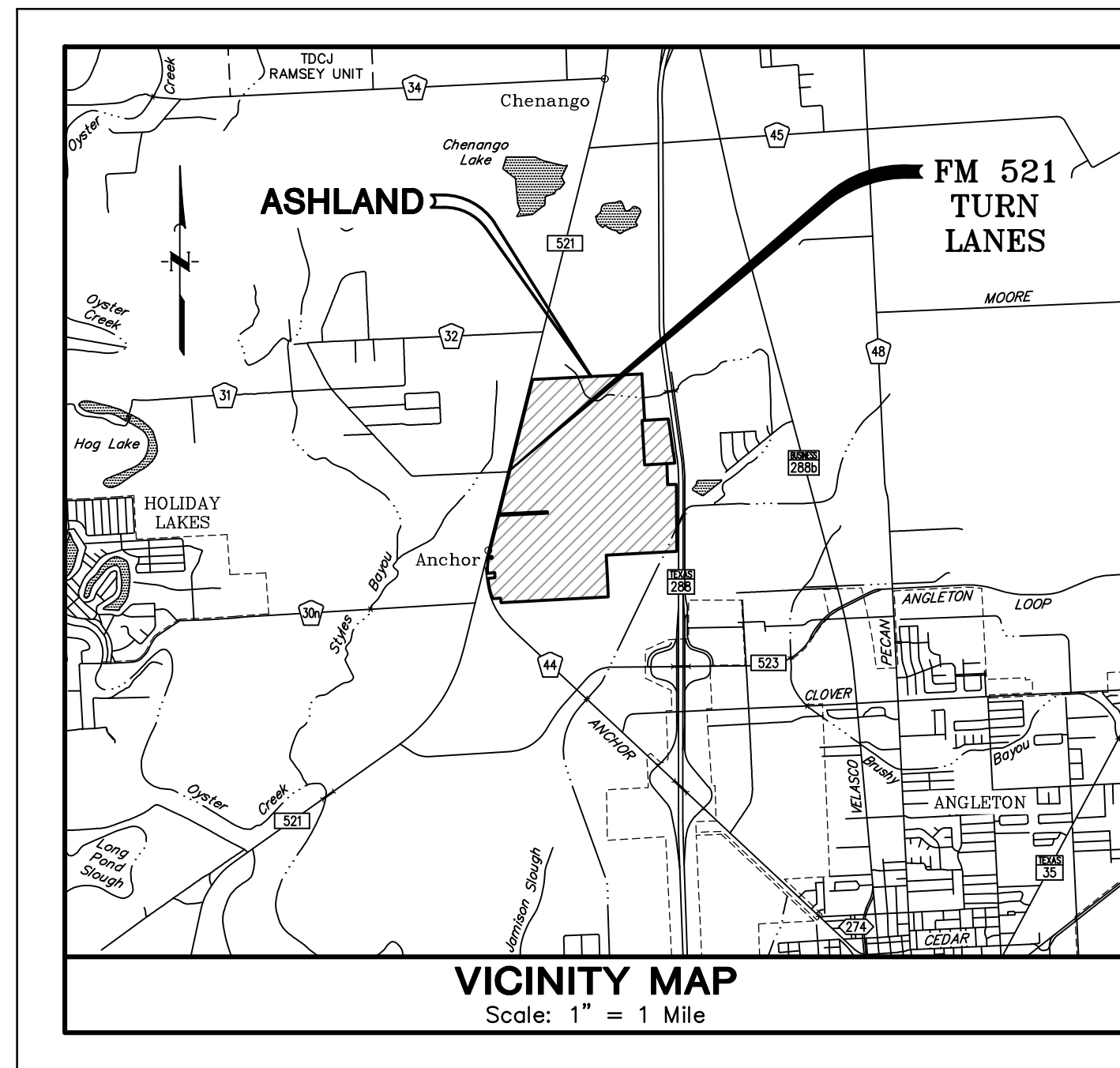
Tan Luong, P.E.
Houston District Hydraulic Section
(713) 802-5565 (office)
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Email: tan.luong@txdot.gov

CONSTRUCTION OF TURN LANES & TRAFFIC SIGNALS ON FM 521 FOR BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 82

OCTOBER 2024

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SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION ON NOVEMBER 1, 2014 AND SPECIFICATION ITEMS SHALL GOVERN THIS PROJECT.

NOTICE

CALL AT LEAST 2 WORKING DAYS (48 HOURS) BEFORE YOU DIG
TEXAS811 (DIG TESS) (1-800-344-8377)
- OR -
LONE STAR NOTIFICATION CENTER (1-800-669-8344)



NO.	DATE	REVISIONS	APP.
1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW

TURN LANES & TRAFFIC SIGNALS ON FM 521

K: 16759\16759-0010-05 Angleton - TIA & Turn Lanes V2 Design Phase CAD Traffic\0 FM 521 Ashland Signals.dwg Oct 03, 2024 - 6:17pm the

MATERIAL OF HIGHWAY TRAFFIC SIGNAL							
ITEM NO.	DESC. CODE	DESCRIPTION	UNIT	FM 521 AT CORAL HAVEN LANE	FM 521 AT SCHOOL DRIVEWAY 1	FM 521 AT CR 32	TOTAL ESTIMATE
416	6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	43	43	60	146
500	6001	MOBILIZATION	LS	1	1	1	3
502	6001	BARRICADES, SIGNS, AND TRAFFIC HANDLING	MO	3	3	3	9
618	6046	CONDT (PVC) (SCH 80) (2")	LF	200	275	115	590
618	6053	CONDT (PVC) (SCH 80) (3")	LF	140	155	195	490
618	6054	CONDT (PVC) (SCH 80) (3") (BORE)	LF	120	50	210	380
620	6007	ELEC CONDR (NO.8) BARE	LF	420	365	460	1245
620	6011	ELEC CONDR (NO.4) BARE	LF	40	115	60	215
620	6012	ELEC CONDR (NO.4) INSULATED	LF	80	230	120	430
621	6005	TRAY CABLE (4 CONDR) (12 AWG)	LF	315	475	430	1220
624	6009	GROUND BOX TY D (162922)	EA	5	4	5	14
628	6145	ELC SRV TY D 120/240 060(NS)SS(E)SP(O)	EA	1	1	1	3
636	6001	ALUMINUM SIGNS (TY A)	SF	18	18		36
644	6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	EA	2	2		4
644	6076	REMOVE SM RD SN SUP&AM	EA	1	1		2
666	6048	REFL PAV MRK TY 1 (W) 24" (SLD) (100MIL)	LF	55	55		110
666	6230	PAVEMENT SEALER 24"	LF	55	55		110
678	6008	PAV SURF PREP FOR MRK (24")	LF	55	55		110
680	6001	INSTALL HWY TRF SIG (FLASH BEACON)	EA			1	1
	**	TRAFFIC SIGNAL CONTROLLER (FULLY ACTUATED WITH CABINET)	EA			1	1
	**	TRAFFIC SIGNAL CONTROLLER FOUNDATION	EA			1	1
	**	LED LUMINAIRE HEAD-EQUIVALENT TO 250W (HPS)	EA			2	2
	**	ROD, 5/8" X 10" COPPER-CLAD GROUND (CONTROLLER ONLY)	EA			1	1
	**	STREET NAME SIGN, "FM 521" (44"x18")	EA			2	2
	**	STREET NAME SIGN, "CR 32" (40"x18")	EA			2	2
	**	4G LTE ENABLED CELLULAR MODEM W/ ANTENNA AND POWER SUPPLY	EA			1	1
	**	18-INCH CABINET BASE EXTENSION	EA			1	1
	**	MAST ARM DAMPER (REQUIRED)	EA			4	4
680	6003	INSTALL HWY TRF SIG (SYSTEM)	EA	1	1		2
	**	TRAFFIC SIGNAL CONTROLLER (FULLY ACTUATED WITH CABINET)	EA	1	1		2
	**	TRAFFIC SIGNAL CONTROLLER FOUNDATION	EA	1	1		2
	**	LED LUMINAIRE HEAD-EQUIVALENT TO 250W (HPS)	EA	2	2		4
	**	ROD, 5/8" X 10" COPPER-CLAD GROUND (CONTROLLER ONLY)	EA	1	1		2
	**	"LEFT ON GREEN ARROW ONLY" (30"x36") (R10-5)	EA	1	1		2
	**	STREET NAME SIGN, "FM 521" (44"x18")	EA	1	1		2
	**	STREET NAME SIGN, "Coral Haven LN" (92"x18")	EA	2			2
	**	DETECTOR PROCESSOR	EA	1	1		2
	**	4G LTE ENABLED CELLULAR MODEM W/ ANTENNA AND POWER SUPPLY	EA	1	1		2
	**	18-INCH CABINET BASE EXTENSION	EA	1	1		2
	**	MAST ARM DAMPER (REQUIRED)	EA	3	3		6

** MATERIAL SUBSIDIARY TO PERTINENT ITEM

MATERIAL OF HIGHWAY TRAFFIC SIGNAL							
ITEM NO.	DESC. CODE	DESCRIPTION	UNIT	FM 521 AT CORAL HAVEN LANE	FM 521 AT SCHOOL DRIVEWAY 1	FM 521 AT CR 32	TOTAL ESTIMATE
682	6001	VEH SIG SEC (12 IN) LED (GRN)	EA	6	6		12
682	6002	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	1	1		2
682	6003	VEH SIG SEC (12 IN) LED (YEL)	EA	6	6	6	18
682	6004	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	1	1		2
682	6005	VEH SIG SEC (12 IN) LED (RED)	EA	6	6	4	16
682	6006	VEH SIG SEC (12 IN) LED(RED ARW)	EA	2	2		4
682	6018	PED SIG SEC (LED) (COUNTDOWN)	EA	2			2
682	6054	BACK PLATE W/REFL BRDR (3 SEC) (VENT) ALUM	EA	6	6		12
682	6055	BACK PLATE W/REFL BRDR (4 SEC) (VENT) ALUM	EA	1	1		2
682	6061	BACK PLATE W/REFL BRDR (1 SEC) (VENT) ALUM	EA			10	10
684	6007	TRF SIG CBL (TY A)(12 AWG)(2 CONDR)	LF	235			235
684	6009	TRF SIG CBL (TY A)(12 AWG)(4 CONDR)	LF	345			345
684	6012	TRF SIG CBL (TY A)(12 AWG)(7 CONDR)	LF	865	900	1255	3020
686	6039	INS TRF SIG PL AM(S) 1 ARM (36') LUM	EA	1	1		2
686	6043	INS TRF SIG PL AM(S) 1 ARM (40') LUM	EA			2	2
686	6045	INS TRF SIG PL AM(S) 1 ARM (44')	EA	1	1	2	4
686	6047	INS TRF SIG PL AM(S) 1 ARM (44') LUM	EA	1	1		2
687	6001	PED POLE ASSEMBLY	EA	2			2
	**	SCREW-IN TYPE FOUNDATION	EA	2			2
688	6001	PED DETECT PUSH BUTTON (APS)	EA	2			2
	**	SIGN, PEDESTRIAN PUSH BUTTON (9"x15") (R10-3eL)	EA	1			1
	**	SIGN, PEDESTRIAN PUSH BUTTON (9"x15") (R10-3eR)	EA	1			1
688	6003	PED DETECTOR CONTROLLER UNIT	EA	1			1
6058	6001	BBU SYSTEM (EXTERNAL BATT CABINET)	EA	1	1	1	3
6155	6002	RADAR COMMUNICATION CABLE	LF	755	795		1550
6185	6002	TMA (STATIONARY)	DAY	30	30	30	90
6292	6001	RVSD(PRESENCE DET ONLY)	EA	3	3		6
6292	6002	RVSD(ADVANCE DET ONLY)	EA	2	2		4

** MATERIAL SUBSIDIARY TO PERTINENT ITEM

NO.	DATE	REVISIONS	APP.
1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW

ASHTON GRAY DEVELOPMENT
BRAZORIA COUNTY, TEXAS

FM 521 TURN LANES
FM 521

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

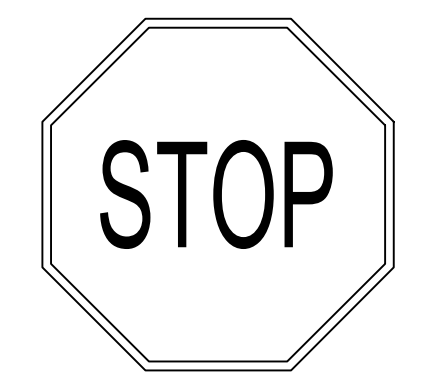
SCALE: _____ DGN. BY: THC
DATE: OCTOBER 2024 DWN. BY: LRM
JOB NO. 16759-0010-05 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

STATE OF TEXAS
CODY W. WRIGHT
98717
LICENSED PROFESSIONAL ENGINEER
10/4/2024

1

SHEET NO. **72**
OF **104**

EXISTING SIGNS

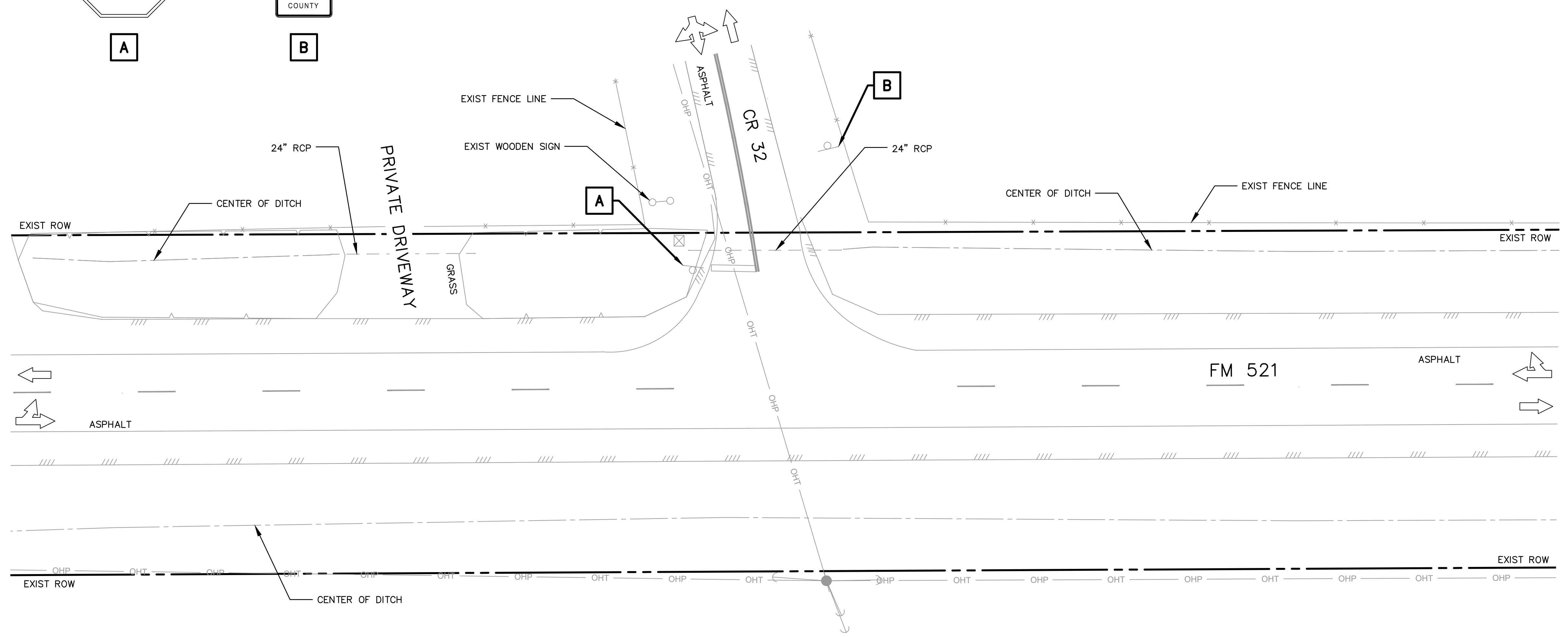


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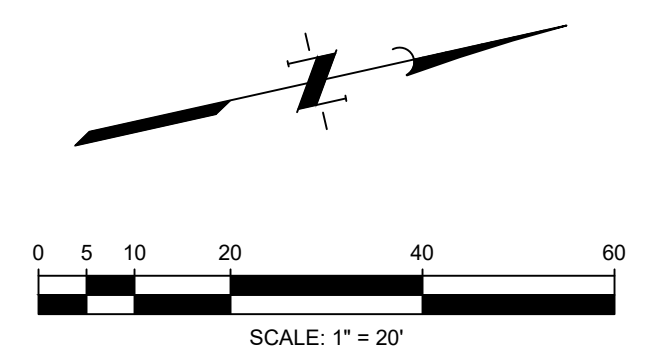


BRAZORIA
32
COUNTY

B



- LEGEND**
- RIGHT OF WAY
 - X- FENCE
 - OHT-OHP- OVERHEAD ELECTRIC
 - POWER POLE
 - ⊠ TELEPHONE PEDESTAL
 - EXIST. SIGN/POLE
 - ⇨ DIRECTION OF TRAFFIC FLOW



NO.	DATE	REVISIONS	APP.
1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW

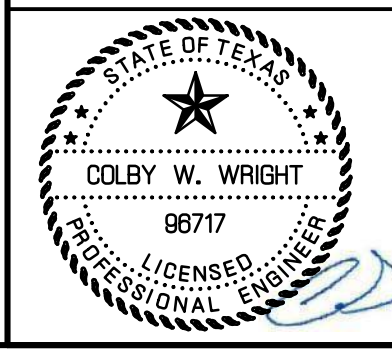
ASHTON GRAY DEVELOPMENT
BRAZORIA COUNTY, TEXAS

FM 521 TURN LANES
FM 521 AT
CR 32

EXISTING LAYOUT



SCALE: 1"=20' DGN. BY: THC
 DATE: OCTOBER 2024 DWN. BY: WCB
 JOB NO. 16759-0010-05 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____

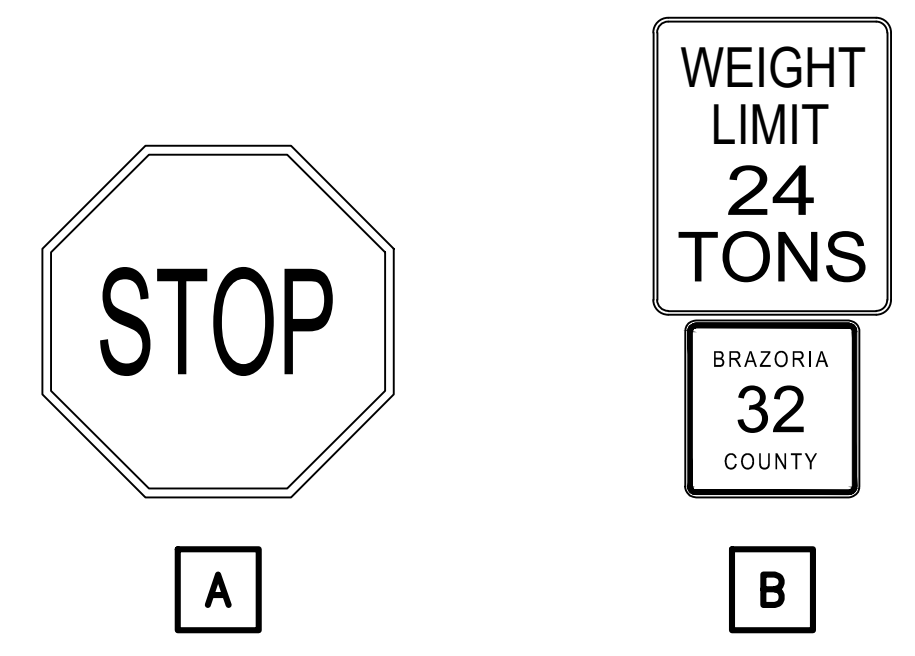


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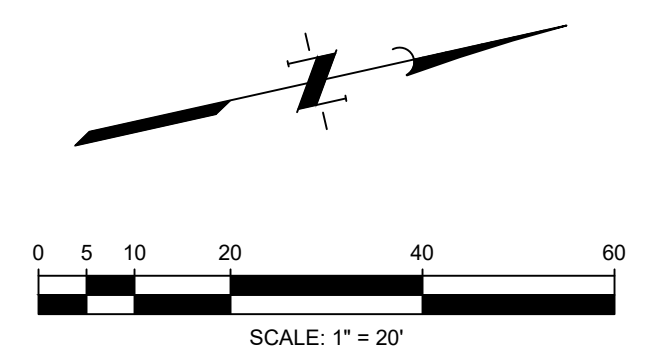
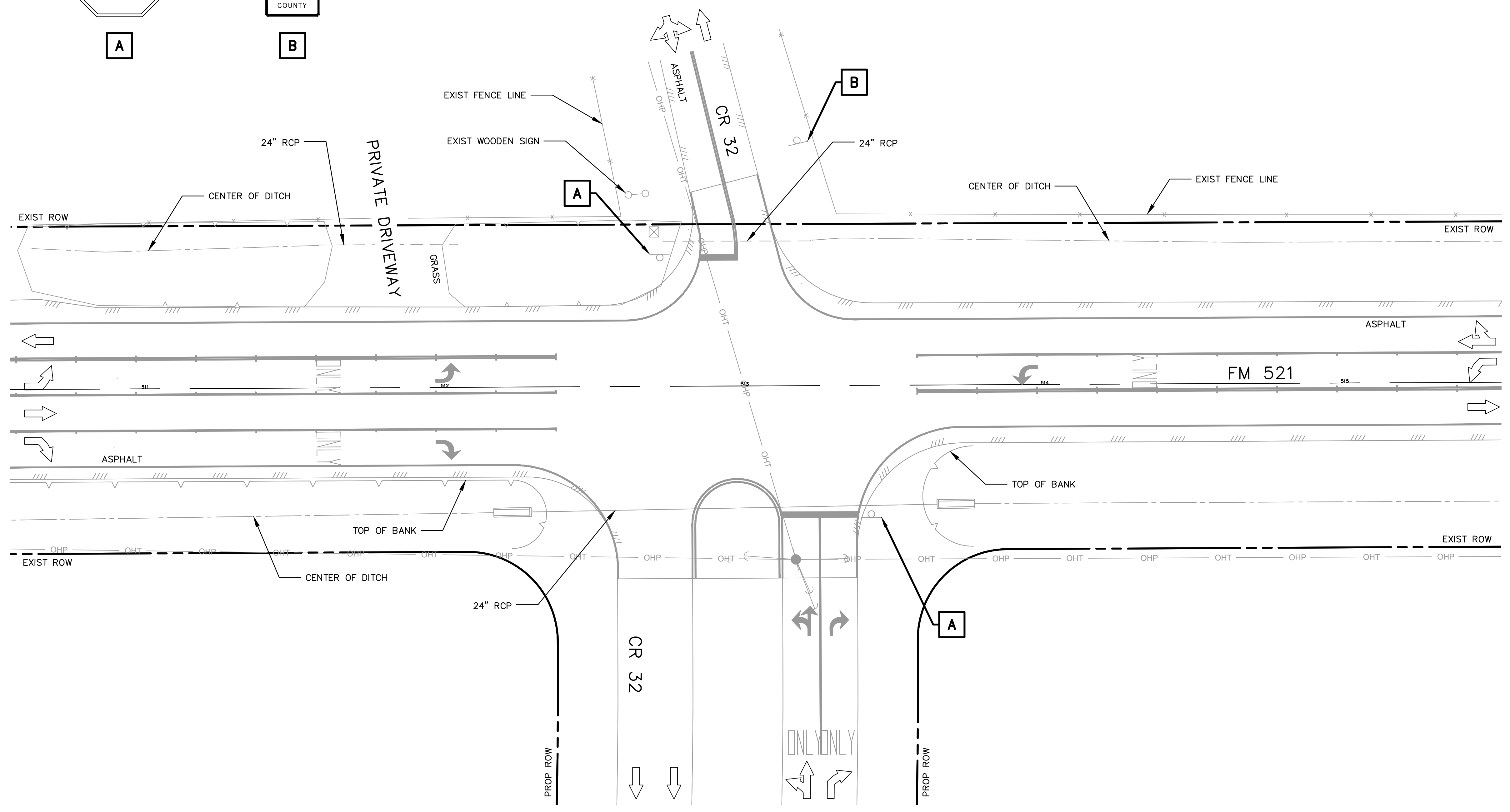
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SHEET NO.
83a
OF 104

EXISTING SIGNS



- LEGEND**
- RIGHT OF WAY
 - X- FENCE
 - OHT-OHP- OVERHEAD ELECTRIC
 - POWER POLE
 - ⊠ TELEPHONE PEDESTAL
 - EXIST. SIGN/POLE
 - ⇨ DIRECTION OF TRAFFIC FLOW



1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW
NO.	DATE	REVISIONS	APP.

ASHTON GRAY DEVELOPMENT
 BRAZORIA COUNTY, TEXAS

**FM 521 TURN LANES
 FM 521 AT
 CR 32**

EXISTING LAYOUT (FUTURE)



SCALE: 1"=20' DGN. BY: THC
 DATE: OCTOBER 2024 DWN. BY: WCB
 JOB NO. 16759-0010-05 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____

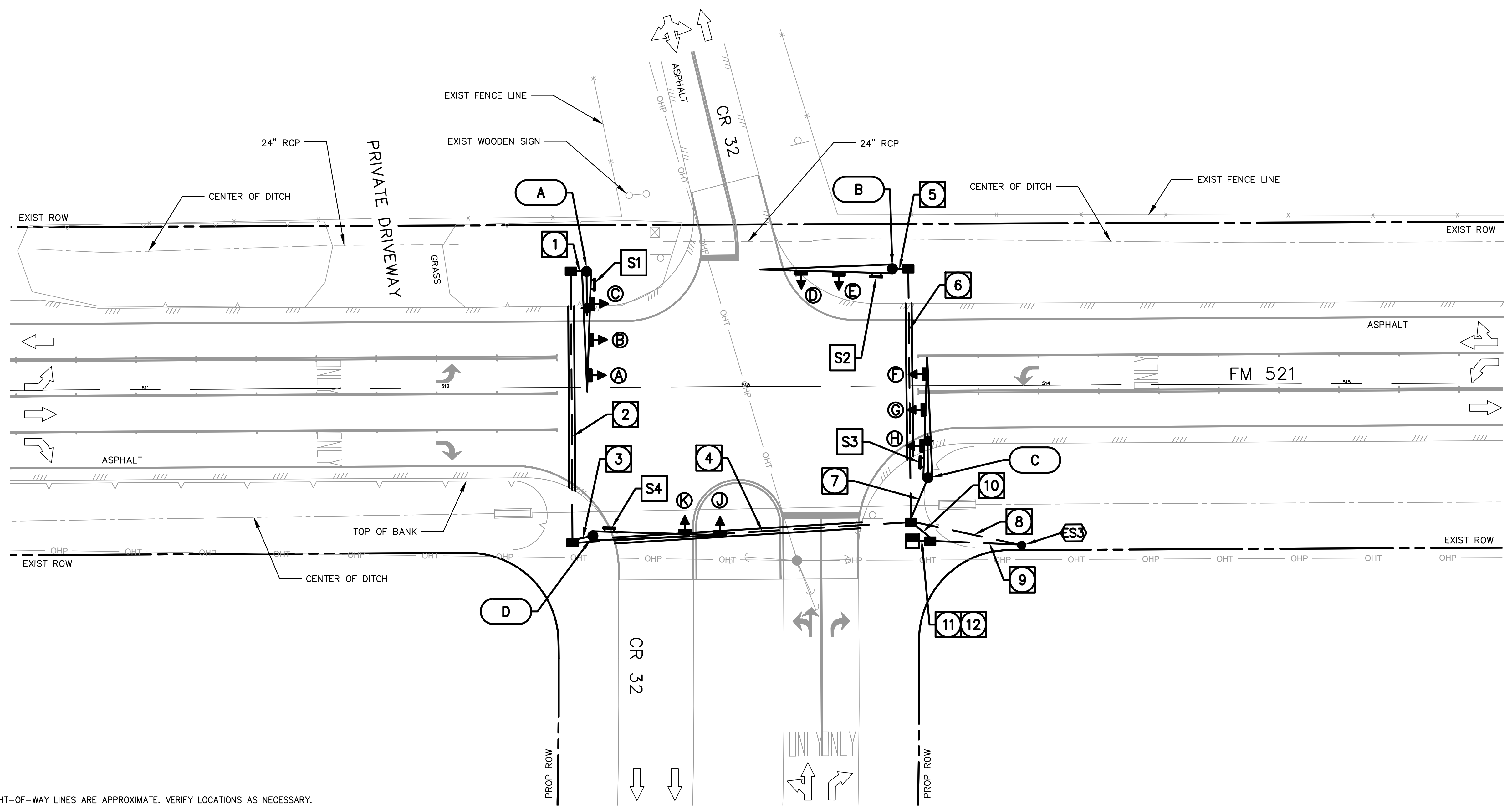


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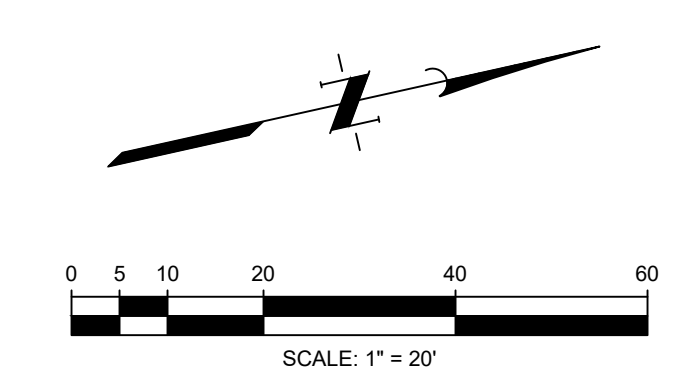
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SHEET NO.
83b
 OF 104

K: 16759\16759-0010-05 Angleton - TIA & Turn Lanes\2 Design Phase\CAD\Traffic\0 FM 521 Ashland Signals.dwg Oct 03,2024 - 8:37am wbrwring



- LEGEND**
- PROPOSED MAST ARM POLE
 - PROPOSED TRAFFIC SIGNAL HEAD
 - PROPOSED ROADWAY/STREET SIGN
 - PROPOSED ELECTRICAL SERVICE POLE
 - PROPOSED LUMINAIRE
 - PROPOSED FULL-ACTUATED CONTROLLER W/CABINET, GPS MODULE AND BATTERY BACK-UP (BBU)
 - PROPOSED GROUND BOX TY D
 - PROPOSED CONDUIT (TRENCH)
 - PROPOSED CONDUIT (BORE)
 - DIRECTION OF TRAFFIC FLOW



- NOTES:**
1. ALL RIGHT-OF-WAY LINES ARE APPROXIMATE. VERIFY LOCATIONS AS NECESSARY.
 2. ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR MUST VERIFY ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES FOR ELEVATION AND CLEARANCES.
 3. LOCATION OF UNDERGROUND INSTALLATIONS ARE APPROXIMATE.
 4. LUMINAIRES ARE SHOWN FOR DIAGRAMMATIC PURPOSE ONLY.

FOR CALLOUTS SEE SHEET 83d.

POSTED SPEED LIMITS:
 SPEED LIMIT: 60 MPH (FM 521)
 SPEED LIMIT: 40 MPH (CR 32)

1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW
NO.	DATE	REVISIONS	APP.

ASHTON GRAY DEVELOPMENT
 BRAZORIA COUNTY, TEXAS

**FM 521 TURN LANES
 FM 521 AT
 CR 32**

PROPOSED LAYOUT



SCALE: 1"=20' DGN. BY: THC
 DATE: OCTOBER 2024 DWN. BY: WCB
 JOB NO. 16759-0010-05 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____



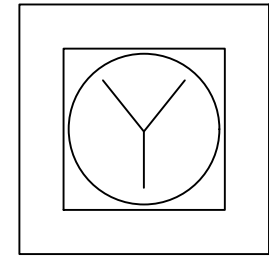
1 : NEW SHEET

1

SHEET NO. **83c**
OF 104

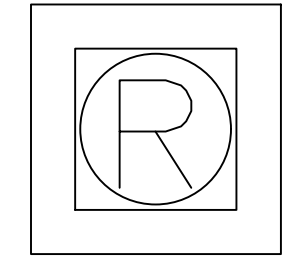
PROPOSED SIGNAL HEAD SCHEDULE

1W-1S (Y)



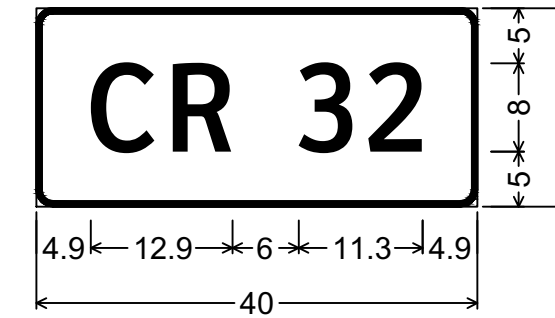
SIGNALS A, B, C, F, G, H

1W-1S (R)



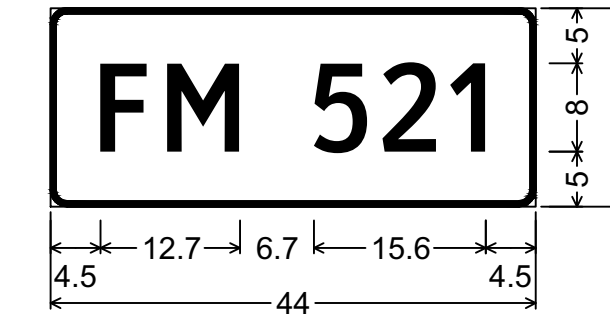
SIGNALS D, E, J, K

PROPOSED SIGNS



1.5" Radius, 0.5" Border, White on Green; "CR 32", ClearviewHwy-3-W;

S1, S3



1.5" Radius, 0.5" Border, White on Green; "FM 521", ClearviewHwy-3-W;

S2, S4

CONDUIT AND CONDUCTOR RUNS

RUN NO.	CONDUIT (618)						CONDUCTORS (620)						TRAY CABLE (621)		SIGNALS (684)	
	PVC						POWER		GROUND				LUMINAIRE		SIGNAL	
	2" (SCHD 80)		3" (SCHD 80)				#4 INSULATED		#4 BARE		#8 BARE		#12/4C TRAY CABLE		#12/7C	
	(6046)		(6053)		(6054)		(6012)		(6011)		(6007)		(6005)		(6012)	
	NO.	TRENCH	NO.	TRENCH	NO.	BORE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	
1	1	10								1	10	1	10	2	10	
2			1	35	1	65				1	100	1	100	2	100	
3	1	15								1	15			1	15	
4			1	40	1	90				1	130	1	130	3	130	
5	1	10								1	10			1	10	
6			1	40	1	55				1	95			1	95	
7	1	20								1	20	1	20	2	20	
8			1	55						1	55	2	55			
9	1	50					2	50	1	50						
10			1	15						1	15			6	15	
11	1	10					2	10	1	10						
12			1	10						1	10			6	10	
POLE A												1	30	2	20	
POLE B														1	20	
POLE C												1	30	2	20	
POLE D														1	20	
MA														2	35	
MB														1	30	
MC														2	35	
MD														1	45	
TOTAL		115		195		210		120		60		460		430		1255

TRAFFIC SIGNAL POLE LEGEND

- PROP. 40' MAST ARM POLE W/ LUMINAIRE
- PROP. 44' MAST ARM POLE
- PROP. 40' MAST ARM POLE W/ LUMINAIRE
- PROP. 44' MAST ARM POLE
- PROP. SERVICE POLE TY D WITH METER AND (120/240 VOLT SERVICE). SERVICE ENCLOSURE AND SERVICE DISCONNECT.

: NEW SHEET

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE NAME	POLE NO. CALLOUT	ELECTRICAL SERVICE DESCRIPTION (SEE ED (5, 6, 7, 8) - 14)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTOR NO./SIZE	SAFETY SWITCH AMPS	MAIN DISCONNECT CKT. BRK. POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOAD CENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CIRCUIT AMPS	BRANCH CKT. BRK. POLE/AMPS	KVA LOAD
FM 521 AT CR 32	ES3	ELEC SERV TY D(120/240) 060 (NS)SS(E)SP(O)	1- 1/4"	3 / #6	10	2P / 60	30	100	SIGNAL	40	1P / 50	<5.5
									LUMINAIRE	3	2P / 20	

1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW
NO.	DATE	REVISIONS	APP.

ASHTON GRAY DEVELOPMENT
BRAZORIA COUNTY, TEXAS

FM 521 TURN LANES
FM 521 AT
CR 32

PROPOSED LAYOUT



SCALE: _____ DGN. BY: THC
DATE: OCTOBER 2024 DWN. BY: WCB
JOB NO. 16759-0010-05 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____



: NEW SHEET

K: 16759\16759-0010-05 Angleton - TIA & Turn Lanes\2 Design Phase\CAD\Traffic\0 FM 521 Ashland Signals.dwg Oct 03,2024 - 8:37am wbrewing

The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DISCLAIMER:

FOUNDATION DESIGN TABLE

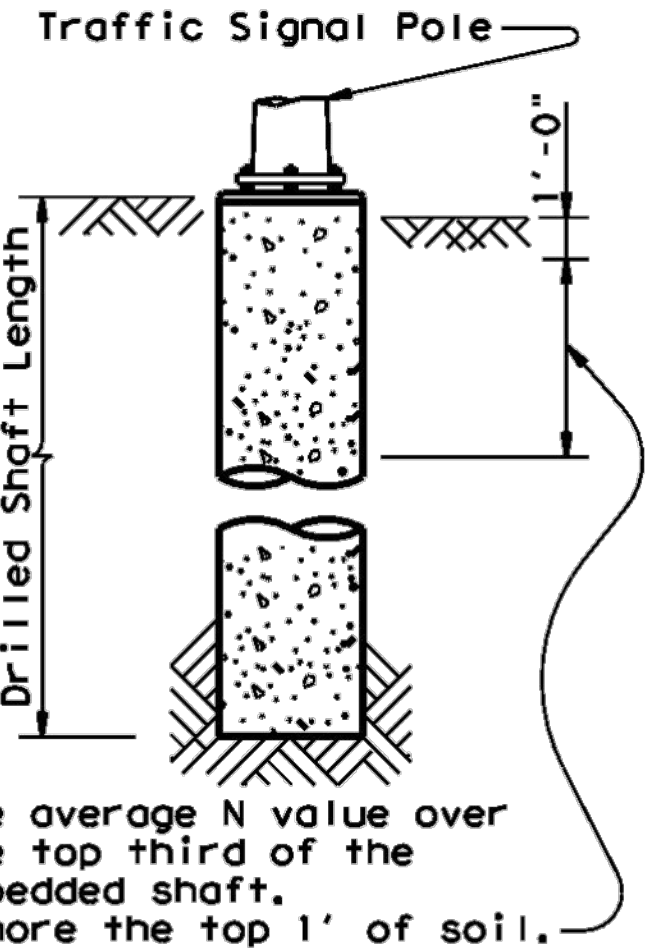
FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		EMBEDDED DRILLED SHAFT LENGTH-ft (4), (5), (6)			ANCHOR BOLT DESIGN (1)				FOUNDATION DESIGN LOAD (2)		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
				10	15	40							
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	3/4"	36	12 3/4"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 1/2"	55	17"	2	87	3	Most arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 3/4"	55	19"	2	131	5	Most arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Most arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 1/4"	55	23"	2	271	9	Most arm assembly. (see Selection Table)

NOTES:

- Anchor bolt design develops the foundation capacity given under Foundation Design Loads.
- Foundation Design Loads are the allowable moments and shears at the base of the structure.
- Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.
- Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.
- If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.
- Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

FOUNDATION SELECTION TABLE FOR STANDARD MAST ARM PLUS ILSN SUPPORT ASSEMBLIES (ft)

80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
		24' X 24'			
MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	28' X 28'				
	32' X 28'				
			32' X 32'		
			36' X 36'		
		40' X 36'			
		44' X 28'		44' X 36'	
100 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH		36'	44'	
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS		24' X 24'		
			28' X 28'		
			32' X 24'		
				32' X 32'	
				36' X 36'	
				40' X 24'	40' X 36'
					44' X 36'

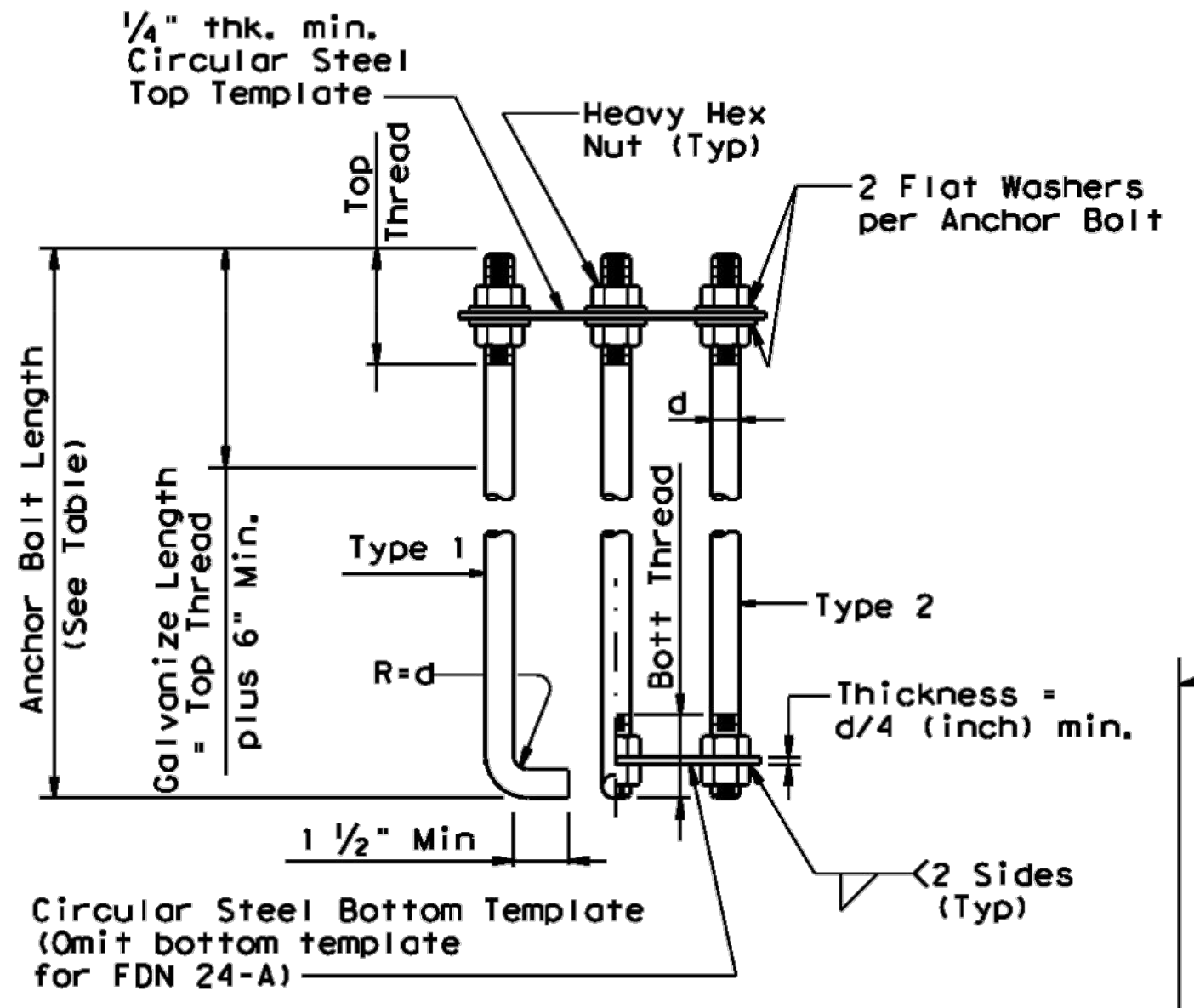


ANCHOR BOLT & TEMPLATE SIZES

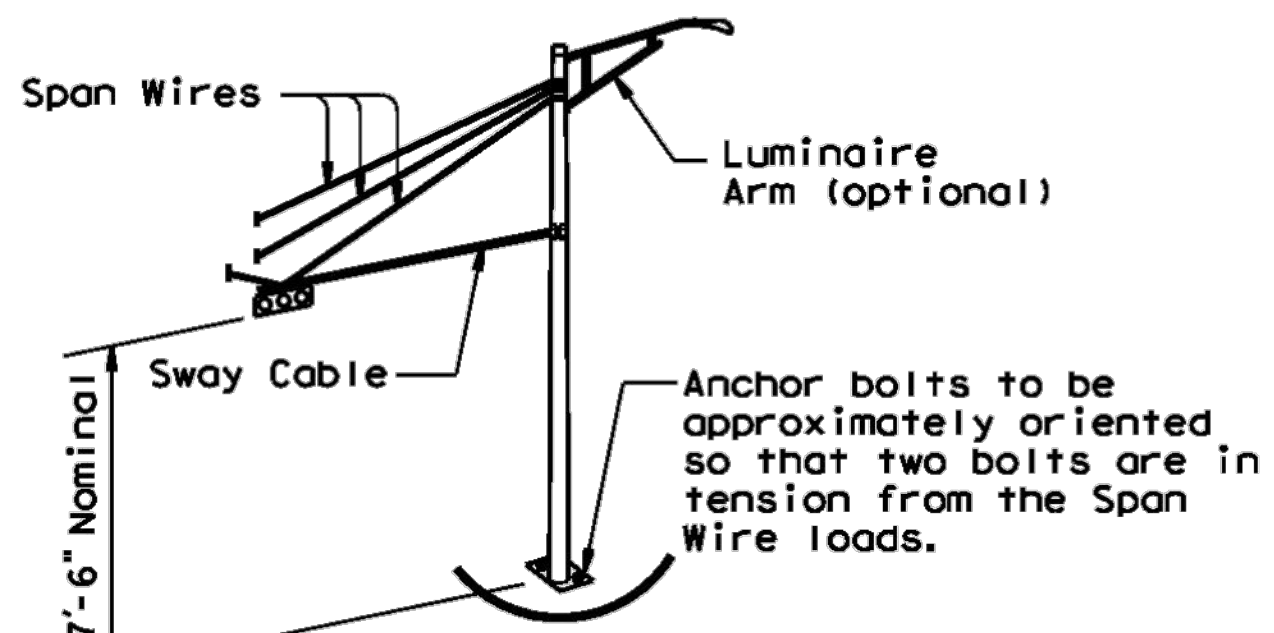
BOLT DIA IN.	7 BOLT LENGTH	TOP THREAD	BOTTOM THREAD	BOLT CIRCLE	R2	R1
3/4"	1'-6"	3"	—	12 3/4"	7 1/8"	5 5/8"
1 1/2"	3'-4"	6"	4"	17"	10"	7"
1 3/4"	3'-10"	7"	4 1/2"	19"	11 1/4"	7 3/4"
2"	4'-3"	8"	5"	21"	12 1/2"	8 1/2"
2 1/4"	4'-9"	9"	5 1/2"	23"	13 3/4"	9 1/4"

7 Min dimensions given, longer bolts are acceptable.

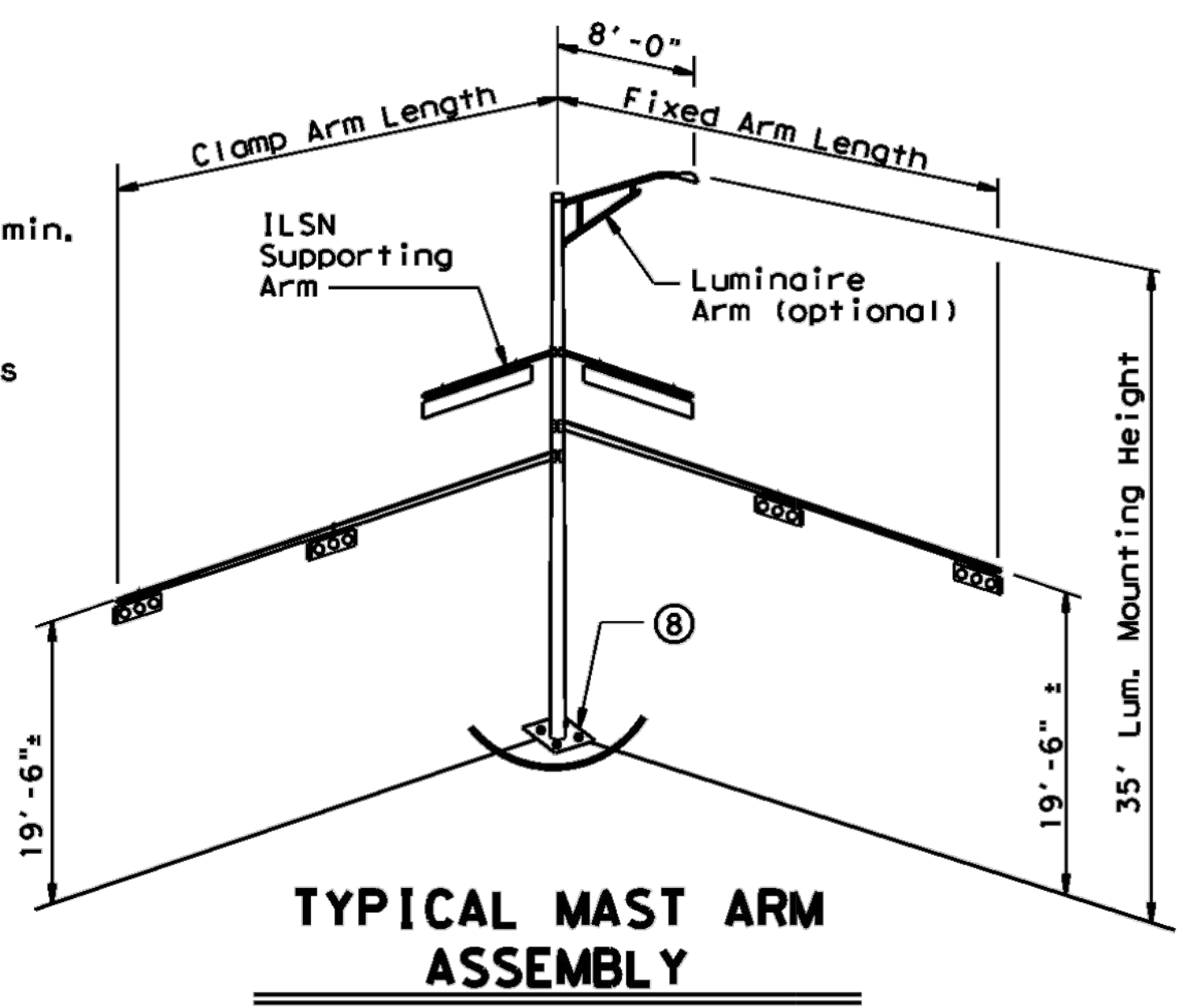
- EXAMPLE:
- For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
 - For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.



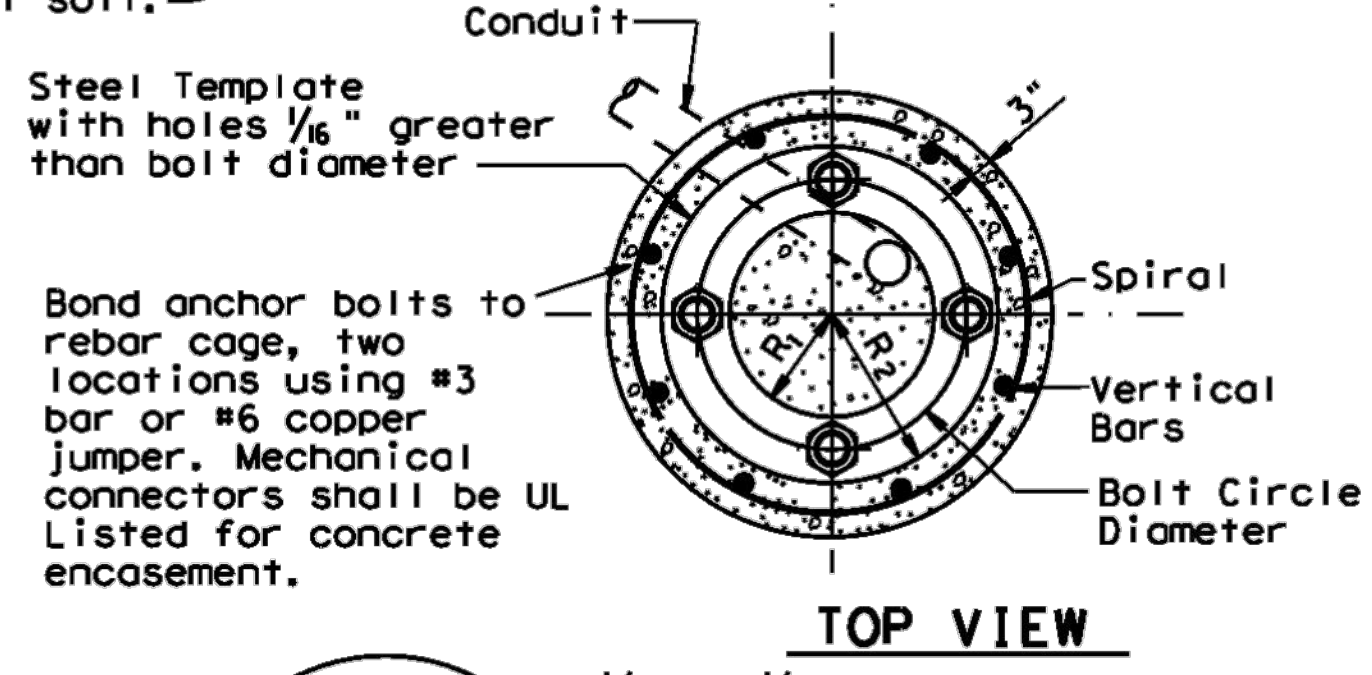
HOOKED ANCHOR (TYPE 1) NUT ANCHOR (TYPE 2) ANCHOR BOLT ASSEMBLY



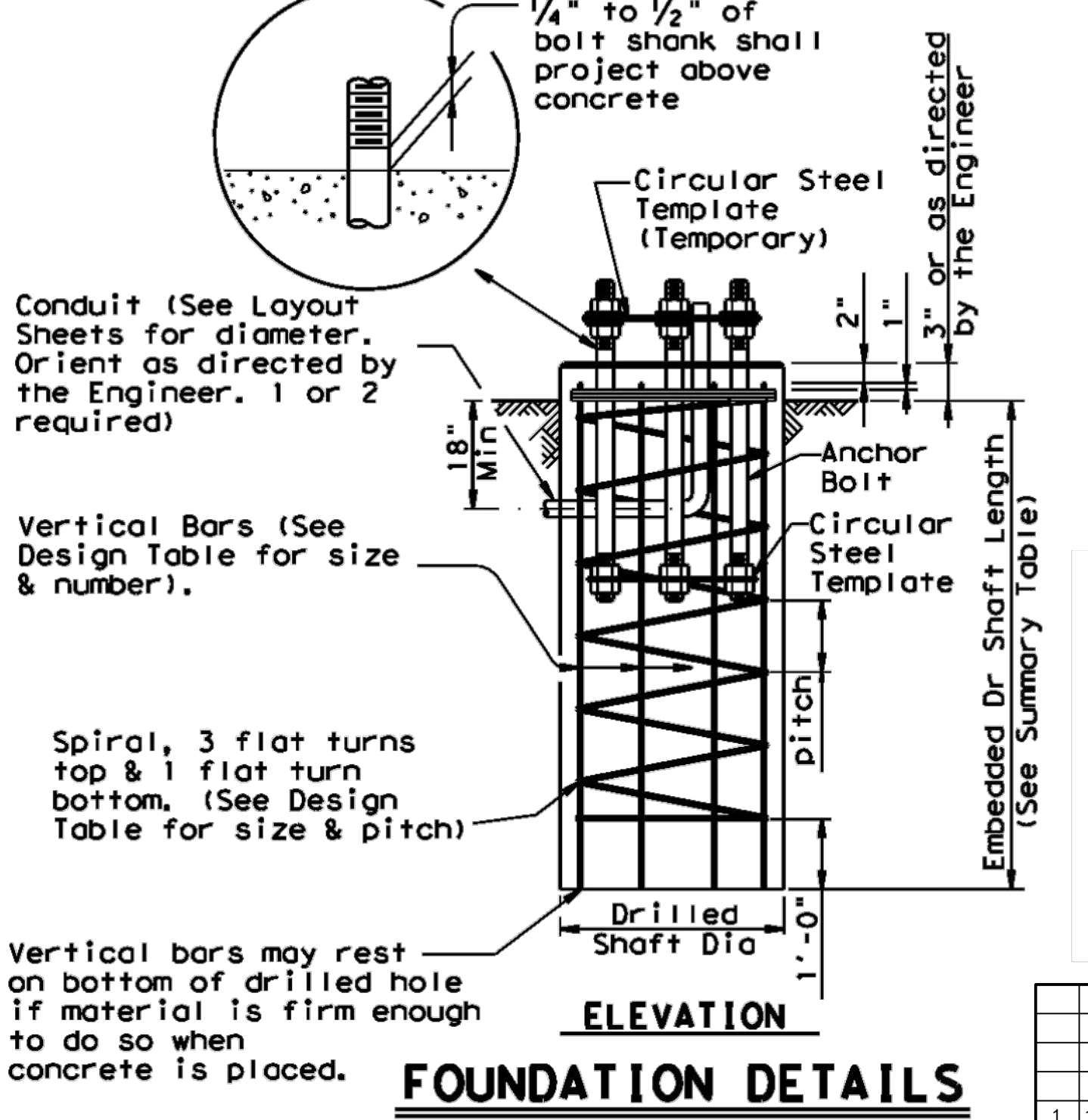
TYPICAL STRAIN POLE ASSEMBLY



TYPICAL MAST ARM ASSEMBLY



TOP VIEW



ELEVATION FOUNDATION DETAILS

FOUNDATION SUMMARY TABLE (3)

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH (6) (FEET)				
				24-A	30-A	36-A	36-B	42-A
CORAL HAVEN								
POLE A	10	36-B	1				15	
POLE B	10	36-B	1				15	
POLE C	10	36-A	1			13		
SCHOOL DRIVE								
POLE A	10	36-B	1				15	
POLE B	10	36-B	1				15	
POLE C	10	36-A	1			13		
CR 32								
POLE A							15	
POLE B							15	
POLE C							15	
POLE D							15	
TOTAL DRILLED SHAFT LENGTHS							26	120

GENERAL NOTES:

- Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and interim revisions thereto.
- Reinforcing steel shall conform to Item 440, "Reinforcing Steel".
- Concrete shall be Class "C".
- Threads for anchor bolts and nuts shall be rolled or cut threads of 8UN series up to 2" in diameter or UNC series for all sizes. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.
- Anchor bolts that are larger than 1" in diameter shall conform to "alloy steel" or "medium-strength mild steel" per Item 449, "Anchor Bolts". Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Galvanize a minimum of the top end thread length plus 6" for all anchor bolts unless otherwise noted. Exposed washers and exposed nuts shall be galvanized. All galvanizing shall be in accordance with Item 445, "Galvanizing".
- Templates and embedded nuts need not be galvanized. Lubricate and tighten anchor bolts when erecting the structure in accordance with Item 449, "Anchor Bolts".



TRAFFIC SIGNAL POLE FOUNDATION

TS-FD-12



© TxDOT August 1995		DN: MS	CR: JSY	DN: MAD/AMF	CR: JSY/TEB
NO.	DATE	REVISIONS	APP.		
1	10.4.24	Change Order 1 - CR 32 Flashing Beacon	CWW		
5-96		REVISIONS			
11-99		CONT	SECT	JOB	HIGHWAY
1-12				16759-0010-05	FM 521
		DIST	COUNTY	SHEET NO.	
		HOU	BRAZORIA	104	

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Source Envelope:	
Document Pages: 25	Signatures: 2
Certificate Pages: 5	Initials: 0
AutoNav: Enabled	Envelope Originator:
Envelopeld Stamping: Enabled	Michelle Howe
Time Zone: (UTC-06:00) Central Time (US & Canada)	125 E. 11th Street
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Timestamp

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 Signed: 10/24/2024 8:55:53 AM

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 Using IP Address: 204.64.21.251

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Electronic Record and Signature Disclosure:
 Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	10/23/2024 3:19:07 PM

Envelope Summary Events	Status	Timestamps
Certified Delivered	Security Checked	10/23/2024 4:58:11 PM
Signing Complete	Security Checked	10/23/2024 4:58:23 PM
Completed	Security Checked	10/24/2024 8:55:53 AM

Payment Events	Status	Timestamps
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Electronic Record and Signature Disclosure

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Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0, NetScape 7.2 (or above)
Email:	Access to a valid email account
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	<ul style="list-style-type: none">• Allow per session cookies

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|--|---|
| | <ul style="list-style-type: none">• Users accessing the internet behind a Proxy Server must enable HTTP 1.1 settings via proxy connection |
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