BRAZORIA COUNTY

PURCHASING DEPARTMENT

SUSAN P. SERRANO, CPPO, CPPB

Purchasing Director

NOTICE TO PROCEED

October 9, 2025

Matula & Matula Construction, Inc.
Attn: Blake Matzke
122 West Way, Suite 325
Lake Jackson, TX 77566
Sent via Email: bmatzke@matulainc.com

Re: Notice to Proceed for CSP# 25-67 Concrete Pavement Repairs 2025 Bar X (Precinct 4)

Dear Mr.Matzke:

Your company is approved to commence the work in accordance with the above referenced project on Monday, January 5, 2026 with a completion date of 172 calendar days. Please Contact the Brazoria County Project Manager to schedule work.

Please complete this process by acknowledging this copy of this NOTICE TO PROCEED to the County.

Very truly yours,

Natasha Stulberg, CPPB
Brazoria County Assistant Purchasing Director

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by: Matula & Matula Construction, Inc.

this 9th day of October, 2025.

Printed Name and Title: Blake Matzke, P.M.

Signature: _____

BRAZORIA COUNTY

PURCHASING DEPARTMENT

SUSAN P. SERRANO, CPPO, CPPB

Purchasing Director

August 28, 2025

Matula & Matula Construction, Inc.
Attn: Blake Matzke
122 West Way, Suite 325
Lake Jackson, TX 77566
bmatzke@matulainc.com

Re: Award for CSP# 25-67 Concrete Pavement Repairs 2025 Bar X (Precinct 4)

Dear Mr. Matzke:

Brazoria County is pleased to inform you that on August 26, 2025, Commissioners' Court awarded the above listed project to your company.

A purchase order and /or notice to proceed will follow. Do not proceed with delivery of services or materials prior to receiving a purchase order number from Brazoria Country.

A Certificate of Interested Parties, Form 1295 is required. Vendors are to log onto the Texas Ethics Commission's website https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and fill out Form 1295. Once the form is completed online, the system will issue a certificate number. Please print, sign the form, and email it to Amanda Erickson at aerickson@brazoriacountytx.gov.

In addition, per Texas Local Government Code 176, completion of the Conflict of Interest Questionnaire, Form CIQ, is required if applicable. You may access the form and further information on our website at http://brazoriacountytx.gov/departments/purchasing under the Doing Business section, Conflict of Interest Reporting.

Per Texas Local Government Code Chapters 808, 809, and 2274, completion of the Boycott Verification Form is required, if applicable. You may access the form and further information on our website at http://brazoriacountytx.gov/departments/purchasing under the Doing Business section.

Please email the CIQ and Boycott Verification Form to Amanda Erickson at aerickson@brazoriacountytx.gov.

As a reminder, a copy of a current certificate of insurance shall be due to Brazoria County within ten (10) calendar days after receipt of notification of award. The contract shall not become effective until the certificate of insurance is received. Failure to provide said certificate may result in cancellation and/or termination of the contract. Please have the certificate of insurance names Brazoria County as an additional insured and a waiver of subrogation applies in favor of Brazoria County.

Per the solicitation, a performance and payment bond are required and due prior to the start of the project.

Thank you for your interest in Brazoria County. If you have any questions, please do not hesitate to contact me.

Very truly yours,

Susan P. Serrano, CPPO, CPPB
Brazoria County Purchasing Director

BRAZORIA COUNTY
CONTRACT SHEET

THE STATE OF TEXAS
COUNTY OF BRAZORIA

This memorandum of agreement made and entered into on the 26th day of August 2025, by and between Brazoria County in the State of Texas (hereinafter designated County), acting herein by County Judge L.M. "Matt" Sebesta, Jr., by virtue of an order of Brazoria County Commissioners' Court, and Matula & Matula Construction, Inc..

WITNESSETH:

The Vendor and the County agree that the Instructions to Respondents, Specifications/Statement of Work, Standard Terms & Conditions, and all other requirements herein for **CSP# 25-67 Concrete Pavement Repairs 2025 Bar X (Pct 4)** as stated in the Competitive Sealed Proposal Table of Contents hereto attached and made a part hereof, together with the bond (when required), vendor's response and negotiated pricing, shall constitute the full agreement and Contract between parties and for furnishing the items set out and described; the County agrees to pay the prices stipulated in the accepted offer.

The order of precedence shall be:

- Brazoria County **CSP# 25-67 Concrete Pavement Repairs 2025 Bar X (Pct 4)**
- Vendor's submittal to the above listed CSP and the final accepted pricing

It is further agreed that this Contract shall not become binding or effective until signed by the parties hereto and a purchase order authorizing the items desired has been issued.

Executed at Angleton, Texas this 18th day of September 2025.

By: _____
County Judge Signature

By: L. M. "Matt" Sebesta Jr.
Printed Name

By: _____
Signature of Vendor

By: Glenn Byrd, Vice President
Printed Name and Title

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2025-1359965

Date Filed:
09/08/2025

Date Acknowledged:
9/9/2025

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Matula & Matula Construction, Inc.
Lake Jackson, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Brazoria County

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
CSP# 25-67
Concrete Pavement Repairs 2025 Bar X (Pct 4)

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Matula, Jon	Lake Jackson , TX United States	X	
Byrd, Glenn	Lake Jackson, TX United States	X	
Gonzalez, Delia	Lake Jackson, TX United States	X	

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is Glenn Byrd, and my date of birth is 02/15/1962.

My address is 122 West Way, Suite 325, Lake Jackson (city), TX (state), 77566 (zip code), US (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Brazoria County, State of Texas, on the 8th day of Sept (month), 2025 (year).

Signature of authorized agent of contracting business entity
(Declarant)

MATU&MA-01 SALST1

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 9/8/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Barry Insurance Group
4418 Broadway St.
Pearland, TX 77581

CONTACT NAME:
PHONE (A/C, No, Ext): (281) 464-3383 FAX (A/C, No): (281) 464-3050
E-MAIL ADDRESS: certs@barryinsurancegroup.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Champlain Specialty Insurance Company	
INSURER B : Progressive Insurance	29203
INSURER C : Landmark American Insurance Company	33138
INSURER D : Texas Mutual Insurance Company	22945
INSURER E : The Travelers Lloyds Insurance Company	41262
INSURER F : Westchester Surplus Lines Insurance Co.	

INSURED
Matula & Matula Construction, Inc.
122 W Way St Ste 325
Lake Jackson, TX 77566-5251

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	X	X	CSAR-CGL-0002306-03	7/1/2025	7/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY	X	X	999364461	7/1/2025	7/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
C	UMBRELLA LIAB [X] OCCUR X EXCESS LIAB [ ] CLAIMS-MADE DED RETENTION $	X	X	LHA607499	7/1/2025	7/1/2026	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [Y] N/A If yes, describe under DESCRIPTION OF OPERATIONS below		X	0001327746	7/1/2025	7/1/2026	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
E	Equipment Floater	X	X	6608J92513	10/2/2024	10/2/2025	Leased/Rented Equip	500,000
F	Contractors Pollutio	X	X	G74385953 003	7/1/2025	7/1/2026	Each Condition	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Project: CSP# 25-67 Concrete Pavement Repairs 2025 Bar X (Pct 4)
GENERAL LIABILITY
Blanket additional insured, waiver of subrogation, primary/non-contributory, and 30 day notice of cancellation are provided in favor of the certificate holder as required by written contract
Forms Attached: CG 20 10 0704, CG 20 37 0704, CG 20 01 0413, CG 24 04 0509, NPC 715 0711

BUSINESS AUTO LIABILITY
SEE ATTACHED ACORD 101

CERTIFICATE HOLDER

Brazoria County
237 E. Locust
Angleton, TX 77515

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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AGENCY CUSTOMER ID: MATU&MA-01 SALST1

LOC #: 1

ADDITIONAL REMARKS SCHEDULE

AGENCY		NAMED INSURED
Barry Insurance Group		Matula & Matula Construction, Inc. 122 W Way St Ste 325 Lake Jackson, TX 77566-5251 Brazoria
POLICY NUMBER		
SEE PAGE 1		
CARRIER	NAIC CODE	EFFECTIVE DATE: SEE PAGE 1
SEE PAGE 1	SEE P 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:
Blanket additional insured, waiver of subrogation, provisions are provided in favor of the certificate holder as required by written contract
Forms Attached: MCA20480711

WORKERS COMPENSATION
Blanket waiver of subrogation is provided in favor of the certificate holder as required by written contract
Forms Attached: WC 42 03 04 B

EXCESS LIABILITY
The Excess Liability coverage is follow form as respects the provisions of the underlying policies.

LEASED/RENTED EQUIPMENT
Blanket Mortgagee, Loss Payee or Lender's Loss Payable as their interest may appear.
Forms Attached: CM T5 60 01 10

INSTALLATION FLOATER:
All Risk (perils) covered
Limits of Insurance: $50,000
At Each Job Site Location, At Each Off-Site Fabrication Location, At Each Temporary Storage Location, At all Covered Locations Combined, In Transit.
Deductible: $5,000

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THIS ENDORSEMENT CHANGES/MODIFIES THE POLICY. PLEASE READ IT CAREFULLY.

PRIMARY AND NON-CONTRIBUTING INSURANCE

This endorsement changes/modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE FORM

To the extent that this insurance is afforded to any additional insured under this policy, **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, **4. Other Insurance**, is deleted in its entirety and replaced with the following condition:

4. Other Insurance

If all of the other insurance permits contribution by equal shares, we will follow this method unless the insured is required by written contract signed by both parties, to provide insurance that is primary and non-contributory, and the "insured contract" is executed prior to any loss. Where required by a written contract signed by both parties, this insurance will be primary and non-contributing only when and to the extent as required by that contract. However, under the contributory approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first. If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

ALL OTHER TERMS AND CONDITIONS OF THE POLICY REMAIN UNCHANGED.

This endorsement is attached to and forms a part of the Policy as listed in the Declarations Page or Declarations Extension Schedule, effective on the inception date of the Policy unless otherwise stated herein.

(The following information is required only when this endorsement is issued subsequent to preparation of the Policy.)

Endorsement effective date: Policy No.: Endorsement No.:

Named Insured:

Authorized Representative _____

THIS ENDORSEMENT CHANGES/MODIFIES THE POLICY. PLEASE READ IT CAREFULLY.

INSURED RETENTION ENDORSEMENT - DEDUCTIBLE

This endorsement changes/modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE

	AMOUNT AND BASIS OF DEDUCTIBLE	
COVERAGE A	**PER CLAIM**	**PER OCCURRENCE**
BODILY INJURY LIABILITY	**$**	**$**
OR		
PROPERTY DAMAGE LIABILITY	**$**	**$**
OR		
BODILY INJURY LIABILITY AND/OR PROPERTY DAMAGE LIABILITY COMBINED	**$**	**$ 5,000**
	PER INJURY	
COVERAGE B		
PERSONAL AND ADVERTISING INJURY LIABILITY	**$**	**$ 5,000**
	PER CLAIM	**PER OCCURRENCE**
COVERAGE C		
MEDICAL PAYMENTS	**$**	**$**
	PER CLAIM	**PER OCCURRENCE**
COVERAGE D		
ERRORS AND OMISSIONS LIABILITY	**$**	**$**
	PER CLAIM	**PER OCCURRENCE**
COVERAGE E		
CONTRACTORS POLLUTION LIABILITY	**$**	**$**

A. Our obligation under the Bodily Injury Liability, Property Damage Liability, Personal and Advertising Injury Liability, Medical Payments or Errors and Omissions Liability Coverages to pay damages and Supplementary Payments on your behalf applies only to the amount of damages and Supplementary Payments in excess of any deductible amounts stated in the Schedule above as applicable to such coverages.

B. Your policy may have a deductible amount on either a per claim, a per "occurrence," or a per injury basis. Your deductible applies to the coverage option and to the basis of the deductible indicated by the placement of the deductible amount in the Schedule above. The deductible amount stated in the Schedule above applies as follows:

1. **PER CLAIM BASIS.** If the deductible amount indicated in the Schedule above is on a per claim basis, that deductible applies as follows:

   a. Under Bodily Injury Liability Coverage, to all damages sustained by any one person because of "bodily injury";

   b. Under Property Damage Liability Coverage, to all damages sustained by any one person because of "property damage";

   c. Under Bodily Injury Liability and/or Property Damage Liability Coverage Combined, to all damages sustained by any one person because of:

(1) "Bodily injury";
(2) "Property damage"; or
(3) "Bodily injury" and "property damage" combined; or

d. Under Supplementary Payments – Coverages **A, B, D** AND **E** to all amounts we pay in the defense and investigation of any claim or "suit" to which this insurance applies;

e. Under Medical Payments Coverage **C**, to all damages sustained by any one person because of "bodily injury";

f. Under Errors and Omissions Liability Coverage **D** to all damages sustained by any one person resulting from negligent acts, errors or omissions

as the result of any one "occurrence."

g. Under Contractor Pollution Liability Coverage **E** to all damages sustained by any one person because of "bodily injury," "property damage," or "clean--up costs."

If damages are claimed for care, loss of services or death resulting at any time from "bodily injury," a separate deductible amount will be applied to each person making a claim for such damages.

With respect to "property damage," person includes an organization.

2. PER OCCURRENCE BASIS. If the deductible amount indicated in the Schedule above is on a per "occurrence" basis, that deductible amount applies as follows:

a. Under Bodily Injury Liability Coverage, to all damages because of "bodily injury";

b. Under Property Damage Liability Coverage, to all damages because of "property damage";

c. Under Bodily Injury Liability and/or Property Damage Liability Coverage Combined, to all damages because of:

(1) "Bodily injury";
(2) "Property damage"; or
(3) "Bodily injury" and "property damage" combined; or

d. Under Supplementary Payments – Coverages **A, B, D** AND **E** to all amounts we pay in the defense and investigation of any claim or "suit" to which this insurance applies.

e. Under Medical Payments Coverage **C**, to all damages sustained by any one person because of "bodily injury";

f. Under Errors and Omissions Liability Coverage **D**, to all damages resulting from negligent acts, errors or omissions.

g. Under Contractor Pollution Liability Coverage E to all damages sustained by any one person because of "bodily injury," "property damage," or "clean-up costs."

as the result of any one "occurrence," regardless of the number of persons or organizations who sustain damages because of that "occurrence."

3. PER INJURY BASIS. If the deductible amount indicated in the Schedule above is on a per injury basis, the deductible amount applies as follows:

a. Under the Personal and Advertising Injury Liability Coverage to all damages because of "personal and advertising injury" sustained by any one person or organization as a result of any one injury.

b. Under Supplementary Payments – Coverages **A, B, D** AND **E** to all amounts we pay in the defense and investigation of any claim or "suit" to which this insurance applies.

C. The terms of this insurance, including those with respect to:

1. Our right and duty to defend the insured against any "suits" seeking those damages; and
2. Your duties in the event of an "occurrence," claim, or "suit"

apply irrespective of the application of the deductible amount.

D. We, at our sole election and option, may either:

1. Pay any part of or all of the deductible amount to effect settlement of any claim or "suit" or payment of Supplementary Payments. Upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as has been paid by us; or

2. Simultaneously upon receipt of notice of any claim or "suit," or at any time thereafter, request you pay or deposit with us all or any part of the deductible amount, to be held and applied by us as herein provided.

E. The deductible may not be satisfied by payments made by any additional insured, any other insurance, or any other insurer, unless such payments are made under a policy written specifically to cover the deductible obligations under this policy.

F. Notwithstanding any other provision of this policy or any endorsements thereto, including the Separation of Insureds Condition, all Named Insureds are jointly and severally liable to us for payment of the full deductible amounts applicable to any and all claims and "occurrences" to which this policy may apply.

ALL OTHER TERMS AND CONDITIONS OF THE POLICY REMAIN UNCHANGED.

This endorsement is attached to and forms a part of the Policy as listed in the Declarations Page or Declarations Extension Schedule, effective on the inception date of the Policy unless otherwise stated herein.

(The following information is required only when this endorsement is issued subsequent to preparation of the Policy.)

Endorsement effective date: Policy No.: Endorsement No.:

Named Insured:

Authorized Representative_____

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 24 04 05 09

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Person Or Organization: As required by written contract signed by both parties and the insured contract is executed prior to any loss
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** of **Section IV – Conditions:**

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

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POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 04 35 12 07

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

EMPLOYEE BENEFITS LIABILITY COVERAGE

THIS ENDORSEMENT PROVIDES CLAIMS-MADE COVERAGE.
PLEASE READ THE ENTIRE ENDORSEMENT CAREFULLY.

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Coverage	Limit Of Insurance		Each Employee Deductible	Premium
Employee Benefits Programs	$1,000,000	each employee	$1,000	Included
	$1,000,000	aggregate		
Retroactive Date:	07/01/2010			
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.				

A. The following is added to **Section I – Coverages:**

COVERAGE – EMPLOYEE BENEFITS LIABILITY

1. Insuring Agreement

a. We will pay those sums that the insured becomes legally obligated to pay as damages because of any act, error or omission, of the insured, or of any other person for whose acts the insured is legally liable, to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages to which this insurance does not apply. We may, at our discretion, investigate any report of an act, error or omission and settle any "claim" or "suit" that may result. But:

(1) The amount we will pay for damages is limited as described in Paragraph **D.** (Section **III** – Limits Of Insurance); and

(2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under Supplementary Payments.

b. This insurance applies to damages only if:

(1) The act, error or omission, is negligently committed in the "administration" of your "employee benefit program";

(2) The act, error or omission, did not take place before the Retroactive Date, if any, shown in the Schedule nor after the end of the policy period; and

(3) A "claim" for damages, because of an act, error or omission, is first made against any insured, in accordance with Paragraph **c.** below, during the policy period or an Extended Reporting Period we provide under Paragraph **F.** of this endorsement.

c. A "claim" seeking damages will be deemed to have been made at the earlier of the following times:

(1) When notice of such "claim" is received and recorded by any insured or by us, whichever comes first; or

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(2) When we make settlement in accordance with Paragraph **a.** above.

A "claim" received and recorded by the insured within 60 days after the end of the policy period will be considered to have been received within the policy period, if no subsequent policy is available to cover the claim.

d. All "claims" for damages made by an "employee" because of any act, error or omission, or a series of related acts, errors or omissions, including damages claimed by such "employee's" dependents and beneficiaries, will be deemed to have been made at the time the first of those "claims" is made against any insured.

2. Exclusions

This insurance does not apply to:

a. Dishonest, Fraudulent, Criminal Or Malicious Act

Damages arising out of any intentional, dishonest, fraudulent, criminal or malicious act, error or omission, committed by any insured, including the willful or reckless violation of any statute.

b. Bodily Injury, Property Damage, Or Personal And Advertising Injury

"Bodily injury", "property damage" or "personal and advertising injury".

c. Failure To Perform A Contract

Damages arising out of failure of performance of contract by any insurer.

d. Insufficiency Of Funds

Damages arising out of an insufficiency of funds to meet any obligations under any plan included in the "employee benefit program".

e. Inadequacy Of Performance Of Investment/Advice Given With Respect To Participation

Any "claim" based upon:

(1) Failure of any investment to perform;

(2) Errors in providing information on past performance of investment vehicles; or

(3) Advice given to any person with respect to that person's decision to participate or not to participate in any plan included in the "employee benefit program".

f. Workers' Compensation And Similar Laws

Any "claim" arising out of your failure to comply with the mandatory provisions of any workers' compensation, unemployment compensation insurance, social security or disability benefits law or any similar law.

g. ERISA

Damages for which any insured is liable because of liability imposed on a fiduciary by the Employee Retirement Income Security Act of 1974, as now or hereafter amended, or by any similar federal, state or local laws.

h. Available Benefits

Any "claim" for benefits to the extent that such benefits are available, with reasonable effort and cooperation of the insured, from the applicable funds accrued or other collectible insurance.

i. Taxes, Fines Or Penalties

Taxes, fines or penalties, including those imposed under the Internal Revenue Code or any similar state or local law.

j. Employment-Related Practices

Damages arising out of wrongful termination of employment, discrimination, or other employment-related practices.

B. For the purposes of the coverage provided by this endorsement:

1. All references to Supplementary Payments – Coverages **A** and **B** are replaced by Supplementary Payments – Coverages **A, B** and **Employee Benefits Liability.**

2. Paragraphs **1.b.** and **2.** of the Supplementary Payments provision do not apply.

C. For the purposes of the coverage provided by this endorsement, Paragraphs **2.** and **3.** of **Section II – Who Is An Insured** are replaced by the following:

2. Each of the following is also an insured:

a. Each of your "employees" who is or was authorized to administer your "employee benefit program".

b. Any persons, organizations or "employees" having proper temporary authorization to administer your "employee benefit program" if you die, but only until your legal representative is appointed.

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c. Your legal representative if you die, but only with respect to duties as such. That representative will have all your rights and duties under this Endorsement.

3. Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain ownership or majority interest, will qualify as a Named Insured if no other similar insurance applies to that organization. However:

a. Coverage under this provision is afforded only until the 90th day after you acquire or form the organization or the end of the policy period, whichever is earlier.

b. Coverage under this provision does not apply to any act, error or omission that was committed before you acquired or formed the organization.

D. For the purposes of the coverage provided by this endorsement, **Section III – Limits Of Insurance** is replaced by the following:

1. **Limits Of Insurance**

a. The Limits of Insurance shown in the Schedule and the rules below fix the most we will pay regardless of the number of:

(1) Insureds;

(2) "Claims" made or "suits" brought;

(3) Persons or organizations making "claims" or bringing "suits";

(4) Acts, errors or omissions; or

(5) Benefits included in your "employee benefit program".

b. The Aggregate Limit is the most we will pay for all damages because of acts, errors or omissions negligently committed in the "administration" of your "employee benefit program".

c. Subject to the Aggregate Limit, the Each Employee Limit is the most we will pay for all damages sustained by any one "employee", including damages sustained by such "employee's" dependents and beneficiaries, as a result of:

(1) An act, error or omission; or

(2) A series of related acts, errors or omissions

negligently committed in the "administration" of your "employee benefit program".

However, the amount paid under this endorsement shall not exceed, and will be subject to, the limits and restrictions that apply to the payment of benefits in any plan included in the "employee benefit program".

The Limits of Insurance of this endorsement apply separately to each consecutive annual period and to any remaining period of less than 12 months, starting with the beginning of the policy period shown in the Declarations of the policy to which this endorsement is attached, unless the policy period is extended after issuance for an additional period of less than 12 months. In that case, the additional period will be deemed part of the last preceding period for purposes of determining the Limits Of Insurance.

2. **Deductible**

a. Our obligation to pay damages on behalf of the insured applies only to the amount of damages in excess of the deductible amount stated in the Schedule as applicable to Each Employee. The limits of insurance shall not be reduced by the amount of this deductible.

b. The deductible amount stated in the Schedule applies to all damages sustained by any one "employee", including such "employee's" dependents and beneficiaries, because of all acts, errors or omissions to which this insurance applies.

c. The terms of this insurance, including those with respect to:

(1) Our right and duty to defend any "suits" seeking those damages; and

(2) Your duties, and the duties of any other involved insured, in the event of an act, error or omission, or "claim"

apply irrespective of the application of the deductible amount.

d. We may pay any part or all of the deductible amount to effect settlement of any "claim" or "suit" and, upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as we have paid.

E. For the purposes of the coverage provided by this endorsement, Conditions **2.** and **4.** of **Section IV – Commercial General Liability Conditions** are replaced by the following:

2. **Duties In The Event Of An Act, Error Or Omission, Or "Claim" Or "Suit"**

a. You must see to it that we are notified as soon as practicable of an act, error or omission which may result in a "claim". To the extent possible, notice should include:

(1) What the act, error or omission was and when it occurred; and

(2) The names and addresses of anyone who may suffer damages as a result of the act, error or omission.

b. If a "claim" is made or "suit" is brought against any insured, you must:

(1) Immediately record the specifics of the "claim" or "suit" and the date received; and

(2) Notify us as soon as practicable.

You must see to it that we receive written notice of the "claim" or "suit" as soon as practicable.

c. You and any other involved insured must:

(1) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the "claim" or "suit";

(2) Authorize us to obtain records and other information;

(3) Cooperate with us in the investigation or settlement of the "claim" or defense against the "suit"; and

(4) Assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of an act, error or omission to which this insurance may also apply.

d. No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation or incur any expense without our consent.

4. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under this endorsement, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when Paragraph **b.** below applies. If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in Paragraph **c.** below.

b. Excess Insurance

(1) This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis that is effective prior to the beginning of the policy period shown in the Schedule of this insurance and that applies to an act, error or omission on other than a claims-made basis, if:

(a) No Retroactive Date is shown in the Schedule of this insurance; or

(b) The other insurance has a policy period which continues after the Retroactive Date shown in the Schedule of this insurance.

(2) When this insurance is excess, we will have no duty to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

(3) When this insurance is excess over other insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of the total amount that all such other insurance would pay for the loss in absence of this insurance; and the total of all deductible and self-insured amounts under all that other insurance.

(4) We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Schedule of this endorsement.

c. Method Of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limits of insurance to the total applicable limits of insurance of all insurers.

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F. For the purposes of the coverage provided by this endorsement, the following Extended Reporting Period provisions are added, or, if this endorsement is attached to a claims-made Coverage Part, replaces any similar Section in that Coverage Part:

EXTENDED REPORTING PERIOD

1. You will have the right to purchase an Extended Reporting Period, as described below, if:
   a. This endorsement is canceled or not renewed; or
   b. We renew or replace this endorsement with insurance that:
      (1) Has a Retroactive Date later than the date shown in the Schedule of this endorsement; or
      (2) Does not apply to an act, error or omission on a claims-made basis.
2. The Extended Reporting Period does not extend the policy period or change the scope of coverage provided. It applies only to "claims" for acts, errors or omissions that were first committed before the end of the policy period but not before the Retroactive Date, if any, shown in the Schedule. Once in effect, the Extended Reporting Period may not be canceled.
3. An Extended Reporting Period of five years is available, but only by an endorsement and for an extra charge.

   You must give us a written request for the endorsement within 60 days after the end of the policy period. The Extended Reporting Period will not go into effect unless you pay the additional premium promptly when due.

   We will determine the additional premium in accordance with our rules and rates. In doing so, we may take into account the following:
   a. The "employee benefit programs" insured;
   b. Previous types and amounts of insurance;
   c. Limits of insurance available under this endorsement for future payment of damages; and
   d. Other related factors.

   The additional premium will not exceed 100% of the annual premium for this endorsement.

   The Extended Reporting Period endorsement applicable to this coverage shall set forth the terms, not inconsistent with this Section, applicable to the Extended Reporting Period, including a provision to the effect that the insurance afforded for "claims" first received during such period is excess over any other valid and collectible insurance available under policies in force after the Extended Reporting Period starts.
4. If the Extended Reporting Period is in effect, we will provide an extended reporting period aggregate limit of insurance described below, but only for claims first received and recorded during the Extended Reporting Period.

   The extended reporting period aggregate limit of insurance will be equal to the dollar amount shown in the Schedule of this endorsement under Limits of Insurance.

   Paragraph **D.1.b.** of this endorsement will be amended accordingly. The Each Employee Limit shown in the Schedule will then continue to apply as set forth in Paragraph **D.1.c.**

G. For the purposes of the coverage provided by this endorsement, the following definitions are added to the **Definitions** Section:

1. "Administration" means:
   a. Providing information to "employees", including their dependents and beneficiaries, with respect to eligibility for or scope of "employee benefit programs";
   b. Handling records in connection with the "employee benefit program"; or
   c. Effecting, continuing or terminating any "employee's" participation in any benefit included in the "employee benefit program".

   However, "administration" does not include handling payroll deductions.
2. "Cafeteria plans" means plans authorized by applicable law to allow employees to elect to pay for certain benefits with pre-tax dollars.
3. "Claim" means any demand, or "suit", made by an "employee" or an "employee's" dependents and beneficiaries, for damages as the result of an act, error or omission.

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4. "Employee benefit program" means a program providing some or all of the following benefits to "employees", whether provided through a "cafeteria plan" or otherwise:

   a. Group life insurance, group accident or health insurance, dental, vision and hearing plans, and flexible spending accounts, provided that no one other than an "employee" may subscribe to such benefits and such benefits are made generally available to those "employees" who satisfy the plan's eligibility requirements;

   b. Profit sharing plans, employee savings plans, employee stock ownership plans, pension plans and stock subscription plans, provided that no one other than an "employee" may subscribe to such benefits and such benefits are made generally available to all "employees" who are eligible under the plan for such benefits;

   c. Unemployment insurance, social security benefits, workers' compensation and disability benefits;

   d. Vacation plans, including buy and sell programs; leave of absence programs, including military, maternity, family, and civil leave; tuition assistance plans; transportation and health club subsidies; and

   e. Any other similar benefits designated in the Schedule or added thereto by endorsement.

H. For the purposes of the coverage provided by this endorsement, Definitions **5.** and **18.** in the **Definitions** Section are replaced by the following:

   5. "Employee" means a person actively employed, formerly employed, on leave of absence or disabled, or retired. "Employee" includes a "leased worker". "Employee" does not include a "temporary worker".

   18. "Suit" means a civil proceeding in which damages because of an act, error or omission to which this insurance applies are alleged. "Suit" includes:

      a. An arbitration proceeding in which such damages are claimed and to which the insured must submit or does submit with our consent; or

      b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the insured submits with our consent.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Blanket where required by written contract signed by both parties and the insured contract is executed prior to any loss	Any location where required by written contract signed by both parties and the insured contract is executed prior to any loss
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
Blanket where required by written contract signed by both parties and the insured contract is executed prior to any loss	Any location where required by written contract signed by both parties and the insured contract is executed prior to any loss
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

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ADDITIONAL INSURED or "CERTIFICATE" HOLDER NOTICE OF CANCELLATION-BLANKET

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

ALL COVERAGE FORMS

If you are required by written contract to provide Notice of Cancellation (for reasons other than non-payment of premium or deductible reimbursement) to any additional insured or "certificate" holder under this policy, we agree to provide such Notice stating when, no less than 30 days from the date of mailing, such cancellation shall take effect.

You agree that as a condition precedent to us providing such notice, you will provide us with a complete list of such additional insureds or "certificate" holders including appropriate designees and complete mailing addresses. Such list shall be provided no less than 7 days from the date it is electronically requested. Such list shall be in a format acceptable to us.

If notice is mailed, proof of mailing is sufficient proof of notice.

For purpose of this endorsement, "certificate" shall mean a certificate of insurance issued as evidence of this insurance.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET WAIVER OF SUBROGATION

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

SECTION IV – BUSINESSS AUTO CONDITIONS, A. Loss Conditions, 5. Transfer of Rights Of Recovery Against Others To Us, the following is added:

We waive any right of recovery we may have against any person or organization to the extent required of you by a written contract executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of the operations contemplated by such contract. The waiver applies only to the person or organization designated in such contract.

Policy# 999364461

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

The following is added to the **Section II – Liability Coverage,** Paragraph **A.1. Who Is An Insured** Provision:

Any person or organization that you are required to include as additional insured on the Coverage Form in a written contract or agreement that is signed and executed by you before the "bodily injury" or "property damage" occurs and that is in effect during the policy period is an "insured" for Liability Coverage, but only for damages to which this insurance applies and only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Section II.

TexasMutual®

WORKERS' COMPENSATION AND EMPLOYERS LIABILITY POLICY

WC 42 03 04 B
Insured copy

TEXAS WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Texas is shown in item 3.A. of the Information Page.

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule, but this waiver applies only with respect to bodily injury arising out of the operations described in the schedule where you are required by a written contract to obtain this waiver from us.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

The premium for this endorsement is shown in the Schedule.

Schedule

1. ( ) Specific Waiver
   Name of person or organization
   (X) Blanket Waiver
   Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.

2. Operations: ALL TEXAS OPERATIONS
3. Premium:
   The premium charge for this endorsement shall be **2.00** percent of the premium developed on payroll in connection with work performed for the above person(s) or organization(s) arising out of the operations described.
4. Advance Premium: Included, see Information Page

This endorsement changes the policy to which it is attached effective on the inception date of the policy unless a different date is indicated below. (The following "attaching clause" need be completed only when this endorsement is issued subsequent to preparation of the policy.)
This endorsement, effective on 7/1/25 **at 12:01 a.m.** standard time, forms a part of:

Policy no. 0001327746 of Texas Mutual Insurance Company effective on 7/1/25

Issued to: MATULA & MATULA CONSTRUCTION INC

Jeanette Ward

This is not a bill

Authorized representative

NCCI Carrier Code: 29939

6/26/25

PO Box 12058, Austin, TX 78711-2058
texasmutual.com | (800) 859-5995 | Fax (800) 359-0650

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET LOSS PAYEES

This endorsement modifies insurance provided under the IM PAK COVERAGE FORM.

The following is added to Section E – ADDITIONAL COVERAGE CONDITIONS:

Loss Payable Provision

In the event of a Covered Cause of Loss to Covered Property in which both you and a Loss Payee share an insurable interest, we will:

a. Adjust the loss or damage with you; and

b. Pay any claim for loss or damage jointly to you and the Loss Payee as your interests may appear.

This endorsement applies to all Covered Property for which a Loss Payee is on file with us or your insurance agent or insurance broker.

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BRAZORIA COUNTY
BID TABLE

VENDOR TO INSERT COMPLETED BID TABLE HERE

ITEM NO.	SPEC NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
		GENERAL ITEMS				
1	500-7001	MOBILIZATION	LS	1	$40,000.00	$40,000.00
2	100-7002	PREPARING ROW	STA	54	$119.50	$6,453.00
3	104-7001	REMOVING CONCRETE PAVEMENT	SY	12,680	$6.20	$78,616.00
4	104-7011	REMOVING CONCRETE DRIVEWAYS	SY	256	$35.50	$9,088.00
5	105-7028	REMOVING UNTREATED BASE (8")	SY	2,233	$4.80	$10,718.40
		PAVING ITEMS				
6	110-7001	EXCAVATION (ROADWAY)	CY	60	$14.20	$852.00
7	247-7047	FLEXIBLE BASE (CMP IN PLC)(TY B GR 3)(FNAL POS)	CY	496	$130.10	$64,529.60
8	260-7001	LIME (HYD, COM OR QK) SLURRY OR QK(DRY)	TON	439	$412.30	$180,999.70
9	260-6073	LIME TRT (SUBGRADE) (8")	SY	14,621	$2.50	$36,552.50
10	360-6028	CONCRETE PAVEMENT (JOINT REINF) (6")	SY	11,885	$68.60	$815,311.00
11	360-6028	CONCRETE PAVEMENT (JOINT REINF) (H.E.S. - 6")	SY	1,387	$77.10	$106,937.70
12	530-7007	DRIVEWAYS (CONC - H.E.S.)	SY	256	$112.70	$28,851.20
		EROSION CONTROL ITEMS				
13	160-7002	FURN & PLACE TOPSOIL (4")	SY	469	$22.20	$10,411.80
14	164-7002	BROADCAST SEED (PERM_RURAL_CLAY)	SY	469	$25.10	$11,771.90
15	506-7039	TEMP SEDMT CONT FENCE (INSTALL)	LF	1,320	$3.70	$4,884.00
16	506-7041	TEMP SEDMT CONT FENCE (REMOVE)	LF	1,320	$2.00	$2,640.00
17	506-7043	BIODEG EROSN CONT LOGS (INSTL) (8")	LF	96	$6.20	$595.20
18	506-7046	BIODEG EROSN CONT LOGS (REMOVE)	LF	96	$3.00	$288.00
		TRAFFIC CONTROL ITEMS				
19	502-7001	BARRICADES, SIGNS, AND TRAFFIC HANDLING	MO	6	$1,659.60	$9,957.60
		TOTAL BASE BID			1,419,457.60	
		GRAND TOTAL			1,419,457.60	

EXHIBIT A – REQUIRED DOCUMENTS

Note: In order to sign the following documents electronically and insert an authorized signature into the PDF, you will need to use the ***latest version of Adobe Reader****. Be aware that such a signature will have the full legal force of a handwritten signature under Texas law. Additionally, all documents with company name and authorized/contact person, and their title with the company, must be identical and match the W-9 with the company's legal name. Documents with different company names may be considered non-responsive.*

- RESPONDENT CERTIFICATION FORM
- BIDDER/RESPONDENT'S AFFIRMATION & SDNs/BLOCKED PERSONS AFFIRMATION
- WORKERS COMPENSATION REQUIREMENTS
- CERTIFICATION REGARDING LOBBYING FORM
- EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS *(if applicable)* (If vendor has any exceptions to the RFP terms & conditions or special requirements, they must be included with the RFP submittal in order to be considered)
- NON COLLUSION AFFIDAVIT
- BID BOND
- CONFLICT OF INTEREST QUESTIONNAIRE – FORM CIQ *(if applicable)*
- CONTRACTOR ACKNOWLEDGMENT OF STORMWATER MANAGEMENT PROGRAM
- TEXAS GOVERNMENT CODE 552, SUBCHAPTER J ACKNOWLEDGEMENT FORM
- PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION FORM *(Vendor to sign form if applicable to telecommunications)*
- AUTHORIZED NEGOTIATOR
- RESIDENT / NONRESIDENT BIDDER PROVISIONS
- VENDOR DATA SHEET & W-9 FORM

BRAZORIA COUNTY
RESPONDENT CERTIFICATION FORM

Matula & Matula Construction, Inc.
LEGAL NAME OF CONTRACTING COMPANY

75-2848842
FEDERAL I.D. # (Company or Corporation)

DUN & BRADSTREET D-U-N-S NUMBER

979-480-0030
TELEPHONE NUMBER

979-480-0060
FACSIMILE NUMBER

Blake Matzke
CONTACT PERSON

Project Manager
TITLE

122 West Way, Suite 325
COMPLETE MAILING ADDRESS

Lake Jackson, TX
CITY & STATE

77566
ZIP CODE

Same as above
COMPLETE STREET ADDRESS

CITY & STATE

ZIP CODE

bmatzke@matulainc.com
EMAIL ADDRESS

CERTIFICATION

By my signature hereon, I certify that the Goods and/or Services that I propose to furnish will meet or exceed every specification contained herein, and that I have read each and every page of the Specifications/Statement of Work, other requirements, as well as, the Standard Terms & Conditions and Bid Table. Further, I agree that if my offer is accepted, I shall perform as required in these Contract documents. I am aware that, once accepted by Brazoria County, my offer becomes a binding Contract in accordance with the provisions herein of the aforementioned Contract documents, and that I will not be permitted to attempt enforcement of any other Contract or Contract provisions.

SIGNATURE
"must be authorized to execute on behalf of company"

07/29/2025
DATE

Delia Gonzalez
Typewritten or Printed Name

Secretary
Title

BRAZORIA COUNTY
BIDDER/RESPONDENT'S AFFIRMATION

This form must be completed, signed, and returned by Bidder/Respondent

NOTE: FAILURE TO SIGN AND RETURN THIS FORM WITHIN 10 DAYS OF AWARD NOTIFICATION MAY RESULT IN THE TERMINATION OF ANY RESULTING PURCHASE ORDER OR CONTRACT.

1. Bidder/Respondent affirms that they are duly authorized to execute this Contract, that this company, corporation, firm, partnership or individual has not prepared this bid/offer in collusion with any other bidder, and that the contents of this bid/offer as to prices, terms or conditions of said bid/offer have not been communicated by the undersigned nor by any employee or Director to any other person engaged in this type of business prior to the official opening of this bid/offer.

2. Bidder/Respondent hereby assigns to purchaser any an all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.

3. Pursuant to §262.0276 (a) of the Texas Local Government Code and subject to Brazoria County Court Order No. 36 of October 28, 2003, Bidder/Respondent, hereby affirms that Bidder/Respondent:

(Please check all that are applicable)

_____ Does not own taxable property in Brazoria County.

_____ Does not owe any ad valorem taxes to Brazoria County or is not otherwise indebted to Brazoria County.

****

BIDDER/RESPONDENT'S SDNs/BLOCKED PERSONS AFFIRMATION

Pursuant to §2155.077 of the Texas Government Code and subject to Brazoria County Court Order No19 of August 9, 2005, Bidder/Respondent, hereby affirms that Bidder/Respondent:

(Please check all that are applicable)

X Is not excluded from doing business at the federal level.

X Is not listed as Specially Designated Nationals (SDN)s/Blocked Persons (individuals and companies owned or controlled by or acting for or on behalf of targeted Countries; or individuals, groups and entities, such as terrorists and narcotics traffickers designated under programs that are not country-specific).

2. Brazoria County may not make procurement transactions with SDNs/Blocked Persons.

****

If any additional information is required regarding these requirements, please contact The Brazoria County Purchasing Department PRIOR to execution.

****

Bidder/Respondent Company Name Matula & Matula Construction, Inc.

Signature of Company Official Authorizing the Bid/Offer _____ Date 07/29/2025

Company Official (Printed Name) Delia Gonzalez

Official's Position Secretary

WORKERS' COMPENSATION REQUIREMENTS

BIDDER/RESPONDENT INSTRUCTIONS:

READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.

The following requirements and specifications supersede all other Requirements where applicable.

Workers' Compensation Insurance Coverage

A. Definitions

Certificate of coverage ("certificate") – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project – includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in §406.096) – includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity or employees of any entity with furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

(1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

(2) no later than seven (7) days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

(1) provide coverage, base on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;

(2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;

(3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(4) obtain from each other person with whom it contracts, and provide to the contractor:

(a) a certificate of coverage, prior to the other person beginning work on the project; and

(b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(5) retain all required certificated of coverage on file for the duration of the project and for one (1) year thereafter;

(6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew of should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

(7) contractually require each person with whom it contracts, to perform as required by paragraphs (9.1) - (9.7), with the certificates of coverage to be provided to the person for whom they are providing services.

J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier of, or in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administration penalties, criminal penalties, civil penalties, or other civil actions.

K. The contractor's failure to comply with any of these provision is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

If awarded a contract for RFP #25-67 by my signature below, I certify that I will provide workers' compensation insurance coverage for each employee employed on this project. I also certify that each of my subcontractors will also provide workers compensation for each employee employed on this project.

Delei Y. Hyn

SIGNATURE

07/29/2025

DATE

Delia Gonzalez

Typewritten or Printed Name

Secretary

Title

CERTIFICATION REGARDING LOBBYING

Certifications For Contracts, Grants, Loans, And Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed within this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature/Authorized Certifying Official

Delia Gonzalez, Secretary

Typed Name and Title

Matula & Matula Construction, Inc.

Applicant / Organization

07/29/2025

Date Signed

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

Approved by OMB

0348-0046

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

Type of Federal Action: a. contract ____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	**Status of Federal Action:** a. bid/offer/application _____ b. initial award c. post-award	**Report Type:** a. initial filing _____ b. material change

Name and Address of Reporting Entity: ____ Prime _____ Subawardee Tier_____, if Known: **Congressional District, if known:**	**If Reporting Entity in No. 4 is Subawardee,** Enter Name and Address of Prime: **Congressional District, if known:**
Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, *if applicable*: _____
Federal Action Number, *if known:*	**9. Award Amount**, *if known:* **$**
10. a. Name and Address of Lobbying Registrant *(if individual, last name, first name, MI):*	**b. Individuals Performing Services** *(including address if different from No. 10a)* *(last name, first name, MI):* Matula & Matula Construction, Inc. 122 West Way, Suite 325 Lake Jackson, TX 77566
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	**Signature:** Delia Y. Matula **Print Name:** Delia Gonzalez **Title:** Secretary **Telephone No.:** 979-480-0030 **Date:** 07/29/2025
Federal Use Only	**Authorized for Local Reproduction** **Standard Form - LLL (Rev. 7-97)**

Note: If this form is not applicable to your company, please mark the form N/A and sign the highlighted signature field above.

VENDOR TO INSERT EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS HERE (IF APPLICABLE)

✓ **Company <u>does not</u> have exceptions** ***(If applicable, check here)***

Or

_____ **Company does have exceptions** ***(If applicable, check here and list exceptions here for consideration. Brazoria County will review all exceptions listed and will formally communicate as to if any exceptions are accepted by the County. If exceptions are accepted by the County, they will be added in the form of an addendum.)***

NON-COLLUSION AFFIDAVIT

THE STATE OF TEXAS

OWNER Brazoria County

Before me, the undersigned authority, on this day personally appeared Delia Gonzalez who being by me duly sworn upon oath says: that he is duly qualified and authorized to make this affidavit for and on behalf of Matula & Matula Construction, Inc. ("Contractor"), of and is fully cognizant of the fact herein set out: that Contractor has not, either directly or indirectly, entered into any agreement with OWNER in any collusion: or otherwise taken any action in restraint of free competitive bidding in connection with the contract for the above referenced project.

Delia Y. Gonzalez

Delia Gonzalez — Name

Secretary — Title

SWORN TO AND SUBSCRIBED BEFORE ME by the said Delia Y. Gonzalez, this 29 day of July, 2025, to certify which witness my hand and seal of office.

Vallori Peltier

NOTARY PUBLIC in and for

State of Texas

Printed Name: Vallori Peltier

My Commission Expires: 12-10-25

NOTARY PUBLIC STATE OF TEXAS
VALLORI PELTIER
Notary ID #7540672
My Commission Expires
December 10, 2025

BID BOND

VENDOR TO INSERT COPY OF BID BOND HERE

BID BOND

KNOW ALL BY THESE PRESENTS, That we, Matula & Matula Construction Inc

of 122 West Way, Suite 325, Lake Jackson, TX 77566

(hereinafter called the Principal), as Principal, and

Developers Surety and Indemnity Company (hereinafter called the Surety),

as Surety, are held and firmly bound unto Brazoria County

(hereinafter called the Obligee) in the penal sum of Five Percent of Amount Bid

Dollars ($ 5%)

for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That WHEREAS, the Principal has submitted or is about to submit a proposal to the Obligee on a contract for

RFP #25-67 Concrete Pavement Repairs 2025 Bar X Phase V-Mill Road (CR 969M) from SH 35 to Flintrock Ct.

NOW, THEREFORE, If the said Contract be timely awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing, and give bond, if bond is required, with surety acceptable to the Obligee for the faithful performance of the said Contract, then this obligation shall be void; otherwise to remain in full force and effect.

Signed and sealed this 29th day of July , 2025 .

Witness

Matula & Matula Construction Inc

By:

Developers Surety and Indemnity Company

By:
Kevin McQuain, Attorney-In-Fact

POWER OF ATTORNEY FOR
COREPOINTE INSURANCE COMPANY
DEVELOPERS SURETY AND INDEMNITY COMPANY
59 Maiden Lane, 43rd Floor, New York, NY 10038
(212) 220-7120

KNOW ALL BY THESE PRESENTS that, except as expressly limited herein, COREPOINTE INSURANCE COMPANY and DEVELOPERS SURETY AND INDEMNITY COMPANY, do hereby make, constitute and appoint:

Kevin McQuain, of Spring, TX

as its true and lawful Attorney-in-Fact, to make, execute, deliver and acknowledge, for and on behalf of said companies, as sureties, bonds, undertakings and contracts of suretyship giving and granting unto said Attorney-in-Fact full power and authority to do and to perform every act necessary, requisite or proper to be done in connection therewith as each of said company could do, but reserving to each of said company full power of substitution and revocation, and all of the acts of said Attorney-in-Fact, pursuant to these presents, are hereby ratified and confirmed. This Power of Attorney is effective 02/01/2024 and shall expire on December 31, 2025.

Bond No.: Bid Bond
Principal: Matula & Matula Construction Inc
Obligee: Brazoria County

This Power of Attorney is granted and is signed under and by authority of the following resolutions adopted by the Board of Directors of COREPOINTE INSURANCE COMPANY and DEVELOPERS SURETY AND INDEMNITY COMPANY (collectively, "Company") on February 10, 2023.

RESOLVED, that Sam Zaza, President, Surety Underwriting, James Bell, Vice President, Surety Underwriting, and Craig Dawson, Executive Underwriter, Surety, each an employee of AmTrust North America, Inc., an affiliate of the Company (the "Authorized Signors"), are hereby authorized to execute a Power of Attorney, qualifying attorney(s)-in-fact named in the Power of Attorney to execute, on behalf of the Company, bonds, undertakings and contracts of suretyship, or other suretyship obligations; and that the Secretary or any Assistant Secretary of the Company be, and each of them hereby is, authorized to attest the execution of any such Power of Attorney.

RESOLVED, that the signature of any one of the Authorized Signors and the Secretary or any Assistant Secretary of the Company, and the seal of the Company must be affixed to any such Power of Attorney, and any such signature or seal may be affixed by facsimile, and such Power of Attorney shall be valid and binding upon the Company when so affixed and in the future with respect to any bond, undertaking or contract of suretyship to which it is attached.

IN WITNESS WHEREOF, COREPOINTE INSURANCE COMPANY and DEVELOPERS SURETY AND INDEMNITY COMPANY have caused these presents to be signed by the Authorized Signor and attested by their Secretary or Assistant Secretary this March 27, 2023.

By: _____
Printed Name: Sam Zaza
Title: President, Surety Underwriting

COREPOINTE INSURANCE COMPANY CORPORATE SEAL DELAWARE

DEVELOPERS SURETY AND INDEMNITY COMPANY INCORPORATED 1936 CALIFORNIA

ACKNOWLEDGEMENT:

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF California COUNTY OF Orange

On this 27 day of March, 2023, before me, Hoang-Quyen Phu Pham, personally appeared Sam Zaza, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to within the instrument and acknowledged to me that they executed the same in their authorized capacity, and that by the signature on the instrument the entities upon behalf which the person acted, executed this instrument.

I certify, under penalty of perjury, under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

HOANG-QUYEN P. PHAM
Notary Public - California
Orange County
Commission # 2432970
My Comm. Expires Dec 31, 2026

CORPORATE CERTIFICATION

The undersigned, the Secretary or Assistant Secretary of COREPOINTE INSURANCE COMPANY and DEVELOPERS SURETY AND INDEMNITY COMPANY, does hereby certify that the provisions of the resolutions of the respective Boards of Directors of said corporations set forth in this Power of Attorney are in force as of the date of this Certification.

This Certification is executed in the City of Cleveland, Ohio, this March 19, 2023.

By: DocuSigned by: Barry W. Moses 6B6415E7ADE548C... Barry W. Moses, Assistant Secretary

POA No. N/A

Signed and sealed this 29th day of July, 2025

AmTrust Surety
An AmTrust Financial Company

Developers Surety and Indemnity Company
CorePointe Insurance Company

IMPORTANT NOTICE:

To obtain information or make a complaint:

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights, or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance at:

P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 475-1771
E-mail: ConsumerProtection@tdi.state.tx.us

For any complaints you may also contact AmTrust Customer Service at:

Telephone: **1-877-528-7878**

Your notice of claim against the attached bond may be given to the surety company that issued the bond by sending it by mail to the following address:

Mailing Address: AmTrust Financial Services, Inc.
P.O. Box 5939
Cleveland, OH 44101
Attention: Surety Claims

Physical Address: AmTrust Financial Services, Inc.
800 Superior Ave
Cleveland, OH 44114

Email: suretybondclaims@amtrustgroup.com

Note: The maximum size for any single email message including attachments is 20MB. Please send any correspondence in excess of this size to the P.O. Box noted above.

PREMIUM OR CLAIM DISPUTES:

If you have a dispute concerning a premium, you should contact the agent first. If you have a dispute concerning a claim, you should contact the company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR BOND:
This notice is for information only and does not become a part or condition of the attached document.

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Matula & Matula Construction, Inc.

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

N/A

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☒ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☒ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

07/29/2025

Date

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 11/30/2015

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 11/30/2015

Contractor Acknowledgement of Stormwater Management Program

I hereby acknowledge that I am aware of the Stormwater Management Program and standard operating procedures developed by Brazoria County in compliance with the TPDES General Permit No. TXR040000. I agree to comply with all applicable best management practices and standard operating procedures while conducting my services for Brazoria County. I agree to conduct all services in a manner that does not introduce illicit discharges of pollutants to streets, stormwater inlets, drainage ditches or any portion of the drainage system. The following materials and/or pollutant sources must not be discharged to the drainage system as a result of any services provided:

1. Grass clippings, leaves, mulch, rocks, sand, dirt or other waste materials resulting from landscaping activities, (except those materials resulting from ditch mowing or maintenance activities)
2. Herbicides, pesticides and/or fertilizers, (except those intended for aquatic use)
3. Detergents, fuels, solvents, oils and/or lubricants, other equipment and/or vehicle fluids,
4. Other hazardous materials including paints, thinners, chemicals or related waste materials,
5. Uncontrolled dewatering discharges, equipment and/or vehicle wash waters,
6. Sanitary waste, trash, debris, or other waste products
7. Wastewater from wet saw machinery,
8. Other pollutants that degrade water quality or pose a threat to human health or the environment.

Furthermore, I agree to notify Brazoria County immediately of any issue caused by or identified by Matula & Matula Construction, Inc. that is believed to be an immediate threat to human health or the environment.

(Company/Contractor)

Contractor Signature

07/29/2025
Date

Delia Gonzalez
Printed Name

Secretary
Title

TEXAS GOVERNMENT CODE 552, SUBCHAPTER J ACKNOWLEDGEMENT FORM

Respondent acknowledges having read and understood the following law, effective January 1, 2020

Delia Gonzalez 07/29/2025

SIGNATURE DATE

"must be authorized to execute on behalf of company"

Delia Gonzalez Secretary

Typewritten or Printed Name Title

SUBCHAPTER J. ADDITIONAL PROVISIONS RELATED TO CONTRACTING INFORMATION

Sec. 552.371. CERTAIN ENTITIES REQUIRED TO PROVIDE CONTRACTING INFORMATION TO GOVERNMENTAL BODY IN CONNECTION WITH REQUEST. (a) This section applies to an entity that is not a governmental body that executes a contract with a governmental body that:

(1) has a stated expenditure of at least $1 million in public funds for the purchase of goods or services by the governmental body; or

(2) results in the expenditure of at least $1 million in public funds for the purchase of goods or services by the governmental body in a fiscal year of the governmental body.

(b) This section applies to a written request for public information received by a governmental body that is a party to a contract described by Subsection (a) for contracting information related to the contract that is in the custody or possession of the entity and not maintained by the governmental body.

(c) A governmental body that receives a written request for information described by Subsection (b) shall request that the entity provide the information to the governmental body. The governmental body must send the request in writing to the entity not later than the third business day after the date the governmental body receives the written request described by Subsection (b).

(d) Notwithstanding Section 552.301:

(1) a request for an attorney general's decision under Section 552.301(b) to determine whether contracting information subject to a written request described by Subsection (b) falls within an exception to disclosure under this chapter is considered timely if made not later than the 13th business day after the date the governmental body receives the written request described by Subsection (b);

(2) the statement and copy described by Section 552.301(d) is considered timely if provided to the requestor not later than the 13th business day after the date the governmental body receives the written request described by Subsection (b);

(3) a submission described by Section 552.301(e) is considered timely if submitted to the attorney general not later than the 18th business day after the date the governmental body receives the written request described by Subsection (b); and

(4) a copy described by Section 552.301(e-1) is considered timely if sent to the requestor not later than the 18th business day after the date the governmental body receives the written request described by Subsection (b).

(e) Section 552.302 does not apply to information described by Subsection (b) if the governmental body:

(1) complies with the requirements of Subsection (c) in a good faith effort to obtain the information from the contracting entity;

(2) is unable to meet a deadline described by Subsection (d) because the contracting entity failed to provide the information to the governmental body not later than the 13th business day after the date the governmental body received the written request for the information; and

(3) if applicable and notwithstanding the deadlines prescribed by Sections 552.301(b), (d), (e), and (e-1), complies with the requirements of those subsections not later than the eighth business day after the date the governmental body receives the information from the contracting entity.

(f) Nothing in this section affects the deadlines or duties of a governmental body under Section 552.301 regarding information the governmental body maintains, including contracting information.

Sec. 552.372. BIDS AND CONTRACTS. (a) A contract described by Section 552.371 must require a contracting entity to:

(1) preserve all contracting information related to the contract as provided by the records retention requirements applicable to the governmental body for the duration of the contract;

(2) promptly provide to the governmental body any contracting information related to the contract that is in the custody or possession of the entity on request of the governmental body; and

(3) on completion of the contract, either:

(A) provide at no cost to the governmental body all contracting information related to the contract that is in the custody or possession of the entity; or

(B) preserve the contracting information related to the contract as provided by the records retention requirements applicable to the governmental body.

(b) Unless Section 552.374(c) applies, a bid for a contract described by Section 552.371 and the contract must include the following statement: "The requirements of Subchapter J, Chapter 552, Government Code, may apply to this (include "bid" or "contract" as applicable) and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter."

(c) A governmental body may not accept a bid for a contract described by Section 552.371 or award the contract to an entity that the governmental body has determined has knowingly or intentionally failed to comply with this subchapter in a previous bid or contract described by that section unless the governmental body determines and documents that the entity has taken adequate steps to ensure future compliance with the requirements of this subchapter.

Sec. 552.373. NONCOMPLIANCE WITH PROVISION OF SUBCHAPTER. A governmental body that is the party to a contract described by Section 552.371 shall provide notice to the entity that is a party to the contract if the entity fails to comply with a requirement of this subchapter applicable to the entity. The notice must:

(1) be in writing;

(2) state the requirement of this subchapter that the entity has violated; and

(3) unless Section 552.374(c) applies, advise the entity that the governmental body may terminate the contract without further obligation to the entity if the entity does not cure the violation on or before the 10th business day after the date the governmental body provides the notice.

Sec. 552.374. TERMINATION OF CONTRACT FOR NONCOMPLIANCE. (a) Subject to Subsection (c), a governmental body may terminate a contract described by Section 552.371 if:

(1) the governmental body provides notice under Section 552.373 to the entity that is party to the contract;

(2) the contracting entity does not cure the violation in the period prescribed by Section 552.373;

(3) the governmental body determines that the contracting entity has intentionally or knowingly failed to comply with a requirement of this subchapter; and

(4) the governmental body determines that the entity has not taken adequate steps to ensure future compliance with the requirements of this subchapter.

(b) For the purpose of Subsection (a), an entity has taken adequate steps to ensure future compliance with this subchapter if:

(1) the entity produces contracting information requested by the governmental body that is in the custody or possession of the entity not later than the 10th business day after the date the governmental body makes the request; and

(2) the entity establishes a records management program to enable the entity to comply with this subchapter.

(c) A governmental body may not terminate a contract under this section if the contract is related to the purchase or underwriting of a public security, the contract is or may be used as collateral on a loan, or the contract's proceeds are used to pay debt service of a public security or loan.

Sec. 552.375. OTHER CONTRACT PROVISIONS. Nothing in this subchapter prevents a governmental body from including and enforcing more stringent requirements in a contract to increase accountability or transparency.

Sec. 552.376. CAUSE OF ACTION NOT CREATED. This subchapter does not create a cause of action to contest a bid for or the award of a contract with a governmental body.

Added by Acts 2019, 86th Leg., R.S., Ch. 1216 (S.B. 943), Sec. 9, eff. January 1, 2020.

PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION FORM

(Vendor to sign form if applicable to telecommunications)

The undersigned vendor hereby represents and warrants that the equipment, systems, and/or services which it will provide to Brazoria County do not use covered telecommunications equipment or services (as defined in Section 889 John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY 2019 NDAA), Pub. L. No. 115-232 (2018)) as a substantial or essential component of any system, or as critical technology of any system.

Additionally, the undersigned vendor hereby represents and warrants that the equipment, systems, and/or services it will provide are not prohibited from being procured using grant funds under section 889 of the FY 2019 NDAA.

Further, per 2 CFR 200.216 (b) & (c)

(b) As described in section 889 of Public Law 115-232, "covered telecommunications equipment or services" means any of the following:

(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);
(2) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);
(3) Telecommunications or video surveillance services provided by such entities or using such equipment;
(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country;
(c) For the purposes of this section, "covered telecommunications equipment or services" also include systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

Matula & Matula Construction, Inc.
COMPANY NAME

SIGNATURE OF COMPANY REPRESENTATIVE

Delia Gonzalez
PRINTED NAME

Secretary
TITLE

07/29/2025
DATE

AUTHORIZED NEGOTIATOR

If your company is selected to enter into negotiations with the County, please list the name and contact information for the individual or individuals that will be negotiating a possible contract on behalf of your company.

Name: Jon Matula

Title: President

Email Address: jm_matula@yahoo.com

Phone Number: 979-482-0786

Name: Blake Matzke

Title: Project Manager

Email Address: bmatzke@matulainc.com

Phone Number: 979-480-0030

RESIDENT / NONRESIDENT BIDDER PROVISIONS

Chapter 2252, Subchapter A, of the Texas Government Code establishes certain requirements applicable to proposers who are not Texas residents. Under the statute, a "resident" proposer is a person whose principle place of business is in Texas, including a contractor whose ultimate parent company or majority owner has its principle place of business in Texas.

A "nonresident" proposer is a person who is not a Texas resident. Please indicate the status of your company as a "resident" proposer or a "nonresident" proposer under these definitions.

Please check (✓) one of the following:

☑ I certify that my company is a **Resident Proposer**.

☐ I certify that my company is a **Nonresident Proposer**.

If your company is a Nonresident Proposer, you must provide the following information for your resident state (the state in which your company's principle place of business is located):

Matula & Matula Construction, Inc.
Company Name

122 West Way, Suite 325
Address

Lake Jackson
City

TX
State

77566
Zip Code

A. Does your resident state require a proposer whose principle place of business is in Texas to under-price proposers whose resident state is the same as yours by a prescribed amount or percentage to receive a comparable contract?

☐ Yes ☒ No

B. What is the prescribed amount of percentage? $_____ or _____%

BRAZORIA COUNTY
VENDOR DATA SHEET

☐ New Vendor ☐ Business Name Change ☐ Address Change ☐ Tax Info Change (W-9) ☐ Other

VENDOR NAME Matula & Matula Construction, Inc.

COMPLETED BY: Delia Gonzalez DATE FORM COMPLETED: August 1994

SAM.GOV: VENDOR D & B DUNS NUMBER: _____ CAGE CODE: _____

Is vendor incorporated? ☑ Yes ☐ No; If incorporated: How incorporated: S-Corp Where incorporated: Texa

Has Name Changed in past two (2) years? ☐ Yes ☑ No If Yes, When _____

FORMER NAME: _____

122 West Way, Suite 325	Lake Jackson	TX 77566
PHYSICAL STREET ADDRESS (Cannot be P.O. Box)	CITY	STATE / ZIP
Delia Gonzalez	Secretary	(979) 480-0030
PRIMARY PERSON AUTHORIZED TO EXECUTE A FINANCIAL/BANKING AGREEMENT	TITLE	TELEPHONE #
Delia Y. Gonzalez	ygonzalez@matulainc.com	
SIGNATURE OF ABOVE INDIVIDUAL	EMAIL ADDRESS	
		( )
SECONDARY PERSON AUTHORIZED TO EXECUTE A FINANCIAL/BANKING AGREEMENT	TITLE	TELEPHONE #
SIGNATURE OF ABOVE INDIVIDUAL	EMAIL ADDRESS	
WEBSITE ADDRESS		

REMITTANCE INFORMATION

Same as above
REMIT TO NAME (If different from above)

REMIT TO ADDRESS	CITY	STATE / ZIP
CONTACT PERSON/TITLE	TELEPHONE #	FACSIMILE #
EMAIL ADDRESS	Is this the only remit address you have? ☑ Yes ☐ No If no, please provide information:	

PLEASE COMPLETE THE W-9 FORM & RETURN IT WITH THE VENDOR DATA SHEET
(NOTE: 1099 FORMS WILL BE SENT TO THE ADDRESS ON THE W-9)

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov*. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at *spam@uce.gov* or report them at *www.ftc.gov/complaint*. You can contact the FTC at *www.ftc.gov/idtheft* or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see *www.IdentityTheft.gov* and Pub. 5027.

Visit *www.irs.gov/IdentityTheft* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

EXHIBIT B – VENDOR RESPONSE

EXHIBIT B – THE FOLLOWING ADDITIONAL REQUIREMENTS ARE TO BE SUBMITTED WITH YOUR CSP RESPONSE:

- BID TABLE WITH PRICING
- VENDOR RESPONSE TO EVALUATION CRITERIA
- EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS *(if applicable)* (If vendor has any exceptions to the CSP terms & conditions or special requirements, they must be included with the CSP submittal in order to be considered)
- SIGNED ADDENDUMS (IF APPLICABLE)

VENDOR TO INSERT RESPONSE HERE

(Include the information below in the specified order)

SECTION 1

VENDORS GENERAL EXPERIENCE & QUALIFICATIONS

General Contractors Name: Matula & Matula Construction, Inc.

I. General

a. Qualification information submitted shall be applicable only to the company entity or branch that will perform this Work.

b. Attach your Project Organization Chart

c. Submit list of other fully staffed branch offices

d. Submit list of corporate officers, partnerships or owners of organization

II. History

a. Please specify:

X Corporation - State of Incorporation Texas

__ Partnership

__ Sole Proprietorship

__ Joint Venture

b. Specify: In continuous business since: August 1994

c. Specify:

__ Large Business (100 or more employees)

X Small Business (fewer than 100 employees)

__ Other _____

III. Experience

a. Normally performs 95 % of work with own forces.

b. Proposing to perform 100 % of work for this project with own forces.

i. List Trades Site work, Demo, Paving, Foundations, Tilt Walls,
Underground Utilities, Generators, Lift Stations

W

SECTION 1-CONTINUATION

VENDORS GENERAL EXPERIENCE & QUALIFICATIONS

Vendor to provide documentation to show the following. Please label each section as shown below: Please see attached

(i) Quality of Work: Demonstrated ability to perform services in accordance with contract specifications. Conformance to good standards of workmanship.

(ii) Customer Satisfaction: Satisfaction of end users with the contractor's completed products and services.

(iii) Timeliness of performance: compliance with delivery schedules; reliability; responsiveness to technical direction, no assessment of liquidated damages.

(iv) Business relations: Effective management, ability to manage projects involving subcontracts, working relationship with the contracting officer and technical representatives, reasonable/cooperative behavior, flexibility, effective contractor recommended solutions, businesslike concern for government's interests.

(v) Cost control: Ability to complete contracts within budget (at or below); reasonableness of price change proposals submitted; providing current, accurate, and complete billings.

SECTION 2

PROJECTS

List Projects Similar in Size and Scope which were completed in the last five (5) years

Please see attached

Project	Project Location	$ Amount	Type	Date

SECTION 3

CONTRACTOR KEY PERSONNEL

I. Superintendent & Project Manager Information

a. Resumes of key personnel shall also be included. Professional affiliations, memberships, and certifications for each of the key personnel must be included and will be used to evaluate the proposed team and personnel.

Please see attached

Project Manager	Years Experience	Projects

Superintendent	Years Experience	Projects

Scheduler	Years Experience	Projects

Quality Control Person	Years Experience	Projects

SECTION 4

CONTRACTOR REFERENCES

References: Name 5 projects of similar work, giving owner's name, owner's representative's name, project architect's name, and telephone numbers for each. References must be provided for owners of similar size and scope as the proposed project. Please see attached

1. Name of government or agency:_____

   Address:_____

   Contact Name:_____

   Phone Number:_____

   $ amount of project / contract:_____

   Contract / Project dates:_____

2. Name of government or agency:_____

   Address:_____

   Contact Name:_____

   Phone Number:_____

   $ amount of project / contract:_____

   Contract / Project dates:_____

3. Name of government or agency:_____

   Address:_____

   Contact Name:_____

   Phone Number:_____

   $ amount of project / contract:_____

   Contract / Project dates:_____

4. Name of government or agency:_____

   Address:_____

   Contact Name:_____

   Phone Number:_____

   $ amount of project / contract:_____

   Contract / Project dates:_____

5. Name of government or agency:_____

Address:_____

Contact Name:_____

Phone Number:_____

$ amount of project / contract:_____

Contract / Project dates:_____

SECTION 5

CONTRACTOR'S CURRENT WORK SCHEDULE/RECORD

I. Current Work Schedule

a. List major construction projects your organization has in-progress using the format below:

Name & Location of Project	Contract $	% Complete	Projected Completion Date	Owner Contact And Phone
Please see attached				

b. Total number and dollar amount of contracts currently in progress:

Number 8 $ 28,758,990.34

c. Largest single contract amount currently in progress:

Project Name: Montclair Blvd Drainage Improvements Phase 2

Projected Completion Date : 09/19/2025

Dollar Amount $ 6,458,034.00

II. Past Record

a. List major construction projects of our organization has completed in the last 5 years with completion dates and references.

Name & Location of Project	Contract $	Date Completed	Owner Contact and Phone
Please see attached			

b. Volume of work completed over last 5 years:

$ 14,078,810.77

$ 12,787,300.48

$ 11,555,303.00

$ 13,428,885.83

$ 13,661,719.02

SECTION 6

VENDOR LITIGATION, CLAIMS, REPUTATION & COMPLIANCE

I. Please answer the following questions

a. Has your firm ever defaulted, been declared to be in default, or failed to complete any work awarded?

__ yes

X no

If yes, stipulate where and why: _____

_____

_____

_____

b. Has your firm ever paid (or had withheld from payment) liquidated damages for failure to complete a contract on time?

__ yes

X no

If yes, stipulate where and why: _____

_____

_____

_____

c. Has your organization ever been charged with or paid a fine for non-compliance of State and/or Federal statutes or regulations?

__ yes

X no

If yes, stipulate where and why: _____

_____

_____

_____

II. List pending claims and/or litigation against or involving project owners at time of submitting Proposal. Show project name, owner and summary explanation.

None

SECTION 7

CONTRACTOR'S SAFETY RECORD

I. List your organization's Workers Compensation Experience Modification Rate (EMR) for the last five years, as obtained from your insurance agent.

2024 .68

2023 .68

2022 .65

2021 .65

2020 .65

II. Complete the matrix below for the last five years, as obtained from OSHA No. 200 Log:

	2024	2023	2022	2021	2020
Number of injuries & illnesses	0	0	1	0	1
Number of lost time accidents	0	0	1	0	1
Number of recordable cases	0	0	0	0	0
Number of fatalities	0	0	0	0	0
Number of employee direct hire fixed hours (round to 1,000's)	128,000	143,000	147,000	125,000	152,000

III. Please answer the following questions regarding your safety program

a. Are regular project safety meetings held for Field Supervisor(s)?

X yes

__ no

If yes, frequency:

X weekly

__ bi-monthly

__ monthly

__ as needed

b. Are project safety inspections conducted?

X yes

__ no

If yes, who performs inspections? Isaac Olguin

How often? Weekly

Who is required to attend? Management

c. Does your organization have a written safety program?

X yes

__ no

If yes, provide a copy. It will become a compliance document upon contract award.

d. Does your organization have a safety orientation program for new employees?

X yes

__ no

For employees promoted to Field Supervisor?

X yes

__ no

If yes, does your Supervisor Safety Program include instructions on the following:

Safety work practices	X yes	__ no
Tool box safety meetings	X yes	__ no
First aid procedures	X yes	__ no
Accident investigation	X yes	__ no
Fire protection	X yes	__ no
New worker's orientation	X yes	__ no

SECTION 8

SUBCONTRACTOR LIST

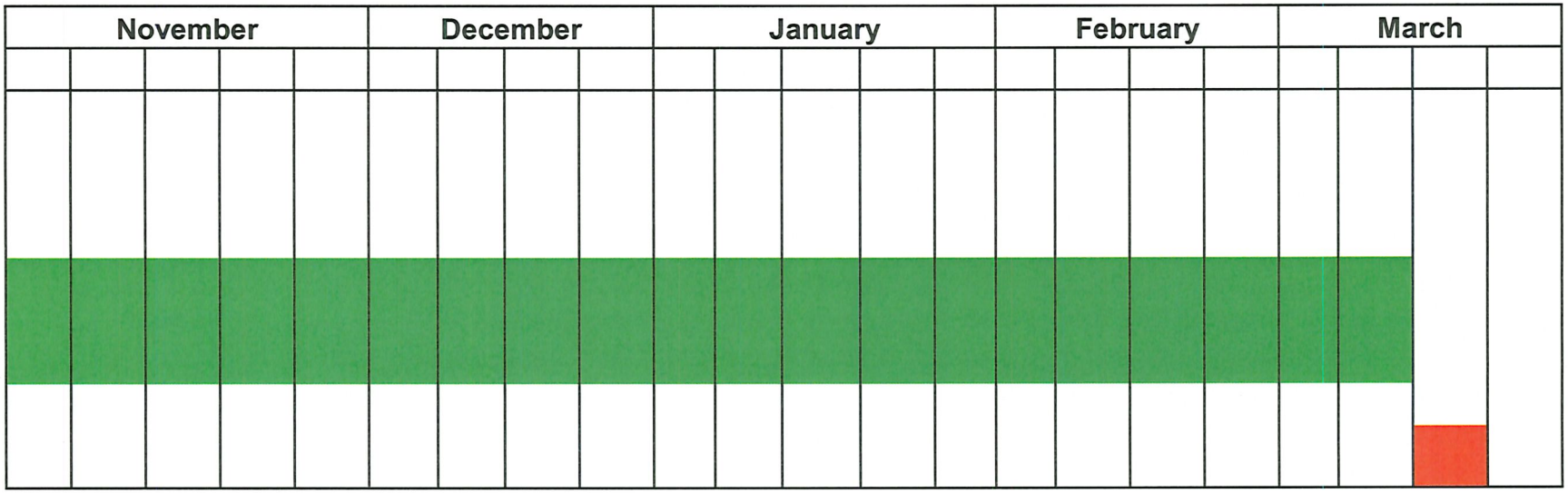
The Offerer shall provide a list of subcontractors your firm intends to contract with for services for each trade included in your offer.

SUBCONTRACTOR	TRADE
N/A	

Section 9

VENDOR TO INSERT PROJECT SCHEDULE HERE

Bar X Mill RD	Start	Finish	September				October				
Notice to Proceed	**9/22/25**	**3/20/26**									
Mobilization	9/22/25	9/26/25									
Demolition & Reconstruction of Pavement & Driveways Including All Appurtenances	9/29/25	3/15/65									
Site Restoration & Completion	3/15/26	3/20/26									


November
December
January
February
March

VENDOR TO INSERT EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS HERE (IF APPLICABLE)

✓ **Company <u>does not</u> have exceptions** ***(If applicable, check here)***

Or

_____ **Company does have exceptions** ***(If applicable, check here and list exceptions here for consideration. Brazoria County will review all exceptions listed and will formally communicate as to if any exceptions are accepted by the County. If exceptions are accepted by the County, they will be added in the form of an addendum.)***

VENDOR TO INSERT EXCEPTIONS HERE

SIGNED ADDENDUMS (IF APPLICABLE)

VENDOR TO INSERT SIGNED ADDENDUMS HERE

BRAZORIA COUNTY
ADDENDUM NUMBER 1

RFP# 25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

PLEASE INCLUDE THIS SIGNED ADDENDUM WITH YOUR SEALED RFP PACKAGE.

This Addendum modifies the RFP#25-67 package as follows:

1. Definitions: All definitions set forth in the Contract shall have the same meaning unless stated otherwise in this Addendum.

2. Brazoria County Clarification:

   2.1 Section 9.0 Evaluation Criteria – Other factors – Section Seven-Vendors Safety Record has been removed from the evaluation criteria. Section Seven will not be included in the scoring.

   Vendors will still need to complete and include Section 7 Contractor's Safety Records found in Exhibit B Vendor Response with your submission.

3. All other terms and conditions of the RFP are to remain unchanged.

Please refer any questions regarding this RFP to the Brazoria County Purchasing Department at (979) 864-1825 or bidclarifications@brazoriacountytx.gov.

Matula & Matula Construction, Inc.
LEGAL NAME OF CONTRACTING COMPANY

979-480-0030
TELEPHONE NUMBER

979-480-0060
FACSIMILE NUMBER

SIGNATURE

Glenn Byrd, Vice President
NAME AND TITLE PRINTED

*Addendum approved by:

Susan P. Serrano, CPPO, CPPB
County Purchasing Director

07/01/2025
Date

BRAZORIA COUNTY
ADDENDUM NUMBER 2

CSP#25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

PLEASE INCLUDE THIS SIGNED ADDENDUM WITH YOUR SEALED CSP PACKAGE.

This Addendum modifies the CSP#25-67 package as follows:

1. Definitions: All definitions set forth in the Contract shall have the same meaning unless stated otherwise in this Addendum.

2. Brazoria County clarification:

   2.1 The method of procurement has been revised from a Request for Proposal (RFP) to a Competitive Sealed Proposal (CSP). The main solicitation document, along with Exhibit A and Exhibit B have been revised to reflect the change from the RFP procurement method to the CSP procurement method.

   In addition, there has been no change to the specifications or scope of work. Any reference to an RFP is now substituted with CSP.

   The updated documents are posted in Bonfire and labeled as Addendum No.2_. Please submit Addendum No.2_25-67 Exhibit A Required Documents and Addendum No.2_Exhibit B Vendor Response with your solicitation.

   2.2 Attachment E Affidavit of Final Payment & Retainage Release has been removed and is no longer applicable to the solicitation.

3. The following questions have been submitted for clarification:

   3.1 Vendor Question: "Can lime item be substituted to cement stabilized sand?"

   Brazoria County Answer: Lime shall not be substituted for cement stabilized sand. Please refer to the geotechnical report for the appropriate lime stabilization depth and application rates. The report is now posted in Bonfire and labeled as 25-67 Geotechnical Engineering Report.

4. All other terms and conditions of the CSP are to remain unchanged.

Please refer any questions regarding this CSP to the Brazoria County Purchasing Department at (979) 864-1825 or bidclarifications@brazoriacountytx.gov.

Matula & Matula Construction, Inc.
LEGAL NAME OF CONTRACTING COMPANY

979-480-0030
TELEPHONE NUMBER

979-480-0060
FACSIMILE NUMBER

SIGNATURE

Glenn Byrd, Vice President
NAME AND TITLE PRINTED

*Addendum approved by:

Susan P. Serrano, CPPO, CPPB
County Purchasing Director

07/24/2025
Date

Matula & Matula Construction, Inc.

Paving & Utility Projects Completed

Project Name	Owner	Architect	Phone No.	Contract Amount	Date of Completion
Water, Drainage Facilities & Paving and Appurtenances to Serve The Lake Jackson Town Center Reserves	WGC Lake Jackson LP	LJA Engineering	(713) 953-5200	$ 585,811.35	02/28/17
Town Hall Site Improvements	Quintana, Town of	Cobb, Fendley, and Associates, Inc.	(281) 471-9650	$ 47,625.20	09/30/17
Downtown Revitalization South Parking Place Phase (Carriage Square)	Lake Jackson, City of	City of Lake Jackson	(979) 415-2415	$ 1,710,034.20	04/30/18
CDBG/Lake Jackson Pedestrian Mobility Improvements Circle Way Trail & Pedestrian Bridge	Lake Jackson, City of	City of Lake Jackson	(979) 415-2415	$ 116,171.30	09/30/18
Oak Drive South Street Pavement & Drainage Rehabilitation Project Westbound Lane from Lake Road to 900 Ft. West	Lake Jackson, City of	City of Lake Jackson	(979) 415-2415	$ 159,040.90	09/30/18
Construction of Parking Lot at Old City Park	Friendswood, City of	City of Friendswood	(281) 996-3239	$ 392,600.18	12/31/18
Water, Sanitary Sewer, Drainage Facilities and Paving to Servce Creekside Subdivision, Section Four	Brazosport Creekside, LLC	Randy L. Stroud, P.E.	(979) 849-3141	$ 1,974,876.50	12/31/18
Paving, Drainage and Utilities Mangolia Street	NCHI Services, LLC	Baker & Lawson	(979) 849-6681	$ 530,566.30	05/10/19
Southside Drive Paving and Drainage Improvements	Angleton, City of	HDR Engineering, Inc.	713-622-9264	$ 1,800,352.93	05/05/20
2018 Paving Improvements	Angelton, City of	HDR Engineering, Inc.	713-622-9264	$ 1,332,561.92	06/30/20
Peach Street Extension	Brazoria County	R.G. Miller Engineers	210-581-3600	$ 764,322.38	05/31/20
Citizen's Convenience Center	Lake Jackson, City of	City of Lake Jackson	979-415-2400	$ 196,129.45	03/29/21
Phase I Corinthian Cove	2401 Park Ave.	Oller Engieering, Inc.	806-993-6226	$ 148,688.20	04/13/21
Paving, Drainage & Utility Improvements on South Yaupon St (Walnut to Oleander), Oleander St (Hickory to Maple), Hickory St (Mimosa to Oleander), Lotus St (Hickory to Past South Yaupon), Lotus Court and Bois D'Arc Street	Lake Jackson, City of	City of Lake Jackson	979-415-2400	$ 3,343,155.33	04/16/21
First Street and Crawford Street Paving and Drainage Improvements	Kendleton, City of	Kaluza, Inc.	281-341-0808	$ 560,200.92	07/21/21
Henderson Rd	Angleton, City of	Baker & Lawson	979-849-6681	$ 499,117.80	07/26/21
Heritage Oaks, Section 7	Chris Peltier Homes	Baker & Lawson	979-849-6681	$ 857,441.65	07/31/21
Bayou Bend Estates	Clint Peltier Custom Homes	Baker & Lawson	979-849-6681	$ 889,684.14	01/04/22
Street Improvements	Richwood, City of	Strand Associates, Inc.	979-836-7937	$ 1,467,287.86	03/25/22
Riverwood Ranch Subdivision, Section 2	Riverway Capital Partners	Baker & Lawson	979-849-6681	$ 1,775,805.97	04/11/22
College Park Subdivision, Section 8	Woodland Development, LLC	Baker & Lawson	979-849-6681	$ 956,589.26	05/19/22
Parking Lot Expansion	Brazoria Columbus Club	Baker & Lawson	979-849-6681	$ 516,084.66	06/30/22
Kiber Reserve - Section 2	Waterstone Development Group	Baker & Lawson	979-849-6681	$ 883,453.66	09/20/22
Elm Estates	Clint Peltier Custom Homes	Baker & Lawson	979-849-6681	$ 918,823.61	09/30/22
Parking Lot	West Columbia, City of	City of West Columbia	979-345-3123	$ 240,115.15	10/27/22
ITB#22-29 Concrete Pavement Repairs 2021-Bar X Winchester Trail (CR 969H) and Lone Star Trail (CR 968A)	Brazoria County	Brazoria County Engineering	979-864-1265	$ 1,268,925.62	11/30/22
Street Panel Replacement at Various Locations	Lake Jackson, City of	City of Lake Jackson	979-415-2400	$ 238,056.45	04/30/23
Brazoria County Courthouse Expansion Utility & Improvements Project	Angleton, City of	HDR Engineering, Inc.	713-622-9264	$ 1,004,864.25	08/11/23
2021 Street Bond Project - Package 2	Angleton, City of	HDR Engineering, Inc.	713-622-9264	$ 1,340,968.07	10/27/23
Paving, Drainage & Utility Improvements on Azalea Street from Circle Way to Center Way	Lake Jackson, City of	City of Lake Jackson	979-415-2400	$ 461,515.06	03/18/24

PRINCIPAL INDIVIDUALS

CONSTRUCTION EXPERIENCE

2025

Name:	Jon Matula
Position:	President (Officer)
Years of Experience:	37
Description of Experience:	Jon has been President of Matula & Matula Construction, Inc. since the Company's inception in 1994 and has a vast knowledge of the Civil Construction industry. He works closely with his key employees and customers ensuring projects are completed satisfactorily. He is knowledgeable in paving, foundations, sidewalks, demo, site work and elevated concrete projects such as decking.

Name:	Glenn Byrd
Position:	Vice President (Officer)
Years of Experience:	44
Description of Experience:	Glenn has 33 years supervisory experience in the Civil Construction industry. He is knowledgeable in the areas of lift stations, water / waste water installation, concrete construction, water treatment plants and underground utilities.

Name:	Delia Y. Gonzalez
Positions:	Secretary/Treasurer (Officer)
Years of Experience:	18
Description of Experience:	Delia has 18 years of experience in accounting, office, and administrative of civil construction in municipality and private development. She holds a Bachelor's Degree in Accounting from the University of Houston – Clear Lake.

Name:	Chris Blessing
Position:	Estimator/Project Manager
Years of Experience:	25
Description of Experience:	Chris has 25 years in estimating and project managing in the Civil Construction industry. He is knowledgeable in underground utilities, earthwork and paving. He has a Bachelor's Degree in Construction Management from Sam Houston State University. He has gained his knowledge and experience working for Texas Sterling Construction and Slack & Company Contracting, Inc.

Name:	Jose Garza
Position:	Superintendent
Years of Experience:	32
Description of Experience:	Jose has 27 years supervisory experience in the Civil Construction industry. He is knowledgeable in underground work, storm sewer, street and utilities, water mains and water plants.

122 West Way, Suite 325 • Lake Jackson, TX 77566 • 979.480.0030 OFFICE • 979.480.0060 FAX

Name:	Isaac Olguin
Position:	Safety Director
Years of Experience:	32
Description of Experience:	Field level, site manager and company director experience in petro-chemical construction, maintenance, manufacturing and turnaround operations. Training and education accomplishments include Safety and Health Degree, OHSA Course 500, OHSA Course 521, NUCA, Scaffold Competent Person/Trainer, 40 Hour HAZWOPER Course, CPR/Medic-First Aid, Master Trainer Course, High Performance Leadership and a Member of ASSE.

Name:	Mario Nunez
Position:	Superintendent
Years of Experience:	27
Description of Experience:	Mario has 27 years of field labor experience. Before becoming a superintendent, he worked as a field surveyor for 12 years prior and gained knowledge on all aspects of a concrete project. He is knowledgeable in subgrade and paving.

Name:	Justin Earle
Position:	Estimator/Project Manager
Years of Experience:	5
Description of Experience:	Justin has 5 years of experience as an estimator and project manager, focusing on civil construction, specifically water/wastewater treatment plants and lift stations. Justin served our country as a Marine for 4 years. He is also CCO certified.

Name:	Blake Matzke
Position:	Project Manager
Years of Experience:	6
Description of Experience:	Blake has several years of field experience including roadway construction, slope paving, site work, underground utilities, and carpentry, with one year of experience in estimating and project management. He has a Bachelor's Degree in Agricultural Economics from Texas Tech University, and past experience in commercial construction through an internship with Balfour Beatty.

Matula & Matula Construction, Inc.

Work in Progress
Contracts on Hand
7/29/2025

Project	Owner	Architect / Engineer	Phone No.	Contract Amount	Percent Complete	Scheduled Completion
Montclair Boulevard Phase II and Country Club Boulevard Improvements	Sugar Land, City of	HDR Engineering	713-622-9264	$ 6,458,034.00	78%	09/19/25
GLO MIT Sanitary Sewer Improvements	Sweeny, City of	Strand & Associates Inc.	979-836-7937	$ 4,274,237.46	74%	10/03/25
GLO CDBG - MIT Wastewater Treatment Plant Rehabilitation	Brazoria, City of	CDM Smith	713-423-7374	$ 3,669,700.00	71%	09/12/25
Preservation Creek MUD Water Supply & Storage Facility	WB West Alvin Land LLC	EHRA	713-337-7482	$ 4,075,482.00	43%	11/21/25
Central Richwood Flood and Drainage Project	Richwood, City of	Strand & Associates Inc.	979-836-7937	$ 1,893,449.90	63%	10/24/25
Lift Station 7 &15 Rehabilitation Project	Texas City, City of	Arkk Engineers, LLC	713-400-2755	$ 1,121,992.00	46%	10/31/25
Austin Colony Subdivision	MBC JD Brazosport	Baker & Lawson, inc.	979-849-6681	$ 2,708,972.28	28%	01/23/26
East Levee Pump Station Expansion	Velasco Drainage District	Baker & Lawson, inc.	979-849-6681	$ 4,557,122.70	45%	09/30/25
				$ 28,758,990.34		

Matula & Matula Construction, Inc.

Client References

Matula & Matula Construction, Inc. would like to submit the following references per your request. Please do not hesitate to contact us if you need any additional information.

Owner: City of Lake Jackson
25 Oak Drive
Lake Jackson, TX 77566
Eddie Herrera
979-415-2400

Owner: City of Angleton
121 S. Velasco
Angleton, TX 77515
Jeff Sifford
979-849-4364

Owner: City of Richwood
1800 Brazosport Blvd N
Richwood, TX 77531
Clif Custer
979-265-2082

Owner: Brazosport Water Authority
1251 FM 2004
Lake Jackson, TX 77566
Wyatt Ringgold
979-297-2715

Engineer: Baker & Lawson Engineering
300 E Ceder
Angleton TX 77515
Doug Roessler
979-849-6681

Engineer: John D. Mercer Associates
118 E. Main St.
Edna, TX 77957
John Mercer
361-782-7121

Engineer: Kelly R. Kaluza & Associates
3014 Avenue I
Rosenberg, TX 77471
Lori Oliver
281-341-0808

Bonding: USI Insurance Services
480 Wildwood Forest Dr, Ste 760
Spring, TX 77380
Kevin McQuian
832-702-8338

Insurance: Barry Insurance Group
4418 Broadway St
Pearland, TX 77581
Jeff Barry
281- 464-3384

Banking: South Star Bank, Brazoria
301 S. Brooks
Brazoria, TX 77422
Pam Browning
979-798-2181

BRAZORIA COUNTY
PURCHASING DEPARTMENT
237 E. LOCUST STREET, SUITE 406
ANGLETON, TEXAS 77515
TEL: 979-864-1825 FAX: 979-864-1034

BRAZORIA COUNTY
REQUEST FOR PROPOSAL COVER SHEET

The REQUEST FOR PROPOSAL (RFP) and accompanying documents are for your convenience in submitting an offer for the referenced products and/or services for BRAZORIA COUNTY.

"RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT"

Sealed Hard Copy or Electronic offers shall be received no later than:

TUESDAY, JULY 29, 2025 at 11:00 A.M. LOCAL TIME

***PROPOSAL OPENING WILL BE AVAILABLE VIA ZOOM. MEETING LINK IS AVAILABLE ON THE PROJECT DETAILS PAGE IN BONFIRE UNDER "IMPORTANT EVENTS". BONFIRE LINK:**
https://brazoriacounty.bonfirehub.com/portal/?tab=login

IF SUBMITTING AN ELECTRONIC SEALED OFFER:

PREFERRED METHOD IS USING THE "BONFIRE" ELECTRONIC BIDDING PLATFORM.
USE LINK, https://brazoriacounty.bonfirehub.com/portal/?tab=login,
CLICK THE HELP BUTTON PROVIDED IN THE BONFIRE WEBSITE AS NEEDED.

IF SUBMITTING A HARD COPY SEALED OFFER:
THE PHYSICAL ADDRESS FOR COURIERS, HAND DELIVERIES AND THE US POSTAL SERVICE IS:

SUSAN SERRANO, CPPO, CPPB
PURCHASING DIRECTOR
BRAZORIA COUNTY COURTHOUSE CAMPUS ADMINISTRATION BUILDING
237 E. LOCUST STREET, SUITE 406
ANGLETON, TEXAS 77515

PLEASE USE THE RETURN LABEL PROVIDED WITH THIS SOLICITATION:

***Please note: US Postal Service mailing address*

The U.S. mail may not deliver to the physical address shown above. Respondents who prefer to use the U.S. mail may submit their offers using the U.S. Postal Service mailing address shown above.

However, packages delivered by the U.S. Postal Service to the Brazoria County mailing address are subject to delays that may cause a response to be rejected due to missing a solicitation receipt deadline.

Responses delivered to the mailing address are routed through the County mailroom and may not reach the required location in time for the bid / offer opening.

Respondents using the U.S. mail should take this possible delay into account when using the U.S. mail.

BRAZORIA COUNTY is very conscious and extremely appreciative of the time and effort you have expended to submit an offer. We would appreciate it if you would indicate on any "No Offer" response, any requirement of this RFP which may have influenced your decision to "No Offer". If your response to this RFP is a "No Offer" response, please complete the Statement of No Offer in this RFP package and submit.

Any prospective respondent desiring any explanation or interpretation of the solicitation must make a written request online through Bonfire electronic platform or email the project facilitator as shown in Section "Questions Due Date (for Clarifications)", which must be received by the Purchasing Department at least five (5) business days prior to the scheduled time for the offer opening. Any information given to a prospective respondent concerning this solicitation will be furnished promptly to all other known prospective respondents as a written amendment/addendum to the solicitation. Brazoria County reserves the right to accept or reject any or all bids/offers as it deems in its best interest and to waive any formalities.

It is the Respondent's responsibility to verify the issuance of Addenda in regard to this Offer. All Addenda shall be submitted to all known respondents and shall be posted on the Bonfire electronic bidding platform at https://brazoriacounty.bonfirehub.com/portal/?tab=login. Brazoria County shall not be responsible for failed internet connections or power interruptions.

All required Offer documents shown on the Table of Contents, including any Addenda Receipt Forms which may have been issued, must be submitted in the Bonfire electronic bidding platform or a sealed envelope included in a hard copy submittal, marked with the bidder's company name, the Offer name, number and due date.



SUSAN SERRANO, CPPO, CPPB
Purchasing Director
Brazoria County Courthouse Campus Administration Building
237 E. Locust Street, Suite 406
Angleton, Texas 77515

Published Dates: WEDNESDAY, JUNE 25, 2025
WEDNESDAY, JULY 2, 2025

BRAZORIA COUNTY
CONTRACT SHEET

THE STATE OF TEXAS
COUNTY OF BRAZORIA

This memorandum of agreement made and entered into on the _____ day of _____, 2025, by and between Brazoria County in the State of Texas (hereinafter designated County), acting herein by County Judge L.M. "Matt" Sebesta, Jr., by virtue of an order of Brazoria County Commissioners' Court, and _____ (hereinafter designated Vendor / Contractor).
(company name)

WITNESSETH:

The Vendor and the County agree that the Instructions to Respondents, Specifications/Statement of Work, Standard Terms & Conditions, and all other requirements herein for RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT as stated in the Request for Proposal Table of Contents hereto attached and made a part hereof, together with the bond (when required), vendor's response and negotiated pricing, shall constitute the full agreement and Contract between parties and for furnishing the items set out and described; the County agrees to pay the prices stipulated in the accepted offer.

The order of precedence shall be:

- Brazoria County RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT
- Vendor's submittal to the above listed RFP and the final accepted pricing

It is further agreed that this Contract shall not become binding or effective until signed by the parties hereto and a purchase order authorizing the items desired has been issued.

Executed at Angleton, Texas this _____day of _____2025.

SIGNATURE REQUIRED BY VENDOR UPON AWARD

By:_____
County Judge Signature

By:_____
Printed Name

By:_____
Signature of Vendor

By:_____
Printed Name and Title

REQUEST FOR PROPOSAL
TABLE OF CONTENTS

RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

All documents included in this Table of Contents represent components which comprise this bid/offer package and subsequent awarded executed contract. The documents shown in Exhibit A and Exhibit B are required to be submitted in your bid/offer package. ***It is the respondent's responsibility to be thoroughly familiar with all requirements and specifications. Be sure you understand the requirements before you return your bid/offer packet.***

The "Exhibit A - Required Forms" and "Exhibit B – Additional Requirements" below are required to be uploaded into the Bonfire electronic procurement portal system or included with your hard copy submittal in one (1) large sealed envelope or box with the Brazoria County Return Label affixed.

FAILURE TO RETURN THE FOLLOWING FORMS MAY DEEM YOUR PROPOSAL AS NON-RESPONSIVE.

EXHIBIT A – REQUIRED DOCUMENTS

- RESPONDENT CERTIFICATION FORM
- BIDDER/RESPONDENT'S AFFIRMATION & SDNs/BLOCKED PERSONS AFFIRMATION
- WORKERS COMPENSATION REQUIREMENTS
- CERTIFICATION REGARDING LOBBYING FORM
- EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS *(if applicable)* (If vendor has any exceptions to the RFP terms & conditions or special requirements, they must be included with the RFP submittal in order to be considered)
- NON COLLUSION AFFIDAVIT
- BID BOND
- CONFLICT OF INTEREST QUESTIONNAIRE – FORM CIQ *(if applicable)*
- CONTRACTOR ACKNOWLEDGMENT OF STORMWATER MANAGEMENT PROGRAM
- TEXAS GOVERNMENT CODE 552, SUBCHAPTER J ACKNOWLEDGEMENT FORM
- PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION FORM *(Vendor to sign form if applicable to telecommunications)*
- AUTHORIZED NEGOTIATOR
- RESIDENT / NONRESIDENT BIDDER
- VENDOR DATA SHEET & W-9 FORM

EXHIBIT B – VENDOR'S RESPONSE

- BID TABLE
- VENDOR RESPONSE TO EVALUATION CRITERIA
- EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS *(if applicable)* (If vendor has any exceptions to the RFP terms & conditions or special requirements, they must be included with the RFP submittal in order to be considered)
- SIGNED ADDENDA *(if applicable)*

Attachments to the RFP:

- Exhibit A – Required Documents
- Exhibit B – Vendor's Response
- Attachment A – Bid Table
- Attachment B – Plan Set
- Attachment C – Specifications
- Attachment D – Affidavit of Final Payment & Retainage Release

BRAZORIA COUNTY
SPECIFICATIONS / SCOPE OF WORK

RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

The following requirements and specifications shall be in addition to the other requirements contained herein and shall supersede the other requirements where applicable.

1.0 SCOPE

The specifications and plans are posted in Bonfire and labeled as follows:

- Attachment B Plan Set
- Attachment C Specifications

2.0 Maintenance Warranty

The Contractor warrants to the Owner "County" that all materials and workmanship used in the construction of the Project will be free from defects in materials and workmanship for a period of one (1) year from the date of substantial completion of the Project. If any defect in materials or workmanship occurs during the warranty period, the Contractor shall promptly repair or replace the defective materials or workmanship at its own expense.

This warranty shall not apply to defects caused by: acts of God or other force majeure events, or any other cause, beyond the reasonable control of the Contractor.

The Owner shall notify the Contractor in writing of any defects in materials or workmanship within a reasonable time after discovery of such defects. If the Contractor fails to repair or replace the defective materials or workmanship within a reasonable time after receipt of notice from the Owner, the Owner may have the defective materials or workmanship repaired or replaced at the Contractor's expense.

BRAZORIA COUNTY
INSTRUCTIONS TO RESPONDENTS

RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

The following requirements and specifications shall be in addition to the other requirements contained herein and shall supersede the other requirements where applicable.

1.0 THE CONTRACT:

The Contract consists of all documents included in this Request for Proposal Number 25-67, as well as addenda issued prior to execution of the Contract and modifications issued after execution of the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may only be amended or modified under the terms of this Contract. Brazoria County may make partial or complete awards to one or more vendors (if applicable) whichever is in the best interest of the County.

2.0 PROJECT DESCRIPTION

Brazoria County is seeking proposals for the removal and replacement of 13,272 square yards of concrete pavement of Mill Road from SH 35 to Flintlock Court. A 2 foot gravel shoulder will also be installed on each side of Mill Road along with 256 square yard of driveway improvements.

The estimated budget for this project is:	$1,604,961.00
Estimated completion time for this project is:	172 calendar days

3.0 ESTIMATED PROJECT TIMELINE (*dates may be subject to change*)

Step One –

Publicly advertised (1st Notice)	June 25, 2025
Publicly advertised (2nd Notice)	July 2, 2025
Deadline for Questions (Clarifications) Submitted	July 15, 2025
Deadline for Addendum to be posted in Bonfire	July 18, 2025
Response Open/Due date by 11:00 a.m. C.S.T.	**July 29, 2025**

Step Two – Interviews **(*if requested by Evaluation Committee*)**
Interviews with short-listed candidates

Award - Contract approval by Commissioner's Court	August

4.0 QUESTIONS DUE DATE (FOR CLARIFICATIONS)

Any prospective respondent desiring any explanation or interpretation of the proposal must make a written request which must be received by the Purchasing Department on or before Tuesday, July 15, 2025. The request must be emailed to bidclarifications@brazoriacountytx.gov. Emails must include the project name and number in the subject field.

All responses to questions or clarification requests will be answered in the form of an addendum after the question deadline and no later than 5 business days prior to the opening/closing date of the solicitation.

5.0 PRE-OFFER MEETING

A pre-offer meeting will be held on Wednesday, July 9, 2025 at 10:00 a.m. in the Purchasing Department conference room located at 237 E. Locust Street, Suite 406. Attendance is not mandatory in order to submit an offer; however, it is highly recommended. Interested parties are encouraged to download all of the proposal documents prior to attending the meeting.

A virtual option is available via Teams. The pre-bid meeting link is available on the Project Details page in Bonfire under "Event". Interested parties will be asked to register for the pre-bid meeting.

6.0 PROPOSAL REQUIREMENTS

The proposal includes instructions to respondents, specifications and contract documents. It is the responsibility of each Respondent before submitting a proposal to examine the contract documents thoroughly.

RFP SUBMISSIONS MAY BE PROVIDED IN ONE OF TWO WAYS, AS EXPLAINED BELOW:

If submitting an RFP Electronic Document Submission (using the Bonfire electronic platform)

Respondent shall fill out and upload the "Exhibit A Required Forms" and "Exhibit B Additional Requirements" into the Bonfire electronic platform. An authorized representative of the company **MUST** sign all required forms. See "Exhibit A Required Forms" for instructions on signing electronically.

If submitting an RFP Hard Copy Document Submission

One (1) original hard copy shall be submitted, which will consist of "Exhibit A Required Forms" and "Exhibit B Additional Requirements".

The hard copy submission shall be sealed in an envelope or box for delivery to the Brazoria County Purchasing Director per instructions herein. All documents included in the response and the outside of the envelope and/or box must be labeled with the vendor name and the RFP number. A Return Label is also provided in this solicitation.

7.0 PREVAILING WAGE RATES

Chapter 2258 of the Texas Government Code requires state agencies, cities, counties, independent school districts, and all other political subdivisions that engage in public work projects using public funds to include prevailing wage rate in the project request for proposal documents and Contract.

Current prevailing wage rates are incorporated in the Contract documents as attached.

8.0 CONTRACT AWARD / EVALUATION PROCESS

An evaluation committee will examine all responses to this Request for Proposals. Responses that do not conform to the instructions given or that do not address all the questions and services specified may be eliminated from consideration. Brazoria County, however, reserves the right to accept such a response if it is determined to be in the County's best interest to do so.

Brazoria County may initiate discussions with respondents. Additional information will be accepted during this period from respondents who responded to the original request. Respondents may NOT initiate discussions. Brazoria County expects to conduct discussions with respondent personnel authorized to enter into contractual obligations.

Brazoria County shall rank responses in accordance with the Evaluation Criteria and will review proposal content and its conformance to requirements. Following an initial evaluation, the evaluation team may recommend award without further discussion with one or more respondents or may conduct discussions and interviews with top-ranked responsible respondent(s).

During the discussion / interview and negotiations**,** the evaluation team may allow the respondent(s) to submit a best and final offer. Final offers shall be evaluated on the same criteria used in the first evaluation.

The award of the contract shall be made to the responsible respondent whose proposal is determined to be the lowest and best evaluated offer resulting from negotiations, taking into consideration the relative importance of price and other evaluation factors set forth in this request for proposal.

"Lowest and best" means an offer providing the best value for the County considering associated direct and indirect costs, including transport, maintenance, reliability, life cycle, warranties and customer service after a sale.

Brazoria County is not bound to accept the lowest priced proposal if that proposal is judged not to provide the best value for the County.

Proposals will be opened publicly to identify the names of the respondents. Other contents of the proposals will not be disclosed prior to award or rejection by Brazoria County.

Brazoria County reserves the right to reject any and all proposals and is not obligated to award a contract pursuant to this request for proposal.

8.1 Financial Statements

If your company is either short listed or deemed the highest ranked, you may be required to submit your current and prior 2 years financial statements for review. This ensures Brazoria County that your company, if awarded, has the financial capacity to perform its obligations under for the entirety of the contract.

Failure to provide financial statements may deem your submission as non-responsive.

9.0 EVALUATION CRITERIA

The criteria used to evaluate the proposals shall be:

Price - Price submitted in offer	50 points
Qualifications- Provide qualifications and experience your firm has with similar projects. *(See Exhibit B Vendor Qualifications: Section One – Vendors General Experience and Qualifications, Section Two – Projects and Section 9 Project Schedule).*	20 points
Proposed Personnel- Provide resumes of key personnel and list any litigation or claims against your firm. *(See Exhibit B Vendors Qualification: Section Three – Contractor Key Personnel, Section Six Vendor Litigation, Claims and Reputation & Compliance and Section 8 Subcontractor List)*	20 points
References- Provide a minimum of five (5) references for similar services to local government agencies and/or other entities within the last five (5) year. *(See Exhibit B Section Four – Vendor References)*	5 points
Other factors – Includes but not limited to, available resources and safety record. *(See Exhibit B Vendor Qualifications: Section Five- Vendors Current Work Schedule / Record and Section Seven - Vendors Safety Record)*	5 points

Bonus Scoring (15 point scale)

9.1 Bonus Points-Interview (If requested by evaluation committee)

Your score may be adjusted up to a maximum of 15 points-total overall possible evaluation points=15

9.1.1 Response to Questions & Answers (0-10 points)

9.1.2 Interview preparedness & adherence to interview (0-5 points)

10.0 CONTRACT TERM

Award of Contract shall begin upon acceptance of Contract and shall continue until completion of the project as stated on the Offer Sheet contained herein.

Brazoria County retains the option to solicit new proposals at any time if in its best interest.

11.0 PROJECT MANAGER

Name: Barbara Martinez
Department: Brazoria County Engineering

The County will maintain oversight to ensure that contractors perform in accordance with the terms, conditions and specifications of the contract.

12.0 INCLEMENT WEATHER FOR HARD COPY SUBMITTALS:

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a proposal submission deadline, the closing will automatically be postponed until the next business day the County is open and at the time shown on the Cover Sheet.

If inclement weather conditions or any other unforeseen event causes delays in carrier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline. It will be the responsibility of the vendor to notify the County of their interest in the project if these conditions are impacting their ability to turn in a submission within the stated deadline. The County reserves the right to make the final judgment call to extend any deadline.

13.0 INSURANCE REQUIREMENTS

Vendor shall furnish certificates of insurance to County evidencing compliance with the insurance requirements hereof for the duration of the project. Certificates shall indicate name of Vendor, name of insurance company, policy number, term of coverage and limits of coverage.

Insurance shall be placed with insurers having an A.M. Best's rating of no less than A. Such insurance must be issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from loss or damage that may arise to any person or property by reason of services rendered by Vendor.

Insurance required herein shall be maintained in full force and effect during the life of this contract and shall be issued on an occurrence basis. Vendor shall require that any and all subcontractors that are not protected under the Vendor's own insurance policies take and maintain insurance of the same nature and in the same amounts as required of Vendor and provide written proof of such insurance to Vendor. Proof of renewed/replacement coverage shall be provided upon expiration, termination, or cancellation of any policy. Vendor shall not allow any subcontractor to commence work on the subcontract until such insurance required for the subcontractor has been obtained and approved.

In the event that the insurance is renewed during the duration of the contract, Vendor shall furnish certificate of insurance to the County evidencing renewal of policy within 30 days of renewal. Vendor shall provide County with at least 30 days prior written notice of any reduction in the limit of liability by endorsement of the policy, cancellation or non-renewal of the insurance coverage required under this Agreement.

Certificates of Insurance, fully executed by a licensed representative of the insurance company written or countersigned by an authorized Texas state agency, shall be filed with the County Purchasing Agent within ten (10) business days of issuance of notification from the County Purchasing Agent to Bidder that the contract is being activated as written proof of such insurance and further provided that Bidder shall not commence work under this contract until it has obtained all insurance required herein and provided written proof as required herein.

WAIVER OF SUBROGATION:

All policies of insurance shall waive all rights of subrogation against Brazoria County, its officers, employees and agents.

ADDITIONALLY INSURED:

Further, on vendor's certificate of insurance supplied to Brazoria County, Brazoria County shall be listed as additionally insured with the exception of workers compensation insurance. The certificate holder shall be as follows:

Brazoria County
237 E. Locust Street, Suite 401
Angleton, TX 77515

14.0 LIQUIDATED DAMAGES, TERMINATION AND DELAYS

14.1 If the Vendor shall fail to fully complete the work within the time specified on the Bid Table (subject however to extensions of time duly granted in the manner and for the causes specified in the herein) the Vendor shall be charged by Brazoria County as liquidated and ascertained damages the sum of seven hundred and eighty-five ($785.00) dollars for each working day that the work remains incomplete beyond the time herein fixed for the completion, it being hereby expressly and mutually agreed that from the nature of the case it would be impracticable and extremely difficult to fix the actual damage which would or will be suffered in the event that the Vendor should fail to fully complete the work within the time specified, and it being further agreed that said charge herein provided for is reasonable and proper in the premises. The

amount so charged may be deducted by Brazoria County from any moneys which might otherwise be or become payable to the Vendor.

14.2 Excusable Delays.

The right of the Vendor to proceed shall not be terminated nor shall the Vendor be charged with liquidated or ascertained damages for any delays in the completion of the work due to:

- Controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency; or

- Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Vendor, including, but not limited to, acts of God or of the public enemy, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.

Provided, however, the Vendor shall promptly notify Brazoria County Project Manager within ten (10) days in writing of the cause of any delay. Upon receipt of such notification, the Brazoria County Project Manager shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this Contract, the delay is determined by the Brazoria County Project Manager to be excusable, Brazoria County shall extend the time for completing the work for a period of time commensurate with the period of excusable delay. Any delay by the Vendor in not notifying the Brazoria County Project Manager shall not be excused.

15.0 CHANGE ORDERS

Due to budget constraints, change orders will be limited to those revisions that are due to unforeseen conditions and are approved by Brazoria County. Vendors are advised to fully understand the scope of work and to review the specifications and drawings in order to submit any requests for clarifications prior to the proposal opening.

In the event a change order is required and approved by Brazoria County, said changes shall be incorporated into this Contract in the form of a change order. All change orders shall be subject to the review and approval of Brazoria County Commissioner's Court, or the Court's designee, and shall be in accordance with the Local Government Code.

Any discrepancies which may be discovered between actual conditions and those represented by the specifications or drawings shall be reported at once to the Brazoria County Project Manager and work shall not proceed except at the Vendor's risk, until written instructions have been received by him from the Brazoria County Project Manager.

16.0 FINAL INSPECTION

When the work included in this Contract is substantially completed, the Vendor shall notify the Project Manager in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The Project Manager will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.
Per Brazoria County, substantial completion is defined as a designated portion of a construction project that is sufficiently complete in accordance with the contract for the owner to occupy and / or utilize it for its intended use, without undue interference.

17.0 PAYMENTS TO VENDOR

17.1 Retainage

The Vendor shall prepare his invoice or application for payment for partial payment(s) as of the last day of the month and submit the invoice or pay application to the Project Architect and /or Brazoria County Project Manager for his approval. The amount of the payment due the Vendor shall have five percent (5%) deducted to be retained until final payment.

17.2 Final Payment

After final inspection and acceptance by Brazoria County of all work under the Contract, the Vendor shall prepare his – invoice or application for payment for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Contract. The total amount of the final payment due the Vendor under this Contract shall be the amount computed as described above less all previous payments.

18.0 HISTORICALLY UNDERUTILIZED BUSINESSES (HUB's)

Historically Underutilized Businesses (HUB's) are encouraged to participate in the bid/RFP processes. Although Brazoria County does not certify HUB vendors, Brazoria County recognizes the certifications of other governmental entities. If you are certified by a government entity, please upload the certificate with your response electronically in the Bonfire electronic platform or include a hard copy of your certificate in your submittal.

19.0 SYSTEM FOR AWARD MANAGEMENT (SAM)

The System for Award Management (SAM) is the official registration required prior to bidding on a contract with any federal government agency, including local governments who receive federal funds.

Prior to award, Brazoria County will check www.sam.gov, the System for Award Management (SAM), to ensure that the proposed vendor has not been debarred. Vendor shall provide their Unique Entity ID number to Brazoria County in order to check www.sam.gov for debarment. If you do not have a Unique Entity ID number, you can request a number for free by visiting https://sam.gov/content/entity-registration. For additional information about the change from DUNS to Unique Entity ID visit https://www.gsa.gov/about-us/organization/federal-acquisition-service/office-of-systems-management/integrated-award-environment-iae/iae-systems-information-kit/unique-entity-id-is-here. Brazoria County is unable to conduct business with vendors who have been debarred.

20.0 AWARD LETTER / NOTICE TO PROCEED

After the award has been made in Commissioner's Court, an award letter will be sent to the vendor with information on how to submit any required documentation needed to finalize the award. Once all required bonds, insurance, and other applicable forms have been submitted to the Purchasing Department, the Project Manager will contact the awarded vendor and set up the project kick-off meeting, if applicable.

21.0 DISCLOSURE OF CERTAIN RELATIONSHIP

Texas Local Government Code chapter 176 requires that any vendor or person who enters or seeks to enter into a contract with a local governmental entity (including any agent of such person or vendor) disclose in the Questionnaire Form CIQ the vendor or person's employment, affiliation, business relationship, family relationship or provision of gifts that might cause a conflict of interest with a local governmental entity.
By law, this questionnaire must be completed and filed with the records administrator of Brazoria County no later than the seventh business day after the date the person engages or communicates with Brazoria County or becomes aware of facts that require the completion of the questionnaire pursuant to Texas Local Government Code section 176.006.

A person commits an offense if the person knowingly violations Texas Local Government Code section 176.006. An offense under this section is a Class C misdemeanor.

A copy of House Bill 23 which amended the Texas Local Government Code Chapter 176 is available at: http://www.capitol.state.tx.us/tlodocs/84R/billtext/html/HB00023F.HTM
Texas Local Government Code Chapter 176 can be found here: http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm

Questionnaire Form CIQ is included in this bid/offer.

By submitting a response to this request, the vendor or person represents compliance with the requirements of Texas Local Government Code chapter 176. If required, completed forms should be sent with your proposal, as well as to:

Brazoria County Courthouse
County Clerk's Office
111 E. Locust Street, Suite 200
Angleton, TX 77515

22.0 CERTIFICATE OF INTERESTED PARTIES

Effective January 1, 2016, all contracts and contract amendments, extensions, or renewals executed by the Commissioners Court will require the completion of Form 1295 "Certificate of Interested Parties" pursuant to Government Code § 2252.908. Form 1295 must be completed by awarded vendor at time of signed contract submission.

Form 1295 and definitions are included in this bid/offer for your information.

All responding vendors may access a video from the Texas Ethics Commission which explains the process on how to submit Form 1295. The video link is available on the Brazoria County Purchasing website at http://brazoriacountytx.gov/departments/purchasing/doing-business.

23.0 BACKGROUND CHECKS AND NON-DISCLOSURE AGREEMENTS:

It is the policy of the County that contractor employees and subcontractors that will complete work in sensitive areas on Brazoria County property be subject to a criminal background check. The County reserves the right to determine a sensitive area and the appropriateness of a criminal background check for any contractor employee or subcontractor.

Non-Disclosure Agreements (NDA) may also be required by Brazoria County. NDAs will be provided to contractor employees and any subcontractors by the Purchasing Department and must be signed and returned in a time frame determined by Purchasing Department

BRAZORIA COUNTY
BID TABLE SUBMITTAL INSTRUCTIONS

RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

Please follow the instructions found in Item 1.0 if you are submitting your bid electronically using Bonfire electronic bidding platform

1.0 ONLINE OFFER SUBMISSION *(PREFERRED METHOD OF SUBMISSION)*

RESPONDENTS ARE TO DOWNLOAD AND FILL OUT THE ONLINE BID TABLE FROM BONFIRE AND THEN UPLOAD THE COMPLETED TABLE INTO BONFIRE TO BE INCLUDED WITH THEIR ONLINE PROPOSAL SUBMISSION.

Please follow the instructions found in Item 2.0 if you are submitting a sealed hard copy proposal

2.0 HARD COPY PROPOSAL SUBMISSION

RESPONDENTS ARE TO INCLUDE WITH THEIR SEALED HARD COPY PROPOSAL, A PRINTED COPY OF ATTACHMENT A BID TABLE.

GENERAL: Brazoria County reserves the right to accept or reject any or all bids and waive all technicalities.

All delivered items should be priced – FOB Destination Full Freight Allowed. Brazoria County will not pay for any additional transportation and/or shipping charges.

BRAZORIA COUNTY
STATEMENT OF NO OFFER

RFP #25-67 CONCRETE PAVEMENT REPAIRS 2025 BAR X PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

If Respondent is not submitting on the goods and/or services as stated in this RFP, please download and complete this form.

Mail the form.to:
Brazoria County Administration Building, Purchasing Department, 237 E. Locust Street, Suite 406, Angleton, Texas 77515.

Or email to: aerickson@brazoriacountytx.gov

****

NAME OF FIRM: _____

ADDRESS: _____

_____

SIGNATURE: _____

TELEPHONE: _____ DATE: _____

****

The above has declined to submit a response for the following reason(s) [please check all that apply]:

_____ Specifications too "restrictive", i.e., goods offered by our company do not meet stated specifications.

_____ Specifications unclear (please explain below).

_____ We do not offer this commodity and/or service or an equivalent.

_____ Insufficient time to respond to the RFP.

_____ Our schedule would not permit us to perform.

_____ Cannot meet insurance requirements.

Remarks: _____

_____

_____

_____

BRAZORIA COUNTY
STANDARD TERMS AND CONDITIONS

1. **FUNDING**: Funds for payment have been provided through the Brazoria County budget approved by the Commissioners Court for the current fiscal year only. State of Texas statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that may arise past the end of the current Brazoria County fiscal year shall be subject to budget approval.

2. **DELIVERY**: Items ordered from this offer may require delivery to various locations throughout Brazoria County, as specified in this offer or at time of order. All delivery and freight charges (F.O.B. Brazoria County designated location) are to be included in the offer price except as noted herein.

3. **AWARD OF CONTRACT**: Brazoria County reserves the right to reject any or all offers, and to select any part or parts thereof without accepting the entire offer. All solicitations may be compared with contracts available to the County through other sources such as Interlocal Agreements and other appropriate sources. Brazoria County may purchase through the source that provides the best value to the County. The successful Respondent will be notified of award as promptly as a thorough analysis of offers will permit, and shall have ten (10) calendar days following date of notification of award in which to supply payment and performance bonds and certificate of insurance as may be required herein.

   3.1 Brazoria County hereby notifies Respondents that pursuant to Texas Local Government Code §262.0276 (effective September 1, 2003) Brazoria County is prohibited from entering into a contract or other transaction which requires approval by the Commissioners Court with an individual, sole proprietorship, corporation, non-profit corporation, partnership joint venture, limited corporation or other entity which is indebted to the County. Further, that this Contract may be terminated and payment withheld if awarded Respondent becomes indebted to the County during the term of the Contract.

4. **EQUAL EMPLOYMENT:** All contracts will be awarded by Brazoria County without consideration as to race, religion, sex, national origin or disability of bidder. Successful bidders are required to adhere to the provisions of 42 USCA Sec. 12101 et seq., Americans with Disabilities Act.

5. **CONTRACT**: The Contract consists of the Instructions to Respondents, Specifications/Statement of Work, Standard Terms & Conditions, all well as all other documents included in the Request for Proposal Number 25-67 as stated in the Request for Proposal Package Checklist, and any drawings and other specifications, as well as addenda issued prior to execution of the Contract, other documents listed in the Contract, and modifications issued after execution of the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. No invoices will be paid prior to acceptance of Contract by Brazoria County. No different or additional terms will become a part of this Contract, except as agreed upon by all parties hereto.

6. **INTERLOCAL PARTICIPATION**: It is hereby made a precondition of any offer for a Contract for supplies or services and a part of these specifications, that the submission of any offer in response to this request constitutes an offer made under the same conditions, for the same price, and for the same effective period as this offer, to any other governmental entity having an interlocal agreement with Brazoria County.

   6.1 It is further understood, that any other governmental entity that elects to use a Brazoria County semi-annual or annual award will issue its own Contracts or purchase orders and will require separate billing.

7. **DEFAULT OF RESPONDENT**: If successful respondent defaults by failing to supply payment and performance bonds and/or certificate of insurance within the ten (10) day period allotted, award shall pass to the next respondent who provides the best value to Brazoria County upon the approval of Commissioners' Court.

   7.1 Respondent, in submitting this offer, agrees that Brazoria County shall not be liable for damages in the event that the County declares the respondent in default.

8. **ADDENDA**: Any interpretations, corrections or changes to these Contract documents and specifications will be made by addenda. Sole issuing authority of addenda shall be vested in the Brazoria County Purchasing Director. Addenda will be mailed to all that are known to have received a copy of the offer package and/or Contract. Respondents shall acknowledge receipt of all addenda.

9. **SALES TAX**: Brazoria County is exempt by law from payment of Texas Sales Tax and Federal Excise Tax.

10. **ETHICAL CONDUCT**: The respondent shall not offer or accept gifts or anything of value, nor enter into any business arrangement with any employee, official, or Director of Brazoria County. No public official shall have interest in this Contract, in accordance with Texas Local Government Code Annotated Title 5, Subtitle C, Chapter 171.

10.1 The Respondent affirms that the only person or parties interested in this offer as principals are those named herein, and that this offer is made without collusion with any other person, firm, or corporation.

11. MINIMUM STANDARDS FOR RESPONSIBLE PROSPECTIVE BIDDERS: A prospective bidder must affirmatively demonstrate bidder's responsibility. A prospective bidder must meet the following requirements:

1) Have adequate financial resources, or the ability to obtain such resources as required;
2) Be able to comply with the required or proposed delivery schedule;
3) Have a satisfactory record of performance;
4) Have a satisfactory record of integrity and ethics;
5) Be otherwise qualified and eligible to receive an award.

11.1 Brazoria County may request representation and other information sufficient to determine bidder's ability to meet these minimum standards listed above.

12. REFERENCES: During an analysis of all offers, Brazoria County may request Respondent to supply a list of three (3) references to which like services or materials have been supplied by Respondent. If requested, references should include name of firm, address, telephone number and name of representative.

13. INSURANCE: Prior to acceptance of contract by Brazoria County, the successful Respondent must furnish a Certificate of Insurance from an approved insurance carrier for the coverage indicated.

14. SILENCE OF SPECIFICATIONS: The apparent silence of the specifications contained as a part of this package as to any detail or to the apparent omission of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

15. INDEMNIFICATION: The successful Respondent (herein after referred to as Contractor), shall defend, indemnify, and save harmless Brazoria County and all its officers, Directors, officials, agents, and employees from all suits, actions, or other claims of any character, name, and description brought for or on account of any injuries or damages of any negligent act or fault of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act of omission, neglect, or misconduct of said Contractor; or because any claims or amount recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising recovered under the Worker's Compensation Act, or any other law, ordinance, order, or decree; or of any Director, employee, subcontractor, or supplier in the execution of, or performance under, any Contract which may result from award of bid/offer.

15.1 Further, Contractor indemnifies and will indemnify and save harmless Brazoria County from liability, claim or demand on their part, their Directors, servants, customers, employees, subcontractors, or any employees or agents of subcontractors, whether such liability, claim, or demand arise from event or casualty happening within the job site itself or elsewhere. Contractor shall pay any judgment with costs which may be obtained against Brazoria County growing out of such injury or damages.

15.2 Money due the Contractor under and by virtue of his Contract as may be considered necessary by the County for such purpose may be retained for the use of the County, or in case no money is due, his surety may be held until such suit or suits action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to the effect furnished to the County, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he is adequately protected by public liability and property damage insurance.

16. THIRD PARTY BENEFICIARY CLAUSE: It is specifically agreed between the parties executing the Contract that it is not intended by any of the provisions of any part of the Contract to create with the public or any member thereof a third party beneficiary or to authorize anyone not a party to the Contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the Contract.

17. PURCHASE ORDERS REQUIRED: All orders for materials or work must be authenticated by a purchase order issued by the Brazoria County Purchasing Department. Invoices not bearing a purchase order number will not be paid.

18. TESTING: All materials being used in fulfillment of this Contract are subject to inspection or test at any time during their preparation, delivery, or use. At the option of the County Purchasing Director, they may be sampled and tested in order to determine compliance with the governing specifications. Materials not conforming to the requirements of these specifications shall not be used in fulfillment of this Contract with Brazoria County. The County reserves the right to immediately terminate any Contract found not to be in compliance with governing specifications as a result of testing by the County.

19. **WAGES**: Contractor shall pay or cause to be paid, without cost or expense to Brazoria County, all Social Security, Unemployment and Federal Income Withholding Taxes of all employees; and all such employees shall be paid wages and benefits as required by Federal and/or State law. Contracts involving construction work or supply of materials in place shall abide by the provisions of Article 5159d Texas Revised Civil Statutes Annotated.

20. **TERMINATION OF CONTRACT**:

Termination with Cause:
"Upon written notice to the Contractor of a defect or breach of this Agreement, Contractor has five (5) business days to cure any defect(s) or breach(es) cited in said notice. If Contractor fails to cure the defect(s) or breach(es) within the five (5) business days allowed, Brazoria County may terminate this Agreement. Nevertheless, Brazoria County reserves the right to provide written notice to the Contractor that this Agreement shall continue if Contractor has in good-faith commenced efforts to cure said defect(s) or breach(es) and Contractor agrees, in writing, to continue to act without undue delay to cure said defect(s) or breach(es).

Termination Without Cause:
This contract may be terminated by either the County or the Contractor at any time, without cause, by providing the other Party at least thirty (30) calendar days' prior written notice.

21. **DELIVERY OF NOTICES**: Any notice provided by this Contract (or required by law) to be given to the Contractor by Brazoria County shall be conclusively deemed to have been given and received on the next day after such written notice has been deposited in the mail in Angleton, Texas, by Registered or Certified mail with sufficient postage affixed thereto, addressed to the Contractor at the address so provided; provided this shall not prevent the giving of actual notice in any other manner.

22. **DELIVERY TICKETS:** Delivery tickets shall accompany each order shipped, and shall show Contractor's name and address, delivery location, Brazoria County purchase order number and descriptive information as to item and quantity delivered.

23. **HAZARDOUS SUBSTANCES:** State law requires that shipments of hazardous substances shall include MATERIAL SAFETY DATA SHEETS (MSDS). MSDS must be supplied with the first order shipped under any contract, and at any time MSDS is revised.

24. **PAYMENT:** Payment shall be made upon receipt and/or acceptance in accordance with the terms of this Contract by the County of items(s) ordered, and receipt of a valid invoice in accordance with Texas Government Code chapter 2251. Contractor is required to pay subcontractors within ten (10) days.

25. **CONTRACTOR'S LIABILITY**: The Contractor shall be responsible for all damage or injury to property of any character during the execution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, including the Contractor's agents, employees, subcontractors, and any employees or agents of subcontractors, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

    25.1 When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, including the Contractor's agents, employees, subcontractors, and any employees or agents of subcontractors, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as he may be directed, or he shall make good such damage or injury in an acceptable manner.

26. **DEFECTIVE MATERIALS**: Unless otherwise stated herein, items supplied under this Contract shall be subject to the County's approval. Items found defective or not meeting specifications shall be picked up and replaced by the Contractor at the next service day at no expense to the County. If item is not picked up within one (1) week after notification, the item will become a donation to the County for disposition.

27. **WARRANTY**: Contractor shall warrant that all items and services shall conform to the proposed specifications, all warranties as stated in the Uniform Commercial Code, and be free from all defects in material, workmanship and title. Contractor and the County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code. Further, Contractor shall provide additional warranty requirements as defined in the Scope of Work attached. Respondents must provide all warranty terms and conditions in response package.

28. **ASSIGNMENT**: Contractor shall not sell, assign, transfer or convey this Contract, in whole or in part, without the prior written consent of Brazoria County.

29. **GOVERNING LAW:** Contractor is advised that these requirements shall be fully governed by the laws of the State of Texas and that Brazoria County may request and rely on advice, decisions and opinions of the Attorney General of Texas and the County Attorney concerning any portion of these requirements. All disputes arising out of this agreement will be resolved in Brazoria County, Texas.

    All documents are subject to the Public Information Act requirements.

30. **DRAWINGS**: All drawings, plans, and specifications are hereby attached and made a part of this Contract.

31. **RIGHT TO AUDIT:** At any time during the term of this Contract and for a period of four (4) years thereafter, the State of Texas, Brazoria County, and/or other federal, State and local agencies which may have jurisdiction over this contract and/or purchase order, at reasonable times and at its expense reserve the right to audit successful bidder's records and books. If needed for audit, original or independently certified copies of off-site records will be provided to auditors at successful respondent's expense within two (2) weeks of written request.

32. **BID BOND:** If required by the County, all respondents must submit with bid, a Bid Bond for at least five percent (5%) of the total bid price, if the bid exceeds $100,000 in Contract price or if the Contract includes construction of public work. Such Bid Bond issued by a surety, acceptable to Brazoria County, authorized to do business in the State of Texas, is a guaranty that the respondent will enter into a contract with Brazoria County (as outlined in the Instructions/Specifications/Statement of Work and attachments) and that offer will furnish the requisite performance and payment bonds as may be required.

33. **PERFORMANCE AND PAYMENT BONDS:** In the event the total accepted proposal price exceeds $25,000 the successful respondent must provide to the office of the County Purchasing Director, a payment bond, and if the price exceeds $100,000 the successful respondent must also provide a performance bond, each in the amount of one hundred percent (100%) of the total contract sum within ten (10) calendar days after receipt of notification of bid/proposal award.
    Such bonds shall be executed by a corporate surety or corporate sureties in accordance with Article 7.19-1, Vernon's Texas Insurance Code. Such corporate surety/sureties shall be duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue fidelity and surety bonds with a Best Rating of "A" or better and have a bonding capacity adequate for the prescribed amount. Brazoria County reserves the right to accept or reject any surety company proposed by the respondent. In the event Brazoria County rejects the proposed surety company, the respondent will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Brazoria County.

34. **APPLICABLE LAW:** All applicable laws and regulations of the State of Texas and ordinances and regulations of Brazoria County shall apply.

35. **COMPLIANCE WITH APPLICABLE LAWS:** Respondent shall at all times observe and comply with all federal, state, local and municipal ordinances, rules, regulations, relating to the provision of the services contracted to be provided by respondent hereunder or which in any manner affect this Contract.

36. **FORCE MAJEURE:** Neither the County nor the successful respondent shall be deemed in violation of this Agreement if either is prevented from performing its obligations hereunder for any reason beyond its control, including but not limited to, acts of God, civil or military authority, acts of public enemy, war riots, rebellions, accidents, fires, explosions, earthquakes, floods, or catastrophic failure of public transportation; provided however, that in the event of strikes or labor disputes, an inability to procure raw materials, equipment, power or supplies, or the enactment of any law, order, proclamation, regulation, ordinance, demand, or other requirement of any governmental agency or intergovernmental body, which prevents, restricts, interferes or delays with the performance of this Contract, the party so affected, upon giving notice to the other party, shall be excused from such performance to the extent of such prevention, restriction, delay or interference, so long as the party so affected shall use reasonable efforts under the circumstance to avoid or remove such causes of nonperformance, and shall continue performance hereunder with the utmost dispatch whenever such causes are removed.

37. **SEVERABILITY:** If any provision of this Contract is held to be unenforceable for any reason, the unenforceability thereof shall not affect any other provision contained herein, and the remainder of the Contract shall remain in full force and effect, and enforceable in accordance with its terms.

38. **QUANTITIES:** Brazoria County requests purchase prices for the items identified in this offer, and in accordance with the specifications provided herein. The quantities provided are given as a guideline only for the purpose of offer preparation. These quantities shall not be construed as the total number of purchases for the Contract. This estimated figure may increase and/or decrease throughout the year. No guarantee is expressed or implied as to the total quantity of items to be purchased under this Contract.

    38.1 Brazoria County reserves the right to add or delete like or related items at any time during the term of this Contract. The additions or deletions shall be incorporated into the contract in the form of an addendum. Additional items shall be priced in accordance with this contract with appropriate discounts being applied.

39. **PURCHASE FROM OTHER SOURCES:** Brazoria County reserves the right to purchase goods and/or services specified herein, or of equal or like kind, through contracts established by other governmental agencies or thorough separate procurement actions due to the unique or special needs of Brazoria County. Further, the County reserves the right to obtain such goods and/or services from others without penalty or prejudice to the County or the respondent and such action shall not invalidate in whole or in part this Contract or any rights or remedies Brazoria County may have hereunder.

40. **AGREEMENT TO NOT BOYCOTT ISRAEL:** By agreeing to this Purchase Order [or if no formal agreement, by providing the good(s) / services(s)] the vendor verifies it does not boycott Israel and will not boycott Israel, as defined by Chapter 808 of the Texas Government Code, during the term of this contract [during the time necessary to provide the good(s) / services(s)].

41. **TEXAS GOVERNMENT CODE 552, SUBCHAPTER J**: Effective January 1, 2020, the requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this contract and the Contractor agrees that the contract can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that subchapter.

42. **PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION (2 CFR 200.216):** By agreeing to this purchase order (or if no formal agreement, by providing goods/services) the vendor represents and warrants that the equipment, systems, and/or services which it will provide to Brazoria County do not use covered telecommunications equipment or services (as defined in Section 889 John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY 2019 NDAA), Pub. L. No. 115-232 (2018)) as a substantial or essential component of any system, or as critical technology of any system. Additionally, the vendor represents and warrants that the equipment, systems, and/or services it will provide are not prohibited from being procured using grant funds under section 889 of the FY 2019 NDAA.

43. **AGREEMENT TO NOT BOYCOTT ENERGY COMPANIES:** By agreeing to this Purchase Order [or if no formal agreement, by providing the good(s) / services(s)] the vendor verifies it does not boycott energy companies and will not boycott energy companies, as defined by Chapter 809 of the Texas Government Code, during the term of this contract [during the time necessary to provide the good(s) / services(s)].

44. **AGREEMENT TO NOT DISCRIMINATE AGAINST A FIREARM ENTITY OR TRADE ASSOCIATION:** By agreeing to this Purchase Order [or if no formal agreement, by providing the good(s) / services(s)] the vendor verifies it does not discriminate against a firearm entity or trade association and will not discriminate against a firearm entity or trade association, as defined by Chapter 2274 of the Texas Government Code, during the term of this contract [during the time necessary to provide the good(s) / services(s)].

45. **DEBRIEF, PROTEST AND APPEAL PROCUDURES:** Please see page 20 of 48, section D. of the Brazoria County Policy and Procedure Manual which can be found on the Brazoria County Purchasing Department's "Doing Business" webpage, https://www.brazoriacountytx.gov/departments/purchasing/doing-business.

46. **DISCLOSURE OF INTERESTED PARTIES FORM 1295:** A person or business, who enters into a contract with the County, meeting the conditions according to Texas Local Government Code Sec. 2252.908, is required to file Form 1295 with Texas Ethics Commission. A contract entered into by a governmental entity is voidable for failure to provide the disclosure of interested parties if the entity submits written notice to the business entity of the failure to submit the form and the business entity has not provided the form on, or before, the 10th business day after the business entity receives written notice to submit the Form 1295. **This form is not required unless there is a contract between the vendor and the Brazoria County. Do not submit this form unless you receive an award letter from the County.**

BRAZORIA COUNTY
SPECIAL REQUIREMENTS

RESPONDENT INSTRUCTIONS:

READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.

The following requirements and specifications supersede other requirements where applicable.

General
The requirements set forth below are intended to outline the basic operating parameters and procedures required to provide goods and/or services to Brazoria County as described herein. It is not the intention to describe every item required. In the performance of this Contract, the successful respondent represents it is familiar with the condition under which Brazoria County operates and represents that it has the resources, knowledge and skills to properly support the County's needs consistent with these special conditions and the Contract documents.

The County reserves the right to modify this Contract and Scope of Work as necessary to develop and maintain specifications / statement of work that meets the County's needs. Such modifications shall be mutually agreed upon and shall be incorporated into this Contract as an addendum. Brazoria County shall not be responsible for any additional charge that is not stated in this Contract or mutually agreed to prior to such work or service is performed and/or invoiced.

The Specifications/Statement of Work provided in this package is to be used as a guide in developing an offer to this RFP. The information contained herein is not intended to be restrictive and the County will consider alternate offers submitted by respondent. Alternate offers shall be clearly marked with the proposed alternates and or exceptions to the Specifications/Statement of Work and shall include all pricing/cost advantages if applicable. Respondents are expected to include any additional requirements that may have been inadvertently left out of the attached Specifications/Statement of Work.

All offers inclusive of pricing shall remain firm for acceptance for a period of ninety (90) days from opening date unless otherwise specified by Brazoria County.

Prices offered shall reflect the full Specifications/Statement of Work as defined per the RFP documents, inclusive of all associated costs for insurance, taxes, overhead, profit and bonding, if required and so identified.

Respondent must include all incidental costs in his pricing. Brazoria County will not provide or allow for parking or travel reimbursements for the respondent's employees. Respondent's offices, administration and/or place of business will not be on Brazoria County premises and will be the respondent's responsibility. Only those costs shown on the Pricing/Delivery Sheet and confirmed by a purchase order will be paid.

It is also understood that any and all persons who provide services under Contract to Brazoria County, resulting from this Request for Proposal, shall be and remain employees of the Contractor, not Brazoria County. It is understood and agreed that the respondent is solely responsible for all services being provided and shall provide adequate insurance to cover against any and all losses incurred by the respondent's employees and or equipment during the course of the Contract.

Respondents may be requested to provide presentations, such presentations may develop into negotiating sessions with the successful respondent as selected by the evaluation committee. If Brazoria County and respondent are unable to agree to Contract terms, Brazoria County reserves the right to terminate Contract negotiations with that respondent and enter into negotiations with another respondent.

No award or acquisition can be made until Commissioners Court approves such action.

Brazoria County will not be obligated to the respondent for goods and/or services until completion of a signed Contract as approved by Commissioners Court.

Submission of an offer implies the respondent's acceptance of the evaluation criteria and respondent recognition that subjective judgments must be made by the evaluating committee.

This Request for Proposal in no manner obligates Brazoria County or any of its agencies to the eventual purchase of any goods and/or services described, implied or which may be proposed, until confirmed by a written Contract and purchase order. Progress toward this end is solely at the discretion of Brazoria County and may be terminated at any time prior to the signing of a Contract.

Brazoria County will not be liable for any costs incurred by the respondent in preparing a response to this RFP. Brazoria County makes no guarantee that any goods and/or services will be purchased as a result of this request for proposal, and reserves the right to reject any and all offers. All offers and their accompanying documentation will become the property of Brazoria County. All offers shall be open to negotiation.

All documents will be held by the County and are NOT subject to public view until an award is made. When an award is made, offers are subject to review under the "Public Information Act". To the extent permitted by law, respondents may request in writing non-disclosure of confidential data. Such data shall accompany the offer, be readily separable from the offer and shall be CLEARLY MARKED "CONFIDENTIAL".

All correspondence relating to this RFP, from advertisement to award shall be sent to the Brazoria County Purchasing Department. All presentations and/or meetings between Brazoria County and the respondent relating to this RFP shall be coordinated by the Brazoria County Purchasing Department. Deviations from this requirement may cause the cancellation of this RFP process and/or disqualification of respondent's proposal.

All information provided to respondent for the purpose of submitting a proposal in response to this RFP is confidential, and is and will remain, the property of Brazoria County and will not be used by respondent for any other purposes.

The respondent is expected to examine all documents, forms, specifications, and all instructions. Failure to do so will be at respondent's risk.

The use of liquid paper is **NOT** acceptable and may result in the disqualification of RFP. If an error is made, bidder **MUST** draw a line through the error and initial each change.

Exceptions
Respondent Terms & Conditions are subject to the review and approval of Brazoria County. In the event of conflicting Terms & Conditions, the terms and conditions contained in the solicitation package shall prevail.

Respondent must clearly identify any conflict with terms & conditions by denoting them on the same page where the conflicting terms and conditions appear.

Public Information Act
All responses to this solicitation are in their entirety, subject to the Public Information Act. Brazoria County will respond to open records requests in accordance to law by providing all requested response information unless respondent (respondent) has specifically identified, in the response package, any section or part respondent deems confidential and/or proprietary. Respondent must note and identify such information on the page where such information appears in the same manner as other exceptions.

Late Offer - Electronic Submissions
Once the project closes in Bonfire, Respondents are not able to upload a finalized submission electronically.

Late Offer – Hard Copy Submissions
Hard Copy proposals received in the office of the County Purchasing Director after submission deadline will be considered void and unacceptable. Brazoria County is not responsible for lateness or non-delivery of mail, carrier, etc., and the date/time stamp in the office of the County Purchasing Director shall be the official time of receipt.

Altering Submissions - Electronic
If an error is made after your proposal submission is finalized, click HERE for instructions. Bonfire allows for respondents to make alterations or amendments and re-submit their submissions before the project closes.

Altering Submissions – Hard Copy
Bids cannot be altered or amended after submission deadline. Any interlineation, alteration, or erasure made before opening time must be initialed by the signer of the bid/offer, guaranteeing authenticity.

Substitutions to Offer
Brazoria County reserves the right to accept any and all or none of the substitutions deemed to be in the best interest of the County.

Withdrawal of Offer
An offer may not be withdrawn or canceled by the respondent without the permission of Brazoria County for a period of ninety (90) days following the date designated for the receipt of bids/offers, and respondent so agrees upon submittal of their bid/offer.

Descriptions
Any reference to model and/or make/manufacturer used in bid/offer specifications or scope of work are descriptive, not restrictive. It is used to indicate the type and quality desired. Bids/Offers on items of like quality will be considered. Offer must provide hardware specifications where hardware is offered.

Terms of Payment
Terms of payment shall be net thirty (30) days from receipt of acceptable invoice and/or acceptance of conforming goods, whichever is later. However, alternate terms will be considered and may be offered. Invoices for installed equipment and software will not be paid prior to complete acceptance by Brazoria County unless otherwise specified. If installation of equipment and software is delayed, the

County reserves the right (without extra expense or penalty) to delay a portion of the payment until equipment is installed and functioning properly.

Pricing / Delivery
All items should be priced – FOB Destination Full Freight Allowed, inside delivery. Brazoria County will not pay for any additional transportation and/or shipping charges.

No charges may be billed to the County unless such costs were explicitly included in the proposal. Respondent will incur any costs not explicitly included in the proposal and/or mutually agreed to in writing by the Brazoria County Purchasing Department.

Reduction in Price: If during the life of the contract, the successful bidder's net prices to other customers for items awarded herein are reduced below the contracted price, it is understood and agreed that the benefits of such reduction shall be extended to Brazoria County.

Price Increase: Requests for price adjustments must be solely for the purpose of accommodating an increase in the vendor's cost. A request for a pricing increase will be reviewed by Purchasing Department using the Producer Price Index (PPI) and/or Consumer Price Index (CPI) and any other research available to determine market conditions favorable to the increase. If market conditions dictate an increase to an awarded vendor's cost, the awarded vendor may submit a request to increase pricing no later than thirty (30) days after receiving notice of the County's intent to renew the contract. Requests will only be considered at the time of renewal with written approval from the County. Additionally, the vendor must de-escalate pricing on a previously escalated item, if the decrease is appropriate, due to market conditions.

The request must be in writing and substantiated with supporting documentation (i.e., increase in manufacturers direct cost, etc.). The request shall be addressed to the County Purchasing Director, 237 E. Locust, Suite 406, Angleton, Texas 77515. The request may also be emailed to the Contract Specialist listed in the solicitation. The awarded vendor's past history of honoring contracts at the bid/offer price will be an important consideration in the determination of requested price increase. Brazoria County reserves the right to accept or reject any/all of the requests for price adjustments as it deems to be in the best interest of the County. If rejected, either party may terminate the contract in accordance with the termination provisions of the contract.

Personnel
Successful respondent agrees at all times to maintain an adequate staff of experienced and qualified full time employees to ensure efficient performance under this Agreement. No part-time, subcontract, or third party personnel may perform services hereunder without the prior written consent of the Brazoria County Purchasing Department.

Successful respondent agrees that at all times its employees will perform required services in a professional and workmanlike manner in accordance with good industry practices.

Brazoria County may, at any time, request the removal and replacement of any of successful respondent's employees and the successful respondent will duly consider such request.

Legal Documents
Respondent must submit with its proposal any agreements for services, etc. which may be required by their organization to enter into a Contract with Brazoria County. These agreements must be completed, executed by respondent's authorized representative and submitted with the returned proposal, and are subject to review and amendment by the Brazoria County Attorney's Office, and to approval by Commissioners Court. In the event of conflicting terms, the Brazoria County Terms and Conditions, Statement of Work, and attachments shall prevail.

Contract Obligations
This offer, submitted documents and any negotiations, when properly accepted by Brazoria County, shall constitute a Contract equally binding between the successful respondent and Brazoria County. The selected respondent will be considered as the prime Contractor and shall assume responsibility for the goods and/or services. Failure to meet obligations may result in the cancellation of any Contracts.

The respondent's response may be incorporated into any Contract which results from this RFP, therefore, respondents are cautioned not to make claims or statements which they are not prepared to commit to Contractually. Failure by the respondent to meet such claims will result in a requirement that the respondent provide resources necessary to meet submitted claims and/or breach of Contract.

Title VI and Related Statues
Nondiscrimination Statement

Brazoria County, as a recipient of Federal financial assistance and under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person shall on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment per 42 U.S.S. § 2000d-3), color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

L.M. "MATT" SEBESTA, JR.
COUNTY JUDGE

Titulo VI y Estatutos Relacionados
Declaration de No Discrimacion

Brazoria County, como beneficiario de la asistencia financiera federal y según el Título VI de la Ley de Derechos Civiles de 1964 y los estatutos relacionados, asegura que ninguna persona será excluida por motivos de raza, religión (donde el objetivo principal de la ayuda financiera es proporcionar empleo por 42 USS § 2000d-3), color, origen nacional, sexo, edad o discapacidad de participacion en, o negado los beneficios de, ni será sujeto a discriminación bajo ningún programa o las actividades del Departamento.

L.M. "MATT" SEBESTA, JR.
COUNTY JUDGE

PREVAILING WAGE RATES

"General Decision Number: TX20250038 01/03/2025

Superseded General Decision Number: TX20240038

State: Texas

Construction Type: Highway

Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025

SUTX2011-013 08/10/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving and Structures)	$ 12.98 **	
ELECTRICIAN	$ 27.11	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.34 **	
Structures	$ 12.23 **	
LABORER		
Asphalt Raker	$ 12.36 **	
Flagger	$ 10.33 **	
Laborer, Common	$ 11.02 **	
Laborer, Utility	$ 11.73 **	
Pipelayer	$ 12.12 **	
Work Zone Barricade Servicer	$ 11.67 **	
PAINTER (Structures)	$ 18.62	
POWER EQUIPMENT OPERATOR:		
Asphalt Distributor	$ 14.06 **	
Asphalt Paving Machine	$ 14.32 **	
Broom or Sweeper	$ 12.68 **	
Concrete Pavement Finishing Machine	$ 13.07 **	
Concrete Paving, Curing, Float, Texturing Machine	$ 11.71 **	
Concrete Saw	$ 13.99 **	
Crane, Hydraulic 80 Tons or less	$ 13.86 **	
Crane, Lattice boom 80 tons or less	$ 14.97 **	
Crane, Lattice boom over 80 Tons	$ 15.80 **	
Crawler Tractor	$ 13.68 **	
Excavator, 50,000 pounds or less	$ 12.71 **	
Excavator, Over 50,000 pounds	$ 14.53 **	
Foundation Drill, Crawler Mounted	$ 17.43 **	
Foundation Drill, Truck Mounted	$ 15.89 **	
Front End Loader 3 CY or Less	$ 13.32 **	
Front End Loader, Over 3 CY	$ 13.17 **	
Loader/Backhoe	$ 14.29 **	
Mechanic	$ 16.96 **	

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     Milling Machine.............$ 13.53 **
     Motor Grader, Fine Grade....$ 15.69 **
     Motor Grader, Rough.........$ 14.23 **
     Off Road Hauler.............$ 14.60 **
     Pavement Marking Machine....$ 11.18 **
     Piledriver..................$ 14.95 **
     Roller, Asphalt.............$ 11.95 **
     Roller, Other...............$ 11.57 **
     Scraper.....................$ 13.47 **
     Spreader Box................$ 13.58 **

Servicer.........................$ 13.97 **

Steel Worker
     Reinforcing Steel...........$ 15.15 **
     Structural Steel Welder.....$ 12.85 **
     Structural Steel............$ 14.39 **

TRUCK DRIVER
     Low Boy Float...............$ 16.03 **
     Single Axle.................$ 11.46 **
     Single or Tandem Axle Dump..$ 11.48 **
     Tandem Axle Tractor w/Semi
     Trailer.....................$ 12.27 **
------------------------------------------------------------------

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

==================================================================

** Workers in this classification may be entitled to a higher
minimum wage under Executive Order 14026 ($17.75) or 13658
($13.30).  Please see the Note at the top of the wage
determination for more information. Please also note that the
minimum wage requirements of Executive Order 14026 are not
currently being enforced as to any contract or subcontract to
which the states of Texas, Louisiana, or Mississippi, including
their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017.  If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking.  Additional information
on contractor requirements and worker protections under the EO
is available at
https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (iii)).
```

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal

number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage

and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

INSURANCE REQUIREMENTS

The following requirements and specifications shall be in addition to the other requirements contained herein and shall supersede the other requirements where applicable.

INSURANCE: Prior to acceptance of contract by Brazoria County, the successful bidder must furnish a Certificate of Insurance together with a receipt showing the time period for which premium has been paid, from an approved insurance carrier for the coverage indicated below.

A. FOR CONSTRUCTION WORK CONTRACTS, THE FOLLOWING COVERAGES ARE REQUIRED:

1. Statutory workers compensation in accordance with the State of Texas requirements.

2. Comprehensive general liability including owners and contractors protective liability insurance for bodily injury, death, or property damages in the following amounts:

COVERAGE	PER OCCURRENCE
a. Premises and product liability	$3,000,000
b. Aggregate policy limits	$1,000,000

3. Comprehensive automobile and truck liability insurance (covering owned, hired and non-owned vehicles):

COVERAGE	PER OCCURRENCE
a. Bodily injury (including death)	$3,000,000
b. Property damage	$3,000,000

Insurance certificates and policy endorsements shall include agreements to hold Commissioners Court of Brazoria County and Brazoria County, Texas harmless; i.e., shall include coverage for "Hold Harmless Agreement".

Failure to maintain insurance coverage as required herein shall be grounds for immediate termination of contract.

All policies must provide, by endorsement to the policy, that thirty (30) days prior written notice of cancellation or material change in coverage be given to the Purchasing Director of Brazoria County. Such insurance when accepted by the County in writing will become acceptable and shall remain unmodified until final acceptance of the work. Coverage provided must be on an occurrence basis.

No policy submitted shall be subject to limitations, conditions, or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by the successful bidder. The decision of Brazoria County thereon is final.

All policies shall be written through a company duly entered and authorized to transact that class of insurance in the State of Texas.

Neither approval by Brazoria County of any insurance supplied by the successful bidder, nor a failure to disapprove that insurance, shall relieve the successful bidder of full responsibility of liability, damages and accidents as set forth herein.

No additional payment shall be made for any insurance that the successful bidder may be required to carry.

Certificate Holder information shall be as follows:
Brazoria County
237 E. Locust Street, Suite 401
Angleton, TX 77515

BRAZORIA COUNTY
BID BOND INFORMATION
AND REQUIREMENTS

The following requirements supersede other requirements where applicable.

BID BOND: All respondents must submit with bid/proposal, a bid bond for at least five percent (5%) of the total bid/proposal price for this construction of a public work project. A Bid Bond shall be issued by a surety acceptable to Brazoria County, authorized to do business in the State of Texas, as a guaranty that the respondent will enter into a contract with Brazoria County (as outlined in the Statement of Work and attachments) and that offer will furnish the requisite performance and payment bonds as may be required.

If submitting to this Bid/Offer electronically, an original (paper, not electronic) bid bond is required to be mailed to the Purchasing Department within three (3) business days *of receipt of the Intent to Award letter* and a copy of the original bid bond shall be submitted with the electronic Bid/Offer response. Please use the label found on the last page of the RFP procurement package, as well as the hard copy mailing address found in the same procurement package. If submitting to this Bid/Offer through hard copy format (not electronically), the original bid bond must be included in the Bid/Offer response.

A guaranty shall be submitted with each bid that the bidder will enter into a contract with Brazoria County for the goods and/or services as outlined in the Specifications, Scope of Work and contract attachments and that respondent will furnish the requisite performance and payment bonds as may be required within ten (10) days after award of the contract and receipt of contract and performance bond forms.

Performance bond and payment bond shall be in a sum equal to the amount of money to be paid by the County under the contract, unless otherwise stated, and shall be executed by a surety company authorized to do business in the State of Texas.

Written verification of the validity of the bond shall be received by the Purchasing Department from the Contractor's Surety before any payments will be made.

BRAZORIA COUNTY
PERFORMANCE BOND INFORMATION
AND REQUIREMENTS

The following requirements supersede other requirements where applicable.

PERFORMANCE BOND: (Public Works Contract or as Required by Commissioner's Court) As designated below, the successful respondent must provide a performance bond, in the amount of one hundred percent (100%) of the total contract sum within ten (10) calendar days after receipt of notification of bid/proposal award. Such bond shall be executed by a corporate surety or corporate sureties in accordance with Article 7.19-1, Vernon's Texas Insurance Code. Such corporate surety/sureties shall be duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue fidelity and surety bonds with a Best Rating of "A" or better and have a bonding capacity adequate for the prescribed amount. Brazoria County reserves the right to accept or reject any surety company proposed by the respondent. In the event Brazoria County rejects the proposed surety company, the respondent will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Brazoria County.

XX PERFORMANCE BOND REQUIRED WHEN BID/PROPOSAL EXCEEDS $100,000 AND IS FOR PUBLIC WORK.

_____ PERFORMANCE BOND REQUIRED WHEN BID/PROPOSAL EXCEEDS $50,000.00 AND IS REQUIRED BY BRAZORIA COUNTY.

If the performance bond and related documents are not returned to the Brazoria County Purchasing Department, 237 E. Locust, Suite 406, Angleton, Texas 77515 within ten (10) days of award, Brazoria County has the right to render the award ineffective.

Written verification of the validity of the bond shall be received by the Purchasing Department from the Contractor's Surety before any payments will be made.

BRAZORIA COUNTY
PAYMENT BOND INFORMATION
AND REQUIREMENTS

The following requirements supersede other requirements where applicable.

PAYMENT BOND: (Public Works Contract) In the event the total accepted bid/proposal price exceeds $25,000 the successful respondent must provide to the office of the County Purchasing Director, a payment bond in the amount of one hundred percent (100%) of the total contract sum within ten (10) calendar days after receipt of notification of bid/proposal award. Such bond shall be executed by a corporate surety or corporate sureties in accordance with Article 7.19-1, Vernon's Texas Insurance Code. Such corporate surety/sureties shall be duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue fidelity and surety bonds with a Best Rating of "A" or better and have a bonding capacity adequate for the prescribed amount. Brazoria County reserves the right to accept or reject any surety company proposed by the respondent. In the event Brazoria County rejects the proposed surety company, the respondent will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Brazoria County.

__X__ PAYMENT BOND REQUIRED WHEN BID/PROPOSAL EXCEEDS $25,000 AND IS FOR PUBLIC WORKS.

If the payment bond and related documents are not returned to the Brazoria County Purchasing Department, 237 E. Locust, Suite 406, Angleton, Texas 77515 within ten (10) days of award, Brazoria County has the right to render the award ineffective.

Written verification of the validity of the bond shall be received by the Purchasing Department from the Contractor's Surety before any payments will be made.

CERTIFICATE OF INTERESTED PARTIES

FORM **1295**

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____ , on the _____ day of _____, 20_____.
(month) (year)

_____
Signature of authorized agent of contracting business entity
(Declarant)

ADD ADDITIONAL PAGES AS NECESSARY

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 12/22/2017

To be completed by awarded vendor at the time of signed contract submittal.

TEXAS ETHICS COMMISSION RULES

CHAPTER 46. DISCLOSURE OF INTERESTED PARTIES

§ 46.1. Application

(a) This chapter applies to section 2252.908 of the Government Code

(b) Section 2252.908 of the Government Code applies only to a contract of a governmental entity or state agency entered into after December 31, 2015, that meets either of the following conditions:

(1) the contract requires an action or vote by the governing body of the entity or agency; or

(2) The value of the contract is at least $1 million.

(c) A contract does not require an action or vote by the governing body of a governmental entity or state agency if:

(1) the governing body has legal authority to delegate to its staff the authority to execute the contract

(2) The governing body has delegated to its staff the authority to execute the contract; and

(3) The governing body does not participate in the selection of the business entity with which the contract is entered into.

§ 46.3. Definitions

(a) “Contract” means a contract between a governmental entity or state agency and a business entity at the time it is voted on by the governing body or at the time it binds the governmental entity or state agency, whichever is earlier, and includes an amended, extended, or renewed contract.

(b) “Business entity” includes an entity through which business is conducted with a governmental entity or state agency, regardless of whether the entity is a for-profit or nonprofit entity. The term does not include a governmental entity or state agency.

(c) “Controlling interest“ means: (1) an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock, or otherwise that exceeds 10 percent; (2) membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or (3) service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers. Subsection (3) of this section does not apply to an officer of a publicly held business entity or its wholly owned subsidiaries.

(d) “Interested party” means: (1) a person who has a controlling interest in a business entity with whom a governmental entity or state agency contracts; or (2) an intermediary.

(e) “Intermediary,” for purposes of this rule, means, a person who actively participates in the facilitation of the contract or negotiating the contract, including a broker, adviser, attorney, or representative of or agent for the business entity who:

(1) receives compensation from the business entity for the person’s participation;

(2) communicates directly with the governmental entity or state agency on behalf of the business entity regarding the contract; and

(3) is not an employee of the business entity or of an entity with a controlling interest in the business entity.

(f) “Signed” includes any symbol executed or adopted by a person with present intention to authenticate a writing, including an electronic signature.

(g) "Value" of a contract is based on the amount of consideration received or to be received by the business entity from the governmental entity or state agency under the contract.

§ 46.4. Changes to Contracts (new rule effective January 1, 2017)

(a) Section 2252.908 of the Government Code does not apply to a change made to an existing contract, including an amendment, change order, or extension of a contract, except as provided by subsections (b) or (c) of this section.

(b) Section 2252.908 of the Government Code applies to a change made to an existing contract, including an amendment, change order, or extension of a contract, if a disclosure of interested parties form was not filed for the existing contract; and either:

(1) the changed contract requires an action or vote by the governing body of the entity or agency; or

(2) the value of the changed contract is at least $1 million.

(c) Section 2252.908 of the Government Code applies to a change made to an existing contract, including an amendment, change order, or extension of a contract, if the business entity submitted a disclosure of interested parties form to the governmental entity or state agency that is a party to the existing contract; and either:

(1) there is a change to the disclosure of interested parties; or

(2) the changed contract requires an action or vote by the governing body of the entity or agency; or

(3) the value of the changed contract is at least $1 million greater than the value of the existing contract.

§ 46.5. Disclosure of Interested Parties Form

(a) A disclosure of interested parties form required by section 2252.908 of the Government Code must be filed on an electronic form prescribed by the commission that contains the following:

(1) The name of the business entity filing the form and the city, state, and country of the business entity's place of business;

(2) The name of the governmental entity or state agency that is a party to the contract for which the form is being filed;

(3) The name of each interested party and the city, state, and country of the place of business of each interested party;

(4) The identification number used by the governmental entity or state agency to track or identify the contract for which the form is being filed and a short description of the services, goods, or other property used by the governmental entity or state agency provided under the contract; and

(5) An indication of whether each interested party has a controlling interest in the business entity, is an intermediary in the contract for which the disclosure is being filed, or both.

(b) The certification of filing and the completed disclosure of interested parties form generated by the commission's electronic filing application must be printed, signed by an authorized agent of the contracting business entity, and submitted to the governmental entity or state agency that is the party to the contract for which the form is being filed.

(c) A governmental entity or state agency that receives a completed disclosure of interested parties form and certification of filing shall notify the commission, in an electronic format prescribed by the commission, of the receipt of those documents not later than the 30th day after the date the governmental entity or state agency receives the disclosure.

(d) The commission shall make each disclosure of interested parties form filed with the commission under section 2252.908(f) of the Government Code available to the public on the commission's Internet website not later than the seventh business day after the date the commission receives the notice required under subsection (c) of this section.

**Note: . A contract entered into by a governmental entity is voidable for failure to provide the disclosure of interested parties if the entity submits written notice to the business entity of the failure to submit the form and the business entity has not provided the form on, or before, the 10th business day after the business entity receives written notice to submit the Form 1295.

Boycott Verification

This verification is required pursuant to Sections 808, 809, 2271, and 2274 (87(R) Senate Bill 13 and 19 versions) of the Texas Government Code:

Definitions:

1. Per Government Code Chapter 808, “Boycott Israel” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purpose

2. Per Government Code Chapter 809, "Boycott energy company" means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company:
   (A) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or
   (B) does business with a company described by Paragraph (A).

3. Per Government Code Chapter 2274 (87(R) Senate Bill 19), "Discriminate against a firearm entity or firearm trade association":
   (A) means, with respect to the entity or association, to:
      (i) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association;
      (ii) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or
      (iii) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association;

4. “Company” has the meaning assigned by Texas Government Code Sections 808.001(2), 809.001(2), and 2274.001(2) (87(R) Senate Bill 19).

To be completed by awarded vendor at the time of signed contract submittal.

This verification is only required for a contract that is between a governmental entity and a company with 10 or more full-time employees; and has a value of $100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. If your contract value or number of employees does not reach that threshold, please provide a written certification of the contract amount and number of employees.

I,_____(Person name), the undersigned representative of (Company or Business Name)__
_____(hereinafter referred to as Company)
being an adult over the age of eighteen (18) years of age, do hereby depose and verify under oath that the company named-above,
   (A) does not boycott Israel currently;
   (B) will not boycott Israel during the term of the contract the named Company, business or individual with Brazoria County Texas, Texas;
   (C) does not boycott energy companies currently;
   (D) will not boycott energy companies during the term of the contract the named Company, business or individual with Brazoria County, Texas;
   (E) does not boycott a firearm entity of firearm trade association currently; and
   (F) will not boycott a firearm entity of firearm trade association during the term of the contract the named Company, business or individual with Brazoria County, Texas

_____ _____
DATE SIGNATURE OF COMPANY REPRESENTATIVE

APPENDIX A of TITLE VI ASSURANCES

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:
(1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter, "DOT")Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
(2) **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
(3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
(4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the *Recipient* or Brazoria County to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the *(Recipient)*, or Brazoria County as appropriate, and shall set forth what efforts it has made to obtain the information.
(5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the *(Recipient)* shall impose such contract sanctions as it or Brazoria County may determine to be appropriate, including, but not limited to: (a.) withholding of payments to the contractor under the contract until the contractor complies, and/or (b.) cancellation, termination or suspension of the contract, in whole or in part.
(6) **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the *(Recipient)* or *Brazoria County* may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the *(Recipient)* to enter into such litigation to protect the interests of the *(Recipient)*, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

BRAZORIA COUNTY
RETURN LABEL

USE THIS LABEL ONLY IF YOU ARE SUBMITTING A HARD COPY PROPOSAL SUBMISSION

SEALED REQUEST FOR PROPOSAL (RFP)

RFP#:	25-67
OPENING DATE:	TUESDAY, JULY 29, 2025
OPENING TIME:	11:00 A.M. LOCAL TIME
RFP DESCRIPTION:	CONCRETE PAVEMENT REPAIRS 2025 BAR X, PHASE V-MILL ROAD (CR 969M) FROM SH 35 TO FLINTLOCK CT

RETURN OFFER TO:

PHYSICAL ADDRESS:

COUNTY PURCHASING DIRECTOR
BRAZORIA COUNTY PURCHASING
237 E. LOCUST STREET, SUITE 406
ANGLETON, TEXAS 77515

DATED MATERIAL – DELIVER IMMEDIATELY

PLEASE CUT OUT AND AFFIX THE RFP LABEL ABOVE TO THE OUTER MOST ENVELOPE OF YOUR RESPONSE TO HELP ENSURE PROPER DELIVERY!

*****LATE RFP's CANNOT BE ACCEPTED*****

BRAZORIA COUNTY ENGINEERING DEPARTMENT
BRAZORIA COUNTY, TEXAS
CONSTRUCTION PLANS FOR

CONCRETE PAVEMENT REPAIRS 2025
BAR X, PHASE V - MILL RD (CR 969M)
FROM SH 35 TO FLINTLOCK CT

STOP!
CALL BEFORE YOU DIG
TEXAS ONE CALL SYSTEM
1-800-245-4545
(@ least 48 hours prior to digging)

COMMISSIONERS COURT

JAY BURRIDGE
COMMISSIONER — PRECINCT 1

STACY L. ADAMS
COMMISSIONER — PRECINCT 3

RYAN CADE
COMMISSIONER — PRECINCT 2

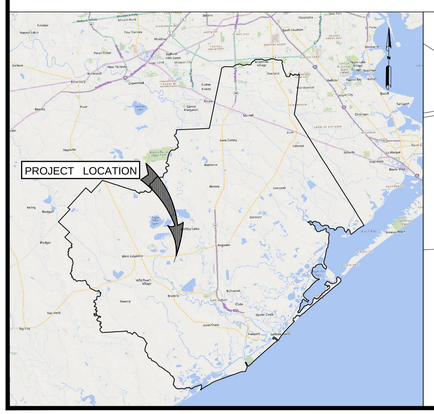
L.M. "MATT" SEBESTA, JR.
COUNTY JUDGE

DAVID LINDER
COMMISSIONER — PRECINCT 4

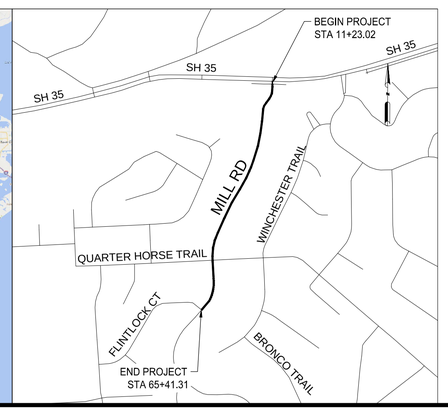
APRIL 2025

INDEX OF SHEETS
SEE SHEET 2 FOR DETAILED INDEX OF SHEETS

VICINITY MAP
N.T.S.



PROJECT LOCATION MAP
N.T.S.



STATE OF TEXAS
COUNTY OF BRAZORIA

PREPARED BY

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T: 281.883.0103
F: 888.937.5150
TBPELS ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301
westwoodps.com

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER
DATE: 4/15/2025

MR. MATT HANKS, J.D., P.E. — DATE
COUNTY ENGINEER

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INDEX OF SHEETS

SHEET	DESCRIPTION
GENERAL	
1	COVER SHEET
2	SHEET INDEX
3	GENERAL NOTES
4	TYPICAL SECTIONS
5	SUMMARY OF QUANTITIES
ROADWAY	
6	OVERALL PROJECT LAYOUT
7	HORIZONTAL ALIGNMENT DATA
8	MILL ROAD PLAN VIEW - STA 10+00 TO STA 17+50
9	MILL ROAD PLAN VIEW - STA 17+50 TO STA 28+00
10	MILL ROAD PLAN VIEW - STA 28+00 TO STA 34+50
11	MILL ROAD PLAN VIEW - STA 34+50 TO STA 43+00
12	MILL ROAD PLAN VIEW - STA 43+00 TO STA 52+50
13	MILL ROAD PLAN VIEW - STA 52+50 TO STA 61+50
14	MILL ROAD PLAN VIEW - STA 61+50 TO STA 66+25
15	DRIVEWAY SCHEDULE
16	JOINTED REINFORCED CONCRETE PAVEMENT DETAILS (1)
17	JOINTED REINFORCED CONCRETE PAVEMENT DETAILS (2)
TRAFFIC CONTROL	
18	OVERALL TRAFFIC CONTROL PLAN
19	TCP DETOUR PLAN - PHASE IA
20	TCP DETOUR PLAN - PHASE IB
21	TCP DETOUR PLAN - PHASE IIA
22	TCP DETOUR PLAN - PHASE IIB
23	TCP 4-WAY INTERSECTION (1 OF 4)
24	TCP 4-WAY INTERSECTION (2 OF 4)
25	TCP 4-WAY INTERSECTION (3 OF 4)
26	TCP 4-WAY INTERSECTION (4 OF 4)
27	BARRICADE & CONSTRUCTION GENERAL NOTES & REQUIREMENTS
28	BARRICADE & CONSTRUCTION PROJECT LIMIT
29	BARRICADE & CONSTRUCTION WORK ZONE SPEED LIMIT
30	BARRICADE & CONSTRUCTION TEMPORARY SIGN NOTES
31	BARRICADE & CONSTRUCTION TYPICAL SIGN SUPPORT
32	BARRICADE & CONSTRUCTION PCMS
33	BARRICADE & CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING
34	BARRICADE & CONSTRUCTION CHANNELIZING DEVICES 1
35	BARRICADE & CONSTRUCTION CHANNELIZING DEVICES 2
36	BARRICADE & CONSTRUCTION CHANNELIZING DEVICES 3
37	BARRICADE & CONSTRUCTION PAVEMENT MARKINGS
38	BARRICADE & CONSTRUCTION PAVEMENT MARKING PATTERNS
SWPPP	
39	SWPPP PLAN - STA 11+00 TO STA 28+50
40	SWPPP PLAN - STA 28+50 TO STA 47+00
41	SWPPP PLAN - STA 47+00 TO STA 66+25
42	TEMPORARY EROSION CONTROL MEASURES (1)
43	TEMPORARY EROSION CONTROL MEASURES (2)
44	TEMPORARY EROSION CONTROL MEASURES (3)
GEOTECHNICAL	
45	BORING LOGS (1 OF 4)
46	BORING LOGS (2 OF 4)
47	BORING LOGS (3 OF 4)
48	BORING LOGS (4 OF 4)

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STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
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20329 STATE HWY 249, STE 350
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

INDEX OF SHEETS

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		2 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

I. GENERAL:

1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE BEGINNING CONSTRUCTION.
2. THE CONTRACTOR RESPONSIBLE FOR PROVIDING SECURITY TO PROTECT THE PROJECT SITE, CONTRACTOR PROPERTY, EQUIPMENT AND WORK.
3. THE CONTRACTOR RESPONSIBLE FOR CLEANING STREETS OF CONSTRUCTION DIRT AND DEBRIS AT CLOSE OF EACH WORK DAY.
4. THE CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR, ALONG WITH CONCURRENCE FROM THE FIELD ENGINEER, SHALL DETERMINE LAY-DOWN AND/OR STAGING AREA LOCATIONS.
6. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS A MINIMUM OF 24 HOURS PRIOR TO CONSTRUCTION IN FRONT OF DRIVEWAYS OR ENTERING UTILITY EASEMENTS.
7. TRAFFIC INGRESS AND EGRESS FOR DRIVEWAYS AND PEDESTRIAN ACCESS FACILITIES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
8. ANY DAMAGE CAUSED BY THE CONTRACTOR TO ITEMS LOCATED OUTSIDE THE COUNTY'S RIGHT-OF-WAY, SHALL BE REPLACED WITH LIKE-KIND OR BETTER AT THE CONTRACTORS' EXPENSE. IF THESE ITEMS ARE LOCATED WITHIN THE PROJECT RIGHT-OF-WAY AND ARE DESIGNATED TO REMAIN, ANY DAMAGE CAUSED BY THE CONTRACTOR TO SUCH ITEMS, SHALL BE REPLACED WITH LIKE-KIND OR BETTER AT THE CONTRACTOR'S EXPENSE. TREES, BUSHES, SHRUBBERY AND OTHER DAMAGED PLANTINGS DESIGNATED TO REMAIN SHALL BE REPLACED WITHIN 72 HOURS OF REMOVAL AND TO BE WATERED THOROUGHLY, NO SEPARATE PAY.
9. PAVED SURFACES, PAVEMENT MARKERS AND MARKINGS SHALL BE PROTECTED FROM DAMAGE BY TRACKED EQUIPMENT.
10. IRON RODS DISTURBED DURING CONSTRUCTION ARE TO BE REPLACED BY A REGISTERED PUBLIC LAND SURVEYOR FOR THE ORIGINAL PROPERTY OWNER AT NO SEPARATE PAY.
11. CONSTRUCTION STAKING WILL BE PROVIDED BY THE CONTRACTOR. TWO COPIES OF STAKING NOTES TO BE PROVIDED TO THE ENGINEER PRIOR TO CONSTRUCTION.
12. THE CONTRACTOR SHALL MAINTAIN UPDATED RED-LINED RECORD DRAWINGS ON SITE FOR INSPECTION BY THE ENGINEER.
13. MOWING, TREE TRIMMING, MAINTENANCE AND CLEAN-UP OF THE PROJECT SHALL MEET THE REQUIREMENT OF SPECIFICATION ITEM 700 (NO SEPARATE PAY). MOWING, TREE TRIMMING, MAINTENANCE AND CLEAN-UP IS REQUIRED FOR THE PROJECT LIMITS AND DURATION, REGARDLESS OF THE CONTRACTOR'S SCOPE OF ACTIVITIES WITHIN THE PROJECT LIMITS.
14. THE REMOVAL OF ANY ABANDONED UTILITIES REQUIRED TO COMPLETE THE WORK SHALL BE INCIDENTAL AND NO SEPARATE PAYMENT SHALL BE MADE.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STOCKPILE NECESSARY MATERIAL ON-SITE OR SECURED OFF-SITE AT NO ADDITIONAL EXPENSE TO BRAZORIA COUNTY. ANY SUITABLE EXCAVATED MATERIAL ON THE PROJECT WHICH IS AVAILABLE AT THE TIME OF NEED, WHETHER FROM STORM SEWER, ROADWAY AND/OR CHANNEL EXCAVATION, SHALL BE USED BEFORE BORROW IS BROUGHT ON-SITE.
16. MANHOLES, JUNCTION BOXES, INLETS AND RISERS ARE TO BE PRECAST OR CAST-IN-PLACE.
17. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES TO BRACE UTILITY POLES BEFORE BEGINNING CONSTRICTION. CONTRACTOR TO MAINTAIN SERVICE DURING CONSTRUCTION.
18. UTILITY POLES TO BE BRACED AS NEEDED PRIOR TO BEGINNING CONSTRUCTION.
19. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION, INCLUDING DRIVEWAYS.

II. PAVING:

1. EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL CONDITION OR BETTER, IN ACCORDANCE WITH TxDOT STANDARDS.
2. SAWCUTTING EXISTING PAVEMENT (CONCRETE OR ASPHALT) SHALL BE INCIDENTAL AND NOT PAID SEPARATELY.
3. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT ALL RADIUS RETURNS OF THE INTERSECTION AND SPACED NOT MORE THAN 60 FEET APART. JOINTS SHALL BE DOWEL TYPE WITH 1" SMOOTH BARS (GRADE 60) 20-INCH LONG PLACED ON 12-INCH CENTERS.
4. EXISTING WATER VALVES AND MANHOLES SHALL BE ADJUSTED AS NECESSARY TO MATCH TOP OF PROPOSED PAVEMENT ELEVATION.
5. ONE-INCH THICK BOARD EXPANSION JOINTS OR ONE-HALF-INCH NON-EXTRUDING PREFORMED JOINTS SHALL BE USED BETWEEN SIDEWALK AND CURB, FIRE HYDRANTS, UTILITY POLES AND OTHER UTILITIES. THIS WILL BE INCIDENTAL TO ITEM 360.
6. THE EXISTING SUBGRADE (MINIMUM 8-INCHES) WILL BE REMIXED WITH 9% LIME AND STABILIZED PRIOR TO PLACING CONCRETE PAVEMENT.

III. TRAFFIC CONTROL PLANS:

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE MOST RECENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE APPROVED TRAFFIC CONTROL PLAN.
2. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS EXCEPT DURING FLAGGING OPERATIONS OR PROVIDE DETOURS AROUND THE CONSTRUCTION SITE AND PROVIDE PUBLIC NOTIFICATION.
3. DETOURS REQUIRE PRIOR APPROVAL OF THE FIELD ENGINEER AND PRECINCT. DETOUR PLANS, IF ALLOWED, MUST INCLUDE APPROPRIATE DETOUR SIGNAGE, PUBLIC NOTICE VIA SIGNAGE TWO WEEKS IN ADVANCE STATING THE DATES OF THE AGREED UPON DATE OF CLOSURE AND THE DATE ROAD WILL RE-OPEN TO TRAFFIC. CONTRACTOR TO USE (WITH PRIOR APPROVAL OF THE FIELD ENGINEER) HIGH EARLY STRENGTH CONCRETE AND OTHER RELATED CONSTRUCTION METHODS TO MINIMIZE THE DURATION OF THE DETOUR AND ENSURE THAT THE ROADWAY IS OPEN ON, OR PRIOR TO, THE AGREED UPON DATE.
4. LANE CLOSURES SHALL BE DURING OFF-PEAK HOURS ONLY (MONDAY THROUGH FRIDAY 9AM TO 4PM). FLAGGERS, IN RADIO CONTACT, ARE REQUIRED TO DIRECT TRAFFIC DURING LANE CLOSURES.
5. THREE WEEKS PRIOR TO THE IMPLEMENTATION OF A TRAFFIC CONTROL PLAN PHASE OR STEP, OR THE IMPLEMENTATION OF AN ADDITIONAL, REVISED OR NEW TRAFFIC CONTROL ELEMENT, THE CONTRACTOR SHALL MEET WITH THE ENGINEER TO GIVE A DETAILED DESCRIPTION OF THE CONTRACTOR'S PLAN AND PREPARATIONS. THE CONTRACTOR SHALL OBTAIN CONCURRENCE FROM THE ENGINEER THAT ADEQUATE PROJECT PROGRESS HAS BEEN ACHIEVED AND THAT PREPARATIONS ARE IN PLACE PRIOR TO SWITCHING TRAFFIC. IF, IN THE OPINION OF THE ENGINEER, REQUIRED PROGRESS AND ADEQUATE PREPARATIONS ARE NOT COMPLETE, THE CONTRACTOR SHALL NOT IMPLEMENT THE NEXT PHASE, STEP OR ELEMENT OF THE TRAFFIC CONTROL UNTIL INCOMPLETE CONSTRUCTION ITEMS OR PREPARATIONS ARE COMPLETED. TIME EXTENSIONS WILL NOT BE GRANTED FOR DELAYS CAUSED BY THE INCOMPLETE CONSTRUCTION ITEMS OR INADEQUATE CONTRACTOR PREPARATIONS REQUIRED TO IMPLEMENT TRAFFIC CONTROL.
6. TRAFFIC CONTROL PER THE CONTRACT IS REQUIRED FOR THE ENTIRE DURATION OF THE PROJECT, INCLUDING THE PUNCHLIST PERIOD. PAYMENT FOR TRAFFIC CONTROL THAT IS PROPERTY INSTALLED FOR LESS THAN A FULL MONTH SHALL BE BASED ON A PERCENTAGE BASIS OF THE TIME INSTALLED. TRAFFIC CONTROL PAYMENTS TO THE CONTRACTOR SHALL END 10 DAYS AFTER SUBSTANTIAL COMPLETION, ALTHOUGH PROPER TRAFFIC CONTROL MUST BE MAINTAINED UNTIL PUNCHLIST COMPLETION.
7. THE PURPOSE OF THE CONSTRUCTION SEQUENCE AND TRAFFIC HANDLING OUTLINE HEREIN IS TO DOCUMENT A VIABLE TRAFFIC CONTROL PLAN THAT CAN BE UTILIZED TO CONSTRUCT THE PROJECT. IT IS THE BASIS OF ESTIMATION FOR THE TRAFFIC CONTROL BID ITEMS, AND IS NOT TO BE UTILIZED IMPLEMENTED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT TRAFFIC CONTROL PLAN, HE/SHE SHALL PREPARE AND SUBMIT THE ALTERNATE TRAFFIC CONTROL PLAN TO THE COUNTY FOR APPROVAL NO LESS THAN 10 WORKING DAYS PRIOR TO THE PROPOSED IMPLEMENTATION DATE. THE TRAFFIC CONTROL PLAN SHALL BE DRAWN TO SCALE AND SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS. UPON APPROVAL BY BRAZORIA COUNTY, THE ALTERNATE PLAN SHALL BECOME THE BASIS FOR A "CHANGE IN CONTRACT" TO REVISE THE TRAFFIC CONTROL BID ITEMS ACCORDINGLY AND BECOME PART OF THE CONTRACT DOCUMENTS.

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

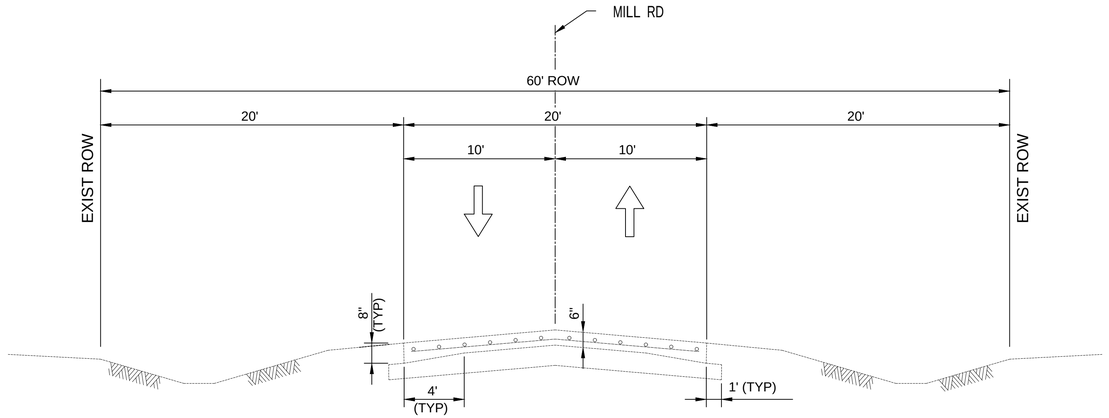
GENERAL NOTES

ANGLETON, BRAZORIA COUNTY, TEXAS

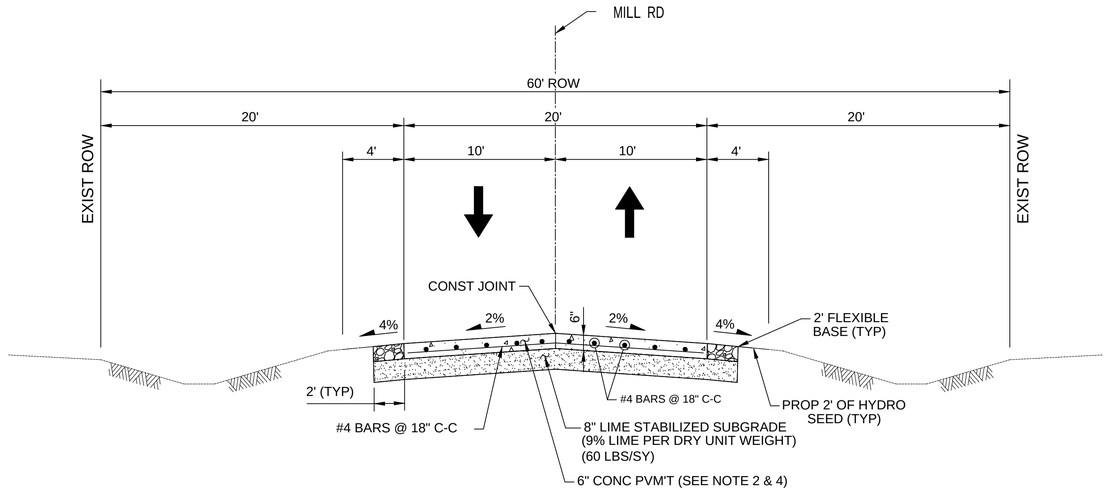
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JAS	JFP	MLM	N.T.S.	APRIL 2025		3 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

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Last Saved: 4/7/2025 1:29 PM
Plotted: Apr 07, 2025 - 1:30PM
Drawing: N:\053744.0009.CAD\DWG\traffic.ctb_XX COVER - MR



EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

NOTES & LEGEND:

1. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM DESIGNATION A-615. GRADE 60.
2. CONCRETE PAVEMENT MIX DESIGNS SHALL MEET COMPRESSIVE STRENGTH REQUIREMENTS OF 4,000 PSI AT 28 DAYS.
3. TRAFFIC WILL NOT BE ALLOWED UNTIL 3,500 PSI IS ACHIEVED.
4. EXPANSION JOINT SPACING SHALL NOT EXCEED 60 FEET 6 INCHES. CONTROL JOINT SPACING SHALL NOT EXCEED 20 FEET.
5. PLEASE REFER TO TERRACON GEOTECHNICAL REPORT NO. AS245100 FOR ADDITIONAL PAVEMENT & SUBGRADE INFORMATION.
6. PLEASE REFER TO THE PROJECT LAYOUT SHEETS TO DETERMINE BOREHOLE LOCATIONS.

EXISTING TRAFFIC LANE

PROPOSED TRAFFIC LANE

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

TYPICAL SECTIONS

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		4 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: jstilsfield
Last Saved: 4/10/2025 7:31 AM
Plotted: 4/10/2025 7:35 AM
Drawing: N:\093744.0006 CAD\0\Traffic.ctb_XX DETAILS - MR

SUMMARY OF QUANTITIES
BRAZORIA COUNTY, TEXAS
CONCRETE PAVEMENT REPAIRS
BAR X - PHASE V MILL RD (CR 969M)

ITEM NO.	ITEM SPEC.	DESCRIPTION	UNIT	QUANTITY
GENERAL ITEMS				
1	500-7001	MOBILIZATION	LS	1
2	100-7002	PREPARING ROW	STA	54
3	104-7001	REMOVING CONCRETE PAVEMENT	SY	12,680
4	104-7011	REMOVING CONCRETE DRIVEWAYS	SY	256
5	105-7028	REMOVING UNTREATED BASE (8")	SY	2,233
PAVING ITEMS				
6	110-7001	EXCAVATION (ROADWAY)	CY	60
7	247-7047	FLEXIBLE BASE (CMP IN PLC)(TY B GR 3)(FNAL POS)	CY	496
8	260-7001	LIME (HYD, COM OR QK) SLURRY OR QK(DRY)	TON	439
9	260-6073	LIME TRT (SUBGRADE) (8")	SY	14,621
10	360-6028	CONCRETE PAVEMENT (JOINT REINF) (6")	SY	11,885
11	360-6028	CONCRETE PAVEMENT (JOINT REINF) (H.E.S. - 6")	SY	1,387
12	530-7007	DRIVEWAYS (CONC - H.E.S.)	SY	256
EROSION CONTROL ITEMS				
12	160-7002	FURN & PLACE TOPSOIL (4")	SY	469
13	164-7002	BROADCAST SEED (PERM_RURAL_CLAY)	SY	469
14	506-7039	TEMP SEDMT CONT FENCE (INSTALL)	LF	1,320
15	506-7041	TEMP SEDMT CONT FENCE (REMOVE)	LF	1,320
16	506-7043	BIODEG EROSN CONT LOGS (INSTL) (8")	LF	96
17	506-7046	BIODEG EROSN CONT LOGS (REMOVE)	LF	96
TRAFFIC CONTROL ITEMS				
18	502-7001	BARRICADES, SIGNS, AND TRAFFIC HANDLING	MO	6

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

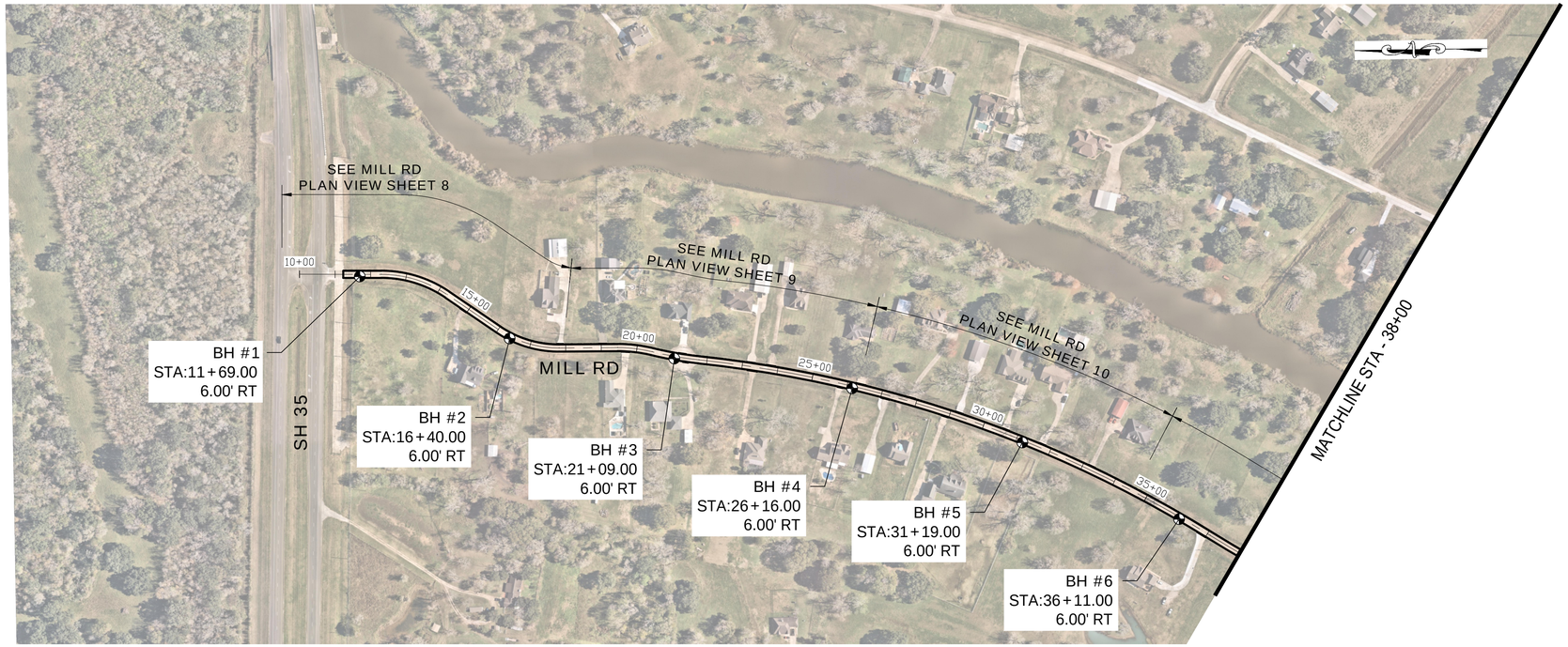
SUMMARY OF QUANTITIES

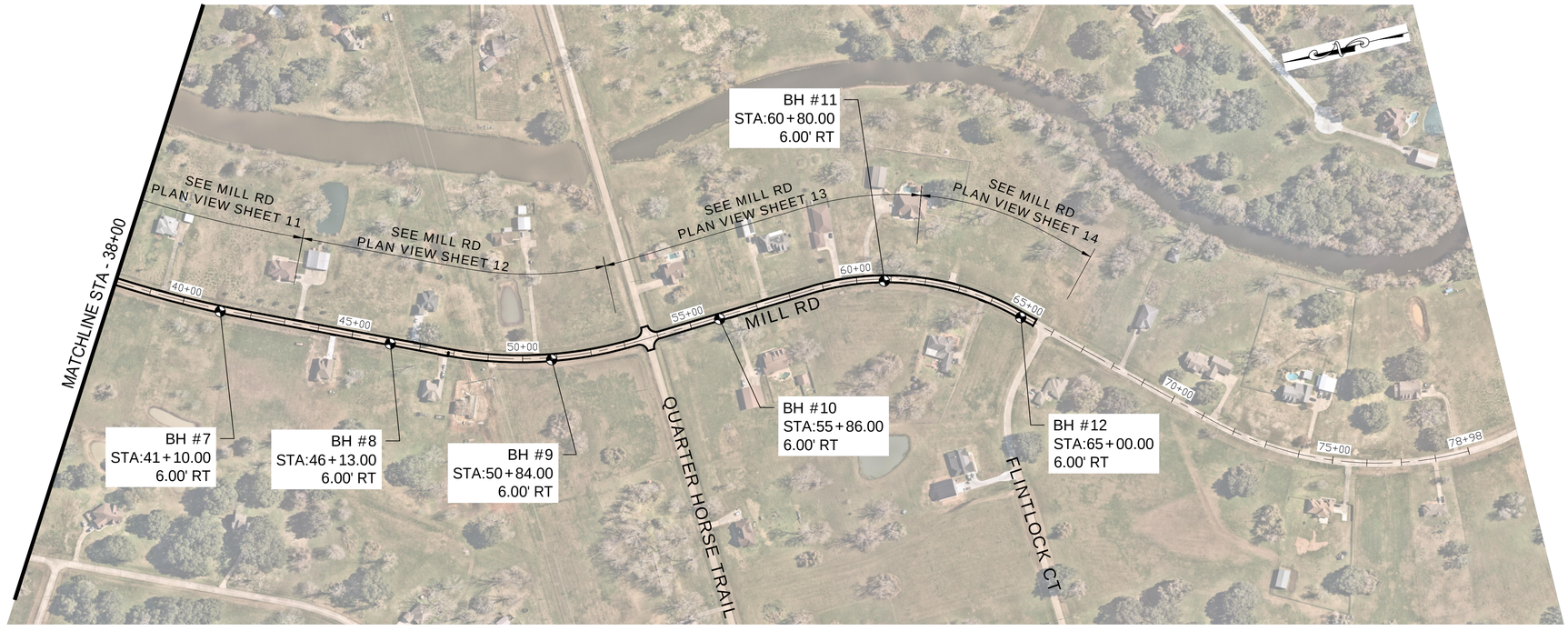
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		5 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaksJhet
Last Saved: 4/17/2025 1:28 PM
Plot Date: 4/17/2025 1:44 PM
Drawing: N:\0037\44.0004 CAD\dwg\Traffic Ctrl_QX COVER.xlR





GENERAL NOTES

1. NO SURVEY AND HORIZONTAL OR VERTICAL CONTROL POINTS WERE ESTABLISHED FOR THIS PROJECT. THE BASELINE IS ESTABLISHED ALONG THE CENTERLINE OF THE ROAD.
2. BEFORE THE EXISTING CONCRETE PAVEMENT IS REMOVED, CONTRACTOR SHALL STAKE THE EDGE OF THE EXISTING CONCRETE PAVEMENT ALONG WITH ELEVATION AT EVERY 50-FEET ALONG A TANGENT AND AT EVERY 5-FEET ALONG A CURVE. NOT A SEPARATE PAY ITEM;INCIDENTAL PROJECT COST.
3. WHEN CONSTRUCTING THE CONCRETE PAVEMENT CONTRACTOR SHALL MATCH THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE EXISTING ROAD AT EDGE AND WORK TOWARDS THE CROWN WITH A MINIMUM 2% CROSS-SLOPE.
4. CONTRACTOR SHALL CALL TEXAS 811 AT LEAST 48 HOURS BEFORE EXCAVATING WITHIN THE R.O.W.
5. CONTRACTOR SHALL AVOID CONFLICT WITH ALL PRIVATE UTILITIES IN THE PROJECT AREA.
6. ANY DAMAGE TO THE EXISTING PRIVATE UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE CALLED OUT ON PLANS.
8. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL ALIGNMENT INFORMATION.

200 0 100 200
SCALE: 1" = 200'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

OVERALL PROJECT LAYOUT

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 200'	APRIL 2025		6 OF 44

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaredPell
Last Saved: 4/9/2025 7:58 AM
Plot Date: 4/15/2025 7:52 PM
Drawing N:\093744.0006\CAD\WD\traffic.cbk_ROADWAY PLAN OVERALL- MR

Horizontal Alignment Report

****

File: N:\0057744.00\06 CAD\DWG\Traffic C3D\Xref_0057744.00 MR_ALN.dwg
Report Date: 10/30/2024 5:41:09 PM
Alignment Name: MR
Station Range: Start: 10+00.00, End: 78+98.36
Description: Mill Road – SH 35 to Flintlock Court

****

Begin MR
N 13,615,428.0591 E 3,065,754.2211 10+00.00

Line (1)
S1° 03' 36.00"W 230.088'
N 13,615,198.0101 E 3,065,749.9646 12+30.09
Line (1)

Curve (2)
BC N 13,615,198.0101 E 3,065,749.9646 12+30.09
CTR N 13,615,204.1149 E 3,065,420.0211
PI N 13,615,096.5641 E 3,065,748.0876

Direction Back S1° 03' 36.00"W
Radius 330.000'
Delta 34°10'54"(RT)
Length 196.872'
Tangent 101.463'
Chord Direction S18° 09' 02.96"W Distance 193.966'
Direction Ahead S35° 14' 29.91"W

EC N 13,615,013.6963 E 3,065,689.5406 14+26.96
Curve (2)

Line (3)
S35° 14' 29.91"W 173.490'
N 13,614,872.0023 E 3,065,589.4322 16+00.45
Line (3)

Curve (4)
BC N 13,614,872.0023 E 3,065,589.4322 16+00.45
CTR N 13,614,698.8945 E 3,065,834.4499
PI N 13,614,795.7517 E 3,065,535.5602

Direction Back S35° 14' 29.91"W
Radius 300.000'
Delta 34°34'22"(LT)
Length 181.023'
Tangent 93.361'
Chord Direction S17° 57' 18.96"W Distance 178.289'
Direction Ahead S0° 40' 08.00"W

EC N 13,614,702.3967 E 3,065,534.4703 17+81.47
Curve (4)

Line (5)
S0° 40' 08.00"W 164.301'
N 13,614,538.1066 E 3,065,532.5523 19+45.77
Line (5)

Curve (6)
BC N 13,614,538.1066 E 3,065,532.5523 19+45.77
CTR N 13,614,542.7762 E 3,065,132.5795
PI N 13,614,488.8548 E 3,065,531.9773

Direction Back S0° 40' 08.00"W
Radius 400.000'
Delta 14°02'24"(RT)
Length 98.017'
Tangent 49.255'
Chord Direction S7° 41' 19.80"W Distance 97.772'
Direction Ahead S14° 42' 31.60"W

EC N 13,614,441.2137 E 3,065,519.4711 20+43.79
Curve (6)

Reversing Curve

Curve (7)
BC N 13,614,441.2137 E 3,065,519.4711 20+43.79
CTR N 13,614,187.3076 E 3,066,486.6999
PI N 13,614,376.3942 E 3,065,502.4554

Direction Back S14° 42' 31.60"W
Radius 1,000.000'
Delta 7°40'05"(LT)
Length 133.831'
Tangent 67.016'
Chord Direction S10° 52' 29.25"W Distance 133.732'
Direction Ahead S7° 02' 26.90"W

EC N 13,614,309.8838 E 3,065,494.2408 21+77.62
Curve (7)

Reversing Curve

Curve (8)
BC N 13,614,309.8838 E 3,065,494.2408 21+77.62
CTR N 13,614,726.6428 E 3,062,119.8799
PI N 13,613,536.7609 E 3,065,398.7543

Direction Back S7° 02' 26.90"W
Radius 3,400.000'
Delta 25°48'34"(RT)
Length 1,531.560'
Tangent 778.997'
Chord Direction S19° 56' 43.80"W Distance 1,518.644'
Direction Ahead S32° 51' 00.71"W

EC N 13,612,882.3318 E 3,064,976.1916 37+09.18
Curve (8)

Reversing Curve

Curve (9)
BC N 13,612,882.3318 E 3,064,976.1916 37+09.18
CTR N 13,611,084.1285 E 3,067,761.0955
PI N 13,612,673.7553 E 3,064,841.5145

Direction Back S32° 51' 00.71"W
Radius 3,315.000'
Delta 8°33'59"(LT)
Length 495.631'
Tangent 248.278'
Chord Direction S28° 34' 01.21"W Distance 495.170'
Direction Ahead S24° 17' 01.72"W

EC N 13,612,447.4449 E 3,064,739.4083 42+04.81
Curve (9)

Line (10)
S24° 17' 01.72"W 570.381'
N 13,611,927.5318 E 3,064,504.8354 47+75.19
Line (10)

Curve (11)
BC N 13,611,927.5318 E 3,064,504.8354 47+75.19
CTR N 13,611,444.3050 E 3,065,575.8709
PI N 13,611,669.5136 E 3,064,388.4235

Direction Back S24° 17' 01.72"W
Radius 1,175.000'
Delta 27°05'22"(LT)
Length 555.542'
Tangent 283.064'
Chord Direction S10° 44' 20.54"W Distance 550.382'
Direction Ahead S2° 48' 20.63"E

EC N 13,611,386.7892 E 3,064,402.2794 53+30.74
Curve (11)

Line (12)
S2° 48' 20.63"E 533.508'
N 13,610,853.9210 E 3,064,428.3944 58+64.24
Line (12)

Curve (13)
BC N 13,610,853.9210 E 3,064,428.3944 58+64.24
CTR N 13,610,815.9850 E 3,063,654.3235
PI N 13,610,530.2264 E 3,064,444.2582

Direction Back S2° 48' 20.63"E
Radius 775.000'
Delta 45°23'12"(RT)
Length 613.913'
Tangent 324.083'
Chord Direction S19° 53' 15.26"W Distance 597.987'
Direction Ahead S42° 34' 51.15"W

EC N 13,610,291.5965 E 3,064,224.9738 64+78.16
Curve (13)

Line (14)
S42° 34' 51.15"W 649.316'
N 13,609,813.4905 E 3,063,785.6272 71+27.47
Line (14)

Curve (15)
BC N 13,609,813.4905 E 3,063,785.6272 71+27.47
CTR N 13,609,136.8603 E 3,064,521.9502
PI N 13,609,514.7363 E 3,063,511.0926

Direction Back S42° 34' 51.15"W
Radius 1,000.000'
Delta 44°10'07"(LT)
Length 770.886'
Tangent 405.738'
Chord Direction S20° 29' 47.81"W Distance 751.939'
Direction Ahead S1° 35' 15.53"E

EC N 13,609,109.1541 E 3,063,522.3340 78+98.36
Curve (15)

N 13,609,109.1541 E 3,063,522.3340 78+98.36
End MR

****

Alignment Length: 6,898.359'

****

Last Saved by: jasturbet
Last Saved: 4/10/2025 7:31 AM
Plotted: 4/10/2025 7:35 AM
Drawing: N:\0057744.00\06 CAD\DWG\traffic cad_XX DETAILS - MR



DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

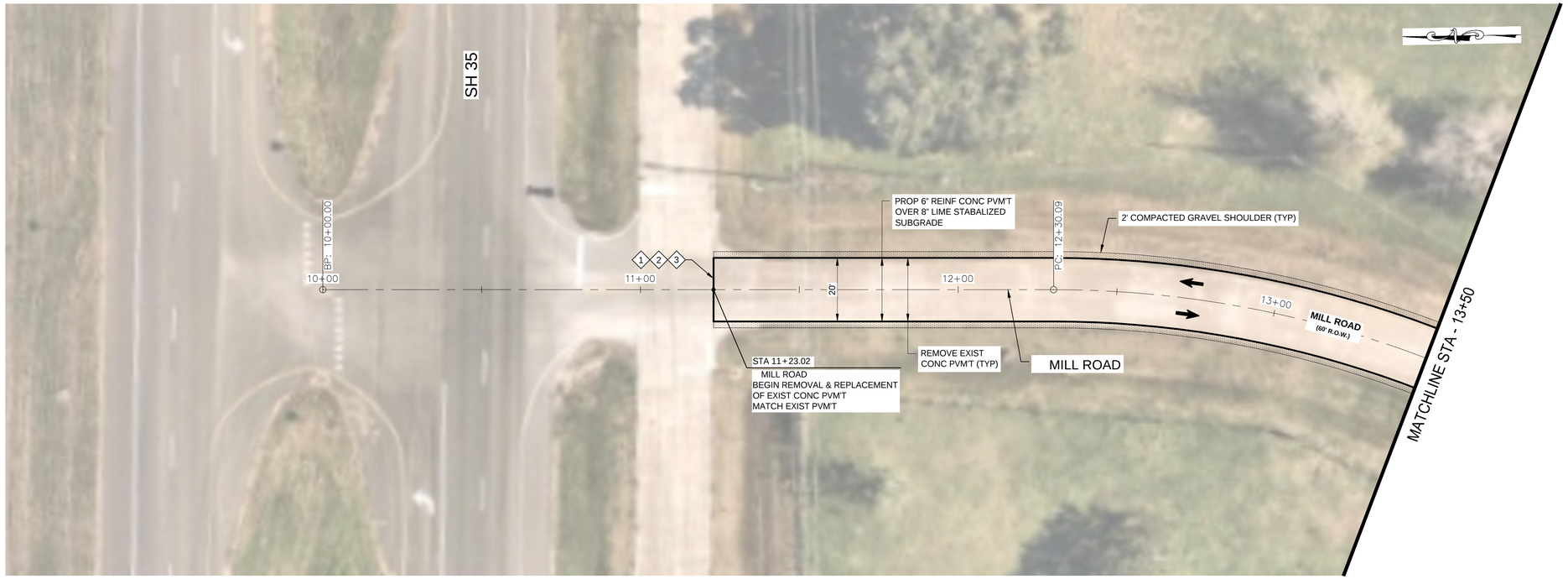
CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

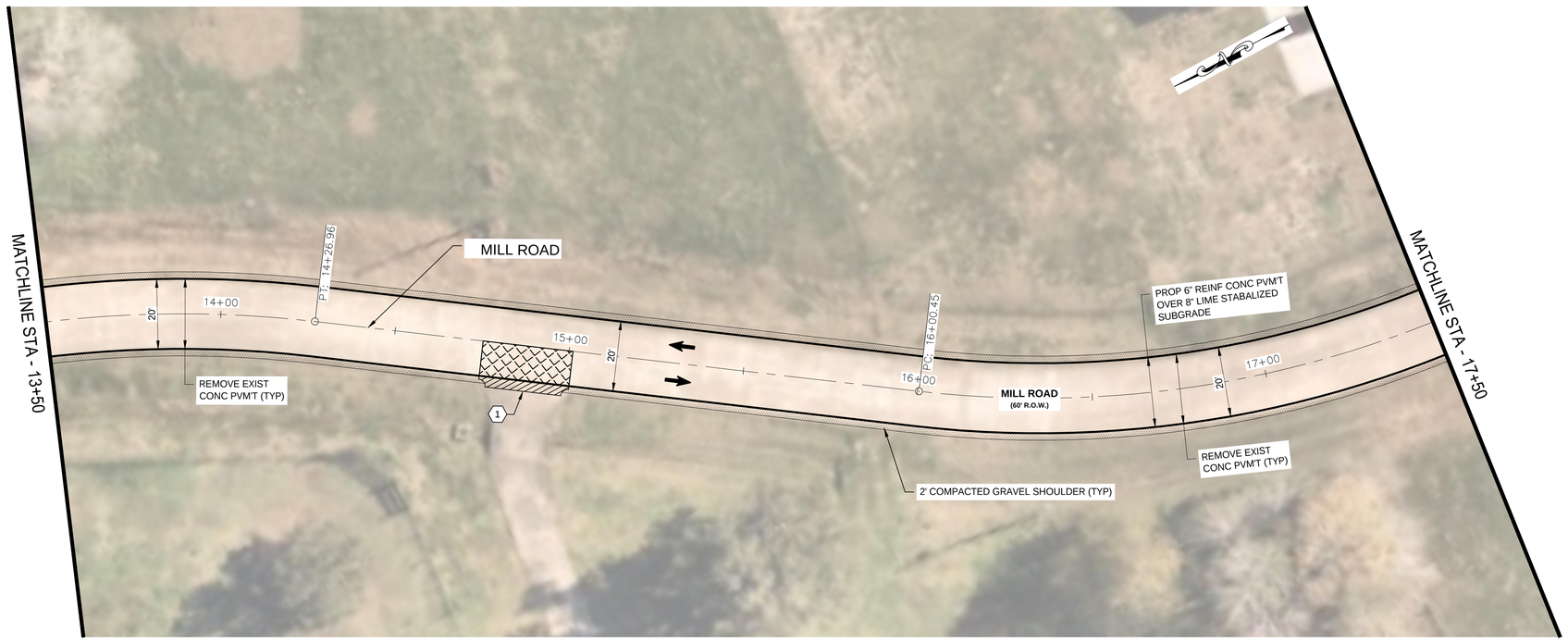
HORIZONTAL ALIGNMENT DATA

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		7 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301





LEGEND

- HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT
- SAWCUT, REMOVE & REPLACE 3' OF EXISTING CONCRETE DRIVEWAY (MATCH EXISTING THICKNESS, MIN 6" THICK, HES CONCRETE)
- COMPACTED GRAVEL SHOULDER
- REMOVE EXISTING PAVEMENT
- TRAFFIC FLOW ARROW
- (X) DRIVEWAY NUMBER
  SEE SHEET 15 FOR "DRIVEWAY SCHEDULE" SHEET.

CONSTRUCTION NOTES

1. PROPOSED SAWED JOINT AND EXPOSE 15" OF REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE 2.
2. HORIZONTAL DOWELS SHALL BE 1" SMOOTH BARS (GRADE 60) 20-INCH LONG DRILLED AND EMBEDDED INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. DOWELS SHALL BE 12" C-C, UNLESS OTHERWISE SPECIFIED.
3. MATCH EXISTING PAVEMENT

GENERAL NOTES

1. NO SURVEY AND HORIZONTAL OR VERTICAL CONTROL POINTS WERE ESTABLISHED FOR THIS PROJECT. THE BASELINE IS ESTABLISHED ALONG THE CENTERLINE OF THE ROAD.
2. BEFORE THE EXISTING CONCRETE PAVEMENT IS REMOVED, CONTRACTOR SHALL STAKE THE EDGE OF THE EXISTING CONCRETE PAVEMENT ALONG WITH ELEVATION AT EVERY 50-FEET ALONG A TANGENT AND AT EVERY 5-FEET ALONG A CURVE. NOT A SEPARATE PAY ITEM;INCIDENTAL PROJECT COST.
3. WHEN CONSTRUCTING THE CONCRETE PAVEMENT CONTRACTOR SHALL MATCH THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE EXISTING ROAD AT EDGE AND WORK TOWARDS THE CROWN WITH A MINIMUM 2% CROSS-SLOPE.
4. CONTRACTOR SHALL CALL TEXAS 811 AT LEAST 48 HOURS BEFORE EXCAVATING WITHIN THE R.O.W.
5. CONTRACTOR SHALL AVOID CONFLICT WITH ALL PRIVATE UTILITIES IN THE PROJECT AREA.
6. ANY DAMAGE TO THE EXISTING PRIVATE UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE CALLED OUT ON PLANS.
8. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL ALIGNMENT INFORMATION.

20 0 10 20
SCALE: 1" = 20'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER
DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

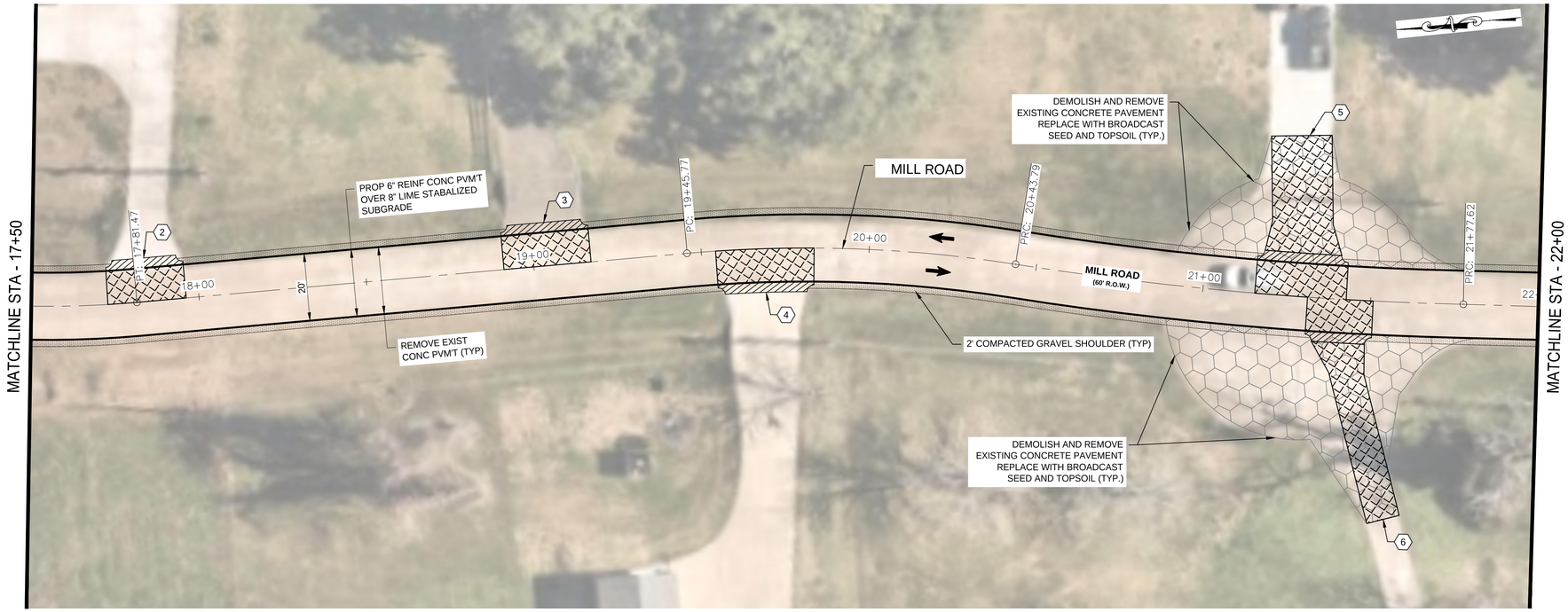
MILL ROAD PLAN VIEW
STA 10+00 TO STA 17+50

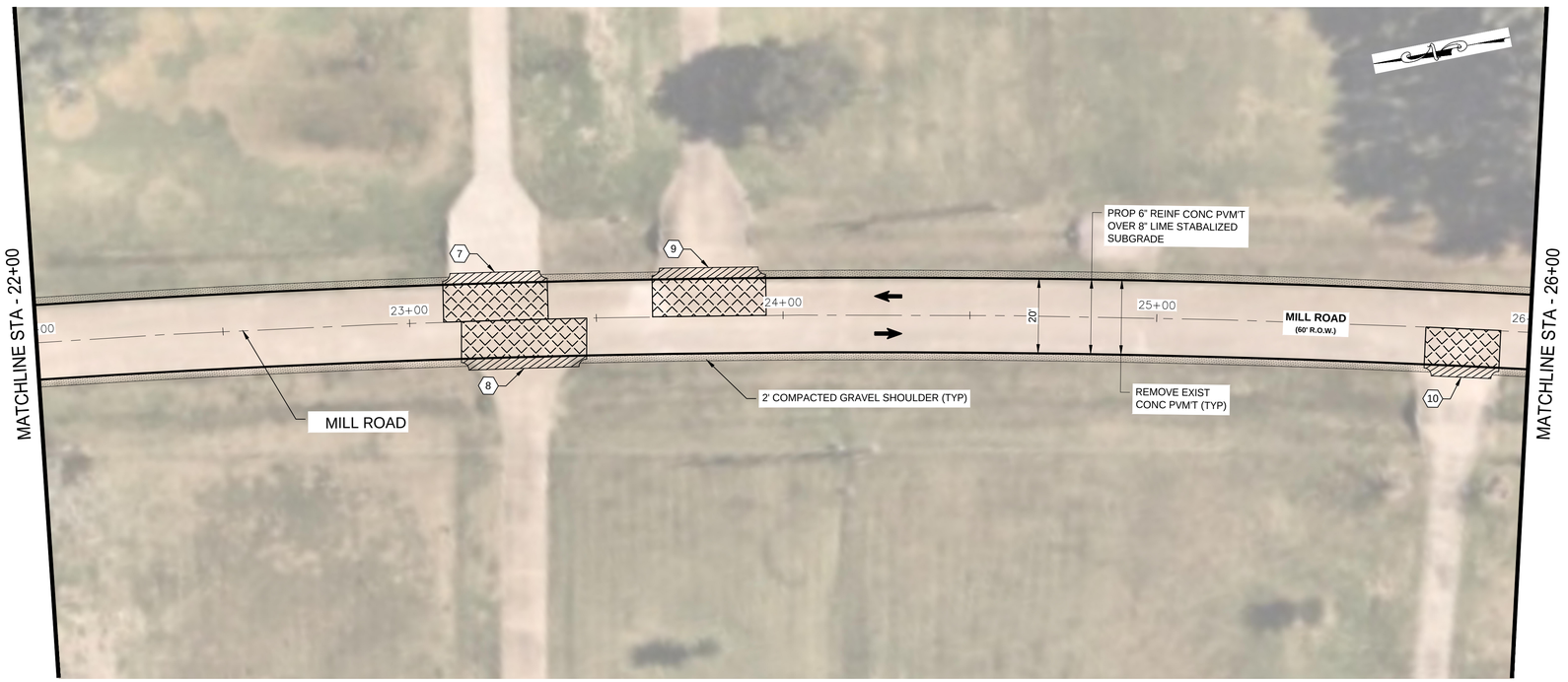
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		8 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaimiPeil
Last Saved: 4/8/2025 3:40 PM
Plot Date: 4/15/2025 11:11 AM
Drawing: N:\053744.0006 CAD\Working\Traffic_cbk_XX ROADWAY PLAN - MR





LEGEND

- HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT
- SAWCUT, REMOVE & REPLACE 3' OF EXISTING CONCRETE DRIVEWAY (MATCH EXISTING THICKNESS, MIN 6" THICK, HES CONCRETE)
- COMPACTED GRAVEL SHOULDER
- REMOVE EXISTING PAVEMENT
- TRAFFIC FLOW ARROW
- (X) DRIVEWAY NUMBER
  SEE SHEET 15 FOR "DRIVEWAY SCHEDULE" SHEET.

CONSTRUCTION NOTES

1. PROPOSED SAWED JOINT AND EXPOSE 15" OF REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE 2.
2. HORIZONTAL DOWELS SHALL BE 1" SMOOTH BARS (GRADE 60) 20-INCH LONG DRILLED AND EMBEDDED INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. DOWELS SHALL BE 12" C-C, UNLESS OTHERWISE SPECIFIED.
3. MATCH EXISTING PAVEMENT

GENERAL NOTES

1. NO SURVEY AND HORIZONTAL OR VERTICAL CONTROL POINTS WERE ESTABLISHED FOR THIS PROJECT. THE BASELINE IS ESTABLISHED ALONG THE CENTERLINE OF THE ROAD.
2. BEFORE THE EXISTING CONCRETE PAVEMENT IS REMOVED, CONTRACTOR SHALL STAKE THE EDGE OF THE EXISTING CONCRETE PAVEMENT ALONG WITH ELEVATION AT EVERY 50-FEET ALONG A TANGENT AND AT EVERY 5-FEET ALONG A CURVE. NOT A SEPARATE PAY ITEM;INCIDENTAL PROJECT COST.
3. WHEN CONSTRUCTING THE CONCRETE PAVEMENT CONTRACTOR SHALL MATCH THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE EXISTING ROAD AT EDGE AND WORK TOWARDS THE CROWN WITH A MINIMUM 2% CROSS-SLOPE.
4. CONTRACTOR SHALL CALL TEXAS 811 AT LEAST 48 HOURS BEFORE EXCAVATING WITHIN THE R.O.W.
5. CONTRACTOR SHALL AVOID CONFLICT WITH ALL PRIVATE UTILITIES IN THE PROJECT AREA.
6. ANY DAMAGE TO THE EXISTING PRIVATE UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE CALLED OUT ON PLANS.
8. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL ALIGNMENT INFORMATION.

20 0 10 20

SCALE: 1" = 20'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

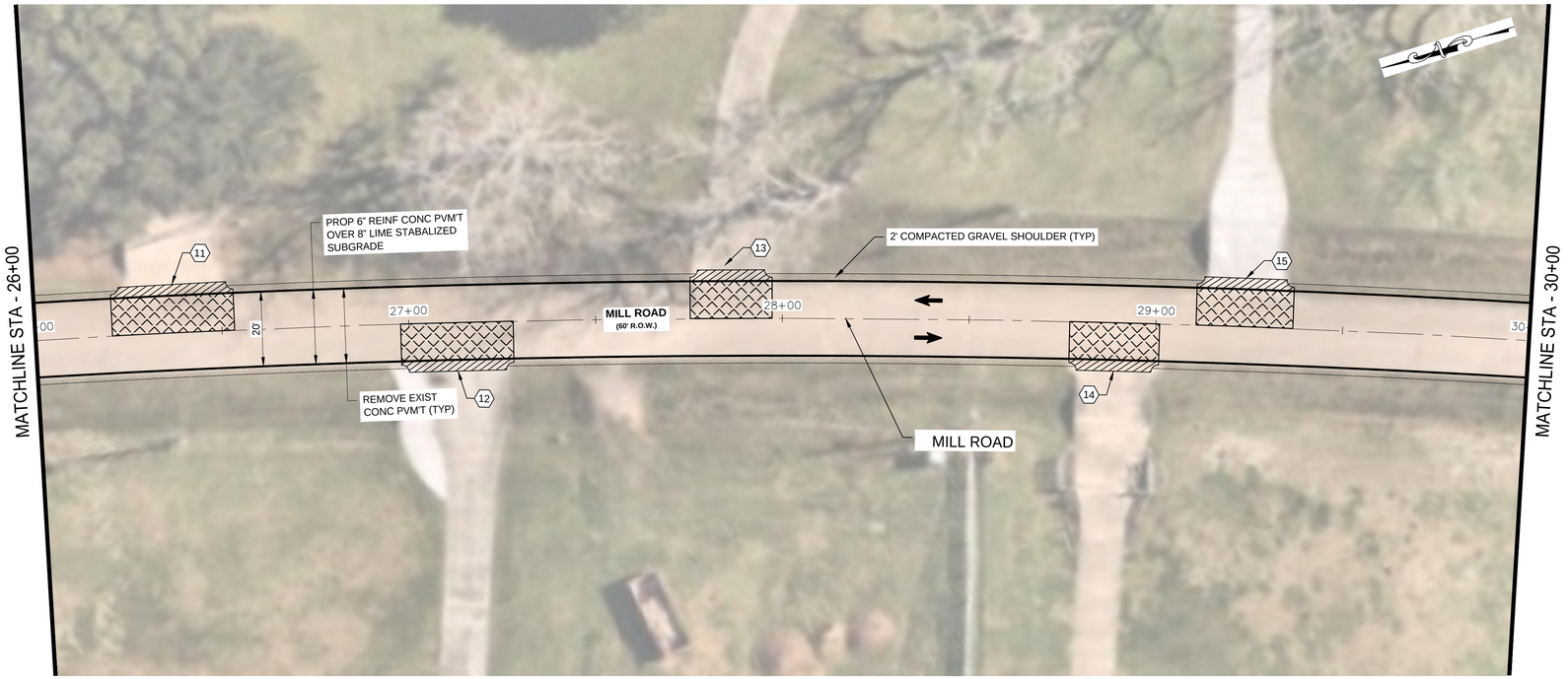
MILL ROAD PLAN VIEW
STA 17+50 TO STA 28+00

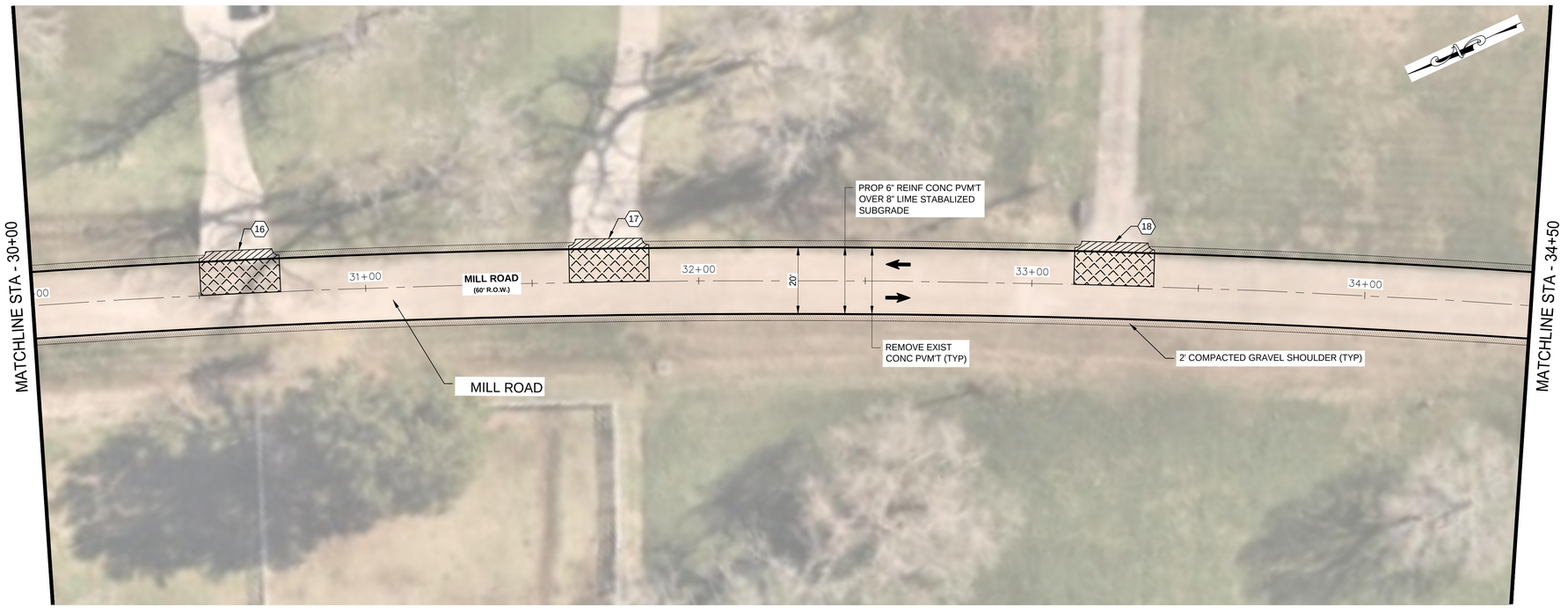
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		9 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaimiReid
Last Saved: 4/8/2025 3:40 PM
Plot Date/Time: 4/15/2025 11:11 AM
Drawing: N:\053744.0006 CAD\MOT\traffic cbl_XX ROADWAY PLAN - MR





LEGEND

- HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT
- SAWCUT, REMOVE & REPLACE 3' OF EXISTING CONCRETE DRIVEWAY (MATCH EXISTING THICKNESS, MIN 6" THICK, HES CONCRETE)
- COMPACTED GRAVEL SHOULDER
- REMOVE EXISTING PAVEMENT
- TRAFFIC FLOW ARROW
- (X) DRIVEWAY NUMBER
  SEE SHEET 15 FOR "DRIVEWAY SCHEDULE" SHEET.

CONSTRUCTION NOTES

1. PROPOSED SAWED JOINT AND EXPOSE 15" OF REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE 2.
2. HORIZONTAL DOWELS SHALL BE 1" SMOOTH BARS (GRADE 60) 20-INCH LONG DRILLED AND EMBEDDED INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. DOWELS SHALL BE 12" C-C, UNLESS OTHERWISE SPECIFIED.
3. MATCH EXISTING PAVEMENT

GENERAL NOTES

1. NO SURVEY AND HORIZONTAL OR VERTICAL CONTROL POINTS WERE ESTABLISHED FOR THIS PROJECT. THE BASELINE IS ESTABLISHED ALONG THE CENTERLINE OF THE ROAD.
2. BEFORE THE EXISTING CONCRETE PAVEMENT IS REMOVED, CONTRACTOR SHALL STAKE THE EDGE OF THE EXISTING CONCRETE PAVEMENT ALONG WITH ELEVATION AT EVERY 50-FEET ALONG A TANGENT AND AT EVERY 5-FEET ALONG A CURVE. NOT A SEPARATE PAY ITEM;INCIDENTAL PROJECT COST.
3. WHEN CONSTRUCTING THE CONCRETE PAVEMENT CONTRACTOR SHALL MATCH THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE EXISTING ROAD AT EDGE AND WORK TOWARDS THE CROWN WITH A MINIMUM 2% CROSS-SLOPE.
4. CONTRACTOR SHALL CALL TEXAS 811 AT LEAST 48 HOURS BEFORE EXCAVATING WITHIN THE R.O.W.
5. CONTRACTOR SHALL AVOID CONFLICT WITH ALL PRIVATE UTILITIES IN THE PROJECT AREA.
6. ANY DAMAGE TO THE EXISTING PRIVATE UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE CALLED OUT ON PLANS.
8. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL ALIGNMENT INFORMATION.

20 0 10 20

SCALE: 1" = 20'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

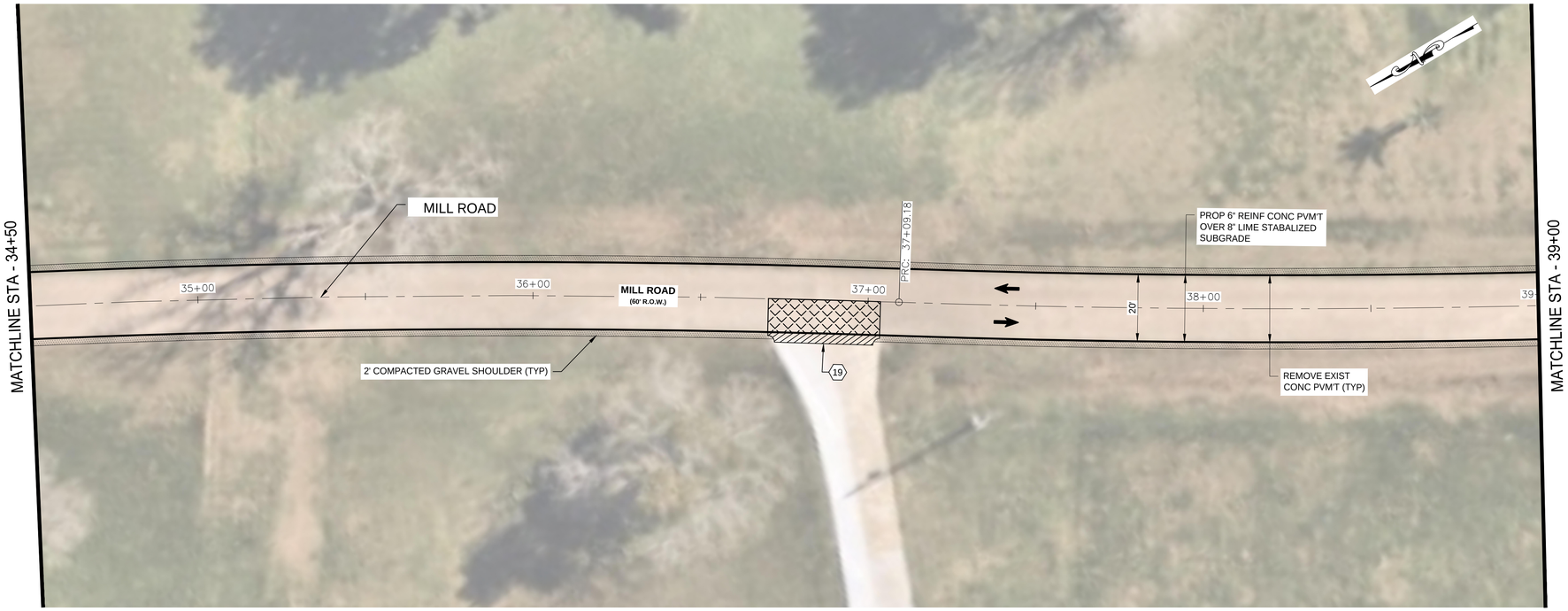
MILL ROAD PLAN VIEW
STA 28+00 TO STA 34+50

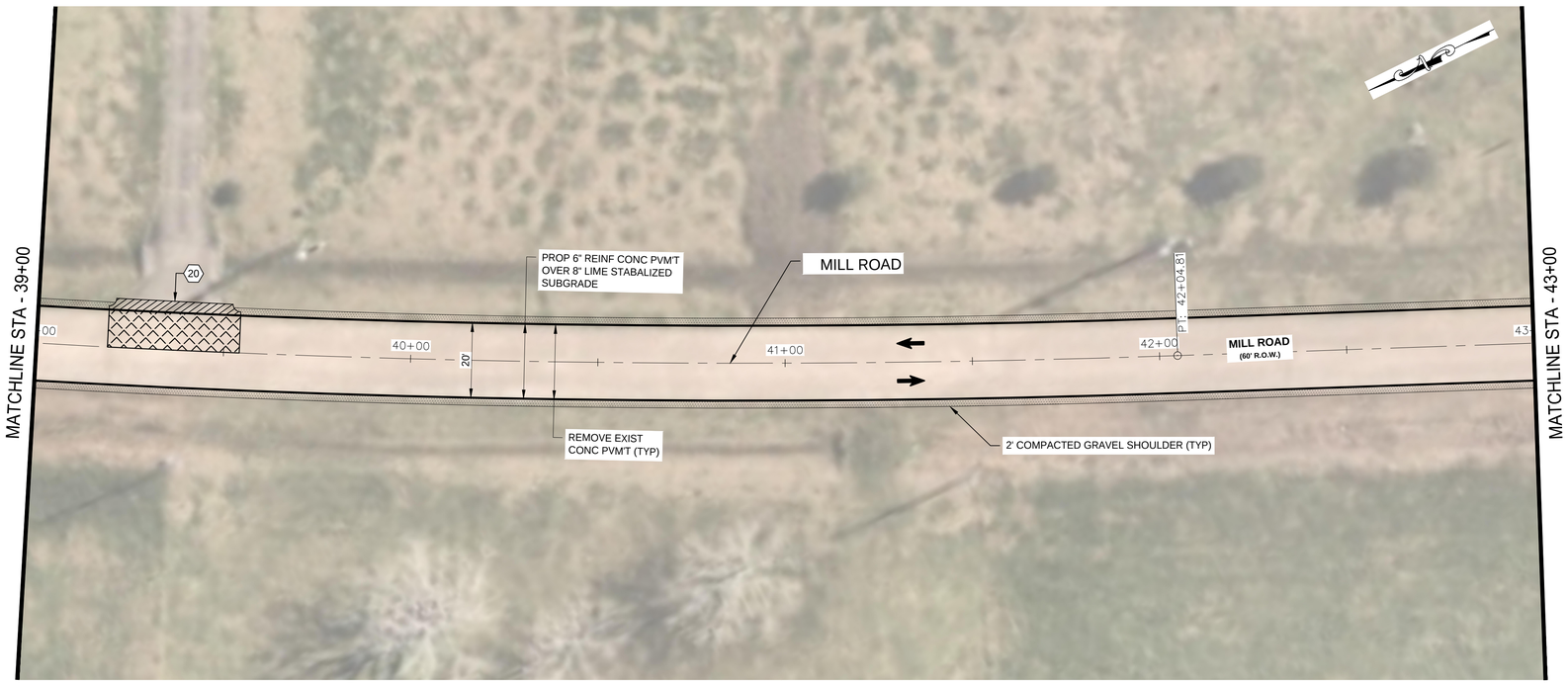
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		10 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaimiPeil
Last Saved: 4/8/2025 3:40 PM
Plot Date: 4/15/2025 1:13 PM
Drawing: N:\053744.0006 CAD\DWG\traffic_cbl_XX ROADWAY PLAN - MR





LEGEND

- HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT
- SAWCUT, REMOVE & REPLACE 3' OF EXISTING CONCRETE DRIVEWAY (MATCH EXISTING THICKNESS, MIN 6" THICK, HES CONCRETE)
- COMPACTED GRAVEL SHOULDER
- REMOVE EXISTING PAVEMENT
- TRAFFIC FLOW ARROW
- (X) DRIVEWAY NUMBER
  SEE SHEET 15 FOR "DRIVEWAY SCHEDULE" SHEET.

CONSTRUCTION NOTES

1. PROPOSED SAWED JOINT AND EXPOSE 15" OF REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE 2.
2. HORIZONTAL DOWELS SHALL BE 1" SMOOTH BARS (GRADE 60) 20-INCH LONG DRILLED AND EMBEDDED INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. DOWELS SHALL BE 12" C-C, UNLESS OTHERWISE SPECIFIED.
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20 0 10 20
SCALE: 1" = 20'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER
DATE: 4/15/2025

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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

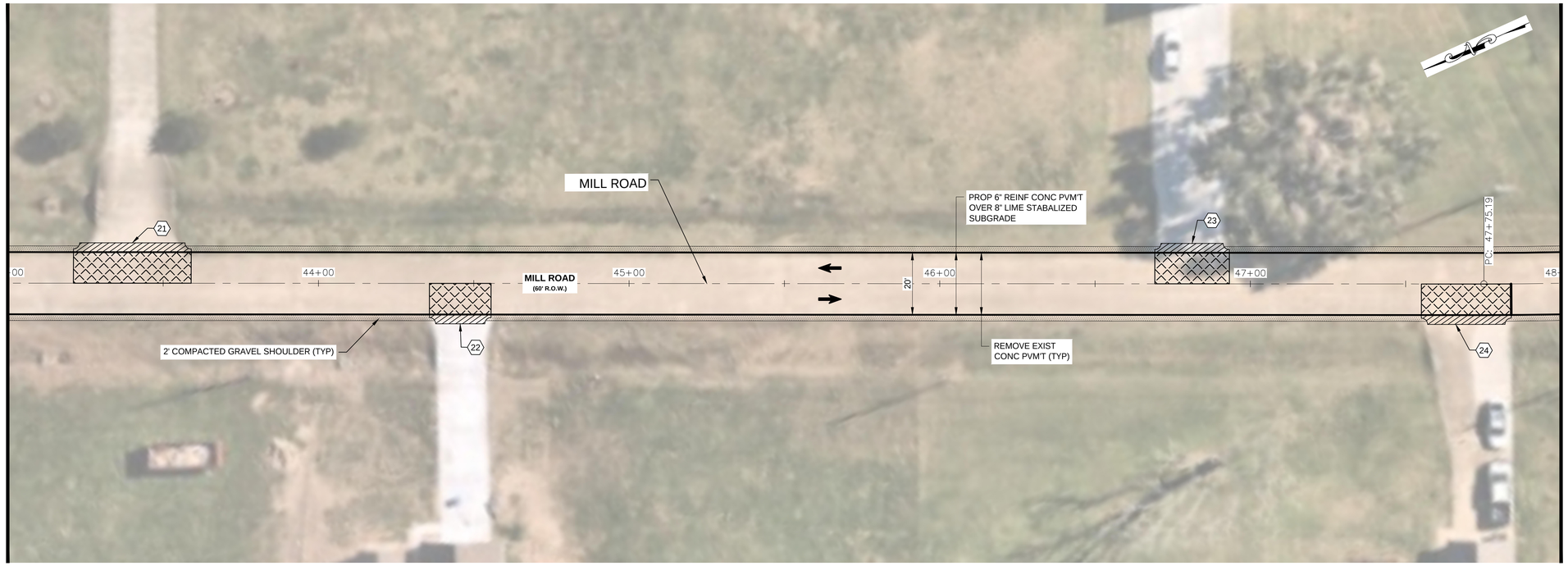
MILL ROAD PLAN VIEW
STA 34+50 TO STA 43+00

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		11 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaimiPeil
Last Saved: 4/8/2025 3:40 PM
Plot Date: 4/15/2025 1:31 PM
Drawing: N:\053744.0009\CAD\WORxfer\c_cbl_XX ROADWAY PLAN - MR





LEGEND

- HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT
- SAWCUT, REMOVE & REPLACE 3' OF EXISTING CONCRETE DRIVEWAY (MATCH EXISTING THICKNESS, MIN 6" THICK, HES CONCRETE)
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20 0 10 20

SCALE: 1" = 20'

STATE OF TEXAS
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LICENSED
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

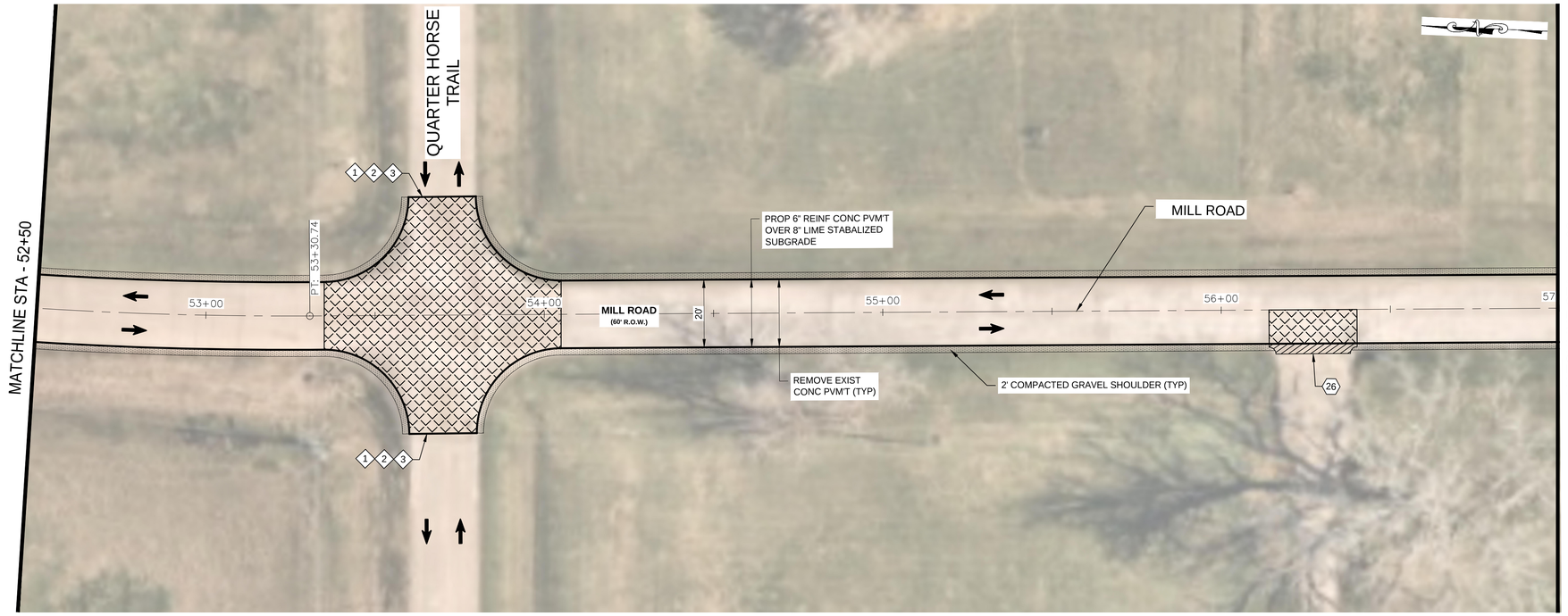
MILL ROAD PLAN VIEW
STA 43+00 TO STA 52+50

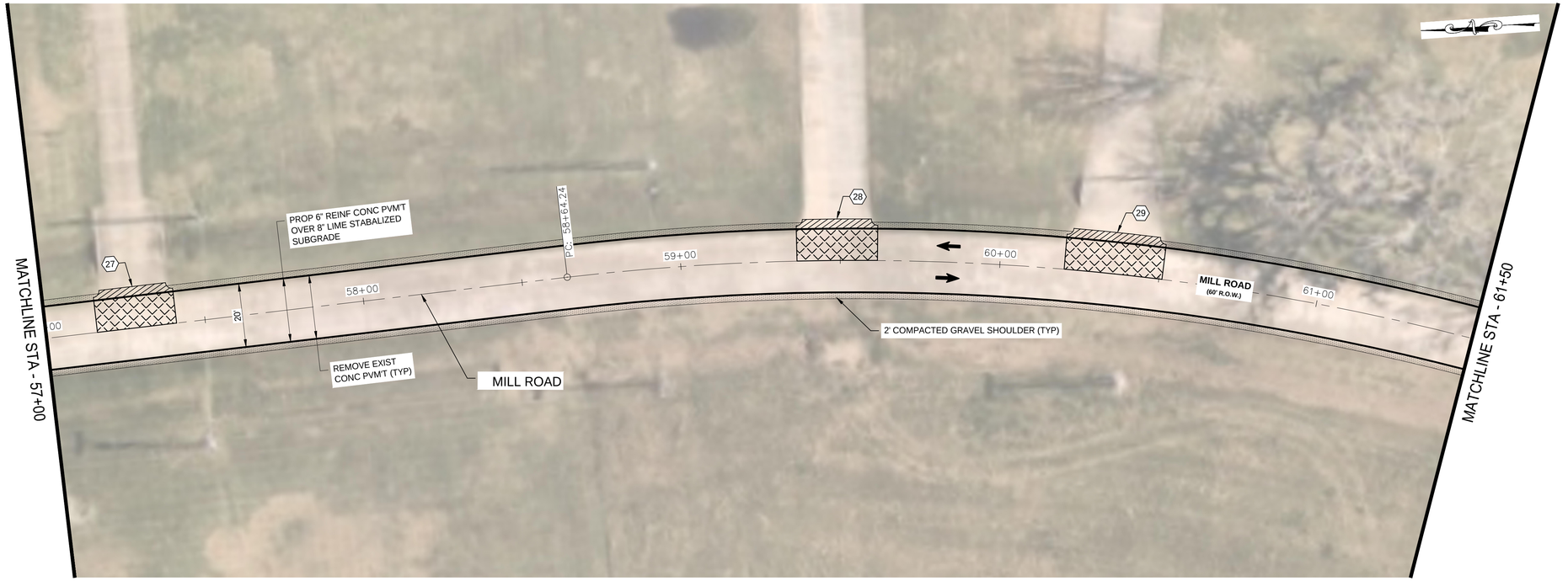
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		12 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaimiPrell
Last Saved: 4/8/2025 3:40 PM
Plotted: 4/15/2025 10:53 AM
Drawing: N:\053744.0006 CAD\0Working\Traffic_cbk_XX ROADWAY PLAN - MR





LEGEND

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20 0 10 20

SCALE: 1" = 20'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

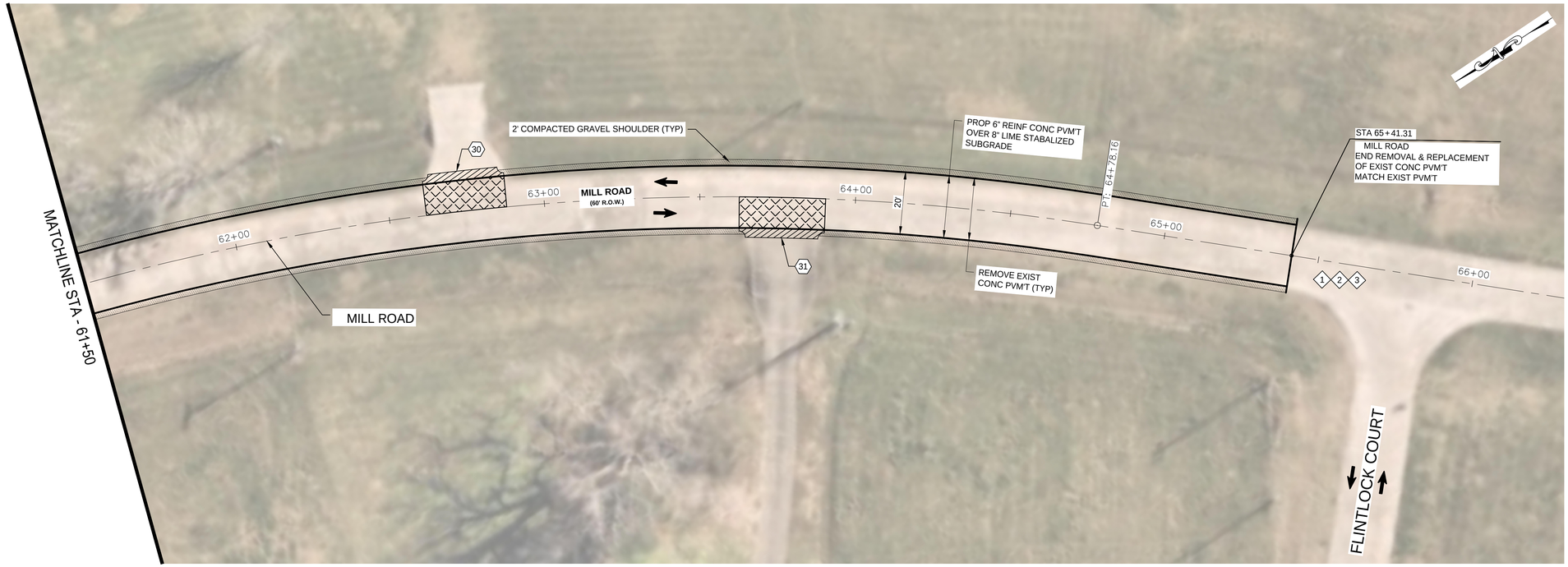
MILL ROAD PLAN VIEW
STA 52+50 TO STA 61+50

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		13 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JaimiReid
Last Saved: 4/8/2025 3:40 PM
Plot Date: 4/15/2025 11:51 AM
Drawing: N:\053744.0006 CAD\DWG\traffic cbl_XX ROADWAY PLAN - MR



LEGEND

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20 0 10 20

SCALE: 1" = 20'

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

MILL ROAD PLAN VIEW
STA 61+50 TO STA 66+25

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 20'	APRIL 2025		14 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

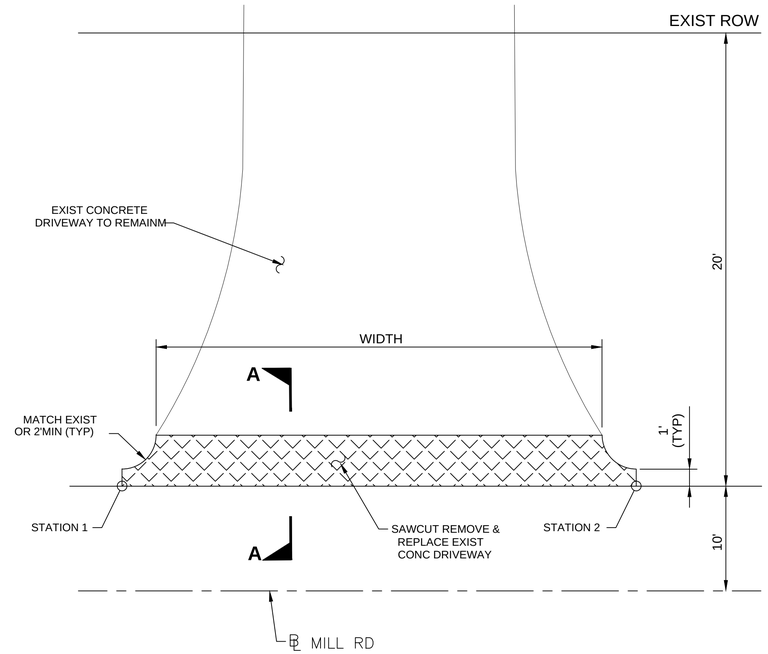
Last Saved by: JakobPell
Last Saved: 4/8/2025 3:40 PM
Plot Date/Time: 4/15/2025 11:01 AM
Drawing: N:\053714.0009 CAD\0\Traffic cad_XX ROADWAY PLAN - MR

MILL RD DRIVEWAY INFORMATION

DRIVEWAY		STATION	OFFSET	EXISTING WIDTH	EXISTING DRIVEWAY TYPE
1	1	14+75.28	10.00' LT	22.00'	CONCRETE
	2	15+01.07			
2	1	17+72.78	10.00' LT	19.00'	CONCRETE
	2	17+96.17			
3	1	18+91.08	10.00' RT	22.00'	CONCRETE
	2	19+17.09			
4	1	19+54.28	10.00' LT	25.00'	CONCRETE
	2	19+83.62			
5	1	21+15.46	10.00' LT	23.00'	CONCRETE
	2	21+42.73			
6	1	21+31.22	10.00' LT	16.00'	CONCRETE
	2	21+50.80			
7	1	23+09.21	10.00' RT	24.00'	CONCRETE
	2	23+37.13			
8	1	23+13.56	10.00' LT	30.00'	CONCRETE
	2	23+47.19			
9	1	23+65.10	10.00' RT	26.00'	CONCRETE
	2	23+95.41			
10	1	25+72.09	10.00' LT	16.00'	CONCRETE
	2	25+92.14			
11	1	26+20.60	10.00' LT	29.00'	CONCRETE
	2	26+53.34			
12	1	26+97.76	10.00' RT	26.00'	CONCRETE
	2	27+27.91			
13	1	27+75.33	10.00' RT	18.00'	CONCRETE
	2	27+97.27			
14	1	28+76.94	10.00' RT	20.00'	CONCRETE
	2	29+01.01			
15	1	29+10.74	10.00' RT	22.00'	CONCRETE
	2	29+36.67			
16	1	30+50.52	10.00' RT	20.00'	CONCRETE
	2	30+74.46			
17	1	31+61.20	10.00' RT	20.00'	CONCRETE
	2	31+85.14			
18	1	33+12.60	10.00' RT	20.00'	CONCRETE
	2	33+36.53			
19	1	36+70.23	10.00' RT	30.00'	CONCRETE
	2	37+03.70			

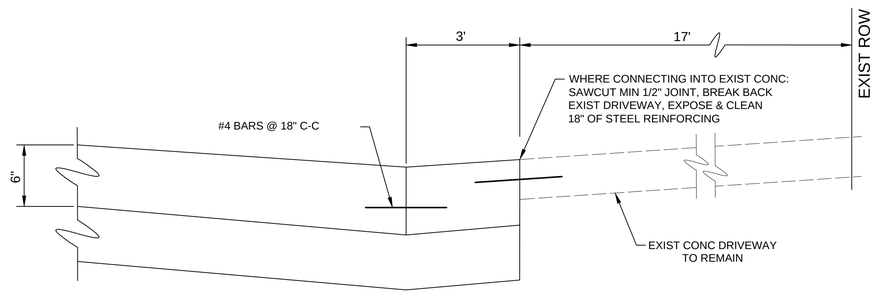
MILL RD DRIVEWAY INFORMATION

DRIVEWAY		STATION	OFFSET	EXISTING WIDTH	EXISTING DRIVEWAY TYPE
20	1	39+18.96	10.00' LT	31.00'	CONCRETE
	2	39+54.19			
21	1	43+21.12	10.00' LT	34.00'	CONCRETE
	2	43+59.03			
22	1	44+35.73	10.00' RT	16.00'	CONCRETE
	2	44+55.55			
23	1	46+69.26	10.00' LT	20.00'	CONCRETE
	2	46+93.26			
24	1	47+55.06	10.00' LT	25.00'	CONCRETE
	2	47+83.94			
25	1	50+30.84	10.00' LT	20.00'	CONCRETE
	2	50+53.06			
26	1	56+14.10	10.00' RT	22.00'	CONCRETE
	2	56+40.11			
27	1	57+16.05	10.00' LT	21.00'	CONCRETE
	2	57+41.03			
28	1	59+36.42	10.00' RT	22.00'	CONCRETE
	2	59+61.63			
29	1	60+20.19	10.00' LT	28.00'	CONCRETE
	2	60+51.01			
30	1	62+61.95	10.00' LT	23.00'	CONCRETE
	2	62+87.85			
31	1	63+62.63	10.00' RT	24.00'	CONCRETE
	2	63+90.42			



TYPICAL DRIVEWAY LAYOUT

NTS



SECTION A-A

NTS

NOTES:

1. STATION 1 AND STATION 2 ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EACH DRIVEWAY AND MATCH EXISTING WIDTH AND THICKNESS.
2. ALL EXISTING CULVERTS UNDER DRIVEWAYS SHALL REMAIN IN PLACE.

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

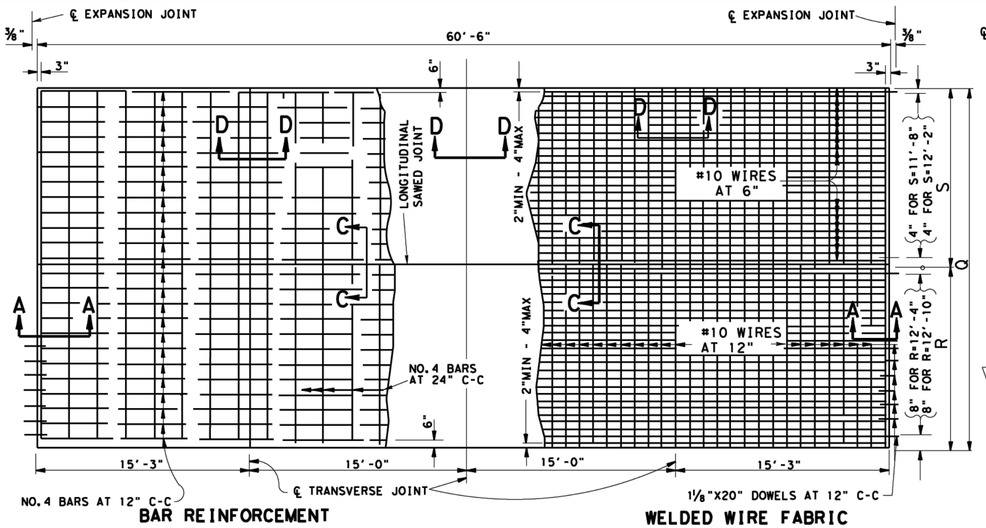
DRIVEWAY SCHEDULE

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		15 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved by: JoduRett
Last Saved: 4/15/2025 7:31 AM
Plot Date: 4/15/2025 7:31 AM
Drawing: N:\2027\44.0056.04\CADD\Civil\sc_cbk_XX DETAILS.MR

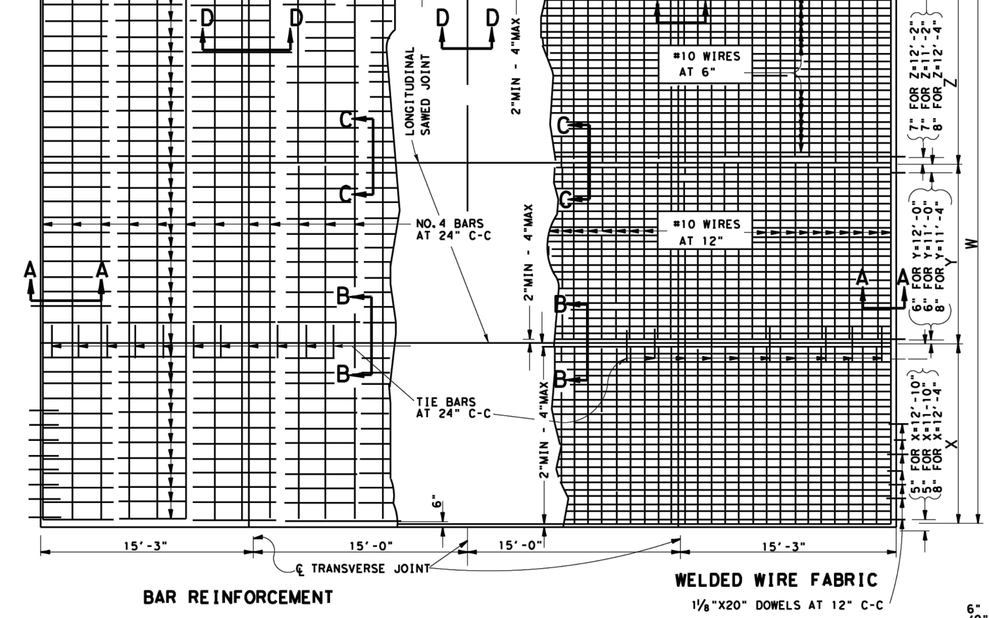


BAR REINFORCEMENT

WELDED WIRE FABRIC

TWO LANE PAVEMENT PLAN

	WIDTH - Q		
	24'-0"	24'-6"	25'-0"
R	12'-4"	12'-4"	12'-10"
S	11'-8"	12'-2"	12'-2"



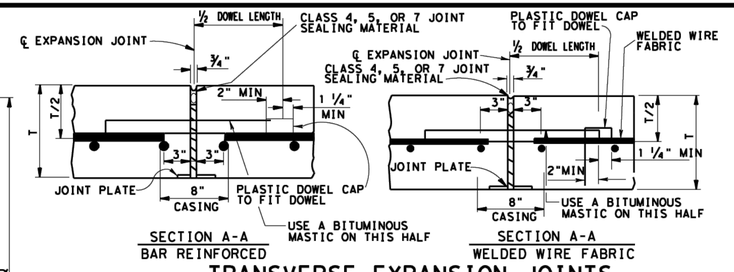
BAR REINFORCEMENT

WELDED WIRE FABRIC

THREE LANE PAVEMENT PLAN

	WIDTH - W		
	37'-0"	36'-0"	34-0"
X	12'-10"	12'-4"	11'-10"
Y	12'-0"	11'-4"	11'-0"
Z	12'-2"	12'-4"	11'-2"

D = DIAMETER
R = RADIUS
T = THICKNESS

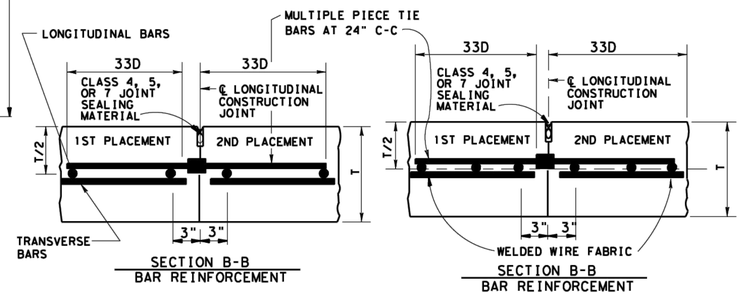


SECTION A-A
BAR REINFORCED

SECTION A-A
WELDED WIRE FABRIC

TRANSVERSE EXPANSION JOINTS

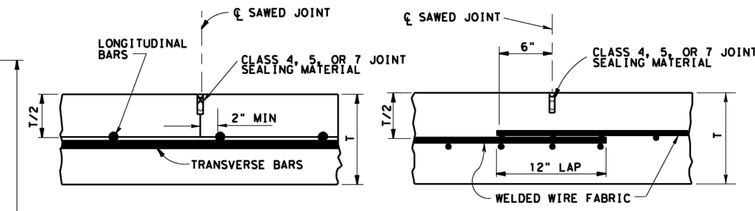
NOTE: DOWEL BARS CONFORMING TO ASTM A615 OR A616 GRADE 60 ARE ACCEPTABLE



SECTION B-B
BAR REINFORCEMENT

SECTION B-B
BAR REINFORCEMENT

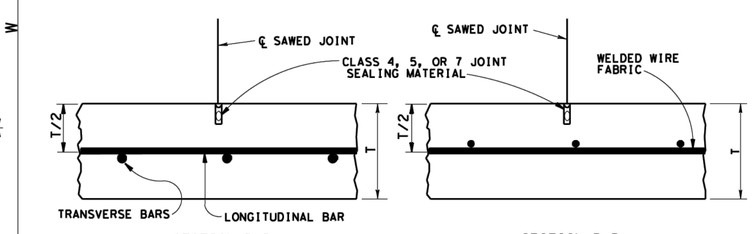
LONGITUDINAL CONSTRUCTION JOINTS



SECTION C-C
BAR REINFORCEMENT

SECTION C-C
WELDED WIRE FABRIC

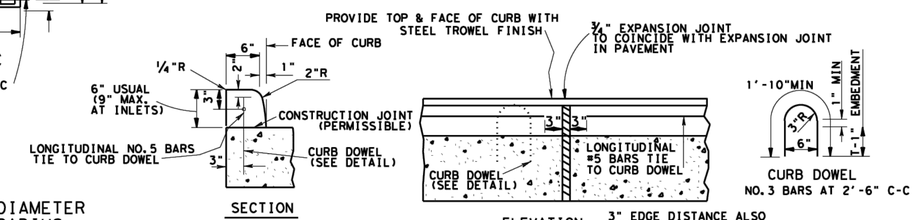
LONGITUDINAL SAWED JOINTS



SECTION D-D
BAR REINFORCEMENT

SECTION D-D
BAR REINFORCEMENT

TRANSVERSE SAWED JOINTS



SECTION

ELEVATION

3" EDGE DISTANCE ALSO APPLIES TO TRANSVERSE GROOVED PLANE JOINT IN CURB

TYPICAL 6" CURB (DETAIL)

GENERAL NOTES

1. MULTIPLE PIECE TIE BARS ARE REQUIRED AT LONGITUDINAL CONSTRUCTION JOINTS. USE MULTIPLE PIECE TIE BAR ASSEMBLIES WITH STOP TYPE COUPLINGS AND WITH THREADS ON THE BARS. ENSURE THE MULTIPLE PIECE TIE BAR ASSEMBLIES DEVELOP A MINIMUM ULTIMATE TENSILE STRENGTH EQUAL TO 1.25 TIMES THE YIELD STRENGTH OF THE TRANSVERSE BARS BEING JOINED. USE DEFORMED REINFORCING BARS FOR TIE BARS. TIE BAR ASSEMBLIES MADE FROM STEELS OTHER THAN ASTM GRADE 60 AND WITH DEFORMATIONS OTHER THAN ASTM STANDARD MAY BE USED IF IT CAN BE PROVEN TO THE ENGINEER THAT THEY ARE IN EVERY RESPECT THE EQUAL OF THE ASSEMBLIES SPECIFIED. LABORATORY TESTING OF THE PROPOSED ASSEMBLIES, AT THE CONTRACTOR'S EXPENSE, MAY BE REQUIRED.
2. FORM CONSTRUCTION JOINTS WITH METAL OR WOOD FORMS EQUAL IN DEPTH TO THE NOMINAL DEPTH OF THE PAVEMENT OR BY OTHER MEANS APPROVED PRIOR TO THEIR USE.
3. SAW LONGITUDINAL AND TRANSVERSE JOINTS AS SOON AS SAWING CAN BE ACCOMPLISHED WITHOUT DAMAGE TO THE PAVEMENT AND BEFORE 24 HOURS AFTER PLACING THE CONCRETE, THE EXACT TIME WILL BE APPROVED BY THE ENGINEER. PREFORMED JOINT WITH ASPHALT STRIP IS NOT ACCEPTABLE.
4. LONGITUDINAL JOINTS ARE SHOWN OFFSET FOUR INCHES FROM THE THEORETICAL LANE LINE AND MAY BE OFFSET TO EITHER SIDE IF THE WIDTH OF THE WIRE FABRIC IS PROPERLY ADJUSTED.
5. ONE OF THE LONGITUDINAL JOINTS OF PAVEMENT SLABS WIDER THAN TWO LANES MAY BE A CONSTRUCTION JOINT. FOR PAVEMENT SLABS WIDER THAN 15 FT. PROVIDE A LONGITUDINAL SAWED JOINT UNLESS OTHERWISE DIRECTED.
6. FORM THE JOINT SEAL SPACE AT TRANSVERSE EXPANSION JOINTS BY USING A STRAIGHT FORM PLACED BEHIND THE LONGITUDINAL FLOAT. LOOSEN THE FORM AS SOON AS THE CONCRETE WILL RETAIN ITS SHAPE AND EDGE WITH AN APPROVED EDGING TOOL. TOOL BOTH EDGES OF LONGITUDINAL CONSTRUCTION JOINTS TO A ⅛ IN. RADIUS AT THE PAVEMENT SURFACE.
7. DO NOT DISCHARGE CONCRETE FROM THE MIXER DIRECTLY ON TOP OF OR ON THE SIDES OF THE EXPANSION JOINT ASSEMBLIES.
8. LAP TRANSVERSE EDGES OF SHEETS OF WELDED WIRE FABRIC 12 INCHES EXCEPT AT TRANSVERSE EXPANSION JOINTS. LAP LONGITUDINAL EDGES 6 INCHES EXCEPT AT LONGITUDINAL CONSTRUCTION JOINTS.
9. DOWEL BARS MAY BE COATED WITH STAINLESS STEEL, MONEL METAL, OR IN ACCORDANCE WITH THE ITEM "REINFORCING STEEL" SECTION ON EPOXY COATING; WITH A WELDED DOWEL ASSEMBLY SUPPORT, AS APPROVED. ENSURE THE CASING CONFORMS TO THE REQUIREMENTS OF ONE OF THE GRADES OF ASTM A167-70 OR A176-71 AND IS NOT LESS THAN 0.010 INCH THICK. PROVIDE A CASING AT LEAST 8 INCHES LONG AND THAT COVERS THE MIDDLE 8 INCHES OF THE DOWEL.
10. SECURE DOWELS PARALLEL TO THE PAVEMENT SURFACE AND PERPENDICULAR TO THE JOINT WITH THE AID OF APPROVED WELDED WIRE BASKET ARRANGEMENTS. ENSURE WELDED WIRE BASKET ARRANGEMENTS DO NOT CROSS THE EXPANSION JOINT. UNIFORMLY COAT DOWELS WITH A BITUMINOUS MASTIC ON THE END WITH THE DOWEL CAP.
11. DO NOT BEND TIE BARS AND DOWEL BARS. TO PREVENT DISPLACEMENT OF WIRE FABRIC BY CONCRETE PLACEMENT, TIE THE FABRIC PANEL TOGETHER AND TIE THE INITIAL FABRIC PANELS OF EACH SLAB TO THE DOWEL BASKET OR AS DIRECTED.
12. TOOL PAVEMENT EDGES TO A RADIUS OF ⅛ IN. WITH AN APPROVED EDGING TOOL.
13. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS, AND CROWN-SLOPE ARE ELSEWHERE SHOWN ON THE PLANS.
14. THE CONTRACTOR HAS THE OPTION OF USING WELDED WIRE FABRIC OR BAR REINFORCEMENT. LOCATE THE LONGITUDINAL STEEL AT THE CENTER OF THE SLAB. TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE FINAL POSITION OF STEEL IS WITHIN ½ IN. OF THE SLAB CENTER. ENSURE THE LONGITUDINAL AND TRANSVERSE STEEL SPACING DOES NOT VARY MORE THAN ONE-TWELFTH OF SPACING SHOWN.
15. LONGITUDINAL STEEL MAY BE SPLICED WITH 33 TIMES BAR DIAMETER LAPS.
16. FOR LANE WIDTHS NOT SHOWN OR FOR VARIABLE PANEL LENGTHS AND WIDTHS, SPACE REINFORCING STEEL AND DOWELS AS DIRECTED.
17. USE APPROVED BAR MAT CHAIRS. DO NOT EXCEED CHAIR SPACING OF 30 IN. C-C (TRANSVERSE) AND 48 IN. C-C (LONGITUDINAL). GALVANIZING THE CHAIRS IS NOT REQUIRED.
18. OBTAIN BOARDS FOR EXPANSION JOINT FILLER FROM REDWOOD TIMBER.
19. PROVIDE AND CONSTRUCT THE JOINT PLATE AS APPROVED.
20. WHEN CURB IS PLACED SEPARATELY FROM THE CONCRETE PAVEMENT, PROVIDE THE REINFORCING STEEL AS SHOWN IN THE CURB DETAIL. THE CURB REINFORCING STEEL MAY BE OMITTED WHEN THE CURB IS PLACED MONOLITHICALLY.

(GENERAL NOTES CONTINUED ON SHEET 2 OF 2)

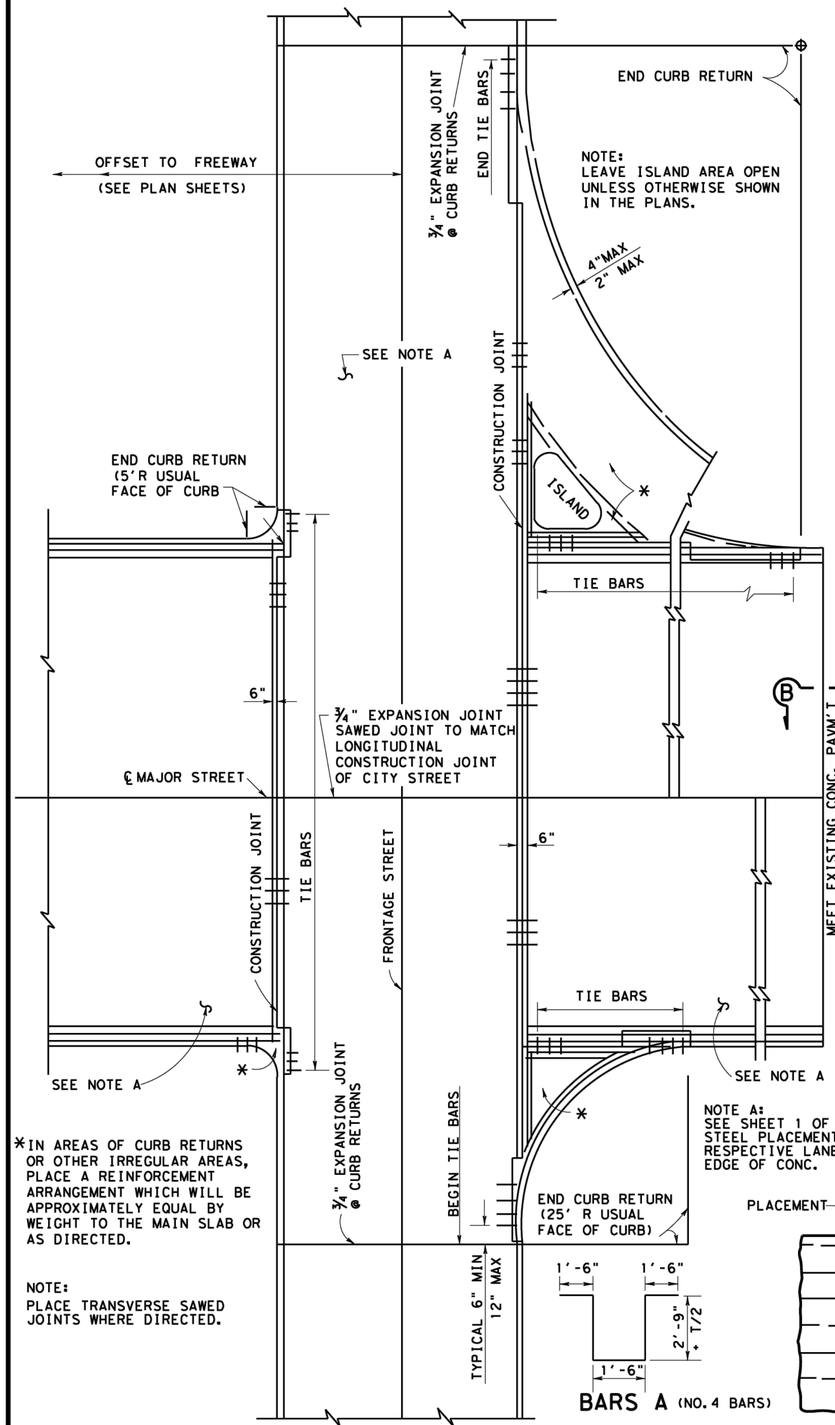
Texas Department of Transportation
Houston District

JOINTED REINFORCED CONCRETE PAVEMENT DETAILS

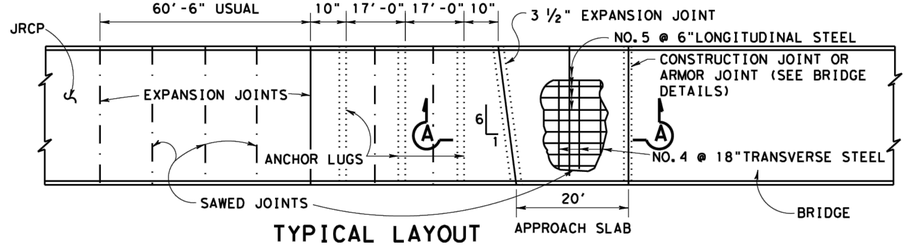
(FOR PAVEMENT THICKNESS 10 INCHES OR LESS)

JRCP

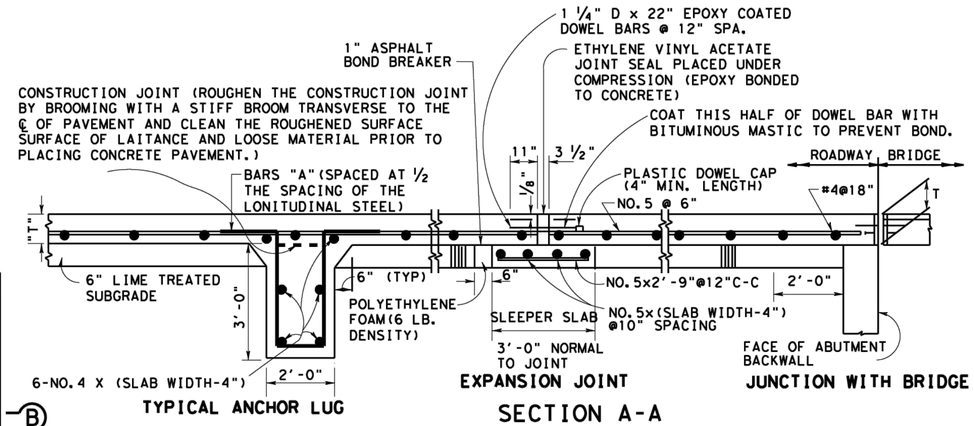
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©TxDOT MAR. 2004	DIST	FED REG	PROJECT NO.	SHEET
REVISIONS 5/05 2004 SPECS 7/10 ADDED NOTE 2/15 2014 SPECS	HOU	6	BAR X, PHASE V - MILL RD	16 OF 48
	COUNTY	CONTROL	SECT JOB	HIGHWAY



INTERSECTION OF MAJOR STREET WITH FRONTAGE STREET TYPICAL REINFORCING PLAN

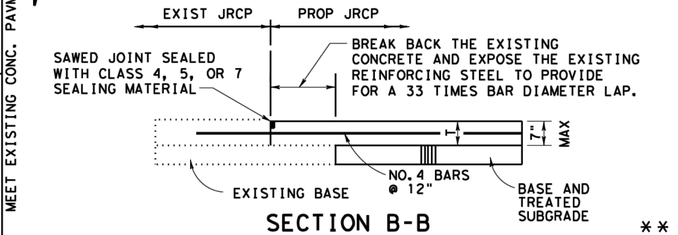


TYPICAL LAYOUT
(TERMINAL ANCHORAGE AT BRIDGES)



TYPICAL ANCHOR LUG | **EXPANSION JOINT** | **JUNCTION WITH BRIDGE**

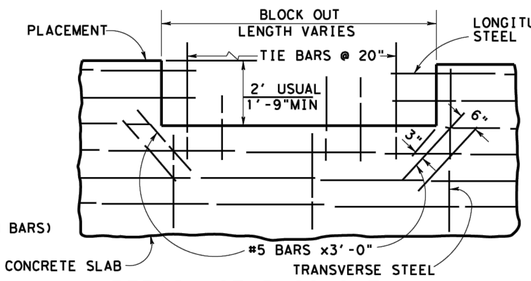
SECTION A-A



SECTION B-B
(FOR PROPOSED PAVEMENT DEPTHS OF 7" MAX)

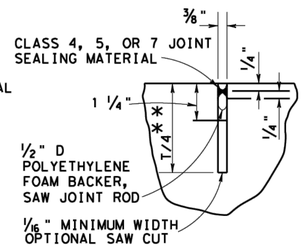
REPLACE ANY BENT LONGITUDNIAL REINFORCING. IF THERE IS NOT SUFFICIENT EXPOSED REINFORCING TO PROVIDE A MINIMUM OF A 33 TIMES BAR DIAMETER LAP, REMOVE THE EXISTING PAVEMENT AND SUFFICIENTLY EXPOSE THE EXISTING REINFORCING TO PROVIDE A 33 TIMES BAR DIAMETER LAP. REPLACE ANY SHEAR BARS THAT ARE DISTURBED, BY DRILLING AND GROUTING AS REQUIRED BY NOTE #29. PERFORM THIS CORRECTIVE ACTION AT NO EXPENSE TO THE DEPARTMENT.

NOTE A:
SEE SHEET 1 OF 2 FOR STEEL PLACEMENT FOR THE RESPECTIVE LANE WIDTHS. EDGE OF CONC.

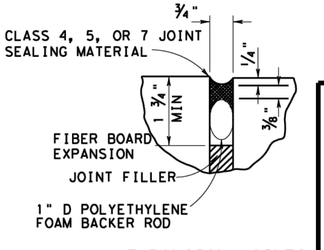


DETAIL OF BLOCKOUT

*OMIT TIE BARS @ INLET BLOCK-OUT



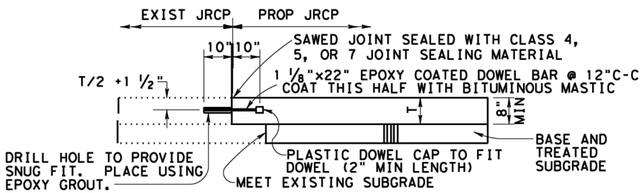
SAWED JOINT



EXPANSION JOINTS

** IF SILICEOUS RIVER GRAVEL IS USED AS THE COARSE AGGREGATE, THIS DEPTH IS T/3.

JOINT SEALING DETAILS



SECTION B-B
(FOR PROPOSED PAVEMENT DEPTHS OF 8" MIN)

GENERAL NOTES (CONTINUED FROM SHEET 1 OF 2)

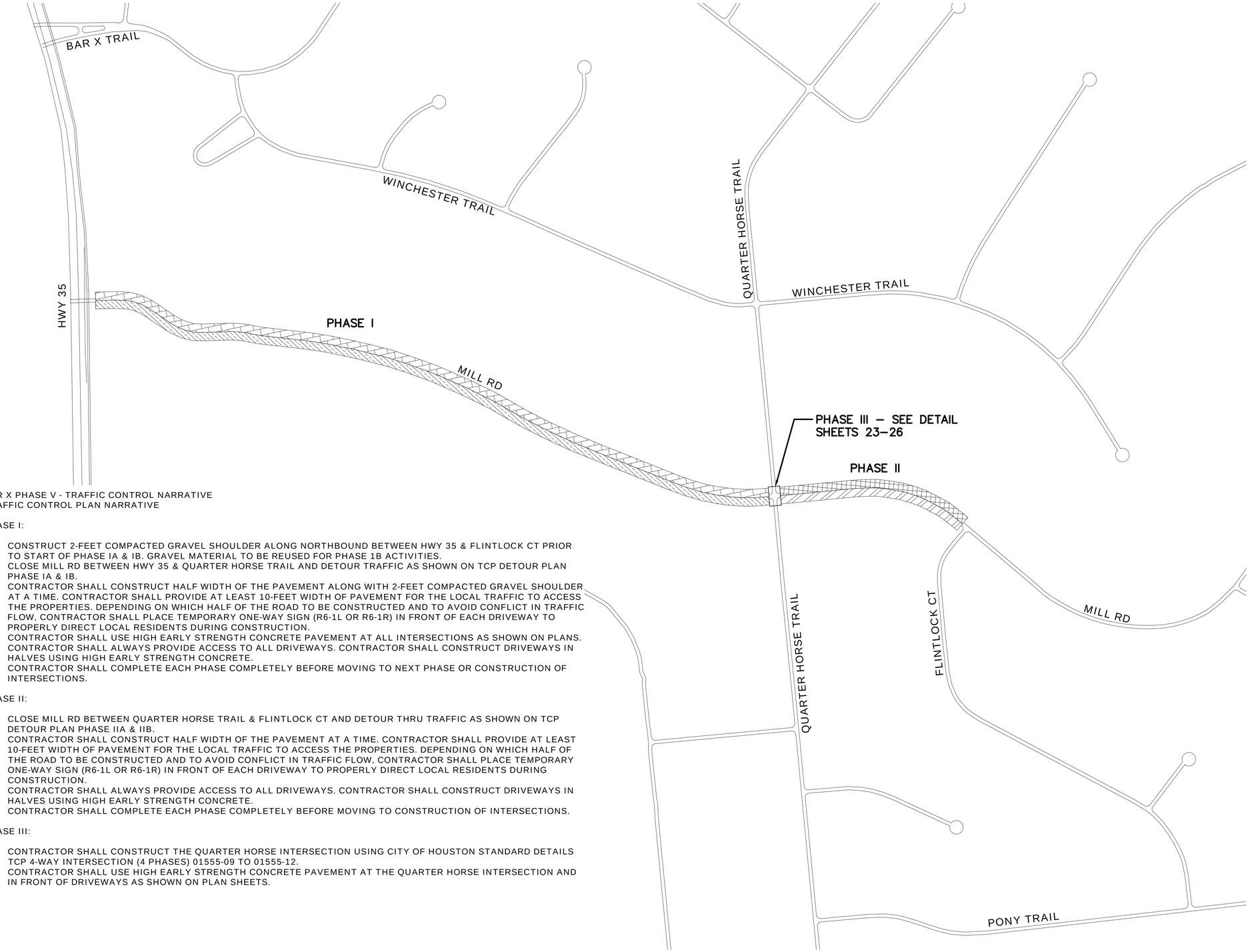
21. CONSTRUCT ANCHOR LUGS, EXPANSION JOINTS, AND SLEEPER SLABS AS DETAILED IN SECTION A-A. THESE WILL BE PAID FOR IN ACCORDANCE WITH ITEM, "CONCRETE PAVEMENT TERMINALS."
22. REINFORCING STEEL FOR TERMINAL ANCHOR SYSTEMS MAY BE GRADE 40 OR GRADE 60.
23. PLACE CONCRETE FOR ANCHOR LUGS AS SOON AS POSSIBLE AFTER COMPLETING EXCAVATION, TO PRESERVE THE INHERENT SOIL CHARACTERISTICS. EXCAVATING FOR AND PLACING CONCRETE FOR ANCHOR SYSTEM MAY BE IN PREFORMED SECTIONS CORRESPONDING TO THE WIDTH OF PAVING PLACEMENT.
24. APPLY A STEEL TROWEL FINISH TO SLEEPER SLABS AND AND COAT WITH AN ASPHALT BOND BREAKER.
25. THE DETAILS FOR ANCHORS, LUGS, EXPANSION JOINTS, AND SLEEPER SLABS ARE NOT APPLICABLE UNLESS SHOWN ELSEWHERE IN THE PLANS.
26. APPROACH SLAB WILL BE PAID FOR IN ACCORDANCE WITH THE ITEM "CONCRETE STRUCTURES."
27. WITHIN 5 MINUTES OF SAWING, COMPLETELY REMOVE THE RESULTING SLURRY FROM THE JOINT BY FLUSHING WITH HIGH PRESSURE WATER. THEN ALLOW THE JOINT TO DRY FOR A MINIMUM OF 48 HOURS BEFORE SANDBLASTING THE JOINT.
28. DO NOT SHEAR CUT DOWEL BARS.
29. SIZE ADDITIONAL SHEAR BARS AS LONGITUDIAL BARS AND SPACE THEM MIDWAY BETWEEN ALTERNATE LONGITUDINAL BARS ALONG THE TRANSVERSE CONSTRUCTION JOINT FORMED AT THE LEAVE-OUT.
30. IF THE CONCRETE DESIGN REQUIRES GREATER THAN 5.5 SACKS OF CEMENTITIOUS MATERIAL PER CUBIC YARD, WRITTEN APPROVAL BY THE AREA ENGINEER WILL BE REQUIRED. ENSURE CONCRETE PAVEMENT MIXES PLACED FROM APRIL 1 TO OCTOBER 31 CONTAIN A MINIMUM OF 25 PERCENT BY WEIGHT OF CLASS "F" FLY ASH.
31. IN LOCATIONS WHERE THE PLANS CALL FOR FAST TRACK CONCRETE PAVEMENT IN LIEU OF JRCP (LAID ON COMPACTED OR STABILIZED SUBGRADE), USE DETAILS IN THIS STANDARD IN CONJUNCTION WITH THE APPROPRIATE FAST TRACK CONCRETE SPECIFICATION. IF THE JRCP IS LAID UPON A BASE STRUCTURE, ADD 3" TO THE FAST TRACK PAVEMENT THICKNESS TO COMPENSATE FOR THE BASE.

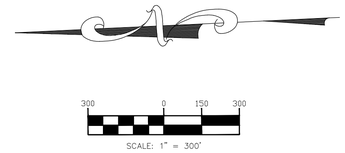
Texas Department of Transportation
Houston District

JOINTED REINFORCED CONCRETE PAVEMENT DETAILS
EXPANSION JOINT DESIGN
(FOR PAVEMENT THICKNESS 10 INCHES OR LESS)

JRCP SHEET 2 OF 2

FILE: STDB-2.dgn	DN:	CK:	DW:	CK:
© TxDOT MAR. 2004	DIST	FED REG	PROJECT NO.	SHEET
REVISIONS 5/05 2004 SPECS 7/2010 ADDED NOTE 9/2013 ADDED NOTE	HOU	6	BAR X, PHASE V - MILL RD	17 OF 48
	COUNTY	CONTROL	SECT	JOB	HIGHWAY





LEGEND

- PHASE IA - REFER TO SHEET 19
- PHASE IB - REFER TO SHEET 20
- PHASE IIA - REFER TO SHEET 21
- PHASE IIB - REFER TO SHEET 22

BAR X PHASE V - TRAFFIC CONTROL NARRATIVE
TRAFFIC CONTROL PLAN NARRATIVE

PHASE I:

1. CONSTRUCT 2-FEET COMPACTED GRAVEL SHOULDER ALONG NORTHBOUND BETWEEN HWY 35 & FLINTLOCK CT PRIOR TO START OF PHASE IA & IB. GRAVEL MATERIAL TO BE REUSED FOR PHASE 1B ACTIVITIES.
2. CLOSE MILL RD BETWEEN HWY 35 & QUARTER HORSE TRAIL AND DETOUR TRAFFIC AS SHOWN ON TCP DETOUR PLAN PHASE IA & IB.
3. CONTRACTOR SHALL CONSTRUCT HALF WIDTH OF THE PAVEMENT ALONG WITH 2-FEET COMPACTED GRAVEL SHOULDER AT A TIME. CONTRACTOR SHALL PROVIDE AT LEAST 10-FEET WIDTH OF PAVEMENT FOR THE LOCAL TRAFFIC TO ACCESS THE PROPERTIES. DEPENDING ON WHICH HALF OF THE ROAD TO BE CONSTRUCTED AND TO AVOID CONFLICT IN TRAFFIC FLOW, CONTRACTOR SHALL PLACE TEMPORARY ONE-WAY SIGN (R6-1L OR R6-1R) IN FRONT OF EACH DRIVEWAY TO PROPERLY DIRECT LOCAL RESIDENTS DURING CONSTRUCTION.
4. CONTRACTOR SHALL USE HIGH EARLY STRENGTH CONCRETE PAVEMENT AT ALL INTERSECTIONS AS SHOWN ON PLANS.
5. CONTRACTOR SHALL ALWAYS PROVIDE ACCESS TO ALL DRIVEWAYS. CONTRACTOR SHALL CONSTRUCT DRIVEWAYS IN HALVES USING HIGH EARLY STRENGTH CONCRETE.
6. CONTRACTOR SHALL COMPLETE EACH PHASE COMPLETELY BEFORE MOVING TO NEXT PHASE OR CONSTRUCTION OF INTERSECTIONS.

PHASE II:

1. CLOSE MILL RD BETWEEN QUARTER HORSE TRAIL & FLINTLOCK CT AND DETOUR THRU TRAFFIC AS SHOWN ON TCP DETOUR PLAN PHASE IIA & IIB.
2. CONTRACTOR SHALL CONSTRUCT HALF WIDTH OF THE PAVEMENT AT A TIME. CONTRACTOR SHALL PROVIDE AT LEAST 10-FEET WIDTH OF PAVEMENT FOR THE LOCAL TRAFFIC TO ACCESS THE PROPERTIES. DEPENDING ON WHICH HALF OF THE ROAD TO BE CONSTRUCTED AND TO AVOID CONFLICT IN TRAFFIC FLOW, CONTRACTOR SHALL PLACE TEMPORARY ONE-WAY SIGN (R6-1L OR R6-1R) IN FRONT OF EACH DRIVEWAY TO PROPERLY DIRECT LOCAL RESIDENTS DURING CONSTRUCTION.
3. CONTRACTOR SHALL ALWAYS PROVIDE ACCESS TO ALL DRIVEWAYS. CONTRACTOR SHALL CONSTRUCT DRIVEWAYS IN HALVES USING HIGH EARLY STRENGTH CONCRETE.
4. CONTRACTOR SHALL COMPLETE EACH PHASE COMPLETELY BEFORE MOVING TO CONSTRUCTION OF INTERSECTIONS.

PHASE III:

1. CONTRACTOR SHALL CONSTRUCT THE QUARTER HORSE INTERSECTION USING CITY OF HOUSTON STANDARD DETAILS TCP 4-WAY INTERSECTION (4 PHASES) 01555-09 TO 01555-12.
2. CONTRACTOR SHALL USE HIGH EARLY STRENGTH CONCRETE PAVEMENT AT THE QUARTER HORSE INTERSECTION AND IN FRONT OF DRIVEWAYS AS SHOWN ON PLAN SHEETS.

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Plot By: JasluthiH 4/15/2025 7:20 AM
Drawing: N:\2057\4a\606 CAD\WG\traffic_cs_XX TCP PLAN - MR

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

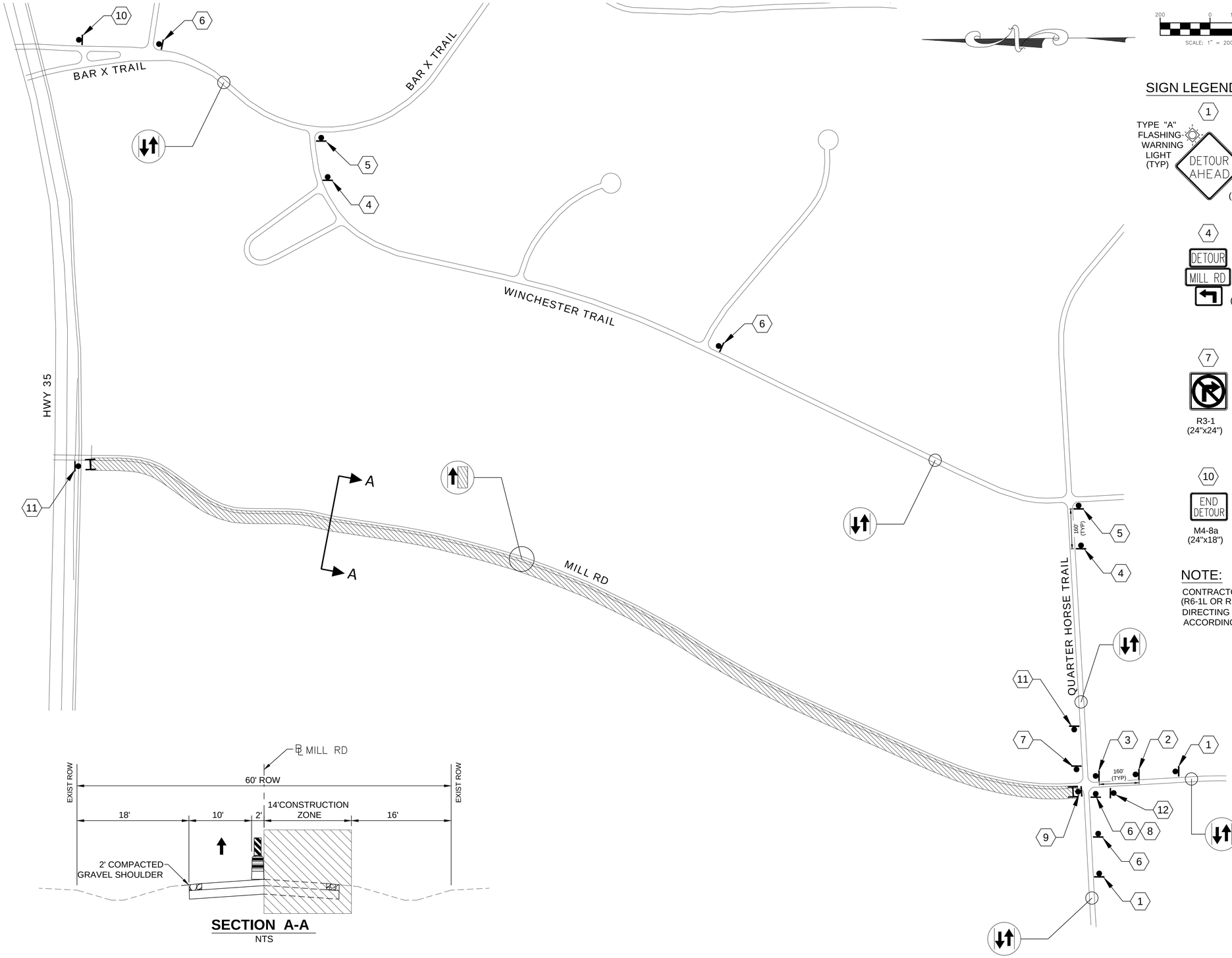
CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

OVERALL TRAFFIC CONTROL PLAN

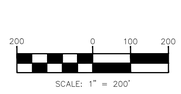
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 300'	APRIL 2025		18 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301



SECTION A-A
NTS



LEGEND:

- CONSTRUCTION ZONE
- TEMP SIGN (SPACING 160' MIN)
- TYPE III BARRICADE
- DIRECTION OF TRAFFIC

SIGN LEGEND:

1. TYPE "A" FLASHING WARNING LIGHT (TYP) — DETOUR AHEAD — W20-2d (36"x36")
2. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M5-1R (21"x15")
3. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M6-1R (21"x15")
4. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M5-1L (21"x15")
5. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M6-1L (21"x15")
6. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M6-3 (21"x15")
7. R3-1 (24"x24")
8. R3-2 (24"x24")
9. ROAD CLOSED — R11-2 (48"x30")
10. END DETOUR — M4-8a (24"x18")
11. TYPE "A" FLASHING WARNING LIGHT (TYP) — ROAD CONSTRUCTION AHEAD — W20-1d (36"x36")
12. END CONSTRUCTION — G20-2 (36"x18")

NOTE:

CONTRACTOR SHALL INSTALL APPROPRIATE ONE WAY SIGN (R6-1L OR R, 36"X12") IN FRONT OF EACH DRIVEWAY DIRECTING THE TRAFFIC IN THE RIGHT DIRECTION ACCORDING TO THE TRAFFIC CONTROL PHASE.

STATE OF TEXAS
MARK L. MILLER
135379
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

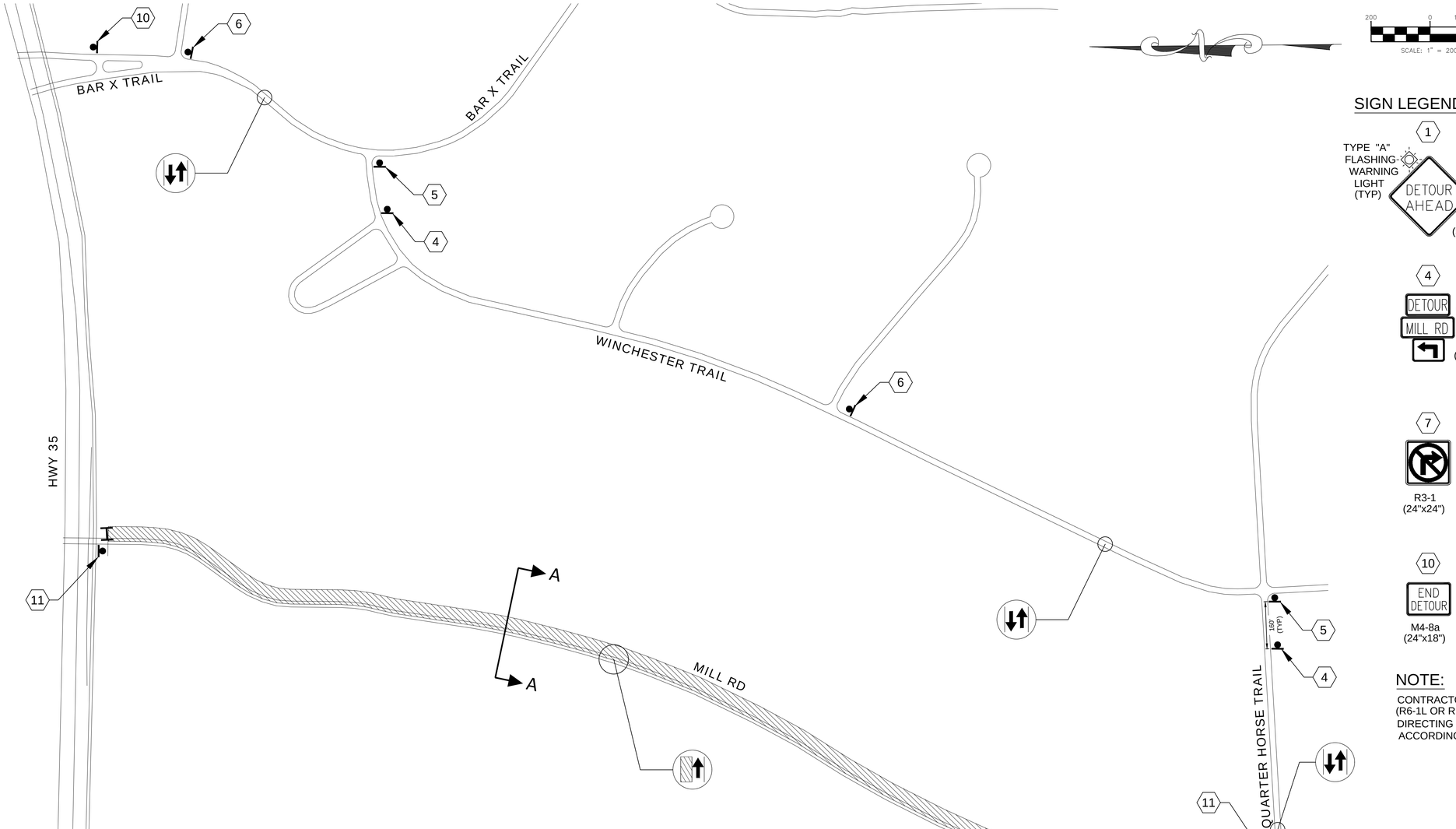
TCP DETOUR PLAN
PHASE IA

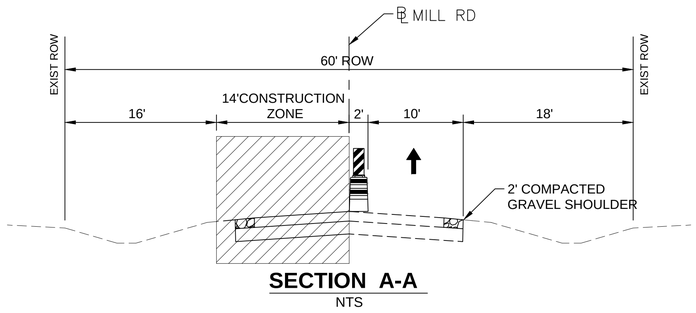
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 200'	APRIL 2025		19 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

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SECTION A-A
NTS

200 0 100 200
SCALE: 1" = 200'

LEGEND:

- CONSTRUCTION ZONE
- TEMP SIGN (SPACING 160' MIN)
- TYPE III BARRICADE
- DIRECTION OF TRAFFIC

SIGN LEGEND:

1. TYPE "A" FLASHING WARNING LIGHT (TYP) — DETOUR AHEAD — W20-2d (36"x36")
2. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M5-1R (21"x15")
3. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M6-1R (21"x15")
4. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M5-1L (21"x15")
5. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M6-1L (21"x15")
6. DETOUR — M4-8 (24"x12") / MILL RD — M4-9N / M6-3 (21"x15")
7. R3-1 (24"x24")
8. R3-2 (24"x24")
9. ROAD CLOSED — R11-2 (48"x30")
10. END DETOUR — M4-8a (24"x18")
11. TYPE "A" FLASHING WARNING LIGHT (TYP) — ROAD CONSTRUCTION AHEAD — W20-1d (36"x36")
12. END CONSTRUCTION — G20-2 (36"x18")

NOTE:

CONTRACTOR SHALL INSTALL APPROPRIATE ONE WAY SIGN (R6-1L OR R, 36"X12") IN FRONT OF EACH DRIVEWAY DIRECTING THE TRAFFIC IN THE RIGHT DIRECTION ACCORDING TO THE TRAFFIC CONTROL PHASE.

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

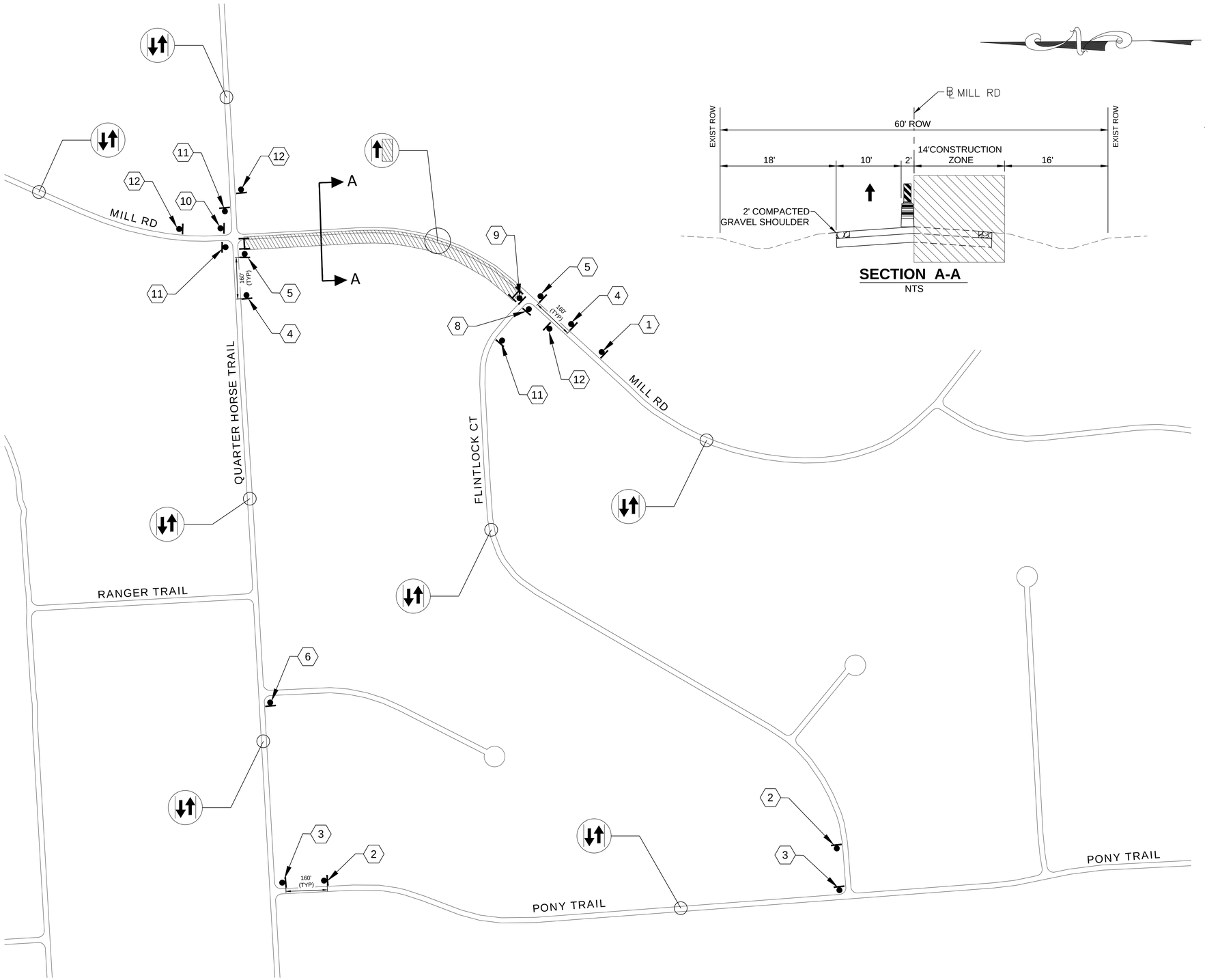
TCP DETOUR PLAN
PHASE IB

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 200'	APRIL 2025		20 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

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Last Saved: 4/15/2025 7:19 AM
Plotted: Apr 15, 2025 - 7:20AM
Drawing: N:\2021\44.0006 CAD\DWG\traffic_cs_X4 TCP PLAN - MR



SECTION A-A
NTS



LEGEND:

- CONSTRUCTION ZONE
- TEMP SIGN (SPACING 160' MIN)
- TYPE III BARRICADE
- DIRECTION OF TRAFFIC

SIGN LEGEND:

1. TYPE "A" FLASHING WARNING LIGHT (TYP) — DETOUR AHEAD — W20-2d (36"x36")
2. DETOUR / MILL RD — M4-8 (24"x12") / M4-9N / M5-1R (21"x15")
3. DETOUR / MILL RD — M4-8 (24"x12") / M4-9N / M6-1R (21"x15")
4. DETOUR / MILL RD — M4-8 (24"x12") / M4-9N / M5-1L (21"x15")
5. DETOUR / MILL RD — M4-8 (24"x12") / M4-9N / M6-1L (21"x15")
6. DETOUR / MILL RD — M4-8 (24"x12") / M4-9N / M6-3 (21"x15")
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11. TYPE "A" FLASHING WARNING LIGHT (TYP) — ROAD CONSTRUCTION AHEAD — W20-1d (36"x36")
12. END CONSTRUCTION — G20-2 (36"x18")

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STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

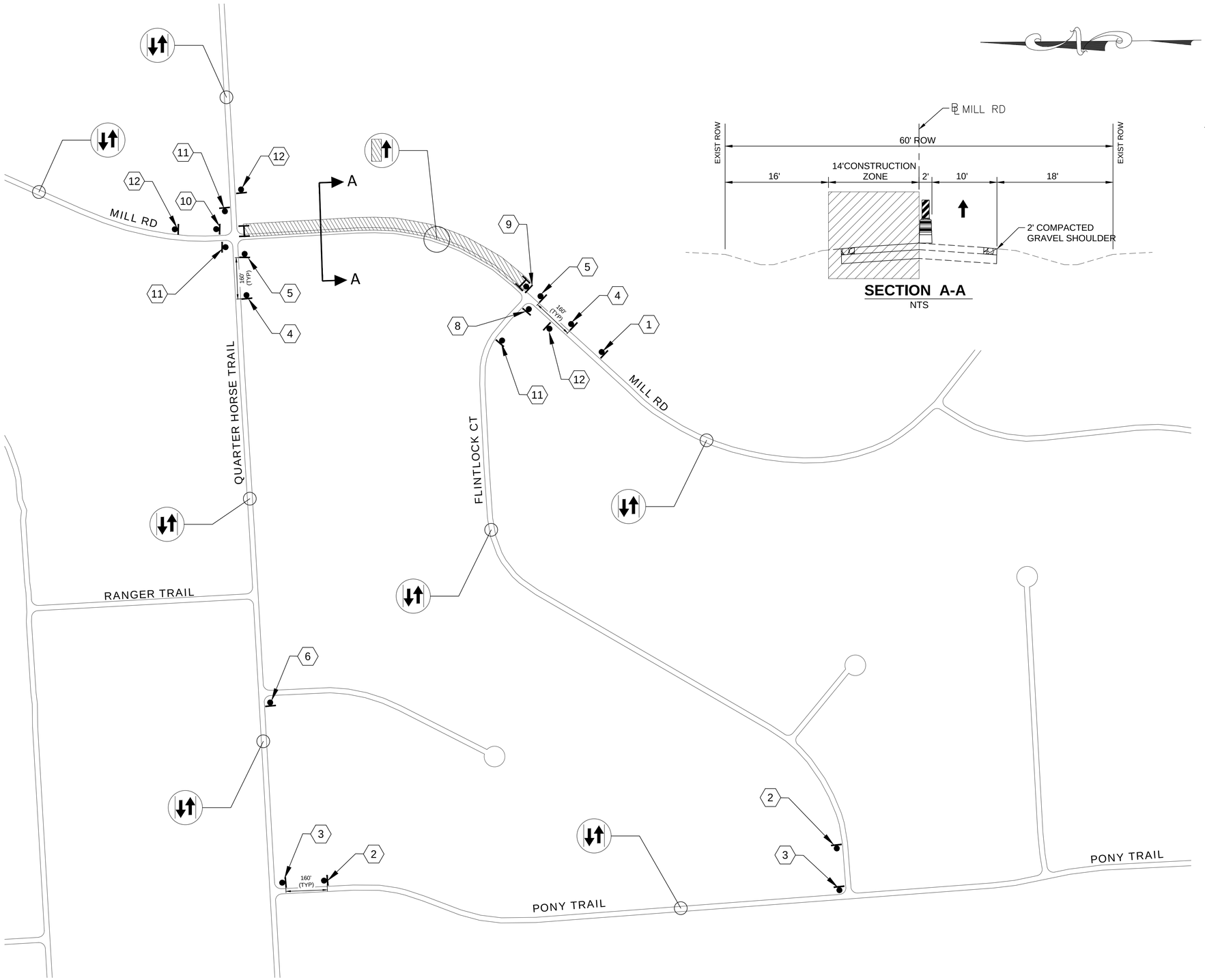
TCP DETOUR PLAN
PHASE IIA

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 200'	APRIL 2025		21 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

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Last Saved: 4/15/2025 7:19 AM
Plot Date/Time: 4/15/2025 7:20 AM
Drawing: N:\2037\4\005\6 DAD\6WGI\traffic-csk_XX TCP PLAN - MR



SECTION A-A
NTS



LEGEND:

- CONSTRUCTION ZONE
- TEMP SIGN (SPACING 160' MIN)
- TYPE III BARRICADE
- DIRECTION OF TRAFFIC

SIGN LEGEND:

1. TYPE "A" FLASHING WARNING LIGHT (TYP) — DETOUR AHEAD — W20-2d (36"x36")
2. DETOUR / MILL RD — M4-8 (24"x12"), M4-9N, M5-1R (21"x15")
3. DETOUR / MILL RD — M4-8 (24"x12"), M4-9N, M6-1R (21"x15")
4. DETOUR / MILL RD — M4-8 (24"x12"), M4-9N, M5-1L (21"x15")
5. DETOUR / MILL RD — M4-8 (24"x12"), M4-9N, M6-1L (21"x15")
6. DETOUR / MILL RD — M4-8 (24"x12"), M4-9N, M6-3 (21"x15")
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10. END DETOUR — M4-8a (24"x18")
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STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

TCP DETOUR PLAN
PHASE IIB

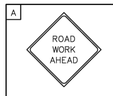
ANGLETON, BRAZORIA COUNTY, TEXAS

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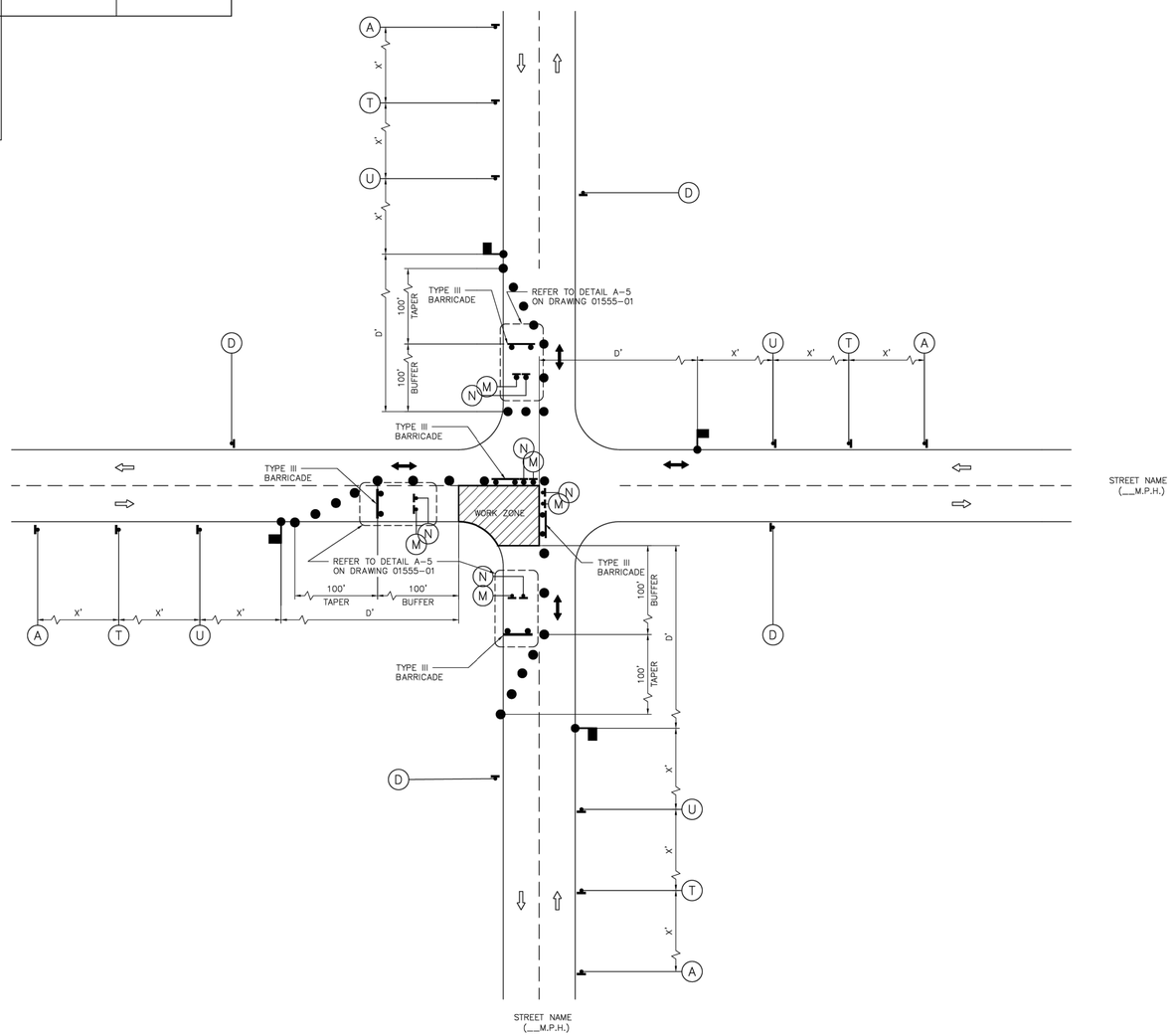
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TBPELS SURVEYING FIRM NO. 10074301

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A	T	U	D
 CW20-1	 CW20-4	 CW20-7	 G20-2

M	N
 R5-1	 R11-2



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. MINOR WORK AND DAYTIME OPERATIONS ONLY.
2. REFER TO PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR DIMENSIONS REFER TO SHEET 01555-01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.
5. MAX. 100' WORK ZONE AT A TIME.

APPROVED BY:	APPROVED BY:
DocuSigned by: Sukat Kanwar	DocuSigned by: KHANG NGUYEN
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: DocuSigned by: Carl Haddock	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO: 01555-09

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

TCP TYPICAL CONSTRUCTION ZONE AT A 4-WAY INTERSECTION (LOW VOLUME TRAFFIC) PHASE 1 OF 4

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE

NOT TO SCALE

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH ITS USE. THE ENGINEER OF RECORD FOR EACH PROJECT USING THIS DESIGN REQUIREMENT IS RESPONSIBLE FOR THE DESIGN FEATURES AND ASSETS INCLUDED IN THE PROJECT PLANS. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.
WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON SHALL NOT BE HELD LIABLE FOR ANY DAMAGES RESULTING FROM THE USE OF THIS STANDARD.

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER
DATE: 4/15/2025

NO.	DATE	REVISION

Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

TCP 4-WAY INTERSECTION
SHEET 1 OF 4

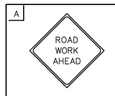
ANGLETON, BRAZORIA COUNTY, TEXAS

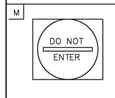
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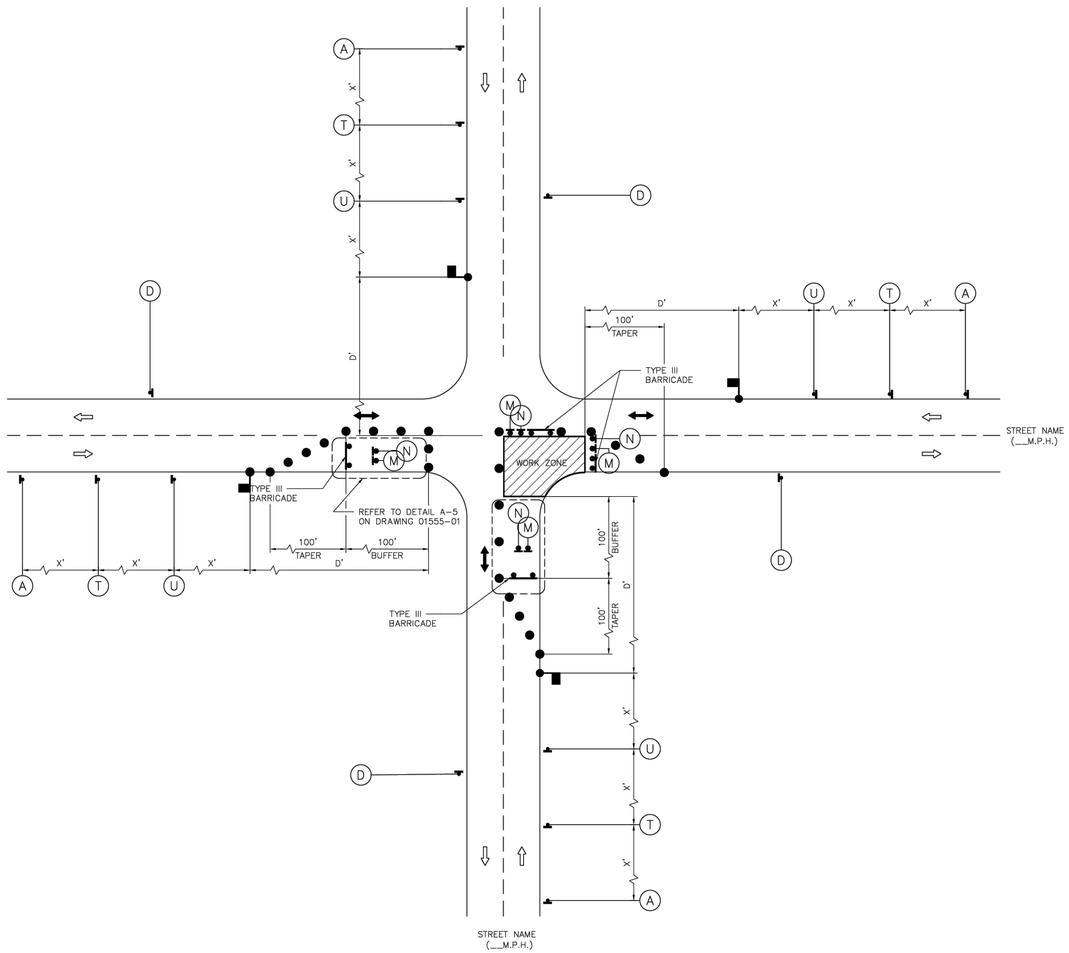
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TBPELS SURVEYING FIRM NO. 10074301

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A	T	U	D
			
CW20–1	CW20–4	CW20–7	G20–2

M	N
	
R5–1	R11–2



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. MINOR WORK AND DAYTIME OPERATIONS ONLY.
2. REFER TO PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR DIMENSIONS REFER TO SHEET 01555–01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.
5. MAX. 100' WORK ZONE AT A TIME.

APPROVED BY:	APPROVED BY:
DocuSigned by: Sukat Kanwar 9EF8B0C094 1F0478...	DocuSigned by: HIMING NGUYEN 551A2991F0A7084C0...
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: DocuSigned by: Carol Haddock A0A1C41BF2304D3...	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV–27–2023	DWG NO: 01555–10

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

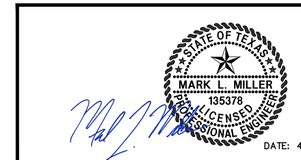
TCP TYPICAL CONSTRUCTION ZONE AT A 4–WAY INTERSECTION (LOW VOLUME TRAFFIC) PHASE 2 OF 4

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE

NOT TO SCALE

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE USER OF THE STANDARD IS RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SAFETY PRECAUTIONS USED IN CONFORMITY WITH OSHA STANDARDS. THE USER IS RESPONSIBLE TO REVIEW THESE DESIGNS AND ASSESS THEIR APPROPRIATENESS TO THE SITE CONDITIONS AND FOR FUTURE CHANGES THAT MAY AFFECT ITS USE. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.
WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES



DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

TCP 4-WAY INTERSECTION
SHEET 2 OF 4

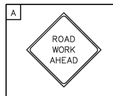
ANGLETON, BRAZORIA COUNTY, TEXAS

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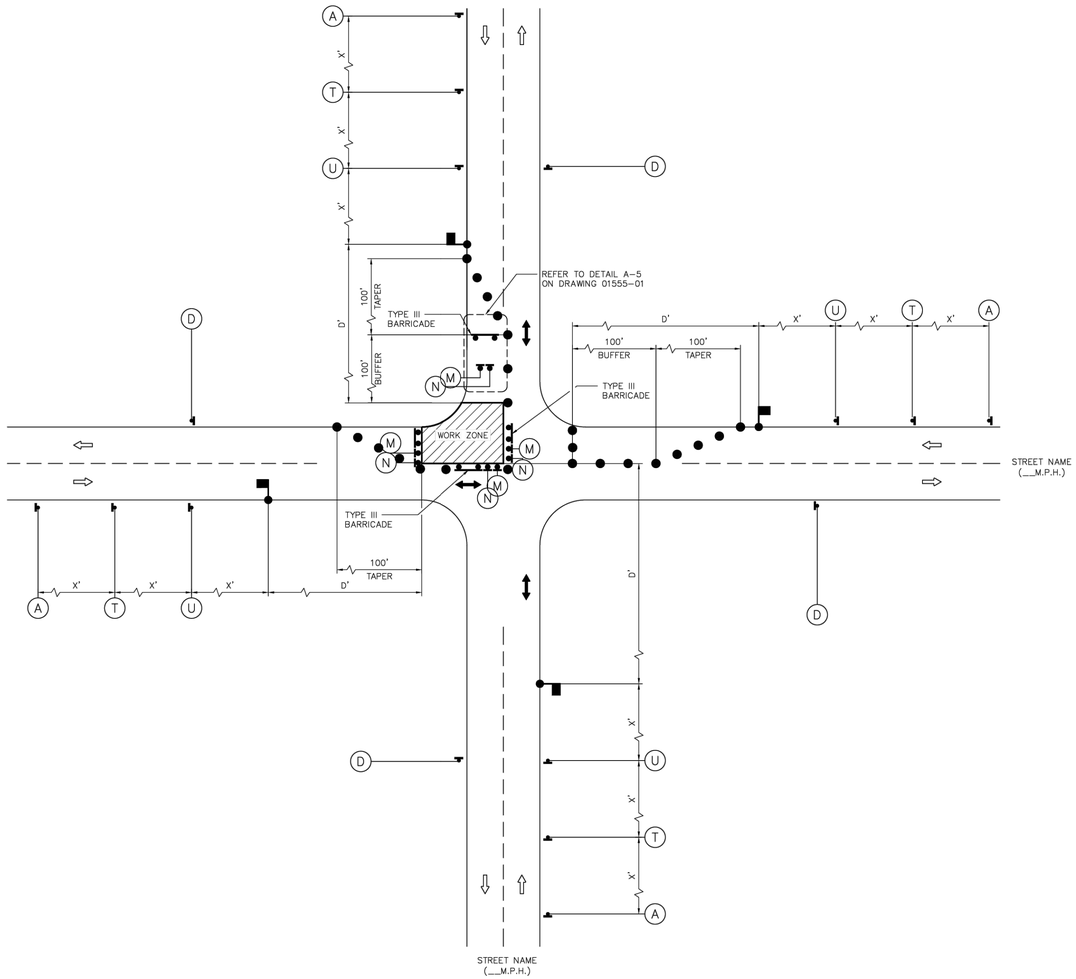
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TBPELS SURVEYING FIRM NO. 10074301

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A	T	U	D
			
CW20-1	CW20-4	CW20-7	G20-2

M	N
	
R5-1	R11-2



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. MINOR WORK AND DAYTIME OPERATIONS ONLY.
2. REFER TO PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR DIMENSIONS REFER TO SHEET 01555-01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.
5. MAX. 100' WORK ZONE AT A TIME.

APPROVED BY:	APPROVED BY:
DocuSigned by: Sukat Kanwar 9EF8B0C094 FF0478...	DocuSigned by: HIHUNG NGUYEN 55A2091F0A7084C0...
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: DocuSigned by: Carl Haddock A0A1C41DB72B3433...	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO: 01555-11

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

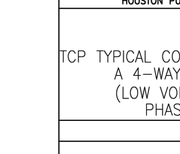
TCP TYPICAL CONSTRUCTION ZONE AT A 4-WAY INTERSECTION (LOW VOLUME TRAFFIC) PHASE 3 OF 4

FOR CITY OF HOUSTON USE ONLY

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DISCLAIMER:
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DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

TCP 4-WAY INTERSECTION
SHEET 3 OF 4

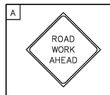
ANGLETON, BRAZORIA COUNTY, TEXAS

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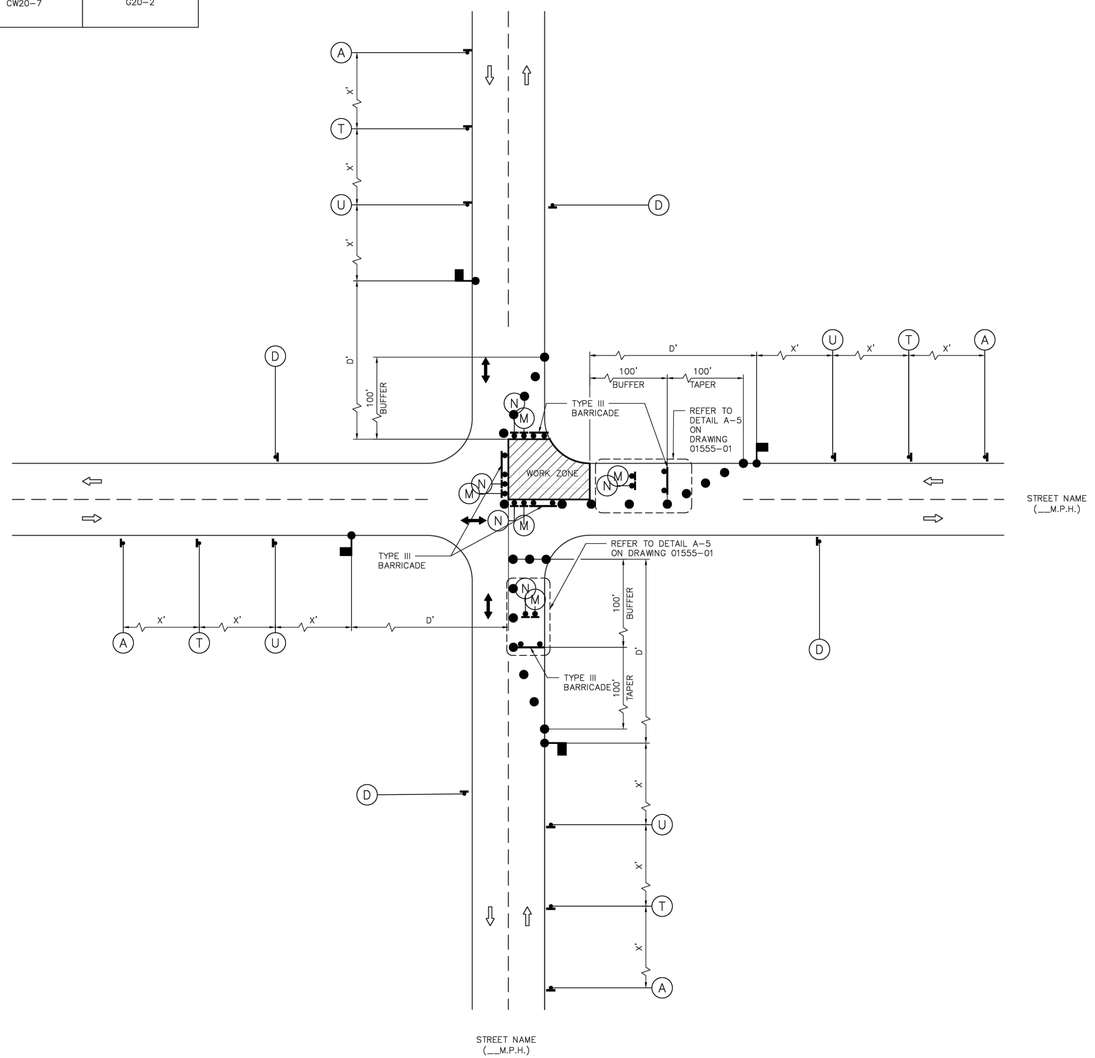
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TBPELS SURVEYING FIRM NO. 10074301

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CW20-1	CW20-4	CW20-7	G20-2

M	N
	
R5-1	R11-2



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. MINOR WORK AND DAYTIME OPERATIONS ONLY.
2. REFER TO PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR DIMENSIONS REFER TO SHEET 01555-01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.
5. MAX. 100' WORK ZONE AT A TIME.

APPROVED BY:	APPROVED BY:
DocuSigned by: Sukut Kunwar	DocuSigned by: LETHUNG NGUYEN
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: DocuSigned by: Carol Haddock — DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO: 01555-12

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

TCP TYPICAL CONSTRUCTION ZONE AT A 4-WAY INTERSECTION (LOW VOLUME TRAFFIC) PHASE 4 OF 4

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE

NOT TO SCALE

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TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

STATE OF TEXAS — MARK L. MILLER — 135378 — LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

TCP 4-WAY INTERSECTION
SHEET 4 OF 4

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		26 OF 48

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DATE:
FILE:

BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP)is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.

11. Traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

2. Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1. Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.

2. Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation

Traffic Safety Division Standard

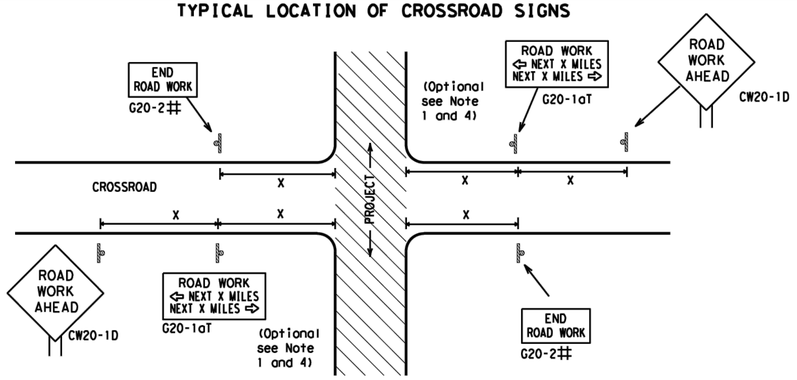
BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

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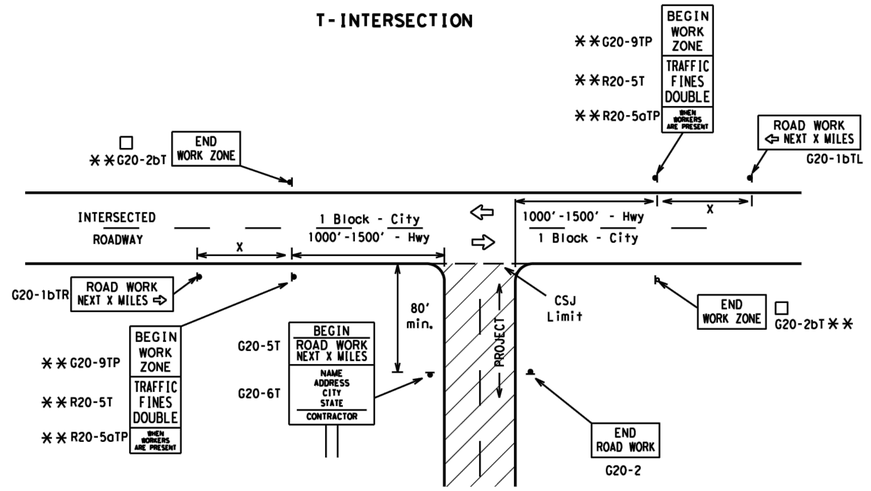
TYPICAL LOCATION OF CROSSROAD SIGNS



May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING[1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign △ Spacing "X"
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
*	*[3]

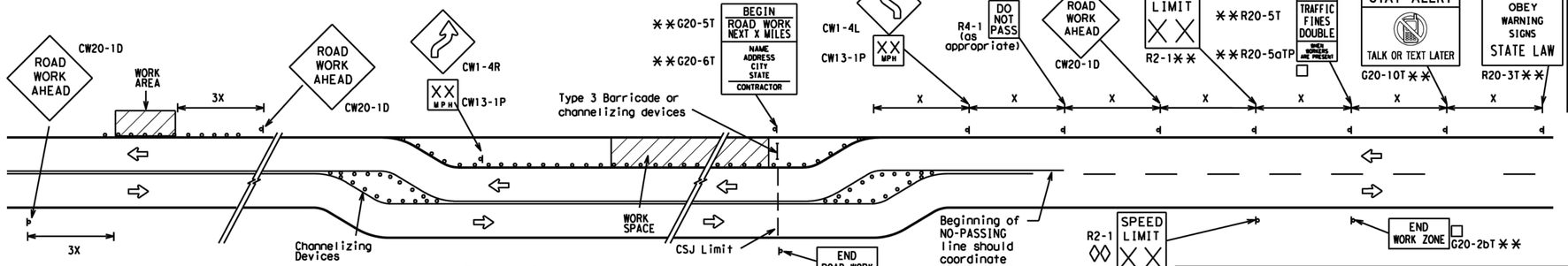
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

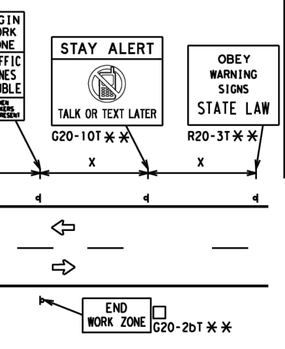
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS

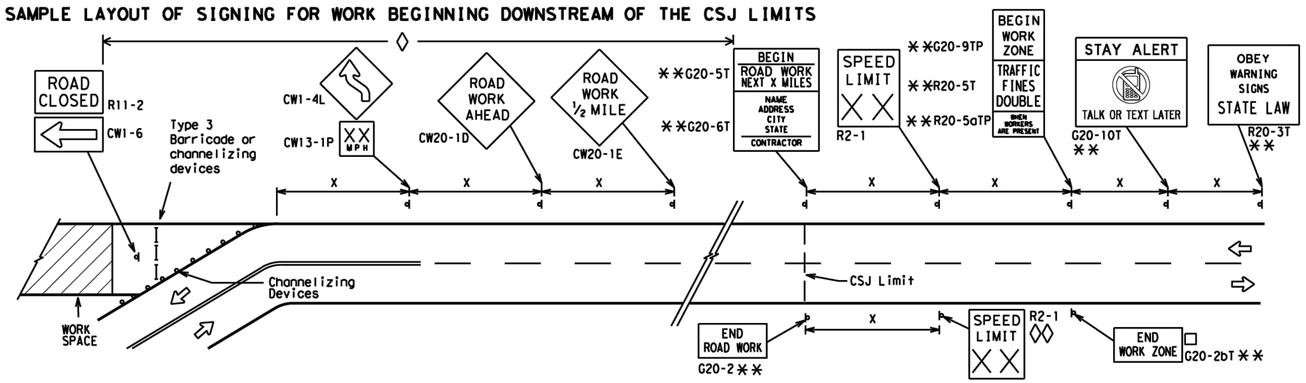


When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS



SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

□ The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

** CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

◊ Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

◊◊ Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND

⟼	Type 3 Barricade
○○○	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

SHEET 2 OF 12

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

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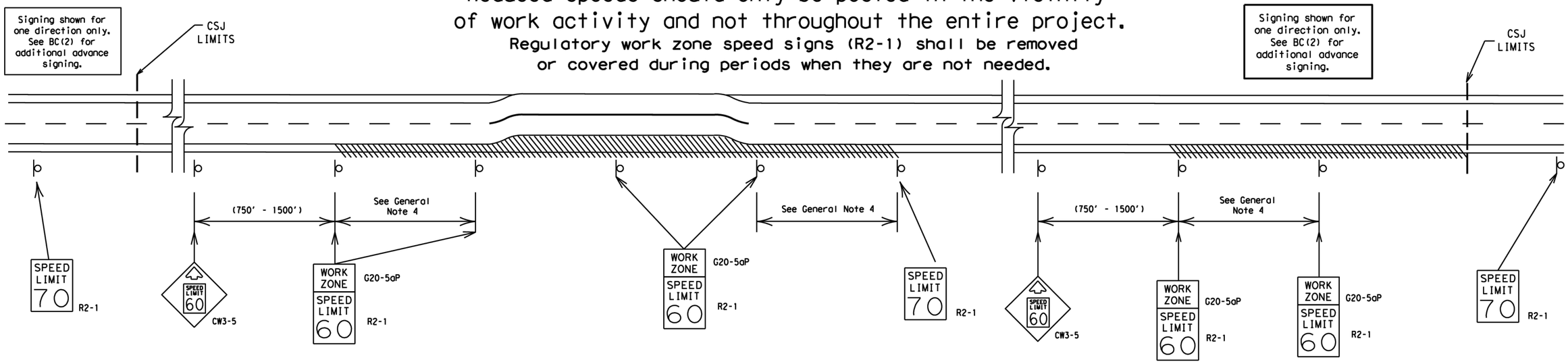
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TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the traveled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the"ADVANCE SPEED LIMIT"(CW3-5)sign, "WORK ZONE"(G20-5aP) plaque and the "SPEED LIMIT"(R2-1)signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

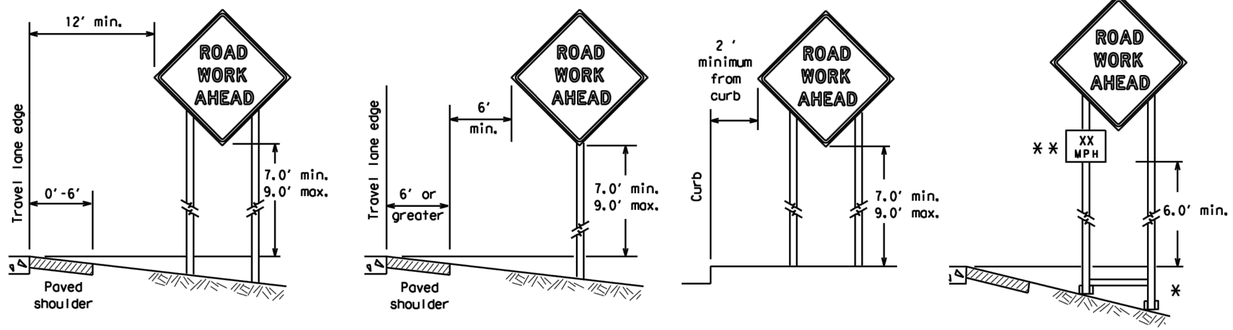
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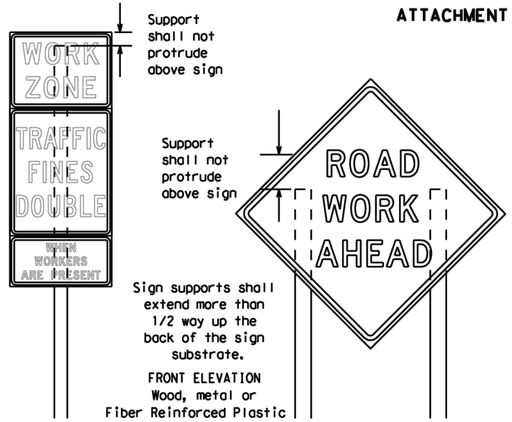
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

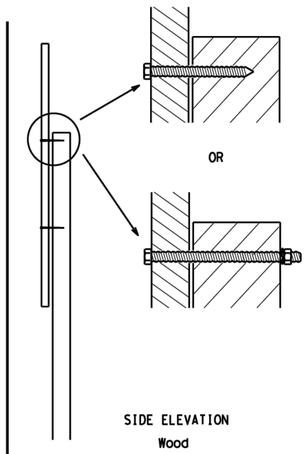


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS





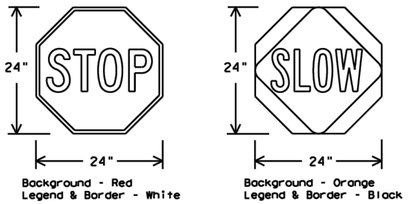
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
2. STOP/SLOW paddles shall be retroreflectorized when used at night.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



SHEETING REQUIREMENTS (WHEN USED AT NIGHT)		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	ORANGE	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDER	WHITE	TYPE B OR C SHEETING
LEGEND & BORDER	BLACK	ACRYLIC NON-REFLECTIVE FILM

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

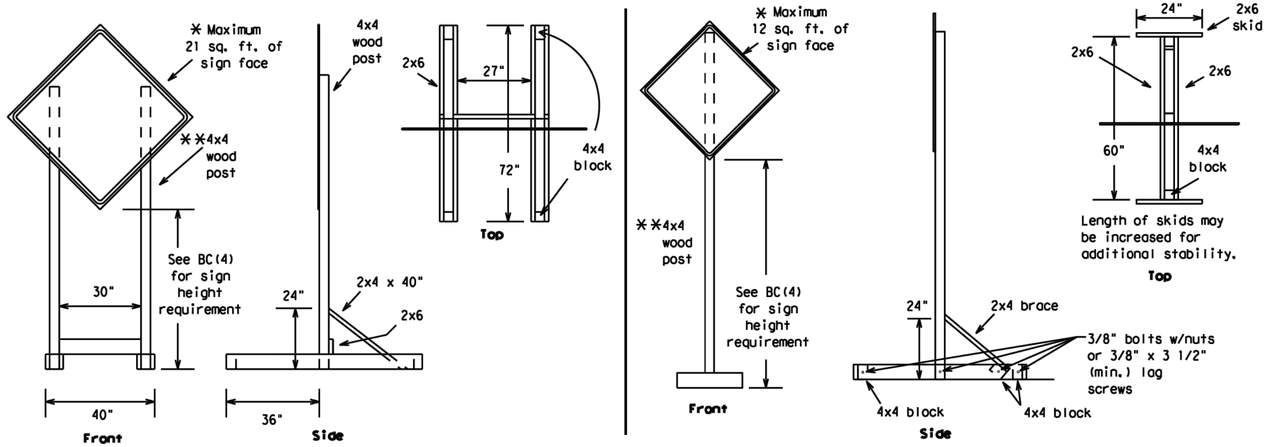
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BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

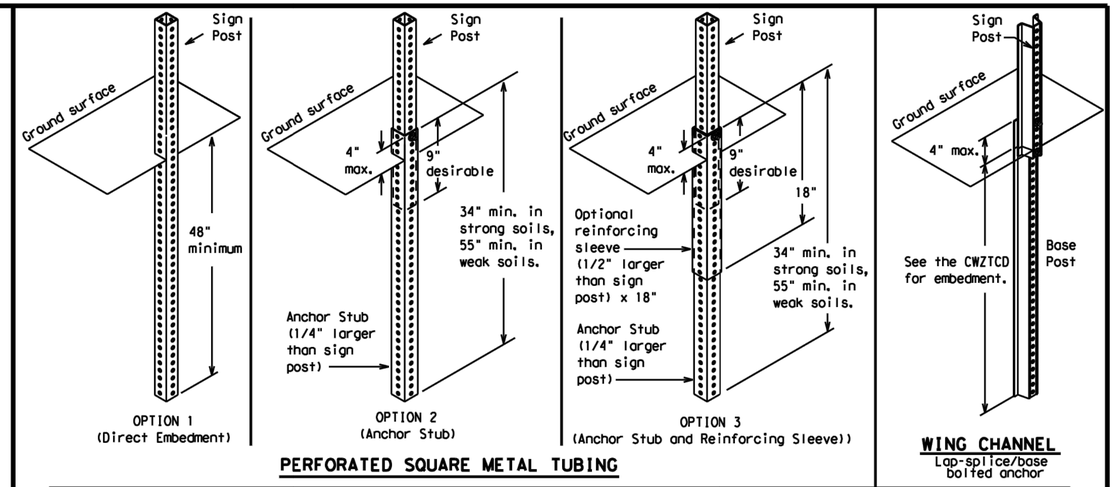
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7-13 5-21				30 OF 48

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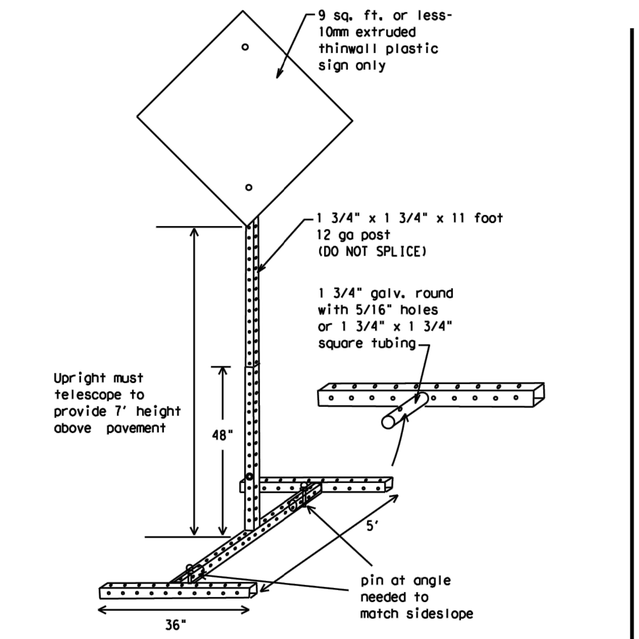
SKID MOUNTED WOOD SIGN SUPPORTS

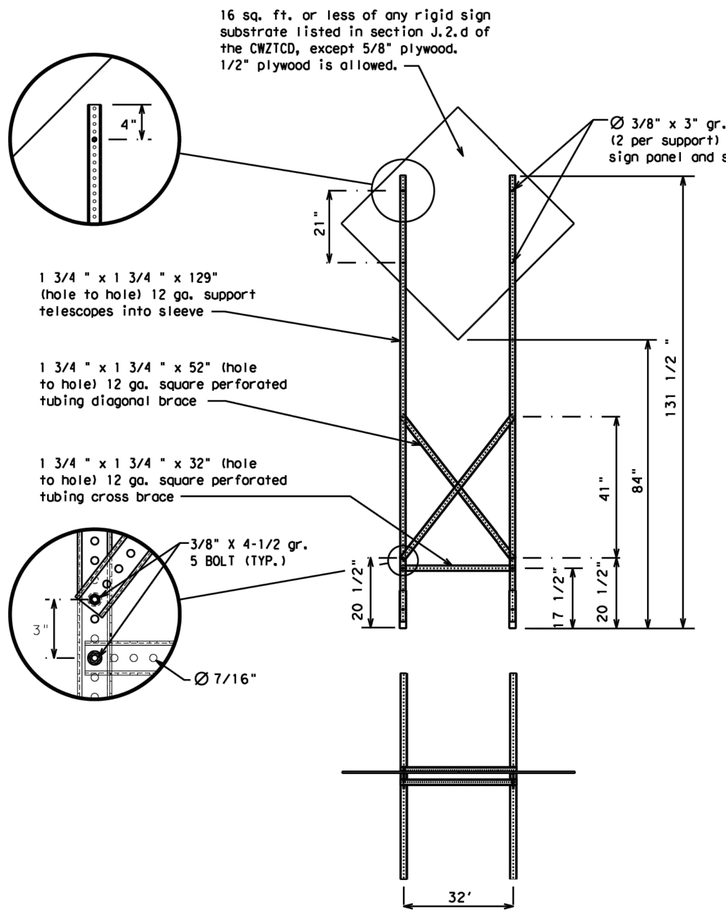
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

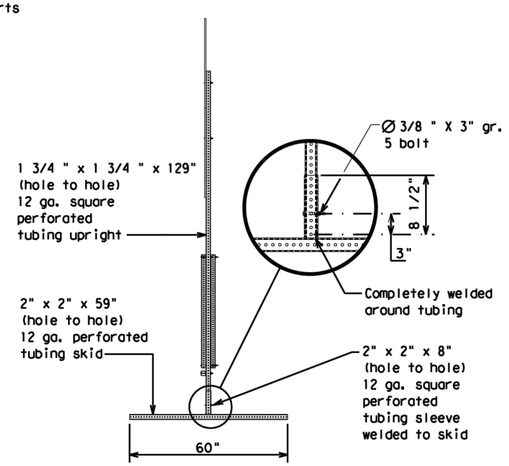


GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.







SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

* See BC(4) for definition of "Work Duration."

** Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

☐ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

SHEET 5 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-21

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7-13 5-21				31 OF 48

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use, the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

Roadway designation * IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

- FREEWAY CLOSED X MILE
- FRONTAGE ROAD CLOSED
- ROAD CLOSED AT SH XXX
- SHOULDER CLOSED XXX FT
- ROAD CLSD AT FM XXXX
- RIGHT LN CLOSED XXX FT
- RIGHT X LANES CLOSED
- RIGHT X LANES OPEN
- CENTER LANE CLOSED
- DAYTIME LANE CLOSURES
- NIGHT LANE CLOSURES
- I-XX SOUTH EXIT CLOSED
- VARIOUS LANES CLOSED
- EXIT XXX CLOSED X MILE
- EXIT CLOSED
- RIGHT LN TO BE CLOSED
- MALL DRIVEWAY CLOSED
- X LANES CLOSED TUE - FRI
- XXXXXXXX BLVD CLOSED

Other Condition List

- ROADWORK XXX FT
- ROAD REPAIRS XXXX FT
- FLAGGER XXXX FT
- LANE NARROWS XXXX FT
- RIGHT LN NARROWS XXXX FT
- TWO-WAY TRAFFIC XX MILE
- MERGING TRAFFIC XXXX FT
- CONST TRAFFIC XXX FT
- LOOSE GRAVEL XXXX FT
- UNEVEN LANES XXXX FT
- DETOUR X MILE
- ROUGH ROAD XXXX FT
- ROADWORK PAST SH XXXX
- ROADWORK NEXT FRI-SUN
- BUMP XXXX FT
- US XXX EXIT X MILES
- TRAFFIC SIGNAL XXXX FT
- LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

- MERGE RIGHT
- FORM X LINES RIGHT
- DETOUR NEXT X EXITS
- USE XXXXX RD EXIT
- USE EXIT XXX
- USE EXIT I-XX NORTH
- STAY ON US XXX SOUTH
- USE I-XX E TO I-XX N
- TRUCKS USE US XXX N
- WATCH FOR TRUCKS
- WATCH FOR TRUCKS
- EXPECT DELAYS
- EXPECT DELAYS
- PREPARE TO STOP
- REDUCE SPEED XXX FT
- END SHOULDER USE
- USE OTHER ROUTES
- WATCH FOR WORKERS
- STAY IN LANE *

Location List

- AT FM XXXX
- BEFORE RAILROAD CROSSING
- NEXT X MILES
- PAST US XXX EXIT
- XXXXXXX TO XXXXXXX
- US XXX TO FM XXXX

Warning List

- SPEED LIMIT XX MPH
- MAXIMUM SPEED XX MPH
- MINIMUM SPEED XX MPH
- ADVISORY SPEED XX MPH
- RIGHT LANE EXIT
- USE CAUTION
- DRIVE SAFELY
- DRIVE WITH CARE

** Advance Notice List

- TUE-FRI XX AM- X PM
- APR XX-XX X PM-X AM
- BEGINS MONDAY
- BEGINS MAY XX
- MAY X-X XX PM - XX AM
- NEXT FRI-SUN
- XX AM TO XX PM
- NEXT TUE AUG XX
- TONIGHT XX PM- XX AM

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol"(CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-21

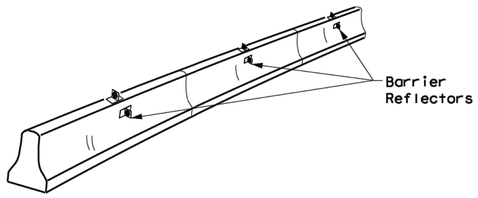
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7-13 5-21				32 OF 48

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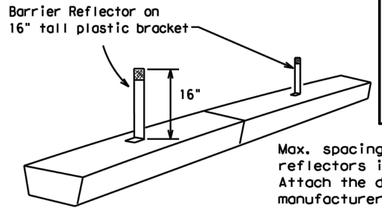
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1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.

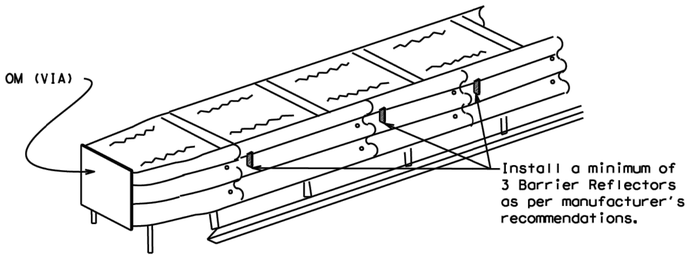


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.

LOW PROFILE CONCRETE BARRIER (LPCB)

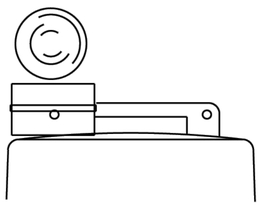


DELINEATION OF END TREATMENTS

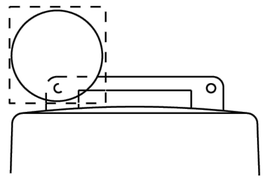
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the apppropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square.Must have a yellow reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

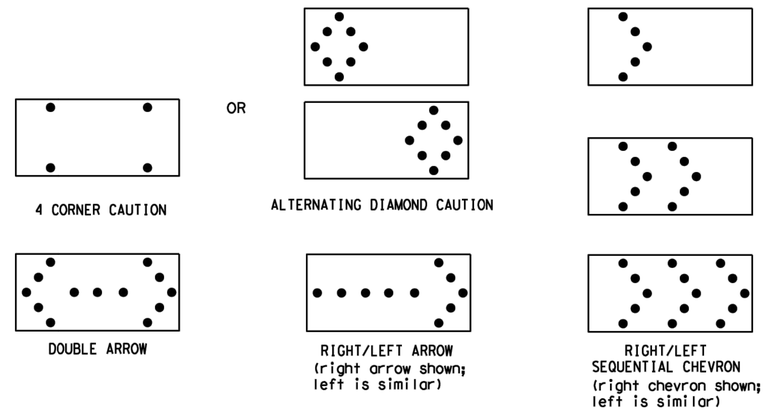
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION

Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21				33 OF 48

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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

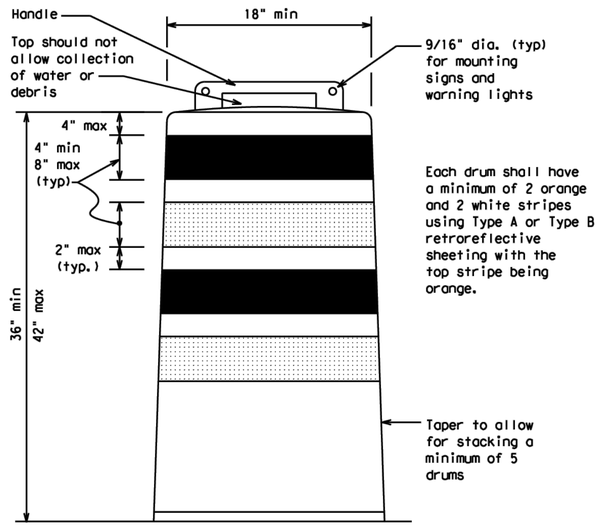
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

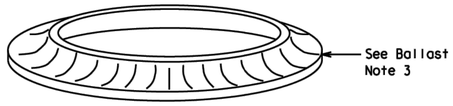
RETROREFLECTIVE SHEETING

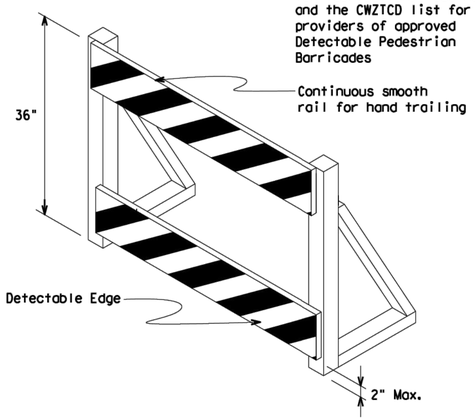
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

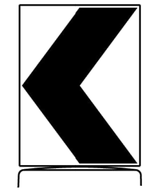




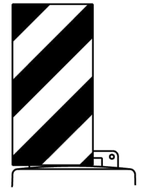


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation | Traffic Safety Division Standard

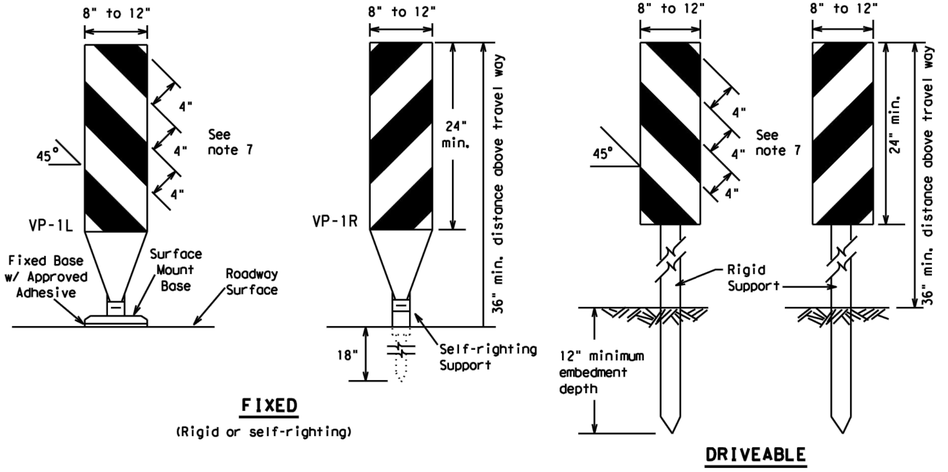
BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

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4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21				34 OF 48
7-13				

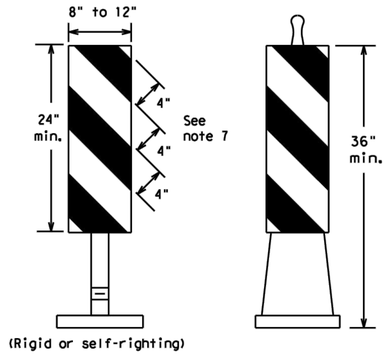
102

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FIXED
(Rigid or self-righting)

DRIVEABLE

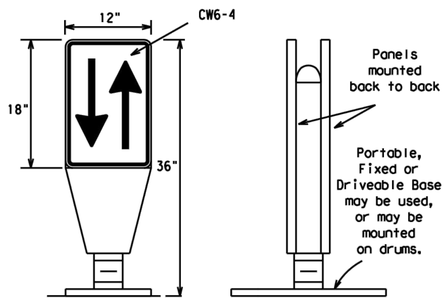


(Rigid or self-righting)

PORTABLE

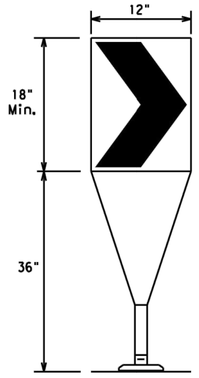
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



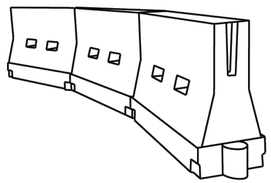
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways, self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10). Place reflective sheeting near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate Manual for Assessing Safety Hardware (MASH) crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

Posted Speed	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'
35		205'	225'	245'	35'	70'
40		265'	295'	320'	40'	80'
45	L = WS	450'	495'	540'	45'	90'
50		500'	550'	600'	50'	100'
55		550'	605'	660'	55'	110'
60		600'	660'	720'	60'	120'
65		650'	715'	780'	65'	130'
70		700'	770'	840'	70'	140'
75		750'	825'	900'	75'	150'
80		800'	880'	960'	80'	160'

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

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

SHEET 9 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

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9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21				35 OF 48

DATE:
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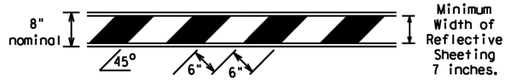
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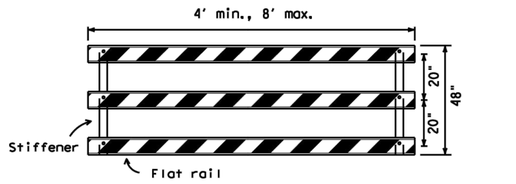
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road, striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



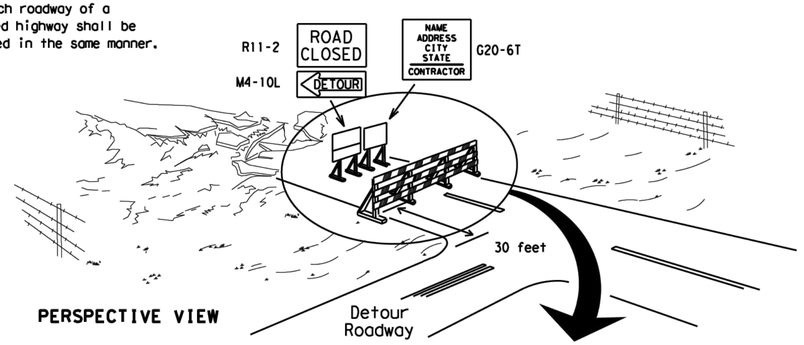
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

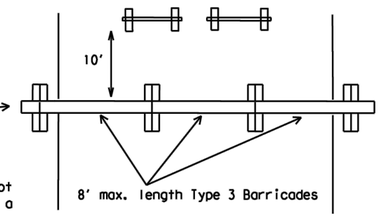
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

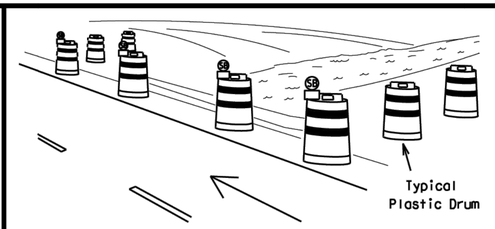
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

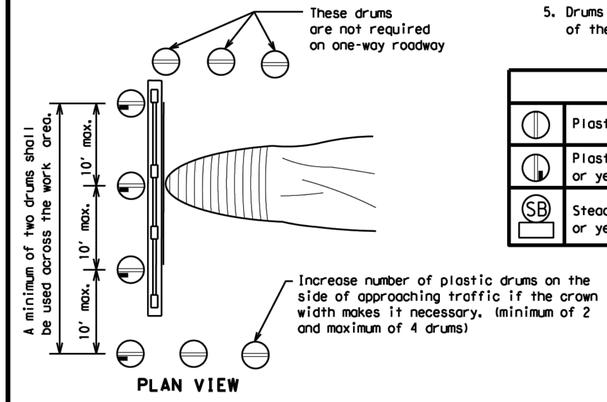
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

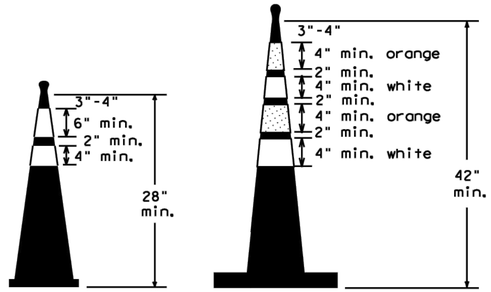
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

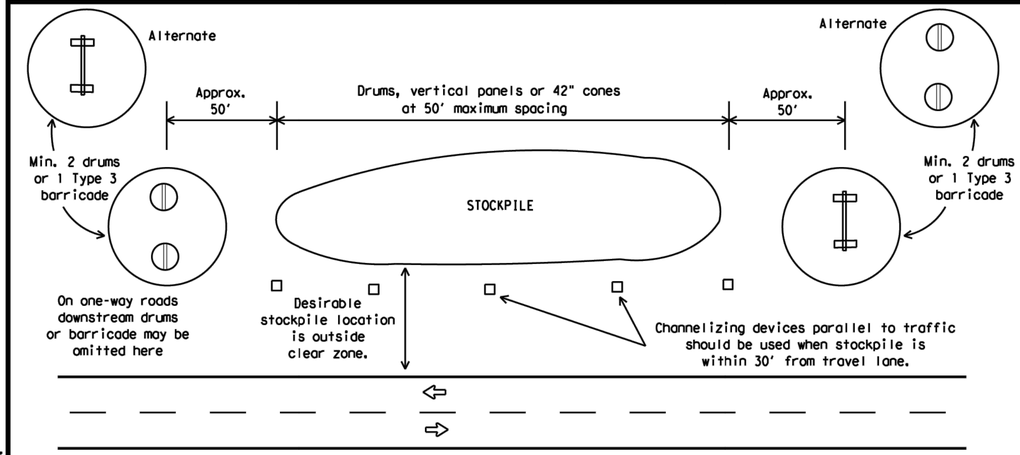
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A or Type B.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

DATE:
FILE:

SHEET 10 OF 12

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 9-07 8-14 7-13 5-21	DIST	COUNTY		SHEET NO. 36 OF 48

104

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

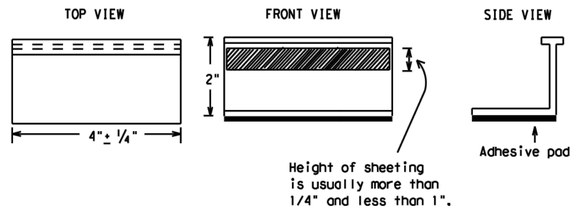
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS				
2-98 9-07 5-21	DIST	COUNTY		SHEET NO.
1-02 7-13				37 OF 48
11-02 8-14				

DATE:
FILE:

105

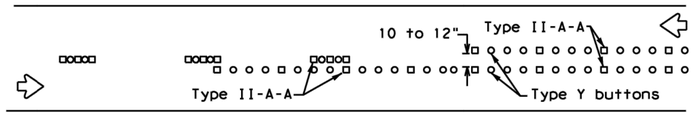
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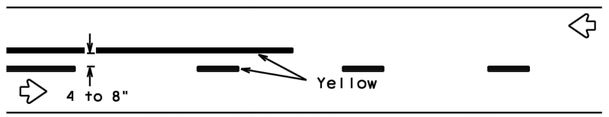
PAVEMENT MARKING PATTERNS



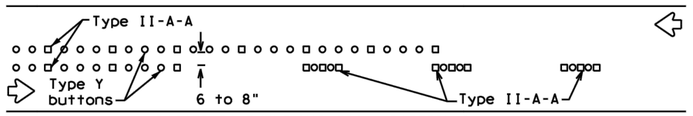
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



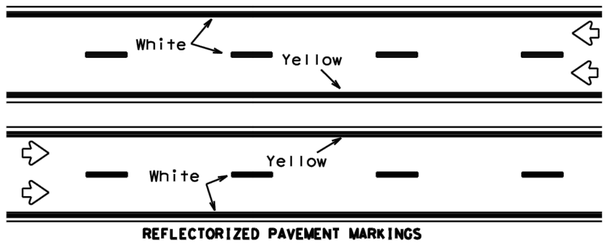
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



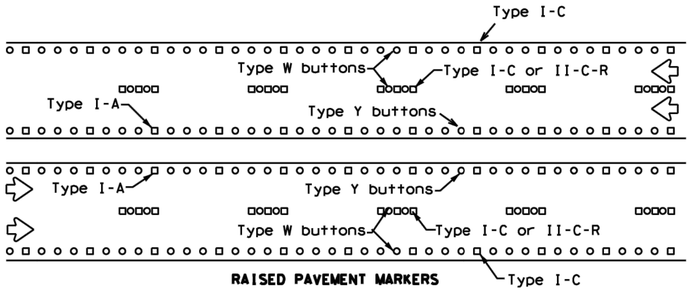
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



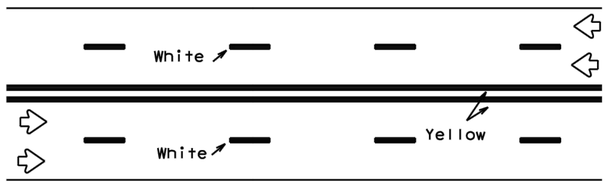
REFLECTORIZED PAVEMENT MARKINGS



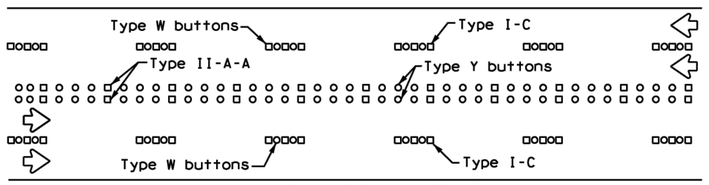
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



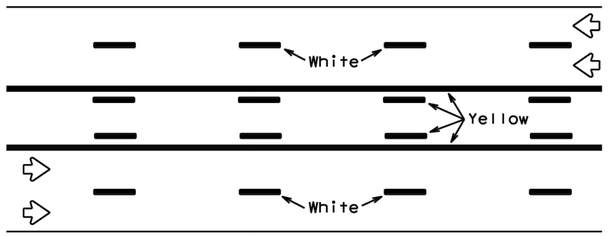
REFLECTORIZED PAVEMENT MARKINGS



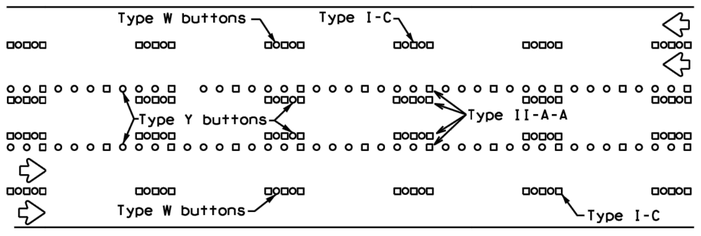
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

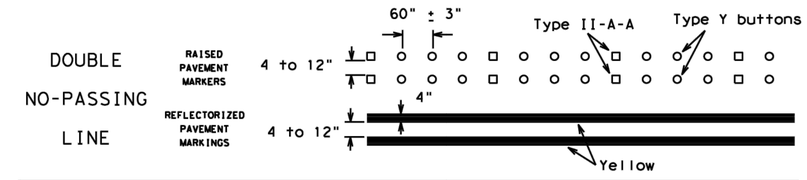
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

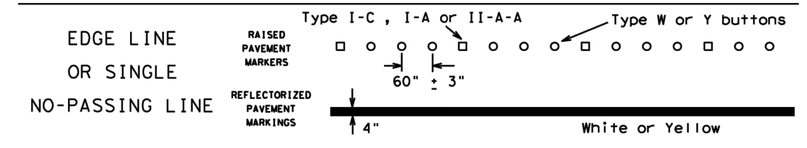
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

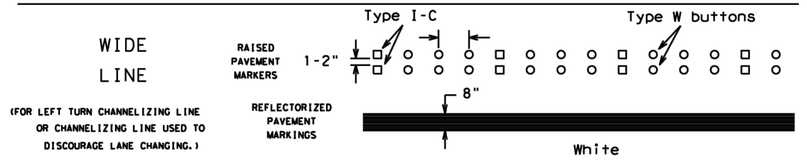


EDGE LINE OR SINGLE NO-PASSING LINE



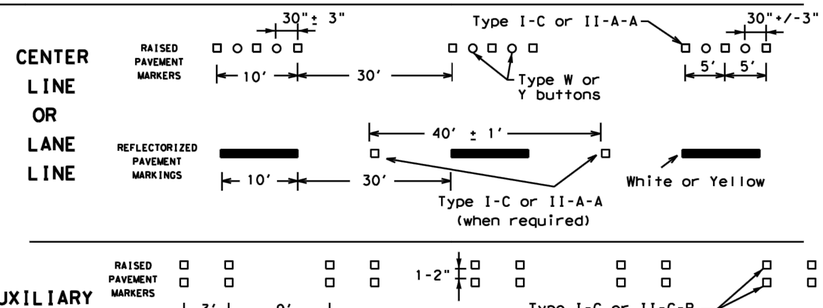
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

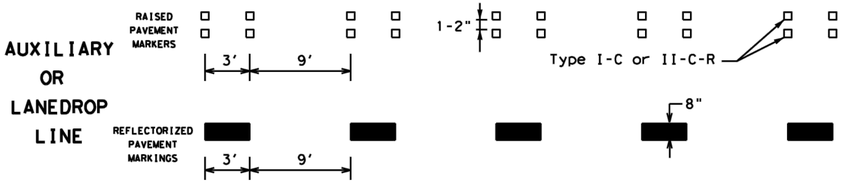


BROKEN LINES

CENTER LINE OR LANE LINE

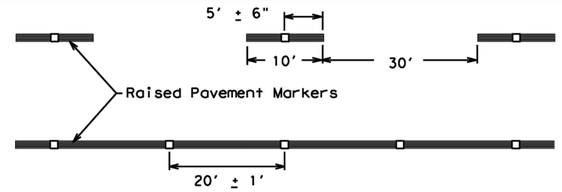


AUXILIARY OR LANEDROP LINE



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

SHEET 12 OF 12

Texas Department of Transportation

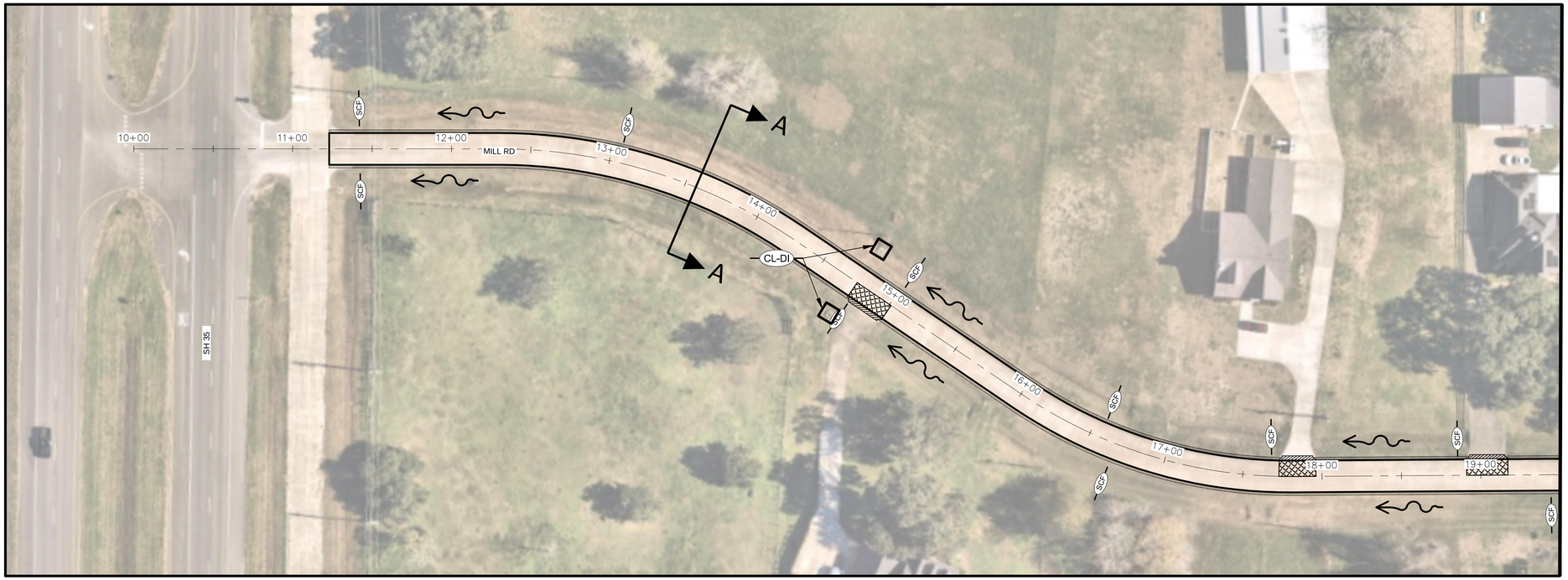
Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

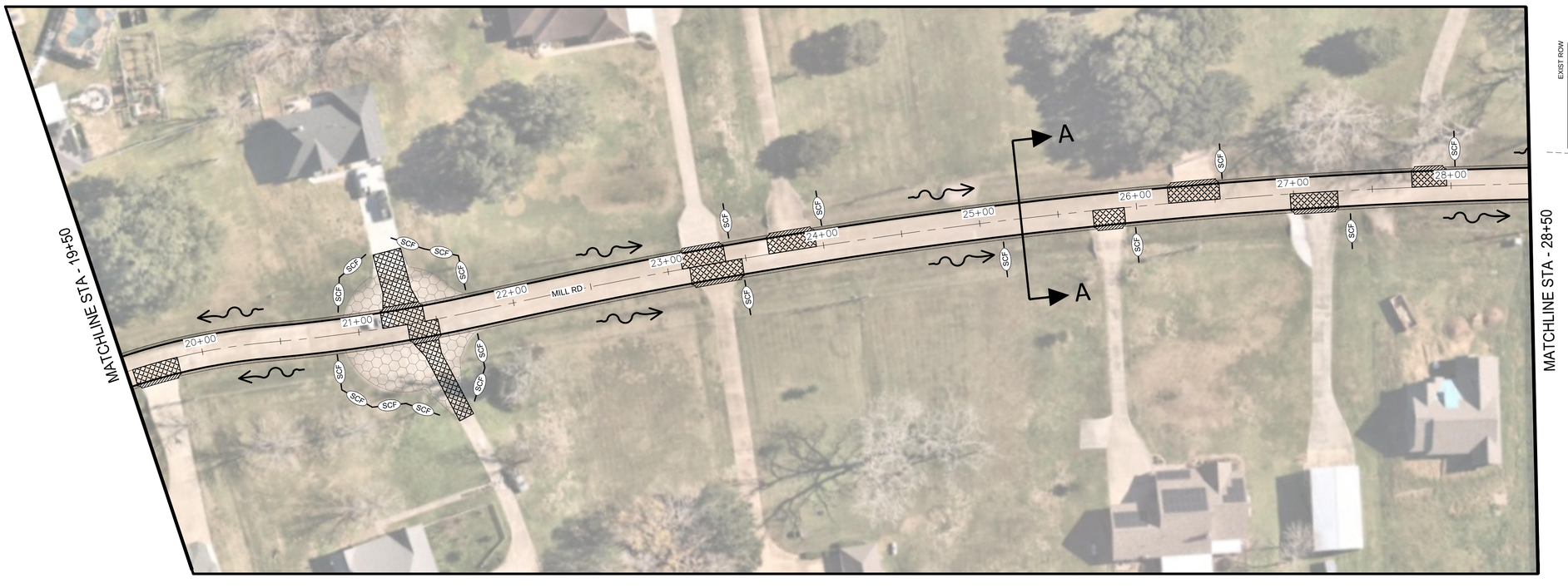
BC(12)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS 1-97 9-07 5-21 2-98 7-13 11-02 8-14	DIST	COUNTY		SHEET NO. 38 OF 48

106



MATCHLINE STA - 19+50



MATCHLINE STA - 28+50

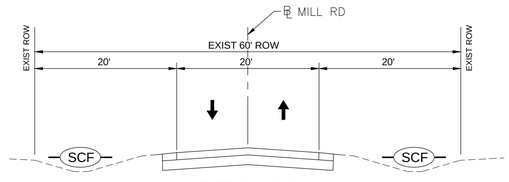
NOTES AND LEGEND:

SCF — SEDIMENT CONTROL FENCE

CL-DI — EROSION CONTROL LOG

DIRECTION OF FLOW

1. STORM WATER POLLUTION PREVENTION DEVICES SHOULD BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.
2. CONTRACTOR IS RESPONSIBLE FOR MODIFICATIONS TO THIS SWPPP AS NECESSARY TO REDUCE AND/ OR ELIMINATE SEDIMENT FROM ENTERING ANY DRAINAGE SYSTEMS.
3. REFER TO STORM WATER POLLUTION PREVENTION PLAN DOCUMENTATION FOR DETAILED GUIDELINES AND ALTERNATIVE STRUCTURAL CONTROL MEASURES.
4. CONTRACTOR SHALL REMOVE ALL DIRT DEPOSITS DAILY OR AS DIRECTED BY ENGINEER.
5. CONTRACTOR SHALL UTILIZE SEDIMENT CONTROL FENCE ON ALL INLETS, AND PIPE STUBS DURING CONSTRUCTION.
6. ALL AREAS PREVIOUSLY DISTURBED BETWEEN EDGE OF PAVEMENT AND ROW THAT ARE NOT TO BE PAVED, SHALL BE STABILIZED BY HYDRO SEEDING IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
7. ONCE DISTURBED AREAS ARE STABILIZED AND REVEGETATION HAS BEGUN TO AN ACCEPTABLE LEVEL TO THE OWNER, CONTRACTOR SHALL REMOVE AND DISPOSE ALL POLLUTION PREVENTION DEVICES.
8. CONTRACTOR SHALL IMPLEMENT SEDIMENT CONTROL FENCE AT LOCATIONS SHOWN ON THE STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM LEAVING THE PROJECT SITE AND POLLUTING THE RECEIVING STORM.
9. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.
10. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
11. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
12. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER (NOT A SEPARATE PAY ITEM, INCIDENTAL TO COST OF SWPPP ITEMS). DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
    - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
    - STRUCTURAL CONTROL MEASURES.
    - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
13. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY HYDRO SEEDING.
14. CONTRACTOR SHALL INSTALL 2 CONCRETE TRUCK WASHOUTS AS NEEDED AT THE LAY DOWN YARD AS PER SPECIFICATIONS.NOT A SEPARATE PAY ITEM, INCIDENTAL TO COST OF SWPPP ITEMS.



SECTION A-A

MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

SWPPP (SHEET 1 OF 3)
STA. 11+00 TO STA. 28+50

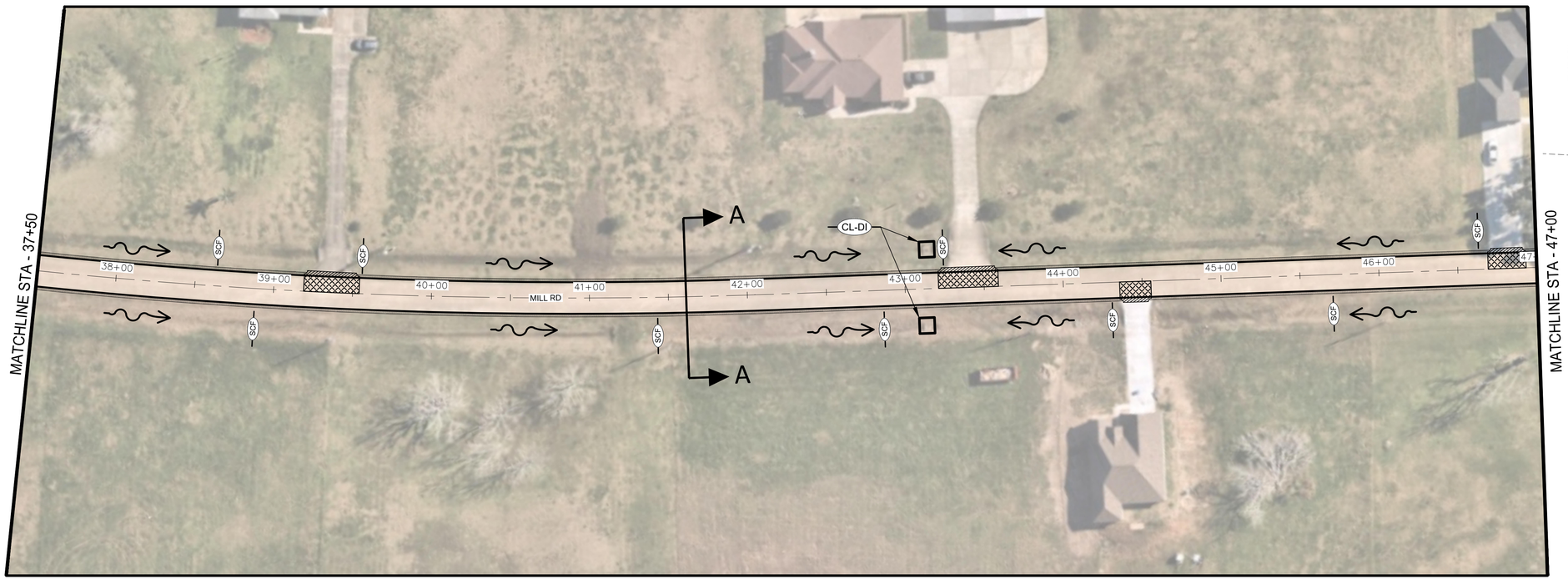
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 40'	APRIL 2025		39 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved By: justinhirl
Last Saved: 4/14/2025 4:12 PM
Last Plotted: 4/14/2025 4:13 PM
Drawing: N:\093744.0006\CAD\Civil\traffic_csk_X4 SWPPP PLAN- MR





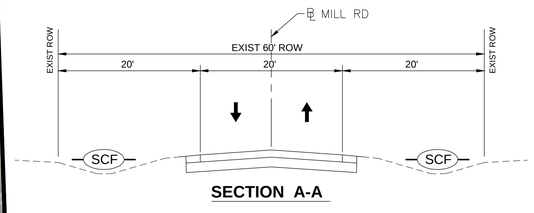
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4. CONTRACTOR SHALL REMOVE ALL DIRT DEPOSITS DAILY OR AS DIRECTED BY ENGINEER.
5. CONTRACTOR SHALL UTILIZE SEDIMENT CONTROL FENCE ON ALL INLETS, AND PIPE STUBS DURING CONSTRUCTION.
6. ALL AREAS PREVIOUSLY DISTURBED BETWEEN EDGE OF PAVEMENT AND ROW THAT ARE NOT TO BE PAVED, SHALL BE STABILIZED BY HYDRO SEEDING IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
7. ONCE DISTURBED AREAS ARE STABILIZED AND REVEGETATION HAS BEGUN TO AN ACCEPTABLE LEVEL TO THE OWNER, CONTRACTOR SHALL REMOVE AND DISPOSE ALL POLLUTION PREVENTION DEVICES.
8. CONTRACTOR SHALL IMPLEMENT SEDIMENT CONTROL FENCE AT LOCATIONS SHOWN ON THE STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM LEAVING THE PROJECT SITE AND POLLUTING THE RECEIVING STORM.
9. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.
10. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
11. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
12. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER (NOT A SEPARATE PAY ITEM, INCIDENTAL TO COST OF SWPPP ITEMS). DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
    - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
    - STRUCTURAL CONTROL MEASURES.
    - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
13. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY HYDRO SEEDING.
14. CONTRACTOR SHALL INSTALL 2 CONCRETE TRUCK WASHOUTS AS NEEDED AT THE LAY DOWN YARD AS PER SPECIFICATIONS.NOT A SEPARATE PAY ITEM, INCIDENTAL TO COST OF SWPPP ITEMS.



SECTION A-A



DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

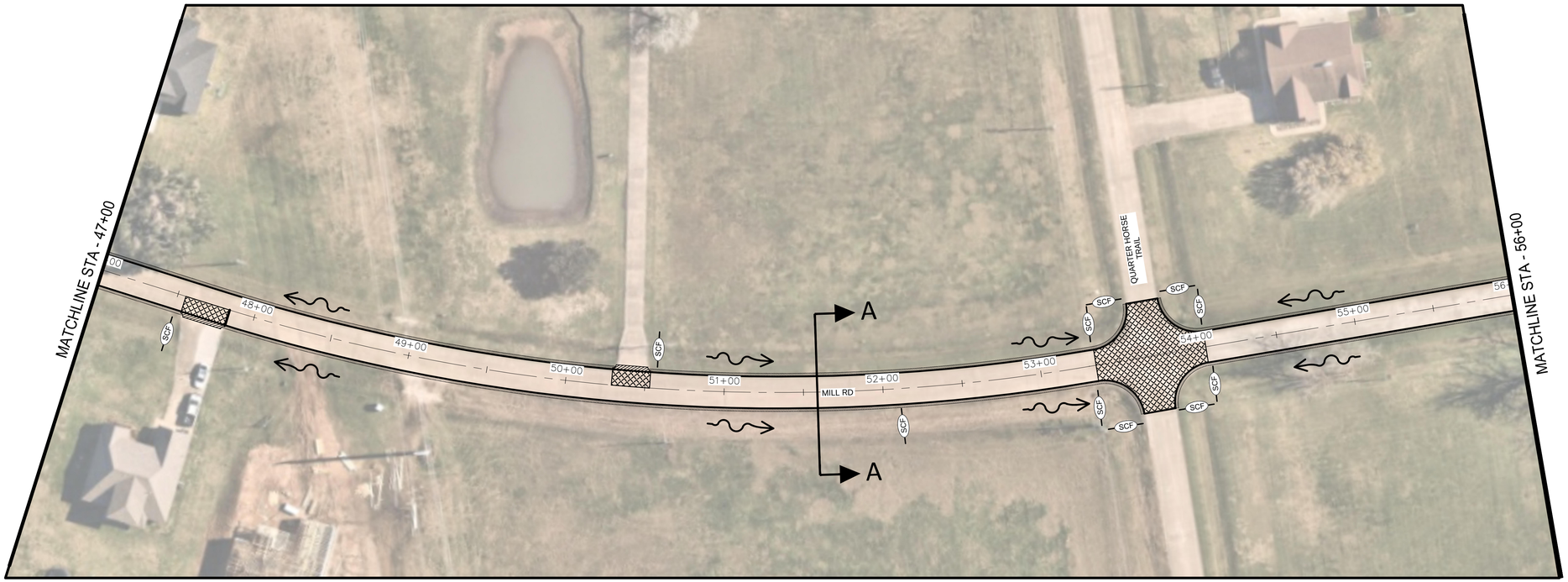
SWPPP (SHEET 2 OF 3)
STA. 28+50 TO 47+00

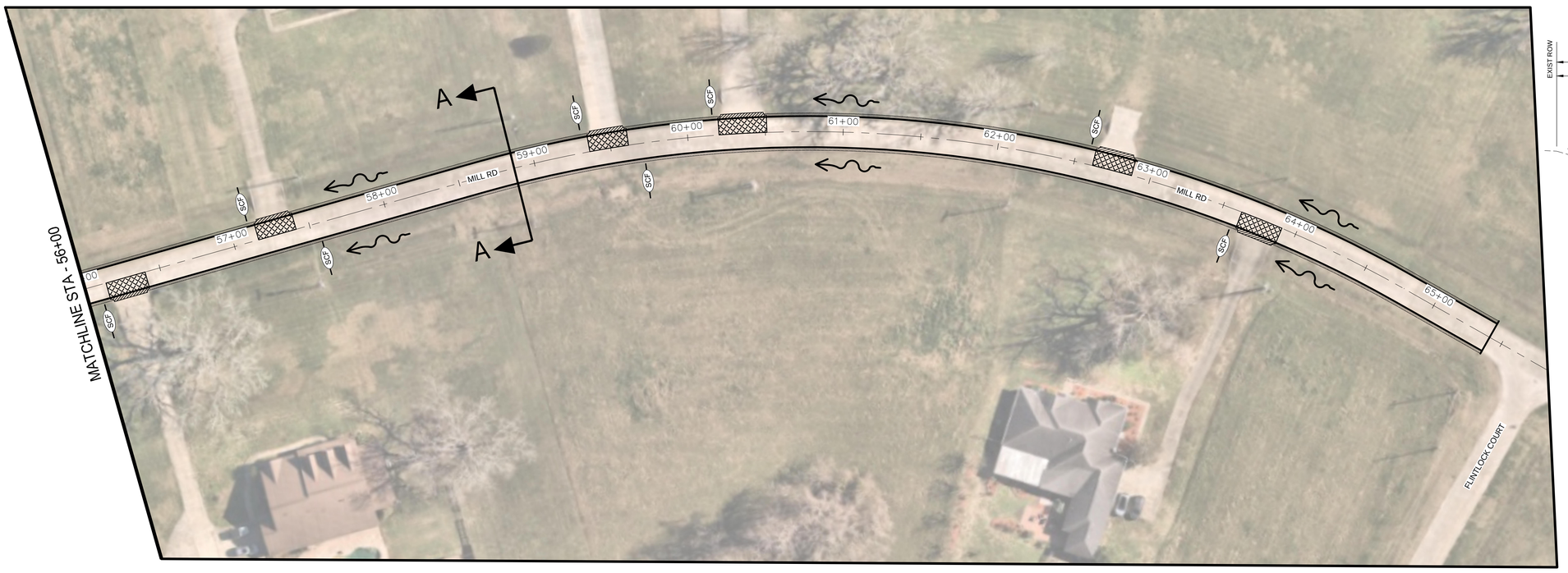
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	1" = 40'	APRIL 2025		40 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Last Saved By: JoshuaH
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Drawing: N:\093744.0006 CAD\DWG\traffic_csk_X4 SWPPP PLAN- MR





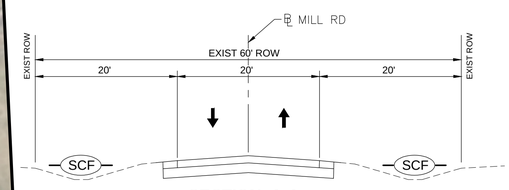
NOTES AND LEGEND:

SCF — SEDIMENT CONTROL FENCE

CL-DI — EROSION CONTROL LOG

DIRECTION OF FLOW

1. STORM WATER POLLUTION PREVENTION DEVICES SHOULD BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.
2. CONTRACTOR IS RESPONSIBLE FOR MODIFICATIONS TO THIS SWPPP AS NECESSARY TO REDUCE AND/ OR ELIMINATE SEDIMENT FROM ENTERING ANY DRAINAGE SYSTEMS.
3. REFER TO STORM WATER POLLUTION PREVENTION PLAN DOCUMENTATION FOR DETAILED GUIDELINES AND ALTERNATIVE STRUCTURAL CONTROL MEASURES.
4. CONTRACTOR SHALL REMOVE ALL DIRT DEPOSITS DAILY OR AS DIRECTED BY ENGINEER.
5. CONTRACTOR SHALL UTILIZE SEDIMENT CONTROL FENCE ON ALL INLETS, AND PIPE STUBS DURING CONSTRUCTION.
6. ALL AREAS PREVIOUSLY DISTURBED BETWEEN EDGE OF PAVEMENT AND ROW THAT ARE NOT TO BE PAVED, SHALL BE STABILIZED BY HYDRO SEEDING IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
7. ONCE DISTURBED AREAS ARE STABILIZED AND REVEGETATION HAS BEGUN TO AN ACCEPTABLE LEVEL TO THE OWNER, CONTRACTOR SHALL REMOVE AND DISPOSE ALL POLLUTION PREVENTION DEVICES.
8. CONTRACTOR SHALL IMPLEMENT SEDIMENT CONTROL FENCE AT LOCATIONS SHOWN ON THE STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM LEAVING THE PROJECT SITE AND POLLUTING THE RECEIVING STORM.
9. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.
10. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
11. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
12. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER (NOT A SEPARATE PAY ITEM, INCIDENTAL TO COST OF SWPPP ITEMS). DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
    - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
    - STRUCTURAL CONTROL MEASURES.
    - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
13. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY HYDRO SEEDING.
14. CONTRACTOR SHALL INSTALL 2 CONCRETE TRUCK WASHOUTS AS NEEDED AT THE LAY DOWN YARD AS PER SPECIFICATIONS.NOT A SEPARATE PAY ITEM, INCIDENTAL TO COST OF SWPPP ITEMS.



SECTION A-A

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
T:281.883.0103
westwoodps.com

BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

SWPPP (SHEET 3 OF 3)
STA. 47+00 TO STA. 66+25

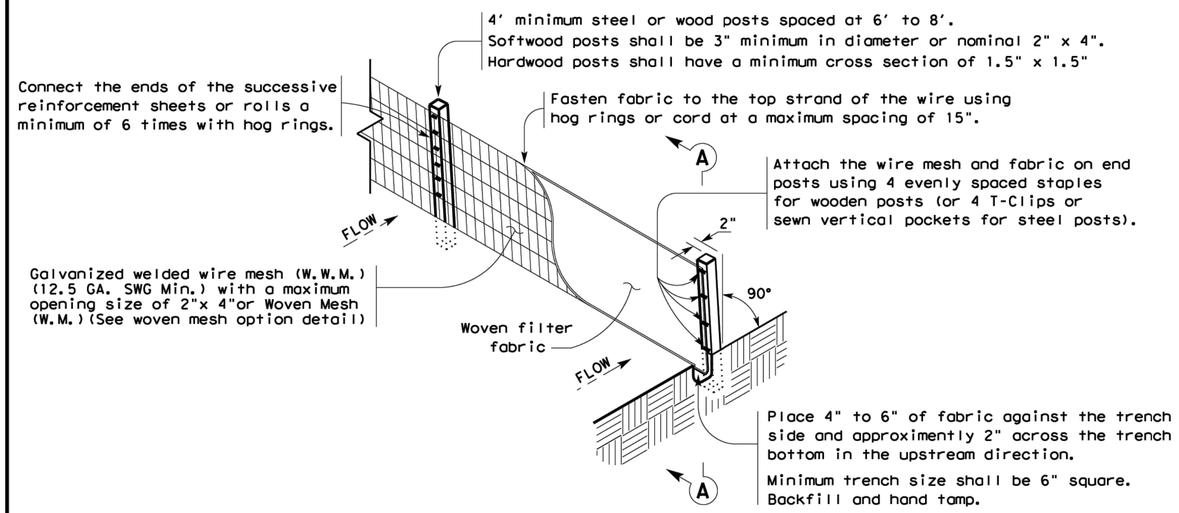
ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
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TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

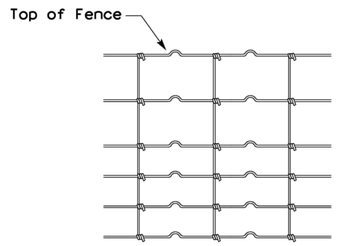
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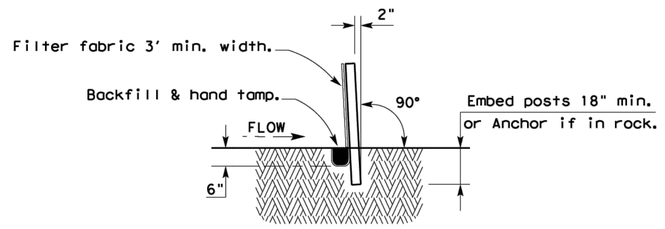
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TEMPORARY SEDIMENT CONTROL FENCE

SCF





SECTION A-A

HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA.SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A 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 maximum flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

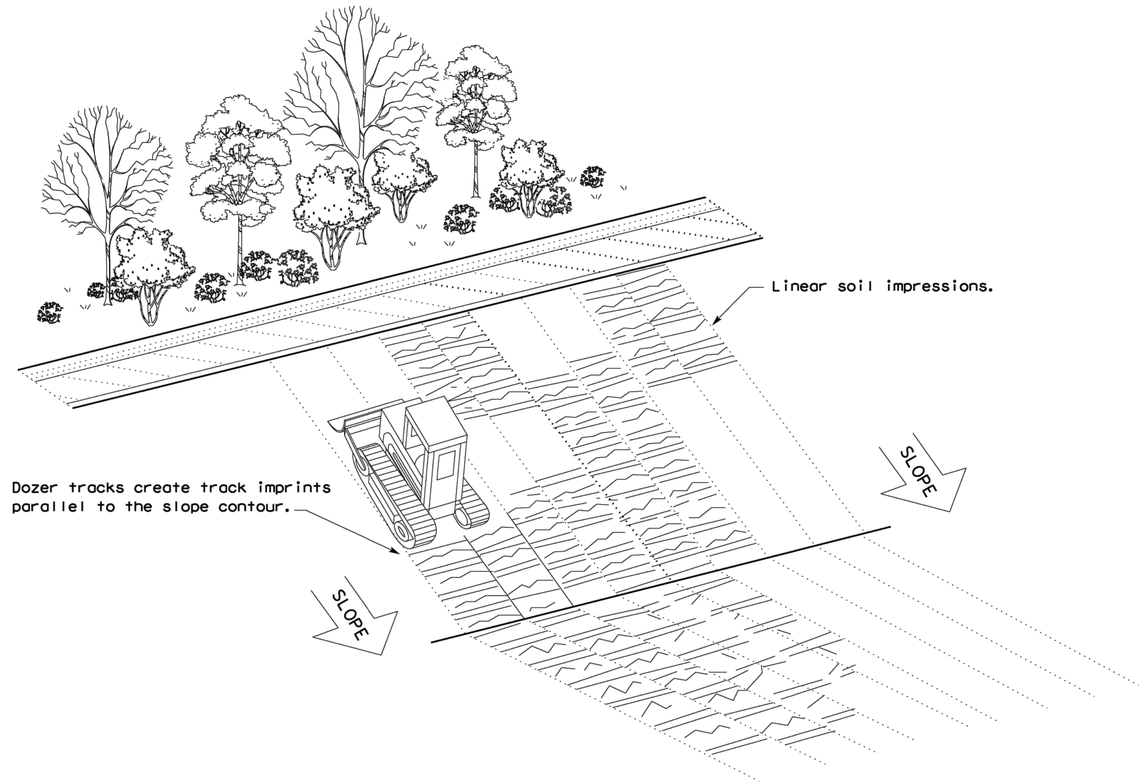
LEGEND

Sediment Control Fence

SCF

GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



VERTICAL TRACKING

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

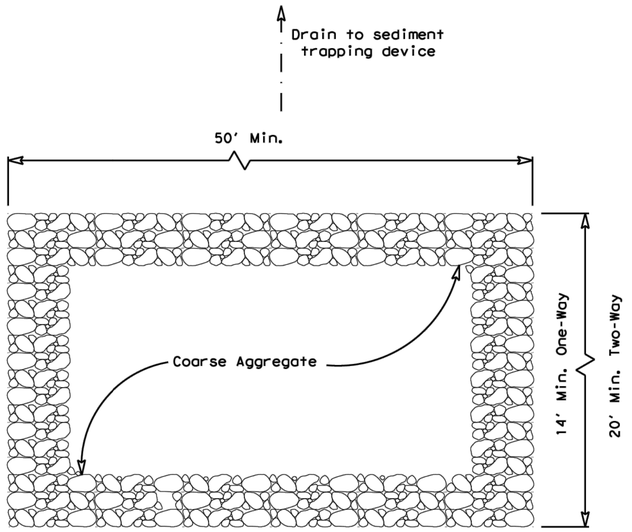
EC(1)-16

FILE: ec116	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS	
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY	
REVISIONS					
	DIST	COUNTY		SHEET NO.	
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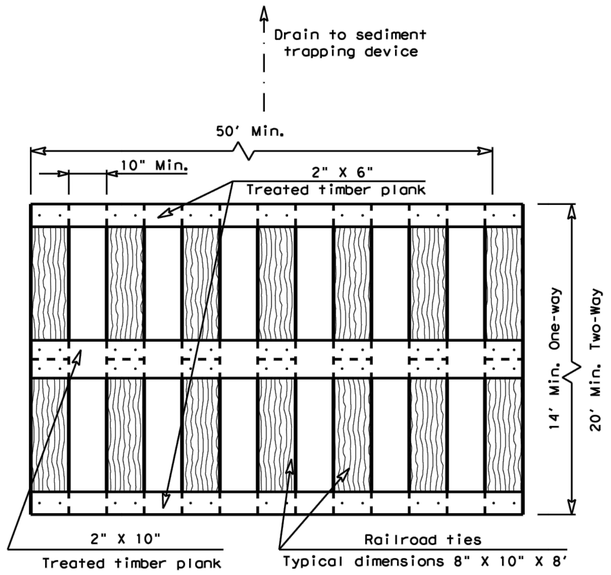
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FILE

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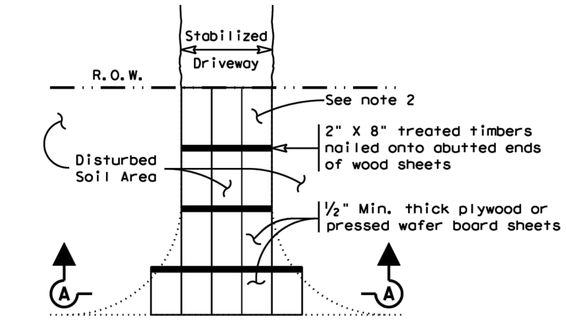
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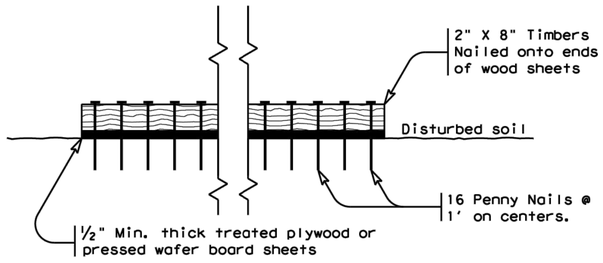
PLAN VIEW



PLAN VIEW



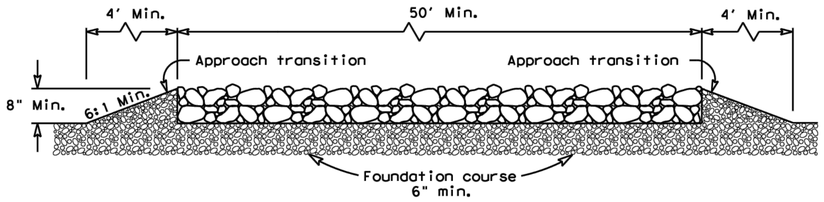
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

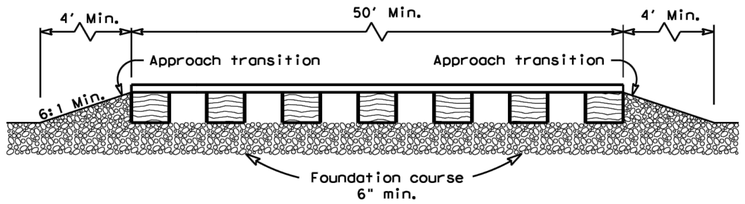
SHORT TERM



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

ROCK CONSTRUCTION (LONG TERM)



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materialas approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

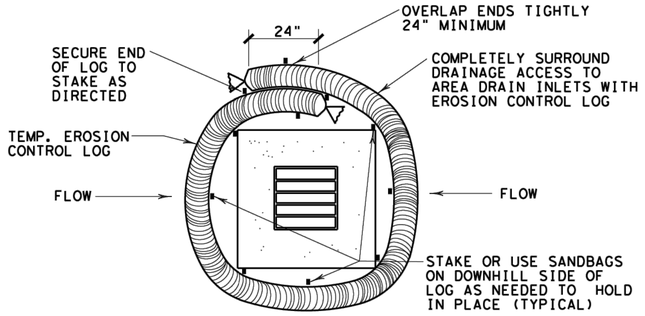
CONSTRUCTION EXITS

EC(3)-16

FILE: ec316	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS	
©TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY	
REVISIONS					
	DIST	COUNTY		SHEET NO.	
				43 OF 48	

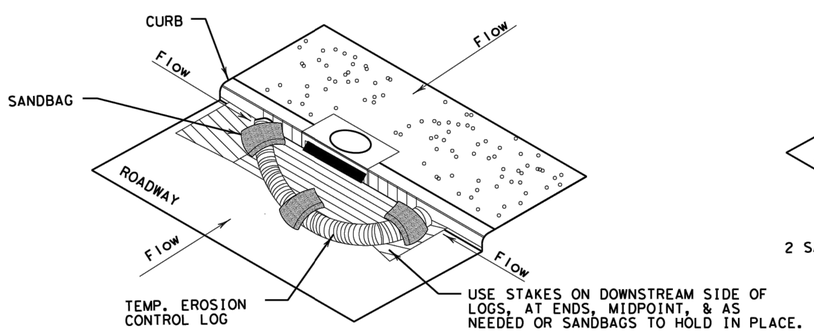
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DATE:
FILE:



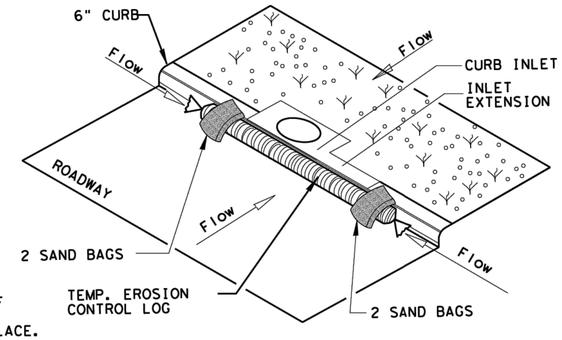
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

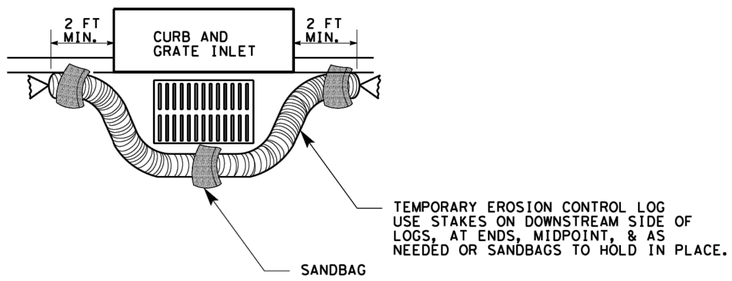
CL-CI



EROSION CONTROL LOG AT CURB INLET

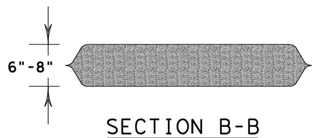
CL-CI

NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.

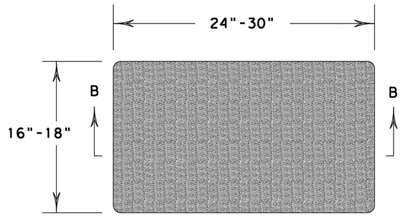


EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI



SECTION B-B



SANDBAG DETAIL

SHEET 3 OF 3

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.
				44 OF 48

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-1

Location: See Exploration Plan
Latitude: 29.1419° Longitude: -95.5620°

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.5										
					1.5 (HP)				26.2		55-19-36	
					2.0 (HP)							
3		5			3.0 (HP)							
					2.0 (HP)	UC	1.57	9.3	32.5	92		
					3.0 (HP)							
		10										

CONCRETE, about 6 1/4 inches

FAT CLAY (CH), dark gray, stiff to very stiff, with ferrous nodules

- tan and gray 4 to 6 feet

- tan below 6 feet

10.0

Boring Terminated at 10 Feet

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-19-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-19-2024

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-2

Location: See Exploration Plan
Latitude: 29.1408° Longitude: -95.5627°

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6										
2		1.1										
					1.0 (HP)							
					1.0 (HP)				40.9		74-23-51	
3		5			1.5 (HP)							
					1.5 (HP)							
					3.0 (HP)							
		10										

CONCRETE, about 6 3/4 inches

FILL - FAT CLAY (CH), dark gray and tan

FAT CLAY (CH), dark gray and tan, medium stiff to very stiff

- with ferrous nodules 2 to 6 feet

- dark gray 4 to 6 feet

- tan and gray, with calcareous nodules 6 to 8 feet
- with silt pockets below 6

- tan below 8 feet

10.0

Boring Terminated at 10 Feet

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-19-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-19-2024

Facilities | Environmental | **Geotechnical** | Materials

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-3

Location: See Exploration Plan
Latitude: 29.1395° Longitude: -95.5629°

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6										
3		2.0			3.0 (HP)				21.9		52-17-35	
4		4.0			1.0 (HP)	UC	0.99	9.1	19.7	109		
					4.0 (HP)							
3		5			2.5 (HP)							
					2.5 (HP)							
		10										

CONCRETE, about 6 3/4 inches

FAT CLAY (CH), dark gray, very stiff

LEAN CLAY (CL), tan and gray, medium stiff, with sand and silt seams

FAT CLAY (CH), tan, very stiff, with calcareous nodules
- with ferrous nodules 4 to 6 feet

10.0

Boring Terminated at 10 Feet

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-19-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-19-2024

Facilities | Environmental | **Geotechnical** | Materials

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STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

Westwood
Westwood Professional Services, Inc.
20329 STATE HWY 249, STE 350
HOUSTON, TX 77070
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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

BORING LOGS (1 OF 4)

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		45 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-4

Location: See Exploration Plan
Latitude: 29.1381° Longitude: -95.5633°

Model Layer	Graphic Log	Depth (Ft.)	Description	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6	**CONCRETE**, about 6 3/4 inches										
3		2.0	**FAT CLAY (CH)**, dark gray, very stiff, with ferrous nodules			2.5 (HP)							
4		6.0	**LEAN CLAY (CL)**, tan, stiff, with silt and sand seams - with calcareous nodules 4 to 6 feet			1.5 (HP) 1.5 (HP)				22.0		30-16-14	
3		10.0	**FAT CLAY WITH SAND (CH)**, tan, stiff to very stiff, with calcareous nodules			2.0 (HP) 3.0 (HP)				29.1		62-19-43	81
			Boring Terminated at 10 Feet										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-19-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-19-2024

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-5

Location: See Exploration Plan
Latitude: 29.1368° Longitude: -95.5638°

Model Layer	Graphic Log	Depth (Ft.)	Description	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6	**CONCRETE**, about 7 1/2 inches										
2		2.0	**FILL - FAT CLAY (CH)**, dark gray			2.5 (HP)				24.7		59-18-41	
4		6.0	**LEAN CLAY (CL)**, tan, stiff to very stiff, with silt and sand seams			3.5 (HP) 1.5 (HP)							
3		10.0	**FAT CLAY WITH SAND (CH)**, tan, stiff to very stiff - with calcareous nodules below 8 feet			2.5 (HP) 2.5 (HP)	UC	1.41	4.8	32.0	92	65-22-43	73
			Boring Terminated at 10 Feet										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-19-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-19-2024

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-6

Location: See Exploration Plan
Latitude: 29.1356° Longitude: -95.5645°

Model Layer	Graphic Log	Depth (Ft.)	Description	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6	**CONCRETE**, about 7 1/4 inches										
3		2.0	**FAT CLAY (CH)**, dark gray, very stiff, with sand and silt pockets - with ferrous nodules 0 to 2 feet			3.0 (HP)							
4		4.0	**LEAN CLAY (CL)**, tan, stiff, with sand seams			1.5 (HP)				20.0		32-15-17	
3		10.0	**FAT CLAY (CH)**, tan, stiff - with ferrous nodules 4 to 6 feet - with calcareous nodules below 6 feet			2.0 (HP) 1.5 (HP) 2.0 (HP)							
			Boring Terminated at 10 Feet										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

BORING LOGS (2 OF 4)

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		46 OF 48

Last Saved by: justin.ehrt
Last Saved: 4/15/2025 9:55 AM
Plotted: Apr 15, 2025 - 9:56am
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Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-7

Location: See Exploration Plan
Latitude: 29.1345° Longitude: -95.5654°

Model Layer	Graphic Log	Depth (Ft.)	Material Description	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6	**CONCRETE**, about 7 inches										
3			**FAT CLAY (CH)**, dark gray, medium stiff to stiff - with ferrous nodules 0 to 2 feet			2.0 (HP)				42.2		78-25-53	
						2.0 (HP)							
			- dark gray and tan, with sand pockets 4 to 6 feet			1.5 (HP)	UC	0.78	1.7	32.9	90		
			- tan, with silt pockets 6 to 8 feet			2.0 (HP)							
4		8.0	**LEAN CLAY WITH SAND (CL)**, tan, soft, with silt seams			0.5 (HP)				25.1		34-14-20	81
		10.0	***Boring Terminated at 10 Feet***										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-8

Location: See Exploration Plan
Latitude: 29.1332° Longitude: -95.5660°

Model Layer	Graphic Log	Depth (Ft.)	Material Description	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6	**CONCRETE**, about 7 inches										
3			**FAT CLAY (CH)**, dark gray, very stiff, with silt pockets - with calcareous nodules and sand pockets 0 to 2 feet			2.5 (HP)							
4		4.0	**LEAN CLAY WITH SAND (CL)**, tan, stiff			1.5 (HP)				20.6		35-15-20	
3			**FAT CLAY (CH)**, tan, stiff to very stiff, with calcareous nodules - with silt pocket below 6 feet			2.0 (HP)							
						1.5 (HP)							
		10.0	***Boring Terminated at 10 Feet***			2.5 (HP)							

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

Terracon
22535 N Highway 288B
Angleton, TX

Boring Log No. B-9

Location: See Exploration Plan
Latitude: 29.1320° Longitude: -95.5666°

Model Layer	Graphic Log	Depth (Ft.)	Material Description	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6	**CONCRETE**, about 7 inches										
3			**FAT CLAY (CH)**, dark gray, stiff to very stiff - with sand pockets 0 to 2 feet			3.0 (HP)				31.9		75-23-52	
			- with calcareous nodules below 2 feet			2.0 (HP)	UC	1.23	6.6	33.3	88		
						2.5 (HP)							
			- dark gray and tan 6 to 8 feet			3.5 (HP)							
			- tan below 8 feet			2.0 (HP)							
		10.0	***Boring Terminated at 10 Feet***										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

Last Saved by: JaskuthM
Last Saved: 4/15/2025 9:55 AM
Plotted: Apr 15, 2025 - 9:56AM
Drawing: N:\005744.00\08 CAD\Civil\traffic_csk_XX ROPE LOGS - MR

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

BORING LOGS (3 OF 4)

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		47 OF 48

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

22535 N Highway 288B
Angleton, TX

Boring Log No. B-10

Location: See Exploration Plan
Latitude: 29.1307° Longitude: -95.5666°

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6										
		CONCRETE, about 7 1/2 inches										
3		2.0			2.0 (HP)							
		FAT CLAY (CH), dark gray, stiff, with ferrous nodules										
4		6.0			2.0 (HP)				17.3		38-15-23	
		LEAN CLAY (CL), tan, stiff, with silt pockets and calcareous nodules			1.5 (HP)							
3		10.0			1.5 (HP)							
		FAT CLAY (CH), tan, stiff to very stiff, with calcareous nodules and sand pockets			2.5 (HP)							
		Boring Terminated at 10 Feet										

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

22535 N Highway 288B
Angleton, TX

Boring Log No. B-11

Location: See Exploration Plan
Latitude: 29.1293° Longitude: -95.5667°

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.6										
		CONCRETE, about 7 inches										
3		6.0			2.5 (HP)				24.8		63-21-42	
		FAT CLAY (CH), dark gray, very stiff - with sand pockets 0 to 2 feet			2.5 (HP)							
4		10.0			2.5 (HP)	UC	2.23	15	23.6	107		
		- with calcareous nodules 2 to 6 feet - tan, with silt seams 4 to 6 feet			0.5 (HP)							
		Boring Terminated at 10 Feet			0.5 (HP)				23.9		27-16-11	65

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

Facilities | Environmental | **Geotechnical** | Materials

Mill Road Pavement Reconstruction
Mill Road | Angleton, Texas
Terracon Project No. AS245100

22535 N Highway 288B
Angleton, TX

Boring Log No. B-12

Location: See Exploration Plan
Latitude: 29.1283° Longitude: -95.5674°

Model Layer	Graphic Log	Depth (Ft.)	Water Level Observations	Sample Type	Field Test Results	Strength Test: Test Type	Strength Test: Compressive Strength (tsf)	Strength Test: Strain (%)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits: LL-PL-PI	Percent Fines
1		0.7										
		CONCRETE, about 8 inches										
4		6.0			4.0 (HP)				20.1		40-16-24	
		LEAN CLAY WITH SAND (CL), dark gray, stiff to very stiff - tan, with silt seams and calcareous nodules 2 to 6 feet			2.0 (HP)							
		10.0			2.0 (HP)				24.0		26-18-8	48
		SANDY LEAN CLAY (CL), tan, soft to stiff, with silt seams - with calcareous nodules below 8 feet			0.5 (HP)							
		Boring Terminated at 10 Feet			2.0 (HP)							

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
no groundwater observed

Drill Rig
Truck

Driller
East Tex

Notes

Advancement Method
dry augered to termination depth

Logged by
DP

Boring Started
11-20-2024

Abandonment Method
Boring backfilled with auger cuttings
Surface capped with concrete.

Boring Completed
11-20-2024

Facilities | Environmental | **Geotechnical** | Materials

TBPELS. ENGINEERING FIRM NO. 11756
TBPELS SURVEYING FIRM NO. 10074301

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED PROFESSIONAL ENGINEER

DATE: 4/15/2025

NO.	DATE	REVISION

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BRAZORIA COUNTY, TEXAS

CONCRETE PAVEMENT REPAIR - MILL RD
BAR X, PHASE V

BORING LOGS (4 OF 4)

ANGLETON, BRAZORIA COUNTY, TEXAS

DESIGN	DRAWN	REVIEWER	SCALE	DATE	FILE	SHEET No.
JAS	JFP	MLM	N.T.S.	APRIL 2025		48 OF 48

Last Saved by: JashuHall
Last Saved: 4/15/2025 9:55 AM
Plotted: Apr 15, 2025 - 9:57AM
Drawing: N:\005744.00\08 CAD\Civil\traffic_csk_XX ltr\PRE LOGS - MR

Technical Specifications

For

Concrete Pavement Repairs 2025

Bar X, Phase V – Mill RD (CR 969M)

Project No. 23-03929

BRAZORIA COUNTY ENGINEERING DEPARTMENT

County Engineer – Matt Hanks, J.D., P.E.

Prepared by

Westwood

STATE OF TEXAS
MARK L. MILLER
135378
LICENSED
PROFESSIONAL ENGINEER

4/17/25

SPECIFICATIONS MANUAL TABLE OF CONTENTS

List of Specifications (TxDOT)

All standard specifications and special specifications applicable to this project are identified below

TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION

TxDOT 100 PREPARING RIGHT OF WAY

TxDOT 104 REMOVING CONCRETE

TxDOT 105 REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT

TxDOT 110 EXCAVATION

TxDOT 160 TOPSOIL

TxDOT 164 SEEDING FOR EROSION CONTROL

TxDOT 247 FLEXIBLE BASE

TxDOT 260 LIME TREATMENT (ROAD MIXED)

TxDOT 360 CONCRETE PAVEMENT

TxDOT 500 MOBILIZATION

TxDOT 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING

TxDOT 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

TxDOT 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS

Item 100
Preparing Right of Way

1. DESCRIPTION

Prepare the right of way and designated easements for construction operations by removing and disposing of all obstructions when removal of such obstructions is not specifically shown on the plans to be paid by other Items.

2. MATERIALS

Furnish materials in conformance with the plans and Specifications.

3. CONSTRUCTION

Protect designated features on the right of way and prune trees and shrubs as directed. Do not park equipment, service equipment, store materials, or disturb the root area under the branches of trees designated for preservation. Follow all local and state regulations when burning. Pile and burn brush at approved locations as directed. Spread mulched material at approved locations as directed. Handle hazardous materials in accordance with Article 6.10., "Hazardous Materials."

Clear areas shown on the plans of all obstructions, except those landscape features that are to be preserved. Such obstructions include remains of houses and other structures, foundations, floor slabs, concrete, brick, lumber, plaster, septic tank drain fields, basements, abandoned utility pipes or conduits, equipment, fences, retaining walls, and other items as specified on the plans. Remove vegetation and other landscape features not designated for preservation, curb and gutter, driveways, paved parking areas, miscellaneous stone, sidewalks, drainage structures, manholes, inlets, abandoned railroad tracks, scrap iron, and debris, whether above or below ground. Remove culverts, storm sewers, manholes, and inlets in proper sequence to maintain traffic and drainage. Removal of live utility facilities is not included in this Item.

Perform tree and brush removal and trimming in accordance with Article 752.4, "Work Methods."

Notify the Engineer in writing when items not shown on the plans and not reasonably detectable (buried with no obvious indication of presence) are encountered and required to be removed. These items will be handled in accordance with Article 4.5., "Differing Site Conditions."

Remove obstructions not designated for preservation to 2 ft. below natural ground in areas receiving embankment. Remove obstructions to 2 ft. below the excavation level in areas to be excavated. Remove obstructions to 1 ft. below natural ground in all other areas. Remove trees and stumps to 6 in. below ground level. Plug the remaining ends of abandoned underground structures over 3 in. in diameter using concrete to form a tight closure. Backfill, compact, and restore areas where obstructions have been removed unless otherwise directed. Use approved material for backfilling. Dispose of wells in accordance with Item 103, "Disposal of Wells."

Accept ownership, unless otherwise directed, and dispose of removed materials and debris at locations off the right of way in conformance with local, state, and federal requirements.

3.1. **Tree Protection**. Install tree protection for trees designated for preservation. Unless otherwise shown on the plans, install tree protection along the drip line of the trees using 4-ft. tall chain link fencing with line posts no more than 10 ft. apart. Install tree protection before beginning work.

4. MEASUREMENT

This Item will be measured by the acre; by the 100-ft. station, regardless of the width of the right of way; or by each tree removed.

Tree removal diameter will be measured in accordance with Article 752.5, "Measurement."

Tree protection will be measured by the acre of trees protected, by the foot of fencing, or by each tree protected.

5. PAYMENT

For "acre" and "station" measurement, the work performed in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Preparing Right of Way." For "each" measurement, the work performed in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Preparing Right of Way (Tree)" of the diameter specified. This price is full compensation for removal and trimming of designated trees and shrubs; removal and disposal of structures and obstructions; backfilling of holes; furnishing and placing concrete for plugs; and equipment, labor, tools, and incidentals.

Total payment of this Item will not exceed 10% of the original Contract amount until final acceptance. The remainder will be paid on the estimate after final acceptance in accordance with Article 5.12., "Final Acceptance."

5.1. **Tree Protection**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows.

5.1.1. **Subsidiary Work**. The following will not be measured or paid for directly, but will be subsidiary to "Tree Protection":

- protection for Contractor project-specific locations inside and outside the right of way;
- repair to areas to be protected that are damaged by Contractor operations;
- removal and re-installation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the protection; and
- minor adjustments, including, but not limited to, plumbing posts and re-attaching protection.

5.1.2. **Installation**. Installation will be paid for as "Tree Protection (Install)." This price is full compensation for furnishing and operating equipment and for labor, materials, tools, and incidentals.

5.1.3. **Removal**. Removal will be paid for as "Tree Protection (Remove)." This price is full compensation for furnishing and operating equipment and for proper disposal, labor, materials, tools, and incidentals.

Item 104
Removing Concrete

1. DESCRIPTION

Break, remove, and salvage or dispose of existing hydraulic cement concrete.

2. CONSTRUCTION

Remove existing hydraulic cement concrete from locations shown on the plans. Avoid damaging concrete that will remain in place. Saw-cut and remove the existing concrete to neat lines. Replace any concrete damaged by the Contractor at no expense to the Department. Accept ownership and properly dispose of broken concrete in conformance with federal, state, and local regulations unless otherwise shown on the plans.

3. MEASUREMENT

Removing concrete pavement, floors, porches, patios, riprap, medians, foundations, sidewalks, driveways, and other appurtenances will be measured by the square yard (regardless of thickness) or by the cubic yard of calculated volume, in its original position.

Removing curb, curb and gutter, and concrete traffic barrier will be measured by the foot in its original position. The removal of monolithic concrete curb or dowelled concrete curb will be included in the concrete pavement measurement.

Removing retaining walls will be measured by the square yard along the front face from the top of the wall to the top of the footing.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantities are required.

4. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Removing Concrete” of the type specified. This price is full compensation for breaking the concrete; loading, hauling, and salvaging or disposing of the material; and equipment, labor, tools, and incidentals.

Removing retaining wall footings will not be measured or paid for directly but will be subsidiary to this Item.

Item 105

Removing Treated and Untreated Base and Asphalt Pavement

1. DESCRIPTION

Break, remove, and store or dispose of existing asphalt pavement, including surface treatments, and treated or untreated base materials.

2. CONSTRUCTION

Break material retained by the Department into pieces not larger than 24 in. unless otherwise shown on the plans. Remove existing asphalt pavement before disturbing stabilized base. Avoid contamination of the asphalt materials and damage to adjacent areas. Repair material damaged by operations outside the designated locations.

Stockpile materials designated salvageable at designated sites when shown on the plans or as directed. Prepare stockpile site by removing vegetation and trash and by providing for proper drainage. Material not designated to be salvaged will become the property of the Contractor. When this material is disposed of, do so in conformance with federal, state, and local regulations.

3. MEASUREMENT

This Item will be measured by the 100-ft. station along the baseline of each roadbed, by the square yard of existing treated or untreated base and asphalt pavement in their original position, or by the cubic yard of existing treated or untreated base and asphalt pavement in their original position, as calculated by the average end area method or as shown on the plans. Square yard and cubic yard measurement will be established by the widths and depths shown on the plans and the lengths measured in the field.

4. PAYMENT

The work performed in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Removing Treated and Untreated Base and Asphalt Pavement” of the depth specified. This price is full compensation for breaking the material, loading, hauling, unloading, and stockpiling or disposing; repair to areas outside designated locations for removal; and equipment, labor, tools, and incidentals.

Item 110
Excavation

1. DESCRIPTION

Excavate areas as shown on the plans or as directed. Remove materials encountered to the lines, grades, and typical sections shown on the plans and cross-sections.

2. MATERIALS

Accept ownership of unsuitable or excess material and dispose of material in conformance with local, state, and federal regulations, at locations outside the right of way.

3. CONSTRUCTION

Maintain drainage in the excavated area to avoid damage to the roadway section. Correct any damage to the subgrade caused by weather at no additional cost to the Department.

Shape slopes to avoid loosening material below or outside the proposed grades. Remove and dispose of slides or slope failures as directed.

Excavate to the grade and sections shown on the plans. Manipulate and compact subgrade in accordance with Section 132.3.4., "Compaction Methods," unless excavation is to clean homogenous rock at final grade.

Correct unsuitable material encountered at or below subgrade as directed.

3.1. **Rock Cuts**. Use approved embankment material compacted in accordance with Section 132.3.4., "Compaction Methods," to replace undercut material at no additional cost if excavation extends below the grade shown on the plans.

3.2. **Earth Cuts**. Scarify remaining material to a depth at least 6 in. below the grade shown on the plans in areas where pavement structure will be placed. Compact subgrade in accordance with Section 132.3.4., "Compaction Methods."

3.3. **Acceptance Criteria**.

3.3.1. **Grade Tolerances**.

3.3.1.1. **Staged Construction**. Grade to within 1.25 in. in the cross-section and 1.25 in. in 16 ft. measured longitudinally.

3.3.1.2. **Turnkey Construction**. Grade to within 0.5 in. in the cross-section and 0.5 in. in 16 ft. measured longitudinally.

4. MEASUREMENT

This Item will be measured by the cubic yard in its original position as computed by the method of average end areas or as shown on the plans.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Limits of measurement for excavation in retaining wall areas will be as shown on the plans.

Shrinkage or swelling factors will not be considered in determining the calculated quantities.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Roadway)," "Excavation (Channel)," "Excavation (Special)," or "Excavation (Roadway and Channel)." This price is full compensation for authorized excavation; drying; undercutting subgrade in rock cuts and reworking or replacing the undercut material; hauling; disposal of material not used elsewhere on the project; scarification and compaction; and equipment, labor, materials, tools, and incidentals.

Drying subgrade deeper than 6 in. below grade as shown on the plans will be paid for in accordance with Article 9.7., "Payment for Extra Work and Force Account Method." Excavation and replacement of unsuitable material below grade as shown on the plans will be performed and paid for in conformance with the applicable bid items. However, if Item 132, "Embankment," is not included in the Contract, payment for replacement of unsuitable material will be paid for in accordance with Article 9.7., "Payment for Extra Work and Force Account Method."

Removing, reworking, reshaping, or re-laying existing pavement structure will be paid for in conformance with the appropriate Item.

When a slide or slope failure not due to the Contractor's negligence or operation occurs, payment for removal and disposal of the slide material will be in accordance with Article 9.7., "Payment for Extra Work and Force Account Method."

Excavation in backfill areas of retaining walls will not be measured or paid for directly, but will be subsidiary to pertinent Items.

Item 160
Topsoil

1. DESCRIPTION

Furnish and place topsoil to the depths and on the areas shown on the plans.

2. MATERIALS

Use easily cultivated, fertile topsoil that is free of objectionable material and resists erosion. Obtain topsoil from the right of way at sites of proposed excavation or embankment when specified on the plans, or as directed. Secure additional topsoil, if necessary, from approved sources outside the right of way in accordance with Article 7.7., "Preservation of Cultural and Natural Resources and the Environment." Ensure that the topsoil obtained from sites outside the right of way has a pH of 5.5–8.5, per Tex-128-E. Topsoil is subject to testing by the Engineer. Furnish water in accordance with Article 168.2., "Materials."

3. CONSTRUCTION

Remove and dispose of objectionable material from the topsoil source before beginning the work. Stockpile topsoil, when necessary, in a windrow at designated locations along the right of way line or as directed. Keep source and stockpile areas drained during topsoil removal and leave them in a neat condition when removal is complete. Scarify the area to a depth of 4 in. before placing topsoil. Spread the topsoil to a uniform loose cover at the thickness specified. Place and shape the topsoil as directed. Water and roll the topsoil using a light roller or other suitable equipment.

4. MEASUREMENT

This Item will be measured by the 100-ft. station along the baseline of each roadbed, by the square yard, or by the cubic yard in vehicles at the point of delivery.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Furnishing and Placing Topsoil" of the depth specified on the plans (except for measurement by the cubic yard). This price is full compensation for securing necessary sources and royalties; furnishing topsoil; excavation, loading, hauling, stockpiling, and placing; watering; rolling; and equipment, labor, materials, tools, and incidentals. Limits of excavation and embankment for payment are shown in Figure 1.

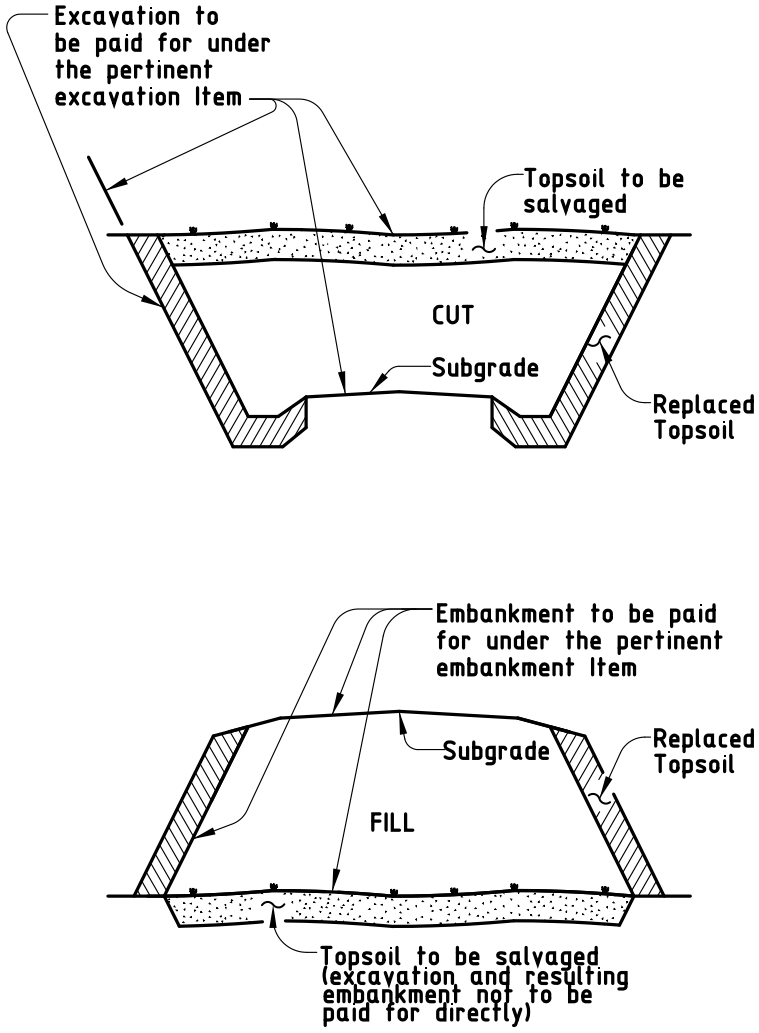


Figure 1
Roadway Cross-Sections Showing Payment for Excavation and Embankment

Item 164
Seeding for Erosion Control

1. DESCRIPTION

Prepare the surface and provide and distribute temporary or permanent seeding for erosion control as shown on the plans or as directed.

2. MATERIALS

2.1. **Seed**. Provide seed from the previous season's crop meeting the requirements of the Texas Seed Law, including the testing and labeling for pure live seed (PLS = Purity × Germination). Furnish seed of the designated species in labeled unopened bags or containers to the Engineer before planting. Use within 12 mo. from the date of the analysis. When Buffalograss is specified, use seed that is treated with potassium nitrate (KNO_3) to overcome dormancy.

Use Tables 1–5 to determine the appropriate seeding mix and rates as shown on the plans. Include flower seeding mix in accordance with Table 5 with seeding mix shown in Table 1 and Table 2.

If a grass plant species is not available by the producers, the other grass plant species in the seeding mix will be increased proportionally by the percentage of the missing plant grass species. If a flower plant species is not available by the producers, the other flower species in the seeding mix will be increased proportionally by the percentage of the missing flower species. Substitute species and rates require approval of the Engineer before being incorporated into the seeding mx. The rates listed in the tables are for drill seeding. All other methods of placing seed will require a 25% increase in rate.

Table 1
Permanent Rural Seeding Mix

District	Clay Soils Species, Percent, and Rate (lb. PLS per acre)		Sandy Soils Species, Percent, and Rate (lb. PLS per acre)	
1 (Paris)	Hooded Windmillgrass (Burnet)	15% 0.3	Hooded Windmillgrass (Burnet)	15% 0.3
	White Tridens (Guadalupe)	20% 0.4	Sand Dropseed (Taylor)	15% 0.3
	Little Bluestem (Coastal Plains)	20% 2.0	Little Bluestem (Coastal Plains)	20% 2.0
	Florida Paspalum (Harrison)	15% 2.25	Florida Paspalum (Harrison)	15% 2.25
	Sideoats Grama (Haskell)	05% 0.5	Splitbeard Bluestem (Neches)	10% 1.0
	Splitbeard Bluestem (Neches)	05% 0.5	Sand Lovegrass (Mason)	10% 0.4
	Sand Dropseed (Taylor)	05% 0.1	Green Sprangletop (Van Horn)	15% 0.6
	Canada Wildrye (Lavaca)	10% 2.0		
	Green Sprangletop (Van Horn)	05% 0.2		
2 (Fort Worth)	Hooded Windmillgrass (Burnet)	15% 0.3	Sand Dropseed (Taylor)	15% 0.3
	White Tridens (Guadalupe)	15% 0.3	Sideoats Grama (Haskell)	15% 1.5
	Sideoats Grama (Haskell)	10% 1.0	Little Bluestem (OK Select)	15% 1.05
	Little Bluestem (OK Select)	10% 0.7	Hairy Grama (Chaparral)	15% 0.6
	Buffalograss (Texoka)	10% 1.5	Green Sprangletop (Van Horn)	10% 0.2
	Silver Bluestem (Santiago)	10% 0.4	Hooded Windmillgrass (Burnet)	10% 0.2
	Green Sprangletop (Van Horn)	10% 0.4	Shortspike Windmillgrass (Welder)	10% 0.2
	Sand Dropseed (Taylor)	10% 0.2	Silver Bluestem (Stantiago)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0		

Table 1 (continued)
Permanent Rural Seeding Mix

District	Clay Soils Species, Percent, and Rate (lb. PLS per acre)		Sandy Soils Species, Percent, and Rate (lb. PLS per acre)	
3 (Wichita Falls)	Sideoats Grama (Haskell)	15% 1.5	Hooded Windmillgrass (Burnet)	10% 0.2
	Green Sprangletop (Van Horn)	10% 0.4	Sand Dropseed (Taylor)	15% 0.3
	Hooded Windmillgrass (Burnet)	10% 0.2	Green Sprangletop (Van Horn)	15% 0.6
	White Tridens (Guadalupe)	10% 0.2	Sideoats Grama (Haskell)	10% 1.0
	Little Bluestem (OK Select)	15% 1.05	Little Bluestem (OK Select)	10% 0.7
	Silver Bluestem (Santiago)	10% 0.4	Silver Bluestem (Santiago)	10% 0.4
	Buffalograss (Texoka)	10% 1.5	Hairy Grama (Chaparral)	10% 0.4
	Blue Grama (Hachita)	05% 0.2	Arizona Cottontop (La Salle)	10% 0.4
	Sand Dropseed (Taylor)	05% 0.1	Blue Grama (Hachita)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0		
4 (Amarillo)	Sideoats Grama (Haskell)	15% 1.5	Green Sprangletop (Van Horn)	15% 0.6
	Silver Bluestem (Santiago)	15% 0.6	Sideoats Grama (Haskell)	10% 1.0
	Buffalograss (Texoka)	15% 2.25	Sand Dropseed (Taylor)	10% 0.2
	Green Sprangletop (Van Horn)	10% 0.4	Silver Bluestem (Santiago)	10% 0.4
	Blue Grama (Hachita)	15% 0.6	Little Bluestem (OK Select)	15% 1.05
	Hooded Windmillgrass (Burnet)	05% 0.1	Arizona Cottontop (La Salle)	10% 0.4
	White Tridens (Guadalupe)	10% 0.2	Blue Grama (Hachita)	10% 0.4
	Western Wheatgrass (Barton)	10% 3.0	Sand Lovegrass (Mason)	10% 0.3
	Canada Wildrye (Lavaca)	05% 1.0	Hooded Windmillgrass (Burnet)	10% 0.2
5 (Lubbock)	Sideoats Grama (Haskell)	15% 1.5	Green Sprangletop (Van Horn)	15% 0.6
	Blue Grama (Hachita)	15% 0.6	Blue Grama (Hachita)	15% 0.6
	Silver Bluestem (Santiago)	15% 0.6	Sideoats Grama (Haskell)	10% 1.0
	Buffalograss (Texoka)	10% 1.5	Little Bluestem (OK Select)	10% 0.7
	White Tridens (Guadalupe)	10% 0.2	Hooded Windmillgrass (Burnet)	10% 0.2
	Green Sprangletop (Van Horn)	10% 0.4	Sand Dropseed (Taylor)	10% 0.2
	Hooded Windmillgrass (Burnet)	05% 0.1	Silver Bluestem (Santiago)	10% 0.4
	Galleta Grass (Viva)	05% 0.3	Arizona Cottontop (La Salle)	10% 0.4
	Western Wheatgrass (Barton)	10% 3.0	Sand Lovegrass (Mason)	10% 0.3
	Canada Wildrye (Lavaca)	05% 1.0		
6 (Odessa)	Whiplash Pappusgrass (Permian)	15% 0.9	Sand Dropseed (Taylor)	15% 0.3
	Green Sprangletop (Van Horn)	10% 0.4	Green Sprangletop (Van Horn)	10% 0.4
	Silver Bluestem (Santiago)	15% 0.6	Sideoats Grama (Brewster)	15% 1.5
	Sideoats Grama (Brewster)	10% 1.0	Whiplash Pappusgrass (Permian)	10% 0.6
	Sand Dropseed (Taylor)	10% 0.2	Hooded Windmillgrass (Burnet)	10% 0.2
	Alkali Sacaton (Saltalk)	10% 0.2	Blue Grama (Hachita)	10% 0.4
	Arizona Cottontop (La Salle)	10% 0.4	Hairy Grama (Chaparral)	10% 0.4
	Blue Grama (Hachita)	10% 0.4	Sand Lovegrass (Mason)	10% 0.3
	Galleta Grass (Viva)	10% 0.6	Little Bluestem (Pastura)	05% 0.5
			Galleta Grass (Viva)	05% 0.3
7 (San Angelo)	Sideoats Grama (Brewster)	15% 1.5	Sand Dropseed (Taylor)	15% 0.3
	Hooded Windmillgrass (Burnet)	10% 0.2	Green Sprangletop (Van Horn)	15% 0.6
	Silver Bluestem (Santiago)	10% 0.4	Hooded Windmillgrass (Burnet)	15% 0.3
	Sand Dropseed (Taylor)	10% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
	White Tridens (Guadalupe)	10% 0.2	Hairy Grama (Chaparral)	10% 0.4
	Whiplash Pappusgrass (Permian)	15% 0.9	Sand Lovegrass (Mason)	10% 0.3
	Texas Grama (Atascosa)	05% 0.5	Sideoats Grama (Brewster)	10% 1.0
	Green Sprangletop (Van Horn)	10% 0.4	Little Bluestem (OK Select)	10% 0.7
	Little Bluestem (OK Select)	05% 0.35	Whiplash Pappusgrass (Permian)	05% 0.3
	Blue Grama (Hachita)	05% 0.2		
	Galleta Grass (Viva)	05% 0.3		

Table 1 (continued)
Permanent Rural Seeding Mix

District	Clay Soils Species, Percent, and Rate (lb. PLS per acre)		Sandy Soils Species, Percent, and Rate (lb. PLS per acre)	
8 (Abilene)	Sideoats Grama (Haskell)	10% 1.0	Sand Dropseed (Taylor)	15% 0.3
	Hooded Windmillgrass (Burnet)	10% 0.2	Green Sprangletop (Van Horn)	10% 0.4
	Buffalograss (Texoka)	10% 1.5	Hooded Windmillgrass (Burnet)	15% 0.3
	Blue Grama (Hachita)	10% 0.4	Silver Bluestem (Santiago)	10% 0.4
	Silver Bluestem (Santiago)	10% 0.4	Little Bluestem (OK Select)	10% 0.7
	White Tridens (Guadalupe)	15% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
	Little Bluestem (OK Select)	10% 0.7	Hairy Grama (Chaparral)	10% 0.4
	Green Sprangletop (Van Horn)	10% 0.4	Sand Lovegrass (Mason)	10% 0.3
	Whiplash Pappusgrass (Permian)	10% 0.6	Arizona Cottontop (La Salle)	10% 0.4
	Galleta Grass (Viva)	10% 0.6		
9 (Waco)	Sideoats Grama (Haskell)	15% 1.5	Hooded Windmillgrass (Burnet)	15% 0.3
	White Tridens (Guadalupe)	15% 0.3	Shortspike Windmillgrass (Welder)	10% 0.2
	Hooded Windmillgrass (Burnet)	10% 0.2	Hairy Grama (Chaparral)	10% 0.4
	Little Bluestem (OK Select)	10% 0.7	Sand Dropseed (Taylor)	15% 0.3
	Buffalograss (Texoka)	10% 1.6	Sideoats Grama (Haskell)	10% 1.0
	Halls Panicum (Oso)	05% 0.1	Little Bluestem (OK Select)	10% 0.7
	Silver Bluestem (Santiago)	10% 0.4	Green Sprangletop (Van Horn)	10% 0.4
	Sand Dropseed (Taylor)	05% 0.1	Texas Grama (Atascosa)	05% 0.15
	Green Sprangletop (Van Horn)	10% 0.4	Silver Bluestem (Santiago)	10% 0.4
	Canada Wildrye (Lavaca)	05% 1.0	Canada Wildrye (Lavaca)	05% 1.0
	Texas Grama (Atascosa)	05% 0.5		
10 (Tyler)	Hooded Windmillgrass (Burnet)	15% 0.3	Hooded Windmillgrass (Burnet)	15% 0.3
	White Tridens (Guadalupe)	15% 0.3	Sand Dropseed (Taylor)	10% 0.2
	Sand Dropseed (Taylor)	05% 0.1	Little Bluestem (Coastal Plains)	20% 2.0
	Little Bluestem (Coastal Plains)	20% 2.0	Florida Paspalum (Harrison)	15% 2.25
	Florida Paspalum (Harrison)	15% 2.25	Splitbeard Bluestem (Neches)	10% 1.0
	Splitbeard Bluestem (Neches)	10% 1.0	Green Sprangletop (Van Horn)	05% 0.2
	Green Sprangletop (Van Horn)	05% 0.2	Sand Lovegrass (Mason)	10% 0.4
	Sideoats Grama (Haskell)	05% 0.5	Red Lovegrass (Duval)	10% 0.2
	Canada Wildrye (Lavaca)	10% 2.0	Hairy Grama (Chaparral)	05% 0.2
11 (Lufkin)	Hooded Windmillgrass (Burnet)	15% 0.3	Hooded Windmillgrass (Burnet)	15% 0.3
	White Tridens (Guadalupe)	15% 0.3	Sand Dropseed (Taylor)	10% 0.2
	Little Bluestem (Coastal Plains)	20% 2.0	Little Bluestem (Coastal Plains)	20% 2.0
	Florida Paspalum (Harrison)	15% 2.25	Florida Paspalum (Harrison)	15% 2.25
	Green Sprangletop (Van Horn)	05% 0.2	Splitbeard Bluestem (Neches)	10% 1.0
	Sideoats Grama (Haskell)	05% 0.5	Green Sprangletop (Van Horn)	05% 0.2
	Splitbeard Bluestem (Neches)	10% 1.0	Red Lovegrass (Duval)	10% 0.2
	Sand Dropseed (Taylor)	05% 0.1	Sand Lovegrass (Mason)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0	Hairy Grama (Chaparral)	05% 0.2
12 (Houston)	White Tridens (Guadalupe)	10% 0.2	Hooded Windmillgrass (Mariah)	15% 0.3
	Hooded Windmillgrass (Mariah)	10% 0.2	Sand Dropseed (Nueces)	15% 0.3
	Shortspike Windmillgrass (Welder)	15% 0.3	Shortspike Windmillgrass (Welder)	10% 0.2
	Little Bluestem (Coastal Plains)	15% 1.5	Little Bluestem (Coastal Plains)	15% 1.5
	Florida Paspalum (Harrison)	15% 2.25	Red Lovegrass (Duval)	10% 0.2
	Red Lovegrass (Duval)	05% 0.1	Florida Paspalum (Harrison)	15% 2.25
	Halls Panicum (Oso)	10% 0.2	Splitbeard Bluestem (Neches)	10% 1.0
	Splitbeard Bluestem (Neches)	05% 0.5	Hairy Grama (Chaparral)	05% 0.2
	Sand Dropseed (Nueces)	05% 0.1	Green Sprangletop (Van Horn)	05% 0.2
	Canada Wildrye (Lavaca)	10% 2.0		
13 (Yoakum)	White Tridens (Guadalupe)	15% 0.3	Hairy Grama (Chaparral)	15% 0.6
	Shortspike Windmillgrass (Welder)	15% 0.3	Hooded Windmillgrass (Mariah)	15% 0.3
	Halls Panicum (Oso)	10% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
	Plains Bristlegrass (Catarina Blend)	10% 0.6	Sand Dropseed (Nueces)	10% 0.2
	Little Bluestem (Coastal Plains)	15% 1.5	Little Bluestem (Carrizo)	10% 1.5
	Sideoats Grama (South Texas)	05% 0.75	Red Lovegrass (Duval)	10% 0.2
	Texas Grama (Atascosa)	10% 1.0	Slender Grama (Dilley)	10% 1.0
	Hooded Windmillgrass (Mariah)	05% 0.1	Plains Bristlegrass (Catarina)	10% 0.4
	Sand Dropseed (Nueces)	05% 0.1	Green Sprangletop (Van Horn)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0		

Table 1 (continued)
Permanent Rural Seeding Mix

District	Clay Soils Species, Percent, and Rate (lb. PLS per acre)		Sandy Soils Species, Percent, and Rate (lb. PLS per acre)	
14 (Austin)	Hooded Windmillgrass (Burnet)	20% 0.4	Hairy Grama (Chaparral)	15% 0.6
	White Tridens (Guadalupe)	10% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
	Sideoats Grama (South Texas)	10% 1.5	Hooded Windmillgrass (Burnet)	10% 0.2
	Shortspike Windmillgrass (Welder)	10% 0.2	Red Lovegrass (Duval)	10% 0.2
	Plains Bristlegrass (Catarina Blend)	10% 0.6	Sand Dropseed (Nueces)	10% 0.2
	Silver Bluestem (Santiago)	10% 0.4	Little Bluestem (Carrizo)	10% 1.5
	Little Bluestem (OK Select)	10% 0.7	Sideoats Grama (South Texas)	10% 1.5
	Halls Panicum (Oso)	05% 0.1	Silver Bluestem (Santiago)	10% 0.4
	Texas Grama (Atascosa)	05% 0.5	Plains Bristlegrass (Catarina)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0	Arizona Cottontop (La Salle)	05% 0.2
15 (San Antonio)	Sideoats Grama (South Texas)	15% 2.25	Slender Grama (Dilley)	15% 1.5
	White Tridens (Guadalupe)	15% 0.3	Hairy Grama (Chaparral)	15% 0.6
	Shortspike Windmillgrass (Welder)	10% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
	Halls Panicum (Oso)	10% 0.2	Hooded Windmillgrass (Mariah)	10% 0.2
	Plains Bristlegrass (Catarina Blend)	10% 0.6	Red Lovegrass (Duval)	10% 0.2
	False Rhodes Grass (Kinney)	05% 0.1	Sand Dropseed (Nueces)	10% 0.2
	Hooded Windmillgrass (Mariah)	05% 0.1	Pink Pappusgrass (Maverick)	05% 0.3
	Pink Pappusgrass (Maverick)	10% 0.6	Little Bluestem (Carrizo)	10% 1.5
	Texas Grama (Atascosa)	05% 0.5	Arizona Cottontop (La Salle)	05% 0.2
	Multiflower False Rhodes Grass (Hidalgo)	10% 0.2	Multiflower False Rhodes Grass (Hidalgo)	05% 0.1
	Arizona Cottontop (La Salle)	05% 0.2	Plains Bristlegrass (Catarina)	05% 0.2
16 (Corpus Christi)	Shortspike Windmillgrass (Welder)	15% 0.3	Slender Grama (Dilley)	15% 1.5
	Pink Pappusgrass (Maverick)	10% 0.6	Hairy Grama (Chaparral)	15% 0.6
	Halls Panicum (Oso)	10% 0.2	Hooded Windmillgrass (Mariah)	10% 0.2
	Plains Bristlegrass (Catarina Blend)	10% 0.6	Red Lovegrass (Duval)	10% 0.2
	White Tridens (Guadalupe)	10% 0.2	Sand Dropseed (Nueces)	10% 0.2
	Multiflower Galse Rhodes Grass (Hidalgo)	10% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
			Pink Pappusgrass (Maverick)	10% 0.6
	Hooded Windmillgrass (Mariah)	10% 0.2	Multiflower False Rhodes Grass (Hidalgo)	10% 0.2
	Arizona Cottontop (La Salle)	05% 0.2		
	Sand Dropseed (Nueces)	05% 0.1	Arizona Cottontop (La Salle)	05% 0.2
	Sideoats Grama (South Texas)	10% 1.5	Little Bluestem (Carrizo)	05% 0.75
	Texas Grama (Atascosa)	05% 0.5		
17 (Bryan)	White Tridens (Guadalupe)	15% 0.3	Sand Dropseed (Taylor)	10% 0.2
	Hooded Windmillgrass (Burnet)	15% 0.3	Shortspike Windmillgrass (Welder)	10% 0.2
	Little Bluestem (Coastal Plains)	15% 1.5	Little Bluestem (Coastal Plains)	15% 1.5
	Florida Paspalum (Harrison)	15% 2.25	Green Sprangletop (Van Horn)	05% 0.2
	Shortspike Windmillgrass (Welder)	10% 0.2	Florida Paspalum (Harrison)	15% 2.25
	Splitbeard Bluestem (Neches)	05% 0.5	Splitbeard Bluestem (Neches)	10% 1.0
	Green Sprangletop (Van Horn)	05% 0.2	Hooded Windmillgrass (Burnet)	15% 0.3
	Halls Panicum (Oso)	05% 0.1	Red Lovegrass (Duval)	10% 0.2
	Sand Dropseed (Taylor)	05% 0.1	Hairy Grama (Chaparral)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0		
18 (Dallas)	Sideoats Grama (Haskell)	15% 1.5	Shortspike Windmillgrass (Welder)	10% 0.2
	Hooded Windmillgrass (Burnet)	15% 0.3	Hairy Grama (Chaparral)	15% 0.6
	White Tridens (Guadalupe)	15% 0.3	Sand Dropseed (Taylor)	10% 0.2
	Little Bluestem (OK Select)	15% 1.05	Little Bluestem (OK Select)	15% 1.05
	Buffalograss (Texoka)	10% 1.5	Sideoats Grama (Haskell)	10% 1.0
	Silver Bluestem (Santiago)	05% 0.2	Green Sprangletop (Van Horn)	10% 0.4
	Green Sprangletop (Van Horn)	05% 0.2	Hooded Windmillgrass (Burnet)	10% 0.2
	Shortspike Windmillgrass (Welder)	05% 0.1	Sand Lovegrass (Mason)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0	Silver Bluestem (Santiago)	10% 0.4
	Sand Dropseed (Taylor)	05% 0.1		

Table 1 (continued)
Permanent Rural Seeding Mix

District	Clay Soils Species, Percent, and Rate (lb. PLS per acre)		Sandy Soils Species, Percent, and Rate (lb. PLS per acre)	
19 (Atlanta)	White Tridens (Guadalupe)	15% 0.3	Hooded Windmillgrass (Burnet)	15% 0.3
	Hooded Windmillgrass (Burnet)	15% 0.3	Sand Dropseed (Taylor)	10% 0.2
	Little Bluestem (Coastal Plains)	20% 2.0	Little Bluestem (Coastal Plains)	20% 2.0
	Florida Paspalum (Harrison)	15% 2.25	Florida Paspalum (Harrison)	15% 2.25
	Sideoats Grama (Haskell)	10% 1.0	Splitbeard Bluestem (Neches)	10% 1.0
	Splitbeard Bluestem (Neches)	05% 0.5	Sand Lovegrass (Mason)	10% 0.4
	Green Sprangletop (Van Horn)	05% 0.2	Red Lovegrass (Duval)	10% 0.2
	Sand Dropseed (Taylor)	05% 0.1	Hairy Grama (Chaparral)	10% 0.4
	Canada Wildrye (Lavaca)	10% 2.0		
20 (Beaumont)	White Tridens (Guadalupe)	10% 0.2	Hooded Windmillgrass (Mariah)	15% 0.3
	Hooded Windmillgrass (Mariah)	10% 0.2	Sand Dropseed (Nueces)	15% 0.3
	Shortspike Windmillgrass (Welder)	15% 0.3	Shortspike Windmillgrass (Welder)	10% 0.2
	Little Bluestem (Coastal Plains)	15% 1.5	Little Bluestem (Coastal Plains)	15% 1.5
	Florida Paspalum (Harrison)	15% 2.25	Red Lovegrass (Duval)	10% 0.2
	Red Lovegrass (Duval)	05% 0.1	Florida Paspalum (Harrison)	15% 2.25
	Halls Panicum (Oso)	10% 0.2	Splitbeard Bluestem (Neches)	10% 1.0
	Splitbeard Bluestem (Neches)	05% 0.5	Hairy Grama (Chaparral)	05% 0.2
	Sand Dropseed (Nueces)	05% 0.1	Green Sprangletop (Van Horn)	05% 0.2
	Canada Wildrye (Lavaca)	10% 2.0		
21 (Pharr)	Shortspike Windmillgrass (Welder)	10% 0.2	Slender Grama (Dilley)	10% 1.0
	Halls Panicum (Oso)	10% 0.2	Hairy Grama (Chaparral)	10% 0.4
	White Tridens (Guadalupe)	10% 0.2	Shortspike Windmillgrass (Welder)	10% 0.2
	Plains Bristlegrass (Catarina Blend)	10% 0.6	Red Lovegrass (Duval)	10% 0.2
	Pink Pappusgrass (Maverick)	10% 0.6	Sand Dropseed (Nueces)	10% 0.2
	Texas Grama (Atascosa)	10% 1.0	Hooded Windmillgrass (Mariah)	10% 0.2
	Multiflower False Rhodes Grass (Hidalgo)	05% 0.1	Pink Pappusgrass (Maverick)	10% 0.6
			Whiplash Pappusgrass (Webb)	10% 0.6
	Hooded Windmillgrass (Mariah)	10% 0.2	Multiflower False Rhodes Grass (Hidalgo)	10% 0.2
	Arizona Cottontop (La Salle)	10% 0.4		
	Sand Dropseed (Nueces)	05% 0.1	Arizona Cottontop (La Salle)	10% 0.4
	Whiplash Pappusgrass (Webb)	10% 0.6		
22 (Laredo)	Sideoats Grama (South Texas)	15% 2.25	Slender Grama (Dilley)	15% 1.5
	Pink Pappusgrass (Maverick)	10% 0.6	Hairy Grama (Chaparral)	15% 0.6
	Halls Panicum (Oso)	10% 0.2	Hooded Windmillgrass (Mariah)	10% 0.2
	Plains Bristlegrass (Catarina Blend)	10% 0.6	Red Lovegrass (Duval)	10% 0.2
	White Tridens (Guadalupe)	10% 0.2	Sand Dropseed (Nueces)	10% 0.2
	Whiplash Pappusgrass (Webb)	10% 0.6	Pink Pappusgrass (Maverick)	10% 0.6
	Shortspike Windmillgrass (Welder)	05% 0.1	Arizona Cottontop (La Salle)	10% 0.4
	Texas Grama (Atascosa)	10% 1.0	Little Bluestem (Carrizo)	05% 0.75
	False Rhodes Grass (Kinney)	10% 0.2	Sideoats Grama (South Texas)	10% 1.5
	Hooded Windmillgrass (Mariah)	10% 0.2	Shortspike Windmillgrass (Welder)	05% 0.1
23 (Brownwood)	Sideoats Grama (Haskell)	15% 1.5	Green Sprangletop (Van Horn)	15% 0.6
	Hooded Windmillgrass (Burnet)	15% 0.3	Sand Dropseed (Taylor)	15% 0.3
	White Tridens (Guadalupe)	15% 0.3	Sideoats Grama (Haskell)	10% 1.0
	Texas Grama (Atascosa)	10% 1.0	Little Bluestem (OK Select)	15% 1.05
	Little Bluestem (OK Select)	10% 0.7	Silver Bluestem (Santiago)	10% 0.4
	Buffalograss (Texoka)	10% 1.5	Hooded Windmillgrass (Burnet)	10% 0.2
	Silver Bluestem (Santiago)	10% 0.4	Shortspike Windmillgrass (Welder)	10% 0.2
	Shortspike Windmillgrass (Welder)	05% 0.1	Hairy Grama (Chaparral)	10% 0.4
	Sand Dropseed (Taylor)	05% 0.1	Sand Lovegrass (Mason)	05% 0.2
	Green Sprangletop (Van Horn)	05% 0.2		

Table 1 (continued)
Permanent Rural Seeding Mix

District	Clay Soils Species, Percent, and Rate (lb. PLS per acre)		Sandy Soils Species, Percent, and Rate (lb. PLS per acre)	
24 (El Paso)	Green Sprangletop (Van Horn)	10% 0.4	Sand Dropseed (Taylor)	20% 0.4
	Sideoats Grama (Brewster)	10% 1.0	Sideoats Grama (Brewster)	15% 1.5
	Whiplash Pappusgrass (Permian)	10% 0.6	Green Sprangletop (Van Horn)	15% 0.6
	Silver Bluestem (Santiago)	10% 0.4	Hooded Windmillgrass (Burnet)	10% 0.2
	Blue Grama (Hachita)	10% 0.4	Blue Grama (Hachita)	10% 0.4
	Galleta Grass (Viva)	10% 0.6	Hairy Grama (Chaparral)	05% 0.2
	Alkali Sacaton (Saltalk)	10% 0.2	Spike Dropseed (Potter)	10% 0.1
	Arizona Cottontop (La Salle)	10% 0.4	Little Bluestem (Pastura)	05% 0.5
	Plains Bristlegrass (Catarina Blend)	10% 0.4	Galleta grass (Viva)	10% 0.6
	False Rhodes Grass (Kinney)	10% 0.2		
25 (Childress)	Sideoats Grama (Haskell)	15% 1.5	Sideoats Grama (Haskell)	15% 1.5
	Hooded Windmillgrass (Burnet)	15% 0.3	Green Sprangletop (Van Horn)	10% 0.4
	Blue Grama (Hachita)	10% 0.4	Sand Dropseed (Taylor)	10% 0.2
	Buffalograss (Texoka)	10% 1.5	Hooded Windmillgrass (Burnet)	10% 0.2
	Galleta Grass (Viva)	10% 0.6	Arizona Cottontop (La Salle)	10% 0.4
	Silver Bluestem (Santiago)	15% 0.6	Blue Grama (Hachita)	10% 0.4
	White Tridens (Guadalupe)	10% 0.2	Little Bluestem (OK select)	10% 1.0
	Green Sprangletop (Van Horn)	05% 0.2	Galleta Grass (Viva)	10% 0.6
	Western Wheatgrass (Barton)	05% 1.5	Sand Lovegrass (Mason)	05% 0.15
	Canada Wildrye (Lavaca)	05% 1.0	Canada Wildrye (Lavaca)	10% 2.0

Table 2
Permanent Urban Seeding Mix

District	Clay Soils Species and Rates (lb. PLS per acre)		Sandy Soils Species and Rates (lb. PLS per acre)	
1 (Paris)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	5.4
	Sideoats Grama (Haskell)	4.5		
2 (Fort Worth)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (El Reno)	3.6	Sideoats Grama (El Reno)	3.6
	Bermudagrass	2.4	Bermudagrass	2.1
	Buffalograss (Texoka)	1.6	Sand Dropseed (Borden Co.)	0.3
3 (Wichita Falls)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (El Reno)	4.5	Sideoats Grama (El Reno)	3.6
	Bermudagrass	1.8	Bermudagrass	1.8
	Buffalograss (Texoka)	1.6	Sand Dropseed (Borden Co.)	0.4
4 (Amarillo)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (El Reno)	3.6	Sideoats Grama (El Reno)	2.7
	Blue Grama (Hachita)	1.2	Blue Grama (Hachita)	0.9
	Buffalograss (Texoka)	1.6	Sand Dropseed (Borden Co.)	0.4
			Buffalograss (Texoka)	1.6
5 (Lubbock)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (El Reno)	3.6	Sideoats Grama (El Reno)	2.7
	Blue Grama (Hachita)	1.2	Blue Grama (Hachita)	0.9
	Buffalograss (Texoka)	1.6	Sand Dropseed (Borden Co.)	0.4
			Buffalograss (Texoka)	1.6
6 (Odessa)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (Haskell)	3.6	Sideoats Grama (Haskell)	2.7
	Blue Grama (Hachita)	1.2	Sand Dropseed (Borden Co.)	0.4
	Buffalograss (Texoka)	1.6	Blue Grama (Hachita)	0.9
			Buffalograss (Texoka)	1.6
7 (San Angelo)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (Haskell)	7.2	Sideoats Grama (Haskell)	3.2
	Buffalograss (Texoka)	1.6	Sand Dropseed (Borden Co.)	0.3
			Blue Grama (Hachita)	0.9
			Buffalograss (Texoka)	1.6

Table 2 (continued)
Permanent Urban Seeding Mix

District	Clay Soils Species and Rates (lb. PLS per acre)		Sandy Soils Species and Rates (lb. PLS per acre)	
8 (Abilene)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (Haskell)	3.6	Sand Dropseed (Borden Co.)	0.3
	Blue Grama (Hachita)	1.2	Sideoats Grama (Haskell)	3.6
	Buffalograss (Texoka)	1.6	Blue Grama (Hachita)	0.8
			Buffalograss (Texoka)	1.6
9 (Waco)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	1.8	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6	Bermudagrass	3.6
	Sideoats Grama (Haskell)	4.5	Sand Dropseed (Borden Co.)	0.4
10 (Tyler)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	5.4
	Sideoats Grama (Haskell)	4.5		
11 (Lufkin)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	5.4
	Sideoats Grama (Haskell)	4.5		
12 (Houston)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (Haskell)	4.5	Bermudagrass	5.4
	Bermudagrass	2.4		
13 (Yoakum)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (South Texas)	4.5	Bermudagrass	5.4
	Bermudagrass	2.4		
14 (Austin)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	4.8
	Sideoats Grama (South Texas)	3.6	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6		
15 (San Antonio)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (South Texas)	3.6	Bermudagrass	4.8
	Bermudagrass	2.4	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6		
16 (Corpus Christi)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (South Texas)	3.6	Bermudagrass	4.8
	Bermudagrass	2.4	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6		
17 (Bryan)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	5.4
	Sideoats Grama (Haskell)	4.5		
18 (Dallas)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (El Reno)	3.6	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6	Bermudagrass	3.6
	Bermudagrass	2.4	Sand Dropseed (Borden Co.)	0.4
19 (Atlanta)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	5.4
	Sideoats Grama (Haskell)	4.5		
20 (Beaumont)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	5.4
	Sideoats Grama (Haskell)	4.5		
21 (Pharr)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (South Texas)	3.6	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6	Bermudagrass	3.6
	Bermudagrass	2.4	Sand Dropseed (Borden Co.)	0.4
22 (Laredo)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (South Texas)	4.5	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6	Bermudagrass	3.6
	Bermudagrass	1.8	Sand Dropseed	0.4
23 (Brownwood)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (Haskell)	3.6	Buffalograss (Texoka)	1.6
	Bermudagrass	1.2	Bermudagrass	3.6
	Blue Grama (Hachita)	0.9	Sand Dropseed (Borden Co.)	0.4

Table 2 (continued)
Permanent Urban Seeding Mix

District	Clay Soils Species and Rates (lb. PLS per acre)		Sandy Soils Species and Rates (lb. PLS per acre)	
24 (El Paso)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (South Texas)	3.6	Buffalograss (Texoka)	1.6
	Blue Grama (Hachita)	1.2	Sand Dropseed (Borden Co.)	0.4
	Buffalograss (Texoka)	1.6	Blue Grama (Hachita)	1.8
25 (Childress)	Green Sprangletop	0.3	Green Sprangletop	0.3
	Sideoats Grama (El Reno)	3.6	Sand Dropseed (Borden Co.)	0.4
	Blue Grama (Hachita)	1.2	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6	Bermudagrass	1.8

Table 3
Temporary Cool Seeding Mix

District	All Soils Species and Rates (lb. PLS per acre)	
1 (Paris), 2 (Fort Worth), 3 (Wichita Falls), 4 (Amarillo), 5 (Lubbock), 6 (Odessa), 7 (San Angelo), 8 (Abilene), 18 (Dallas), 19 (Atlanta), 23 (Brownwood), 24 (El Paso), 25 (Childress)	Oats	30.0
	Wheat	30.0
	Little Barley	5.0
	Western Wheatgrass	5.0
9 (Waco), 10 (Tyler), 11 (Lufkin), 12 (Houston), 13 (Yoakum), 14 (Austin), 15 (San Antonio), 16 (Corpus Christi), 17 (Bryan), 20 (Beaumont), 21 (Pharr), 22 (Laredo)	Oats	40.0
	Little Barley	5.0

Table 4
Temporary Warm Seeding Mix

District	All Soils Species and Rates (lb. PLS per acre)	
All	Brownton Millet	20.0

Table 5
Flower Seeding Mix

District	All Soils Species and Rates (lb. PLS per acre)	
1 (Paris), 10 (Tyler), 11 (Lufkin), 12 (Houston), 17 (Bryan), 19 (Atlanta), 20 (Beaumont)	Herbaceous Mimosa (Crockett)	1.5
	Illinois Bundleflower (Sabine)	1.5
	Thickspike Gayfeather (Pineywoods)	1.5
	Purple Prairie Clover (Kaneb)	0.6
	Rio Grange Clammyweed (Zapata)	2.0
2 (Fort Worth), 3 (Wichita Falls), 4 (Amarillo), 5 (Lubbock), 6 (Odessa), 7 (San Angelo), 8 (Abilene), 9 (Waco), 18 (Dallas), 23 (Brownwood), 25 (Childress)	Engelmann Daisy (Eldorado)	1.5
	Awnless Bushsunflower (Plateau)	1.5
	Partridge Pea	1.5
	Illinois Bundleflower (Sabine)	1.5
	Rio Grande Clammyweed (Zapata)	2.0
13 (Yoakum), 14 (Austin), 15 (San Antonio), 16 (Corpus Christi, 21 (Pharr), 22 (Laredo), 24 (El Paso)	Indian Blanket (Fuego)	1.0
	Awnless Bushsunflower (Venado)	0.4
	Prostrate Bundleflower (Balli)	1.5
	Orange Zexmenia (Goliad)	0.4
	Rio Grande Clammyweed (Zapata)	2.0

2.2. **Fertilizer**. Use fertilizer in accordance with Article 166.2., “Materials.”

2.3. **Water**. Use water in accordance with Article 168.2, “Materials.”

2.4. **Highly Erodible Land (HEL)**. Add Bermudagrass to the mix shown in Table 1 at 1.0 PLS per acre if shown on the plans.

2.5. **Mulch**.

2.5.1. **Straw or Hay Mulch**. Use straw or hay mulch in accordance with Section 162.2.5., "Mulch."

2.5.2. **Hydro Mulch**. Use mulches that are on the Approved Products List. Submit one full set of manufacturer's literature for the selected material. Keep mulch dry until applied. Do not use molded or rotted material.

2.6. **Tacking Methods**. Use a tacking agent applied in conformance with the manufacturer's recommendations or by a crimping method on all straw or hay mulch operations. Use tacking agents as approved or as shown on the plans.

3. CONSTRUCTION

Scarify the area to a depth of 4 in. before placing the seed, unless otherwise directed. Use approved equipment to vertically track the seedbed as shown on the plans or as directed. Scarify the seedbed to a depth of 4 in. or mow the area before placement of the permanent seed mix when performing permanent seeding after an established temporary seeding. Plant the seed mix specified and mulch, if required, after the area has been completed to lines and grades as shown on the plans.

Apply fertilizer in accordance with Article 166.3., "Construction." Grass seed, flower seed, and fertilizer may be distributed simultaneously during dry seeding operations, provided each component is applied at the specified rate. Do not combine fertilizer and seed in the same slurry during hydro mulch seeding operations. Apply half of the required fertilizer during the temporary seeding operation and the other half during the permanent seeding operation when temporary and permanent seeding are both specified for the same area.

Water the seeded areas at the rates and frequencies as shown on the plans or as directed.

Distribute the seed or seed mixture uniformly over the areas shown on the plans. Provide equipment with an agitator or method to maintain a uniform seed mixture during distribution.

3.1. **Planting Season**.

3.1.1. **Temporary Seed**. Plant cool seeding mix September 1–January 31. Plant warm seeding mix February 1–August 30.

3.1.2. **Permanent Seed**. End planting season for all Districts by May 15. Begin planting season for each District based on the following.

- **January 15**. 1 (Paris), 10 (Tyler), 11 (Lufkin), 12 (Houston), 13 (Yoakum), 15 (San Antonio), 16 (Corpus Christi), 17 (Bryan), 19 (Atlanta), 20 (Beaumont), 21 (Pharr), and 22 (Laredo).
- **February 1**. 2 (Fort Worth), 3 (Wichita Falls), 6 (Odessa), 7 (San Angelo), 8 (Abilene), 9 (Waco), 14 (Austin), 18 (Dallas), 23 (Brownwood), 24 (El Paso), and 25 (Childress).
- **February 15**. 4 (Amarillo) and 5 (Lubbock).

3.2. **Broadcast Seeding**. Use hand or mechanical distribution or hydro-seeding on top of the soil unless otherwise directed. Apply the mixture to the area to be seeded within 30 min. of placement of components in the equipment when seed and water are to be distributed as a slurry during hydro-seeding. Roll the planted area using a light roller or other suitable equipment. Roll sloped areas along the contour of the slopes.

3.3. **Straw or Hay Mulch Seeding**. Plant seed in accordance with Section 164.3.2., "Broadcast Seeding." Apply straw or hay mulch uniformly over the seeded area immediately after planting the seed or seed mixture. Apply straw or hay mulch in accordance with Section 164.3.6., "Straw or Hay Mulching." Apply tack in accordance with Section 164.2.6., "Tacking Methods."

3.4. **Hydro Mulch Seeding**. Plant seed in accordance with Section 164.3.2, "Broadcast Seeding," before placing mulch. Apply mulch uniformly over the seeded area immediately after planting the seed or seed mixture at the following rates.

- **Sandy Soils with Slopes of 3:1 or Less**. 2,500 lb. per acre.
- **Sandy Soils with Slopes Greater than 3:1**. 3,000 lb. per acre.
- **Clay Soils with Slopes of 3:1 or Less**. 2,000 lb. per acre.
- **Clay Soils with Slopes Greater than 3:1**. 2,300 lb. per acre.

Mulch rates are based on dry weight of mulch per acre. Mix mulch and water to make a slurry and apply uniformly over the seeded area using suitable equipment.

3.5. **Drill Seeding**. Plant at a depth of 1/4–1/3 in. using a pasture- or rangeland-type drill unless otherwise directed. Plant seed along the contour of the slopes.

3.6. **Straw or Hay Mulching**. Apply straw or hay mulch uniformly over the area as shown on the plans. Apply straw mulch at 2–2.5 ton per acre. Apply hay mulch at 1.5–2 ton per acre. Use a tacking method over the mulched area in accordance with Section 164.2.6., "Tacking Methods."

4. MEASUREMENT

This Item will be measured by the square yard or by the acre.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Broadcast Seeding (Perm)" of the rural or urban seed mixture and sandy or clay soil specified, "Broadcast Seeding (Temp)" of warm or cool season specified, "Straw or Hay Mulch Seeding (Perm)" of the rural or urban seed mixture and sandy or clay soil specified, "Straw or Hay Mulch Seeding (Temp)" of warm or cool season specified, "Hydro Mulch Seeding (Perm)" of the rural or urban seed mixture and sandy or clay soil specified, "Hyrdro Mulch Seeding (Temp)" of warm or cool season specified, "Drill Seeding (Perm)" of the rural or urban seed mixture and sandy or clay soil specified, "Drill Seeding (Temp)" of warm or cool season specified, and "Straw or Hay Mulching." This price is full compensation for furnishing materials, seeding mix, flower seeding mix, HEL seeding mix, water for hydro-seeding and hydro-mulching operations, mowing, tacking, labor, equipment, tools, supplies, and incidentals.

Fertilizer will not be paid for directly, but will be subsidiary to this Item.

Water for irrigating the seeded area, when specified, will be paid for under Item 168, "Vegetative Watering."

Item 247
Flexible Base

1. DESCRIPTION

Construct a foundation course composed of flexible base.

2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications. Notify the Engineer of the proposed material sources and of changes to material sources. The Engineer may sample and test project materials at any time before compaction throughout the duration of the project to assure specification compliance.

2.1. **Aggregate**. Furnish aggregate of the type and grade shown on the plans and meeting the requirements shown in Table 1. Each source must meet Table 1 requirements for liquid limit, plasticity index, and wet ball mill for the grade specified. Do not use additives, such as but not limited to lime, cement, or fly ash to modify aggregates to meet the requirements of Table 1, unless shown on the plans.

Unless otherwise shown on the plans, the unconfined compressive strength is waived when the flexible base material meets the #200 sieve requirement. When the #200 sieve requirement does not meet the specification in Table 1, the unconfined compressive strength is required.

Table 1
Material Requirements

Property	Test Method	Grade 1–2[3]	Grade 3	Grade 4	Grade 5
Master gradation sieve size (cumulative % retained)	Tex-110-E			As shown on the plans	
2-1/2"		0	0		0
1-3/4"		0–10	0–10		0–5
7/8"		10–35	–		10–35
3/8"		30–65	–		35–65
#4		45–75	45–75		45–75
#40		65–90	50–85		70–90
#200[1, 2]		85–95	–		–
Liquid limit, % Max	Tex-104-E	40	40		35
Plasticity index, Max	Tex-106-E	10	12		10
Plasticity index, Min		As shown on the plans	As shown on the plans		As shown on the plans
Wet ball mill, % Max	Tex-116-E	40	–		40
Wet ball mill, % Max increase passing the #40 sieve		20	–		20
Min compressive strength[2], psi	Tex-117-E				
lateral pressure 0 psi		35	–		–
lateral pressure 3 psi		–	–		90
lateral pressure 15 psi		175	–		175

1. The #200 sieve test is only required to meet the waiver of the unconfined compressive strength requirement. The #200 sieve test requirement is only applicable to stockpile samples from Section 247.2.4.
2. Compressive strength and #200 sieve test requirements are waived when the flexible base is mixed with or without existing material and treated with cement, emulsion, foamed asphalt, or lime, unless otherwise shown on the plans.
3. Grade 3 may be substituted for Grade 1–2 or Grade 5 when the flexible base is mixed with or without existing material and treated with cement, emulsion, foamed asphalt, or lime, as approved. The Grade 3 flexible base must meet the wet ball mill requirements of Grade 1–2 or Grade 5 as applicable.

2.1.1. **Material Tolerances**. The Engineer may accept material if no more than one of the five most recent gradation tests has an individual sieve outside the specified limits of the gradation. This allowance does not apply to the #200 sieve requirement.

The Engineer may accept material if no more than one of the five most recent liquid limit or plasticity index tests is outside the specified limit. No single failing liquid limit or plasticity index test may exceed the allowable limit by more than 2 percentage points.

2.1.2. **Material Types**. Do not use fillers or binders unless approved. Furnish the type shown on the plans in accordance with the following.

2.1.2.1. **Type A**. Crushed stone produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use gravel or multiple sources.

2.1.2.2. **Type B**. Crushed or uncrushed gravel. Blending of two or more sources is allowed.

2.1.2.3. **Type C**. Crushed gravel with a minimum of 60% of the particles retained on a No. 4 sieve with two or more crushed faces as determined in accordance with Tex-460-A, Part I. Blending of two or more sources is allowed.

2.1.2.4. **Type D**. Type A material or crushed concrete. Crushed concrete containing gravel will be considered Type D material. Crushed concrete must meet the requirements of Section 247.2.1.2.6., "Recycled Material," and be managed in a way to provide for uniform quality. The Engineer may require separate dedicated stockpiles to verify compliance.

2.1.2.5. **Type E**. Caliche, iron ore, or as otherwise shown on the plans.

2.1.2.6. **Recycled Material**. Reclaimed asphalt pavement (RAP) and other recycled materials may be used when shown on the plans. Request approval to blend two or more sources of recycled materials. When RAP is allowed, do not exceed 20% RAP by weight, unless otherwise shown on the plans. The percentage limitations for other recycled materials will be as shown on the plans.

Provide recycled materials, other than RAP, that have a maximum sulfate content of 3,000 ppm when tested in accordance with Tex-145-E. Certify compliance with DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines." In addition, recycled materials must be free of reinforcing steel and other objectionable material and have at most 1.5% deleterious material when tested in accordance with Tex-413-A. The liquid limit, plasticity index, wet ball mill, and compressive strength for all recycled materials are waived. When using RAP, crush RAP so that 100% passes the 2-in. sieve and does not exceed a maximum percent loss from decantation of 5.0% when tested in accordance with Tex-406-A. Test RAP without removing the asphalt. The final product must meet the requirements shown in Table 1 for the grade specified except when the Department requires a specific amount of Department-furnished RAP be added to the blend, unless otherwise shown on the plans.

The Contractor is responsible for uniformly blending the recycled material with the flexible base material to build a stockpile to meet the percentages required. Any Contractor-furnished surplus of recycled materials will remain the property of the Contractor. Remove Contractor-owned recycled materials from the project and dispose of them in accordance with federal, state, and local regulations before project acceptance.

2.2. **Water**. Furnish water free of industrial wastes and other objectionable matter.

2.3. **Material Sources**. Expose the vertical faces of all strata of material proposed for use when non-commercial sources are used. Secure and process the material by successive vertical cuts extending through all exposed strata, when directed.

2.4. **Stockpile Approval**. Stockpile is approved when the Engineer's test results meet the material requirements shown in Table 1.

2.4.1. **Sampling**. The Contractor and the Engineer will sample flexible base from completed stockpiles in accordance with Tex-100-E. Personnel conducting sampling must be certified by the Department-approved soils and base certification program.

Sampling stockpiles may be located at the production site or at the project location. The Contractor will witness the Engineer's sampling and sample the stockpile for their own testing, and label as deemed necessary.

Sample the stockpile for the Engineer when shown on the plans. When the Contractor samples the stockpile for the Engineer, the Engineer must witness the sampling of material designated for the Engineer and the Materials and Tests Division (MTD). The Engineer will label their sampling containers as "Engineer" and "MTD," or as deemed necessary.

The Engineer will take immediate possession of the sample containers for the Engineer and MTD. The Engineer will maintain custody of the samples until all testing and reporting are completed.

2.4.2. **Referee Testing**. Referee testing is applicable for stockpile testing only. MTD is the referee laboratory. MTD may designate a laboratory from the Department's MPL for Commercial Laboratories Approved for Flexible Base Referee Requests as the referee laboratory as deemed necessary. The designated laboratory cannot be performing any testing under this Item for the Engineer or Contractor.

The Contractor may request referee testing when the Engineer's test results fail to meet any of the material requirements shown in Table 1 and the Contractor's sample from Section 2.4.1., "Sampling," for the same failing Department test, passes. The tests must be performed by a laboratory listed on the Department's MPL for Commercial Laboratories Approved for Flexible Base Referee Requests. Submit the request by email within 5 working days after receiving failing test results from the Engineer. Include completed test reports passing the applicable requirements shown in Table 1 in the email.

Record and submit completed test reports electronically on Department-provided templates in their original format meeting the applicable material requirements shown in Table 1. Use Department-provided templates to record and calculate all test data. The Engineer and the Contractor will provide any available test results to the other party when requested.

3. EQUIPMENT

Provide machinery, tools, and equipment necessary for proper execution of the work.

3.1. **Rollers**. Provide rollers in accordance with Item 210, "Rolling." Provide proof rollers in accordance with Item 216, "Proof Rolling," when required.

3.2. **Inertial Profiler**. When ride quality measurement is required, provide a high-speed or lightweight inertial profiler certified at the Texas A&M Transportation Institute. Provide equipment certification documentation. Display a current decal on the equipment indicating the certification expiration date.

4. CONSTRUCTION

Construct each layer uniformly, free of loose or segregated areas, and with the required density and moisture content. Provide a smooth surface that conforms to the typical sections, lines, and grades shown on the plans or as directed.

Stockpile base material temporarily at an approved location before delivery to the roadway. Build stockpiles in layers no greater than 2 ft. thick. Stockpiles must have a total height between 10 and 16 ft. unless otherwise approved. After construction and acceptance of the stockpile in accordance with Section 247.2.4., "Stockpile Approval," loading from the stockpile for delivery is allowed. Load by making successive vertical cuts through the entire depth of the stockpile.

Do not add or remove material from temporary stockpiles that require sampling and testing before delivery, unless otherwise approved. Charges for additional sampling and testing required as a result of adding or removing material will be deducted from the Contractor's estimates.

Haul approved flexible base in clean trucks. Deliver the required quantity to each 100-ft. station or designated stockpile site as shown on the plans. Prepare stockpile sites as directed. When delivery is to the 100-ft. station, manipulate in conformance with the applicable Items.

4.1. **Preparation of Subgrade or Existing Base**. Remove or scarify existing asphalt concrete pavement in accordance with Item 105, "Removing Treated and Untreated Base and Asphalt Pavement," when shown on the plans or as directed. Shape the subgrade or existing base to conform to the typical sections shown on the plans or as directed.

When new base is required to be mixed with existing base, deliver, place, and spread the new flexible base in the required amount per station. Manipulate and thoroughly mix the new base with existing material to provide a uniform mixture to the specified depth before shaping.

Proof roll the roadbed in accordance with Item 216 before pulverizing or scarifying when shown on the plans or directed. Correct soft spots as directed.

4.2. **Placing**. Spread and shape flexible base into a uniform layer using an approved spreader the same day as delivered unless otherwise approved. Construct layers to the thickness shown on the plans. Maintain the shape of the course. Control dust by sprinkling, as directed. Correct or replace segregated areas as directed at no additional expense to the Department.

Place successive base courses and finish courses using the same construction methods required for the first course.

4.3. **Compaction**. Compact using density control unless otherwise shown on the plans. Multiple lifts are permitted when shown on the plans or approved. Bring each layer to the moisture content directed. When necessary, sprinkle the material in accordance with Item 204, "Sprinkling." Maintain moisture during compaction within ±2.0% of the optimum moisture content as determined in accordance with Tex-113-E.

Begin rolling longitudinally at the sides and proceed toward the center, overlapping on successive trips by at least 1/2 the width of the roller unit. Begin rolling at the low side and progress toward the high side on superelevated curves. Offset alternating trips of the roller. Operate rollers at a speed between 2 and 6 mph as directed.

Rework, recompact, and refinish material that fails to meet or that loses required moisture, density, stability, or finish requirements before the next course is placed or the project is accepted. Continue work until specification requirements are met. Perform the work at no additional expense to the Department.

Before final acceptance, the Engineer will select the locations of tests and measure the flexible base depth in accordance with Tex-140-E. Correct areas deficient by more than 1/2 in. in thickness by scarifying, adding material as required, reshaping, recompacting, and refinishing at the Contractor's expense.

4.3.1. **Ordinary Compaction**. Roll using approved compaction equipment as directed. Correct irregularities, depressions, and weak spots immediately by scarifying the areas affected, adding or removing approved material as required, reshaping, and recompacting.

4.3.2. **Density and Moisture Control**. Compact to a minimum of 100% of the maximum dry density and within ±2.0% of the optimum moisture content as determined in accordance with Tex-113-E, unless otherwise shown on the plans. Provide the Engineer with the beginning and ending station numbers of the area completed for testing. The Engineer will determine roadway density and moisture content of completed sections in accordance with Tex-115-E, Part I. The Engineer will determine random locations for testing in accordance with Tex-115-E, Part IV. Do not achieve density by drying the material after compaction.

When the density is less than 100% of the maximum dry density, the Engineer may perform additional testing to determine the extent of the area to correct. The Engineer may accept the section if no more than one of the five most recent density tests is below the specified density and the failing test is no more than 3 pcf below the specified density.

4.3.3. **Miscellaneous and Small Areas**. Miscellaneous areas are those that typically involve handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Miscellaneous and small areas are not subject to density testing but may be tested as directed.

4.4. **Finishing**. After completing compaction, clip, skin, or tight-blade the surface using a maintainer or subgrade trimmer to a depth of approximately 1/4 in. Remove loosened material and dispose of it at an approved location. Seal the clipped surface immediately by rolling using a pneumatic tire roller until a smooth surface is attained. Add small increments of water as needed during rolling. Shape and maintain the course and surface in conformity with the typical sections, lines, and grades as shown on the plans or as directed.

Correct grade deviations greater than 1/4 in. in 16 ft. measured longitudinally. Correct grade deviations greater than 1/4 in. over the entire width of the cross-section in areas where surfacing is to be placed. Correct by loosening and adding or removing material. Reshape and recompact in accordance with Section 247.4.3., "Compaction."

4.5. **Curing**. Cure the finished section until the moisture content is at least 2 percentage points below optimum or as directed before applying the next successive course or prime coat.

4.6. **Ride Quality**. Measurement of ride quality only applies to the final travel lanes that receive a one- or two-course surface treatment for the final riding surface, unless otherwise shown on the plans. Measure the ride quality of the base course either before or after the application of the prime coat, as directed, and before placement of the surface treatment. Use a certified profiler operator listed on the Department's MPL. When requested, furnish the Engineer with documentation for the person certified to operate the profiler.

Provide all profile data to the Engineer in electronic data files within 3 days of measuring the ride quality using the format specified in Tex-1001-S. The Engineer will use Department software to evaluate longitudinal profiles to determine areas requiring corrective action. Correct 0.1-mi. sections with an average international roughness index (IRI) value greater than 100 in. per mile to an IRI value of 100 in. per mile or less, unless otherwise shown on the plans. Reprofile and correct sections that fail to maintain ride quality before the placement of the surface treatment, as directed. Unless ride deterioration is due to environmental impact, traffic, or other incidents outside the Contractor's control, perform this work at no additional expense to the Department, as approved.

5. MEASUREMENT

Flexible base will be measured as follows.

- **Flexible Base (Complete in Place)**. The ton, square yard, or any cubic yard method.
- **Flexible Base (Roadway Delivery)**. The ton or any cubic yard method.
- **Flexible Base (Stockpile Delivery)**. The ton, cubic yard in vehicle, or cubic yard in stockpile.

Measurement by the cubic yard in final position and square yard is a plans quantity measurement. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Measurement is further defined for payment as follows.

5.1. **Cubic Yard in Vehicle**. By the cubic yard in vehicles of uniform capacity at the point of delivery.

5.2. **Cubic Yard in Stockpile**. By the cubic yard in the final stockpile position, by the method of average end areas, or as shown on the plans.

5.3. **Cubic Yard in Final Position**. By the cubic yard in the completed and accepted final position. The volume of base course is computed in place by the method of average end areas between the original subgrade or existing base surfaces and the lines, grades, and slopes of the accepted base course, or as shown on the plans.

5.4. **Square Yard**. By the square yard of surface area in the completed and accepted final position. The surface area of the base course is based on the width of flexible base, or as shown on the plans.

5.5. **Ton**. By the ton of dry weight in vehicles as delivered. The dry weight is determined by deducting the weight of the moisture in the material at the time of weighing from the gross weight of the material. The Engineer will determine the moisture content in the material in accordance with Tex-103-E from samples taken at the time of weighing.

When material is measured in trucks, the weight of the material will be determined on certified scales, or the Contractor must provide a set of standard platform truck scales at an approved location. Scales must meet the requirements of Item 520, "Weighing and Measuring Equipment."

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the types of work described below. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans for cubic yard in the final position or square yard measurement.

Sprinkling and rolling, except proof rolling, will not be paid for directly, but will be subsidiary to this Item unless otherwise shown on the plans. When proof rolling is shown on the plans or directed, it will be paid for in accordance with Item 216.

Where subgrade is constructed under this Contract, correction of soft spots in the subgrade will be at the Contractor's expense. Where subgrade is not constructed under this Contract, correction of soft spots in the subgrade will be paid in conformance with pertinent Items or in accordance with Article 4.4., "Changes in the Work."

6.1. **Flexible Base (Complete in Place)**. Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle," "In Stockpile," or "In Final Position" will be specified. For square yard measurement, a depth will be specified. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, spreading, blading, mixing, shaping, placing, compacting, reworking, finishing, correcting locations where thickness is deficient, curing, furnishing scales and labor for weighing and measuring, equipment, labor, tools, and incidentals.

6.2. **Flexible Base (Roadway Delivery)**. Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle," "In Stockpile," or "In Final Position" will be specified. The unit price bid will not include processing at the roadway. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, furnishing scales and labor for weighing and measuring, equipment, labor, tools, and incidentals.

6.3. **Flexible Base (Stockpile Delivery)**. Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle" or "In Stockpile" will be specified. The unit price bid will not include processing at the roadway. This price is full compensation for furnishing and disposing of materials, preparing the stockpile area, temporary or permanent stockpiling, assistance provided in stockpile sampling and operations to level

stockpiles for measurement, loading, hauling, delivery of materials to the stockpile, furnishing scales and labor for weighing and measuring, equipment, labor, tools, and incidentals.

Item 260
Lime Treatment (Road-Mixed)

1. DESCRIPTION

Mix and compact lime, water, and subgrade or base (with or without asphaltic concrete pavement) in the roadway.

2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications. Notify the Engineer of the proposed material sources and of changes to material sources. Obtain verification from the Engineer that the specification requirements are met before using the sources. The Engineer may sample and test project materials at any time before compaction. Use material definitions in accordance with Tex-100-E.

2.1. **Lime**. Furnish lime that meets the requirements of DMS-6350, "Lime and Lime Slurry." When dry lime is required, provide dry quicklime. When lime slurry is required, provide commercial lime slurry or quicklime slurry. Do not use dry quicklime when sulfates are present in quantities greater than 3,000 parts per million (ppm). When furnishing quicklime, provide it in bulk.

2.2. **Subgrade**. The Engineer will determine the sulfate content of the subgrade in accordance with Tex-145-E and organic content in accordance with Tex-148-E before lime treatment begins. Suspend operations when material to be treated has a sulfate content greater than 7,000 ppm or an organic content greater than 2.0%, unless otherwise directed.

2.3. **Flexible Base**. Unless otherwise shown on the plans, furnish base material that meets the requirements of Item 247, "Flexible Base," for the type and grade shown on the plans, before the addition of lime. Unless otherwise shown on the plans, the compressive strength of the flexible base is waived.

2.4. **Water**. Furnish water free of industrial wastes and other objectionable material.

2.5. **Asphalt**. When asphalt or emulsion is permitted for curing purposes, furnish materials that meet the requirements of Item 300, "Asphalts, Oils, and Emulsions," as shown on the plans or as directed.

2.6. **Mix Design**. The Engineer will determine the target lime content and optimum moisture content in accordance with Tex-121-E or prior experience with the project materials. The Contractor may propose a mix design developed in accordance with Tex-121-E. The Engineer will use Tex-121-E to verify the Contractor's proposed mix design before acceptance. Reimburse the Department for subsequent mix designs or partial designs necessitated by changes in the material or requests by the Contractor. Limit the amount of recycled asphalt pavement to no more than 50% of the mix, unless otherwise shown on the plans or directed.

3. EQUIPMENT

Provide machinery, tools, and equipment necessary for proper execution of the work. Provide rollers in accordance with Item 210, "Rolling." Provide proof rollers in accordance with Item 216, "Proof Rolling," when required.

3.1. **Storage Facility**. Store quicklime in closed, weatherproof containers.

3.2. **Slurry Equipment**. Use slurry tanks equipped with agitation devices to slurry quicklime on the project or other approved location. The Engineer may approve other slurrying methods.

Provide a pump for agitating the slurry when the distributor truck is not equipped with an agitator. Equip the distributor truck with a sampling device in accordance with Tex-600-J, Part I, when using commercial lime slurry.

3.3. **Hydrated Lime Distribution Equipment**. Provide equipment to spread lime evenly across the area to be treated. Provide equipment with a rotary vane feeder to spread lime, when shown on the plans.

3.4. **Pulverization Equipment**. Provide pulverization equipment that:

- cuts and pulverizes material uniformly to the proper depth using cutters that plane to a uniform surface over the entire width of the cut,
- provides a visible indication of the depth of cut at all times, and
- uniformly mixes the materials.

4. CONSTRUCTION

Construct each layer uniformly, free of loose or segregated areas, and with the required density and moisture content. Provide a smooth surface that conforms to the typical sections, lines, and grades shown on the plans or as directed.

4.1. **Preparation of Subgrade or Existing Base for Treatment**. Before treating, remove existing asphalt concrete pavement in accordance with Item 105, "Removing Treated and Untreated Base and Asphalt Pavement," when shown on the plans or as directed. Shape existing material in conformance with applicable bid items to conform to typical sections shown on the plans and as directed.

Unless otherwise approved, proof roll the roadbed in accordance with Item 216 before pulverizing or scarifying existing material. Correct soft spots as directed.

When material is imported from a borrow source, notify the Engineer of the location of the borrow source well in advance to allow time for testing and approval to avoid delay to the project. Stockpile as directed. The Engineer will test the borrow source and determine the sulfate and organic contents. When the borrow source has a sulfate content greater than 3,000 ppm or an organic content greater than 2.0%, proceed as directed.

When new base material is required to be mixed with existing base, deliver, place, and spread the new material in the required amount per station. Manipulate and thoroughly mix new base with existing material to provide a uniform mixture to the specified depth before shaping.

4.2. **Pulverization**. Pulverize or scarify existing material after shaping. If the material cannot be uniformly processed to the required depth in a single pass, excavate and windrow the material to expose a secondary grade to achieve processing to plan depth.

4.3. **Application of Lime**. Uniformly apply lime using dry or slurry placement as shown on the plans or as directed. Add lime at the percentage determined in accordance with Section 260.2.6., "Mix Design." Apply lime only on an area where mixing can be completed during the same working day.

Start lime application only when the air temperature is at least 35°F and rising or is at least 40°F. The temperature will be taken in the shade and away from artificial heat. Suspend application when the Engineer determines that weather conditions are unsuitable.

Minimize dust and scattering of lime by wind. Do not apply lime when wind conditions, in the opinion of the Engineer, cause blowing lime to become dangerous to traffic or objectionable to adjacent property owners. When pebble grade quicklime is placed dry, mix the material and lime thoroughly at the time of lime

application. Use of quicklime can be dangerous. Inform users of the recommended precautions for handling and storage.

4.3.1. **Dry Placement**. Before applying lime, bring the prepared roadway to approximately two percentage points above optimum moisture content. When necessary, sprinkle in accordance with Item 204, "Sprinkling." Distribute the required quantity of pebble grade quicklime using approved equipment.

4.3.2. **Slurry Placement**. Provide slurry free of objectionable materials, at or above the minimum dry solids content, and with a uniform consistency that will allow ease of handling and uniform application. Deliver commercial lime slurry to the jobsite or use quicklime to prepare lime slurry at the jobsite or other approved location, as specified. When dry quicklime is applied as slurry, use 80% of the amount shown on the plans.

Distribute slurry uniformly by making successive passes over a measured section of roadway until the specified lime content is reached. Uniformly spread the residue from quicklime slurry over the length of the roadway being processed, unless otherwise directed.

4.4. **Mixing**. Begin mixing within 6 hr. of application of lime. Lime exposed to the open air for 6 hr. or more between application and mixing, or that experiences excessive loss due to washing or blowing, will not be accepted for payment. Thoroughly mix the material and lime using approved equipment. When treating subgrade, bring the moisture content above the optimum moisture content to ensure adequate chemical reaction of the lime and subgrade materials.

Ensure 100% of the material passes a 2-1/2 in. sieve, except rock, before mellowing. Allow the mixture to mellow for 1–4 days, as directed. When pebble grade quicklime is used, allow the mixture to mellow for 2--4 days, as directed. Sprinkle the treated materials during the mixing and mellowing operation, as directed, to achieve adequate hydration and proper moisture content. When the material to be treated has a sulfate content greater than 3,000 ppm but less than or equal to 7,000 ppm, mellow for a minimum of 7 days. Maintain in a continuously moist condition by sprinkling in accordance with Item 204. After mellowing, resume mixing until a homogeneous, friable mixture is obtained. After mixing, the Engineer may sample the mixture at roadway moisture and test in accordance with Tex-101-E, Part III, to determine compliance with the gradation requirements shown in Table 1.

Table 1
Gradation Requirements (Min % Passing)

Sieve Size	Base	Subgrade
1-3/4"	100	100
3/4"	85	85
#4	–	60

4.5. **Strength Testing**. The Engineer will sample and test the lime-treated mixture for unconfined compressive strength in accordance with Tex-117-E, Part II. The unconfined compressive strength must be greater than 50 psi for lime-treated subgrade and 150 psi for lime-treated flexible base or lime-treated flexible base with existing material, unless otherwise shown on the plans.

4.6. **Compaction**. Compact the mixture using density control, unless otherwise shown on the plans. Multiple lifts are permitted when shown on the plans or approved. Bring each layer to the moisture content directed. Sprinkle the treated material in accordance with Item 204, or aerate the treated material to adjust the moisture content during compaction so that it is no more than 1.0% below optimum and 2.0% above optimum as determined in accordance with Tex-121-E.

Begin rolling longitudinally at the sides and proceed toward the center, overlapping on successive trips by at least one-half the width of the roller unit. On superelevated curves, begin rolling at the low side and progress toward the high side. Offset alternating trips of the roller. Operate rollers at a speed between 2 and 6 mph as directed.

Before final acceptance, the Engineer will select the locations of tests in each unit and measure the treated depth in accordance with Tex-140-E. Correct areas deficient by more than 1/2 in. in thickness or more than

1/2% in target lime content by adding lime as required, reshaping, recompacting, and refinishing at the Contractor's expense.

Rework, recompact, and refinish material that fails to meet or that loses required moisture, density, stability, or finish before the next course is placed or the project is accepted. Continue work until specification requirements are met. Rework in accordance with Section 260.4.7., "Reworking a Section." Perform the work at no additional expense to the Department.

4.6.1. **Ordinary Compaction**. Roll using approved compaction equipment, as directed. Correct irregularities, depressions, and weak spots immediately by scarifying the areas affected, adding or removing treated material as required, reshaping, and recompacting.

4.6.2. **Density and Moisture Control**. Compact to at least 95% of the maximum density, and moisture content no more than 1.0% below optimum and 2.0% above optimum as determined in accordance with Tex-121-E, unless otherwise shown on the plans. Provide the Engineer with the beginning and ending station numbers of the area completed for testing. The Engineer will determine roadway density and moisture content of completed sections in accordance with Tex-115-E, Part I. The Engineer will determine random locations for testing in accordance with Tex-115-E, Part IV.

When the density is less than 95% of the maximum dry density, the Engineer may perform additional testing to determine the extent of the area to correct. The Engineer may accept the section if no more than one of the five most recent density tests is below the specified density and the failing test is no more than 3 pcf below the specified density.

4.7. **Reworking a Section**. When a section is reworked within 72 hr. after completion of compaction, rework the section to provide the required density. When a section is reworked more than 72 hr. after completion of compaction, add additional lime at 25% of the percentage determined in accordance with Section 260.2.6., "Mix Design." Reworking includes loosening, adding material or removing unacceptable material if necessary, mixing as directed, compacting, and finishing. When density control is specified, determine a new maximum density of the reworked material in accordance with Tex-121-E, and compact to at least 95% of this density.

4.8. **Finishing**. Immediately after completing compaction of the final course, clip, skin, or tight-blade the surface of the lime-treated material using a maintainer or subgrade trimmer to a depth of approximately 1/4 in. Remove loosened material and dispose of at an approved location. Roll the clipped surface immediately using a pneumatic tire roller until a smooth surface is attained. Add small amounts of water as needed during rolling. Shape and maintain the course and surface in conformity with the typical sections, lines, and grades shown on the plans or as directed.

Finish grade of constructed subgrade to within 0.1 ft. in the cross-section and 0.1 ft. in 16 ft. measured longitudinally.

Correct grade deviations of constructed base greater than 1/4 in. in 16 ft. measured longitudinally or greater than 1/4 in. over the entire width of the cross-section in areas where surfacing is to be placed. Remove excess material, reshape, and roll using a pneumatic-tire roller. Correct as directed if material is more than 1/4 in. low. Do not surface patch. The 72-hr. time limit required for completion of placement, compaction, and finishing does not apply to finishing required just before applying the surface course.

4.9. **Miscellaneous and Small Areas**. Miscellaneous areas are those that typically involve handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Miscellaneous and small areas are not subject to density testing but may be tested as directed.

4.10. **Curing**. Cure for the minimum number of days shown in Table 2 by sprinkling in accordance with Item 204, or by applying an asphalt material at a rate of 0.05–0.20 gal. per square yard, as shown on the plans or as directed. Maintain moisture during curing. Upon completion of curing, maintain the moisture content in

accordance with Section 132.3.5., "Maintenance of Moisture and Reworking," for subgrade and Section 247.4.5., "Curing," for bases before placing subsequent courses. Do not allow equipment on the finished course during curing except as required for sprinkling, unless otherwise approved. Apply seals or additional courses within 14 calendar days of final compaction.

Table 2
Min Curing Requirements before Placing Subsequent Courses[1]

Untreated Material	Curing (Days)
PI ≤35	2
PI >35	5

1. Subject to approval. Proof rolling may be required as an indicator of adequate curing.

5. MEASUREMENT

5.1. **Lime**. When lime is furnished in trucks, the weight of lime will be determined on certified scales, or the Contractor must provide a set of standard platform truck scales at an approved location approved. Scales must meet the requirements of Item 520, "Weighing and Measuring Equipment."

5.1.1. **Commercial Lime Slurry**. Lime slurry will be measured by the ton (dry weight) as calculated from the minimum percent dry solids content of the slurry, multiplied by the weight of the slurry in tons delivered.

5.1.2. **Quicklime**.

5.1.2.1. **Dry**. Lime will be measured by the ton (dry weight) of the quicklime.

5.1.2.2. **Slurry**. Lime slurry will be measured by the ton (dry weight) of the quicklime used to prepare the slurry multiplied by a conversion factor of 1.28 to determine the quantity of equivalent hydrated lime, which will be the basis of payment.

5.2. **Lime Treatment**. Lime treatment will be measured by the square yard of surface area. The dimensions for determining the surface areas are established by the widths shown on the plans and the lengths measured at placement.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for in accordance with Section 260.6.1., "Lime," and Section 260.6.2., "Lime Treatment."

Furnishing and delivering new base will be paid for in accordance with Section 247.6.2., "Flexible Base (Roadway Delivery)." Mixing, spreading, blading, shaping, compacting, and finishing new or existing base material will be paid for under Section 260.6.2., "Lime Treatment." Removal and disposal of existing asphalt concrete pavement will be paid for in conformance with pertinent Items or in accordance with Article 4.4., "Changes in the Work."

Sprinkling and rolling, except proof rolling, will not be paid for directly, but will be subsidiary to this Item, unless otherwise shown on the plans. When proof rolling is shown on the plans or directed by the Engineer, it will be paid for in accordance with Item 216.

Where subgrade is constructed under this Contract, correction of soft spots in the subgrade or existing base will be at the Contractor's expense. Where subgrade is not constructed under this Contract, correction of soft spots in the subgrade or existing base will be paid for in accordance with pertinent Items or Article 4.4., "Changes in the Work."

Where subgrade to be treated under this Contract has sulfates greater than 7,000 ppm, work will be paid for in accordance with Article 4.4., “Changes in the Work.”

Asphalt used solely for curing will not be paid for directly, but will be subsidiary to this Item. Asphalt placed for curing and priming will be paid for under Item 310, “Prime Coat.”

6.1. **Lime**. Lime will be paid for at the unit price bid for “Quicklime (Dry)” or “Commercial or Quicklime (Slurry).” This price is full compensation for materials, delivery, equipment, labor, tools, and incidentals.

Lime used for reworking a section in accordance with Section 260.4.7., “Reworking a Section,” will not be paid for directly, but will be subsidiary to this Item.

6.2. **Lime Treatment**. Lime treatment will be paid for at the unit price bid for “Lime Treatment (Existing Material),” “Lime Treatment (New Base),” or “Lime Treatment (Mixing Existing Material and New Base),” for the depth specified. No payment will be made for thickness or width exceeding that shown on the plans. This price is full compensation for shaping existing material, loosening, mixing, pulverizing, spreading, applying lime, compacting, finishing, curing, curing materials, blading, shaping and maintaining shape, replacing mixture, disposing of loosened materials, processing, hauling, preparing secondary subgrade, water, equipment, labor, tools, and incidentals.

Item 360
Concrete Pavement

1. DESCRIPTION

Construct hydraulic cement concrete pavement with or without curbs on the concrete pavement.

2. MATERIALS

Use materials from non-listed sources only when tested and approved by the Engineer before use. Allow 30 calendar days for the Engineer to sample, test, and report results for non-listed sources.

2.1. **Hydraulic Cement Concrete**. Provide hydraulic cement concrete in accordance with Item 421, "Hydraulic Cement Concrete." Use compressive strength testing unless otherwise shown on the plans. Provide Class P concrete designed to meet a minimum average compressive strength of 3,200 psi at 7 days or a minimum average compressive strength of 4,000 psi at 28 days. Test in accordance with Tex-418-A.

Obtain written approval if the concrete mix design exceeds 520 lb. per cubic yard of cementitious material.

Use coarse aggregates for continuously reinforced concrete pavements to produce concrete with a rated coefficient of thermal expansion not more than 5.5×10^{-6} in./in./°F as listed in accordance with the *Concrete Rated Source Quality Catalog*.

Provide Class High Early Strength (HES) concrete designed to meet a minimum average compressive strength of 3,200 psi at 24 hr., for early opening of small pavement areas or leave-outs to traffic when shown on the plans or allowed. When opening of small pavement areas or leave-outs to traffic is less than 24 hr., design Class HES concrete to achieve a minimum average compressive strength of 1,800 psi at 8 hr.

2.2. **Reinforcing Steel**. Provide Grade 60 or above deformed steel for bar reinforcement in accordance with Item 440, "Reinforcement for Concrete." Provide positioning and supporting devices (baskets and chairs) capable of securing and holding the reinforcing steel in proper position before and during paving. Provide corrosion protection when shown on the plans.

2.2.1. **Dowels**. Provide dowel bars for concrete pavements in accordance with DMS-7325, "Dowel Bars for Concrete Pavements" and the MPL for "Dowel Bars for Concrete Pavements." Provide dowel caps filled with a soft compressible material with enough range of movement to allow complete closure of the expansion joint.

2.2.2. **Tie Bars**. Provide straight deformed steel tie bars. Provide either multiple-piece tie bars or single-piece tie bars as shown on the plans. Furnish multiple piece tie bar assemblies from the list of approved multiple-piece tie bars that have been prequalified in accordance with DMS-4515, "Multiple Piece Tie Bars for Concrete Pavement," when used. Multiple-piece tie bars used on individual projects must be sampled in accordance with Tex-711-I, and tested in accordance with Tex-712-I.

2.3. **Curing Materials**. Provide Type 2 membrane curing compound in accordance with DMS-4650, "Hydraulic Cement Concrete Curing Materials and Evaporation Retardants." Provide asphaltic curing materials in accordance with Item 300, "Asphalts, Oils, and Emulsions," for concrete pavement to be overlaid with asphalt concrete, unless otherwise shown on the plans or approved. Provide materials for other methods of curing in accordance with Item 422, "Concrete Superstructures." When required, provide insulating blankets with a minimum thermal resistance (R) rating of 0.5 degree Fahrenheit square-foot per British Thermal Unit. Use insulating blankets that are free of tears and are in good condition.

2.4. **Epoxy**. Provide Type III, Class C epoxy in accordance with DMS-6100, "Epoxies and Adhesives," for installing all drilled-in reinforcing steel. Submit a work plan and request approval for the use of epoxy types other than Type III, Class C.

2.5. **Evaporation Retardant**. Provide evaporation retardant in accordance with DMS-4650.

2.6. **Joint Sealants and Fillers**. Provide Class 5 or Class 8 joint sealant materials and fillers unless otherwise shown on the plans or approved, and other sealant materials of the size, shape, and type shown on the plans in accordance with DMS-6310, "Joint Sealants and Fillers."

2.7. **Repair Materials**. Provide concrete repair materials in accordance with DMS-4655, "Concrete Repair Materials," or DMS-6170, "Polymeric Materials for Patching Spalls in Concrete Pavement."

3. EQUIPMENT

Furnish and maintain all equipment in good working condition. Use measuring, mixing, and delivery equipment in accordance with Item 421. Obtain approval for other equipment used.

3.1. **Placing, Consolidating, and Finishing Equipment**. Provide self-propelled paving equipment that uniformly distributes the concrete with minimal segregation and provides a smooth machine-finished consolidated concrete pavement conforming to plan line and grade. Provide an automatic grade control system on slip-forming equipment. Provide mechanically operated finishing floats capable of producing a uniformly smooth pavement surface. Provide equipment capable of providing a fine, light water fog mist.

When using stringless paving equipment, use in accordance with Section 5.9.3., "Method C," and establish control points at maximum intervals of 500 ft. Use these control points as reference to perform the work.

Provide mechanically operated vibratory equipment capable of adequately consolidating the concrete. Provide immersion vibrators on the paving equipment at sufficiently close intervals to provide uniform vibration and consolidation of the concrete over the entire width and depth of the pavement and in conformance with the manufacturer's recommendations. Provide immersion vibrator units that operate at a frequency in air of at least 8,000 cycles per minute. Provide enough hand-operated immersion vibrators for timely and proper consolidation of the concrete for concrete pavement (formed) placements, and along forms, at all joints, and in areas not covered by other vibratory equipment. Surface vibrators may be used to supplement equipment-mounted immersion vibrators. Provide tachometers to verify the proper operation of all vibrators.

For small or irregular areas or when approved, the paving equipment described in this Section is not required.

3.2. **Forming Equipment**.

3.2.1. **Pavement Forms**. Provide side forms of sufficient cross-section, strength, and rigidity to support the paving equipment and resist the impact and vibration of the operation without visible springing or settlement. Use forms that are free of detrimental kinks, bends, or warps that could affect ride quality or alignment. Provide bulkhead forms of sufficient cross-section, strength, and rigidity to support reinforcing steel and maintain alignment during concrete placement operations.

3.3. **Curb Forms**. Provide curb forms for separately placed curbs that are not slipformed that conform to the requirements of Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."

3.4. **Single-Piece Tie-Bar Inserting Equipment**. Provide inserting equipment that accurately inserts and positions reinforcing steel in the plastic concrete parallel to the profile grade and horizontal alignment as shown on the plans.

3.5. **Texturing Equipment**.

3.5.1. **Carpet Drag**. Provide a carpet drag mounted on a work bridge or a manual moveable support system. Provide a single piece of carpet of sufficient transverse length to span the full width of the pavement being placed and adjustable so that a sufficient longitudinal length of carpet is in contact with the concrete being placed to produce the desired texture. Obtain approval to vary the length and width of the carpet to accommodate specific applications.

3.5.2. **Tining Equipment**. Provide a self-propelled metal tine device equipped with steel tines with cross-section approximately 1/32 in. thick by 1/12 in. wide. Provide tines for longitudinal tining equipment spaced at approximately 3/4 in., center-to-center, or provide tines for transverse tining equipment spaced at approximately 1 in., center-to-center. Manual methods that produce an equivalent texture may be used when it is impractical to use self-propelled equipment, such as for small areas, narrow width sections, and emergencies due to equipment breakdown.

3.6. **Curing Equipment**. Provide a self-propelled machine for applying membrane curing compound using mechanically pressurized spraying equipment with atomizing nozzles. Provide equipment and controls that maintain the required uniform rate of application over the entire paving area. Hand-operated pressurized spraying equipment with atomizing nozzles may only be used on small or irregular areas, on narrow width sections, or in emergencies due to equipment breakdown.

3.7. **Sawing Equipment**. Provide power-driven concrete saws to saw the joints shown on the plans. Provide standby power-driven concrete saws during concrete sawing operations.

3.8. **Grinding Equipment**. Provide self-propelled powered grinding equipment that is specifically designed to smooth and texture concrete pavement using circular diamond blades when required. Provide equipment with automatic grade control capable of grinding at least a 3-ft. width longitudinally in each pass without damaging the concrete.

3.9. **Testing Equipment**. Provide testing equipment in accordance with Item 421, unless otherwise shown on the plans or specified. Maintain and calibrate all Contractor-supplied testing equipment in conformance with pertinent test methods. Provide calibration records of strength-testing equipment to the Engineer within 1 week after each calibration.

3.10. **Coring Equipment**. Provide coring equipment capable of extracting cores in accordance with Tex-424-A when required.

3.11. **Miscellaneous Equipment**. Furnish 10-ft. and 15-ft. steel or magnesium long-handled, standard straightedges. Furnish enough work bridges, long enough to span the pavement, for finishing and inspection operations.

4. CONSTRUCTION

Obtain approval for adjustments to plan grade-line to maintain thickness over minor subgrade or base high spots while maintaining clearances and drainage. Maintain subgrade or base in a smooth, clean, compacted condition in conformance with the required section and established grade until the pavement concrete is placed. Dampen subgrade or base with water before placing pavement concrete.

Adequately light the active work areas for all nighttime operations. Provide and maintain tools and materials to perform testing.

4.1. **Paving and Quality Control (QC) Plan**. Submit a paving and QC plan for approval before beginning pavement construction operations. Include details of all operations in the concrete paving process, including methods to construct transverse joints, methods to consolidate concrete at joints, longitudinal construction joint layout, sequencing, curing, lighting, early opening, leave-outs, sawing, inspection, contractor QC testing, testing for opening to traffic, construction methods, other details, and description of all equipment. List

certified personnel performing contractor QC testing and testing for opening to traffic. Submit revisions to the paving and QC plan for approval.

4.2. **Placing Reinforcing Steel for Continuously Reinforced Concrete Pavements**. Accurately place and secure in position all reinforcing steel as shown on the plans. Provide chairs in sufficient number to adequately support the reinforcing steel at the proper height as show on the plans. Secure reinforcing steel at alternate intersections with tie wires. Reinforcing steel intersections may be secured with locking support chairs instead of tie wires. Anchor pins used to prevent the reinforcing steel from shifting may remain in the final pavement. 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. Tie all splices with tie wires.

4.3. **Joints**. Install formed joints as shown on the plans. Install transverse bulkhead forms to support extending reinforcing steel, shaped accurately to the cross-section of the pavement when placing of concrete is stopped.

4.3.1. **Placing Reinforcement at Joints**. Install reinforcing steel at transverse construction joints as shown on the plans. Use multiple-piece tie bars, drilled and epoxy-grouted tie bars, or mechanically inserted single-piece tie bars at longitudinal construction joints. Discontinue the use of mechanically inserted single-piece tie bars if this method results in steel misalignment or improper location, poor concrete consolidation, or other inadequacies. Protect the reinforcing steel immediately beyond the construction joint from damage, vibration, and impact.

For drilled and epoxy-grouted tie bars, drill holes into the existing concrete at least 10 in. deep unless otherwise directed. Use a drill bit with a diameter that is 1/8 in. greater than that of tie bars. Clean the holes using a wire brush and compressed air to remove all the dust and moisture. Only cartridge or machine applicator epoxies are allowed. Follow the epoxy manufacturer's instructions to apply the epoxy. Insert the tip of the epoxy cartridge or the tip of the machine applicator to the end of the tie bar hole, and inject Type III, Class C, epoxy to fill the hole with the amount of epoxy recommended by the manufacture for the size of bar and depth of hole. Insert tie bars.

4.3.2. **Testing of Tie Bars**. Verify that tie bars that are drilled and epoxied or mechanically inserted into concrete at longitudinal construction joints develop a pullout resistance equal to at least 3/4 of the yield strength of the reinforcing steel. Test pullout resistance of mechanically inserted tie bars when the concrete pavement is at least 7 days old. Test pullout resistance of epoxy-grouted bars after the epoxy manufacturer's recommended final cure time. Test 15 bars in accordance with ASTM E488, except that alternate approved equipment may be used. All 15 tested bars must meet the required pullout strength. Perform corrective measures to provide equivalent pullout resistance if any of the test results do not meet the required minimum pullout strength. Repair damage from testing.

4.3.3. **Testing of Epoxy-Grouted Longitudinal Bars in Continuously Reinforced Concrete Pavements**. When longitudinal reinforcing steel is drilled and epoxy-grouted in existing pavement, test each bar in accordance with ASTM E488, except that alternate approved equipment may be used. All bars must develop a pullout resistance equal to at least 3/4 of the yield strength of the steel. Test pullout resistance after the epoxy manufacturer's recommended final cure time. Perform corrective measures to provide equivalent pullout resistance if any of the test results do not meet the required minimum pullout strength. Repair damage from testing.

4.3.4. **Transverse Construction Joints for Concrete Pavement Contraction Design (CPCD)**. Install and rigidly secure a complete joint assembly and bulkhead in the planned transverse contraction joint location when the placing of concrete is intentionally stopped. Install a transverse construction joint either at a planned transverse contraction joint location or mid-slab between planned transverse contraction joints when the placing of concrete is unintentionally stopped. Install tie bars of the size and spacing used in the longitudinal joints for mid-slab construction joints.

Place dowels at mid-depth of the pavement slab, parallel to the surface. Place dowels for transverse contraction joints parallel to the pavement edge. Tolerances for location and alignment of dowels will be shown on the plans. For dowels used in a contraction joint, coat the entire length of the dowels with a thin

film of grease, wax, silicone, or other approved de-bonding material. For dowels used in an expansion joint, coat half the length with a thin film of grease, wax, silicone, or other approved de-bonding material; provide dowel caps on the coated half of each dowel bar.

4.4. **Curb Joints**. Construct curb joints in accordance with Item 529.

4.5. **Placing and Removing Forms**. Use clean and oiled forms. Secure forms on a base or firm subgrade that is accurately graded and that provides stable support without deflection and movement by form riding equipment. Pin every form at least at the middle and near each end. Tightly join and key form sections together to prevent relative displacement.

Set side forms far enough in advance of concrete placement to permit inspection. Check conformity of the grade, alignment, and stability of forms immediately before placing concrete, and make all necessary corrections. Use a straightedge or other approved method to test the top of forms to ensure that the ride quality requirements for the completed pavement will be met. Stop paving operations if forms settle or deflect more than 1/8 in. under finishing operations. Reset forms to line and grade, and refinish the concrete surface to correct grade.

Avoid damage to the edge of the pavement when removing side forms and bulkhead forms. Repair damage resulting from form removal with an approved repair material within 24 hr. after form removal unless otherwise approved. Chip excessively honeycombed areas to sound concrete, and repair with an approved repair material within 24 hr. after form removal unless otherwise approved. Clean joint face within 24 hr. after a bulkhead for a transverse construction joint has been removed unless otherwise approved. Promptly apply membrane curing compound to the edge of the concrete pavement when forms are removed before 72 hr. after concrete placement.

Forms that are not the same depth as the pavement but within 2 in. of that depth are permitted if the subbase is trenched or the full width and length of the form base are supported with a firm material to produce the required pavement thickness. Promptly repair the form trench after use. Use flexible or curved wood or metal forms for curves of 100-ft. radius or less.

4.6. **Concrete Delivery**. Clean delivery equipment as necessary to prevent accumulation of old concrete before loading fresh concrete. Use agitated delivery equipment for concrete designed to have a slump of more than 5 in. Segregated concrete is subject to rejection.

Begin the discharge of concrete delivered in agitated delivery equipment in accordance with Item 421. Place non-agitated concrete within 45 min. after batching. Reduce times as directed when hot weather or other conditions cause quick setting of the concrete.

4.7. **Concrete Placement**. Do not allow the pavement edge to deviate from the established paving line by more than 1/2 in. at any point. Place the concrete as near as possible to its final location, and minimize segregation and rehandling. Distribute concrete using shovels where hand spreading is necessary. Do not use rakes or vibrators to distribute concrete.

4.7.1. **Consolidation**. Consolidate all concrete using approved mechanical vibrators operated on the front of the paving equipment. Use immersion-type vibrators that simultaneously consolidate the full width of the placement when machine finishing. Keep vibrators from dislodging reinforcement. Use hand-operated vibrators to consolidate concrete for concrete pavement (formed) placements, and along forms, at all joints, and in areas not accessible to the machine-mounted vibrators. Do not operate machine-mounted vibrators while the paving equipment is stationary. Vibrator operations are subject to review.

4.7.2. **Curbs**. Curbs will be in accordance with Item 529.

4.7.3. **Temperature Restrictions**. Place concrete that is between 40°F and 95°F when measured in accordance with Tex-422-A at the time of discharge, except that concrete may be used if it was already in transit when the temperature was found to exceed the allowable maximum. Take immediate corrective action or cease concrete production when the concrete temperature exceeds 95°F.

Do not place concrete when the ambient temperature in the shade is below 40°F and falling, unless approved. Concrete may be placed when the ambient temperature in the shade is above 35°F and rising or above 40°F. Protect the pavement with an approved insulating material capable of protecting the concrete for the specified curing period when temperatures warrant protection against freezing. Submit for approval proposed measures to protect the concrete from anticipated freezing weather for the first 72 hr. after placement. Repair or replace all concrete damaged by freezing.

4.8. **Spreading and Finishing**. Finish all concrete pavement using approved self-propelled equipment. Use power-driven spreaders, power-driven vibrators, power-driven strike-off screed, or approved alternate equipment to strike-off the surface of the concrete to the required section and grade without surface voids. Use float equipment for final finishing. Use concrete with a consistency that allows completion of all finishing operations without addition of water to the surface. Use the minimal amount of water fog mist necessary to maintain a moist surface. Reduce fogging if float or straightedge operations result in excess slurry.

4.8.1. **Finished Surface**. Perform sufficient checks using a minimum 10-ft. long straightedge on the plastic concrete to ensure the final surface is within the tolerances specified in Surface Test A in accordance with Item 585, “Ride Quality for Pavement Surfaces.” Check with the straightedge parallel to the centerline.

4.8.2. **Maintenance of Surface Moisture**. Prevent surface drying of the pavement before application of the curing system by means that may include water fogging, the use of wind screens, or the use of evaporation retardants. Apply evaporation retardant at the manufacturer’s recommended rate. Reapply the evaporation retardant as needed to maintain the concrete surface in a moist condition until curing system is applied. Do not use evaporation retardant as a finishing aid. Failure to take acceptable precautions to prevent surface drying of the pavement will be cause for shutdown of pavement operations.

4.8.3. **Surface Texturing**. Complete final texturing before the concrete has attained its initial set. Drag the carpet longitudinally along the pavement surface with the carpet contact surface area adjusted to provide a satisfactory coarsely textured surface. Prevent grout from plugging the carpet. Do not perform carpet dragging operations while there is excessive bleed water.

A metal-tine texture finish is required unless otherwise shown on the plans. Provide longitudinal tining unless otherwise shown on the plans. Immediately following the carpet drag, apply a single coat of evaporation retardant, if needed, at the rate recommended by the manufacturer. Provide the metal-tine finish immediately after the concrete surface has set enough for consistent tining. Operate the metal-tine device to obtain grooves approximately 3/16 in. deep, with a minimum depth of 1/8 in., and approximately 1/12 in. wide. Do not overlap a previously tined area. Use manual methods to achieve similar results on ramps, small or irregular areas, and narrow width sections of pavements. Repair damage to the edge of the slab and joints immediately after texturing. Do not tine pavement that will be overlaid or that is scheduled for blanket diamond grinding or shot blasting.

Target a carpet drag texture of 0.04 in., as measured by Tex-436-A, when carpet drag is the only surface texture required on the plans. Ensure adequate and consistent macro-texture is achieved by applying enough weight to the carpet and by keeping grout from plugging the carpet. Correct any location with a texture less than 0.03 in. by diamond grinding or shot blasting. The Engineer will determine the test locations at points located transversely to the direction of traffic in the outside wheel path.

4.8.4. **Small, Irregular Area, or Narrow Width Placements**. Use hand equipment and procedures that produce a consolidated and finished pavement section to the line and grade where machine placements and finishing of concrete pavement are not practical.

4.8.5. **Emergency Procedures**. Use hand-operated equipment for applying texture, evaporation retardant, and cure in the event of equipment breakdown.

4.9. **Curing**. Keep the concrete pavement surface from drying in accordance with Section 360.4.8.2., “Maintenance of Surface Moisture,” until the curing material has been applied. Maintain and promptly repair damage to curing materials on exposed surfaces of concrete pavement continuously for at least 3 curing days. A curing day is defined as a 24-hr. period when either the temperature taken in the shade away from

artificial heat is above 50°F for at least 19 hr. or the surface temperature of the concrete is maintained above 40°F for 24 hr. Curing begins when the concrete curing system has been applied. Stop concrete paving if curing compound is not being applied promptly and maintained adequately. Other methods of curing in accordance with Item 422 may be used when specified or approved.

4.9.1. **Membrane Curing**. Spray the concrete surface uniformly with two coats of membrane curing compound at an individual application rate of no more than 180 sq. ft. per gallon. Apply the curing compound before allowing the concrete surface to dry.

Manage finishing and texturing operations to ensure placement of curing compound on a moist concrete surface, relatively free of bleed water, to prevent any plastic shrinkage from cracking. Time the application of curing compound to prevent plastic shrinkage from cracking.

Maintain curing compounds in a uniformly agitated condition, free of settlement before and during application. Do not thin or dilute the curing compound.

Apply additional compound at the same rate of coverage to correct damage where the coating shows discontinuities or other defects or if rain falls on the newly coated surface before the film has dried enough to resist damage. Ensure that the curing compound coats the sides of the tining grooves.

4.9.2. **Asphalt Curing**. Apply a uniform coating of asphalt curing at a rate of 90 sq. ft.–180 sq. ft. per gallon when an asphaltic concrete overlay is required. Apply curing immediately after texturing and once the free moisture (sheen) has disappeared. Obtain approval to add water to the emulsion to improve spray distribution. Maintain the asphalt application rate when using diluted emulsions. Maintain asphalt emulsions in a mixed condition during application.

4.9.3. **Curing Class HES Concrete**. Provide membrane curing in accordance with Section 360.4.9.1., “Membrane Curing,” or wet mat curing in accordance with Section 422.4.8., “Final Curing,” for all Class HES concrete.

4.10. **Sawing Joints**. Saw joints to the depth shown on the plans as soon as sawing can be accomplished without damage to the pavement, regardless of time of day or weather conditions. Some minor raveling of the saw-cut is acceptable. Use a chalk line, string line, sawing template, or other approved method to provide a true joint alignment. Provide enough saws to match the paving production rate to ensure sawing completion at the earliest possible time to avoid uncontrolled cracking. The Engineer will evaluate the cause of the uncontrolled cracking and direct any necessary repairs. Reduce paving production if necessary to ensure timely sawing of joints. Promptly restore membrane cure damaged within the first 72 hr. of curing.

The Engineer will check the depth of saw cuts in accordance with Tex-423-A within 24 hrs. after saw-cutting or before joints are sealed, whichever is sooner. Frequency of checks will be as follows:

- every 500 ft. or fraction thereof for all longitudinal contraction joints, and
- 10% of transverse contraction joints in CPCD for each daily placement.

Resaw contraction joints that are deficient in depth by more than 1/4 in. from plan depth within 24 hr. of depth checks.

4.11. **Cleaning and Sealing Joints**. Clean and seal joints in accordance with Item 438, “Cleaning and Sealing Joints.” Repair excessive spalling of the joint saw groove using an approved method before installing the sealant. Seal all joints before opening the pavement to all traffic. Joint sealants are not required on concrete pavement that is to be overlaid with asphaltic materials.

4.12. **Protection of Pavement**. Erect and maintain barricades and other standard and approved devices that will exclude all vehicles and equipment from the newly placed pavement for the periods specified. Protect the pavement from damage due to crossings using approved methods before opening to traffic. Where a detour is not readily available or economically feasible, an occasional crossing of the roadway with overweight equipment may be permitted for relocating equipment only, but not for hauling material. When an occasional

crossing of overweight equipment is permitted, temporary matting or other approved methods may be required.

Maintain an adequate supply of sheeting or other material to cover and protect fresh concrete surface from weather damage. Apply as needed to protect the pavement surface from weather.

4.13. **Opening to Traffic**. Testing for opening pavement to traffic is the responsibility of the Contractor unless otherwise shown on the plans or as directed. Before opening pavement to traffic:

- provide test results to the Engineer for review, if necessary,
- clean pavement,
- place stable material against pavement edges,
- seal joints, and
- perform all other traffic-safety related work.

4.13.1. **Opening Pavement to All Traffic**. Pavements can be open to all traffic:

- when the pavement is 7 days old,
- when 3-day curing is complete and the concrete has attained a compressive strength of 3,200 psi,
- after 24 hr. and the concrete has attained a compressive strength of 3,200 psi when Class HES concrete is used, or
- after the concrete has been cured for at least 8 hr. and attained a minimum compressive strength of 1,800 psi when Class HES concrete is used.

4.13.2. **Opening Pavement to Construction Equipment**. Unless otherwise shown on the plans, concrete pavement may be opened to concrete paving equipment and related delivery equipment after the concrete is at least 48 hr. old and has attained a compressive strength of 3,200 psi. Keep delivery equipment at least 2 ft. from the edge of the concrete pavement. Keep tracks of the paving equipment at least 1 ft. from the pavement edge. Protect textured surfaces from the paving equipment. Restore damaged membrane curing as soon as possible. Repair pavement damaged by paving or delivery equipment before opening to all traffic.

4.13.3. **Maturity Method**. Maturity method, in accordance with Tex-426-A, may be used to estimate concrete strength for opening pavement to traffic. Install at least two maturity sensors for each day's placement in areas where the maturity method will be used for opening. Maturity sensors, when used, will be installed near the day's final placement for areas being evaluated.

The Engineer will test specimens to verify the strength-maturity relationship in accordance with Tex-426-A. The strength-maturity relationship will be verified at least every 10 days of production after the first day. Establish a new strength-maturity relationship when the strength specimens deviate more than 10% from the maturity-estimated strengths. Suspend use of the maturity method for opening pavements to traffic when the strength-maturity relationship deviates by more than 10% until a new strength-maturity relationship is established.

The Engineer will determine the frequency of verification when the maturity method is used intermittently or for only specific areas.

4.13.4. **Emergency Opening to Traffic**. Open the pavement to traffic under emergency conditions, when the pavement is at least 72 hr. old, when directed in writing.

4.14. **Sampling and Testing of Concrete**. Unless otherwise specified, all fresh and hardened concrete is subject to testing as follows.

4.14.1. **Fresh Concrete**. Provide safe access and assistance to the Engineer during sampling. Fresh concrete will be sampled in accordance with Tex-407-A.

4.14.2. **Testing Concrete**. The Engineer will test the fresh and hardened concrete in accordance with the following methods:

- **Slump**. Tex-415-A, only for formed concrete pavement placements;
- **Air Content**. Tex-414-A or Tex-416-A, only when air-entrained concrete is shown on the plans;
- **Temperature**. Tex-422-A;
- **Making and Curing Strength Specimens**. Tex-447-A;
- **Compressive Strength**. Tex-418-A; and
- **Maturity**. Tex-426-A.

Maturity specimens will be made only when maturity method is used or shown on the plans.

Concrete with slump less than minimum required after all addition of water withheld will be rejected, unless otherwise allowed by the Engineer. Concrete with slump exceeding maximum allowed may be used at the Contractor's option. If used, Engineer will make, test, and evaluate strength specimens in accordance with Section 360.4.15., "Acceptance of Concrete Pavement." Acceptance of concrete not meeting air content or temperature requirements will be determined by Engineer. Fresh concrete exhibiting segregation and excessive bleeding will be rejected.

4.14.2.1. **Strength Specimen Handling**. After strength test specimens are molded, protect and cure in conformance with pertinent test methods. When necessary, deliver Contractor-molded specimens to curing facilities, remove specimens from their molds, and place specimens in curing tanks within 24–48 hr. after molding, in conformance with pertinent test methods. The Engineer will deliver Department-molded specimens to curing facilities, remove specimens from their molds, and place specimens in curing tanks within 24–48 hr. after molding, in conformance with pertinent test methods.

4.15. **Acceptance of Concrete Pavement**. The Engineer will determine pay adjustments for deficient pavement thickness within 14 days after concrete pavement has been cored. The Engineer will determine structural adequacy of low concrete strengths within 7 days after design strength specimens or cores, if taken, are tested.

4.15.1. **Pavement Thickness**. The Engineer will check the thickness in accordance with Tex-423-A unless other methods are shown on the plans. The Engineer will perform one thickness test consisting of one reading at approximately the center of the paving equipment every 500 ft. or fraction thereof. Core where directed, in accordance with Tex-424-A, to verify deficiencies. Do not core until pavement is at least 7 days old or has achieved design strength. Fill core holes using an approved concrete mixture and method.

4.15.1.1. **Assessing Payment Adjustments**. Limits for applying a payment adjustment for deficient pavement thickness are 500 ft. units of pavement in each lane. Lane width will be as shown on typical sections and in conformance with pavement design standards.

The limits for retaining deficient pavement without compensation or removing and replacing without additional compensation will be defined by coring or equivalent nondestructive means as determined by the Engineer. The remaining portion of the 500-ft. unit allowed for pay adjustment will be subject to the payment adjustment based on the average core thickness deficiency at each end of the 10-ft. interval investigation as determined by the Engineer.

Shoulders will be measured for thickness unless otherwise shown on the plans. Shoulders 6 ft. wide or wider will be considered as lanes. Shoulders less than 6 ft. wide will be considered part of the adjacent lane. Shoulders less than 6 ft. wide and placed separately from the adjacent lane will be considered as a lane.

Limits for applying payment adjustment for deficient pavement thickness for ramps, widenings, acceleration and deceleration lanes, and other miscellaneous areas are 500-ft. units. Areas less than 500-ft. units will be individually evaluated for payment adjustment based on the plan area.

4.15.1.2. **Verification of Thickness Deficiencies**. When any fresh depth test measured in accordance with Tex-423-A is deficient by more than 0.50 in. from the plan thickness, take one 4-in. diameter core at that location to verify the measurement.

When determining the average thickness deficiency for assessing a pay adjustment other than retaining pavement without compensation or remove and replace as shown in Table 1, take at least two additional cores from the unit, in accordance with Section 360.4.15.1.1., "Assessing Payment Adjustments," equidistantly spaced from the first core in each direction if the first core is deficient by more than 0.50 in. from the plan thickness. Measure the length of cores in accordance with Tex-424-A. Determine the average thickness by averaging the lengths of the cores. Subtract the calculated average thickness from the plan thickness to determine the average thickness deficiency. In calculations of the average thickness, measurements exceeding the plan thickness by more than 0.2 in. will be considered as the plan thickness plus 0.2 in.

When determining the limits for retaining the deficient pavement without compensation or remove and replace without additional compensation, take additional cores at 10-ft. intervals in each direction parallel to the centerline to determine the boundary of the deficient area if the first core length deficiency is more than 1.00 in. for pavements less than 11 in. thick or more than 1.50 in. for pavements 11 in. or thicker. Continue taking cores at 10-ft. intervals until the core length deficiency is less than 1.00 in. for pavements less than 11 in. thick or less than 1.50 in. for pavements 11 in. or thicker.

4.15.2. **Strength of Concrete Pavement**. The Engineer will accept concrete pavement meeting a compressive strength of 3,200 psi at 7 days or meeting a compressive strength of 4,000 psi at 28 days for Class P concrete.

Concrete strength testing may be correlated to an age other than 7 days in accordance with Tex-427-A when approved.

The Engineer will accept concrete pavement using Class HES concrete based on the required strength and time.

Investigate the strength test procedures, the quality of materials, the concrete production operations, and other possible problem areas to determine the cause when a concrete strength test value is more than 10% below the required strength or when three consecutive strength values fall below the required strength. Take necessary action to correct the problem, including redesign of the concrete mix if needed. The Engineer may suspend concrete paving if the Contractor is unable to identify, document, and correct the cause of low-strength test values in a timely manner. The Engineer will evaluate the structural adequacy of the pavements if any strength is more than 15% below the required strength. Remove and replace pavements found to be structurally inadequate at no additional cost when directed.

4.15.3. **Ride Quality**. Measure and correct ride quality in accordance with Item 585, unless otherwise shown on the plans.

5. MEASUREMENT

This Item will be measured as follows.

5.1. **Concrete Pavement**. Concrete pavement will be measured by the square yard of surface area in place. The surface area includes the portion of the pavement slab extending beneath the curb.

6. PAYMENT

These prices are full compensation for materials, equipment, labor, tools, and incidentals.

6.1. **Concrete Pavement**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Concrete Pavement" of the type and depth specified as adjusted in accordance with Section 360.6.2., "Deficient Thickness Adjustment."

6.2. **Deficient Thickness Adjustment**. Where the average thickness of pavement is deficient in thickness, payment will be made using the adjustment factor in accordance with Table 1 applied to the bid price for the deficient area for each unit in accordance with Section 360.4.15.1.1., "Assessing Payment Adjustments." When pavement thickness investigation (coring) is conducted for three consecutive placements, remove and replace without additional compensation all pavement placed during these days if the average thickness deficiency from all cores taken from these consecutive placements is greater than 0.25 in.

Table 1
Deficient Thickness Price Adjustment Factor

Deficiency in Thickness Determined by Cores (in.)	**Proportional Part of Contract Price Allowed (Adjustment Factor) for Thickness <11 inches**
Not deficient	1.00
Over 0.00 through 0.50	1.00
Over 0.50 through 0.75	0.80
Over 0.75 through 1.00	0.60
Over 1.00 through 1.25	Retain pavement without compensation or Remove and Replace
Over 1.25	Remove and Replace
Deficiency in Thickness Determined by Cores (in.)	**Proportional Part of Contract Price Allowed (Adjustment Factor) for Thickness ≥11 inches**
Not deficient	1.00
Over 0.00 through 0.50	1.00
Over 0.50 through 0.75	0.90
Over 0.75 through 1.00	0.80
Over 1.00 through 1.50	0.60
Over 1.50 through 2.00	Retain pavement without compensation or Remove and replace
Over 2.00	Remove and replace

6.3. **Curb**. All curbs will be paid for under Item 529.

Item 500
Mobilization

1. DESCRIPTION

Establish and remove offices, plants, and facilities. Move personnel, equipment, and supplies to and from the project or the vicinity of the project site to begin work or complete work on Contract Items. Bonds and insurance are required for performing mobilization.

For Contracts with emergency mobilization, provide a person and method of contact available 24 hr. per day, 7 days per week, unless otherwise shown on the plans. The time of notice will be the transmission time of the written notice or notice provided orally by the Department's representative.

2. MEASUREMENT

This Item will be measured by the lump sum or each as the work progresses. Mobilization is calculated on the base bid only and will not be paid for separately on any additive alternate items added to the Contract.

3. PAYMENT

For this Item, the adjusted Contract amount will be calculated as the total Contract amount less the lump sum for mobilization. Material on hand will not be considered as a construction item earned when calculating mobilization payment. Except for Contracts with callout or emergency work, mobilization will be paid in partial payments as follows.

- Payment will be made upon presentation of a paid invoice for the payment or performance bonds and required insurance.
- Payment will be made upon verification of documented expenditures for plant and facility setup. The combined amount for all these facilities will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
- When 1% of the adjusted Contract amount for construction Items is earned, 50% of the mobilization lump sum bid or 5% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- When 5% of the adjusted Contract amount for construction Items is earned, 75% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under the Item will be deducted from this amount.
- When 10% of the adjusted Contract amount for construction Items is earned, 90% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- Upon final acceptance, 97% of the mobilization lump sum bid will be paid. Previous payments under this Item will be deducted from this amount.
- Payment for the remainder of the lump sum bid for "Mobilization" will be made after all submittals are received, after final quantities have been determined, and when any separate vegetative establishment and maintenance, test, and performance periods provided for in the Contract have been successfully completed.

For projects with extended maintenance or performance periods, payment for the remainder of the lump sum bid for "Mobilization" will be made 6 mo. after final acceptance.

For Contracts with callout or emergency work, "Mobilization" will be paid as follows.

- Payment will be made upon presentation of a paid invoice for the payment of performance bonds and required insurance.
- Mobilization for callout work will be paid for each callout work request.
- Mobilization for emergency work will be paid for each emergency work request.

Item 502
Barricades, Signs, and Traffic Handling

1. DESCRIPTION

Provide, install, move, replace, maintain, clean, and remove all traffic control devices shown on the plans and as directed.

Temporary work zone (TWZ) traffic control devices manufactured after December 31, 2019, must have been successfully tested to the crashworthiness requirements of the 2016 edition of the AASHTO *Manual for Assessing Safety Hardware* (MASH). An exception to the manufacture date applies when, based on the project's date of letting, a category of MASH-2016 compliant TWZ traffic control devices was not approved, or was not self-certified. In such case, devices that meet NCHRP-350 or MASH-2009 may be used.

Temporary work zone (TWZ) traffic control devices manufactured on or before December 31, 2019, must at a minimum have been successfully tested to the crashworthiness requirements of NCHRP-350 or MASH-2009. These devices may continue to be used throughout their normal service lives.

Such TWZ traffic control devices include:

- portable sign supports,
- barricades,
- portable traffic barriers designated exclusively for use in TWZs,
- crash cushions designated exclusively for use in TWZs,
- longitudinal channelizers, and
- truck-mounted attenuators (TMAs) and trailer attenuators (TAs).

Category I devices (i.e., lightweight devices), such as cones, tubular markers, and drums without lights or signs attached, may be self-certified by the vendor or provider, with documentation provided to the Department, or as shown on Department's Compliant Work Zone Traffic Control Device List.

2. CONSTRUCTION

Comply with the requirements of Article 7.2., "Safety."

Implement the traffic control plan (TCP) shown on the plans.

Install traffic control devices straight and plumb. Make changes to the TCP only as approved. Minor adjustments to meet field conditions are allowed.

Submit Contractor-proposed TCP changes, signed and sealed by a licensed professional engineer, for approval. The Engineer may develop, sign, and seal Contractor-proposed changes. Changes must conform to guidelines established in the TMUTCD using approved products from the Department's Compliant Work Zone Traffic Control Device List.

Maintain traffic control devices by taking corrective action when notified. Corrective actions include, but are not limited to, cleaning, replacing, straightening, covering, and removing devices. Maintain the devices such that they are properly positioned and spaced, are legible, and have retroreflective characteristics that meet requirements day or night and in all weather conditions.

The Engineer may authorize or direct in writing the removal or relocation of project limit advance warning signs. When project limit advance warning signs are removed before final acceptance, provide traffic control in accordance with the TMUTCD for minor operations as approved.

Remove all traffic control devices upon completion of the work as shown on the plans or as directed.

3. MEASUREMENT

"Barricades, Signs, and Traffic Handling" will be measured by the month. Law enforcement personnel with patrol vehicles will be measured by the hour for each person.

4. PAYMENT

4.1. **Barricades, Signs, and Traffic Handling**. Except for Contracts with callout work and work orders, the work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Barricades, Signs, and Traffic Handling." This price is full compensation for installation, maintenance, adjustments, replacements, removal, materials, equipment, labor, tools, and incidentals.

When the plans establish pay items for particular work in the TCP, that work will be measured and paid for under pertinent Items.

TMAs and TAs will be paid for under Item 505, "Truck-Mounted Attenuator (TMA) and Trailer Attenuator (TA)." Portable changeable message signs will be paid for under Item 503, "Portable Changeable Message Sign." Portable traffic signals will be paid for under Item 510, "One-Way Traffic Control," unless otherwise shown on the plans.

In accordance with Section 7.2.3., "Safety Contingency," funds have been included in the project budget to improve the effectiveness of traffic handling and enhance safety during the course of this project.

4.1.1. **Initiation of Payment**. Payment for this Item will begin on the first estimate after barricades, signs, and traffic handling devices have been installed in accordance with the TCP.

4.1.2. **Paid Months**. Monthly payment will be made each succeeding month for this Item provided the barricades, signs, and traffic handling devices have been installed and maintained in accordance with the TCP until the Contract amount has been paid.

If, within the timeframe established by the Engineer, the Contractor fails to provide or properly maintain signs and barricades in compliance with the Contract requirements, as determined by the Engineer, the Contractor will be considered in noncompliance with this Item. No payment will be made for the months in question, and the total final payment quantity will be reduced by the number of months the Contractor was in noncompliance.

4.1.3. **Maximum Total Payment Before Acceptance**. The total payment for this Item will not exceed 10% of the total Contract amount before final acceptance in accordance with Article 5.12., "Final Acceptance." The remaining balance will be paid in accordance with Section 502.4.1.5., "Balance Due."

4.1.4. **Total Payment Quantity**. The quantity paid under this Item will not exceed the total quantity shown on the plans, except as modified by change order and as adjusted in accordance with Section 502.4.1.2., "Paid Months." An overrun of the plans quantity for this Item will not be allowed for approving designs; testing; material shortages; closed construction seasons; curing periods; establishment, performance, test, and maintenance periods; failure to complete the work in the number of months allotted; or delays caused directly or indirectly by Contract requirements.

4.1.5. **Balance Due**. The remaining unpaid months of barricades less non-compliance months will be paid on final acceptance of the project, if all work is complete and accepted in accordance with Article 5.12., "Final Acceptance."

4.1.6. **Contracts with Callout Work and Work Orders**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be subsidiary to pertinent Items, except for federally funded Contracts.

4.2. **Law Enforcement Personnel**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid by Contractor force account for "Law Enforcement Personnel." This price is full compensation for furnishing all labor, materials, supplies, equipment, patrol vehicles, fees, and incidentals necessary to complete the work as directed.

Item 506

Temporary Erosion, Sedimentation, and Environmental Controls

1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants and protect environmental resources in accordance with the Stormwater Pollution Prevention Plan (SWP3) and environmental layout shown on the plans. Comply with Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) TXR150000 requirements. Control measures are defined as Best Management Practices (BMPs) used to prevent or reduce the discharge of pollutants and measures to protect environmental resources. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the Erosion Control Approved Products List. Perform work in a manner to prevent degradation of receiving waters, protect environmental resources, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures are performed in conformance with the manufacturer's or designer's specifications.

2. MATERIALS

Furnish materials in accordance with the following.

- Item 161, "Compost"
- Item 432, "Riprap"
- Item 556, "Pipe Underdrains"

2.1. **Rock Filter Dams**.

2.1.1. **Aggregate**. Furnish aggregate with approved hardness, durability, cleanliness, and resistance to crumbling, flaking, and eroding. Provide the following.

- **Types 1, 2, and 4 Rock Filter Dams**. Use 3–6-in. aggregate.
- **Type 3 Rock Filter Dams**. Use 4–8-in. aggregate.

2.1.2. **Wire**. Provide minimum 20-gauge galvanized wire for the steel wire mesh and tie wires for Types 2 and 3 rock filter dams. Type 4 dams require:

- a double-twisted, hexagonal weave with a nominal mesh opening of 2-1/2 × 3-1/4 in.,
- minimum 0.0866-in. steel wire for netting,
- minimum 0.1063-in. steel wire for selvages and corners, and
- minimum 0.0866 in. for binding or tie wire.

2.1.3. **Sandbag Material**. Furnish sandbags meeting Section 506.2.8., "Sandbags," except that any gradation of aggregate may be used to fill the sandbags.

2.2. **Temporary Pipe Slope Drains**. Provide corrugated metal pipe, polyvinyl chloride (PVC) pipe, flexible tubing, watertight connection bands, grommet materials, prefabricated fittings, and flared entrance sections as shown on the plans. Recycled and other materials meeting these requirements are allowed if approved.

Furnish concrete in accordance with Item 432.

2.3. **Temporary Paved Flumes**. Furnish asphalt concrete, hydraulic cement concrete, or other comparable non-erodible material as shown on the plans. Provide rock or rubble with a minimum diameter of 6 in. and a maximum volume of 1/2 cu. ft. for the construction of energy dissipaters.

2.4. **Construction Exits**. Provide materials as shown on the plans and in accordance with this Section.

2.4.1. **Rock Construction Exit**. Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free of adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4–8-in. aggregate for Type 1. Use 2–4-in. aggregate for Type 3.

2.4.2. **Timber Construction Exit**. Furnish No. 2 quality or better railroad ties and timbers for long-term construction exits, free of large and loose knots and treated to control rot. Fasten timbers using nuts and bolts or lag bolts, of at least 1/2 in. diameter, unless otherwise shown on the plans or allowed. Provide plywood or pressed wafer board at least 1/2 in. thick for short-term exits.

2.4.3. **Foundation Course**. Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

2.5. **Embankment for Erosion Control**. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

2.6. **Pipe**. Provide pipe outlet material in accordance with Item 556 and as shown on the plans.

2.7. **Construction Perimeter Fence**.

2.7.1. **Posts**. Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in. or use nominal 2 × 4-in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.7.2. **Fence**. Provide orange construction fencing as approved.

2.7.3. **Fence Wire**. Provide 14-gauge or larger galvanized smooth or twisted wire. Provide 16-gauge or larger tie wire.

2.7.4. **Flagging**. Provide brightly colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

2.7.5. **Staples**. Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

2.7.6. **Used Materials**. Previously used materials meeting the applicable requirements may be used if approved.

2.8. **Sandbags**. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet (UV) stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation shown in Table 1 to fill sandbags. Filled sandbags must be 24–30 in. long, 16–18 in. wide, and 6–8 in. thick.

Table 1
Sand Gradation

Sieve Size	Retained (% by Weight)
#4	Maximum 3%
#100	Minimum 80%
#200	Minimum 95%

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

2.9. **Temporary Sediment Control Fence**. Provide a net-reinforced fence using woven geotextile fabric. Logos visible to the traveling public will not be allowed.

2.9.1. **Fabric**. Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2.9.2. **Posts**. Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter or use nominal 2 × 4-in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.

2.9.3. **Net Reinforcement**. Provide net reinforcement of at least 12.5-gauge (Standard Wire Gauge) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.

2.9.4. **Staples**. Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

2.9.5. **Used Materials**. Use recycled material meeting the applicable requirements if approved.

2.10. **Biodegradable Erosion Control Logs**.

2.10.1. **Core Material**. Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically shown on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost in accordance with Item 161.

2.10.2. **Containment Mesh**. Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable, such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

Furnish recyclable containment mesh for temporary installations.

2.10.3. **Size**. Furnish biodegradable erosion control logs with diameters as shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

3.1. **Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities**. Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for managing environmental compliance. The CRPE will implement stormwater and erosion control practices, oversee and observe stormwater control measure monitoring and management, oversee environmental compliance requirements, and monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES CGP TXR150000. Take required training in accordance with Section 7.7.4.4, "Training."

Maintain daily monitor reports and make them available within 24 hr. upon request. During time suspensions when work is not occurring or on Contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project.

Ensure training is completed in accordance with Section 7.7.4.4., "Training," by all applicable personnel before employees work on the project. Document, maintain, and make available within 24 hr. of a request, a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and the date the employee completed the training.

3.2. **Contractor Superintendent Qualifications and Responsibilities**. Provide a superintendent who is competent, has experience with and knowledge of stormwater management, and is knowledgeable of the requirements and the conditions of the TPDES CGP TXR150000. The superintendent will manage and oversee the day-to-day operations and activities at the project site, work with the CRPE to provide effective stormwater management at the project site, represent and act on behalf of the Contractor, and attend the Department's preconstruction conference for the project. Take training as required in Section 7.7.4.4., "Training."

4. CONSTRUCTION

4.1. **Contractor Responsibilities**. Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES CGP TXR150000, and as directed. Coordinate stormwater management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside the Department's right of way in conformance with the specific or general stormwater permit requirements. Prevent water pollution from stormwater associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. **Implementation**. The CRPE, or alternate CRPE, must be accessible by telephone and able to respond to project-related stormwater management or other environmental emergencies 24 hr. per day.

4.2.1. **Commencement**. Implement the SWP3 as shown on the plans and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES CGP TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.

4.2.2. **Phasing**. Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by TPDES CGP TXR150000 or otherwise necessitated by project conditions.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. **General**.

4.3.1. **Temporary Alterations or Control Measure Removal**. Altering or removal of control measures is allowed when control measures are restored within the same working day.

4.3.2. **Stabilization**. Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with TPDES CGP TXR150000.

4.3.3. **Finished Work**. Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with TPDES CGP TXR150000. The Engineer may accept the work before vegetative cover of 70% density of existing adjacent undisturbed areas. An exception will be allowed in arid areas as defined in TPDES CGP TXR150000.

4.3.4. **Restricted Activities and Required Precautions**. Do not discharge onto the ground or into surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment onsite to prevent actual or potential water pollution. Manage, control, and dispose of litter onsite such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in TPDES CGP TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Immediately address chemical and hydrocarbon spills caused by the Contractor. Keep a spill kit onsite. Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

4.4. **Installation, Maintenance, and Removal Work**. Perform work in accordance with the SWP3, in conformance with manufacturers' guidelines, and in accordance with TPDES CGP TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place, or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections within the timeframe specified is when site conditions are considered "too wet to work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established timeframe, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance with the SWP3, the plans, or TPDES CGP TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with TPDES CGP TXR150000, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

4.4.1. **Rock Filter Dams for Erosion Control**. Remove trees, brush, stumps, and other objectionable material that may interfere with the construction of rock filter dams. Place sandbags as a foundation when required or at the Contractor's option.

Place the aggregate to the lines, height, and slopes specified, without undue voids for Types 1, 2, 3, and 5. Place the aggregate on the mesh and then fold the mesh at the upstream side over the aggregate and secure it to itself on the downstream side using wire ties, or hog rings for Type 2 and Type 3, or as directed.

Place rock filter dams perpendicular to the flow of the stream or channel unless otherwise directed. Construct filter dams in accordance with the following criteria unless otherwise shown on the plans.

4.4.1.1. **Type 1 (Non-Reinforced)**.

- **Height**. At least 18 in. measured vertically from existing ground to top of filter dam.
- **Top Width**. At least 2 ft.
- **Slopes**. No steeper than 2:1.

4.4.1.2. **Type 2 (Reinforced)**.

- **Height**. At least 18 in. measured vertically from existing ground to top of filter dam.
- **Top Width**. At least 2 ft.
- **Slopes**. No steeper than 2:1.

4.4.1.3. **Type 3 (Reinforced)**.

- **Height**. At least 36 in. measured vertically from existing ground to top of filter dam.
- **Top Width**. At least 2 ft.
- **Slopes**. No steeper than 2:1.

4.4.1.4. **Type 4 (Sack Gabions)**. Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single-loop-double-loop pattern on 4–5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist four times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires four times.

Place the sack flat in a filling trough, fill with stone, connect sides, and secure ends as described above for horizontal filling.

Lift and place without damaging the gabion. Shape sack gabions to existing contours.

4.4.1.5. **Type 5**. Provide rock filter dams as shown on the plans.

4.4.2. **Temporary Pipe Slope Drains**. Install pipe with a slope as shown on the plans or as directed. Construct embankment for the drainage system in 8-in. lifts to the required elevations. Hand-tamp the soil around and under the entrance section to the top of the embankment as shown on the plans or as directed. Form the top of the embankment or earth dike over the pipe slope drain at least 1 ft. higher than the top of the inlet pipe at all points. Secure the pipe with hold-downs or hold-down grommets spaced at most 10 ft. on center. Construct the energy dissipaters or sediment traps as shown on the plans or as directed. Construct the sediment trap using concrete or rubble riprap in accordance with Item 432, when shown on the plans.

4.4.3. **Temporary Paved Flumes**. Construct paved flumes as shown on the plans or as directed. Provide excavation and embankment (including compaction of the subgrade) of material to the dimensions shown on the plans unless otherwise indicated. Install a rock or rubble riprap energy dissipater, constructed from the materials specified above, to a minimum depth of 9 in. at the flume outlet to the limits shown on the plans or as directed.

4.4.4. **Construction Exits**. Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.4.1. **Long-Term**. Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1. **Type 1**. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

4.4.4.1.2. **Type 2**. Construct using railroad ties and timbers as shown on the plans or as directed.

4.4.4.2. **Short-Term**.

4.4.4.2.1. **Type 3**. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

4.4.4.2.2. **Type 4**. Construct as shown on the plans or as directed.

4.4.5. **Earthwork for Erosion Control**. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

4.4.5.1. **Excavation and Embankment for Erosion Control Features**. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

4.4.5.2. **Excavation of Sediment and Debris**. Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.

4.4.6. **Construction Perimeter Fence**. Construct, align, and locate fencing as shown on the plans or as directed.

4.4.6.1. **Installation of Posts**. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8–10 ft.

4.4.6.2. **Wire Attachment**. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

4.4.6.3. **Flag Attachment**. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

4.4.7. **Sandbags for Erosion Control**. Construct a berm or dam of sandbags that will intercept sediment-laden stormwater runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

4.4.8. **Temporary Sediment Control Fence**. Provide temporary sediment control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, in accordance with this Section, or as directed.

4.4.8.1. **Installation of Posts**. Embed posts at least 18 in. deep or adequately anchor, if in rock, with a spacing of 6--8 ft., and install on a slight angle toward the runoff source.

4.4.8.2. **Fabric Anchoring**. Dig trenches along the uphill side of the fence to anchor 6–8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.8.3. **Fabric and Net Reinforcement Attachment**. Attach the reinforcement to wooden posts using staples, or to steel posts using T-clips, in at least four places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement using hog rings or cord every 15 in. or less.

4.4.8.4. **Fabric and Net Splices**. Locate splices at a fence post with a minimum lap of 6 in. attached in at least six places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than one patch every 15–20 ft.),
- posts without bends, and
- backing without holes.

4.4.9. **Biodegradable Erosion Control Logs**. Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement resulting from normal rain events, to prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs to facilitate daily work is allowed at the Contractor's expense.

4.4.10. **Vertical Tracking**. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring at least 12 in. long × 2–4 in. wide × 1/2–2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12-in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred, unless otherwise approved.

4.5. **Monitoring and Documentation**. Monitor the control measures daily as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES CGP TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls in accordance with the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, the responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist periodically as directed.

5. MEASUREMENT

5.1. **Rock Filter Dams**. Installation or removal of rock filter dams will be measured by the foot or by the cubic yard. The measured volume will include sandbags, when used.

5.1.1. **Linear Measurement**. When rock filter dams are measured by the foot, measurement will be along the centerline of the top of the dam.

5.1.2. **Volume Measurement**. When rock filter dams are measured by the cubic yard, measurement will be based on the volume of rock computed by the method of average end areas.

5.1.2.1. **Installation**. Measurement will be made in final position.

5.1.2.2. **Removal**. Measurement will be made at the point of removal.

5.2. **Temporary Pipe Slope Drains**. Temporary pipe slope drains will be measured by the foot.

5.3. **Temporary Paved Flumes**. Temporary paved flumes will be measured by the square yard of surface area. The measured area will include the energy dissipater at the flume outlet.

5.4. **Construction Exits**. Construction exits will be measured by the square yard of surface area.

5.5. **Earthwork for Erosion and Sediment Control**.

5.5.1. **Equipment and Labor Measurement**. Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

5.5.2. **Volume Measurement**.

5.5.2.1. **In Place**.

5.5.2.1.1. **Excavation**. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

5.5.2.1.2. **Embankment**. Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon which the embankment is to be constructed for the feature and
- the lines, grades, and slopes of the accepted embankment for the feature.

5.5.2.2. **In Vehicles**. Excavation and embankment quantities will be combined and paid for under "Earthwork (Erosion and Sediment Control, In Vehicle)." Excavation will be measured by the cubic yard in vehicles at the point of removal. Embankment will be measured by the cubic yard in vehicles measured at the point of delivery. Shrinkage or swelling factors will not be considered in determining the calculated quantities.

5.6. **Construction Perimeter Fence**. Construction perimeter fence will be measured by the foot.

5.7. **Sandbags for Erosion Control**. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

5.8. **Temporary Sediment Control Fence**. Installation or removal of temporary sediment control fence will be measured by the foot.

5.9. **Biodegradable Erosion Control Logs**. Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.

5.10. **Vertical Tracking**. Vertical tracking will not be measured or paid for directly, but will be subsidiary to this Item.

6. PAYMENT

The following will not be paid for directly, but will be subsidiary to pertinent Items:

- erosion control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (e.g., construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;

- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking, which will be subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly, but will be subsidiary to the excavation and embankment under this Item.

6.1. **Rock Filter Dams**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows.

6.1.1. **Installation**. Installation will be paid for as "Rock Filter Dams (Install)" of the type and slope as specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.1.2. **Removal**. Removal will be paid for as "Rock Filter Dams (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

When the Engineer directs that the rock filter dam installation or portions thereof be replaced, payment will be made at the unit price bid for "Rock Filter Dams (Remove)" and for "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.2. **Temporary Pipe Slope Drains**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Pipe Slope Drains" of the size specified. This price is full compensation for furnishing materials, removal and disposal, furnishing and operating equipment, labor, tools, and incidentals.

Removal of temporary pipe slope drains will not be paid for directly, but will be subsidiary to the installation Item. When the Engineer directs that the pipe slope drain installation or portions thereof be replaced, payment will be made at the unit price bid for "Temporary Pipe Slope Drains" of the size specified, which is full compensation for the removal and reinstallation of the pipe drain.

Earthwork required for the pipe slope drain installation, including construction of the sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

Riprap concrete or stone, when used as an energy dissipater or as a stabilized sediment trap, will be measured and paid for in accordance with Item 432.

6.3. **Temporary Paved Flumes**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Paved Flume (Install)" or "Temporary Paved Flume (Remove)." This price is full compensation for furnishing and placing materials, removal and disposal, equipment, labor, tools, and incidentals.

When the Engineer directs that the paved flume installation or portions thereof be replaced, payment will be made at the unit prices bid for "Temporary Paved Flume (Remove)" and "Temporary Paved Flume (Install)." These prices are full compensation for the removal and replacement of the paved flume and for equipment, labor, tools, and incidentals.

Earthwork required for the paved flume installation, including construction of a sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.4. **Construction Exits**. Contractor-required construction exits from off right of way locations or on right of way PSLs will not be paid for directly, but will be subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

6.5. **Earthwork for Erosion and Sediment Control**.

6.5.1. **Initial Earthwork for Erosion and Sediment Control**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, (In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment, including hauling; disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

6.5.2. **Maintenance Earthwork for Erosion and Sediment Control for Cleaning and Restoring Control Measures**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid under a Contractor Force Account Item from invoice provided to the Engineer.

This price is full compensation for excavation, embankment, and re-grading, including dewatering for removal of accumulated sediment, and the removal of accumulated sediment in various erosion control installations as directed, hauling, and disposal of material not used elsewhere on the project; excavation for construction of erosion control features; embankments, including furnishing material from approved sources and construction of erosion control features; and equipment, labor, tools, and incidentals.

Earthwork needed to remove and obliterate erosion control features will not be paid for directly, but will be subsidiary to pertinent Items unless otherwise shown on the plans.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

6.6. **Construction Perimeter Fence**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will not be paid for directly, but will be subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

6.7. **Sandbags for Erosion Control**. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly, but will be subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

6.8. **Temporary Sediment Control Fence**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows.

6.8.1. **Installation**. Installation will be paid for as "Temporary Sediment-Control Fence (Install)." This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

6.8.2. **Removal**. Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.9. **Biodegradable Erosion Control Logs**. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows.

6.9.1. **Installation**. Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

6.9.2. **Removal**. Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

6.10. **Vertical Tracking**. Vertical tracking will not be measured or paid for directly, but will be subsidiary to this Item.

Item 530
Intersections, Driveways, and Turnouts

1. DESCRIPTION

Construct and pave intersections, driveways, and turnouts. Pave existing intersections, driveways, and turnouts.

Intersections are considered areas off the travel lanes and shoulders of the Contract highway on the intersecting highway on the state system. The intersecting on-system highway work will be paid for under this Item only when shown on the plans.

Driveways are defined as private (residential or commercial) and public (county road and city street) access areas off the travel lanes and shoulders.

Turnouts include but are not limited to mailbox and litter barrel widenings.

2. MATERIALS

Furnish materials that meet the following.

- Item 247, “Flexible Base”
- Item 260, “Lime Treatment (Road-Mixed)”
- Item 275, “Cement Treatment (Road-Mixed)”
- Item 276, “Cement Treatment (Plant-Mixed)”
- Item 292, “Asphalt Treatment (Plant-Mixed)”
- Item 316, “Seal Coat”
- Item 330, “Limestone Rock Asphalt Pavement”
- Item 334, “Hot-Mix Cold-Laid Asphalt Concrete Pavement”
- Item 341, “Dense-Graded Hot-Mix Asphalt”
- Item 360, “Concrete Pavement”
- Item 421, “Hydraulic Cement Concrete”
- Item 440, “Reinforcement for Concrete”

3. CONSTRUCTION

Construct and pave intersections, driveways, and turnouts, and pave existing intersections, driveways, and turnouts as shown on the plans or as directed. Place materials in conformance with construction Articles of pertinent Items. Provide uninterrupted access to adjacent property unless otherwise directed. Ensure that abrupt elevation changes in driveway or turnout areas that serve as sidewalks do not exceed 1/4 in. and that the sidewalk area cross slope does not exceed 2%. Ready-mix concrete and hand finishing will be permitted when concrete pavement is specified unless otherwise shown on the plans for intersections.

4. MEASUREMENT

This Item will be measured by the square yard of the final pavement surface, as placed in the field, including radii and turnout.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Intersections," "Driveways," "Turnouts," "Intersections, Driveways, and Turnouts," or "Driveways and Turnouts" of the surface specified.

This price is full compensation for furnishing and operating equipment; excavation and embankment; base and pavement materials; and labor, materials, tools, and incidentals. Drainage structures will be measured and paid for in conformance with the pertinent bid Items.