FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6	F 2023(225),ETC		1
STATE	STATE DIST.	COUNTY	
TEXAS	YKM	GONZALES,ETC	
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024,ETC	UA90,ETC

STATE OF TEXAS
TEXAS DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT
FOR THE CONSTRUCTION OF SEAL COAT TYPE WORK
CONSISTING OF SEAL COAT

SEE SHEET 2 FOR INDEX OF SHEETS

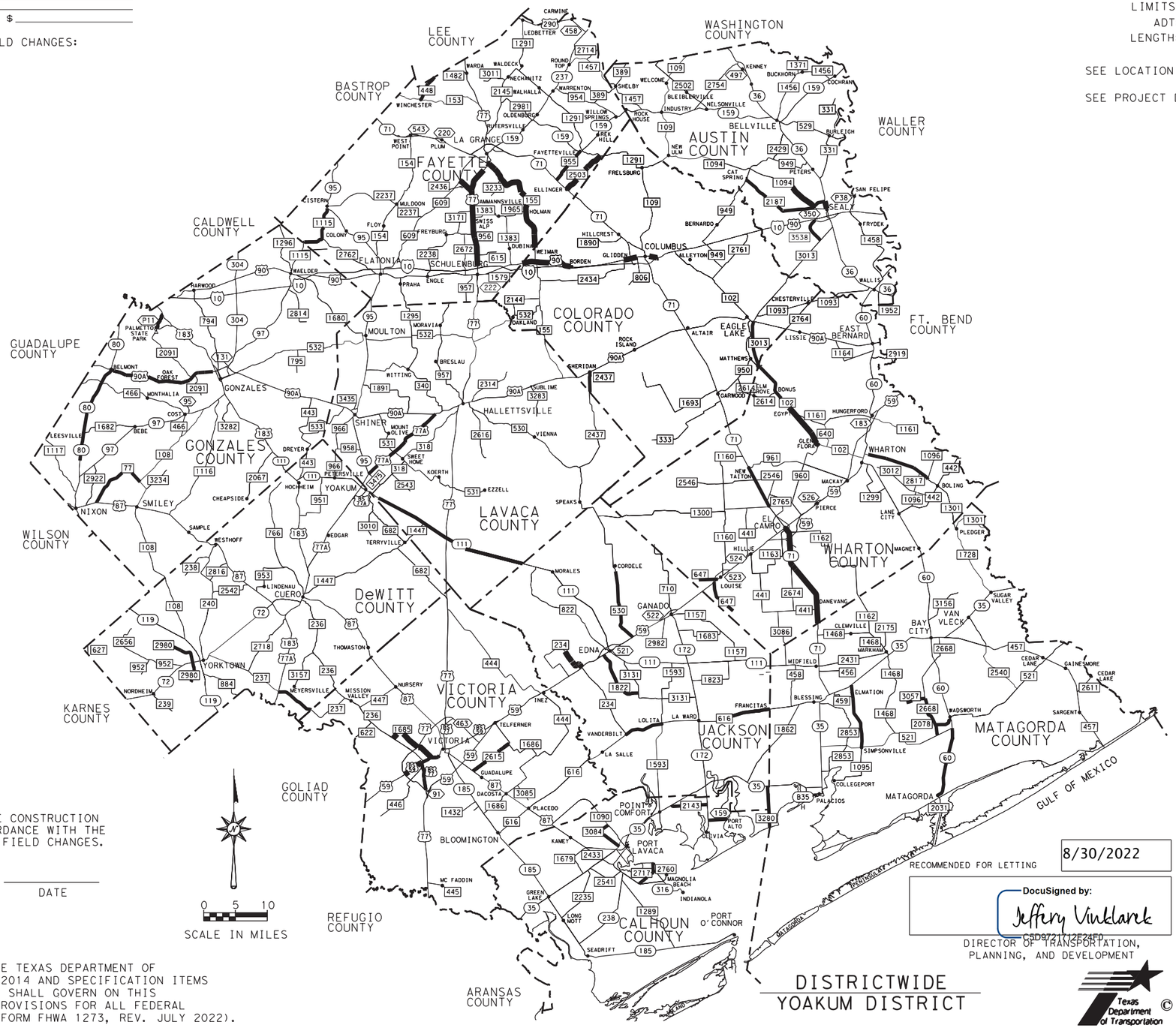
CONTRACTOR: _____
DATE OF LETTING: _____
DATE WORK BEGAN: _____
DATE WORK COMPLETED: _____
DATE WORK ACCEPTED: _____
FINAL CONTRACT COST: $ _____

LIST OF APPROVED FIELD CHANGES:

DESIGN SPEED: N/A
CSJ: 0025-05-024,ETC
HIGHWAY: UA 90,ETC
COUNTY: GONZALES,ETC
LIMITS: DISTRICTWIDE
ADT: SEE PROJECT SUMMARY
LENGTH: SEE PROJECT SUMMARY

SEE LOCATION MAP FOR MORE DETAIL.

SEE PROJECT DATA SHEETS FOR: EQUATIONS
EXCEPTIONS
RAILROAD CROSSINGS



THIS IS TO CERTIFY THAT THE CONSTRUCTION WORK WAS PERFORMED IN ACCORDANCE WITH THE PLANS, CONTRACT AND LISTED FIELD CHANGES.

AREA ENGINEER _____ DATE _____

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, REV. JULY 2022).

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

SUBMITTED FOR LETTING 08/22/2022

Amanda Anderle Fling, P.E.

DISTRICT DESIGN ENGINEER

RECOMMENDED FOR LETTING 8/30/2022

DocuSigned by:
Jeffery Vinklarek
C5D9721712E24F0...

DIRECTOR OF TRANSPORTATION, PLANNING, AND DEVELOPMENT

APPROVED FOR LETTING 8/30/2022

DocuSigned by:
Martin C. Horsts PE
894AD332139E48D...

DISTRICT ENGINEER

DISTRICTWIDE
YOAKUM DISTRICT

Texas Department of Transportation

SHEET NO.	DESCRIPTION
GENERAL	
1	TITLE SHEET
2	INDEX OF SHEETS
3-5	PROJECT SUMMARY
6-8	LOCATION MAP
9-11	GENERAL NOTES
12-12A	ESTIMATE & QUANTITY SHEET
13-141	PROJECT DATA & BASIS OF ESTIMATE
TRAFFIC CONTROL	
STANDARD SHEETS	
142-153	BC(1-12)-21
154	TCP(SC-1)-21
155	TCP(SC-2)-21
156	TCP(SC-3)-21
157	TCP(SC-4)-21
158	TCP(SC-5)-21
159	TCP(SC-6)-21
160	TCP(SC-7)-21
161	TCP(3-1)-13
162	TCP(3-2)-13
163	TCP(3-3)-14
164	TCP - LEFT TURN LANE(YKM DISTRICT)
TRAFFIC	
STANDARD SHEETS	
165	PM(1)-20
166	PM(2)-20
167	PM(3)-20
168	PM(4)-22
169	RCD(1)-16
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171	RS(1)-13
172	RS(2)-13
173	RS(3)-13
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175	RS(5)-13
ENVIRONMENTAL	
176	ENVIRONMENTAL PERMITS, ISSUES & COMMITMENTS
RAILROAD	
STANDARD SHEETS	
177-203	RAILROAD SCOPE OF WORK
204-205	RAILROAD REQUIREMENTS FOR NON-BRIDGE CONSTRUCTION PROJECTS

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED PROFESSIONAL ENGINEER

Amanda Anderle Fling, P.E.

08/01/2022

INDEX OF SHEETS

Texas Department of Transportation

FED.RD. DIV.NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	2

PATH: T:\YKMANNEX\PS&E\2023 Seal Coat\INDEX\
FILE: 002 INDEX OF SHEETS.dgn

YOAKUM AREA OFFICE PROJECT SUMMARY

No.	CSJ	HIGHWAY	COUNTY	LIMITS	LENGTH (MI.)	TRM BEGIN	TRM END	ADT
1	0025-05-024	UA 90	GONZALES	FROM SH 80 TO 0.25 MI E OF CR 143	6.210	540+0.527	546+0.761	3428
2	0025-06-057	UA 90	GONZALES	FROM 0.25 MI E OF CR 143 TO GONZALES C-L	7.487	546+0.761	554+0.270	4929
3	0287-03-037	SH 80	GONZALES	FROM US 90A TO 0.155 MI S OF CR 104	7.081	500+1.995	508+1.907	2453
4	0287-04-039	SH 80	GONZALES	FROM 0.155 MI S OF CR 104 TO 2.1 MI N OF SH 97	4.510	508+1.907	514+0.465	1883
5	0584-01-002	PR 11	GONZALES	FROM US 183 TO FM 1586	1.964	084-0.033	084+1.931	471
6	0687-01-015	** FM 77	GONZALES	FROM US 87 TO FM 108	8.418	538-0.030	546+0.439	193
7	0211-09-035	FM 155	FAYETTE	FROM US 77 TO COLORADO C/L	14.345	466-0.035	482+0.019	2115
8	0268-01-058	US 77	FAYETTE	FROM 1.50 MI SOUTH OF FM 155 TO 0.60 MI SOUTH OF FM 2436	3.310	498+1.954	502+1.249	6193
9	0268-02-037	US 77	FAYETTE	FROM 0.60 MI SOUTH OF FM 2436 TO SCHULENBURG C-L	9.022	502+1.249	512+0.270	5866
*10	0334-07-007	** FM 448	FAYETTE	FROM LEE C/L TO FM 153	3.413	454+0.091	456+1.507	446
11	0416-01-002	SS 92	FAYETTE	FROM US 77 TO END OF MAINTENANCE	0.310	588-0.285	588+0.025	871
12	1262-01-017	FM 1115	FAYETTE	FROM SH 95 TO GONZALES C/L	6.676	470-0.008	478+0.005	487
*13	1264-01-016	FM 955	FAYETTE	FROM SH 159 TO SH 71	4.658	464-0.024	468+0.663	1884
14	2348-01-007	** FM 2436	FAYETTE	FROM FM 609 TO US 77	1.942	586+0.000	586+1.942	1606
15	2382-01-005	** FM 2503	FAYETTE	FROM FM 1291 TO SH 71	6.121	464-0.016	470+0.136	882
16	0269-03-039	UA 77	LAVACA	FROM US 90A TO MUSTANG CREEK	4.374	498+1.371	504+0.397	2596
17	0269-04-040	UA 77	LAVACA	FROM MUSTANG CREEK TO SH 95	6.205	504+0.397	510+0.600	3173
18	0346-06-054	SH 111	LAVACA	FROM DEWITT C/L TO JACKSON C/L	21.534	520+0.012	540+1.853	5624
*19	0346-11-009	SH 111	DEWITT	FROM S KENNEDY ST TO LAVACA C/L	0.194	519+0.217	520+0.012	5026
20	0941-03-111	FM 237	DEWITT	FROM US 183 TO VICTORIA C/L	4.889	564+0.316	570+0.011	1680
21	3012-01-008	** FM 2980	DEWITT	FROM END OF STATE MAINTENANCE TO SH 72	3.179	526+0.000	528+1.186	1022
22	3012-02-006	** FM 2980	DEWITT	FROM SH 72 TO END OF STATE MAINTENANCE	2.565	528+1.224	532+0.027	168
				SHEET TOTAL:	128.407			

* PROJECT WITH RAILROAD COORDINATION REQUIRED.
** STATE FUNDED

ALL PROJECTS HAVE EXISTING RAISED REFLECTIVE PAVEMENT MARKERS TO BE REMOVED BY CONTRACTOR.

PATH: T:\YKMANNEX\PS&E\2023 Seal Coat\
FILE: 003 PROJECT SUMMARY.dgn

PROJECT SUMMARY

Texas Department of Transportation

YOAKUM AREA OFFICE

FED.RD. DIV.NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	3

WHARTON AREA OFFICE PROJECT SUMMARY

No.	CSJ	HIGHWAY	COUNTY	LIMITS	LENGTH (MI.)	TRM BEGIN	TRM END	ADT
*23	0026-04-049	US 90	COLORADO	FROM FAYETTE C/L TO CR 210	6.492	740+0.797	748+0.504	4407
*24	0026-06-037	US 90	COLORADO	FROM FM 2434 TO FM 806	1.687	754+1.256	756+0.946	6103
*25	0027-01-048	US 90	COLORADO	FROM 0.75 MI EAST OF BS 71F TO IH 10	2.005	758+0.704	760+1.573	4523
26	2349-01-009	FM 2437	COLORADO	FROM US 90A TO LAVACA C/L	2.990	502-0.017	506+0.001	632
*27	3205-03-014	FM 3013	COLORADO	FROM US 90A TO WHARTON C/L	5.606	488+1.198	496+0.004	2874
*28	0187-03-074	SH 36	AUSTIN	FROM FM 1094 TO 1500' SOUTH OF SL 350	0.765	606+0.904	606+1.764	16208
29	0271-18-004	FM 3538	AUSTIN	FROM 0.125 MI SOUTH OF IH 10 TO FM 3013	3.206	472+0.259	474+1.468	2182
30	1721-02-013	FM 1094	AUSTIN	FROM 586' WEST OF SCHLUENS RD TO 1091' WEST OF FM 2187	5.262	626+1.043	632+0.317	2065
*31	2894-01-014	** FM 2187	AUSTIN	FROM FM 949 TO SH 36	11.876	468+0.000	478+1.923	2189
32	0266-05-053	SH 71	WHARTON	FROM FM 961 TO FM 1300	5.368	696+0.195	700+1.613	5844
*33	0266-06-049	SH 71	WHARTON	FROM BU 59S TO MATAGORDA C/L	10.107	704+1.028	718+0.566	9977
34	0709-02-057	FM 102	WHARTON	FROM COLORADO C/L TO FM 960	12.852	498+0.001	510+0.870	2590
*35	1302-02-014	** FM 647	WHARTON	FROM SL 523 TO END OF MAINTENANCE	4.492	520-0.950	522+1.731	170
36	1412-03-042	FM 1301	WHARTON	FROM 475 FT N OF N ALABAMA RD TO FM 442	9.821	636+0.668	646+0.527	15990
*37	3014-02-005	** FM 647	WHARTON	FROM END OF MAINENANCE TO SL 523	2.436	516-0.040	518+0.404	348
38	3205-04-007	FM 3013	WHARTON	FROM COLORADO C/L TO FM 102	0.708	496+0.004	496+0.712	999
*39	0241-04-024	SH 60	MATAGORDA	FROM FM 521 TO 1.207 MI S OF FM 521	1.003	544+0.782	544+1.785	1719
*40	0241-05-013	SH 60	MATAGORDA	FROM 1.207 MI S OF FM 521 TO FM 2031	7.822	544+1.785	552+1.635	1719
*41	0847-04-008	** FM 2078	MATAGORDA	FROM FM 2668 TO SH 60	2.357	646-0.043	648+0.349	369
*42	1321-01-023	FM 1095	MATAGORDA	FROM SH 35 TO FM 521	8.241	532-0.026	540+0.253	661
*43	2697-01-036	FM 2668	MATAGORDA	FROM FM 3057 TO FM 521	5.108	532+0.631	536+1.752	560
*44	3087-01-009	FM 3057	MATAGORDA	FROM END OF MAINENANCE TO FM 2668	2.386	646-0.413	648+0.008	802
				SHEET TOTAL:	112.590			

* PROJECT WITH RAILROAD COORDINATION REQUIRED
** STATE FUNDED

ALL PROJECTS HAVE EXISTING RAISED REFLECTIVE PAVEMENT MARKERS TO BE REMOVED BY CONTRACTOR.

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FILE: 003 PROJECT SUMMARY.dgn

PROJECT SUMMARY

Texas Department of Transportation

WHARTON AREA OFFICE

FED.RD. DIV.NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	4

VICTORIA AREA OFFICE PROJECT SUMMARY

No.	CSJ	HIGHWAY	COUNTY	LIMITS	LENGTH (MI.)	TRM BEGIN	TRM END	ADT
* 45	0088-06-006	BU 59T	VICTORIA	FROM GUADALUPE RIVER TO N OF US 59	4.861	638+1.080	642+2.008	13511
* 46	0371-01-092	BU 77S	VICTORIA	FROM BU 59T TO US 59 N FRONT RD	3.410	582+0.051	584+1.588	1839
47	1698-01-024	FM 1685	VICTORIA	FROM FM 236 TO BU 59T	6.418	576-0.017	582+0.585	1388
* 48	2601-01-016	FM 2615	VICTORIA	FROM US 87 TO FM 1686	5.736	588-0.038	592+1.758	568
* 49	0497-02-044	FM 616	JACKSON	FROM FM 234 TO FM 1593	4.069	712+0.316	716+0.805	2856
* 50	0497-03-011	FM 616	JACKSON	FROM WEST CARANCAHUA CREEK TO MATAGORDA C/L	6.019	724+0.891	730+0.941	779
51	0515-01-072	** FM 234	JACKSON	FROM CR 112(LOST BRIDGE RD) TO US 59 N FRT RD(EL TORO)	3.267	538+0.314	540+1.588	209
52	0671-01-004	** FM 3280	JACKSON	FROM SH 35 TO CALHOUN C/L	2.999	544-0.066	546+0.996	215
* 53	1090-01-028	FM 530	JACKSON	FROM CR 274 TO US 59	8.418	528+0.740	536+1.227	369
* 54	1945-01-023	FM 1822	JACKSON	FROM SL 521 TO FM 3131	7.577	526-0.013	532+1.578	3501
55	0420-08-009	** SS 159	CALHOUN	FROM SH 172 TO END OF STATE MAINTENANCE	2.296	618-0.013	620+0.300	514
56	0671-02-004	** FM 3280	CALHOUN	FROM JACKSON C/L TO END OF STATE MAINTENANCE	1.997	546+0.996	550+0.000	60
57	2016-01-013	FM 2143	CALHOUN	FROM SH 35 TO SH 172	4.551	614-0.015	618+0.585	1150
58	2714-01-005	** FM 2717	CALHOUN	FROM END OF STATE MAINTENANCE TO SH 316	3.466	556-0.004	558+1.509	450
59	3171-01-011	FM 3084	CALHOUN	FROM FM 1090 TO INDEPENDENCE DRIVE	3.776	552-0.035	554+1.784	1441
				SHEET TOTAL:	68.860			

* PROJECT WITH RAILROAD COORDINATION REQUIRED.
** STATE FUNDED

ALL PROJECTS HAVE EXISTING RAISED REFLECTIVE PAVEMENT MARKERS TO BE REMOVED BY CONTRACTOR.

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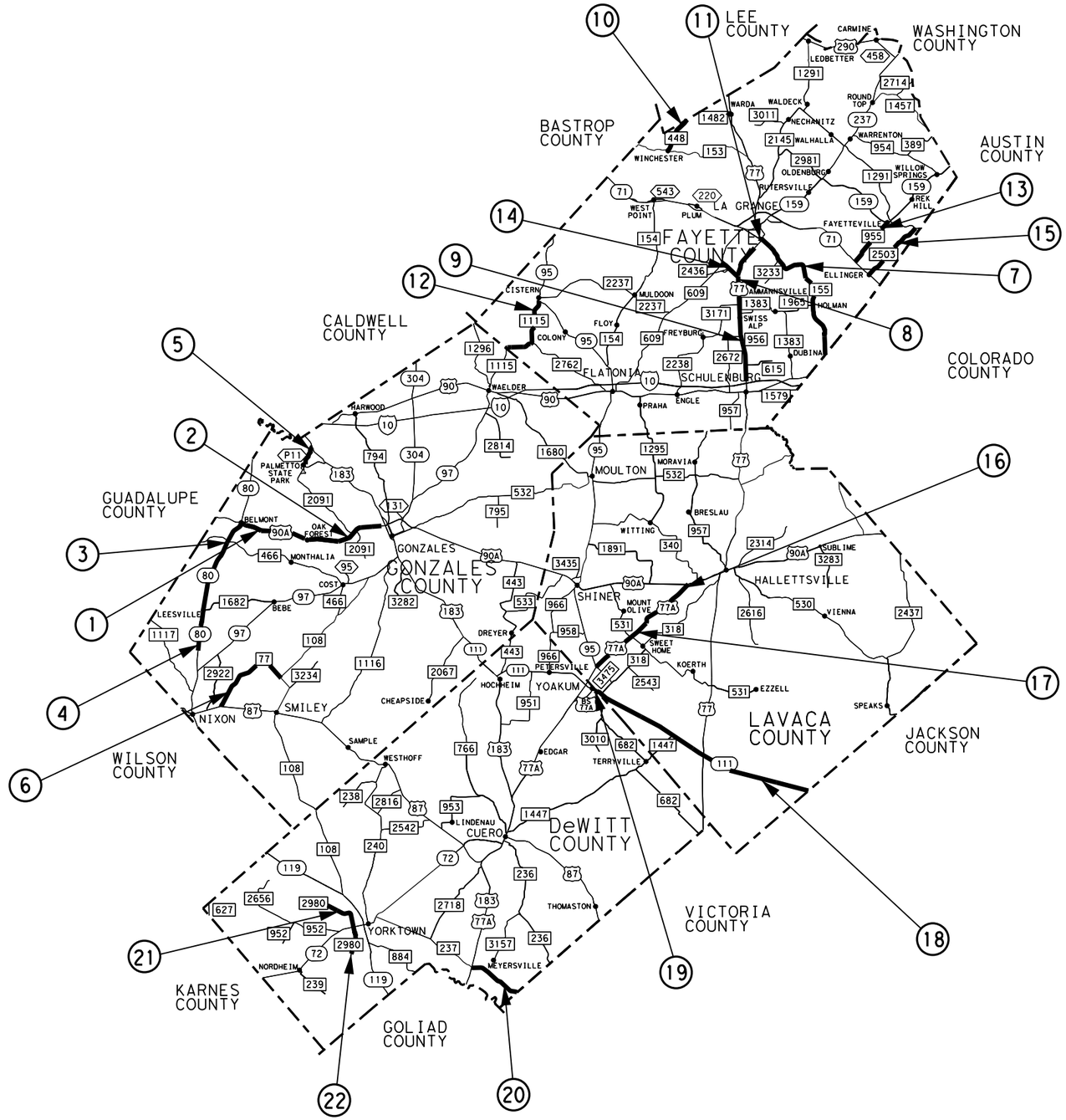
FILE: 003 PROJECT SUMMARY.dgn

PROJECT SUMMARY

Texas Department of Transportation

VICTORIA AREA OFFICE

FED.RD. DIV.NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	5



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SCALE IN MILES

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FILE: 004 LOCATION MAPS.dgn

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

Amanda Anderle Fling, P.E.

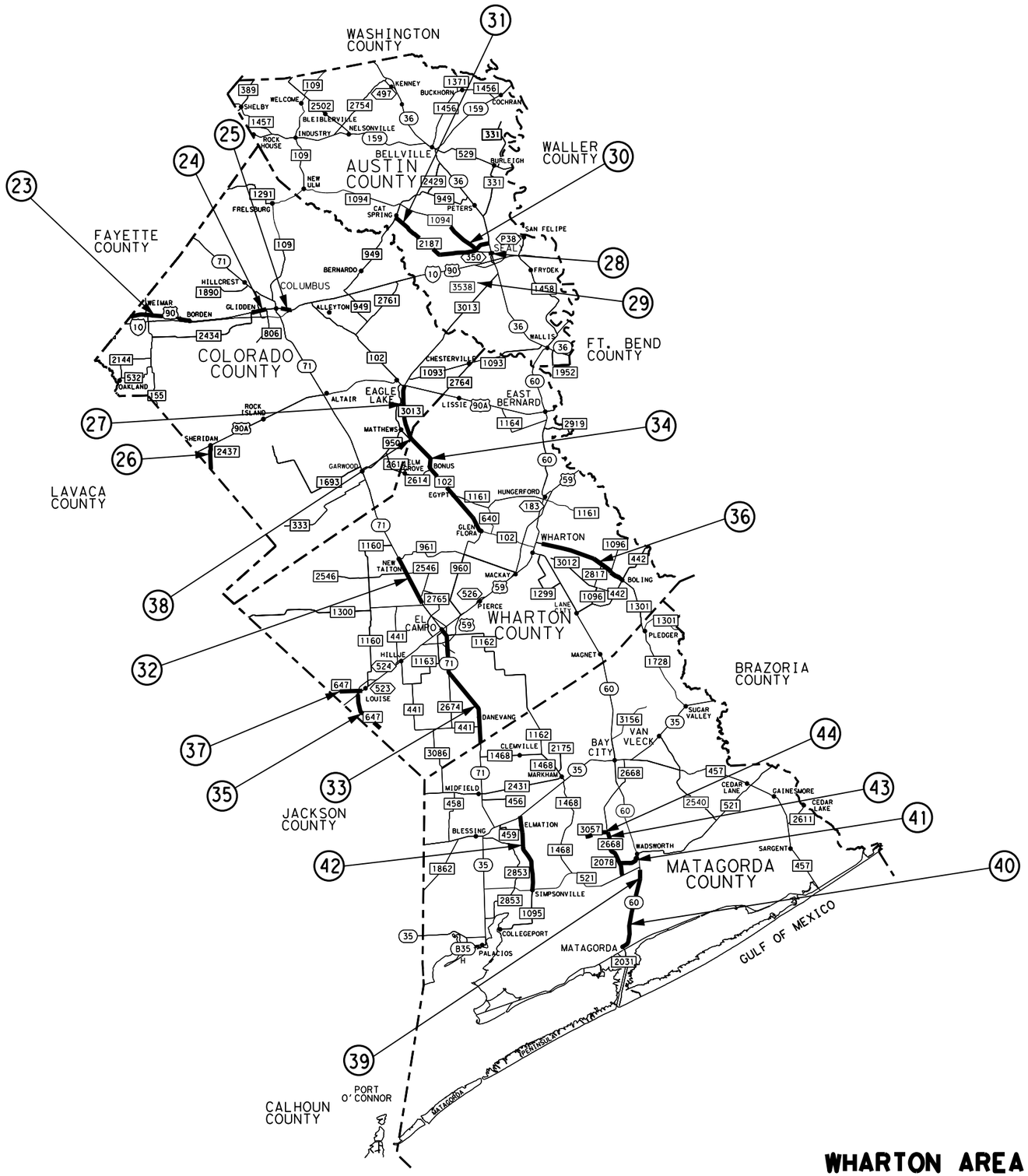
08/01/2022

LOCATION MAP

YOAKUM AREA OFFICE

Texas Department of Transportation

FED. RD. DIV. NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	6



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SCALE IN MILES

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FILE: 004 LOCATION MAPS.dgn

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED PROFESSIONAL ENGINEER

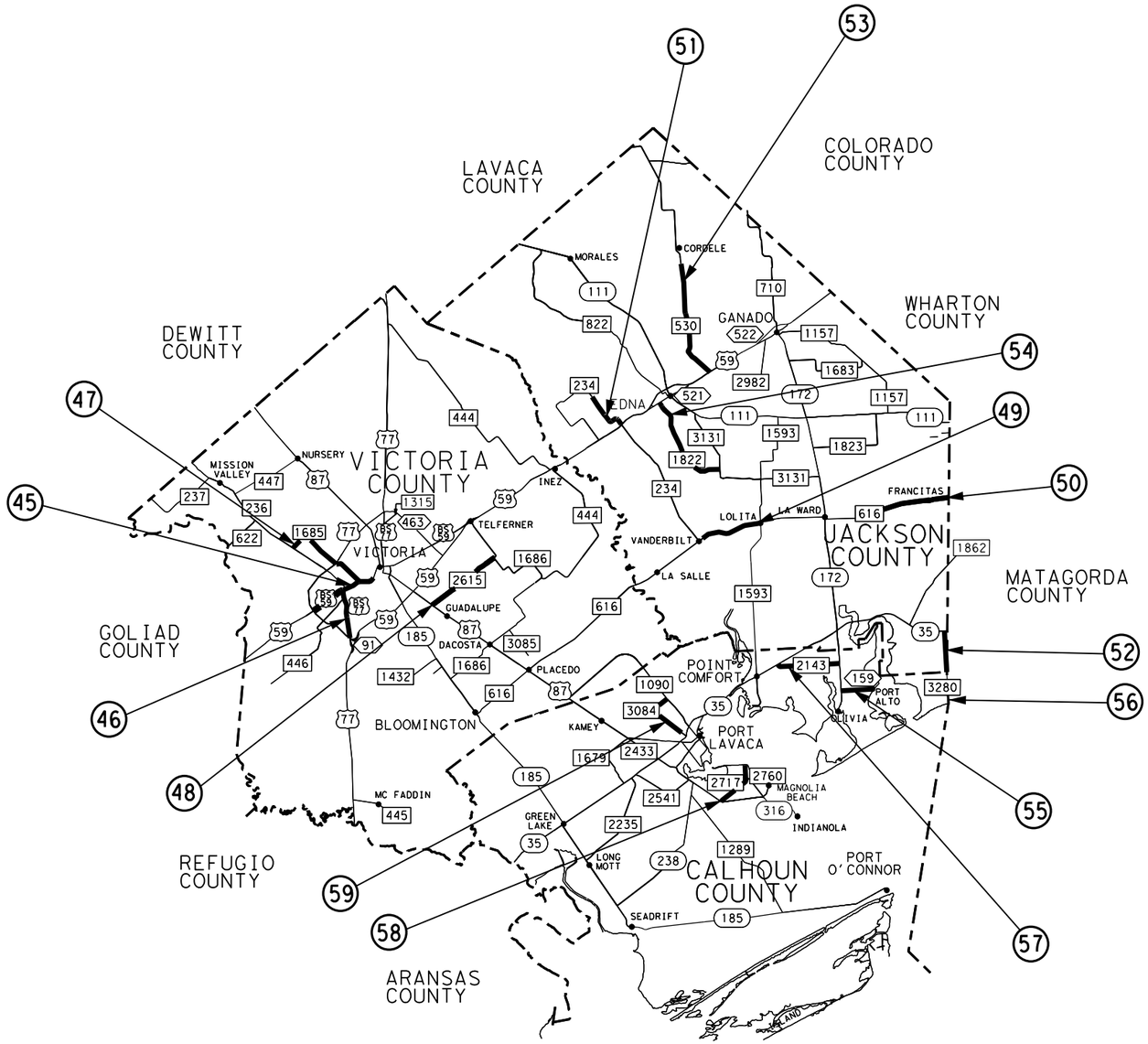
Amanda Anderle Fling, P.E.

08/01/2022

LOCATION MAP

WHARTON AREA OFFICE

FED.RD. DIV.NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	7



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SCALE IN MILES

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FILE: 004 LOCATION MAPS.dgn

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED PROFESSIONAL ENGINEER

Amanda Anderle Fling, P.E.

08/01/2022

LOCATION MAP

VICTORIA AREA OFFICE

Texas Department of Transportation

FED.RD. DIV.NO.		PROJECT NO.	
6			
CONT.	SECT.	JOB	HIGHWAY NO.
0025	05	024, ETC	UA 90, ETC
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	YKM	GONZALES, ETC	8

GENERAL:

Contractor questions on this project are to be addressed to the following individual(s):

Clayton Harris Clayton.Harris@txdot.gov
James Janak James.Janak@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals.

All contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to TxDOT's Public FTP at the following Address:
https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name.

I. UNION PACIFIC RAILROAD COMPANY

PROTECTION OF FIBER OPTIC CABLE SYSTEMS

Fiber optic cable systems may be buried on the railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. The state and/or its contractor shall telephone the railroad during normal business hours (7:00 a.m. to 9:00 p.m., central time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, seven-day number for emergency calls) to determine if fiber optic cable is buried on the railroad's premises to be used by the state. If it is, the state and/or its contractor will telephone the telecommunications company(ies) involved, arrange for a cable locator and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the railroad's premises.

Project Number: **Sheet: 9**

County: GONZALES, ETC **Control: 0025-05-024, ETC**

Highway: UA 90, ETC

II. BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY

PROTECTION OF FIBER OPTIC CABLE SYSTEMS

The state and/or its contractor shall, five working days before any work is performed, call the railroad's communications network control center at 1-800-533-2891 (a 24-hour number) to assist in determining if fiber optic communications, control systems, or other type of cable systems are buried in the general locations where work is to be performed. In the event such cable is present, the state and/or its contractor shall then call the owner of the cable line to determine its exact location. The contractor shall indemnify and hold harmless the railroad against any cost or claims arising out of damage to any fiber optic communications, control systems or other types of cable systems, but only to the extent such damage is caused by negligence of the contractor.

III. KANSAS CITY SOUTHERN RAILWAY COMPANY

Fiber optic cable systems may be buried on the railroad's property. Protection of the fiber optic cable system is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. The state and/or its contractor shall telephone Texas One Call at 1-800-344-8377 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the railroad's premises to be used by the state. If it is, the state and/or its contractor will telephone the telecommunications company(ies) involved, arrange for a cable locator, and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the railroad premise.

IV. UNIVERSAL TEXAS

Fiber optic cable systems may be buried on the railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. The state and/or its contractor shall telephone Texas One Call at 1-800-545-6005 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the railroad's premises to be used by the state. If it is, the state and/or its contractor will telephone the telecommunications company(ies) involved, arrange for a cable locator, and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the railroad's premises.

Remove and dispose of existing raised pavement markers as directed. All work involved in the removal and disposal of these markers will not be paid for directly but shall be considered subsidiary to the various bid items involved.

Do not work on the roadway before sunrise or after sunset unless otherwise approved.

Leave all traffic lanes open to traffic at night, weekends and holidays unless otherwise approved.

Furnish a certified copy of the legal gross weight of each vehicle hauling materials by weight and certified measurements for all trucks hauling material by volume.

Do not cross the median except at existing crossovers.

Unless otherwise approved, maintain a minimum safety clearance from the edge of the travelway for material stockpiled in proximity of traffic lanes based on the current average traffic count of the particular highway as follows:

0 - 1500 = 16 feet
Over 1500 = 30 feet

In the event the above requirements cannot be met, make arrangements to stockpile material off the right of way.

ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES

No significant traffic generator events identified.

ITEM 8: PROSECUTION AND PROGRESS

The latest work-start date is June 1, 2023.

Provide progress schedule as a Bar Chart.

ITEM 302: AGGREGATES FOR SURFACE TREATMENTS

Furnish Type PE aggregate consisting of crushed slag, crushed stone or natural limestone rock asphalt.

Furnish precoated aggregate that has a residual bitumen coating target value of 1.0% by weight.

ITEM 316: SEAL COAT

The asphalt application season for this project is May 1 to September 15.

Asphalt binders allowed for ASPH(TIER I) are AC-20XP or AC-20-5TR or SPG-79-13.
Asphalt binders allowed for ASPH(TIER II) are AC-20XP or SPG-79-13.

Project Number: **Sheet: 10**

County: GONZALES, ETC **Control: 0025-05-024, ETC**

Highway: UA 90, ETC

Remove daily excess aggregate in developed or curb and gutter sections with a pickup broom or other method as approved and dispose of at an approved site.

Calibrate spray bars in accordance with Test Method TEX-922-K, Part III, prior to beginning seal coat.

In addition to other asphalt distributor requirements, the asphalt distributor shall be capable of providing a transversely varied asphalt rate. The Contractor shall demonstrate that the distributor can apply an asphalt rate outside of the wheel path locations between 22 and 32 percent higher than the asphalt rate being applied in the wheelpaths for the nozzle arrangement determined by the Engineer. The Contractor's calibration of the distributor will include verification of this capability and a description of the spray bar(s) and nozzles being used. The percentage difference in asphalt rate provided by each tested spray bar shall be provided to the Engineer. The Engineer will select the pavements where the transversely varied asphalt rate is to be provided.

Seal additional roadway widened areas at bridges, curves, etc., shoulder tapers, mailbox turnouts, and historical markers. Payment for these quantities will be included with the appropriate items all as directed.

Use a patch truck and crew behind the aggregate spreader box as directed.

Use two paper widths covering a minimum of five feet at the beginning of each shot to construct a straight transverse joint and to prevent overlapping of the asphalt.

ITEM 502: BARRICADES, SIGNS, AND TRAFFIC HANDLING

The Contractor Force Account “Safety Contingency” that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor’s Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

Law enforcement assistance for this project will be required, as approved, for major traffic control changes and lane closures. Coordinate with local law enforcement and arrange for law enforcement in a marked vehicle as approved by the Engineer. Complete the daily tracking form provided by the department, including all signatures, and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided.

Provide trail and lead vehicles when using TCP(3-1), TCP(3-2) or TCP(3-3).

Utilize TCP(3-3) for sweeping operations or for installing and removing tabs or raised pavement markers.

Provide suitable warning lights mounted high enough to be visible from all directions on all construction equipment, including pilot vehicles, and operate warning lights when the equipment is within the right of way. Equip other equipment such as trucks, trailers, autos, etc., with emergency flashers and use emergency flashers while within the work area.

Barricades and warning signs are to remain in place until final markings are complete.

No additional payment will be made for relocating existing sign assemblies to temporary mounts.

Maintain a minimum distance of two (2) miles between work areas.

Limit lane closure lengths for seal coat operations to two (2) miles on two lane, two-way highways with ADT volumes greater than 1000, and three (3) miles on two lane, two-way highways with ADT volumes less than 1000, and on four lane highways. The lane closure length will be determined during construction in urban areas.

Signs warning of temporary conditions, such as “NO CENTER LINE,” “LOOSE GRAVEL,” etc., shall only be displayed when conditions are present. Remove or completely cover signs that do not apply to the roadway conditions. These signs may be installed prior to beginning work but shall remain completely covered until the signs are applicable.

In accordance with Article 502.4.2, no payment will be made for the month if the contractor fails to provide or properly maintain signs in compliance with the contract requirements. Temporary warning signs that are visible when conditions do not apply will be considered improper maintenance of signs.

ITEM 506: TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

The storm water pollution prevention plan (SW3P) for this project will consist of utilizing existing vegetation. The disturbed area is less than one acre and use of erosion control measures is not anticipated. If physical conditions encountered at the job site require necessary controls, BMP installation, maintenance, and removal will be paid as extra work on a force account basis per Articles 4.4 and 9.7.

ITEM 662: WORK ZONE PAVEMENT MARKINGS

T-Tabs will not be allowed on this project.

Project Number: **Sheet: 11**

County: GONZALES, ETC **Control: 0025-05-024, ETC**

Highway: UA 90, ETC

Remove the exposed portions of the temporary flexible reflective roadway marker tabs after raised pavement markers are installed. If the tabs are not in line with the markings, remove the tabs immediately after the centerline markings are installed.

ITEM 666: REFLECTORIZED PAVEMENT MARKINGS

Remove all applied markings that are not in alignment or sequence as stated in the plans using the Surface Treatment Method.

Provide Type I pavement markings in accordance with this item. The requirements of this item are supplemented with the following provision: Place Type I pavement markings with a ribbon-gun application. All other provisions remain in effect.

Retroreflectivity testing is required for all profile striping.

ITEM 668: PREFABRICATED PAVEMENT MARKINGS

Pavement marking material may be placed on roadways at any time during the year, subject to temperature and moisture limitations specified.

ITEM 6185: TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)

Shadow vehicle(s) with TMA are set up for stationary and/or mobile operations. The contractor will be responsible for determining if operations will be ongoing at the same time to determine the total number of TMAs needed for the project.

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0025-05-024

DISTRICT Yoakum

COUNTY Austin, Calhoun, Colorado, De Witt, Fayette, Gonzales, Jackson, Lavaca, Matagorda, Victoria, Wharton

HIGHWAY BU 59T, BU 77S, FM 102, FM 1094, FM 1095, FM 1115, FM 1301, FM 155, FM 1685, FM 1822, FM 2078, FM 2143, FM 2187, FM 234, FM 237, FM 2436, FM 2437, FM 2503, FM 2615, FM 2668, FM 2717, FM 2980, FM 3013, FM 3057, FM 3084, FM 3280, FM 3538, FM 448, FM 530, FM 616, FM 647, FM 77, FM 955, PR 11, SH 111, SH 36, SH 60, SH 71, SH 80, SS 159, SS 92, UA 77, UA 90, US 77, US 90

ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL
	316-6004	ASPH (TIER I)	GAL	1,257,277.000	
	316-6005	ASPH (TIER II)	GAL	746,328.000	
	316-6017	ASPH (AC-20-5TR)	GAL	736,288.000	
	316-6246	AGGR(TY-PE GR-3 SAC-B)	CY	43,752.000	
	316-6249	AGGR(TY-PE GR-4 SAC-B)	CY	11,465.000	
	500-6001	MOBILIZATION	LS	1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	5.000	
	662-6109	WK ZN PAV MRK SHT TERM (TAB)TY W	EA	3,666.000	
	662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	46,550.000	
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF	1,048.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	17,171.000	
	666-6170	REFL PAV MRK TY II (W) 4" (SLD)	LF	1,388,515.000	
	666-6205	REFL PAV MRK TY II (Y) 4" (BRK)	LF	178,673.000	
	666-6207	REFL PAV MRK TY II (Y) 4" (SLD)	LF	709,609.000	
	666-6300	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL)	LF	25,771.000	
	666-6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	1,649,435.000	
	666-6312	RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL)	LF	144,243.000	
	666-6315	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	LF	624,262.000	
	666-6342	REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)	LF	1,388,515.000	
	666-6344	REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)	LF	178,673.000	
	666-6345	REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)	LF	709,609.000	
	668-6074	PREFAB PAV MRK TY C (W) (12") (SLD)	LF	466.000	
	668-6075	PREFAB PAV MRK TY C (W) (18") (SLD)	LF	7,445.000	
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	6,998.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA	93.000	
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA	48.000	
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA	27.000	
	668-6091	PREFAB PAV MRK TY C (W) (18")(YLD TRI)	EA	14.000	
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA	17.000	
	668-6108	PREFAB PAV MRK TY C (Y) (24") (SLD)	LF	6,626.000	
	672-6007	REFL PAV MRKR TY I-C	EA	2,449.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	36,276.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	1.000	
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	120.000	
	6185-6002	TMA (STATIONARY)	DAY	25.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY	150.000	
	12	RAILROAD FLAGGING: RAILROAD FORCE ACCOUNT WORK (PARTICIPATING)	LS	18.000	
	18	EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0025-05-024

DISTRICT Yoakum

COUNTY Austin, Calhoun, Colorado, De Witt, Fayette, Gonzales, Jackson, Lavaca, Matagorda, Victoria, Wharton

HIGHWAY BU 59T, BU 77S, FM 102, FM 1094, FM 1095, FM 1115, FM 1301, FM 155, FM 1685, FM 1822, FM 2078, FM 2143, FM 2187, FM 234, FM 237, FM 2436, FM 2437, FM 2503, FM 2615, FM 2668, FM 2717, FM 2980, FM 3013, FM 3057, FM 3084, FM 3280, FM 3538, FM 448, FM 530, FM 616, FM 647, FM 77, FM 955, PR 11, SH 111, SH 36, SH 60, SH 71, SH 80, SS 159, SS 92, UA 77, UA 90, US 77, US 90

ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000	
		LAW ENFORCEMENT: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000	

P R O J E C T D A T A

CONTROL: 0025-05-024 HWY: UA 90
COUNTY : GONZALES TYPE: SEAL COAT
LENGTH : 32,790.00 FT = 6.210 MI PROJECT: #1
LIMITS : FROM SH 80 TRAFFIC: 3428 VPD
TO 0.25 MI E OF CR 143

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 327+90.00 (5)	32790.00	24	87440
		TOTAL TRAVEL LANE AREA	**87440**
(1) STA 0+00.00 TO STA 9+18.00	918.00	16	1632
STA 9+18.00 TO STA 11+18.00	200.00	16-4	222
STA 11+18.00 TO STA 12+28.00	110.00	4	49
STA 12+28.00 TO STA 14+48.00	220.00	4-16	244
STA 14+48.00 TO STA 108+31.00	9383.00	16	16681
STA 108+31.00 TO STA 110+11.00	180.00	16-4	200
STA 110+11.00 TO STA 111+11.00	100.00	4	44
STA 111+11.00 TO STA 112+91.00	180.00	4-16	200
STA 112+91.00 TO STA 239+22.00	12631.00	16	22455
STA 239+22.00 TO STA 240+72.00	150.00	16-4	167
STA 240+72.00 TO STA 242+74.00	202.00	4	90
STA 242+74.00 TO STA 244+54.00	180.00	4-16	200
STA 244+54.00 TO STA 317+39.00	7285.00	16	12951
STA 317+39.00 TO STA 318+89.00	150.00	16-4	167
STA 318+89.00 TO STA 319+89.00	100.00	4	44
STA 319+89.00 TO STA 321+69.00	180.00	4-16	200
STA 321+69.00 TO STA 327+90.00 (5)	621.00	16	1104
		TOTAL SHOULDER AREA	**56650**
INTERSECTIONS			
COUNTY ROADS (8 EA)	VAR	VAR	1620
		TOTAL INTERSECTION AREA	**1620**

Project Number: **Sheet** 13

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 90 PROJECT #1 CONT 0025-05-024 GONZALES CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 2.601 = TRM 540+0.527
(5) STA 327+90.00 = MP: 8.811 = TRM 546+0.761

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[UA 90 PROJECT #1 CONT 0025-05-024 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.46 GAL/SY	87440 SY	40222	GAL
	SHOULDERS	0.46 GAL/SY	56650 SY	26059	GAL
	INTERSECTIONS	0.46 GAL/SY	1620 SY	745	GAL
			TOTAL	**67026**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	87440 SY	795	CY
	SHOULDERS	1 CY/110 SY	56650 SY	515	CY
	INTERSECTIONS	1 CY/110 SY	1620 SY	15	CY
			TOTAL	**1325**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	32790 LF	820	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**830**	**EA**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**65580**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	15508 LF	3877	LF
	SINGLE NO PASS	10 LF/40 LF	14371 LF	3593	LF
			TOTAL	**7470**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		14371 LF	14371	LF
	DOUBLE NO PASS		2911 LF X 2	5822	LF
			TOTAL	**20193**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	RESTRICTED WIDTH BRIDGE CROSSHATCH		EST	**4542**	**LF**

Project Number: **Sheet** 14

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 90 PROJECT #1 CONT 0025-05-024 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"STOP"		EST	1	EA
	"AHEAD"		EST	1	EA
			TOTAL	**2**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	15508 LF	194	EA
	SINGLE NO PASS	1 EA/40 LF	14371 LF	359	EA
	DOUBLE NO PASS	1 EA/40 LF	2911 LF	73	EA
			TOTAL	**626**	**EA**
6001	**PORTABLE CHANGEABLE MESSAGE SIGN**		EST	**1**	**EA**
6185	**TMA (STATIONARY)**		EST	**25**	**DAY**
6185	**TMA (MOBILE OPERATION)**		EST	**150**	**DAY**

P R O J E C T D A T A

CONTROL: 0025-06-057 HWY: UA 90
COUNTY : GONZALES TYPE: SEAL COAT
LENGTH : 39,532.00 FT = 7.487 MI PROJECT: #2
LIMITS : FROM 0.25 MI EAST OF CR 143 TRAFFIC: 4929 VPD
TO GONZALES C-L

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 154+48.00	15448.00	24	41195
	STA 154+48.00 TO STA 158+08.00	360.00	24-50	1480
	STA 158+08.00 TO STA 166+13.00	805.00	50	4472
	STA 166+13.00 TO STA 171+25.00	512.00	50-24	2105
	STA 171+25.00 TO STA 395+32.00 (5)	22407.00	24	59752

		TOTAL TRAVEL LANE AREA		**109004**

(1)	STA 0+00.00 TO STA 59+80.00	5980.00	20	13289
	STA 59+80.00 TO STA 62+20.00	240.00	20-14	453
	STA 62+20.00 TO STA 63+00.00	80.00	14	124
	STA 63+00.00 TO STA 65+40.00	240.00	14-20	453
	STA 65+40.00 TO STA 154+48.00	8908.00	20	19796
	STA 154+48.00 TO STA 158+08.00	360.00	20-0	400
	STA 166+13.00 TO STA 171+25.00	512.00	0-20	569
	STA 171+25.00 TO STA 395+32.00 (5)	22407.00	20	49793

		TOTAL SHOULDER AREA		**84877**

ADDITIONAL AREA			
HISTORICAL MARKER	104.00	10	116

	TOTAL ADDITIONAL AREA		**116**

INTERSECTIONS			
COUNTY ROADS (2 EA)	VAR	VAR	408

	TOTAL INTERSECTION AREA		**408**

Project Number: **Sheet** 15

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 90 PROJECT #2 CONT 0025-06-057 GONZALES CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 8.973 = TRM 546+0.761
(5) STA 395+32.00 = MP: 16.460 = TRM 554+0.270

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[UA 90 PROJECT #2 CONT 0025-06-057 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	STA 0+00.00 TO STA 158+08.00				
	TRAVEL LANES	0.46 GAL/SY	42675 SY		19631 GAL
	SHOULDERS	0.50 GAL/SY	34515 SY		17258 GAL
	STA 158+08.00 TO STA 395+32.00				
	TRAVEL LANES	0.28 GAL/SY	66329 SY		18572 GAL
	SHOULDERS	0.30 GAL/SY	50362 SY		15109 GAL
	ADDITIONAL AREA	0.30 GAL/SY	116 SY		35 GAL
	INTERSECTIONS	0.30 GAL/SY	408 SY		122 GAL
				TOTAL	**70727 GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	STA 0+00.00 TO STA 158+08.00				
	TRAVEL LANES	1 CY/110 SY	42675 SY		388 CY
	SHOULDERS	1 CY/110 SY	34515 SY		314 CY
				TOTAL	**702 CY**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	STA 158+08.00 TO STA 395+32.00				
	TRAVEL LANES	1 CY/145 SY	66329 SY		457 CY
	SHOULDERS	1 CY/145 SY	50362 SY		347 CY
	ADDITIONAL AREA	1 CY/145 SY	116 SY		1 CY
	INTERSECTIONS	1 CY/145 SY	408 SY		3 CY
				TOTAL	**808 CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	570 LF		29 EA
	LANE LINE	1 EA/40 LF	283 LF		7 EA
				TOTAL	**36 EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	38393 LF		960 EA
	GORE	2 EA/20 LF	2278 LF X 2		456 EA
	BEGIN/END NO PASSING		EST		10 EA
				TOTAL	**1426 EA**

Project Number: **Sheet** 16

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 90 PROJECT #2 CONT 0025-06-057 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST		**570 LF**
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	283 LF		**71 LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST		**79064 LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	8977 LF		2244 LF
	SINGLE NO PASS	10 LF/40 LF	13246 LF		3312 LF
				TOTAL	**5556 LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		13246 LF		13246 LF
	DOUBLE NO PASS		13578 LF X 2		27156 LF
	GORE		2278 LF X 4		9112 LF
				TOTAL	**49514 LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	RESTRICTED WIDTH BRIDGE CROSSHATCH		EST		**1109 LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	570 LF		29 EA
	LANE LINE	1 EA/80 LF	283 LF		4 EA
				TOTAL	**33 EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	8977 LF		112 EA
	SINGLE NO PASS	1 EA/40 LF	13246 LF		331 EA
	DOUBLE NO PASS	1 EA/40 LF	13578 LF		339 EA
	GORE	2 EA/20 LF	2278 LF X 2		456 EA
				TOTAL	**1238 EA**

P R O J E C T D A T A

CONTROL: 0287-03-037 HWY: SH 80
COUNTY : GONZALES TYPE: SEAL COAT
LENGTH : 37,388.00 FT = 7.081 MI PROJECT: #3
LIMITS : FROM US 90A TRAFFIC: 2453 VPD
TO 0.155 MI S OF CR 104

LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 7+82.00	(3)	782.00	26	2259
(3) STA 50+82.00 TO STA 114+33.00		6351.00	26	18347
STA 114+33.00 TO STA 412+63.00		29830.00	32	106062
STA 412+63.00 TO STA 416+88.00	(5)	425.00	24	1133

		TOTAL TRAVEL LANE AREA		**127801**

(1) STA 0+00.00 TO STA 7+82.00	(3)	782.00	22	1912
(3) STA 50+82.00 TO STA 114+33.00		6351.00	22	15525
STA 412+63.00 TO STA 416+88.00	(5)	425.00	16	756

		TOTAL SHOULDER AREA		**18193**

INTERSECTIONS			
COUNTY ROADS (6 EA)	VAR	VAR	798
FM 466 (2 EA)	VAR	VAR	340

	TOTAL INTERSECTION AREA		**1138**

Project Number: **Sheet** 17

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 80 PROJECT #3 CONT 0287-03-037 GONZALES CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 6.066 = TRM 500+1.995
(5) STA 416+88.00 = MP: 13.961 = TRM 508+1.907

(2) NO EQUATIONS
(3) EXCEPTION: STA 7+82.00 TO STA 50+82.00 = -4300.00 LF = -0.814 MI
(GUADALUPE RIVER BRIDGE REPLACEMENT PROJECT)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[SH 80 PROJECT #3 CONT 0287-03-037 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	STA 0+00.00 TO STA 114+33.00				
	TRAVEL LANES	0.48 GAL/SY	20606 SY	9891	GAL
	SHOULDERS	0.50 GAL/SY	17437 SY	8719	GAL
	STA 114+33.00 TO STA 416+88.00				
	TRAVEL LANES	0.28 GAL/SY	107195 SY	30015	GAL
	SHOULDERS	0.28 GAL/SY	756 SY	212	GAL
	INTERSECTIONS	0.28 GAL/SY	1138 SY	319	GAL
			TOTAL	**49156**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	STA 0+00.00 TO STA 114+33.00				
	TRAVEL LANES	1 CY/110 SY	20606 SY	187	CY
	SHOULDERS	1 CY/110 SY	17437 SY	159	CY
			TOTAL	**346**	**CY**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	STA 114+33.00 TO STA 416+88.00				
	TRAVEL LANES	1 CY/145 SY	107195 SY	739	CY
	SHOULDERS	1 CY/145 SY	756 SY	5	CY
	INTERSECTIONS	1 CY/145 SY	1138 SY	8	CY
			TOTAL	**752**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	244 LF	**12**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	37388 LF	935	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**945**	**EA**
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	**244**	**LF**

Project Number: **Sheet** 18

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 80 PROJECT #3 CONT 0287-03-037 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**60510**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**14266**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	5261 LF	1315	LF
	SINGLE NO PASS	10 LF/40 LF	17991 LF	4498	LF
			TOTAL	**5813**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		17991 LF	17991	LF
	DOUBLE NO PASS		13902 LF X 2	27804	LF
			TOTAL	**45795**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**60510**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**26**	**LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	244 LF	**12**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	5261 LF	66	EA
	SINGLE NO PASS	1 EA/40 LF	17991 LF	450	EA
	DOUBLE NO PASS	1 EA/40 LF	13902 LF	348	EA
			TOTAL	**864**	**EA**

P R O J E C T D A T A

CONTROL: 0287-04-039 HWY: SH 80
COUNTY : GONZALES TYPE: SEAL COAT
LENGTH : 23,814.00 FT = 4.510 MI PROJECT: #4
LIMITS : FROM 0.155 MI S OF CR 104 TRAFFIC: 1883 VPD
TO 2.1 MI N OF SH 97

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 2+80.00	280.00	40	1244
	STA 2+80.00 TO STA 49+65.00	4685.00	32	16658
	STA 49+65.00 TO STA 53+00.00	335.00	38	1414
	STA 53+00.00 TO STA 118+24.00	6524.00	32	23196
	STA 118+24.00 TO STA 127+31.00	907.00	40	4031
	STA 127+31.00 TO STA 184+37.00	5706.00	32	20288
	STA 184+37.00 TO STA 191+50.00	713.00	40	3169
	STA 191+50.00 TO STA 238+14.00 (5)	4664.00	32	16583

		TOTAL TRAVEL LANE AREA		**86583**

ADDITIONAL AREA

	133.00	14	207

	TOTAL ADDITIONAL AREA		**207**

INTERSECTIONS

COUNTY ROADS (6 EA)	VAR	VAR	675
FM 1682 (1 EA)	VAR	VAR	145

	TOTAL INTERSECTION AREA		**820**

Project Number: **Sheet** 19

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 80 PROJECT #4 CONT 0287-04-039 GONZALES CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 13.680 = TRM 508+1.907
(5) STA 238+14.00 = MP: 18.190 = TRM 514+0.465

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[SH 80 PROJECT #4 CONT 0287-04-039 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.28 GAL/SY	86583 SY	24243	GAL
	ADDITIONAL AREA	0.28 GAL/SY	207 SY	58	GAL
	INTERSECTIONS	0.28 GAL/SY	820 SY	230	GAL
			TOTAL	**24531**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	86583 SY	597	CY
	ADDITONAL AREA	1 CY/145 SY	207 SY	1	CY
	INTERSECTIONS	1 CY/145 SY	820 SY	6	CY
			TOTAL	**604**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	23814 LF	595	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**605**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**47628**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	8759 LF	2190	LF
	SINGLE NO PASS	10 LF/40 LF	12202 LF	3051	LF
			TOTAL	**5241**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		12202 LF	12202	LF
	DOUBLE NO PASS		2603 LF X 2	5206	LF
			TOTAL	**17408**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**47628**	**LF**

Project Number: **Sheet** 20

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 80 PROJECT #4 CONT 0287-04-039 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	8759 LF	109	EA
	SINGLE NO PASS	1 EA/40 LF	12202 LF	305	EA
	DOUBLE NO PASS	1 EA/40 LF	2603 LF	65	EA
			TOTAL	**479**	**EA**

P R O J E C T D A T A

CONTROL: 0584-01-002 HWY: PR 11
COUNTY : GONZALES TYPE: SEAL COAT
LENGTH : 10,373.00 FT = 1.964 MI PROJECT: #5
LIMITS : FROM US 183 TRAFFIC: 471 VPD
TO FM 1586

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 103+73.00 (5)	10373.00	23	26509

	TOTAL TRAVEL LANE AREA		**26509**

ADDITIONAL AREA

OVERLOOK	240.00	12	320

	TOTAL ADDITIONAL AREA		**320**

Project Number: **Sheet** 21

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[PR 11 PROJECT #5 CONT 0584-01-002 GONZALES CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.014 = TRM 084-0.033
(5) STA 103+73.00 = MP: 1.978 = TRM 084+1.931

(2) NO EQUATIONS
(3) NO EXCEPTION
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[PR 11 PROJECT #5 CONT 0584-01-002 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.28 GAL/SY	26509 SY	7423	GAL
	ADDITIONAL AREA	0.28 GAL/SY	320 SY	90	GAL
			TOTAL	**7513**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	26509 SY	183	CY
	ADDITIONAL AREA	1 CY/145 SY	320 SY	2	CY
			TOTAL	**185**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	10373 LF	259	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**269**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	220 LF	55	LF
	SINGLE NO PASS	10 LF/40 LF	1230 LF	308	LF
			TOTAL	**363**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		1230 LF	1230	LF
	DOUBLE NO PASS		8923 LF X 2	17846	LF
			TOTAL	**19076**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	220 LF	55	LF
	SINGLE NO PASS	10 LF/40 LF	1230 LF	308	LF
			TOTAL	**363**	**LF**

Project Number: **Sheet** 22

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[PR 11 PROJECT #5 CONT 0584-01-002 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		1230 LF	1230	LF
	DOUBLE NO PASS		8923 LF X 2	17846	LF
			TOTAL	**19076**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	220 LF	3	EA
	SINGLE NO PASS	1 EA/40 LF	1230 LF	31	EA
	DOUBLE NO PASS	1 EA/40 LF	8923 LF	223	EA
			TOTAL	**257**	**EA**

P R O J E C T D A T A

CONTROL: 0687-01-015 HWY: FM 77
COUNTY : GONZALES TYPE: SEAL COAT
LENGTH : 44,448.00 FT = 8.418 MI PROJECT: #6
LIMITS : FROM US 87 TRAFFIC: 193 VPD
TO FM 108

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 444+48.00 (5)	44448.00	26	128405

	TOTAL TRAVEL LANE AREA		**128405**

INTERSECTIONS

COUNTY ROADS (6 EA)	VAR	VAR	1585

	TOTAL INTERSECTION AREA		**1585**

Project Number: **Sheet** 23

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 77 PROJECT #6 CONT 0687-01-015 GONZALES CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.015 = TRM 538-0.030
(5) STA 444+48.00 = MP: 8.433 = TRM 546+0.439

(2) NO EQUATIONS
(3) NO EXCEPTION
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 77 PROJECT #6 CONT 0687-01-015 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	128405 SY	61634	GAL
	INTERSECTIONS	0.48 GAL/SY	1585 SY	761	GAL
			TOTAL	**62395**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	128405 SY	1167	CY
	INTERSECTIONS	1 CY/110 SY	1585 SY	14	CY
			TOTAL	**1181**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	44448 LF	1111	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1121**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	4731 LF	1183	LF
	SINGLE NO PASS	10 LF/40 LF	11837 LF	2959	LF
			TOTAL	**4142**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		11837 LF	11837	LF
	DOUBLE NO PASS		27508 LF X 2	55016	LF
			TOTAL	**66853**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**88896**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	4731 LF	1183	LF
	SINGLE NO PASS	10 LF/40 LF	11837 LF	2959	LF
			TOTAL	**4142**	**LF**

Project Number: **Sheet** 24

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 77 PROJECT #6 CONT 0687-01-015 GONZALES CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		11837 LF	11837	LF
	DOUBLE NO PASS		27508 LF X 2	55016	LF
			TOTAL	**66853**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	4731 LF	59	EA
	SINGLE NO PASS	1 EA/40 LF	11837 LF	296	EA
	DOUBLE NO PASS	1 EA/40 LF	27508 LF	688	EA
			TOTAL	**1043**	**EA**

P R O J E C T D A T A

CONTROL: 0211-09-035 HWY: FM 155
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 75,745.00 FT = 14.345 MI PROJECT: #7
LIMITS : FROM US 77 TRAFFIC: 2115 VPD
TO COLORADO C/L

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 50+20.00	5020.00	27	15060
	STA 50+20.00 TO STA 55+25.00	505.00	34	1908
	STA 55+25.00 TO STA 93+31.00	3806.00	28	11841
	STA 93+31.00 TO STA 123+79.00	3048.00	36	12192
	STA 123+79.00 TO STA 320+27.00	19648.00	26	56761
	STA 320+27.00 TO STA 326+77.00 (3)	650.00	23	1661
(3)	STA 328+42.00 TO STA 334+33.00	591.00	23	1510
	STA 334+33.00 TO STA 495+78.00	16145.00	27	48435
	STA 495+78.00 TO STA 499+33.00	355.00	55	2169
	STA 499+33.00 TO STA 542+70.00	4337.00	27	13011
	STA 542+70.00 TO STA 548+38.00	568.00	40	2524
	STA 548+38.00 TO STA 759+10.00 (5)	21072.00	27	63216

		TOTAL TRAVEL LANE AREA		**230288**

	STA 320+27.00 TO STA 326+77.00 (3)	650.00	16	1156
(3)	STA 328+42.00 TO STA 334+33.00	591.00	16	1051

		TOTAL SHOULDER AREA		**2207**

INTERSECTIONS			
US 77	VAR	VAR	112
FM 3233	VAR	VAR	174
COUNTY ROADS (18 EA)	VAR	VAR	2796

	TOTAL INTERSECTION AREA		**3082**

Project Number: **Sheet** 25

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 155 PROJECT #7 CONT 0211-09-035 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.009 = TRM 466-0.035
(5) STA 759+10.00 = MP: 15.385 = TRM 482+0.019

(2) NO EQUATIONS
(3) EXCEPTION: STA 326+77.00 TO STA 328+42.00 = -165.00 FT. = -0.031 MI.
(WILLIAMS CREEK BRIDGE)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 155 PROJECT #7 CONT 0211-09-035 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAFFIC LANES	0.48 GAL/SY	230288 SY	110538	GAL
	SHOULDERS	0.48 GAL/SY	2207 SY	1059	GAL
	INTERSECTIONS	0.48 GAL/SY	3082 SY	1479	GAL
			TOTAL	**113076**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAFFIC LANES	1 CY/110 SY	230288 SY	2094	CY
	SHOULDERS	1 CY/110 SY	2207 SY	20	CY
	INTERSECTIONS	1 CY/110 SY	3082 SY	28	CY
			TOTAL	**2142**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	75745 LF	1894	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1904**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**151490**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	22148 LF	5537	LF
	SINGLE NO PASS	10 LF/40 LF	24317 LF	6079	LF
			TOTAL	**11616**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		24317 LF	24317	LF
	DOUBLE NO PASS		29167 LF X 2	58334	LF
			TOTAL	**82651**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**151490**	**LF**

Project Number: **Sheet** 26

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 155 PROJECT #7 CONT 0211-09-035 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	22148 LF	5537	LF
	SINGLE NO PASS	10 LF/40 LF	24317 LF	6079	LF
			TOTAL	**11616**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		24317 LF	24317	LF
	DOUBLE NO PASS		29167 LF X 2	58334	LF
			TOTAL	**82651**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**30**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	22148 LF	277	EA
	SINGLE NO PASS	1 EA/40 LF	24317 LF	608	EA
	DOUBLE NO PASS	1 EA/40 LF	29167 LF	729	EA
			TOTAL	**1614**	**EA**

P R O J E C T D A T A

CONTROL: 0268-01-058 HWY: US 77
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 17,480.00 FT = 3.310 MI PROJECT: #8
LIMITS : FROM 1.50 MI SOUTH OF FM 155 TRAFFIC: 6193 VPD
TO 0.60 MI SOUTH FM 2436

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 56+80.00	5680.00	24	15147
	STA 56+80.00 TO STA 60+40.00	360.00	24-36	1200
	STA 60+40.00 TO STA 75+85.00	1545.00	36	6180
	STA 75+85.00 TO STA 81+45.00	560.00	36-24	1867
	STA 81+45.00 TO STA 137+84.00	5639.00	24	15037
	STA 137+84.00 TO STA 142+06.00	422.00	24-36	1407
	STA 142+06.00 TO STA 143+15.00	109.00	36-48	509
	STA 143+15.00 TO STA 150+65.00	750.00	48	4000
	STA 150+65.00 TO STA 158+22.00	757.00	48-38	3617
	STA 158+22.00 TO STA 168+13.00	991.00	38	4184
	STA 168+13.00 TO STA 174+80.00 (5)	667.00	24	1779

		TOTAL TRAVEL LANE AREA		**54927**

(1)	STA 0+00.00 TO STA 69+50.00	6950.00	12	9267
	STA 69+50.00 TO STA 81+45.00	1195.00	16	2124
	STA 81+45.00 TO STA 83+14.00	169.00	14	263
	STA 83+14.00 TO STA 133+34.00	5020.00	12	6693
	STA 133+34.00 TO STA 137+84.00	450.00	15	750
	STA 137+84.00 TO STA 142+06.00	422.00	24-28	1219
	STA 142+06.00 TO STA 143+15.00	109.00	28-20	291
	STA 143+15.00 TO STA 168+13.00	2498.00	20	5551
	STA 168+13.00 TO STA 174+80.00 (5)	667.00	32	2372

		TOTAL SHOULDER AREA		**28530**

ADDITIONAL AREA			
HISTORICAL MARKER	VAR	VAR	1044
ROADSIDE PARK	VAR	VAR	1844

	TOTAL ADDITIONAL AREA		**2888**

INTERSECTIONS			
COUNTY ROADS (4 EA)	VAR	VAR	300

	TOTAL INTERSECTION AREA		**300**

Project Number: **Sheet** 27

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 77 PROJECT #8 CONT 0268-01-058 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 15.963 = TRM 498+1.954
(5) STA 174+80.00 = MP: 19.273 = TRM 502+1.249

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[US 77 PROJECT #8 CONT 0268-01-058 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.48 GAL/SY	54927 SY	26365	GAL
	SHOULDERS	0.50 GAL/SY	28530 SY	14265	GAL
	ADDITIONAL AREA	0.50 GAL/SY	2888 SY	1444	GAL
	INTERSECTIONS	0.50 GAL/SY	300 SY	150	GAL
			TOTAL	**42224**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	54927 SY	499	CY
	SHOULDERS	1 CY/110 SY	28530 SY	259	CY
	ADDITIONAL AREA	1 CY/110 SY	2888 SY	26	CY
	INTERSECTIONS	1 CY/110 SY	300 SY	3	CY
			TOTAL	**787**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	3300 LF	165	EA
	LANE LINE	1 EA/40 LF	842 LF	21	EA
			TOTAL	**186**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	15132 LF	378	EA
	GORE	2 EA/20 LF	2348 LF X 2	470	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**858**	**EA**
666	**REFL PAV MRK TY I(W)8"(DOT)(100MIL)**				
	TURN LANE	3 LF/12 LF	873 LF	**218**	**LF**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**2427**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	842 LF	**211**	**LF**

Project Number: **Sheet** 28

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 77 PROJECT #8 CONT 0268-01-058 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**34960**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	386 LF	97	LF
	SINGLE NO PASS	10 LF/40 LF	7184 LF	1796	LF
			TOTAL	**1893**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		7184 LF	7184	LF
	DOUBLE NO PASS		7832 LF X 2	15664	LF
	GORE		2348 LF X 4	9392	LF
			TOTAL	**32240**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	**6**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**6**	**EA**
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**881**	**LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	3300 LF	165	EA
	LANE LINE	1 EA/80 LF	842 LF	11	EA
			TOTAL	**176**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	386 LF	5	EA
	SINGLE NO PASS	1 EA/40 LF	7184 LF	180	EA
	DOUBLE NO PASS	1 EA/40 LF	7832 LF	196	EA
	GORE	2 EA/20 LF	2348 LF X 2	470	EA
			TOTAL	**851**	**EA**

P R O J E C T D A T A

CONTROL: 0268-02-037 HWY: US 77
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 47,637.00 FT = 9.022 MI PROJECT: #9
LIMITS : FROM 0.6 MI S OF FM 2436 TRAFFIC: 5866 VPD
TO SCHULENBURG C-L

	LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 93+63.00		9363.00	24	24968
	STA 93+63.00 TO STA 97+02.00		339.00	24-38	1168
	STA 97+02.00 TO STA 99+37.00		235.00	38-40	1018
	STA 99+37.00 TO STA 114+09.00		1472.00	40-36	6215
	STA 114+09.00 TO STA 117+26.00		317.00	36-35	1250
	STA 117+26.00 TO STA 119+72.00		246.00	35-24	806
	STA 119+72.00 TO STA 135+81.00		1609.00	24	4291
	STA 135+81.00 TO STA 139+52.00		371.00	24-36	1237
	STA 139+52.00 TO STA 148+60.00		908.00	36-37	3682
	STA 148+60.00 TO STA 153+53.00		493.00	37-36	1999
	STA 153+53.00 TO STA 231+28.00		7775.00	36	31100
	STA 231+28.00 TO STA 246+23.00		1495.00	36-24	4983
	STA 246+23.00 TO STA 260+00.00		1377.00	24	3672
	STA 260+00.00 TO STA 262+21.00		221.00	24-36	737
	STA 262+21.00 TO STA 269+80.00		759.00	36	3036
	STA 269+80.00 TO STA 275+17.00		537.00	36-24	1790
	STA 275+17.00 TO STA 282+77.00		760.00	24	2027
	STA 282+77.00 T0 STA 298+32.00		1555.00	24-36	5183
	STA 298+32.00 TO STA 476+37.00	(5)	17805.00	36	71220

	TOTAL TRAVEL LANE AREA				**170382**

(1)	STA 0+00.00 TO STA 93+63.00		9363.00	23	23928
	STA 93+63.00 TO STA 135+81.00		4218.00	21	9842
	STA 135+81.00 TO STA 139+52.00		371.00	24	989
	STA 139+52.00 TO STA 153+53.00		1401.00	20	3113
	STA 153+53.00 TO STA 169+62.00		1609.00	18	3218
	STA 169+62.00 TO STA 212+05.00		4243.00	14	6600
	STA 212+05.00 TO STA 231+28.00		1923.00	16	3419
	STA 231+28.00 TO STA 246+23.00		1495.00	14	2326
	STA 246+23.00 TO STA 260+00.00		1377.00	22	3366
	STA 260+00.00 TO STA 262+21.00		221.00	23	565
	STA 262+21.00 TO STA 269+80.00		759.00	22	1855
	STA 269+80.00 TO STA 282+77.00		1297.00	23	3315
	STA 282+77.00 TO STA 298+32.00		1555.00	22	3801
	STA 298+32.00 TO STA 321+84.00		2352.00	24	6272
	STA 321+84.00 TO STA 396+54.00		7470.00	20	16600
	STA 396+54.00 TO STA 476+37.00	(5)	7983.00	22	19514

	TOTAL SHOULDER AREA				**108723**

Project Number: **Sheet** 29

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 77 PROJECT #9 CONT 0268-02-037 FAYETTE CO. CONT'D]---

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
ADDITIONAL AREA				
	AT SWISS ALP	174.00	30	580

		TOTAL ADDITIONAL AREA		**580**

INTERSECTIONS				
	FM 3171	VAR	VAR	83
	FM 1383	VAR	VAR	110
	FM 956	VAR	VAR	115
	FM 615	VAR	VAR	107
	COUNTY ROADS (12 EA)	VAR	VAR	1093

		TOTAL INTERSECTION AREA		**1508**

(1) STA 0+00.00 = MP: 19.685 = TRM 502+1.249
(5) STA 476+37.00 = MP: 28.707 = TRM 512+0.270

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[US 77 PROJECT #9 CONT 0268-02-037 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.48 GAL/SY	170382 SY	81783 GAL	
	SHOULDERS	0.50 GAL/SY	108723 SY	54362 GAL	
	ADDITIONAL AREA	0.50 GAL/SY	580 SY	290 GAL	
	INTERSECTIONS	0.50 GAL/SY	1508 SY	754 GAL	
			TOTAL	**137189 GAL**	
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	170382 SY	1549 CY	
	SHOULDERS	1 CY/110 SY	108723 SY	988 CY	
	ADDITIONAL AREA	1 CY/110 SY	580 SY	5 CY	
	INTERSECTIONS	1 CY/110 SY	1508 SY	14 CY	
			TOTAL	**2556 CY**	
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	LANE LINE	1 EA/40 LF	23469 LF	587 EA	
	TURN LANE	1 EA/20 LF	4857 LF	243 EA	
			TOTAL	**830 EA**	
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	45088 LF	1127 EA	
	GORE	2 EA/20 LF	2549 LF X 2	510 EA	
	BEGIN/END NO PASSING		EST	10 EA	
			TOTAL	**1647 EA**	
666	**REFL PAV MRK TY I(W)8"(DOT)(100MIL)**				
	TURN LANE	3 LF/12 LF	2165 LF	**541 LF**	
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**2692 LF**	
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	23469 LF	**5867 LF**	

Project Number: **Sheet** 30

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 77 PROJECT #9 CONT 0268-02-037 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**91285 LF**	
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	573 LF	143 LF	
	SINGLE NO PASS	10 LF/40 LF	5807 LF	1452 LF	
			TOTAL	**1595 LF**	
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		5807 LF	5807 LF	
	DOUBLE NO PASS		37641 LF X 2	75282 LF	
	GORE		2549 LF X 4	10196 LF	
			TOTAL	**91285 LF**	
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**40 LF**	
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	**10 EA**	
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**10 EA**	
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**1442 LF**	
672	**REFL PAV MRKR TY I-C**				
	LANE LINE	1 EA/80 LF	23469 LF	293 EA	
	TURN LANE	1 EA/20 LF	4857 LF	243 EA	
			TOTAL	**536 EA**	

---[US 77 PROJECT #9 CONT 0268-02-037 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	573 LF	7	EA
	SINGLE NO PASS	1 EA/40 LF	5807 LF	145	EA
	DOUBLE NO PASS	1 EA/40 LF	37641 LF	941	EA
	GORE	2 EA/20 LF	2549 LF X 2	510	EA
			TOTAL	**1603**	**EA**

Project Number: **Sheet** 31

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0334-07-007 HWY: FM 448
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 18,021.00 FT = 3.413 MI PROJECT: #10
LIMITS : FROM LEE C/L TRAFFIC: 446 VPD
TO FM 153

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 179+21.00	17921.00	24-27	50776
STA 179+21.00 TO STA 180+21.00 (5)	100.00	27-31	322

	TOTAL TRAVEL LANE AREA		**51098**

INTERSECTIONS

CITY STREETS (4 EA)	VAR	VAR	302

	TOTAL INTERSECTION AREA		**302**

Project Number: **Sheet** 32

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 448 PROJECT #10 CONT 0334-07-007 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 454+0.091
(5) STA 180+21.00 = MP: 3.413 = TRM 456+1.507

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	51098 SY	25549	GAL
	INTERSECTIONS	0.50 GAL/SY	302 SY	151	GAL
			TOTAL	**25700**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	51098 SY	465	CY
	INTERSECTIONS	1 CY/110 SY	302 SY	3	CY
			TOTAL	**468**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	18021 LF	451	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**461**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**36042**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	7600 LF	1900	LF
	SINGLE NO PASS	10 LF/40 LF	4608 LF	1152	LF
			TOTAL	**3052**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		4608 LF	4608	LF
	DOUBLE NO PASS		5813 LF X 2	11626	LF
			TOTAL	**16234**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**36042**	**LF**

Project Number: **Sheet** 33

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 448 PROJECT #10 CONT 0334-07-007 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	7600 LF	1900	LF
	SINGLE NO PASS	10 LF/40 LF	4608 LF	1152	LF
			TOTAL	**3052**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		4608 LF	4608	LF
	DOUBLE NO PASS		5813 LF X 2	11626	LF
			TOTAL	**16234**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**12**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	7600 LF	95	EA
	SINGLE NO PASS	1 EA/40 LF	4608 LF	115	EA
	DOUBLE NO PASS	1 EA/40 LF	5813 LF	145	EA
			TOTAL	**355**	**EA**

P R O J E C T D A T A

CONTROL: 0416-01-002 HWY: SS 92
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 1,639.00 FT = 0.310 MI PROJECT: #11
LIMITS : FROM US 77 TRAFFIC: 871 VPD
TO END OF MAINTENANCE

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 3+28.00	328.00	38	1385
	STA 3+28.00 TO STA 14+87.00	1159.00	28	3606
	STA 14+87.00 TO STA 15+92.00	105.00	60	700
	STA 15+92.00 TO STA 16+39.00 (5)	47.00	28	146

		TOTAL TRAVEL LANE AREA		**5837**

INTERSECTIONS

	CITY STREETS (4 EA)	VAR	VAR	173

		TOTAL INTERSECTION AREA		**173**

Project Number: **Sheet** 34

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SS 92 PROJECT #11 CONT 0416-01-002 FAYETTE CO. CONT'D]---

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.023 = TRM 588-0.285
(5) STA 16+39.00 = MP: 0.333 = TRM 588+0.025

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
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PROFESSIONAL ENGINEER

---[SS 92 PROJECT #11 CONT 0416-01-002 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	5837 SY	2802	GAL
	INTERSECTIONS	0.48 GAL/SY	173 SY	83	GAL
			TOTAL	**2885**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	5837 SY	53	CY
	INTERSECTIONS	1 CY/110 SY	173 SY	2	CY
			TOTAL	**55**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	1639 LF	**41**	**EA**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**3278**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	DOUBLE NO PASS		1639 LF X 2	**3278**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	DOUBLE NO PASS	1 EA/40 LF	1639 LF	**41**	**EA**

Project Number: **Sheet** 35

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 1262-01-017 HWY: FM 1115
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 35,250.00 FT = 6.676 MI PROJECT: #12
LIMITS : FROM SH 95 TRAFFIC: 487 VPD
TO GONZALES C/L

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 264+16.00	26416.00	27	79248
STA 264+16.00 TO STA 268+06.00	390.00	24	1040
STA 268+06.00 TO STA 347+69.00	7963.00	28	24774
STA 347+69.00 TO STA 352+50.00 (5)	481.00	29	1550

	TOTAL TRAVEL LANE AREA		**106612**
ADDITIONAL AREA			
@ MAILBOX TURNOUTS	VAR	VAR	993

	TOTAL ADDITIONAL AREA		**993**
INTERSECTIONS			
SH 95	VAR	VAR	466
FM 2762	VAR	VAR	242
COUNTY ROADS (7 EA)	VAR	VAR	756

	TOTAL INTERSECTION AREA		**1464**

Project Number: **Sheet** 36

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1115 PROJECT #12 CONT 1262-01-017 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 9.960 = TRM 470-0.008
(5) STA 352+50.00 = MP: 16.636 = TRM 478+0.005

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 1115 PROJECT #12 CONT 1262-01-017 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.46 GAL/SY	106612 SY	49042	GAL
	ADDITIONAL AREA	0.46 GAL/SY	993 SY	457	GAL
	INTERSECTIONS	0.46 GAL/SY	1464 SY	673	GAL
			TOTAL	**50172**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	106612 SY	969	CY
	ADDITIONAL AREA	1 CY/110 SY	993 SY	9	CY
	INTERSECTIONS	1 CY/110 SY	1464 SY	13	CY
			TOTAL	**991**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	35250 LF	881	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**891**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**70500**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	6324 LF	1581	LF
	SINGLE NO PASS	10 LF/40 LF	16786 LF	4197	LF
			TOTAL	**5778**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		16786 LF	16786	LF
	DOUBLE NO PASS		11794 LF X 2	23588	LF
			TOTAL	**40374**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**70500**	**LF**

Project Number: **Sheet** 37

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1115 PROJECT #12 CONT 1262-01-017 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	6324 LF	1581	LF
	SINGLE NO PASS	10 LF/40 LF	16786 LF	4197	LF
			TOTAL	**5778**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		16786 LF	16786	LF
	DOUBLE NO PASS		11794 LF X 2	23588	LF
			TOTAL	**40374**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**28**	**LF**
668	**PREFAB PAV MRK TY C(W)(36")(YLD TRI)**		EST	**5**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	6324 LF	79	EA
	SINGLE NO PASS	1 EA/40 LF	16786 LF	420	EA
	DOUBLE NO PASS	1 EA/40 LF	11794 LF	295	EA
			TOTAL	**794**	**EA**

P R O J E C T D A T A

CONTROL: 1264-01-016 HWY: FM 955
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 24,598.00 FT = 4.658 MI PROJECT: #13
LIMITS : FROM SH 159 TRAFFIC: 1884 VPD
TO SH 71

	LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 0+92.00		92.00	30	307
	STA 0+92.00 TO STA 1+60.00		68.00	28	212
	STA 1+60.00 TO STA 4+30.00	(3)	270.00	27	810
(3)	STA 4+42.00 TO STA 171+08.00		16666.00	26	48146
	STA 171+08.00 TO STA 177+61.00		653.00	30	2177
	STA 177+61.00 TO STA 187+00.00		939.00	27	2817
	STA 187+00.00 TO STA 194+55.00		755.00	30	2517
	STA 194+55.00 TO STA 246+10.00	(5)	5155.00	27	15465

		TOTAL TRAVEL LANE AREA			**72451**

ADDITIONAL AREA

HISTORICAL MARKER	VAR	VAR	171	

	TOTAL ADDITIONAL AREA		**171**	

INTERSECTIONS

COUNTY ROADS & CITY STREETS (7 EA)	VAR	VAR	747	

	TOTAL INTERSECTION AREA		**747**	

Project Number: **Sheet** 38

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 955 PROJECT #13 CONT 1264-01-016 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 464-0.024
(5) STA 246+10.00 = MP: 4.660 = TRM 468+0.663

(2) NO EQUATIONS
(3) EXCEPTION: STA 4+30.00 TO STA 4+42.00 = -12.00 FT = -0.002 MI(RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 4+30.00 TO STA 4+42.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 955 PROJECT #13 CONT 1264-01-016 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	72451 SY	34776	GAL
	ADDITIONAL AREA	0.48 GAL/SY	171 SY	82	GAL
	INTERSECTIONS	0.48 GAL/SY	747 SY	359	GAL
			TOTAL	**35217**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	72451 SY	659	CY
	ADDITIONAL AREA	1 CY/110 SY	171 SY	2	CY
	INTERSECTIONS	1 CY/110 SY	747 SY	7	CY
			TOTAL	**668**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	24598 LF	615	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**625**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**49196**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	5898 LF	1475	LF
	SINGLE NO PASS	10 LF/40 LF	6490 LF	1623	LF
			TOTAL	**3098**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		6490 LF	6490	LF
	DOUBLE NO PASS		11744 LF X 2	23488	LF
			TOTAL	**29978**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**860**	**LF**

Project Number: **Sheet** 39

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 955 PROJECT #13 CONT 1264-01-016 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	DOUBLE NO PASS		430 LF X 2	**860**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**49196**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	5898 LF	1475	LF
	SINGLE NO PASS	10 LF/40 LF	6490 LF	1623	LF
			TOTAL	**3098**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		6490 LF	6490	LF
	DOUBLE NO PASS		11744 LF X 2	23488	LF
			TOTAL	**29978**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	32	LF
	RAILROAD STOP BAR		EST	70	LF
			TOTAL	**102**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**2**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	5898 LF	74	EA
	SINGLE NO PASS	1 EA/40 LF	6490 LF	162	EA
	DOUBLE NO PASS	1 EA/40 LF	11744 LF	294	EA
			TOTAL	**530**	**EA**

P R O J E C T D A T A

CONTROL: 2348-01-007 HWY: FM 2436
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 10,259.00 FT = 1.942 MI PROJECT: #14
LIMITS : FROM FM 609 TRAFFIC: 1606 VPD
TO US 77

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 102+59.00 (5)	10259.00	24	27357

	TOTAL TRAVEL LANE AREA		**27357**
(1) STA 0+00.00 TO STA 3+49.00	349.00	20	776
STA 3+49.00 TO STA 102+59.00 (5)	9910.00	18	19820

	TOTAL SHOULDER AREA		**20596**
INTERSECTIONS			
US 77	VAR	VAR	729
ADDITIONAL @ CHURCH	393.00	18	786
COUNTY ROADS (3 EA)	VAR	VAR	290

	TOTAL INTERSECTION AREA		**1805**

Project Number: **Sheet** 40

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2436 PROJECT #14 CONT 2348-01-007 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.044 = TRM 586+0.000
(5) STA 102+59.00 = MP: 1.986 = TRM 586+1.942

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 2436 PROJECT #14 CONT 2348-01-007 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.48 GAL/SY	27357 SY	13131	GAL
	SHOULDERS	0.50 GAL/SY	20596 SY	10298	GAL
	INTERSECTIONS	0.50 GAL/SY	1805 SY	903	GAL
			TOTAL	**24332**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	27357 SY	249	CY
	SHOULDERS	1 CY/110 SY	20596 SY	187	CY
	INTERSECTIONS	1 CY/110 SY	1805 SY	16	CY
			TOTAL	**452**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	10259 LF	256	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**266**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**20518**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	4935 LF	1234	LF
	SINGLE NO PASS	10 LF/40 LF	3901 LF	975	LF
			TOTAL	**2209**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		3901 LF	3901	LF
	DOUBLE NO PASS		1401 LF X 2	2802	LF
			TOTAL	**6703**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**20518**	**LF**

Project Number: **Sheet** 41

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2436 PROJECT #14 CONT 2348-01-007 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	4935 LF	1234	LF
	SINGLE NO PASS	10 LF/40 LF	3901 LF	975	LF
			TOTAL	**2209**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		3901 LF	3901	LF
	DOUBLE NO PASS		1401 LF X 2	2802	LF
			TOTAL	**6703**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**16**	**LF**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"STOP"		EST	1	EA
	"AHEAD"		EST	1	EA
			TOTAL	**2**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	4935 LF	62	EA
	SINGLE NO PASS	1 EA/40 LF	3901 LF	98	EA
	DOUBLE NO PASS	1 EA/40 LF	1401 LF	35	EA
			TOTAL	**195**	**EA**

P R O J E C T D A T A

CONTROL: 2382-01-005 HWY: FM 2503
COUNTY : FAYETTE TYPE: SEAL COAT
LENGTH : 32,321.00 FT = 6.121 MI PROJECT: #15
LIMITS : FROM FM 1291 TRAFFIC: 882 VPD
TO SH 71

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 38+28.00	3828.00	26	11059
STA 38+28.00 TO STA 323+21.00 (5)	28493.00	25	79147

	TOTAL TRAVEL LANE AREA		**90206**

INTERSECTIONS

COUNTY ROADS & CITY STREETS (20 EA)	VAR	VAR	1629
SH 71	VAR	VAR	77

	TOTAL INTERSECTION AREA		**1706**

Project Number: **Sheet** 42

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2503 PROJECT #15 CONT 2382-01-005 FAYETTE CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.008 = TRM 464-0.016
(5) STA 323+21.00 = MP: 6.129 = TRM 470+0.136

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	90206 SY	43299	GAL
	INTERSECTIONS	0.48 GAL/SY	1706 SY	819	GAL
			TOTAL	**44118**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	90206 SY	820	CY
	INTERSECTIONS	1 CY/110 SY	1706 SY	16	CY
			TOTAL	**836**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	32321 LF	808	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**818**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	5905 LF	1476	LF
	SINGLE NO PASS	10 LF/40 LF	15963 LF	3991	LF
			TOTAL	**5467**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		15963 LF	15963	LF
	DOUBLE NO PASS		10263 LF X 2	20526	LF
			TOTAL	**36489**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	5905 LF	1476	LF
	SINGLE NO PASS	10 LF/40 LF	15963 LF	3991	LF
			TOTAL	**5467**	**LF**

Project Number: **Sheet** 43

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2503 PROJECT #15 CONT 2382-01-005 FAYETTE CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		15963 LF	15963	LF
	DOUBLE NO PASS		10263 LF X 2	20526	LF
			TOTAL	**36489**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**12**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	5905 LF	74	EA
	SINGLE NO PASS	1 EA/40 LF	15963 LF	399	EA
	DOUBLE NO PASS	1 EA/40 LF	10263 LF	257	EA
			TOTAL	**730**	**EA**

P R O J E C T D A T A

CONTROL: 0269-03-039 HWY: UA 77
COUNTY : LAVACA TYPE: SEAL COAT
LENGTH : 23,095.00 FT = 4.374 MI PROJECT: #16
LIMITS : FROM US 90A TRAFFIC: 2596 VPD
TO MUSTANG CREEK

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 84+32.00 (3)	8432.00	24	22485
(3) STA 111+57.00 TO STA 258+20.00 (5)	14663.00	24	39101

	TOTAL TRAVEL LANE AREA		**61586**
(1) STA 0+00.00 TO STA 84+32.00 (3)	8432.00	20	18738
(3) STA 111+57.00 TO STA 258+20.00 (5)	14663.00	20	32584

	TOTAL SHOULDER AREA		**51322**
INTERSECTIONS			
COUNTY ROADS (12 EA)	VAR	VAR	890

	TOTAL INTERSECTION AREA		**890**

Project Number: **Sheet** 44

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 77 PROJECT #16 CONT 0269-03-039 LAVACA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 17.808 = TRM 498+1.371
(5) STA 258+20.00 = MP: 22.698 = TRM 504+0.397

(2) NO EQUATIONS
(3) EXCEPTION: STA 84+32.00 TO STA 111+57.00 = -2725.00 FT = -0.516 MI
(ROCKY CREEK BRIDGE REPLACEMENT PROJECT)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[UA 77 PROJECT #16 CONT 0269-03-039 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	61586 SY	29561	GAL
	SHOULDERS	0.48 GAL/SY	51322 SY	24635	GAL
	INTERSECTIONS	0.48 GAL/SY	890 SY	427	GAL
			TOTAL	**54623**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	61586 SY	560	CY
	SHOULDERS	1 CY/110 SY	51322 SY	467	CY
	INTERSECTIONS	1 CY/110 SY	890 SY	8	CY
			TOTAL	**1035**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	23095 LF	577	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**587**	**EA**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**46190**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	4660 LF	1165	LF
	SINGLE NO PASS	10 LF/40 LF	11870 LF	2968	LF
			TOTAL	**4133**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		11870 LF	11870	LF
	DOUBLE NO PASS		5810 LF X 2	11620	LF
			TOTAL	**23490**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	RESTRICTED WIDTH BRIDGE CROSSHATCH		EST	**560**	**LF**

Project Number: **Sheet** 45

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 77 PROJECT #16 CONT 0269-03-039 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	4660 LF	58	EA
	SINGLE NO PASS	1 EA/40 LF	11870 LF	297	EA
	DOUBLE NO PASS	1 EA/40 LF	5810 LF	145	EA
			TOTAL	**500**	**EA**

P R O J E C T D A T A

CONTROL: 0269-04-040 HWY: UA 77
COUNTY : LAVACA TYPE: SEAL COAT
LENGTH : 32,763.00 FT = 6.205 MI PROJECT: #17
LIMITS : FROM MUSTANG CREEK TRAFFIC: 3173 VPD
TO SH 95

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 90+76.00	9076.00	24	24203
	STA 90+76.00 TO STA 95+66.00	490.00	24-36	1633
	STA 95+66.00 TO STA 119+46.00	2380.00	36	9520
	STA 119+46.00 TO STA 124+36.00	490.00	36-24	1633
	STA 124+36.00 TO STA 180+76.00	5640.00	24	15040
	STA 180+76.00 TO STA 182+96.00	220.00	24-36	733
	STA 182+96.00 TO STA 199+36.00	1640.00	36	6560
	STA 199+36.00 TO STA 201+56.00	220.00	36-24	733
	STA 201+56.00 TO STA 327+63.00 (5)	12607.00	24	33619

		TOTAL TRAVEL LANE AREA		**93674**

(1)	STA 0+00.00 TO STA 90+76.00	9076.00	20	20169
	STA 90+76.00 TO STA 95+66.00	490.00	20-24	1198
	STA 95+66.00 TO STA 119+46.00	2380.00	24	6347
	STA 119+46.00 TO STA 124+36.00	490.00	24-20	1198
	STA 124+36.00 TO STA 180+76.00	5640.00	20	12533
	STA 180+76.00 TO STA 182+96.00	220.00	20-24	538
	STA 182+96.00 TO STA 199+36.00	1640.00	24	4373
	STA 199+36.00 TO STA 201+56.00	220.00	24-20	538
	STA 201+56.00 TO STA 327+63.00 (5)	12607.00	20	28016

		TOTAL SHOULDER AREA		**74910**

INTERSECTIONS			
FM 531 (2 EA)	VAR	VAR	165
COUNTY ROADS (7 EA)	VAR	VAR	466

	TOTAL INTERSECTION AREA		**631**

Project Number: **Sheet** 46

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 77 PROJECT #17 CONT 0269-04-040 LAVACA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 22.743 = TRM 504+0.397
(5) STA 327+63.00 = MP: 28.948 = TRM 510+0.600

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
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---[UA 77 PROJECT #17 CONT 0269-04-040 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	93674 SY	44964	GAL
	SHOULDERS	0.48 GAL/SY	74910 SY	35957	GAL
	INTERSECTIONS	0.48 GAL/SY	631 SY	303	GAL
			TOTAL	**81224**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	93674 SY	852	CY
	SHOULDERS	1 CY/110 SY	74910 SY	681	CY
	INTERSECTIONS	1 CY/110 SY	631 SY	6	CY
			TOTAL	**1539**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	830 LF	**42**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	28133 LF	703	EA
	GORE	2 EA/20 LF	1620 LF X 2	324	EA
	CONTINUOUS LT TURN	1 EA/40 LF	3010 LF X 2	151	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1188**	**EA**
666	**REFL PAV MRK TY I(W)8"(DOT)(100MIL)**				
	TURN LANE	3 LF/12 LF	580 LF	**145**	**LF**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**250**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**65526**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	2695 LF	674	LF
	SINGLE NO PASS	10 LF/40 LF	15100 LF	3775	LF
			TOTAL	**4449**	**LF**

Project Number: **Sheet** 47

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[UA 77 PROJECT #17 CONT 0269-04-040 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		15100 LF	15100	LF
	DOUBLE NO PASS		10060 LF X 2	20120	LF
	GORE		1620 LF X 4	6480	LF
	CONTINUOUS LT TURN		3010 LF X 2	6020	LF
			TOTAL	**47720**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	**12**	**EA**
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**384**	**LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	830 LF	**42**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	2695 LF	34	EA
	SINGLE NO PASS	1 EA/40 LF	15100 LF	378	EA
	DOUBLE NO PASS	1 EA/40 LF	10060 LF	252	EA
	GORE	2 EA/20 LF	1620 LF X 2	324	EA
	CONTINUOUS LT TURN	1 EA/40 LF	3010 LF X 2	151	EA
			TOTAL	**1139**	**EA**

P R O J E C T D A T A

CONTROL: 0346-06-054 HWY: SH 111
COUNTY : LAVACA TYPE: SEAL COAT
LENGTH : 113,700.00 FT = 21.534 MI PROJECT: #18
LIMITS : FROM DEWITT C/L TRAFFIC: 5624 VPD
TO JACKSON C/L

	LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 11+83.00		1183.00	24	3155
	STA 11+83.00 TO STA 13+33.00		150.00	24-48	600
	STA 13+33.00 TO STA 29+28.00		1595.00	48	8507
	STA 29+28.00 TO STA 36+28.00		700.00	48-24	2800
	STA 36+28.00 TO STA 429+11.00		39283.00	24	104755
	STA 429+11.00 TO STA 432+11.00		300.00	24-36	1000
	STA 432+11.00 TO STA 440+16.00		805.00	36	3220
	STA 440+16.00 TO STA 443+16.00		300.00	36-24	1000
	STA 443+16.00 TO STA 603+94.00		16078.00	24	42875
	STA 603+94.00 TO STA 608+74.00		480.00	24-36	1600
	STA 608+74.00 TO STA 618+51.00		977.00	36	3908
	STA 618+51.00 TO STA 623+21.00		470.00	36-24	1567
	STA 623+21.00 TO STA 709+63.00	(3)	8642.00	24	23045
(3)	STA 714+12.00 TO STA 960+48.00	(3)	24636.00	24	65696
(3)	STA 962+33.00 TO STA 984+51.00	(3)	2218.00	24	5915
(3)	STA 992+49.00 TO STA 1151+32.00	(5)	15883.00	24	42355

			TOTAL TRAVEL LANE AREA		**311998**

(1)	STA 0+00.00 TO STA 11+83.00		1183.00	16	2103
	STA 11+83.00 TO STA 603+94.00		59211.00	20	131580
	STA 603+94.00 TO STA 709+63.00	(3)	10569.00	20	23487
(3)	STA 714+12.00 TO STA 960+48.00	(3)	24636.00	20	54747
(3)	STA 962+33.00 TO STA 984+51.00	(3)	2218.00	20	4929
(3)	STA 992+49.00 TO STA 1151+32.00	(5)	15883.00	20	35296

			TOTAL SHOULDER AREA		**252142**

INTERSECTIONS			
FM 1447	VAR	VAR	196
COUNTY ROADS (15 EA)	VAR	VAR	1370
US 77 ON/OFF RAMPS (4.0 EA)	VAR	VAR	814

TOTAL INTERSECTION AREA			**2380**

Project Number: **Sheet** 48

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 111 PROJECT #18 CONT 0346-06-054 LAVACA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 520+0.012
(5) STA 1151+32.00 = MP: 21.805 = TRM 540+1.853

(2) NO EQUATIONS
(3) EXCEPTIONS: STA 709+63.00 TO STA 714+12.00 = -449 FT = -0.085 MI
(BRUSHY CREEK BRIDGE)
STA 960+48.00 TO STA 962+33.00 = -185 FT = -0.035 MI
(LAVACA RIVER RELIEF BRIDGE)
STA 984+51.00 TO STA 992+49.00 = -798 FT = -0.151 MI
(LAVACA RIVER BRIDGE)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[SH 111 PROJECT #18 CONT 0346-06-054 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	STA 603+94.00 TO STA 1151+32.00				
	TRAVEL LANES	0.30 GAL/SY	144086 SY	43226	GAL
	SHOULDERS	0.30 GAL/SY	118459 SY	35538	GAL
	INTERSECTIONS	0.30 GAL/SY	814 SY	244	GAL
			TOTAL	**79008**	**GAL**
316	**ASPH (AC-20-5TR)**				
	STA 0+00.00 TO STA 603+94.00				
	TRAVEL LANES	0.28 GAL/SY	167912 SY	47015	GAL
	SHOULDERS	0.30 GAL/SY	133683 SY	40105	GAL
	INTERSECTIONS	0.30 GAL/SY	1566 SY	470	GAL
			TOTAL	**87590**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	311998 SY	2152	CY
	SHOULDERS	1 CY/145 SY	252142 SY	1739	CY
	INTERSECTIONS	1 CY/145 SY	2380 SY	16	CY
			TOTAL	**3907**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	710 LF	36	EA
	ISLAND	1 EA/20 LF	600 LF	30	EA
	LANE LINE	1 EA/40 LF	2700 LF	68	EA
			TOTAL	**134**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	111645 LF	2791	EA
	GORE	2 EA/20 LF	2055 LF X 2	412	EA
			TOTAL	**3203**	**EA**
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	710	LF
	ISLAND		EST	600	LF
			TOTAL	**1310**	**LF**

Project Number: **Sheet** 49

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 111 PROJECT #18 CONT 0346-06-054 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	2700 LF	**675**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**230020**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	59931 LF	14983	LF
	SINGLE NO PASS	10 LF/40 LF	38544 LF	9636	LF
			TOTAL	**24619**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		38544 LF	38544	LF
	DOUBLE NO PASS		11629 LF X 2	23258	LF
	GORE		2055 LF X 4	8220	LF
			TOTAL	**70022**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	RESTRICTED WIDTH BRIDGE CROSSHATCH		EST	1100	LF
	SCHOOL ZONE		EST	40	LF
			TOTAL	**1140**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	96	LF
	GORE CROSSHATCH		EST	264	LF
	CROSSWALK		EST	42	LF
			TOTAL	**402**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	RT TURN		EST	**2**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**2**	**EA**

---[SH 111 PROJECT #18 CONT 0346-06-054 LAVACA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST		**524 LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	710 LF		36 EA
	ISLAND	1 EA/20 LF	600 LF		30 EA
	LANE LINE	1 EA/80 LF	2700 LF		34 EA
				TOTAL	**100 EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	59931 LF		749 EA
	SINGLE NO PASS	1 EA/40 LF	38544 LF		964 EA
	DOUBLE NO PASS	1 EA/40 LF	11629 LF		291 EA
	GORE	2 EA/20 LF	2055 LF	X 2	412 EA
				TOTAL	**2416 EA**

Project Number: **Sheet** 50

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0346-11-009 HWY: SH 111
COUNTY : DEWITT TYPE: SEAL COAT
LENGTH : 1,025.00 LF = 0.194 MI PROJECT: #19
LIMITS : FROM S KENNEDY ST TRAFFIC: 5026 VPD
TO LAVACA C/L

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 10+25.00 (5)	1025.00	22	2506

	TOTAL TRAVEL LANE AREA		**2506**
(1) STA 0+00.00 TO STA 10+25.00 (5)	1025.00	16	1822

	TOTAL SHOULDER AREA		**1822**

Project Number: **Sheet** 51

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 111 PROJECT #19 CONT 0346-11-009 DEWITT CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 9.969 = TRM 519+0.217
(5) STA 10+25.00 = MP: 10.163 = TRM 520+0.012

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[SH 111 PROJECT #19 CONT 0346-11-009 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.28 GAL/SY	2506 SY	702	GAL
	SHOULDERS	0.30 GAL/SY	1822 SY	547	GAL
			TOTAL	**1249**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	2506 SY	17	CY
	SHOULDERS	1 CY/145 SY	1822 SY	13	CY
			TOTAL	**30**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	1025 LF	**26**	**EA**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**2050**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	DOUBLE NO PASS		1025 LF X 2	**2050**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**38**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	CROSSWALK		EST	**30**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	DOUBLE NO PASS	1 EA/40 LF	1025 LF	**26**	**EA**

Project Number: **Sheet** 52

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0941-03-111 HWY: FM 237
COUNTY : DEWITT TYPE: SEAL COAT
LENGTH : 25,814.00 FT = 4.889 MI PROJECT: #20
LIMITS : FROM US 183 TRAFFIC: 1680 VPD
TO VICTORIA C/L

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 258+14.00 (5)	25814.00	28	80310
		TOTAL TRAVEL LANE AREA	**80310**

INTERSECTIONS

COUNTY ROADS (10 EA)	VAR	VAR	1140
		TOTAL INTERSECTION AREA	**1140**

Project Number: **Sheet** 53

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 237 PROJECT #20 CONT 0941-03-111 DEWITT CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 10.584 = TRM 564+0.316
(5) STA 258+14.00 = MP: 15.473 = TRM 570+0.011

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 237 PROJECT #20 CONT 0941-03-111 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.50 GAL/SY	80310 SY	40155	GAL
	INTERSECTIONS	0.50 GAL/SY	1140 SY	570	GAL
			TOTAL	**40725**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	80310 SY	730	CY
	INTERSECTIONS	1 CY/110 SY	1140 SY	10	CY
			TOTAL	**740**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	25814 LF	645	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**655**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**51628**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	7100 LF	1775	LF
	SINGLE NO PASS	10 LF/40 LF	13626 LF	3407	LF
			TOTAL	**5182**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		13626 LF	13626	LF
	DOUBLE NO PASS		5088 LF X 2	10176	LF
			TOTAL	**23802**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**51628**	**LF**

Project Number: **Sheet** 54

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 237 PROJECT #20 CONT 0941-03-111 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	7100 LF	1775	LF
	SINGLE NO PASS	10 LF/40 LF	13626 LF	3407	LF
			TOTAL	**5182**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		13626 LF	13626	LF
	DOUBLE NO PASS		5088 LF X 2	10176	LF
			TOTAL	**23802**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	7100 LF	89	EA
	SINGLE NO PASS	1 EA/40 LF	13626 LF	341	EA
	DOUBLE NO PASS	1 EA/40 LF	5088 LF	127	EA
			TOTAL	**557**	**EA**
6056	**PREFORMED IN-LANE (TRANS)RUMBLE STRIP**				
	@ US 183 INTERSECTION		EST	**40**	**LF**

P R O J E C T D A T A

CONTROL: 3012-01-008 HWY: FM 2980
COUNTY : DEWITT TYPE: SEAL COAT
LENGTH : 16,786.00 FT = 3.179 MI PROJECT: #21
LIMITS : FROM END OF STATE MAINTENANCE TRAFFIC: 1022 VPD
TO SH 72

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 167+86.00 (5)	16786.00	26	48493
		TOTAL TRAVEL LANE AREA	**48493**

INTERSECTIONS

COUNTY ROADS (5 EA)	VAR	VAR	791
		TOTAL INTERSECTION AREA	**791**

Project Number: **Sheet** 55

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2980 PROJECT #21 CONT 3012-01-008 DEWITT CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 526+0.000
(5) STA 167+86.00 = MP: 3.179 = TRM 528+1.186

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
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---[FM 2980 PROJECT #21 CONT 3012-01-008 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.46 GAL/SY	48493 SY	22307	GAL
	INTERSECTIONS	0.46 GAL/SY	791 SY	364	GAL
			TOTAL	**22671**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	48493 SY	441	CY
	INTERSECTIONS	1 CY/110 SY	791 SY	7	CY
			TOTAL	**448**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	16786 LF	420	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**430**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	1459 LF	365	LF
	SINGLE NO PASS	10 LF/40 LF	6340 LF	1585	LF
			TOTAL	**1950**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		6340 LF	6340	LF
	DOUBLE NO PASS		8935 LF X 2	17870	LF
			TOTAL	**24210**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**33572**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	1459 LF	365	LF
	SINGLE NO PASS	10 LF/40 LF	6340 LF	1585	LF
			TOTAL	**1950**	**LF**

Project Number: **Sheet** 56

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2980 PROJECT #21 CONT 3012-01-008 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		6340 LF	6340	LF
	DOUBLE NO PASS		8935 LF X 2	17870	LF
			TOTAL	**24210**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	1459 LF	18	EA
	SINGLE NO PASS	1 EA/40 LF	6340 LF	159	EA
	DOUBLE NO PASS	1 EA/40 LF	8935 LF	223	EA
			TOTAL	**400**	**EA**

P R O J E C T D A T A

CONTROL: 3012-02-006 HWY: FM 2980
COUNTY : DEWITT TYPE: SEAL COAT
LENGTH : 13,544.00 FT = 2.565 MI PROJECT: #22
LIMITS : FROM SH 72 TRAFFIC: 168 VPD
TO END OF STATE MAINTENANCE

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 127+18.00 (3)	12718.00	26	36741
(3) STA 129+91.00 TO STA 138+17.00 (5)	826.00	26	2386

	TOTAL TRAVEL LANE AREA		**39127**

INTERSECTIONS

COUNTY ROADS (3 EA)	VAR	VAR	494

	TOTAL INTERSECTION AREA		**494**

Project Number: **Sheet** 57

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2980 PROJECT #22 CONT 3012-02-006 DEWITT CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.023 = TRM 528+1.224
(5) STA 138+17.00 = MP: 3.639 = TRM 532+0.027

(2) NO EQUATIONS
(3) EXCEPTION: STA 127+18.00 TO STA 129+91.00 = -273.00 FT. = -0.051 MI.
(SMITH CREEK BRIDGE)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 2980 PROJECT #22 CONT 3012-02-006 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.46 GAL/SY	39127 SY	17998	GAL
	INTERSECTIONS	0.46 GAL/SY	494 SY	227	GAL
			TOTAL	**18225**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	39127 SY	356	CY
	INTERSECTIONS	1 CY/110 SY	494 SY	4	CY
			TOTAL	**360**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	13544 LF	339	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**349**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	3494 LF	874	LF
	SINGLE NO PASS	10 LF/40 LF	6440 LF	1610	LF
			TOTAL	**2484**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		6440 LF	6440	LF
	DOUBLE NO PASS		3610 LF X 2	7220	LF
			TOTAL	**13660**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	3494 LF	874	LF
	SINGLE NO PASS	10 LF/40 LF	6440 LF	1610	LF
			TOTAL	**2484**	**LF**

Project Number: **Sheet** 58

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2980 PROJECT #22 CONT 3012-02-006 DEWITT CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		6440 LF	6440	LF
	DOUBLE NO PASS		3610 LF X 2	7220	LF
			TOTAL	**13660**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	3494 LF	44	EA
	SINGLE NO PASS	1 EA/40 LF	6440 LF	161	EA
	DOUBLE NO PASS	1 EA/40 LF	3610 LF	90	EA
			TOTAL	**295**	**EA**

P R O J E C T D A T A

CONTROL: 0026-04-049 HWY: US 90
COUNTY : COLORADO TYPE: SEAL COAT
LENGTH : 34,278.00 FT = 6.492 MI PROJECT: #23
LIMITS : FROM FAYETTE C/L TRAFFIC: 4407 VPD
TO CR 210

	LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 48+00.00		4800.00	24	12800
	STA 48+00.00 TO STA 51+50.00		350.00	24-36	1167
	STA 51+50.00 TO STA 71+74.00		2024.00	36	8096
	STA 71+74.00 TO STA 74+24.00		250.00	36-24	833
	STA 74+24.00 TO STA 120+54.00		4630.00	24	12347
	STA 120+54.00 TO STA 342+78.00	(5)	22224.00	24	59264

		TOTAL TRAVEL LANE AREA			**94507**

(1)	STA 0+00.00 TO STA 47+20.00		4720.00	16	8391
	STA 47+20.00 TO STA 48+00.00		80.00	24	213
	STA 48+00.00 TO STA 72+54.00		2454.00	24	6544
	STA 72+54.00 TO STA 110+20.00		3766.00	32	13390
	STA 110+20.00 TO STA 120+54.00		1034.00	12	1379
	STA 120+54.00 TO STA 131+61.00		1107.00	12	1476
	STA 131+61.00 TO STA 272+67.00		14106.00	18	28212
	STA 272+67.00 TO STA 280+40.00		773.00	4	344
	STA 280+40.00 TO STA 342+78.00	(5)	6238.00	16	11090

		TOTAL SHOULDER AREA			**71039**

INTERSECTIONS				
COUNTY ROADS & CITY STREETS (8 EA)		VAR	VAR	1040

	TOTAL INTERSECTION AREA			**1040**

Project Number: **Sheet** 59

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 90 PROJECT #23 CONT 0026-04-049 COLORADO CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 740+0.797
(5) STA 342+78.00 = MP: 6.492 = TRM 748+0.504

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
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---[US 90 PROJECT #23 CONT 0026-04-049 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	STA 0+00.00 TO STA 48+00.00				
	TRAVEL LANES	0.48 GAL/SY	12800 SY	6144	GAL
	SHOULDERS	0.48 GAL/SY	8604 SY	4130	GAL
	STA 48+00.00 TO STA 120+54.00 (WEIMAR C-L)				
	TRAVEL LANES	0.26 GAL/SY	22443 SY	5835	GAL
	SHOULDERS	0.28 GAL/SY	21313 SY	5968	GAL
	INTERSECTIONS	0.28 GAL/SY	1040 SY	291	GAL
	STA 120+54.00 TO STA 342+78.00				
	TRAVEL LANES	0.48 GAL/SY	59264 SY	28447	GAL
	SHOULDERS	0.48 GAL/SY	41122 SY	19739	GAL
			TOTAL	**70554**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	STA 0+00.00 TO STA 48+00.00				
	TRAVEL LANES	1 CY/110 SY	12800 SY	116	CY
	SHOULDERS	1 CY/110 SY	8604 SY	78	CY
	STA 48+00.00 TO STA 120+54.00 (WEIMAR C-L)				
	SHOULDERS	1 CY/110 SY	21313 SY	194	CY
	INTERSECTIONS	1 CY/110 SY	1040 SY	9	CY
	STA 120+54.00 TO STA 342+78.00				
	TRAVEL LANES	1 CY/110 SY	59264 SY	539	CY
	SHOULDERS	1 CY/110 SY	41122 SY	374	CY
			TOTAL	**1310**	**CY**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	STA 48+00.00 TO STA 120+54.00 (WEIMAR C-L)				
	TRAVEL LANES	1 CY/145 SY	22443 SY	**155**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	95 LF	**5**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	32062 LF	802	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1716 LF X 2	86	EA
	GORE	2 EA/20 LF	500 LF X 2	100	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**998**	**EA**

Project Number: **Sheet** 60

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 90 PROJECT #23 CONT 0026-04-049 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**95**	**LF**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**56916**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	3908 LF	977	LF
	SINGLE NO PASS	10 LF/40 LF	13525 LF	3381	LF
			TOTAL	**4358**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		13525 LF	13525	LF
	DOUBLE NO PASS		8719 LF X 2	17438	LF
			TOTAL	**30963**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	8882	LF
	PARKING LINES		EST	568	LF
			TOTAL	**9450**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	CONTINUOUS LT TURN	10 LF/40 LF	1716 LF X 2	**858**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	DOUBLE NO PASS		4441 LF X 2	8882	LF
	CONTINUOUS LT TURN		1716 LF X 2	3432	LF
	GORE		500 LF X 4	2000	LF
			TOTAL	**14314**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**56916**	**LF**

---[US 90 PROJECT #23 CONT 0026-04-049 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	3908 LF	977 LF	
	SINGLE NO PASS	10 LF/40 LF	13525 LF	3381 LF	

			TOTAL	**4358**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		13525 LF	13525 LF	
	DOUBLE NO PASS		8719 LF X 2	17438 LF	

			TOTAL	**30963**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**124**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	85	LF
	STOP BAR @ CROSSWALK		EST	57	LF
	CROSSWALK		EST	540	LF
	GORE CROSSHATCH		EST	573	LF

			TOTAL	**1255**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN			**4**	**EA**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	95 LF	**5**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	3908 LF	49	EA
	SINGLE NO PASS	1 EA/40 LF	13525 LF	338	EA
	DOUBLE NO PASS	1 EA/40 LF	13160 LF	329	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1716 LF X 2	86	EA
	GORE	2 EA/20 LF	500 LF X 2	100	EA

			TOTAL	**902**	**EA**

Project Number: **Sheet** 61

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0026-06-037 HWY: US 90
COUNTY : COLORADO TYPE: SEAL COAT
LENGTH : 8,909.00 FT = 1.687 MI PROJECT: #24
LIMITS : FROM FM 2434 TRAFFIC: 6103 VPD
TO FM 806

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 86+49.00	8649.00	24	23064
	STA 86+49.00 TO STA 89+09.00 (5)	260.00	36	1040

		TOTAL TRAVEL LANE AREA		**24104**
(1)	STA 0+00.00 TO STA 3+16.00	316.00	16	562
	STA 3+16.00 TO STA 28+00.00	2484.00	12	3312
	STA 28+00.00 TO STA 89+09.00 (5)	6109.00	16	10860

		TOTAL SHOULDER AREA		**14734**
ADDITIONAL AREA				
	AREA IN FRONT OF WAREHOUSE YARD	465	26	1343

		TOTAL ADDITIONAL AREA		**1343**
INTERSECTIONS				
	FM 2434	VAR	VAR	223
	SH 71 S	VAR	VAR	293
	SH 71 W	VAR	VAR	265
	COUNTY ROADS & CITY STREETS (8 EA)	VAR	VAR	1067

		TOTAL INTERSECTION AREA		**1848**

Project Number: **Sheet** 62

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 90 PROJECT #24 CONT 0026-06-037 COLORADO CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 13.195 = TRM 754+1.256
(5) STA 89+09.00 = MP: 14.882 = TRM 756+0.946

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[US 90 PROJECT #24 CONT 0026-06-037 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.46 GAL/SY	24104 SY	11088 GAL	
	SHOULDERS	0.46 GAL/SY	14734 SY	6778 GAL	
	ADDITIONAL AREA	0.46 GAL/SY	1343 SY	618 GAL	
	INTERSECTIONS	0.46 GAL/SY	1848 SY	850 GAL	
			TOTAL	**19334 GAL**	
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	24104 SY	219 CY	
	SHOULDERS	1 CY/110 SY	14734 SY	134 CY	
	ADDITIONAL	1 CY/110 SY	1343 SY	12 CY	
	INTERSECTIONS	1 CY/110 SY	1848 SY	17 CY	
			TOTAL	**382 CY**	
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	13 LF	**1 EA**	
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	8657 LF	216 EA	
	CONTINUOUS LT TURN	1 EA/40 LF	125 LF X 2	6 EA	
	GORE	2 EA/20 LF	127 LF X 2	26 EA	
	BEGIN/END NO PASSING		EST	10 EA	
			TOTAL	**258 EA**	
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	**13 LF**	
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**16941 LF**	
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	6023 LF	1506 LF	
	SINGLE NO PASS	10 LF/40 LF	500 LF	125 LF	
			TOTAL	**1631 LF**	

Project Number: **Sheet** 63

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 90 PROJECT #24 CONT 0026-06-037 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		500 LF	500 LF	
	DOUBLE NO PASS		1661 LF X 2	3322 LF	
			TOTAL	**3822 LF**	
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	CONTINUOUS LT TURN	10 LF/40 LF	125 LF	**31 LF**	
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	CONTINUOUS LT TURN		125 LF X 2	250 LF	
	GORE		127 LF X 4	508 LF	
			TOTAL	**758 LF**	
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**16941 LF**	
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	6023 LF	1506 LF	
	SINGLE NO PASS	10 LF/40 LF	500 LF	125 LF	
			TOTAL	**1631 LF**	
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		500 LF	500 LF	
	DOUBLE NO PASS		1661 LF X 2	3322 LF	
			TOTAL	**3822 LF**	
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**110 LF**	
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	13 LF	**1 EA**	

---[US 90 PROJECT #24 CONT 0026-06-037 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	6023 LF	75	EA
	SINGLE NO PASS	1 EA/40 LF	500 LF	13	EA
	DOUBLE NO PASS	1 EA/40 LF	1661 LF	42	EA
	CONTINUOUS LT TURN	1 EA/40 LF	125 LF X 2	6	EA
	GORE	2 EA/20 LF	127 LF X 2	26	EA
			TOTAL	**162**	**EA**

Project Number: **Sheet** 64

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0027-01-048 HWY: US 90
COUNTY : COLORADO TYPE: SEAL COAT
LENGTH : 10,589.00 FT = 2.005 MI PROJECT: #25
LIMITS : FROM 0.75 MI EAST OF BS 71F TRAFFIC: 4523 VPD
TO IH 10

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 102+59.00	10259.00	24	27357
	STA 102+59.00 TO STA 105+39.00	280.00	50	1556
	STA 105+39.00 TO STA 105+89.00 (5)	50.00	65	361

		TOTAL TRAVEL LANE AREA		**29274**

(1)	STA 0+00.00 TO STA 17+67.00	1767.00	14	2749
	STA 21+52.00 TO STA 25+98.00	446.00	14	694
	STA 30+18.00 TO STA 40+96.00	1078.00	14	1677
	STA 42+36.00 TO STA 57+78.00	1542.00	14	2399
	STA 62+71.00 TO STA 102+59.00	3988.00	14	6204

		TOTAL SHOULDER AREA		**13723**

INTERSECTIONS			
COUNTY ROADS & CITY STREETS (8 EA)	VAR	VAR	1568
SOUTH IH 10 FRONTAGE RD (2 EA)	VAR	VAR	587

	TOTAL INTERSECTION AREA		**2155**

Project Number: **Sheet** 65

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 90 PROJECT #25 CONT 0027-01-048 COLORADO CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 16.788 = TRM 758+0.704
(5) STA 105+89.00 = MP: 18.793 = TRM 760+1.573

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[US 90 PROJECT #25 CONT 0027-01-048 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.46 GAL/SY	29274 SY	13466	GAL
	SHOULDERS	0.46 GAL/SY	13723 SY	6313	GAL
	INTERSECTIONS	0.46 GAL/SY	2155 SY	991	GAL
			TOTAL	**20770**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	29274 SY	266	CY
	SHOULDERS	1 CY/110 SY	13723 SY	125	CY
	INTERSECTIONS	1 CY/110 SY	2155 SY	20	CY
			TOTAL	**411**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	10259 LF	256	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**266**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD))**				
	EDGELINE		EST	**21178**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	690 LF	173	LF
	SINGLE NO PASS	10 LF/40 LF	5842 LF	1461	LF
			TOTAL	**1634**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		5842 LF	5842	LF
	DOUBLE NO PASS		3454 LF X 2	6908	LF
			TOTAL	**12750**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	ISLAND EDGELINE		EST	**672**	**LF**

Project Number: **Sheet** 66

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[US 90 PROJECT #25 CONT 0027-01-048 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**21178**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	690 LF	173	LF
	SINGLE NO PASS	10 LF/40 LF	5842 LF	1461	LF
			TOTAL	**1634**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		5842 LF	5842	LF
	DOUBLE NO PASS		3454 LF X 2	6908	LF
			TOTAL	**12750**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	105	LF
	RESTRICTED WIDTH BRIDGE		EST	652	LF
			TOTAL	**757**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	690 LF	9	EA
	SINGLE NO PASS	1 EA/40 LF	5842 LF	146	EA
	DOUBLE NO PASS	1 EA/40 LF	3454 LF	86	EA
			TOTAL	**241**	**EA**

P R O J E C T D A T A

CONTROL: 2349-01-009 HWY: FM 2437
COUNTY : COLORADO TYPE: SEAL COAT
LENGTH : 15,792.00 FT = 2.990 MI PROJECT: #26
LIMITS : FROM US 90A TRAFFIC: 632 VPD
TO LAVACA C/L

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 6+49.00	649.00	34	2452
	STA 6+49.00 TO STA 29+50.00	2301.00	32	8181
	STA 29+50.00 TO STA 157+92.00 (5)	12842.00	30	42807

		TOTAL TRAVEL LANE AREA		**53440**

INTERSECTIONS				
	COUNTY ROADS (2 EA)	VAR	VAR	306
	CITY STREETS (13 EA)	VAR	VAR	1398
	SCHOOL WIDENING	VAR	VAR	842

		TOTAL INTERSECTION AREA		**2546**

Project Number: **Sheet** 67

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2437 PROJECT #26 CONT 2349-01-009 COLORADO CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.009 = TRM 502-0.017
(5) STA 157+92.00 = MP: 2.999 = TRM 506+0.001

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 2437 PROJECT #26 CONT 2349-01-009 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	53440 SY	26720	GAL
	INTERSECTIONS	0.50 GAL/SY	2546 SY	1273	GAL
			TOTAL	**27993**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	53440 SY	486	CY
	INTERSECTIONS	1 CY/110 SY	2546 SY	23	CY
			TOTAL	**509**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	15792 LF	395	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**405**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**31584**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	3495 LF	874	LF
	SINGLE NO PASS	10 LF/40 LF	9332 LF	2333	LF
			TOTAL	**3207**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		9332 LF	9332	LF
	DOUBLE NO PASS		2331 LF X 2	4662	LF
			TOTAL	**13994**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**31584**	**LF**

Project Number: **Sheet** 68

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2437 PROJECT #26 CONT 2349-01-009 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	3495 LF	874	LF
	SINGLE NO PASS	10 LF/40 LF	9332 LF	2333	LF
			TOTAL	**3207**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		9332 LF	9332	LF
	DOUBLE NO PASS		2331 LF X 2	4662	LF
			TOTAL	**13994**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**44**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	70	LF
	CROSSWALK		EST	30	LF
			TOTAL	**100**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	3495 LF	44	EA
	SINGLE NO PASS	1 EA/40 LF	9332 LF	233	EA
	DOUBLE NO PASS	1 EA/40 LF	2331 LF	58	EA
			TOTAL	**335**	**EA**

P R O J E C T D A T A

CONTROL: 3205-03-014 HWY: FM 3013
COUNTY : COLORADO TYPE: SEAL COAT
LENGTH : 29,604.00 FT = 5.606 MI PROJECT: #27
LIMITS : FROM US 90A TRAFFIC: 2874 VPD
TO WHARTON C/L

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 296+04.00 (5)	29604.00	24	78944
	TOTAL TRAVEL LANE AREA		**78944**
(1) STA 0+00.00 TO STA 296+04.00 (5)	29604.00	20	65787
	TOTAL SHOULDER AREA		**65787**
INTERSECTIONS			
COUNTY ROADS (7 EA)	VAR	VAR	1706
	TOTAL INTERSECTION AREA		**1706**

Project Number: **Sheet** 69

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3013 PROJECT #27 CONT 3205-03-014 COLORADO CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.000 = TRM 488+1.198
(5) STA 296+04.00 = MP: 6.606 = TRM 496+0.004

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 3013 PROJECT #27 CONT 3205-03-014 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	78944 SY	37893	GAL
	SHOULDERS	0.48 GAL/SY	65787 SY	31578	GAL
	INTERSECTIONS	0.48 GAL/SY	1706 SY	819	GAL
			TOTAL	**70290**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	78944 SY	718	CY
	SHOULDERS	1 CY/110 SY	65787 SY	598	CY
	INTERSECTIONS	1 CY/110 SY	1706 SY	16	CY
			TOTAL	**1332**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	29604 LF	740	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**750**	**EA**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**58910**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	28720 LF	7180	LF
	SINGLE NO PASS	10 LF/40 LF	735 LF	184	LF
			TOTAL	**7364**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		735 LF	**735**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**92**	**LF**

Project Number: **Sheet** 70

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3013 PROJECT #27 CONT 3205-03-014 COLORADO CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	28720 LF	359	EA
	SINGLE NO PASS	1 EA/40 LF	735 LF	18	EA
			TOTAL	**377**	**EA**

P R O J E C T D A T A

CONTROL: 0187-03-074 HWY: SH 36
COUNTY : AUSTIN TYPE: SEAL COAT
LENGTH : 4,042.00 FT = 0.765 MI PROJECT: #28
LIMITS : FROM FM 1094 TRAFFIC: 16208 VPD
TO 1500’ SOUTH OF SL 350

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 3+42.00 (3)	342.00	60	2280
(3) STA 4+22.00 TO STA 9+60.00 (3)	538.00	60	3587
(3) STA 13+80.00 TO STA 45+42.00 (3)	3162.00	60	21080

	TOTAL TRAVEL LANE AREA		**26947**

Project Number: **Sheet** 71

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 36 PROJECT #28 CONT 0187-03-074 AUSTIN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 6.650 = TRM 606+0.904
(5) STA 45+42.00 = MP: 7.510 = TRM 606+1.764

(2) NO EQUATIONS
(3) EXCEPTION: STA 3+42.00 TO STA 4+22.00 = - 80.00 FT = -0.015 MI(RR XING)
STA 9+60.00 TO STA 13+80.00 = -420.00 FT = -0.080 MI
(CONCRETE PAVEMENT @ MAIN ST INTERSECTION)
(4) RAILROAD CROSSINGS: 1 RETAINED STA 3+42.00 TO STA 4+22.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.26 GAL/SY	26947 SY		**7006 GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	26947 SY		**186 CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	1169 LF	58 EA	
	LANE LINE	1 EA/40 LF	6358 LF	159 EA	

			TOTAL	**217 EA**	
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	DOUBLE NO PASS	1 EA/40 LF	356 LF X 2	18 EA	
	CONTINUOUS LT TURN	1 EA/40 LF	3833 LF X 2	192 EA	

			TOTAL	**210 EA**	
666	**REFL PAV MRK TY I(W)8"(DOT)(100MIL)**				
	TURN LANE	3 LF/12 LF	375 LF		**94 LF**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST		**794 LF**
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	6358 LF		**1590 LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	CONTINUOUS LT TURN	10 LF/40 LF	3833 LF X 2		**1917 LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	DOUBLE NO PASS		356 LF X 2	712 LF	
	CONTINUOUS LT TURN		3833 LF X 2	7666 LF	

			TOTAL	**8378 LF**	

Project Number: **Sheet** 72

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 36 PROJECT #28 CONT 0187-03-074 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	228 LF	
	RAILROAD STOP BAR		EST	52 LF	
	CROSSWALK		EST	210 LF	

			TOTAL	**490 LF**	
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	RT TURN		EST		**2 EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST		**2 EA**
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	CROSSHATCH		EST		**396 LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	1169 LF	58 EA	
	LANE LINE	1 EA/80 LF	6358 LF	79 EA	

			TOTAL	**137 EA**	
672	**REFL PAV MRKR TY II-A-A**				
	DOUBLE NO PASS	1 EA/40 LF	356 LF	9 EA	
	CONTINUOUS LT TURN	1 EA/40 LF	3833 LF X 2	192 EA	

			TOTAL	**201 EA**	

P R O J E C T D A T A

CONTROL: 0271-18-004 HWY: FM 3538
COUNTY : AUSTIN TYPE: SEAL COAT
LENGTH : 16,928.00 FT = 3.206 MI PROJECT: #29
LIMITS : FROM 0.125 MI SOUTH OF IH 10 TRAFFIC: 2182 VPD
TO FM 3013

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 163+83.00	16383.00	24	43688
	STA 163+83.00 TO STA 166+53.00	270.00	24-36	900
	STA 166+53.00 TO STA 169+28.00 (5)	275.00	36	1100

		TOTAL TRAVEL LANE AREA		**45688**
(1)	STA 0+00.00 TO STA 163+83.00	16383.00	20	36407
	STA 163+83.00 TO STA 166+53.00	270.00	20-15	525
	STA 166+53.00 TO STA 169+28.00 (5)	275.00	15	458

		TOTAL SHOULDER AREA		**37390**
INTERSECTIONS				
	COUNTY ROADS (6 EA)	VAR	VAR	510

		TOTAL INTERSECTION AREA		**510**

Project Number: **Sheet** 73

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3538 PROJECT #29 CONT 0271-18-004 AUSTIN CO. CONT'D]---

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.300 = TRM 472+0.259
(5) STA 169+28.00 = MP: 3.506 = TRM 474+1.468

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED PROFESSIONAL ENGINEER

---[FM 3538 PROJECT #29 CONT 0271-18-004 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.50 GAL/SY	45688 SY	22844	GAL
	SHOULDERS	0.50 GAL/SY	37390 SY	18695	GAL
	INTERSECTIONS	0.50 GAL/SY	510 SY	255	GAL
			TOTAL	**41794**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	45688 SY	415	CY
	SHOULDERS	1 CY/110 SY	37390 SY	340	CY
	INTERSECTIONS	1 CY/110 SY	510 SY	5	CY
			TOTAL	**760**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	275 LF	**14**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	16928 LF	423	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**433**	**EA**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**275**	**LF**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**33856**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	15670 LF	3918	LF
	SINGLE NO PASS	10 LF/40 LF	585 LF	146	LF
			TOTAL	**4064**	**LF**

Project Number: **Sheet** 74

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3538 PROJECT #29 CONT 0271-18-004 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		585 LF	585	LF
	DOUBLE NO PASS		468 LF X 2	936	LF
			TOTAL	**1521**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**33856**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	15670 LF	3918	LF
	SINGLE NO PASS	10 LF/40 LF	585 LF	146	LF
			TOTAL	**4064**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		585 LF	585	LF
	DOUBLE NO PASS		468 LF X 2	936	LF
			TOTAL	**1521**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**22**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	RT TURN		EST	**1**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**1**	**EA**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	275 LF	**14**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	15670 LF	196	EA
	SINGLE NO PASS	1 EA/40 LF	585 LF	15	EA
	DOUBLE NO PASS	1 EA/40 LF	468 LF	12	EA
			TOTAL	**223**	**EA**

P R O J E C T D A T A

CONTROL: 1721-02-013 HWY: FM 1094
COUNTY : AUSTIN TYPE: SEAL COAT
LENGTH : 27,784.00 FT = 5.262 MI PROJECT: #30
LIMITS : FROM 586’ WEST OF SCHLUENS RD TRAFFIC: 2065 VPD
TO 1091’ WEST OF FM 2187

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 277+84.00 (5)	27784.00	20	61742
		TOTAL TRAVEL LANE AREA	**61742**
(1) STA 0+00.00 TO STA 277+84.00 (5)	27784.00	6	18523
		TOTAL SHOULDER AREA	**18523**
INTERSECTIONS			
COUNTY ROADS (6 EA)	VAR	VAR	397
		TOTAL INTERSECTION AREA	**397**

Project Number: **Sheet** 75

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1094 PROJECT #30 CONT 1721-02-013 AUSTIN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 4.176 = TRM 626+1.043
(5) STA 277+84.00 = MP: 9.438 = TRM 632+0.317

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED PROFESSIONAL ENGINEER

---[FM 1094 PROJECT #30 CONT 1721-02-013 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.46 GAL/SY	61742 SY	28401	GAL
	SHOULDERS	0.46 GAL/SY	18523 SY	8521	GAL
	INTERSECTIONS	0.46 GAL/SY	397 SY	183	GAL
			TOTAL	**37105**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	61742 SY	561	CY
	SHOULDERS	1 CY/110 SY	18523 SY	168	CY
	INTERSECTIONS	1 CY/110 SY	397 SY	4	CY
			TOTAL	**733**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	27784 LF	695	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**705**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**55568**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	11922 LF	2981	LF
	SINGLE NO PASS	10 LF/40 LF	11329 LF	2832	LF
			TOTAL	**5813**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		11329 LF	11329	LF
	DOUBLE NO PASS		4239 LF X 2	8478	LF
			TOTAL	**19807**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**55568**	**LF**

Project Number: **Sheet** 76

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1094 PROJECT #30 CONT 1721-02-013 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	11922 LF	2981	LF
	SINGLE NO PASS	10 LF/40 LF	11329 LF	2832	LF
			TOTAL	**5813**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		11329 LF	11329	LF
	DOUBLE NO PASS		4239 LF X 2	8478	LF
			TOTAL	**19807**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	11922 LF	149	EA
	SINGLE NO PASS	1 EA/40 LF	11329 LF	283	EA
	DOUBLE NO PASS	1 EA/40 LF	4239 LF	106	EA
			TOTAL	**538**	**EA**

P R O J E C T D A T A

CONTROL: 2894-01-014 HWY: FM 2187
COUNTY : AUSTIN TYPE: SEAL COAT
LENGTH : 62,706.00 FT = 11.876 MI PROJECT: #31
LIMITS : FROM FM 949 TRAFFIC: 2189 VPD
TO SH 36

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 531+87.00 (3)	53187.00	22	130013
(3) STA 531+97.00 TO STA 542+47.00 (3)	1050.00	22	2567
(3) STA 542+77.00 TO STA 627+46.00 (5)	8469.00	22	20702

	TOTAL TRAVEL LANE AREA		**153282**
(1) STA 0+00.00 TO STA 531+87.00 (3)	53187.00	4	23639
(3) STA 531+97.00 TO STA 542+47.00 (3)	1050.00	4	467
(3) STA 542+77.00 TO STA 627+46.00 (5)	8469.00	4	3764

	TOTAL SHOULDER AREA		**27870**
INTERSECTIONS			
COUNTY ROADS (8 EA)	VAR	VAR	673

	TOTAL INTERSECTION AREA		**673**

Project Number: **Sheet** 77

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2187 PROJECT #31 CONT 2894-01-014 AUSTIN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 2.042 = TRM 468+0.000
(5) STA 627+46.00 = MP: 13.925 = TRM 478+1.923

(2) NO EQUATIONS
(3) EXCEPTION: STA 531+87.00 TO STA 531+97.00 = -10.00 FT = -0.002 MI (RR XING)
STA 542+47.00 TO STA 542+77.00 = -30.00 FT = -0.005 MI (FM 1094)
(4) RAILROAD CROSSING: 1 RETAINED STA 531+87.00 TO STA 531+97.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 2187 PROJECT #31 CONT 2894-01-014 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	153282 SY	73575	GAL
	SHOULDERS	0.48 GAL/SY	27870 SY	13378	GAL
	INTERSECTIONS	0.48 GAL/SY	673 SY	323	GAL
			TOTAL	**87276**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	153282 SY	1393	CY
	SHOULDERS	1 CY/110 SY	27870 SY	253	CY
	INTERSECTIONS	1 CY/110 SY	673 SY	6	CY
			TOTAL	**1652**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURNLANE	1 EA/20 LF	175 LF	**9**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	62256 LF	1556	EA
	GORE	2 EA/20 LF	450 LF X 2	90	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1656**	**EA**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURNLANE		EST	**175**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	20677 LF	5169	LF
	SINGLE NO PASS	10 LF/40 LF	23272 LF	5818	LF
			TOTAL	**10987**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		23272 LF	23272	LF
	DOUBLE NO PASS		18913 LF X 2	37826	LF
			TOTAL	**61098**	**LF**

Project Number: **Sheet** 78

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2187 PROJECT #31 CONT 2894-01-014 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**125412**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	GORE		450 LF X 4	**1800**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	20677 LF	5169	LF
	SINGLE NO PASS	10 LF/40 LF	23272 LF	5818	LF
			TOTAL	**10987**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		23272 LF	23272	LF
	DOUBLE NO PASS		18913 LF X 2	37826	LF
			TOTAL	**61098**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOOL ZONE		EST	**56**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	60	LF
	RAILROAD STOP BAR		EST	66	LF
			TOTAL	**126**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**2**	**EA**
668	**PREFAB PAV MRK TY C(W)(36")(YLD TRI)**		EST	**7**	**EA**
672	**REFL PAV MRKR TY I-C**				
	TURNLANE	1 EA/20 LF	175 LF	**9**	**EA**

---[FM 2187 PROJECT #31 CONT 2894-01-014 AUSTIN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	20677 LF	258	EA
	SINGLE NO PASS	1 EA/40 LF	23272 LF	582	EA
	DOUBLE NO PASS	1 EA/40 LF	18913 LF	473	EA
	GORE	2 EA/20 LF	450 LF X 2	90	EA
			TOTAL	**1403**	**EA**

Project Number: **Sheet** 79

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0266-05-053 HWY: SH 71
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 28,344.00 FT = 5.368 MI PROJECT: #32
LIMITS : FROM FM 961 TRAFFIC: 5844 VPD
TO FM 1300

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 283+44.00 (5)	28344.00	24	75584
		TOTAL TRAVEL LANE AREA	**75584**
(1) STA 0+00.00 TO STA 283+44.00 (5)	28344.00	12	37792
		TOTAL SHOULDER AREA	**37792**
INTERSECTIONS			
FM 2546 (3 EA)	VAR	VAR	585
COUNTY ROADS (7 EA)	VAR	VAR	1269
		TOTAL INTERSECTION AREA	**1854**

Project Number: **Sheet** 80

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 71 PROJECT #32 CONT 0266-05-053 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 7.214 = TRM 696+0.195
(5) STA 283+44.00 = MP: 12.582 = TRM 700+1.613

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
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---[SH 71 PROJECT #32 CONT 0266-05-053 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.50 GAL/SY	75584 SY	37792	GAL
	SHOULDERS	0.50 GAL/SY	37792 SY	18896	GAL
	INTERSECTIONS	0.50 GAL/SY	1854 SY	927	GAL
			TOTAL	**57615**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	75584 SY	687	CY
	SHOULDERS	1 CY/110 SY	37792 SY	344	CY
	INTERSECTIONS	1 CY/110 SY	1854 SY	17	CY
			TOTAL	**1048**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	28344 LF	**709**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**56688**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	26760 LF	6690	LF
	SINGLE NO PASS	10 LF/40 LF	1240 LF	310	LF
			TOTAL	**7000**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		1240 LF	**1240**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**56688**	**LF**

Project Number: **Sheet** 81

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 71 PROJECT #32 CONT 0266-05-053 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**32**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	26760 LF	335	EA
	SINGLE NO PASS	1 EA/40 LF	1240 LF	31	EA
			TOTAL	**366**	**EA**

P R O J E C T D A T A

CONTROL: 0266-06-049 HWY: SH 71
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 53,365.00 FT = 10.107 MI PROJECT: #33
LIMITS : FROM BU 59S TRAFFIC: 9977 VPD
TO MATAGORDA C/L

	LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 4+12.00		412.00	36	1648
	STA 4+12.00 TO STA 5+12.00	(3)	100.00	36-24	333
(3)	STA 5+24.00 TO STA 35+82.00	(3)	3058.00	24	8155
(3)	STA 37+27.00 TO STA 70+61.00		3334.00	24	8891
	STA 70+61.00 TO STA 73+51.00	(3)	290.00	24-36	967
(3)	STA 80+91.00 TO STA 86+41.00		550.00	46-24	2139
	STA 86+41.00 TO STA 254+76.00	(3)	16835.00	24	44893
(3)	STA 428+74.00 TO STA 565+74.00		13700.00	24	36533
	STA 565+74.00 TO STA 569+88.00		414.00	24-36	1380
	STA 569+88.00 TO STA 578+26.00		838.00	36	3352
	STA 578+26.00 TO STA 582+26.00		400.00	36-24	1333
	STA 582+26.00 TO STA 716+60.00	(5)	13434.00	24	35824

				TOTAL TRAVEL LANE AREA	**145448**

(1)	STA 0+00.00 TO STA 5+12.00	(3)	512.00	24	1365
(3)	STA 5+24.00 TO STA 9+80.00		456.00	24	1216
	STA 9+80.00 TO STA 35+82.00	(3)	2602.00	16	4626
(3)	STA 37+27.00 TO STA 73+51.00	(3)	3624.00	16	6443
(3)	STA 80+91.00 TO STA 254+76.00	(3)	17385.00	16	30907
(3)	STA 428+74.00 TO STA 565+74.00		13700.00	16	24356
	STA 565+74.00 TO STA 569+88.00		414.00	16-8	552
	STA 569+88.00 TO STA 578+26.00		838.00	8	745
	STA 578+26.00 TO STA 582+26.00		400.00	8-16	533
	STA 582+26.00 TO STA 716+60.00	(5)	13434.00	16	23883

				TOTAL SHOULDER AREA	**94626**

INTERSECTIONS				
COUNTY ROADS & CITY STREETS (20 EA)	VAR	VAR	2610	

		TOTAL INTERSECTION AREA	**2610**	

Project Number: **Sheet** 82

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 71 PROJECT #33 CONT 0266-06-049 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 15.976 = TRM 704+1.028
(5) STA 716+60.00 = MP: 29.547 = TRM 718+0.566

(2) NO EQUATIONS
(3) EXCEPTION: STA 5+12.00 TO STA 5+24.00 = - 12.00 FT = -0.002 MI (RR XING)
STA 35+82.00 TO STA 37+27.00 = -145.00 FT = -0.027 MI (TRES PALACIOS BRIDGE)
STA 73+51.00 TO STA 80+91.00 = -740.00 FT = -0.140 MI (US 59 UNDERPASS AND FRTG INTER)
STA 254+76.00 TO STA 428+74.00 = -17398.00 FT = -3.295 MI (FM 2674 TO CR 405)
(4) RAILROAD CROSSING: 1 RETAINED STA 5+12.00 TO STA 5+24.00

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---[SH 71 PROJECT #33 CONT 0266-06-049 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	STA 0+00.00 TO STA 254+76.00				
	TRAVEL LANES	0.30 GAL/SY	67026 SY	20108	GAL
	SHOULDERS	0.30 GAL/SY	44557 SY	13367	GAL
	INTERSECTIONS	0.30 GAL/SY	2610 SY	783	GAL
	STA 428+74.00 TO STA 716+60.00				
	TRAVEL LANES	0.28 GAL/SY	78422 SY	21958	GAL
	SHOULDERS	0.28 GAL/SY	50069 SY	14019	GAL
			TOTAL	**70235**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	STA 428+74.00 TO STA 716+60.00				
	TRAVEL LANES	1 CY/110 SY	78422 SY	713	CY
	SHOULDERS	1 CY/110 SY	50069 SY	455	CY
			TOTAL	**1168**	**CY**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	STA 0+00.00 TO STA 254+76.00				
	TRAVEL LANES	1 CY/145 SY	67026 SY	462	CY
	SHOULDERS	1 CY/145 SY	44557 SY	307	CY
	INTERSECTIONS	1 CY/145 SY	2610 SY	18	CY
			TOTAL	**787**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	760 LF	**38**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	50553 LF	1264	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1150 LF X 2	58	EA
	GORE	2 EA/20 LF	1662 LF X 2	332	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1664**	**EA**
666	**REFL PAV MRK TY I(W)(8")(DOT)(100MIL)**				
	TURN LANE	3 LF/12 LF	200 LF	**50**	**LF**

Project Number: **Sheet** 83

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 71 PROJECT #33 CONT 0266-06-049 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	**560**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**106730**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	37063 LF	9266	LF
	SINGLE NO PASS	10 LF/40 LF	7445 LF	1861	LF
	CONTINUOUS LT TURN	10 LF/40 LF	1150 LF X 2	575	LF
			TOTAL	**11702**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		7445 LF	7445	LF
	DOUBLE NO PASS		5463 LF X 2	10926	LF
	CONTINUOUS LT TURN		1150 LF X 2	2300	LF
	GORE		1662 LF X 4	6648	LF
			TOTAL	**27319**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR @ CROSSWALK		EST	36	LF
	RAILROAD STOP BAR		EST	72	LF
	CROSSWALK		EST	64	LF
			TOTAL	**172**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	RT TURN		EST	**4**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**4**	**EA**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**2**	**EA**

---[SH 71 PROJECT #33 CONT 0266-06-049 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	760 LF		**38 EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	37063 LF		463 EA
	SINGLE NO PASS	1 EA/40 LF	7445 LF		186 EA
	DOUBLE NO PASS	1 EA/40 LF	5463 LF		137 EA
	CONTINUOUS LT TURN	1 EA/40 LF	1150 LF	X 2	58 EA
	GORE	2 EA/20 LF	1662 LF	X 2	332 EA

				TOTAL	**1176 EA**

Project Number: **Sheet** 84

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0709-02-057 HWY: FM 102
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 67,860.00 FT = 12.852 MI PROJECT: #34
LIMITS : FROM COLORADO C/L TRAFFIC: 2590 VPD
TO FM 960

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 216+85.00	21685.00	24	57827
	STA 216+85.00 TO STA 221+85.00	500.00	24-36	1667
	STA 221+85.00 TO STA 226+55.00	470.00	36	1880
	STA 226+55.00 TO STA 230+55.00	400.00	36-24	1333
	STA 230+55.00 TO STA 407+43.00	17688.00	24	47168
	STA 407+43.00 TO STA 414+23.00	680.00	24-36	2267
	STA 414+23.00 TO STA 417+63.00	340.00	36	1360
	STA 417+63.00 TO STA 423+03.00	540.00	36-24	1800
	STA 423+03.00 TO STA 678+60.00 (5)	25557.00	24	68152

		TOTAL TRAVEL LANE AREA		**183454**

(1)	STA 0+00.00 TO STA 27+45.00	2745.00	6	1830
	STA 27+45.00 TO STA 216+85.00	18940.00	16	33671
	STA 216+85.00 TO STA 221+85.00	500.00	16-8	667
	STA 221+85.00 TO STA 226+55.00	470.00	8	418
	STA 226+55.00 TO STA 230+55.00	400.00	8-16	533
	STA 230+55.00 TO STA 407+43.00	17688.00	16	31445
	STA 407+43.00 TO STA 414+23.00	680.00	16-8	907
	STA 414+23.00 TO STA 417+63.00	340.00	8	302
	STA 417+63.00 TO STA 423+03.00	540.00	8-16	720
	STA 423+03.00 TO STA 678+60.00 (5)	25557.00	16	45435

		TOTAL SHOULDER AREA		**115928**

INTERSECTIONS				
	FM 960	VAR	VAR	143
	FM 1161	VAR	VAR	222
	FM 2614	VAR	VAR	188
	COUNTY ROADS & CITY STREETS (20 EA)	VAR	VAR	1943

		TOTAL INTERSECTION AREA		**2496**

Project Number: **Sheet** 85

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 102 PROJECT #34 CONT 0709-02-057 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.000 = TRM 498+0.001
(5) STA 678+60.00 = MP: 13.852 = TRM 510+0.870

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

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---[FM 102 PROJECT #34 CONT 0709-02-057 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	183454 SY	88058	GAL
	SHOULDERS	0.48 GAL/SY	115928 SY	55645	GAL
	INTERSECTIONS	0.48 GAL/SY	2496 SY	1198	GAL
			TOTAL	**144901**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	183454 SY	1668	CY
	SHOULDERS	1 CY/110 SY	115928 SY	1054	CY
	INTERSECTIONS	1 CY/110 SY	2496 SY	23	CY
			TOTAL	**2745**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	140 LF	**7**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	65438 LF	1636	EA
	CONTINUOUS LT TURN	1 EA/40 LF	140 LF X 2	7	EA
	GORE	2 EA/20 LF	2282 LF X 2	456	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**2109**	**EA**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**140**	**LF**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**135720**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	41227 LF	10307	LF
	SINGLE NO PASS	10 LF/40 LF	17252 LF	4313	LF
	CONTINUOUS LT TURN	10 LF/40 LF	140 LF X 2	70	LF
			TOTAL	**14690**	**LF**

Project Number: **Sheet** 86

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 102 PROJECT #34 CONT 0709-02-057 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		17252 LF	17252	LF
	DOUBLE NO PASS		5060 LF X 2	10120	LF
	CONTINUOUS LT TURN		140 LF X 2	280	LF
	GORE		2282 LF X 4	9128	LF
			TOTAL	**36780**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**135720**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**12**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	**4**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**2**	**EA**
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**1144**	**LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	140 LF	**7**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	41227 LF	515	EA
	SINGLE NO PASS	1 EA/40 LF	17252 LF	431	EA
	DOUBLE NO PASS	1 EA/40 LF	5060 LF	127	EA
	CONTINUOUS LT TURN	1 EA/40 LF	140 LF X 2	7	EA
	GORE	2 EA/20 LF	2282 LF X 2	456	EA
			TOTAL	**1536**	**EA**

P R O J E C T D A T A

CONTROL: 1302-02-014 HWY: FM 647
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 23,718.00 FT = 4.492 MI PROJECT: #35
LIMITS : FROM SL 523 TRAFFIC: 170 VPD
TO END OF MAINTENANCE

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 0+50.00 (3)	50.00	24	133
(3) STA 0+62.00 TO STA 101+70.00 (3)	10108.00	24	26955
(3) STA 110+65.00 TO STA 246+25.00 (5)	13560.00	24	36160
	TOTAL TRAVEL LANE AREA		**63248**

INTERSECTIONS

SL 523	VAR	VAR	185
COUNTY ROADS (2 EA)	VAR	VAR	360
	TOTAL INTERSECTION AREA		**545**

Project Number: **Sheet** 87

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 647 PROJECT #35 CONT 1302-02-014 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.011 = TRM 520-0.950
(5) STA 246+25.00 = MP: 4.674 = TRM 522+1.731

(2) NO EQUATIONS
(3) EXCEPTION: STA 0+50.00 TO STA 0+62.00 = - 12.00 FT = -0.002 MI
(RR XING)
STA 101+70.00 TO STA 110+65.00 = -895.00 FT = -0.169 MI
(EAST MUSTANG CREEK BRIDGE REPLACEMENT)
(4) RAILROAD CROSSING: 1 RETAINED STA 0+50.00 TO STA 0+62.00

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B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	63248 SY	31624	GAL
	INTERSECTIONS	0.50 GAL/SY	545 SY	273	GAL
			TOTAL	**31897**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	63248 SY	575	CY
	INTERSECTIONS	1 CY/110 SY	545 SY	5	CY
			TOTAL	**580**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	23718 LF	593	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**603**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	18175 LF	4544	LF
	SINGLE NO PASS	10 LF/40 LF	4900 LF	1225	LF
			TOTAL	**5769**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		4900 LF	4900	LF
	DOUBLE NO PASS		500 LF X 2	1000	LF
			TOTAL	**5900**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**47436**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	18175 LF	4544	LF
	SINGLE NO PASS	10 LF/40 LF	4900 LF	1225	LF
			TOTAL	**5769**	**LF**

Project Number: **Sheet** 88

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 647 PROJECT #35 CONT 1302-02-014 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		4900 LF	4900	LF
	DOUBLE NO PASS		500 LF X 2	1000	LF
			TOTAL	**5900**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	12	LF
	RAILROAD STOP BAR		EST	48	LF
			TOTAL	**60**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**1**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	18175 LF	227	EA
	SINGLE NO PASS	1 EA/40 LF	4900 LF	123	EA
	DOUBLE NO PASS	1 EA/40 LF	500 LF	13	EA
			TOTAL	**363**	**EA**

P R O J E C T D A T A

CONTROL: 1412-03-042 HWY: FM 1301
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 51,855.00 FT = 9.821 MI PROJECT: #36
LIMITS : FROM 475 FT N OF N ALABAMA RD TRAFFIC: 15990 VPD
TO FM 442

	LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 13+76.00	1376.00	64	9785
	STA 13+76.00 TO STA 22+76.00	900.00	40(AVG)	4000
	STA 22+76.00 TO STA 47+56.00	2480.00	24	6613
	STA 47+56.00 TO STA 50+76.00	320.00	24-36	1067
	STA 50+76.00 TO STA 61+76.00	1100.00	36	4400
	STA 61+76.00 TO STA 65+70.00	394.00	36-24	1313
	STA 65+70.00 TO STA 422+33.00	35663.00	24	95101
	STA 422+33.00 TO STA 427+23.00	490.00	24-40	1742
	STA 427+23.00 TO STA 429+88.00	265.00	47(AVG)	1384
	STA 429+88.00 TO STA 435+58.00	570.00	50	3167
	STA 435+58.00 TO STA 438+23.00	265.00	47(AVG)	1384
	STA 438+23.00 TO STA 443+29.00	506.00	40-24	1799
	STA 443+29.00 TO STA 507+10.00	6381.00	24	17016
	STA 507+10.00 TO STA 510+65.00	355.00	24-38	1223
	STA 510+65.00 TO STA 514+95.00	430.00	38	1816
	STA 514+95.00 TO STA 516+95.00	200.00	38-24	689
	STA 516+95.00 TO STA 518+55.00	160.00	24	427

	TOTAL TRAVEL LANE AREA			**152926**

STA 13+76.00 TO STA 22+76.00	900.00	12	1200
STA 22+76.00 TO STA 47+56.00	2480.00	16	4409
STA 47+56.00 TO STA 50+76.00	320.00	16-22	676
STA 50+76.00 TO STA 61+76.00	1100.00	22	2689
STA 61+76.00 TO STA 65+70.00	394.00	22-16	832
STA 65+70.00 TO STA 422+33.00	35663.00	16	63401
STA 422+33.00 TO STA 427+23.00	490.00	12	653
STA 427+23.00 TO STA 429+88.00	265.00	12-10	324
STA 429+88.00 TO STA 435+58.00	570.00	10	633
STA 435+58.00 TO STA 438+23.00	265.00	10-12	324
STA 438+23.00 TO STA 443+29.00	506.00	12	675
STA 443+29.00 TO STA 507+10.00	6381.00	16	11344
STA 507+10.00 TO STA 510+65.00	355.00	16-0	316
STA 514+95.00 TO STA 516+95.00	200.00	0-16	178
STA 516+95.00 TO STA 518+55.00	160.00	16	284

TOTAL SHOULDER AREA			**87938**

Project Number: **Sheet** 89

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1301 PROJECT #36 CONT 1412-03-042 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
INTERSECTIONS			
FM 2817	VAR	VAR	172
FM 1096 (2 EA)	VAR	VAR	342
FM 442 (2 EA)	VAR	VAR	418
COUNTY ROADS & CITY STREETS (24 EA)	VAR	VAR	2635

TOTAL INTERSECTION AREA			**3567**

(1) STA 0+00.00 = MP: 2.696 = TRM 636+0.668
(5) STA 518+55.00 = MP: 12.517 = TRM 646+0.527

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 1301 PROJECT #36 CONT 1412-03-042 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.26 GAL/SY	152926 SY	39761	GAL
	SHOULDERS	0.30 GAL/SY	87938 SY	26381	GAL
	INTERSECTIONS	0.30 GAL/SY	3567 SY	1070	GAL
			TOTAL	**67212**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	152926 SY	1055	CY
	SHOULDERS	1 CY/145 SY	87938 SY	606	CY
	INTERSECTIONS	1 CY/145 SY	3567 SY	25	CY
			TOTAL	**1686**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	1990 LF	100	EA
	LANE LINE	1 EA/40 LF	1696 LF	42	EA
			TOTAL	**142**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	47022 LF	1176	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1563 LF X 2	78	EA
	GORE	2 EA/20 LF	3270 LF X 2	654	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1918**	**EA**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**1990**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	1696 LF	**424**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**103710**	**LF**

Project Number: **Sheet** 90

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1301 PROJECT #36 CONT 1412-03-042 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	36616 LF	9154	LF
	SINGLE NO PASS	10 LF/40 LF	6300 LF	1575	LF
	CONTINUOUS LT TURN	10 LF/40 LF	1563 LF X 2	782	LF
			TOTAL	**11511**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		6300 LF	6300	LF
	DOUBLE NO PASS		2711 LF X 2	5422	LF
	CONTINUOUS LT TURN		1563 LF X 2	3126	LF
	GORE		3270 LF X 4	13080	LF
			TOTAL	**27928**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**50**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	285	LF
	CROSSWALK		EST	132	LF
			TOTAL	**417**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	4	EA
	RT TURN		EST	2	EA
			TOTAL	**6**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**4**	**EA**
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**1447**	**LF**

---[FM 1301 PROJECT #36 CONT 1412-03-042 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	1990 LF	100	EA
	LANE LINE	1 EA/80 LF	1696 LF	21	EA

			TOTAL	**121**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	36616 LF	458	EA
	SINGLE NO PASS	1 EA/40 LF	6300 LF	158	EA
	DOUBLE NO PASS	1 EA/40 LF	2711 LF	68	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1563 LF X 2	78	EA
	GORE	2 EA/20 LF	3270 LF X 2	654	EA

			TOTAL	**1416**	**EA**

Project Number: **Sheet** 91

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 3014-02-005 HWY: FM 647
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 12,866.00 FT = 2.436 MI PROJECT: #37
LIMITS : FROM END OF MAINTENANCE TRAFFIC: 348 VPD
TO SL 523

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 128+66.00 (5)	12866.00	24	34309
		TOTAL TRAVEL LANE AREA	**34309**
(1) STA 97+25.00 TO STA 109+36.00 (5)	1211.00	12	1615
		TOTAL SHOULDER AREA	**1615**
INTERSECTIONS			
US 59 RAMP	VAR	VAR	168
SL 523	VAR	VAR	834
COUNTY ROADS (4 EA)	VAR	VAR	307
		TOTAL INTERSECTION AREA	**1309**

Project Number: **Sheet** 92

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 647 PROJECT #37 CONT 3014-02-005 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 10.000 = TRM 516-0.040
(5) STA 128+66.00 = MP: 12.436 = TRM 518+0.404

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
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---[FM 647 PROJECT #37 CONT 3014-02-005 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	34309 SY	17155	GAL
	SHOULDERS	0.50 GAL/SY	1615 SY	808	GAL
	INTERSECTIONS	0.50 GAL/SY	1309 SY	655	GAL
			TOTAL	**18618**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	34309 SY	312	CY
	SHOULDERS	1 CY/110 SY	1615 SY	15	CY
	INTERSECTIONS	1 CY/110 SY	1309 SY	12	CY
			TOTAL	**339**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	12736 LF	318	EA
	GORE	2 EA/20 LF	130 LF X 2	26	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**354**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	9580 LF	2395	LF
	SINGLE NO PASS	10 LF/40 LF	2580 LF	645	LF
			TOTAL	**3040**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		2580 LF	2580	LF
	DOUBLE NO PASS		380 LF X 2	760	LF
	GORE		130 LF X 4	520	LF
			TOTAL	**3860**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**25732**	**LF**

Project Number: **Sheet** 93

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 647 PROJECT #37 CONT 3014-02-005 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	9580 LF	2395	LF
	SINGLE NO PASS	10 LF/40 LF	2580 LF	645	LF
			TOTAL	**3040**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		2580 LF	2580	LF
	DOUBLE NO PASS		380 LF X 2	760	LF
	GORE		130 LF X 4	520	LF
			TOTAL	**3860**	**LF**
668	**PREFAB PAV MRK TY C(W)(12")(SLD)**				
	ISLAND		EST	**136**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**24**	**LF**
668	**PREFAB PAV MRK TY C(W)(36")(YLD TRI)**		EST	**5**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	9580 LF	120	EA
	SINGLE NO PASS	1 EA/40 LF	2580 LF	65	EA
	DOUBLE NO PASS	1 EA/40 LF	380 LF	10	EA
	GORE	2 EA/20 LF	130 LF X 2	26	EA
			TOTAL	**221**	**EA**

P R O J E C T D A T A

CONTROL: 3205-04-007 HWY: FM 3013
COUNTY : WHARTON TYPE: SEAL COAT
LENGTH : 3,740.00 FT = 0.708 MI PROJECT: #38
LIMITS : FROM COLORADO C/L TRAFFIC: 999 VPD
TO FM 102

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 37+40.00 (5)	3740.00	24	9973
		TOTAL TRAVEL LANE AREA	**9973**
(1) STA 0+00.00 TO STA 37+40.00 (5)	3740.00	16	6649
		TOTAL SHOULDER AREA	**6649**

Project Number: **Sheet** 94

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3013 PROJECT #38 CONT 3205-04-007 WHARTON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.000 = TRM 496+0.004
(5) STA 37+40.00 = MP: 1.708 = TRM 496+0.712

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 3013 PROJECT #38 CONT 3205-04-007 WHARTON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.50 GAL/SY	9973 SY	4987	GAL
	SHOULDERS	0.50 GAL/SY	6649 SY	3325	GAL
			TOTAL	**8312**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	9973 SY	91	CY
	SHOULDERS	1 CY/110 SY	6649 SY	60	CY
			TOTAL	**151**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	3740 LF	**94**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**7480**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	2355 LF	589	LF
	SINGLE NO PASS	10 LF/40 LF	1385 LF	346	LF
			TOTAL	**935**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		1385 LF	**1385**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**7480**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	2355 LF	29	EA
	SINGLE NO PASS	1 EA/40 LF	1385 LF	35	EA
			TOTAL	**64**	**EA**

Project Number: **Sheet** 95

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0241-04-024 HWY: SH 60
COUNTY : MATAGORDA TYPE: SEAL COAT
LENGTH : 5,298.00 FT = 1.003 MI PROJECT: #39
LIMITS : FROM FM 521 TRAFFIC: 1719 VPD
TO 1.207 MI S OF FM 521

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 52+98.00 (5)	5298.00	24	14128
		TOTAL TRAVEL LANE AREA	**14128**
(1) STA 0+00.00 TO STA 52+98.00 (5)	5298.00	20	11773
		TOTAL SHOULDER AREA	**11773**

Project Number: **Sheet** 96

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 60 PROJECT #39 CONT 0241-04-024 MATAGORDA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 24.097 = TRM 544+0.782
(5) STA 52+98.00 = MP: 25.100 = TRM 544+1.785

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[SH 60 PROJECT #39 CONT 0241-04-024 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	14128 SY	6781	GAL
	SHOULDERS	0.48 GAL/SY	11773 SY	5651	GAL
			TOTAL	**12432**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	14128 SY	128	CY
	SHOULDERS	1 CY/110 SY	11773 SY	107	CY
			TOTAL	**235**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	5298 LF	**132**	**EA**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**10596**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	4423 LF	1106	LF
	SINGLE NO PASS	10 LF/40 LF	875 LF	219	LF
			TOTAL	**1325**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		875 LF	**875**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	RAILROAD STOP BAR		EST	**24**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**1**	**EA**

Project Number: **Sheet** 97

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 60 PROJECT #39 CONT 0241-04-024 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	4423 LF	55	EA
	SINGLE NO PASS	1 EA/40 LF	875 LF	22	EA
			TOTAL	**77**	**EA**

P R O J E C T D A T A

CONTROL: 0241-05-013 HWY: SH 60
COUNTY : MATAGORDA TYPE: SEAL COAT
LENGTH : 41,302.00 FT = 7.822 MI PROJECT: #40
LIMITS : FROM 1.207 MI S OF FM 521 TRAFFIC: 1719 VPD
TO FM 2031

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 4+88.00 (3)	488.00	26	1410
(3) STA 5+60.00 TO STA 390+25.00	38465.00	26	111121
STA 390+25.00 TO STA 392+95.00	270.00	26-37	945
STA 392+25.00 TO STA 413+74.00 (5)	2149.00	37	8835

	TOTAL TRAVEL LANE AREA		**122311**
(1) STA 0+00.00 TO STA 4+88.00 (3)	488.00	20	1084
(3) STA 5+60.00 TO STA 386+33.00	38073.00	20	84607
STA 386+33.00 TO STA 389+55.00	322.00	22	787
STA 389+55.00 TO STA 392+25.00	270.00	22-14	540
STA 392+25.00 TO STA 413+74.00 (5)	2149.00	14	3343

	TOTAL SHOULDER AREA		**90361**
INTERSECTIONS			
COUNTY ROADS & CITY STREETS (24 EA)	VAR	VAR	2050

	TOTAL INTERSECTION AREA		**2050**

Project Number: **Sheet** 98

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 60 PROJECT #40 CONT 0241-05-013 MATAGORDA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 24.781 = TRM 544+1.785
(5) STA 413+74.00 = MP: 32.616 = TRM 552+1.635

(2) NO EQUATIONS
(3) EXCEPTION: STA 4+88.00 TO STA 5+60.00 = -72.00 FT = -0.013 MI(RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 4+88.00 TO STA 5+60.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[SH 60 PROJECT #40 CONT 0241-05-013 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.50 GAL/SY	122311 SY	61156	GAL
	SHOULDERS	0.50 GAL/SY	90361 SY	45181	GAL
	INTERSECTIONS	0.50 GAL/SY	2050 SY	1025	GAL
			TOTAL	**107362**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	122311 SY	1112	CY
	SHOULDERS	1 CY/110 SY	90361 SY	821	CY
	INTERSECTIONS	1 CY/110 SY	2050 SY	19	CY
			TOTAL	**1952**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	410 LF	**21**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	39282 LF	982	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1620 LF X 2	81	EA
	GORE	2 EA/20 LF	400 LF X 2	80	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1153**	**EA**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**410**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**82604**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	27455 LF	6864	LF
	SINGLE NO PASS	10 LF/40 LF	9475 LF	2369	LF
	CONTINUOUS LT TURN	10 LF/40 LF	1620 LF X 2	810	LF
			TOTAL	**10043**	**LF**

Project Number: **Sheet** 99

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SH 60 PROJECT #40 CONT 0241-05-013 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		9475 LF	9475	LF
	DOUBLE NO PASS		2352 LF X 2	4704	LF
	CONTINUOUS LT TURN		1620 LF X 2	3240	LF
	GORE		400 LF X 4	1600	LF
			TOTAL	**19019**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	68	LF
	RAILROAD STOP BAR		EST	48	LF
	CROSSWALK		EST	50	LF
			TOTAL	**166**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	**4**	**EA**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**1**	**EA**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	410 LF	**21**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	27455 LF	343	EA
	SINGLE NO PASS	1 EA/40 LF	9475 LF	237	EA
	DOUBLE NO PASS	1 EA/40 LF	2352 LF	59	EA
	CONTINUOUS LT TURN	1 EA/40 LF	1620 LF X 2	81	EA
	GORE	2 EA/20 LF	400 LF X 2	80	EA
			TOTAL	**800**	**EA**

P R O J E C T D A T A

CONTROL: 0847-04-008 HWY: FM 2078
COUNTY : MATAGORDA TYPE: SEAL COAT
LENGTH : 12,445.00 FT = 2.357 MI PROJECT: #41
LIMITS : FROM FM 2668 TRAFFIC: 369 VPD
TO SH 60

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 124+45.00 (5)	12445.00	26	35952
		TOTAL TRAVEL LANE AREA	**35952**

INTERSECTIONS

FM 2668	VAR	VAR	182
SH 60	VAR	VAR	111
COUNTY ROADS (3 EA)	VAR	VAR	182
		TOTAL INTERSECTION AREA	**475**

Project Number: **Sheet** 100

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2078 PROJECT #41 CONT 0847-04-008 MATAGORDA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 646-0.043
(5) STA 124+45.00 = MP: 2.357 = TRM 648+0.349

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	35952 SY	17257	GAL
	INTERSECTIONS	0.48 GAL/SY	475 SY	228	GAL
			TOTAL	**17485**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	35952 SY	327	CY
	INTERSECTIONS	1 CY/110 SY	475 SY	4	CY
			TOTAL	**331**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	12445 LF	311	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**321**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	3010 LF	753	LF
	SINGLE NO PASS	10 LF/40 LF	4913 LF	1228	LF
			TOTAL	**1981**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		4913 LF	4913	LF
	DOUBLE NO PASS		4322 LF X 2	8644	LF
			TOTAL	**13557**	**LF**
666	**RE PM/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**24890**	**LF**

Project Number: **Sheet** 101

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2078 PROJECT #41 CONT 0847-04-008 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	3010 LF	753	LF
	SINGLE NO PASS	10 LF/40 LF	4913 LF	1228	LF
			TOTAL	**1981**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		4913 LF	4913	LF
	DOUBLE NO PASS		4322 LF X 2	8644	LF
			TOTAL	**13557**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**24**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	3010 LF	38	EA
	SINGLE NO PASS	1 EA/40 LF	4913 LF	123	EA
	DOUBLE NO PASS	1 EA/40 LF	4322 LF	108	EA
			TOTAL	**269**	**EA**

P R O J E C T D A T A

CONTROL: 1321-01-023 HWY: FM 1095
COUNTY : MATAGORDA TYPE: SEAL COAT
LENGTH : 43,513.00 FT = 8.241 MI PROJECT: #42
LIMITS : FROM SH 35 TRAFFIC: 661 VPD
TO FM 521

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 48+93.00 (3)	4893.00	26	14135
(3) STA 49+05.00 TO STA 435+25.00 (5)	38620.00	26	111569

		TOTAL TRAVEL LANE AREA	**125704**

INTERSECTIONS			
SH 35	VAR	VAR	416
FM 459	VAR	VAR	207
FM 521	VAR	VAR	888
COUNTY ROADS (11 EA)	VAR	VAR	1610

		TOTAL INTERSECTION AREA	**3121**

Project Number: **Sheet** 102

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1095 PROJECT #42 CONT 1321-01-023 MATAGORDA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.006 = TRM 532-0.026
(5) STA 435+25.00 = MP: 9.249 = TRM 540+0.253

(2) NO EQUATIONS
(3) EXCEPTION: STA 48+93.00 TO STA 49+05.00 = -12.00 FT = -0.002 MI(RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 48+93.00 TO STA 49+05.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	125704 SY	60338	GAL
	INTERSECTIONS	0.48 GAL/SY	3121 SY	1498	GAL
			TOTAL	**61836**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	125704 SY	1143	CY
	INTERSECTIONS	1 CY/110 SY	3121 SY	28	CY
			TOTAL	**1171**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	43513 LF	1088	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1098**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	30128 LF	7532	LF
	SINGLE NO PASS	10 LF/40 LF	11344 LF	2836	LF
			TOTAL	**10368**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		11344 LF	11344	LF
	DOUBLE NO PASS		2041 LF X 2	4082	LF
			TOTAL	**15426**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**87026**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	30128 LF	7532	LF
	SINGLE NO PASS	10 LF/40 LF	11344 LF	2836	LF
			TOTAL	**10368**	**LF**

Project Number: **Sheet** 103

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1095 PROJECT #42 CONT 1321-01-023 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		11344 LF	11344	LF
	DOUBLE NO PASS		2041 LF X 2	4082	LF
			TOTAL	**15426**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**48**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	RAILROAD STOP BAR		EST	72	LF
	STOP BAR		EST	26	LF
	CROSSWALK		EST	30	LF
			TOTAL	**128**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**2**	**EA**
668	**PREFAB PAV MRK TY C(W)(18")(YLD TRI)**		EST	**14**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	30128 LF	377	EA
	SINGLE NO PASS	1 EA/40 LF	11344 LF	284	EA
	DOUBLE NO PASS	1 EA/40 LF	2041 LF	51	EA
			TOTAL	**712**	**EA**

P R O J E C T D A T A

CONTROL: 2697-01-036 HWY: FM 2668
COUNTY : MATAGORDA TYPE: SEAL COAT
LENGTH : 26,972.00 FT = 5.108 MI PROJECT: #43
LIMITS : FROM FM 3057 TRAFFIC: 560 VPD
TO FM 521

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 269+72.00 (5)	26972.00	28	83913
		TOTAL TRAVEL LANE AREA	**83913**

INTERSECTIONS

FM 2078	VAR	VAR	162
FM 521	VAR	VAR	202
COUNTY ROADS (2 EA)	VAR	VAR	200
		TOTAL INTERSECTION AREA	**564**

Project Number: **Sheet** 104

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2668 PROJECT #43 CONT 2697-01-036 MATAGORDA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 15.331 = TRM 532+0.631
(5) STA 269+72.00 = MP: 20.439 = TRM 536+1.752

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 2668 PROJECT #43 CONT 2697-01-036 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	83913 SY	40278	GAL
	INTERSECTIONS	0.48 GAL/SY	564 SY	271	GAL
			TOTAL	**40549**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	83913 SY	763	CY
	INTERSECTIONS	1 CY/110 SY	564 SY	5	CY
			TOTAL	**768**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	26972 LF	674	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**684**	**EA**
666	**REFL PAV MTK TY II(W)4"(SLD)**				
	EDGELINE		EST	**53944**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	13516 LF	3379	LF
	SINGLE NO PASS	10 LF/40 LF	3820 LF	955	LF
			TOTAL	**4334**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		3820 LF	3820	LF
	DOUBLE NO PASS		9454 LF X 2	18908	LF
			TOTAL	**22728**	**LF**
666	**REF PROF PAV MTK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**53944**	**LF**

Project Number: **Sheet** 105

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2668 PROJECT #43 CONT 2697-01-36 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	13516 LF	3379	LF
	SINGLE NO PASS	10 LF/40 LF	3820 LF	955	LF
			TOTAL	**4334**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		3820 LF	3820	LF
	DOUBLE NO PASS		9454 LF X 2	18908	LF
			TOTAL	**22728**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	RAILROAD STOP BAR		EST	36	LF
	STOP BAR		EST	12	LF
			TOTAL	**48**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**1**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	13516 LF	169	EA
	SINGLE NO PASS	1 EA/40 LF	3820 LF	96	EA
	DOUBLE NO PASS	1 EA/40 LF	9454 LF	236	EA
			TOTAL	**501**	**EA**

P R O J E C T D A T A

CONTROL: 3087-01-009 HWY: FM 3057
COUNTY : MATAGORDA TYPE: SEAL COAT
LENGTH : 12,602.00 FT = 2.386 MI PROJECT: #44
LIMITS : FROM END OF MAINTENANCE TRAFFIC: 802 VPD
TO FM 2668

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 20+12.00 (3)	2012.00	27	6036
(3) STA 20+55.00 TO STA 120+70.00	10015.00	27	30045
STA 120+70.00 TO STA 126+45.00 (5)	575.00	37	2364

	TOTAL TRAVEL LANE AREA		**38445**

INTERSECTIONS

FM 2668	VAR	VAR	807

	TOTAL INTERSECTION AREA		**807**

Project Number: **Sheet** 106

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3057 PROJECT #44 CONT 3087-01-009 MATAGORDA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 646-0.413
(5) STA 126+45.00 = MP: 2.394 = TRM 648+0.008

(2) NO EQUATIONS
(3) EXCEPTION: STA 20+12.00 TO STA 20+55.00 = -43.00 FT = -0.008 MI (RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 20+12.00 TO STA 20+55.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 3057 PROJECT #44 CONT 3087-01-009 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	38445 SY	18454 GAL	
	INTERSECTIONS	0.48 GAL/SY	807 SY	387 GAL	
			TOTAL	**18841 GAL**	
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	38445 SY	350 CY	
	INTERSECTIONS	1 CY/110 SY	807 SY	7 CY	
			TOTAL	**357 CY**	
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	12602 LF	**315 EA**	
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**25204 LF**	
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	8169 LF	2042 LF	
	SINGLE NO PASS	10 LF/40 LF	4415 LF	1104 LF	
			TOTAL	**3146 LF**	
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		4415 LF	**4415 LF**	
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**25204 LF**	
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	8169 LF	2042 LF	
	SINGLE NO PASS	10 LF/40 LF	4415 LF	1104 LF	
			TOTAL	**3146 LF**	

Project Number: **Sheet** 107

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3057 PROJECT #44 CONT 3087-01-009 MATAGORDA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		4415 LF	**4415 LF**	
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	12 LF	
	RAILROAD STOP BAR		EST	72 LF	
			TOTAL	**84 LF**	
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**2 EA**	
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	8169 LF	102 EA	
	SINGLE NO PASS	1 EA/40 LF	4415 LF	110 EA	
			TOTAL	**212 EA**	

P R O J E C T D A T A

CONTROL: 0088-06-006 HWY: BU 59T
COUNTY : VICTORIA TYPE: SEAL COAT
LENGTH : 25,668.00 FT = 4.861 MI PROJECT: #45
LIMITS : FROM GUADALUPE RIVER TRAFFIC: 13511 VPD
TO N OF US 59

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 182+92.00 (3)	18292.00	64	130076
(3) STA 186+62.00 TO STA 247+30.00 (3)	6068.00	64	43150
(3) STA 247+42.00 TO STA 260+50.00 (5)	1308.00	64	9301

	TOTAL TRAVEL LANE AREA		**182527**
(1) STA 0+00.00 TO STA 182+92.00 (3)	18292.00	20	40649
(3) STA 186+62.00 TO STA 247+30.00 (3)	6068.00	20	13484
(3) STA 247+42.00 TO STA 260+50.00 (5)	1308.00	20	2907

	TOTAL SHOULDER AREA		**57040**
INTERSECTIONS			
COUNTY ROADS & CITY STREETS (15 EA)	VAR	VAR	4226

	TOTAL INTERSECTION AREA		**4226**

Project Number: **Sheet** 108

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[BU 59T PROJECT #45 CONT 0088-06-006 VICTORIA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.045 = TRM 638+1.080
(5) STA 260+50.00 = MP: 4.978 = TRM 642+2.008

(2) NO EQUATIONS
(3) EXCEPTIONS: STA 182+92.00 TO STA 186+62.00 = -370.00 FT = -0.070 MI
(DRY CREEK BRIDGE)
STA 247+30.00 TO STA 247+42.00 = - 12.00 FT = -0.002 MI
(RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 247+30.00 TO STA 247+42.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[BU 59T PROJECT #45 CONT 0088-06-006 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.26 GAL/SY	182527 SY	47457	GAL
	SHOULDERS	0.26 GAL/SY	57040 SY	14830	GAL
	INTERSECTIONS	0.26 GAL/SY	4226 SY	1099	GAL
			TOTAL	**63386**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	182527 SY	1259	CY
	SHOULDERS	1 CY/145 SY	57040 SY	393	CY
	INTERSECTIONS	1 CY/145 SY	4226 SY	29	CY
			TOTAL	**1681**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	LANE LINE	1 EA/40 LF	25688 LF X 2	1284	EA
	TURN LANE	1 EA/20 LF	1810 LF	91	EA
	ISLAND	1 EA/20 LF	990 LF	50	EA
	RR XING	1 EA/20 LF	1440 LF	72	EA
			TOTAL	**1497**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	GORE	2 EA/20 LF	440 LF X 2	88	EA
	CONTINUOUS LT TURN	1 EA/40 LF	25108 LF X 2	1255	EA
	DOUBLE NO PASS	1 EA/40 LF	140 LF	4	EA
			TOTAL	**1347**	**EA**
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	1810	LF
	ISLAND		EST	660	LF
	RR XING		EST	1440	LF
			TOTAL	**3910**	**LF**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**51336**	**LF**

Project Number: **Sheet** 109

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[BU 59T PROJECT #45 CONT 0088-06-006 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	25688 LF X 2	**12844**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	CONTINUOUS LT TURN	10 LF/40 LF	25108 LF X 2	**12554**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	GORE		440 LF X 4	1760	LF
	CONTINUOUS LT TURN		25108 LF X 2	50216	LF
	DOUBLE NO PASS		140 LF X 2	280	LF
			TOTAL	**52256**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**51336**	**LF**
668	**PREFAB PAV MRK TY C(W)(12")(SLD)**				
	ISLAND		EST	**330**	**LF**
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**168**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	100	LF
	RAILROAD STOP BAR		EST	240	LF
			TOTAL	**340**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	**33**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**1**	**EA**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**6**	**EA**

---[BU 59T PROJECT #45 CONT 0088-06-006 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST		**220 LF**
672	**REFL PAV MRKR TY I-C**				
	LANE LINE	1 EA/80 LF	25688 LF X 2		642 EA
	TURN LANE	1 EA/20 LF	1810 LF		91 EA
	ISLAND	1 EA/20 LF	990 LF		50 EA
	RR XING	2 EA/20 LF	1440 LF		144 EA

				TOTAL	**927 EA**
672	**REFL PAV MRKR TY II-A-A**				
	GORE	2 EA/20 LF	440 LF X 2		88 EA
	CONTINUOUS LT TURN	1 EA/40 LF	25108 LF X 2		1255 EA
	DOUBLE NO PASS	1 EA/40 LF	140 LF		4 EA

				TOTAL	**1347 EA**

Project Number: **Sheet** 110

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0371-01-092 HWY: BU 77S
COUNTY : VICTORIA TYPE: SEAL COAT
LENGTH : 18,008.00 FT = 3.410 MI PROJECT: #46
LIMITS : FROM BU 59T TRAFFIC: 1839 VPD
TO US 59 N FRONT RD

LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 1+66.00	(3)	166.00	26	480
(3) STA 4+73.00 TO STA 67+35.00	(3)	6262.00	26	18090
(3) STA 71+00.00 TO STA 179+45.00		10845.00	26	31330
STA 179+45.00 TO STA 184+40.00		495.00	26-38	1760
STA 184+40.00 TO STA 186+80.00	(5)	240.00	38	1013

		TOTAL TRAVEL LANE AREA		**52673**
(1) STA 0+00.00 TO STA 1+66.00	(3)	166.00	16	295
(3) STA 4+73.00 TO STA 67+35.00	(3)	6262.00	16	11132
(3) STA 71+00.00 TO STA 186+80.00	(5)	11580.00	16	20587

		TOTAL SHOULDER AREA		**32014**
ADDITIONAL AREA				
RAMP/GORE @ BU 59T		VAR	VAR	6046
RAMPS NORTH OF BUS 59T (2 EA)		VAR	VAR	7450

		TOTAL ADDITIONAL AREA		**13496**
INTERSECTIONS				
COUNTY ROADS (5 EA)		VAR	VAR	676
FM 446 (1 EA)		VAR	VAR	164
FRONTAGE ROADS (2 EA)		VAR	VAR	200

		TOTAL INTERSECTION AREA		**1040**

Project Number: **Sheet** 111

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[BU 77S PROJECT #46 CONT 0371-01-092 VICTORIA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.083 = TRM 582+0.051
(5) STA 186+80.00 = MP: 3.620 = TRM 584+1.588

(2) NO EQUATIONS
(3) EXCEPTIONS: STA 1+66.00 TO STA 4+73.00 = -307.00 FT = -0.058 MI
(RR BRIDGE)
STA 67+35.00 TO STA 71+00.00 = -365.00 FT = -0.069 MI
(DRY CREEK BRIDGE)
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[BU 77S PROJECT #46 CONT 0371-01-092 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (AC-20-5TR)**				
	TRAVEL LANES	0.26 GAL/SY	52673 SY	13695	GAL
	SHOULDERS	0.26 GAL/SY	32014 SY	8324	GAL
	ADDITIONAL AREA	0.26 GAL/SY	13496 SY	3509	GAL
	INTERSECTIONS	0.26 GAL/SY	1040 SY	270	GAL
			TOTAL	**25798**	**GAL**
316	**AGGR(TY-PE GR-4 SAC-B)**				
	TRAVEL LANES	1 CY/145 SY	52673 SY	363	CY
	SHOULDERS	1 CY/145 SY	32014 SY	221	CY
	ADDITIONAL AREA	1 CY/145 SY	13496 SY	93	CY
	INTERSECTIONS	1 CY/145 SY	1040 SY	7	CY
			TOTAL	**684**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	100 LF	5	EA
	GORE	1 EA/20 LF	138 LF X 2	14	EA
			TOTAL	**19**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	17062 LF	427	EA
	GORE	2 EA/20 LF	946 LF X 2	190	EA
	RAMP DOUBLE NO PASS	2 EA/20 LF	360 LF X 2	72	EA
			TOTAL	**689**	**EA**
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	100	LF
	GORE		138 LF X 2	276	LF
			TOTAL	**376**	**LF**

Project Number: **Sheet** 112

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[BU 77S PROJECT #46 CONT 0371-01-092 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**36016**	**LF**
666	**REF PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	8844 LF	2211	LF
	SINGLE NO PASS	10 LF/40 LF	7118 LF	1780	LF
			TOTAL	**3991**	**LF**
666	**REF PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		7118 LF	7118	LF
	DOUBLE NO PASS		1100 LF X 2	2200	LF
			TOTAL	**9318**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	RAMP EDGELINE		EST	**3720**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	GORE		946 LF X 4	3784	LF
	RAMP EDGELINE		EST	3000	LF
	RAMP DOUBLE NO PASS		360 LF X 2	720	LF
			TOTAL	**7504**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**36016**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	8844 LF	2211	LF
	SINGLE NO PASS	10 LF/40 LF	7118 LF	1780	LF
			TOTAL	**3991**	**LF**

---[BU 77S PROJECT #46 CONT 0371-01-092 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		7118 LF	7118 LF	
	DOUBLE NO PASS		1100 LF X 2	2200 LF	
			TOTAL	**9318 LF**	
668	**PREFAB PAV MRK TY C (W)(24")(SLD)**				
	STOP BAR		EST	**100 LF**	
668	**PREFAB PAV MRK TY C (Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**80 LF**	
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	100 LF	5 EA	
	GORE	1 EA/20 LF	138 LF X 2	14 EA	
			TOTAL	**19 EA**	
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	8844 LF	111 EA	
	SINGLE NO PASS	1 EA/40 LF	7118 LF	178 EA	
	DOUBLE NO PASS	1 EA/40 LF	1100 LF	28 EA	
	GORE	2 EA/20 LF	946 LF X 2	190 EA	
	RAMP DOUBLE NO PASS	2 EA/20 LF	360 LF X 2	72 EA	
			TOTAL	**579 EA**	

Project Number: **Sheet** 113

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 1698-01-024 HWY: FM 1685
COUNTY : VICTORIA TYPE: SEAL COAT
LENGTH : 33,890.00 FT = 6.418 MI PROJECT: #47
LIMITS : FROM FM 236 TRAFFIC: 1388 VPD
TO BU 59T

	LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1)	STA 0+00.00 TO STA 79+25.00		7925.00	24	21133
	STA 79+25.00 TO STA 85+20.00		595.00	24-26	1653
	STA 85+20.00 TO STA 156+95.00		7175.00	26	20728
	STA 156+95.00 TO STA 166+70.00	(3)	975.00	26-68	5092
(3)	STA 175+05.00 TO STA 181+30.00		625.00	68-26	3264
	STA 181+30.00 TO STA 347+25.00	(5)	16595.00	26	47941

			TOTAL TRAVEL LANE AREA		**99811**

(1)	STA 0+00.00 TO STA 79+25.00		7925.00	12	10567

			TOTAL SHOULDER AREA		**10567**

INTERSECTIONS				
	COUNTY ROADS & CITY STREETS (12 EA)	VAR	VAR	1862

		TOTAL INTERSECTION AREA		**1862**

Project Number: **Sheet** 114

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1685 PROJECT #47 CONT 1698-01-024 VICTORIA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 5.012 = TRM 576-0.017
(5) STA 347+25.00 = MP: 11.588 = TRM 582+0.585

(2) NO EQUATIONS
(3) EXCEPTION: STA 166+70.00 TO STA 175+05.00 = -835.00 FT = -0.158 MI
(US 77 INT - HOT MIX)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 1685 PROJECT #47 CONT 1698-01-024 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.26 GAL/SY	99811 SY	25951	GAL
	SHOULDERS	0.26 GAL/SY	10567 SY	2747	GAL
	INTERSECTIONS	0.26 GAL/SY	1862 SY	484	GAL
			TOTAL	**29182**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	99811 SY	907	CY
	SHOULDERS	1 CY/110 SY	10567 SY	96	CY
	INTERSECTIONS	1 CY/110 SY	1862 SY	17	CY
			TOTAL	**1020**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	LANE LINE	1 EA/40 LF	16355 LF	409	EA
	TURN LANE	1 EA/20 LF	360 LF	18	EA
			TOTAL	**427**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	32355 LF	809	EA
	CONTINUOUS LT TURN	1 EA/40 LF	630 LF X 2	32	EA
	GORE	2 EA/20 LF	905 LF X 2	182	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1033**	**EA**
666	**REFL PAV MRK TY I(W)8"(SLD)(100MIL)**				
	TURN LANE		EST	**360**	**LF**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**67780**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	5940 LF	1485	LF
	SINGLE NO PASS	10 LF/40 LF	11315 LF	2829	LF
			TOTAL	**4314**	**LF**

Project Number: **Sheet** 115

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1685 PROJECT #47 CONT 1698-01-024 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		11315 LF	11315	LF
	DOUBLE NO PASS		15715 LF X 2	31430	LF
			TOTAL	**42745**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(BRK)(100MIL)**				
	LANE LINE	10 LF/40 LF	16355 LF	**4089**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	CONTINUOUS LT TURN	10 LF/40 LF	630 LF X 2	**315**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	CONTINUOUS LT TURN		630 LF X 2	1260	LF
	GORE		905 LF X 4	3620	LF
			TOTAL	**4880**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**67780**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	5940 LF	1485	LF
	SINGLE NO PASS	10 LF/40 LF	11315 LF	2829	LF
			TOTAL	**4314**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		11315 LF	11315	LF
	DOUBLE NO PASS		15715 LF X 2	31430	LF
			TOTAL	**42745**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**135**	**LF**

---[FM 1685 PROJECT #47 CONT 1698-01-024 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	RT TURN		EST		**2 EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"STOP"		EST		3 EA
	"AHEAD"		EST		3 EA

				TOTAL	**6 EA**
672	**REFL PAV MRKR TY I-C**				
	LANE LINE	1 EA/80 LF	16355 LF		204 EA
	TURN LANE	1 EA/20 LF	360 LF		18 EA

				TOTAL	**222 EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	5940 LF		74 EA
	SINGLE NO PASS	1 EA/40 LF	11315 LF		283 EA
	DOUBLE NO PASS	1 EA/40 LF	7755 LF		194 EA
	DOUBLE NO PASS	2 EA/80 LF	7960 LF		200 EA
	CONTINUOUS LT TURN	1 EA/40 LF	630 LF X 2		32 EA
	GORE	2 EA/20 LF	905 LF X 2		182 EA

				TOTAL	**965 EA**

Project Number: **Sheet** 116

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 2601-01-016 HWY: FM 2615
COUNTY : VICTORIA TYPE: SEAL COAT
LENGTH : 30,288.00 FT = 5.736 MI PROJECT: #48
LIMITS : FROM US 87 TRAFFIC: 568 VPD
TO FM 1686

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 0+50.00 (3)	50.00	25	139
(3) STA 0+62.00 TO STA 303+00.00 (5)	30238.00	25	83994

	TOTAL TRAVEL LANE AREA		**84133**

INTERSECTIONS

COUNTY ROADS (7 EA)	VAR	VAR	805

	TOTAL INTERSECTION AREA		**805**

Project Number: **Sheet** 117

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2615 PROJECT #48 CONT 2601-01-016 VICTORIA CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.013 = TRM 588-0.038
(5) STA 303+00.00 = MP: 5.751 = TRM 592+1.758

(2) NO EQUATIONS
(3) EXCEPTION: STA 0+50.00 TO STA 0+62.00 = -12.00 FT = -0.002 MI (RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 0+50.00 TO STA 0+62.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 2615 PROJECT #48 CONT 2601-01-016 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	84133 SY	42067	GAL
	INTERSECTIONS	0.50 GAL/SY	805 SY	403	GAL
			TOTAL	**42470**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	84133 SY	765	CY
	INTERSECTIONS	1 CY/110 SY	805 SY	7	CY
			TOTAL	**772**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	30288 LF	757	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**767**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	25250 LF	6313	LF
	SINGLE NO PASS	10 LF/40 LF	4000 LF	1000	LF
			TOTAL	**7313**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		4000 LF	4000	LF
	DOUBLE NO PASS		1000 LF X 2	2000	LF
			TOTAL	**6000**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**60576**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	25250 LF	6313	LF
	SINGLE NO PASS	10 LF/40 LF	4000 LF	1000	LF
			TOTAL	**7313**	**LF**

Project Number: **Sheet** 118

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2615 PROJECT #48 CONT 2601-01-016 VICTORIA CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		4000 LF	4000	LF
	DOUBLE NO PASS		1000 LF X 2	2000	LF
			TOTAL	**6000**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	40	LF
	RAILROAD STOP BAR		EST	48	LF
			TOTAL	**88**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**1**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	25250 LF	316	EA
	SINGLE NO PASS	1 EA/40 LF	4000 LF	100	EA
	DOUBLE NO PASS	1 EA/40 LF	1000 LF	25	EA
			TOTAL	**441**	**EA**

P R O J E C T D A T A

CONTROL: 0497-02-044 HWY: FM 616
COUNTY : JACKSON TYPE: SEAL COAT
LENGTH : 21,485.00 FT = 4.069 MI PROJECT: #49
LIMITS : FROM FM 234 TRAFFIC: 2856 VPD
TO FM 1593

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 59+00.00 (3)	5900.00	24	15733
(3) STA 63+00.00 TO STA 116+25.00 (3)	5325.00	24	14200
(3) STA 125+10.00 TO STA 141+10.00 (3)	1600.00	24	4267
(3) STA 151+70.00 TO STA 203+70.00 (3)	5200.00	24	13867
(3) STA 204+10.00 TO STA 238+70.00 (5)	3460.00	28	10764

	TOTAL TRAVEL LANE AREA		**58831**
(1) STA 0+00.00 TO STA 59+00.00 (3)	5900.00	20	13111
(3) STA 63+00.00 TO STA 116+25.00 (3)	5325.00	20	11833
(3) STA 125+10.00 TO STA 141+10.00 (3)	1600.00	20	3556
(3) STA 151+70.00 TO STA 194+80.00 (3)	4310.00	20	9578
STA 236+55.00 TO STA 238+70.00 (5)	215.00	16	382

	TOTAL SHOULDER AREA		**38460**
ADDITIONAL AREA			
STA 107+46.00 TO STA 109+58.00			
(BIRD WATCH PARKING)	212.00	22	518

	TOTAL ADDITIONAL AREA		**518**
INTERSECTIONS			
COUNTY ROADS & CITY STREETS (13 EA)	VAR	VAR	1160

	TOTAL INTERSECTION AREA		**1160**

Project Number: **Sheet** 119

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 616 PROJECT #49 CONT 0497-02-044 JACKSON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.343 = TRM 712+0.316
(5) STA 238+70.00 = MP: 4.863 = TRM 716+0.805

(2) NO EQUATIONS
(3) EXCEPTIONS: STA 59+00.00 TO STA 63+00.00 = - 400.00 FT = -0.076 MI
(LAVACA RIVER WEST RELIEF BRIDGE)
STA 116+25.00 TO STA 125+10.00 = - 885.00 FT = -0.168 MI
(LAVACA RIVER BRIDGE)
STA 141+10.00 TO STA 151+70.00 = -1060.00 FT = -0.200 MI
(LAVACA RIVER EAST RELIEF BRIDGE)
STA 203+70.00 TO STA 204+10.00 = - 40.00 FT = -0.007 MI
(RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 203+70.00 TO STA 204+10.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 616 PROJECT #49 CONT 0497-02-044 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.50 GAL/SY	58831 SY	29416	GAL
	SHOULDERS	0.50 GAL/SY	38460 SY	19230	GAL
	ADDITIONAL AREA	0.50 GAL/SY	518 SY	259	GAL
	INTERSECTIONS	0.50 GAL/SY	1160 SY	580	GAL
			TOTAL	**49485**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	58831 SY	535	CY
	SHOULDERS	1 CY/110 SY	38460 SY	350	CY
	ADDITIONAL AREA	1 CY/110 SY	518 ST	5	CY
	INTERSECTIONS	1 CY/110 SY	1160 SY	11	CY
			TOTAL	**901**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	21485 LF	**537**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**34270**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	12230 LF	3058	LF
	SINGLE NO PASS	10 LF/40 LF	9025 LF	2256	LF
			TOTAL	**5314**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		9025 LF	**9025**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**8700**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**34270**	**LF**

Project Number: **Sheet** 120

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 616 PROJECT #49 CONT 0497-02-044 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	12230 LF	3058	LF
	SINGLE NO PASS	10 LF/40 LF	9025 LF	2256	LF
			TOTAL	**5314**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		9025 LF	**9025**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	130	LF
	RAILROAD STOP BAR		EST	72	LF
			TOTAL	**202**	**LF**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**2**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	12230 LF	153	EA
	SINGLE NO PASS	1 EA/40 LF	9025 LF	226	EA
			TOTAL	**379**	**EA**

P R O J E C T D A T A

CONTROL: 0497-03-011 HWY: FM 616
COUNTY : JACKSON TYPE: SEAL COAT
LENGTH : 31,782.00 FT = 6.019 MI PROJECT: #50
LIMITS : FROM WEST CARANCAHUA CREEK TRAFFIC: 779 VPD
TO MATAGORDA C/L

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 317+82.00 (5)	31782	28	98877
		TOTAL TRAVEL LANE AREA	**98877**
INTERSECTIONS			
COUNTY ROADS (3 EA)	VAR	VAR	375
		TOTAL INTERSECTION AREA	**375**

---[FM 616 PROJECT #50 CONT 0497-03-011 JACKSON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 3.229 = TRM 724+0.891
(5) STA 317+82.00 = MP: 9.248 = TRM 730+0.941

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
_____, P.E. 08/01/2022
DESIGN ENGINEER DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 616 PROJECT #50 CONT 0497-03-011 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.46 GAL/SY	98877 SY	45483	GAL
	INTERSECTIONS	0.46 GAL/SY	375 SY	173	GAL
			TOTAL	**45656**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	98877 SY	899	CY
	INTERSECTIONS	1 CY/110 SY	375 SY	3	CY
			TOTAL	**902**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	31782 LF	795	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**805**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**63564**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	29922 LF	7481	LF
	SINGLE NO PASS	10 LF/40 LF	740 LF	185	LF
			TOTAL	**7666**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		740 LF	740	LF
	DOUBLE NO PASS		1120 LF X 2	2240	LF
			TOTAL	**2980**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**63564**	**LF**

Project Number: **Sheet** 122

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 616 PROJECT #50 CONT 0497-03-011 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	29922 LF	7481	LF
	SINGLE NO PASS	10 LF/40 LF	740 LF	185	LF
			TOTAL	**7666**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		740 LF	740	LF
	DOUBLE NO PASS		1120 LF X 2	2240	LF
			TOTAL	**2980**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**16**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	29922 LF	374	EA
	SINGLE NO PASS	1 EA/40 LF	740 LF	19	EA
	DOUBLE NO PASS	1 EA/40 LF	1120 LF	28	EA
			TOTAL	**421**	**EA**

P R O J E C T D A T A

CONTROL: 0515-01-072 HWY: FM 234
COUNTY : JACKSON TYPE: SEAL COAT
LENGTH : 17,250.00 FT = 3.267 MI PROJECT: #51
LIMITS : FROM CR 112(LOST BRIDGE RD) TRAFFIC: 209 VPD
TO US 59 N FRT RD(EL TORO)

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 172+50.00 (5)	17250.00	26	49833

		TOTAL TRAVEL LANE AREA	**49833**

INTERSECTIONS

COUNTY ROADS (6 EA)	VAR	VAR	1545

		TOTAL INTERSECTION AREA	**1545**

Project Number: **Sheet** 123

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 234 PROJECT #51 CONT 0515-01-072 JACKSON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 8.301 = TRM 538+0.314
(5) STA 172+50.00 = MP: 11.568 = TRM 540+1.588

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

---[FM 234 PROJECT #51 CONT 0515-01-072 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	49833 SY	24917	GAL
	INTERSECTIONS	0.50 GAL/SY	1545 SY	773	GAL
			TOTAL	**25690**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	49833 SY	453	CY
	INTERSECTIONS	1 CY/110 SY	1545 SY	14	CY
			TOTAL	**467**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	17250 LF	431	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**441**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	10445 LF	2611	LF
	SINGLE NO PASS	10 LF/40 LF	3050 LF	763	LF
			TOTAL	**3374**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		3050 LF	3050	LF
	DOUBLE NO PASS		3560 LF X 2	7120	LF
			TOTAL	**10170**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**34500**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	10445 LF	2611	LF
	SINGLE NO PASS	10 LF/40 LF	3050 LF	763	LF
			TOTAL	**3374**	**LF**

Project Number: **Sheet** 124

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 234 PROJECT #51 CONT 0515-01-072 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		3050 LF	3050	LF
	DOUBLE NO PASS		3560 LF X 2	7120	LF
			TOTAL	**10170**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**65**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	10445 LF	131	EA
	SINGLE NO PASS	1 EA/40 LF	3050 LF	76	EA
	DOUBLE NO PASS	1 EA/40 LF	3560 LF	89	EA
			TOTAL	**296**	**EA**

P R O J E C T D A T A

CONTROL: 0671-01-004 HWY: FM 3280
COUNTY : JACKSON TYPE: SEAL COAT
LENGTH : 15,835.00 FT = 2.999 MI PROJECT: #52
LIMITS : FROM SH 35 TRAFFIC: 215 VPD
TO CALHOUN C/L

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 158+35.00 (5)	15835.00	24	42227

		TOTAL TRAVEL LANE AREA	**42227**
INTERSECTIONS			
SH 35	VAR	VAR	110

		TOTAL INTERSECTION AREA	**110**

Project Number: **Sheet** 125

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3280 PROJECT #52 CONT 0671-01-004 JACKSON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 5.000 = TRM 544-0.066
(5) STA 158+35.00 = MP: 7.999 = TRM 546+0.996

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 3280 PROJECT #52 CONT 0671-01-004 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL SY	42227 SY	21114	GAL
	INTERSECTIONS	0.50 GAL SY	110 SY	55	GAL
			TOTAL	**21169**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	42227 SY	384	CY
	INTERSECTIONS	1 CY/110 SY	110 SY	1	CY
			TOTAL	**385**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	15835 LF	**396**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	15105 LF	3776	LF
	SINGLE NO PASS	10 LF/40 LF	730 LF	183	LF
			TOTAL	**3959**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		730 LF	**730**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	15105 LF	3776	LF
	SINGLE NO PASS	10 LF/40 LF	730 LF	183	LF
			TOTAL	**3959**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		730 LF	**730**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**16**	**LF**

Project Number: **Sheet** 126

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3280 PROJECT #52 CONT 0671-01-004 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	15105 LF	189	EA
	SINGLE NO PASS	1 EA/40 LF	730 LF	18	EA
			TOTAL	**207**	**EA**

P R O J E C T D A T A

CONTROL: 1090-01-028 HWY: FM 530
COUNTY : JACKSON TYPE: SEAL COAT
LENGTH : 44,450.00 FT = 8.418 MI PROJECT: #53
LIMITS : FROM CR 274 TRAFFIC: 369 VPD
TO US 59

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 304+80.00 (3)	30480.00	26	88053
(3) STA 307+90.00 TO STA 328+00.00	2010.00	26	5807
STA 328+00.00 TO STA 334+10.00	610.00	29	1966
STA 334+10.00 TO STA 442+60.00	10850.00	26	31344
STA 442+60.00 TO STA 447+60.00 (5)	500.00	24	1333

	TOTAL TRAVEL LANE AREA		**128503**
STA 442+60.00 TO STA 447+60.00 (5)	500.00	16	889

	TOTAL SHOULDER AREA		**889**
INTERSECTIONS			
COUNTY ROADS (4 EA)	VAR	VAR	350

	TOTAL INTERSECTION AREA		**350**

Project Number: **Sheet** 127

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 530 PROJECT #53 CONT 1090-01-028 JACKSON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 10.863 = TRM 528+0.740
(5) STA 447+60.00 = MP: 19.340 = TRM 536+1.227

(2) NO EQUATIONS
(3) EXCEPTIONS: STA 304+80.00 TO STA 307+90.00 = -310.00 FT = -0.059 MI (BRIDGE)
(4) NO AT GRADE RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED PROFESSIONAL ENGINEER

---[FM 530 PROJECT #53 CONT 1090-01-028 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	128503 SY	64252	GAL
	SHOULDERS	0.50 GAL/SY	889 SY	445	GAL
	INTERSECTIONS	0.50 GAL/SY	350 SY	175	GAL
			TOTAL	**64872**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	128503 SY	1168	CY
	SHOULDERS	1 CY/110 SY	889 SY	8	CY
	INTERSECTIONS	1 CY/110 SY	350 SY	3	CY
			TOTAL	**1179**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	44450 LF	1111	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1121**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	27445 LF	6861	LF
	SINGLE NO PASS	10 LF/40 LF	12600 LF	3150	LF
			TOTAL	**10011**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		12600 LF	12600	LF
	DOUBLE NO PASS		4405 LF X 2	8810	LF
			TOTAL	**21410**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**88900**	**LF**

Project Number: **Sheet** 128

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 530 PROJECT #53 CONT 1090-01-028 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	27445 LF	6861	LF
	SINGLE NO PASS	10 LF/40 LF	12600 LF	3150	LF
			TOTAL	**10011**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		12600 LF	12600	LF
	DOUBLE NO PASS		4405 LF X 2	8810	LF
			TOTAL	**21410**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**40**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	27445 LF	343	EA
	SINGLE NO PASS	1 EA/40 LF	12600 LF	315	EA
	DOUBLE NO PASS	1 EA/40 LF	4405 LF	110	EA
			TOTAL	**768**	**EA**

P R O J E C T D A T A

CONTROL: 1945-01-023 HWY: FM 1822
COUNTY : JACKSON TYPE: SEAL COAT
LENGTH : 40,009.00 FT = 7.577 MI PROJECT: #54
LIMITS : FROM SL 521 TRAFFIC: 3501 VPD
TO FM 3131

LIMITS STA TO STA		LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 4+12.00	(3)	412.00	39	1785
(3) STA 4+23.00 TO STA 34+25.00		3002.00	42	14009
STA 34+25.00 TO STA 37+20.00		295.00	54	1770
STA 37+20.00 TO STA 64+58.00		2738.00	42	12777
STA 64+58.00 TO STA 348+91.00		28433.00	28	88458
STA 348+91.00 TO STA 354+84.00		593.00	24	1581
STA 354+84.00 TO STA 400+20.00	(5)	4536.00	28	14112
				134492
TOTAL TRAVEL LANE AREA				**134492**
STA 4+91.00 TO STA 22+14.00		1723.00	12	2297
				2297
TOTAL SHOULDER AREA				**2297**
INTERSECTIONS				
SL 521		VAR	VAR	237
CITY STREETS & COUNTY ROADS (22 EA)		VAR	VAR	2866
				3103
TOTAL INTERSECTION AREA				**3103**

Project Number: **Sheet** 129

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1822 PROJECT #54 CONT 1945-01-023 JACKSON CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.008 = TRM 526-0.013
(5) STA 400+20.00 = MP: 8.587 = TRM 532+1.578

(2) NO EQUATIONS
(3) EXCEPTION: STA 4+12.00 TO STA 4+23.00 = -11.00 FT = -0.002 MI (RR XING)
(4) RAILROAD CROSSING: 1 RETAINED STA 4+12.00 TO STA 4+23.00

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
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---[FM 1822 PROJECT #54 CONT 1945-01-023 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	134492 SY	64556	GAL
	SHOULDERS	0.48 GAL/SY	2297 SY	1103	GAL
	INTERSECTIONS	0.48 GAL/SY	3103 SY	1489	GAL
			TOTAL	**67148**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	134492 SY	1223	CY
	SHOULDERS	1 CY/110 SY	2297 SY	21	CY
	INTERSECTIONS	1 CY/110 SY	3103 SY	28	CY
			TOTAL	**1272**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY W**				
	TURN LANE	1 EA/20 LF	500 LF	25	EA
	RR XING	1 EA/20 LF	80 LF	4	EA
			TOTAL	**29**	**EA**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	33139 LF	828	EA
	CONTINUOUS LT TURN	1 EA/40 LF	6458 LF X 2	323	EA
	GORE	2 EA/20 LF	412 LF X 2	82	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**1243**	**EA**
666	**REFL PAV MRK TY I(W)(8")(SLD)(100MIL)**				
	TURN LANE		EST	500	LF
	RR XING		EST	80	LF
			TOTAL	**580**	**LF**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**80018**	**LF**

Project Number: **Sheet** 130

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 1822 PROJECT #54 CONT 1945-01-023 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	18180 LF	4545	LF
	SINGLE NO PASS	10 LF/40 LF	7940 LF	1985	LF
			TOTAL	**6530**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		7940 LF	7940	LF
	DOUBLE NO PASS		7019 LF X 2	14038	LF
			TOTAL	**21978**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL)**				
	CONTINUOUS LT TURN	10 LF/40 LF	6458 LF X 2	**3229**	**LF**
666	**RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL)**				
	CONTINUOUS LT TURN		6458 LF X 2	12916	LF
	GORE		412 LF X 4	1648	LF
			TOTAL	**14564**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**80018**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	18180 LF	4545	LF
	SINGLE NO PASS	10 LF/40 LF	7940 LF	1985	LF
			TOTAL	**6530**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		7940 LF	7940	LF
	DOUBLE NO PASS		7019 LF X 2	14038	LF
			TOTAL	**21978**	**LF**

---[FM 1822 PROJECT #54 CONT 1945-01-023 JACKSON CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
668	**PREFAB PAV MRK TY C(W)(18")(SLD)**				
	SCHOOL ZONE		EST	**126**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	218	LF
	RAILROAD STOP BAR		EST	120	LF
	CROSSWALK		EST	138	LF
			TOTAL	**476**	**LF**
668	**PREFAB PAV MRK TY C(W)(ARROW)**				
	LT TURN		EST	1	EA
	RT TURN		EST	2	EA
			TOTAL	**3**	**EA**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"ONLY"		EST	**2**	**EA**
668	**PREFAB PAV MRK TY C(W)(RR XING)**		EST	**4**	**EA**
668	**PREFAB PAV MRK TY C(Y)(24")(SLD)**				
	GORE CROSSHATCH		EST	**108**	**LF**
672	**REFL PAV MRKR TY I-C**				
	TURN LANE	1 EA/20 LF	500 LF	25	EA
	RR XING	1 EA/20 LF	80 LF	4	EA
			TOTAL	**29**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	18180 LF	227	EA
	SINGLE NO PASS	1 EA/40 LF	7940 LF	199	EA
	DOUBLE NO PASS	1 EA/40 LF	7019 LF	175	EA
	CONTINUOUS LT TURN	1 EA/40 LF	6458 LF X 2	323	EA
	GORE	2 EA/20 LF	412 LF X 2	82	EA
			TOTAL	**1006**	**EA**

Project Number: **Sheet** 131

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 0420-08-009 HWY: SS 159
COUNTY : CALHOUN TYPE: SEAL COAT
LENGTH : 12,123.00 FT = 2.296 MI PROJECT: #55
LIMITS : FROM SH 172 TRAFFIC: 514 VPD
TO END OF STATE MAINTENANCE

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 121+23.00 (5)	12123.00	21	28287
		TOTAL TRAVEL LANE AREA	**28287**

INTERSECTIONS

SH 172	VAR	VAR	162
COUNTY ROADS & CITY STREETS (7 EA)	VAR	VAR	647
		TOTAL INTERSECTION AREA	**809**

Project Number: **Sheet** 132

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SS 159 PROJECT #55 CONT 0420-08-009 CALHOUN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.003 = TRM 618-0.013
(5) STA 121+23.00 = MP: 2.299 = TRM 620+0.300

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
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---[SS 159 PROJECT #55 CONT 0420-08-009 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.48 GAL/SY	28287 SY	13578	GAL
	INTERSECTIONS	0.48 GAL/SY	809 SY	388	GAL
			TOTAL	**13966**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	28287 SY	257	CY
	INTERSECTIONS	1 CY/110 SY	809 SY	7	CY
			TOTAL	**264**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	12123 LF	303	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**313**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	11023 LF	2756	LF
	SINGLE NO PASS	10 LF/40 LF	1100 LF	275	LF
			TOTAL	**3031**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		1100 LF	**1100**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	11023 LF	2756	LF
	SINGLE NO PASS	10 LF/40 LF	1100 LF	275	LF
			TOTAL	**3031**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		1100 LF	**1100**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**12**	**LF**

Project Number: **Sheet** 133

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[SS 159 PROJECT #55 CONT 0420-08-009 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	11023 LF	138	EA
	SINGLE NO PASS	1 EA/40 LF	1100 LF	28	EA
			TOTAL	**166**	**EA**

P R O J E C T D A T A

CONTROL: 0671-02-004 HWY: FM 3280
COUNTY : CALHOUN TYPE: SEAL COAT
LENGTH : 10,545.00 FT = 1.997 MI PROJECT: #56
LIMITS : FROM JACKSON C/L TRAFFIC: 60 VPD
TO END OF STATE MAINTENANCE

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 105+45.00 (5)	10545.00	24	28120
		TOTAL TRAVEL LANE AREA	**28120**

ADDITIONAL AREA

FROM TRM 550+0.000 TO EOM	1490.00	24	3973
		TOTAL ADDITIONAL AREA	**3973**

Project Number: **Sheet** 134

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3280 PROJECT #56 CONT 0671-02-004 CALHOUN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 1.000 = TRM 546+0.996
(5) STA 105+45.00 = MP: 2.997 = TRM 550+0.000

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 3280 PROJECT #56 CONT 0671-02-004 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	28120 SY	14060	GAL
	ADDITIONAL AREA	0.50 GAL/SY	3973 SY	1987	GAL
			TOTAL	**16047**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	28120 SY	256	CY
	ADDITIONAL AREA	1 CY/110 SY	3973 SY	36	CY
			TOTAL	**292**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	12035 LF	**301**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	12035 LF	**3009**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	12035 LF	**3009**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	12035 LF	**150**	**EA**

Project Number: **Sheet** 135

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

P R O J E C T D A T A

CONTROL: 2016-01-013 HWY: FM 2143
COUNTY : CALHOUN TYPE: SEAL COAT
LENGTH : 24,030.00 FT = 4.551 MI PROJECT: #57
LIMITS : FROM SH 35 TRAFFIC: 1150 VPD
TO SH 172

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 141+19.00 (3)	14119.00	28	43926
(3) STA 142+79.00 TO STA 241+90.00 (5)	9911.00	28	30834

	TOTAL TRAVEL LANE AREA		**74760**

INTERSECTIONS

SH 35	VAR	VAR	288
SH 172	VAR	VAR	242
COUNTY ROADS (3 EA)	VAR	VAR	330

	TOTAL INTERSECTION AREA		**860**

Project Number: **Sheet** 136

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2143 PROJECT #57 CONT 2016-01-013 CALHOUN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.006 = TRM 614-0.015
(5) STA 241+90.00 = MP: 4.587 = TRM 618+0.585

(2) NO EQUATIONS
(3) EXCEPTION: STA 141+19.00 TO STA 142+79.00 = -160.00 FT = -0.030 MI
(KELLER'S CREEK BRIDGE)
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 2143 PROJECT #57 CONT 2016-01-013 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.50 GAL/SY	74760 SY	37380	GAL
	INTERSECTIONS	0.50 GAL/SY	860 SY	430	GAL
			TOTAL	**37810**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	74760 SY	680	CY
	INTERSECTIONS	1 CY/110 SY	860 SY	8	CY
			TOTAL	**688**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	24030 LF	601	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**611**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**48060**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	19333 LF	4833	LF
	SINGLE NO PASS	10 LF/40 LF	3327 LF	832	LF
			TOTAL	**5665**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		3327 LF	3327	LF
	DOUBLE NO PASS		1370 LF X 2	2740	LF
			TOTAL	**6067**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**48060**	**LF**

Project Number: **Sheet** 137

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2143 PROJECT #57 CONT 2016-01-013 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	19333 LF	4833	LF
	SINGLE NO PASS	10 LF/40 LF	3327 LF	832	LF
			TOTAL	**5665**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		3327 LF	3327	LF
	DOUBLE NO PASS		1370 LF X 2	2740	LF
			TOTAL	**6067**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**33**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	19333 LF	242	EA
	SINGLE NO PASS	1 EA/40 LF	3327 LF	83	EA
	DOUBLE NO PASS	1 EA/40 LF	1370 LF	34	EA
			TOTAL	**359**	**EA**

P R O J E C T D A T A

CONTROL: 2714-01-005 HWY: FM 2717
COUNTY : CALHOUN TYPE: SEAL COAT
LENGTH : 18,302.00 FT = 3.466 MI PROJECT: #58
LIMITS : FROM END OF STATE MAINTENANCE TRAFFIC: 450 VPD
TO SH 316

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 183+02.00 (5)	18302.00	26	52872
		TOTAL TRAVEL LANE AREA	**52872**
INTERSECTIONS			
FM 2760	VAR	VAR	133
CITY STREETS (9 EA)	VAR	VAR	644
		TOTAL INTERSECTION AREA	**777**

Project Number: **Sheet** 138

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2717 PROJECT #58 CONT 2714-01-005 CALHOUN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.000 = TRM 556-0.004
(5) STA 183+02.00 = MP: 3.466 = TRM 558+1.509

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
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---[FM 2717 PROJECT #58 CONT 2714-01-005 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER II)**				
	TRAVEL LANES	0.50 GAL/SY	52872 SY	26436	GAL
	INTERSECTIONS	0.50 GAL/SY	777 SY	389	GAL
			TOTAL	**26825**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	52872 SY	481	CY
	INTERSECTIONS	1 CY/110 SY	777 SY	7	CY
			TOTAL	**488**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	18302 LF	458	EA
	BEGIN/END NO PASSING		EST	10	EA
			TOTAL	**468**	**EA**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	13870 LF	3468	LF
	SINGLE NO PASS	10 LF/40 LF	1541 LF	385	LF
			TOTAL	**3853**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		1541 LF	1541	LF
	DOUBLE NO PASS		2777 LF X 2	5554	LF
			TOTAL	**7095**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	13870 LF	3468	LF
	SINGLE NO PASS	10 LF/40 LF	1541 LF	385	LF
			TOTAL	**3853**	**LF**

Project Number: **Sheet** 139

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 2717 PROJECT #58 CONT 2714-01-005 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		1541 LF	1541	LF
	DOUBLE NO PASS		2777 LF X 2	5554	LF
			TOTAL	**7095**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**36**	**LF**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	13870 LF	173	EA
	SINGLE NO PASS	1 EA/40 LF	1541 LF	39	EA
	DOUBLE NO PASS	1 EA/40 LF	2777 LF	69	EA
			TOTAL	**281**	**EA**

P R O J E C T D A T A

CONTROL: 3171-01-011 HWY: FM 3084
COUNTY : CALHOUN TYPE: SEAL COAT
LENGTH : 19,938.00 FT = 3.776 MI PROJECT: #59
LIMITS : FROM FM 1090 TRAFFIC: 1441 VPD
TO INDEPENDENCE DRIVE

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY
(1) STA 0+00.00 TO STA 124+40.00	12440.00	29	40084
STA 124+40.00 TO STA 199+38.00 (5)	7498.00	24	19995

	TOTAL TRAVEL LANE AREA		**60079**

INTERSECTIONS			
FM 1090	VAR	VAR	272
COUNTY ROADS & CITY STREETS (7 EA)	VAR	VAR	890

	TOTAL INTERSECTION AREA		**1162**

---[FM 3084 PROJECT #59 CONT 3171-01-011 CALHOUN CO. CONT'D]---

LIMITS STA TO STA	LENGTH FT	WIDTH FT	AREA SY

(1) STA 0+00.00 = MP: 0.002 = TRM 552-0.035
(5) STA 199+38.00 = MP: 3.778 = TRM 554+1.784

(2) NO EQUATIONS
(3) NO EXCEPTIONS
(4) NO RAILROAD CROSSINGS

Amanda Anderle Fling, P.E.
DESIGN ENGINEER

08/01/2022
DATE

STATE OF TEXAS
AMANDA ANDERLE FLING
105989
LICENSED
PROFESSIONAL ENGINEER

---[FM 3084 PROJECT #59 CONT 3171-01-011 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
316	**ASPH (TIER I)**				
	TRAVEL LANES	0.48 GAL/SY	60079 SY	28838	GAL
	INTERSECTIONS	0.48 GAL/SY	1162 SY	558	GAL
			TOTAL	**29396**	**GAL**
316	**AGGR(TY-PE GR-3 SAC-B)**				
	TRAVEL LANES	1 CY/110 SY	60079 SY	546	CY
	INTERSECTIONS	1 CY/110 SY	1162 SY	11	CY
			TOTAL	**557**	**CY**
662	**WK ZN PAV MRK SHT TERM(TAB)TY Y-2**				
	CENTERLINE	1 EA/40 LF	19938 LF	**498**	**EA**
666	**REFL PAV MRK TY II(W)4"(SLD)**				
	EDGELINE		EST	**24880**	**LF**
666	**REFL PAV MRK TY II(Y)4"(BRK)**				
	PASS	10 LF/40 LF	18760 LF	4690	LF
	SINGLE NO PASS	10 LF/40 LF	1120 LF	280	LF
			TOTAL	**4970**	**LF**
666	**REFL PAV MRK TY II(Y)4"(SLD)**				
	SINGLE NO PASS		1120 LF	**1120**	**LF**
666	**RE PM W/RET REQ TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**14996**	**LF**
666	**REF PROF PAV MRK TY I(W)4"(SLD)(100MIL)**				
	EDGELINE		EST	**24880**	**LF**
666	**REF PROF PAV MRK TY I(Y)4"(BRK)(100MIL)**				
	PASS	10 LF/40 LF	18760 LF	4690	LF
	SINGLE NO PASS	10 LF/40 LF	1120 LF	280	LF
			TOTAL	**4970**	**LF**

Project Number: **Sheet** 141

County: GONZALES, ETC **Control** 0025-05-024, ETC

Highway: UA 90, ETC

---[FM 3084 PROJECT #59 CONT 3171-01-011 CALHOUN CO. CONT'D]---

B A S I S O F E S T I M A T E

ITEM	DESCRIPTION	RATE	BASIS	QUANTITY	UNIT
666	**REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL)**				
	SINGLE NO PASS		1120 LF	**1120**	**LF**
668	**PREFAB PAV MRK TY C(W)(24")(SLD)**				
	STOP BAR		EST	**38**	**LF**
668	**PREFAB PAV MRK TY C(W)(WORD)**				
	"STOP"		EST	2	EA
	"AHEAD"		EST	2	EA
			TOTAL	**4**	**EA**
672	**REFL PAV MRKR TY II-A-A**				
	PASS	1 EA/80 LF	18760 LF	235	EA
	SINGLE NO PASS	1 EA/40 LF	1120 LF	28	EA
			TOTAL	**263**	**EA**
6056	**PREFORMED IN-LANE (TRANS)RUMBLE STRIP**				
	@ RT TURN		EST	**80**	**LF**

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

DATE: $DATE$ $TIME$
FILE: $FILE$

SHEET 1 OF 12

Texas Department of Transportation

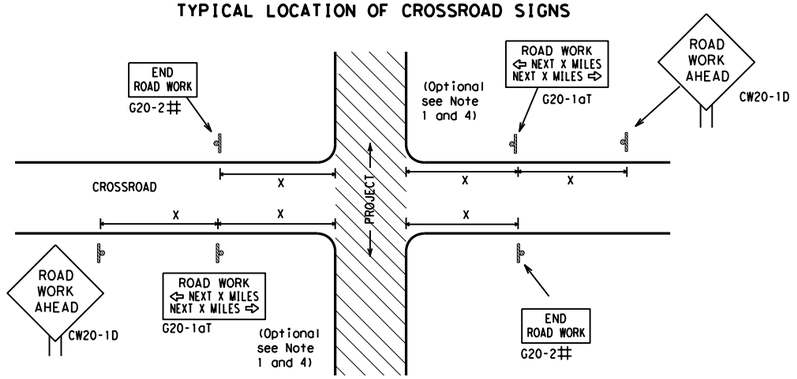
Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-03 7-13 9-07 8-14 5-10 5-21	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		142

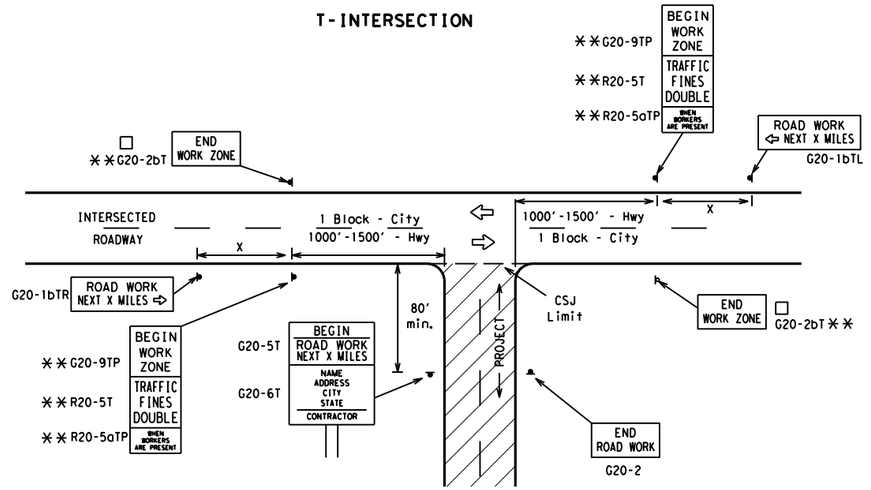
TYPICAL LOCATION OF CROSSROAD SIGNS



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]

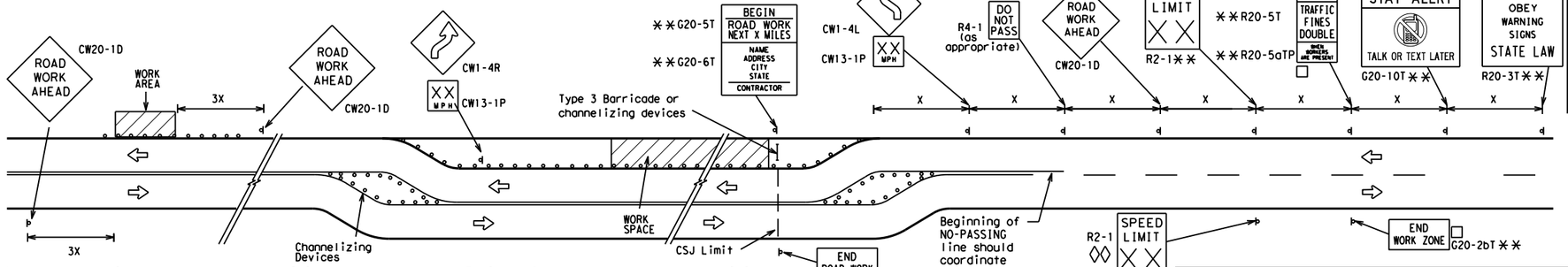
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

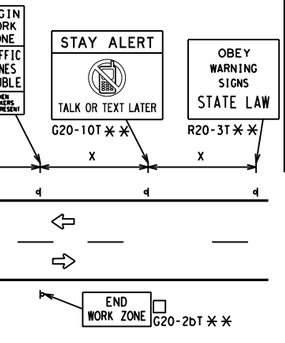
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may 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

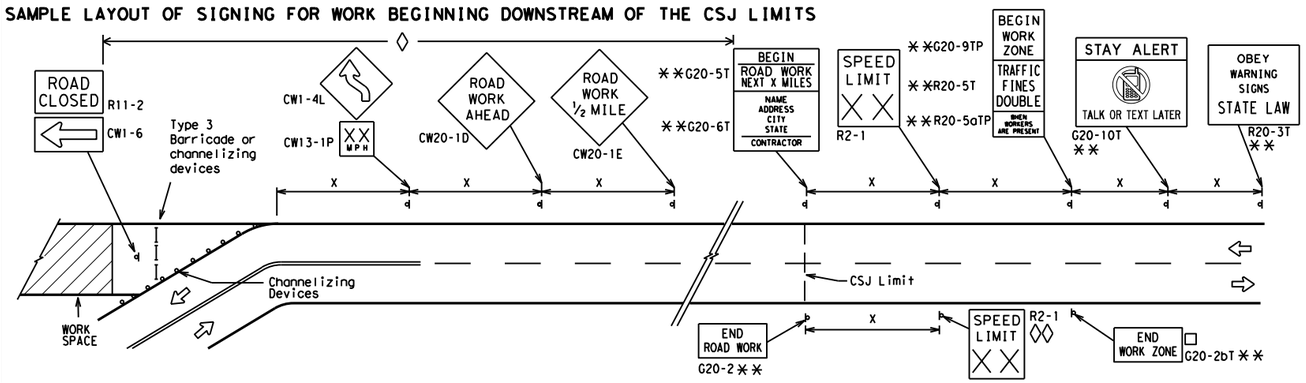


When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing 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.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	0025	05	024, ETC	UA 90, ETC
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DATE: $DATE$ $TIME$
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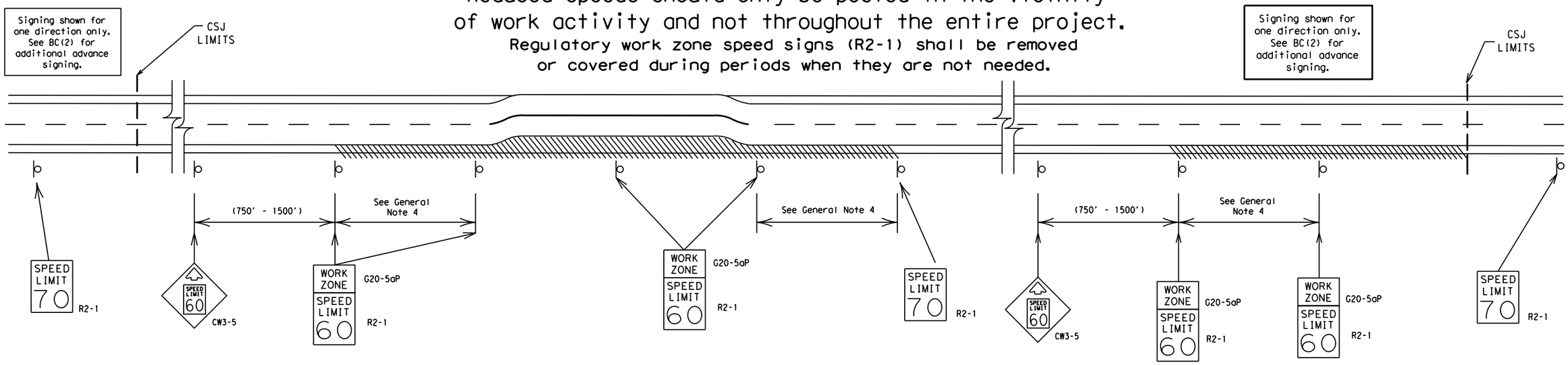
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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

BC(3)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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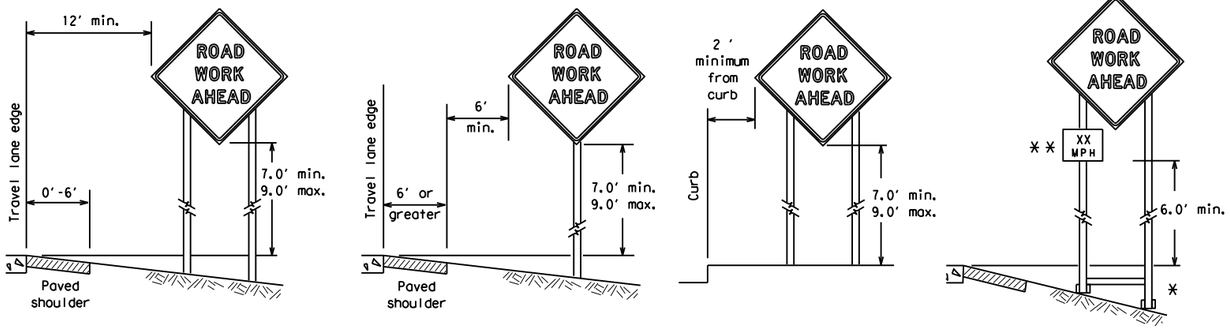
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		144

DATE: $DATE$ $TIME$
FILE: $FILE$

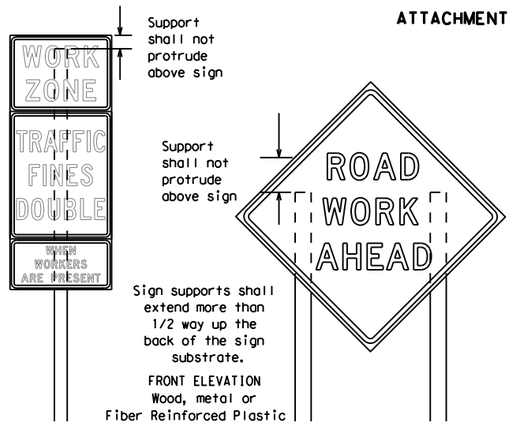
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



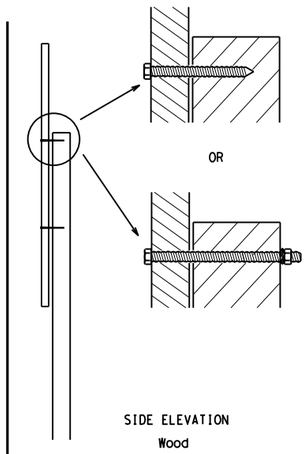
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** 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



FRONT ELEVATION
Wood, metal or
Fiber Reinforced Plastic



SIDE ELEVATION
Wood

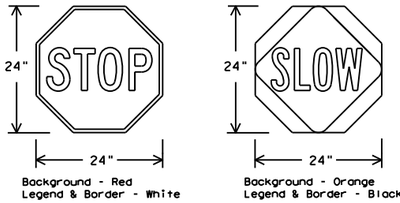
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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.



Background - Red
Legend & Border - White

Background - Orange
Legend & Border - Black

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.

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

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7-13 5-21	YKM	GONZALES, ETC		145

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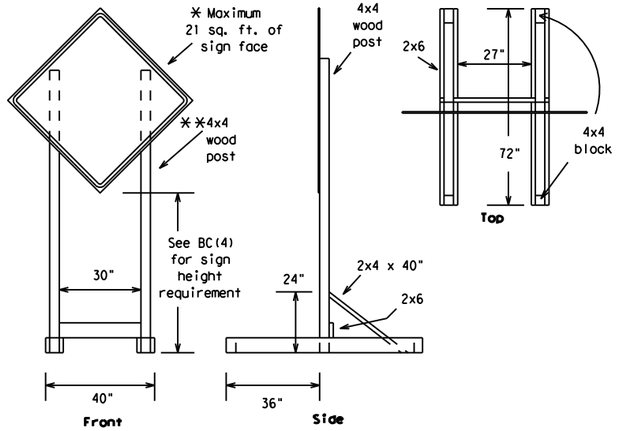
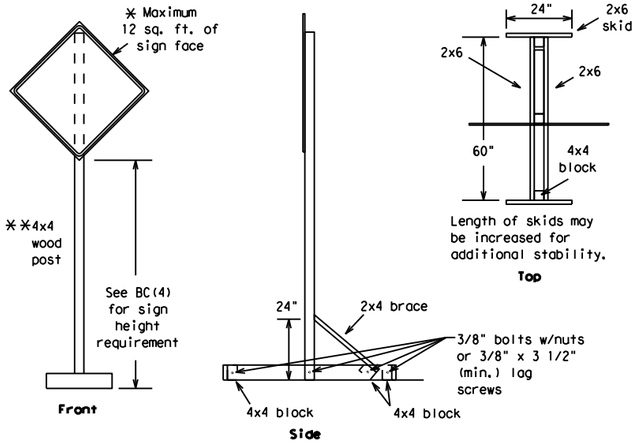
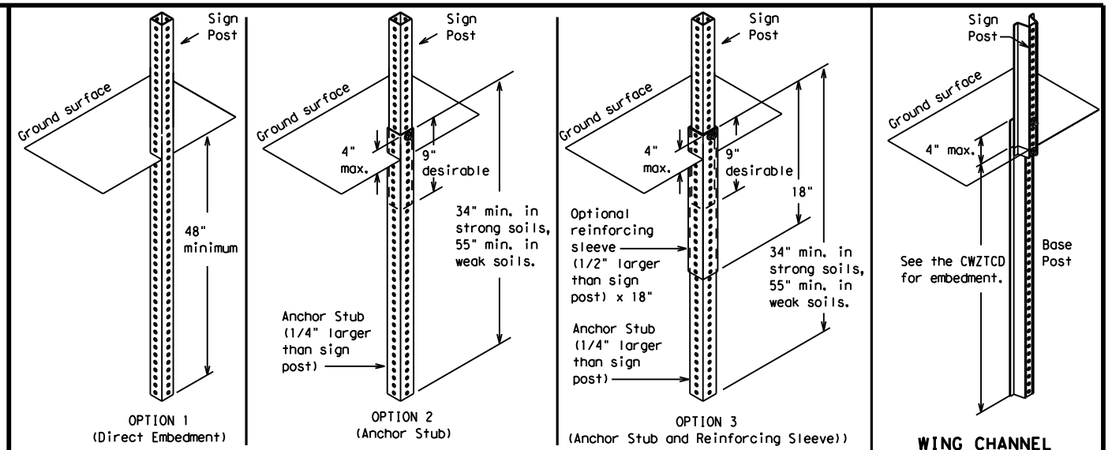




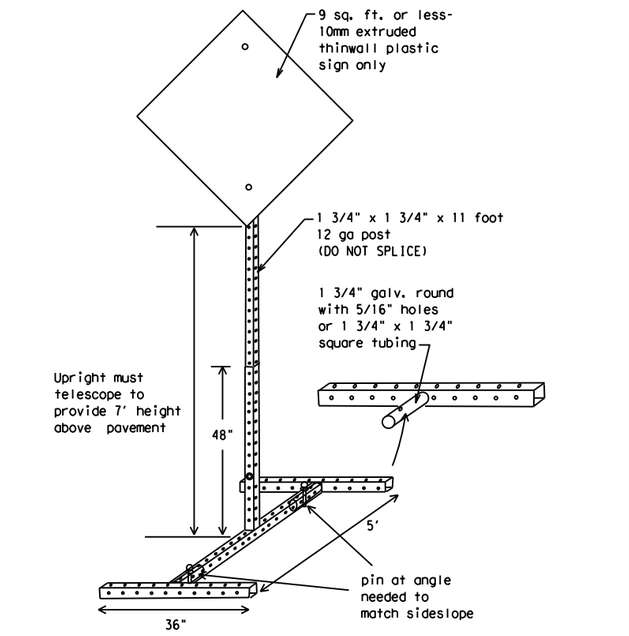
SKID MOUNTED WOOD SIGN SUPPORTS

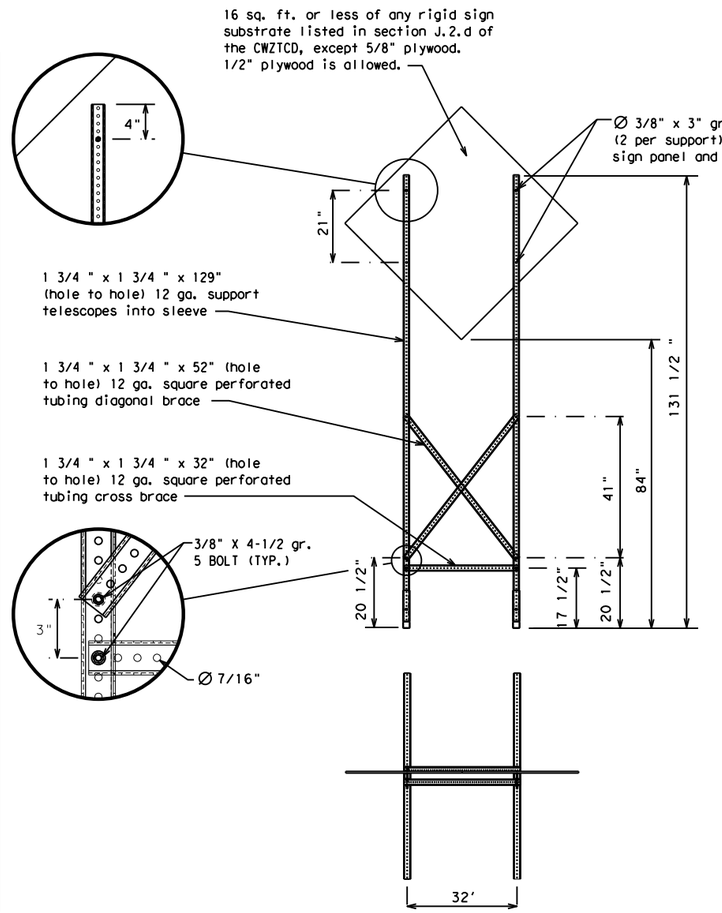
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

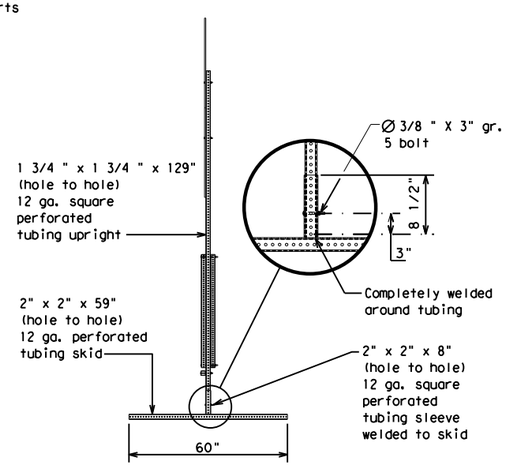


GROUND MOUNTED SIGN SUPPORTS

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.

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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7-13 5-21	YKM	GONZALES, ETC		146

DATE: $DATE$ $TIME$
FILE: $FILE$

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

WORD OR PHRASE	ABBREVIATION
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

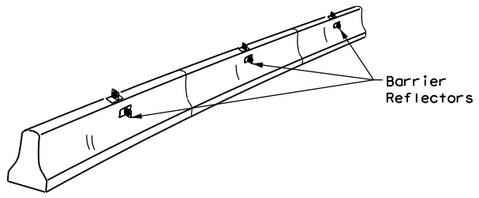
BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	YKM	GONZALES, ETC		147

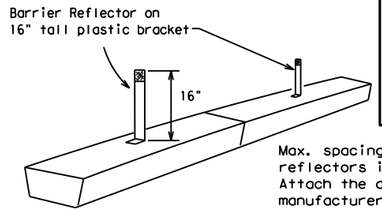
DATE: $DATE$ $TIME$
FILE: $FILE$

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.

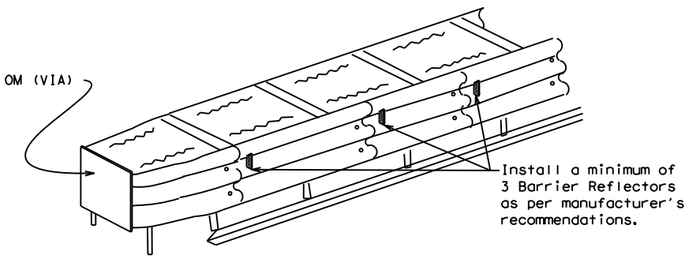


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

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)

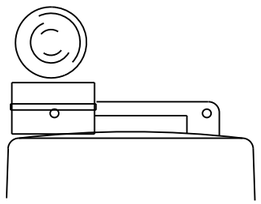


DELINEATION OF END TREATMENTS

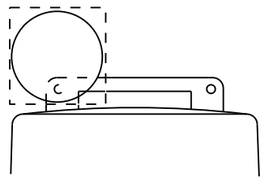
END TREATMENTS FOR CTB'S USED IN WORK ZONES

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

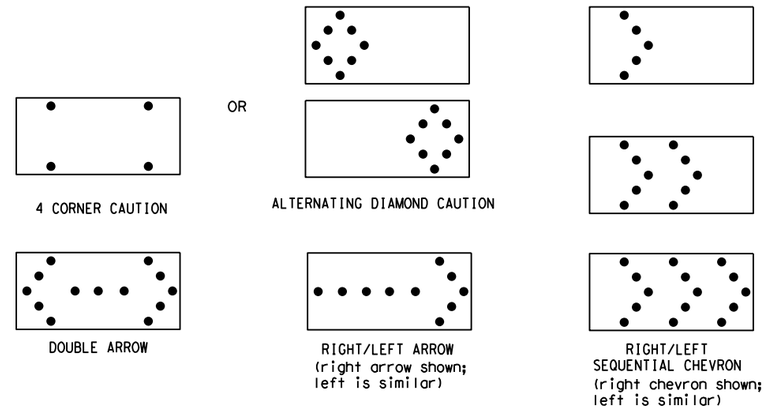
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing 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.

SHEET 7 OF 12

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
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	YKM	GONZALES, ETC		148

101

DATE: $DATE$ $TIME$
FILE: $FILE$

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:

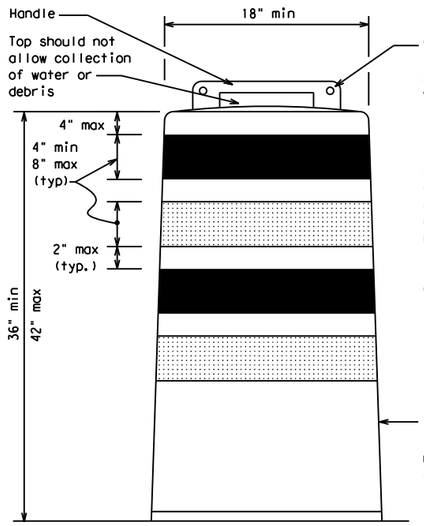
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents 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.

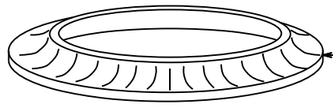
RETROREFLECTIVE SHEETING

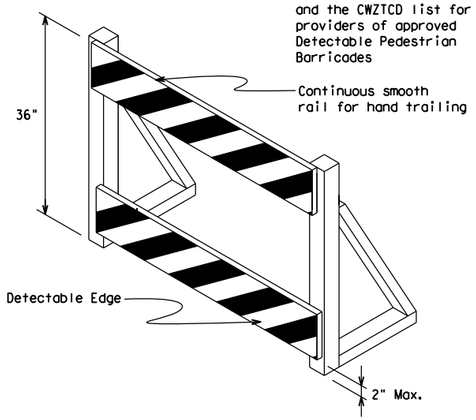
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall 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.

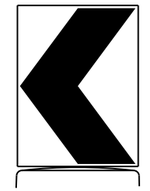




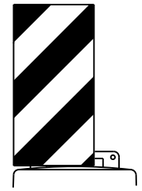


DETECTABLE PEDESTRIAN BARRICADES

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.

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BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21	YKM	GONZALES, ETC		149
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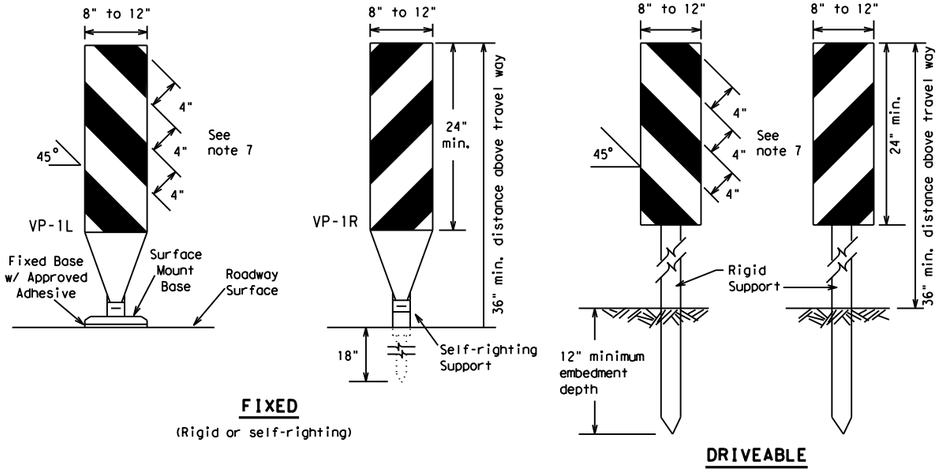
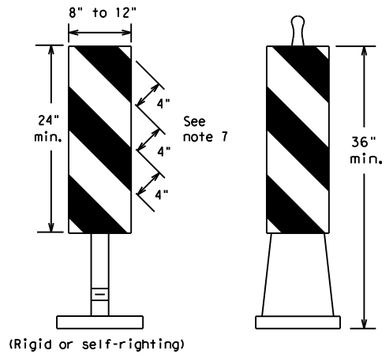


FIXED
(Rigid or self-righting)

DRIVEABLE

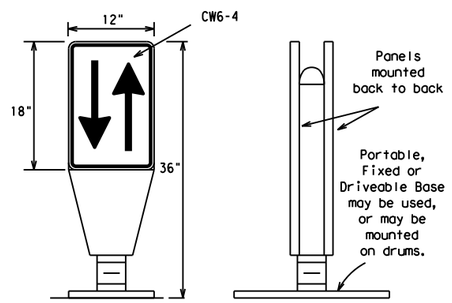


(Rigid or self-righting)

PORTABLE

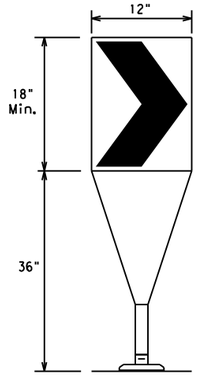
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is 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.

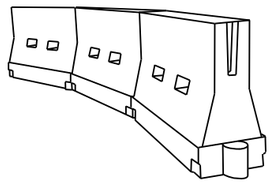
OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



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



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

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.

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

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BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

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7-13 5-21	YKM	GONZALES, ETC		150

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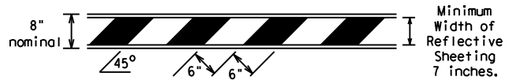
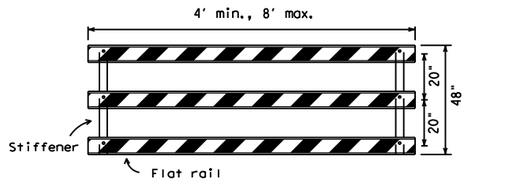
TYPE 3 BARRICADES

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.



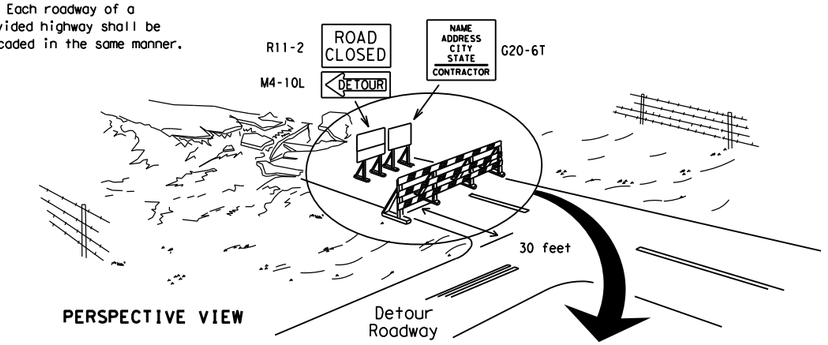
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

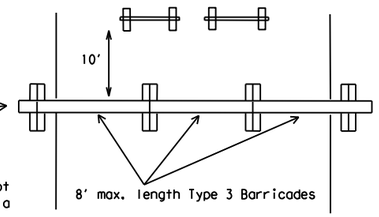
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

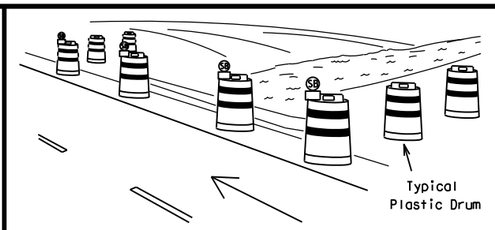
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

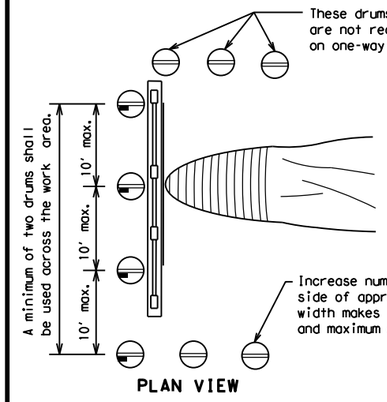
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

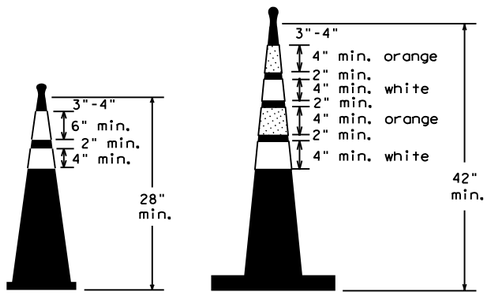
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder 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.



LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

PLAN VIEW

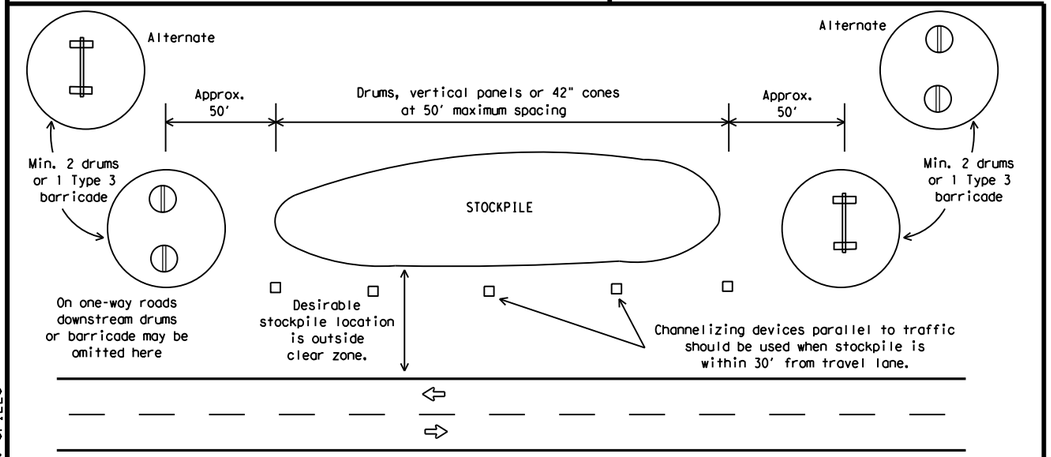
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



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

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Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

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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.

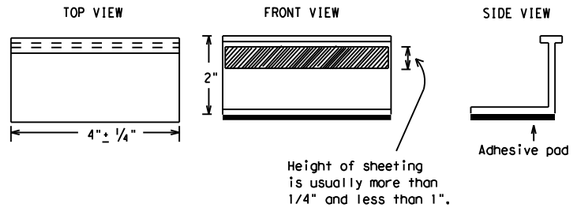
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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).

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Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

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REVISIONS	0025	05	024, ETC	UA 90, ETC
2-98 9-07 5-21	DIST	COUNTY		SHEET NO.
1-02 7-13	YKM	GONZALES, ETC		152
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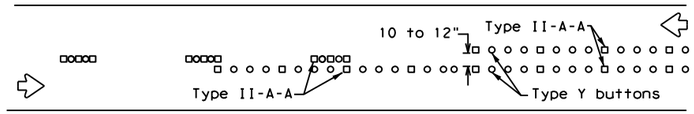
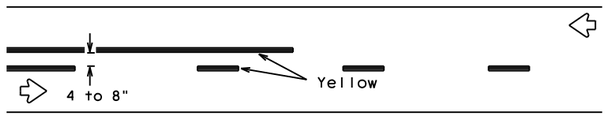
PAVEMENT MARKING PATTERNS

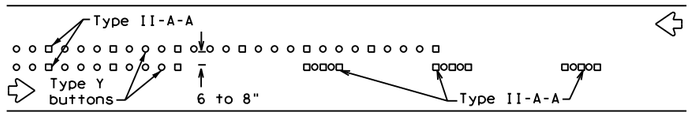
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



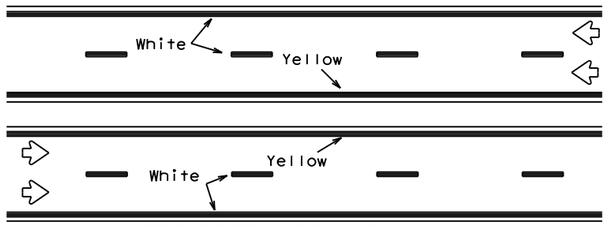
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



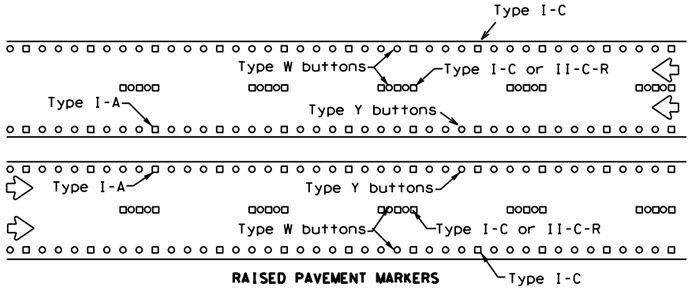
RAISED PAVEMENT MARKERS - PATTERN B

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



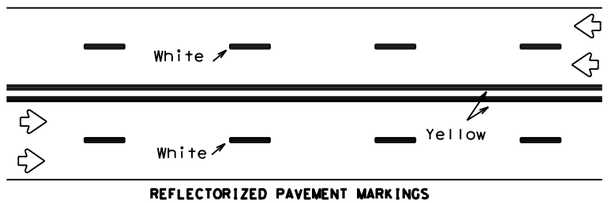
REFLECTORIZED PAVEMENT MARKINGS



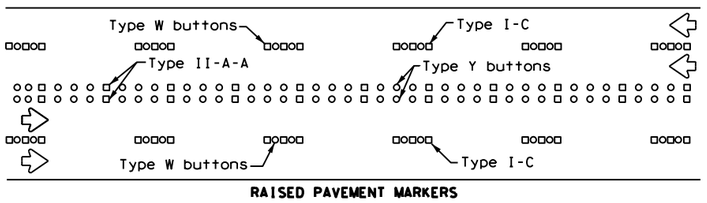
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



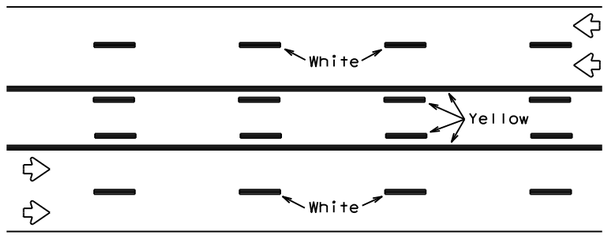
REFLECTORIZED PAVEMENT MARKINGS



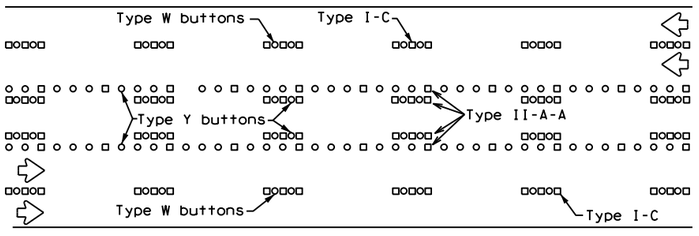
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

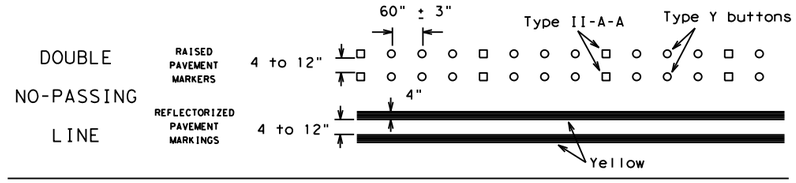
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

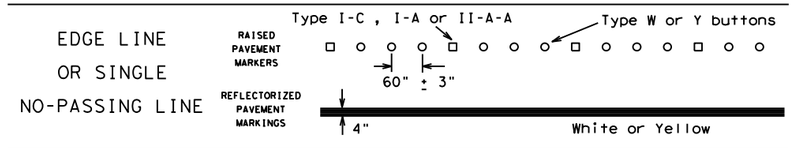
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

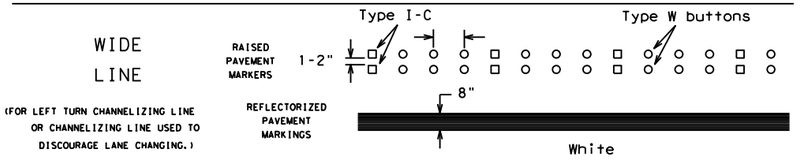


EDGE LINE OR SINGLE NO-PASSING LINE



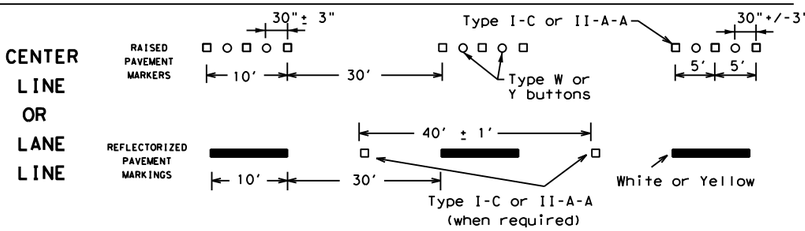
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

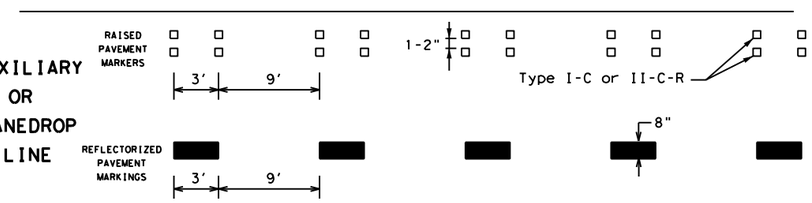


BROKEN LINES

CENTER LINE OR LANE LINE

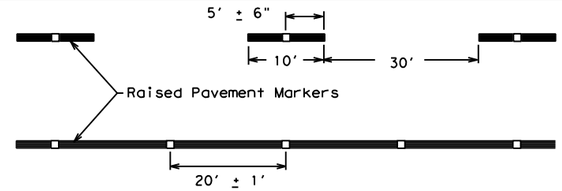


AUXILIARY OR LANEDROP LINE



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."

Texas Department of Transportation

Traffic Safety Division Standard

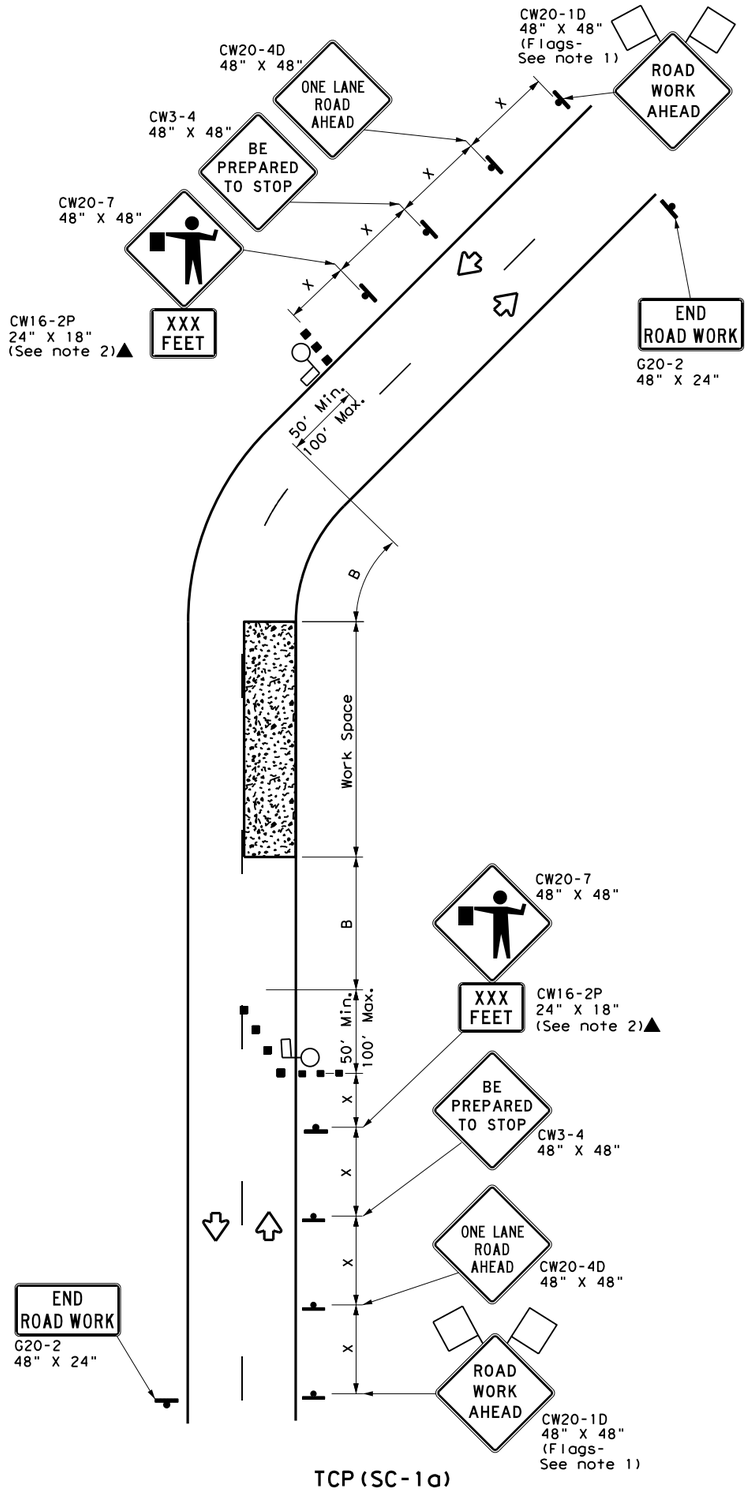
BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 1-97 9-07 5-21 2-98 7-13 11-02 8-14	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		153

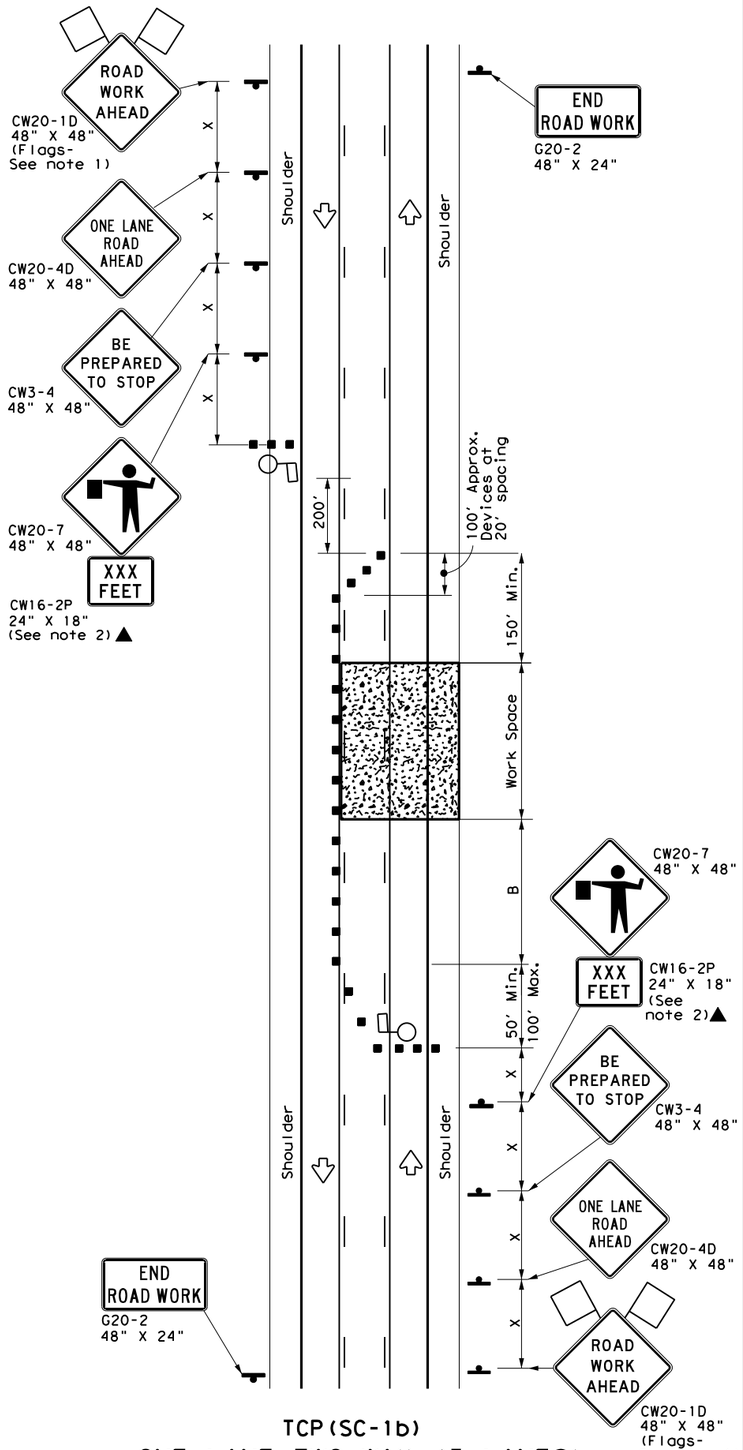
106

DATE: $DATE$ $TIME$
FILE: $FILE$



TCP(SC-1a)

ONE LANE TWO-WAY (2 LANES) CONTROL WITH PILOT VEHICLE



TCP(SC-1b)

ONE LANE TWO-WAY (3 LANES) CONTROL WITH PILOT VEHICLE AND CHANNELIZING DEVICES

LEGEND

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

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	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L = WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only

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

TYPICAL USAGE

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

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger sign is less than 1500 feet.
5. Flaggers should use two-way radios or other methods of communication at all times to control traffic.
6. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.
7. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
8. If the seal coat operation crosses intersections, traffic in these areas must be controlled, Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning other member of the traffic control crew at the intersection.
9. Temporary rumble strips are not required on seal coat operations.
10. Pilot car is used to guide vehicles through traffic control zone, vehicle shall have an identification name displayed and "PILOT CAR, FOLLOW ME" (G20-4) sign or message board mounted in a conspicuous position on rear.

TCP (SC-1a)

1. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic.

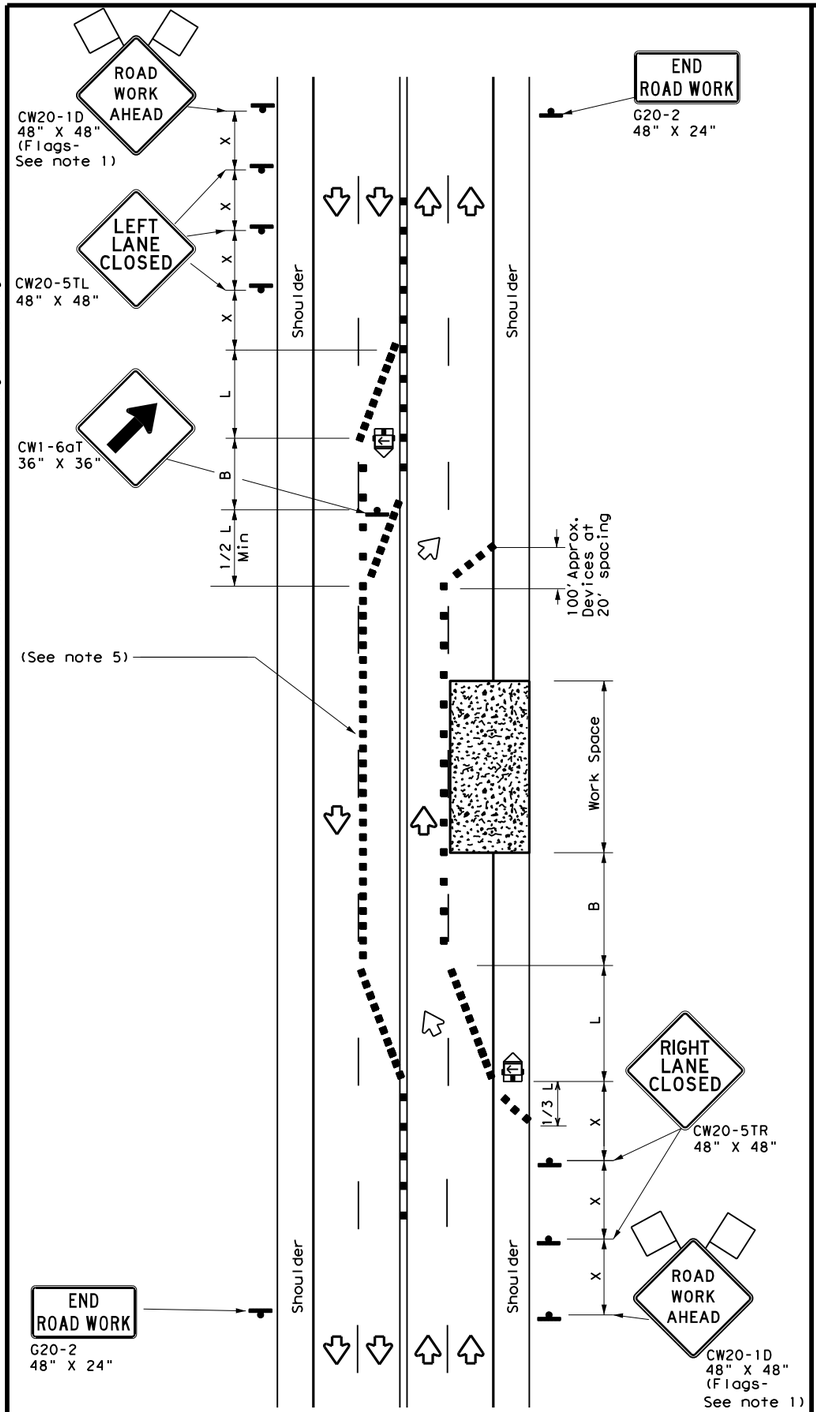
Texas Department of Transportation — Traffic Safety Division Standard

TRAFFIC CONTROL PLAN SEAL COAT OPERATIONS

TCP(SC-1)-21

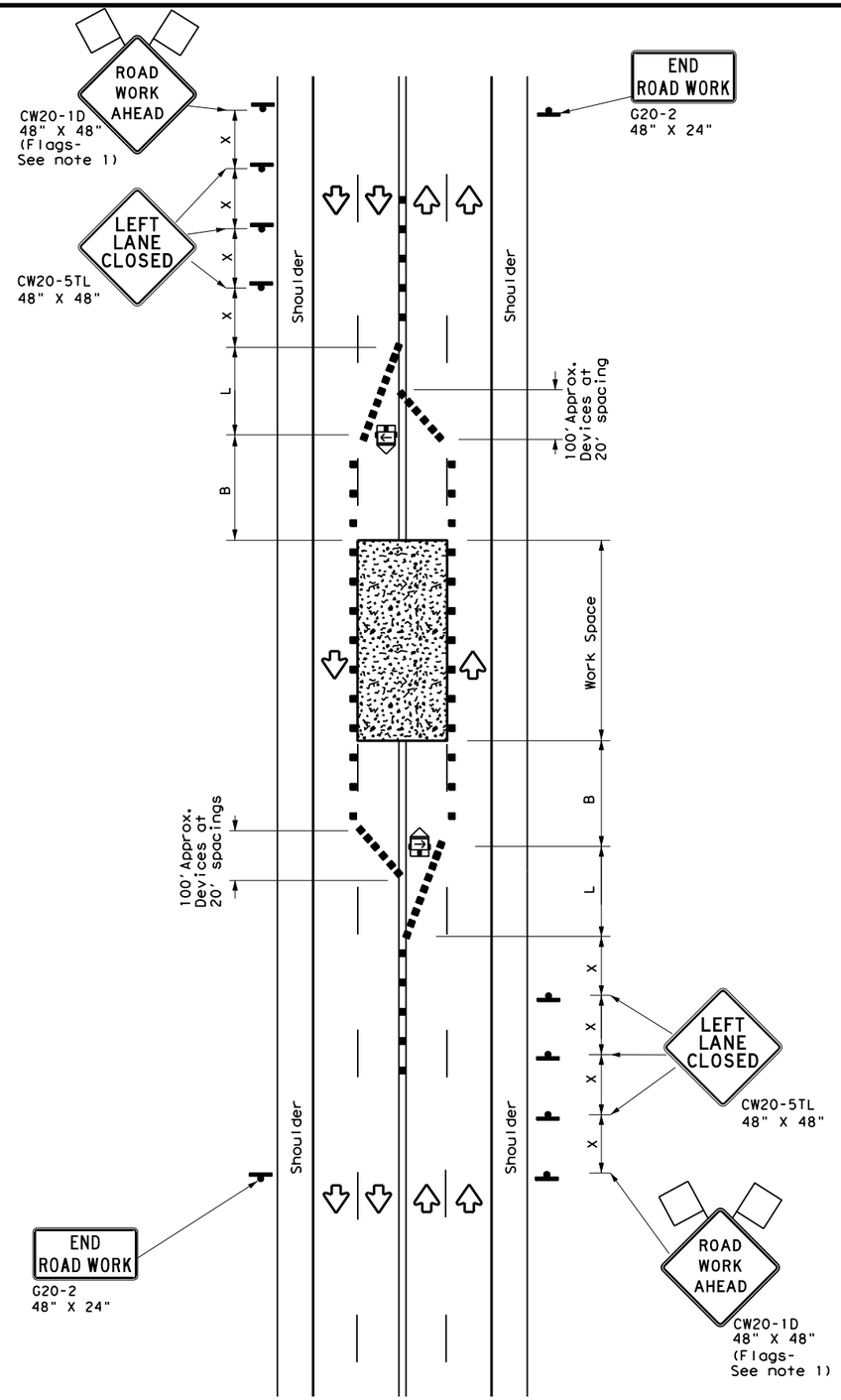
FILE: tcpsc-1-21.dgn	DN:	CK:	DW:	CK:
©TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		154

DATE: $DATE$ $TIME$
FILE: $FILE$



TCP (SC-2a)

ONE LANE CLOSED EACH DIRECTION
CONTROL WITH CHANNELIZING DEVICES



TCP (SC-2b)

CENTER LANES CLOSED
CONTROL WITH CHANNELIZING DEVICES

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

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	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

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

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

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
4. If the seal coat operation crosses intersections, traffic in these areas must be controlled, Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning other member of the traffic control crew at the intersection.
5. Temporary rumble strips are not required on seal coat operations.

TCP (SC-2a)

6. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the posted speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(SC-2)-21

FILE: tcpsc-2-21.dgn	DN:	CK:	DW:	CK:
© TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		155

DATE: $DATE$ $TIME$
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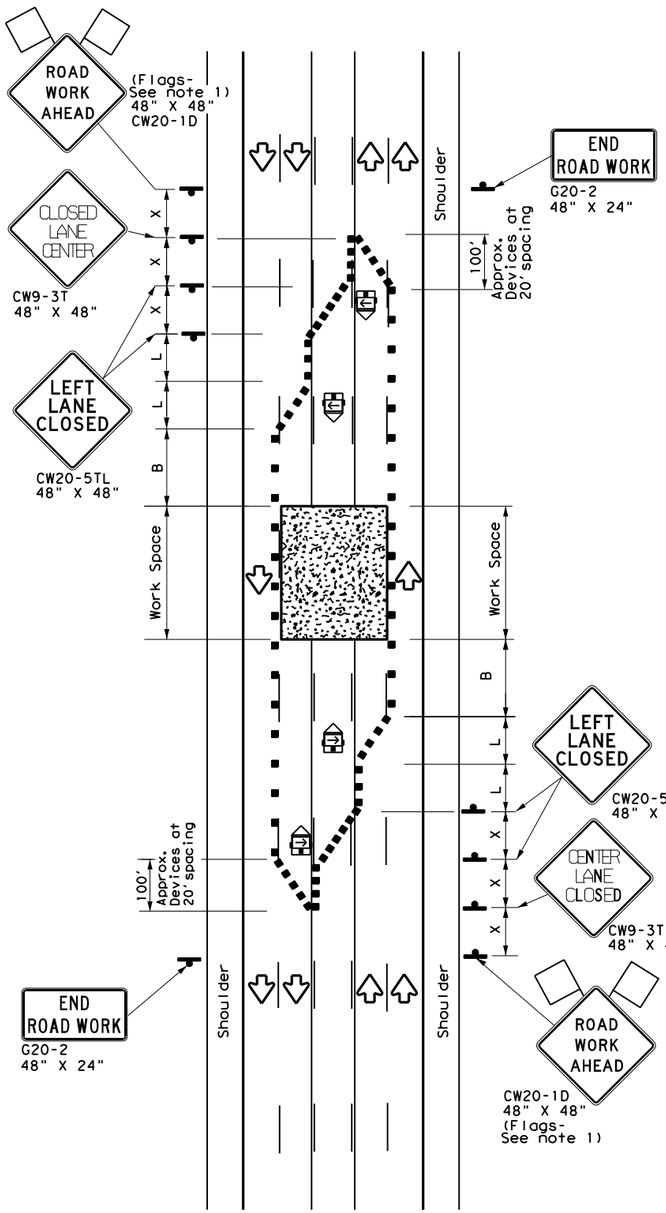
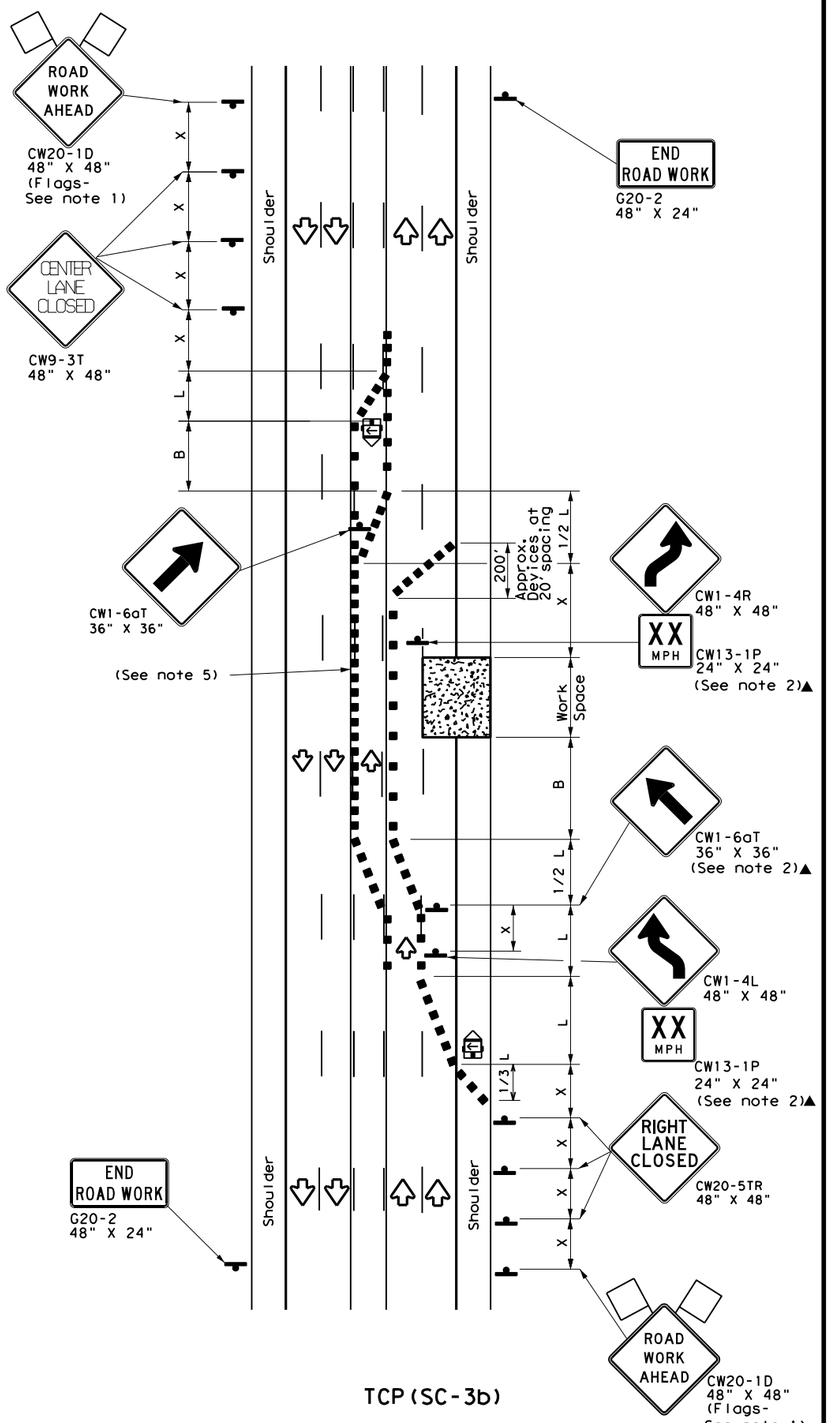


TCP(SC-3a)

CENTER LANES CLOSED
CONTROL WITH CHANNELIZING DEVICES



TCP(SC-3b)

ONE LANES CLOSED
CONTROL WITH CHANNELIZING DEVICES

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

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

* Conventional Roads Only

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

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

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work when approved by the Engineer.
3. If the seal coat operation crosses intersections, traffic in these areas must be controlled. Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning other members of the traffic control crew at the intersection.
4. Temporary rumble strips are not required on seal coat operations.

TCP (SC-3b)

5. For shorter durations where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the posted speed in mph. This tighter devices spacing is intended for the area of conflicting markings, not the entire work zone.

Texas Department of Transportation

Traffic Safety Division Standard

TRAFFIC CONTROL PLAN SEAL COAT OPERATIONS

TCP(SC-3)-21

FILE: tcpsc-3-21.dgn	DN:	CK:	DW:	CK:
©TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
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	YKM	GONZALES, ETC		156

DATE: $DATE$ $TIME$
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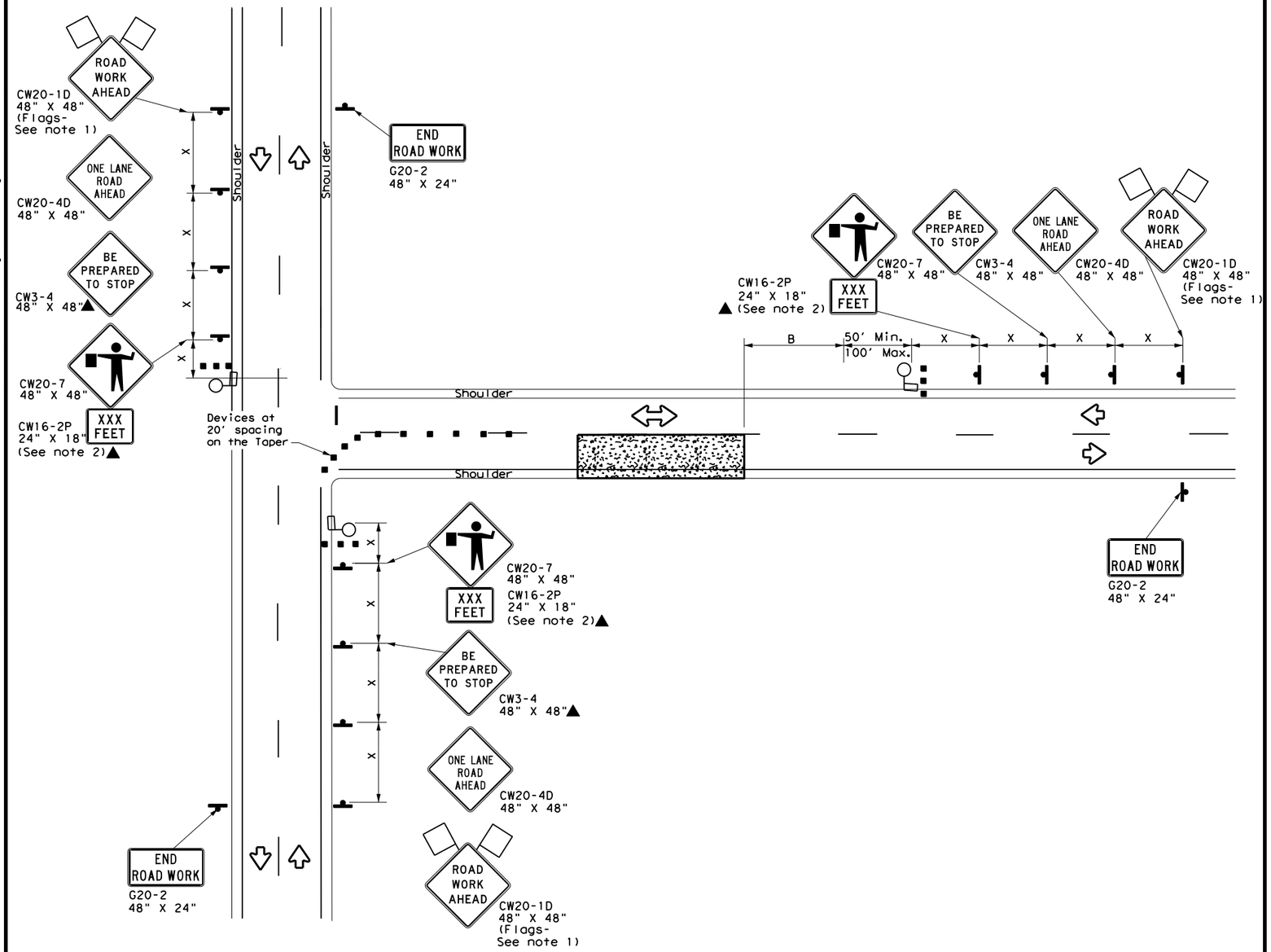

ONE LANE TWO-WAY (T-INTERSECTION) CONTROL WITH PILOT VEHICLE

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

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	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only

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

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

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Flaggers should use two-way radios or other methods of communication at all times to control traffic.
5. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.
6. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
7. Temporary rumble strips are not required on seal coat operations.
8. Pilot car is used to guide vehicles through traffic control zone, vehicle shall have an identification name displayed and "PILOT CAR, FOLLOW ME" (G20-4) sign or message board mounted in a conspicuous position on rear.

Texas Department of Transportation — Traffic Safety Division Standard

TRAFFIC CONTROL PLAN SEAL COAT OPERATIONS

TCP(SC-4)-21

FILE: tcpsc-4-21.dgn	DN:	CK:	DW:	CK:
©TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		157

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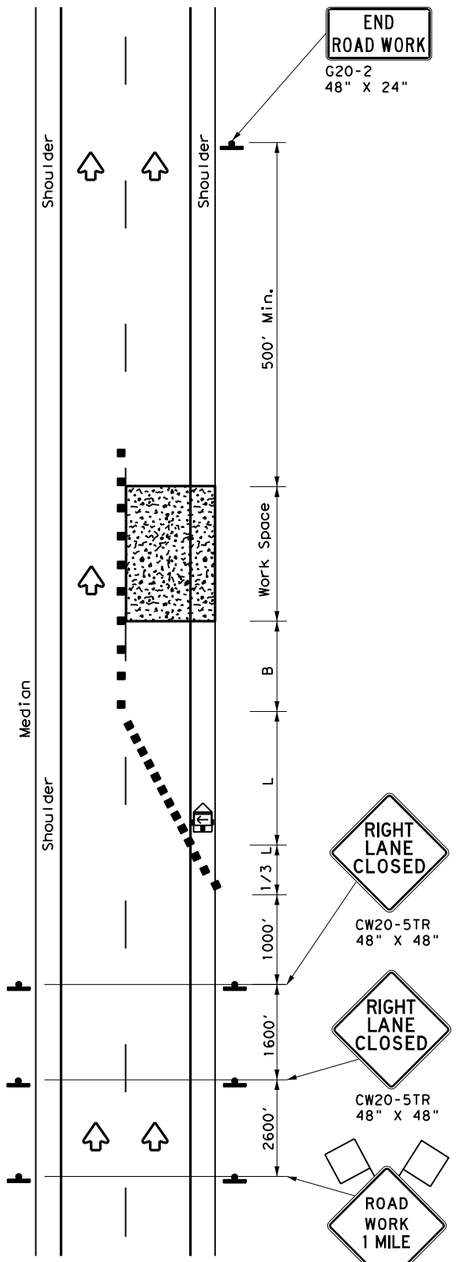
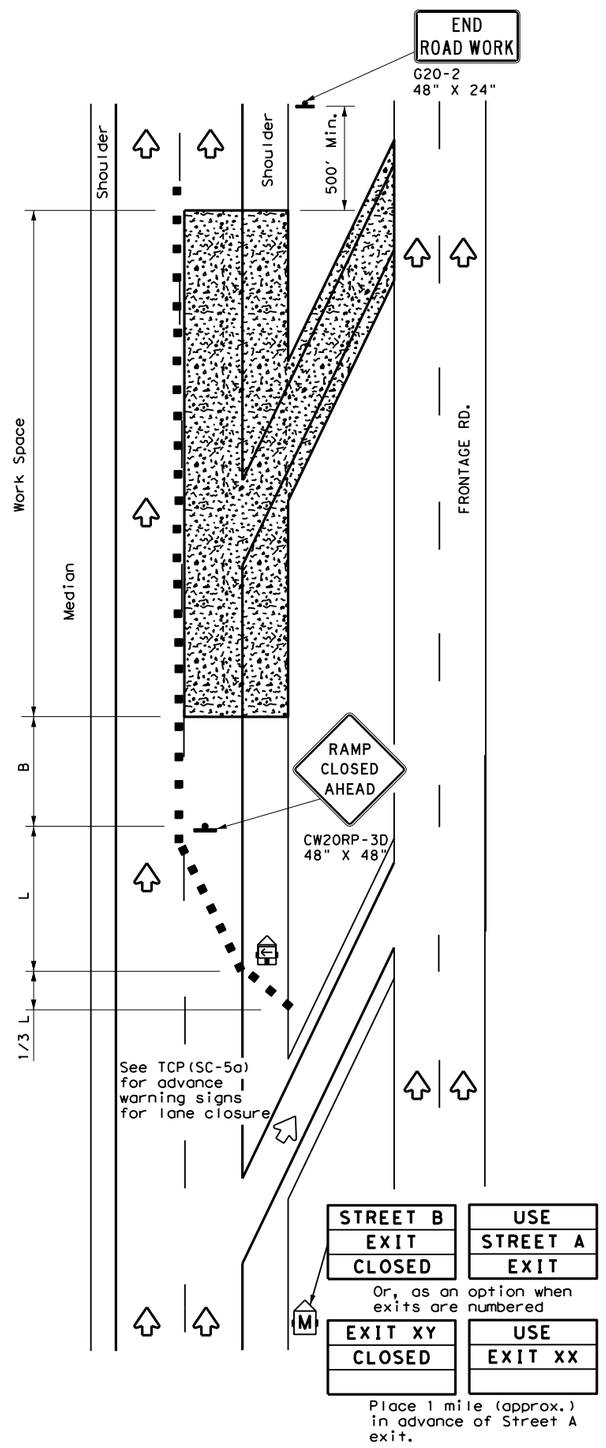
FILE: $FILE$



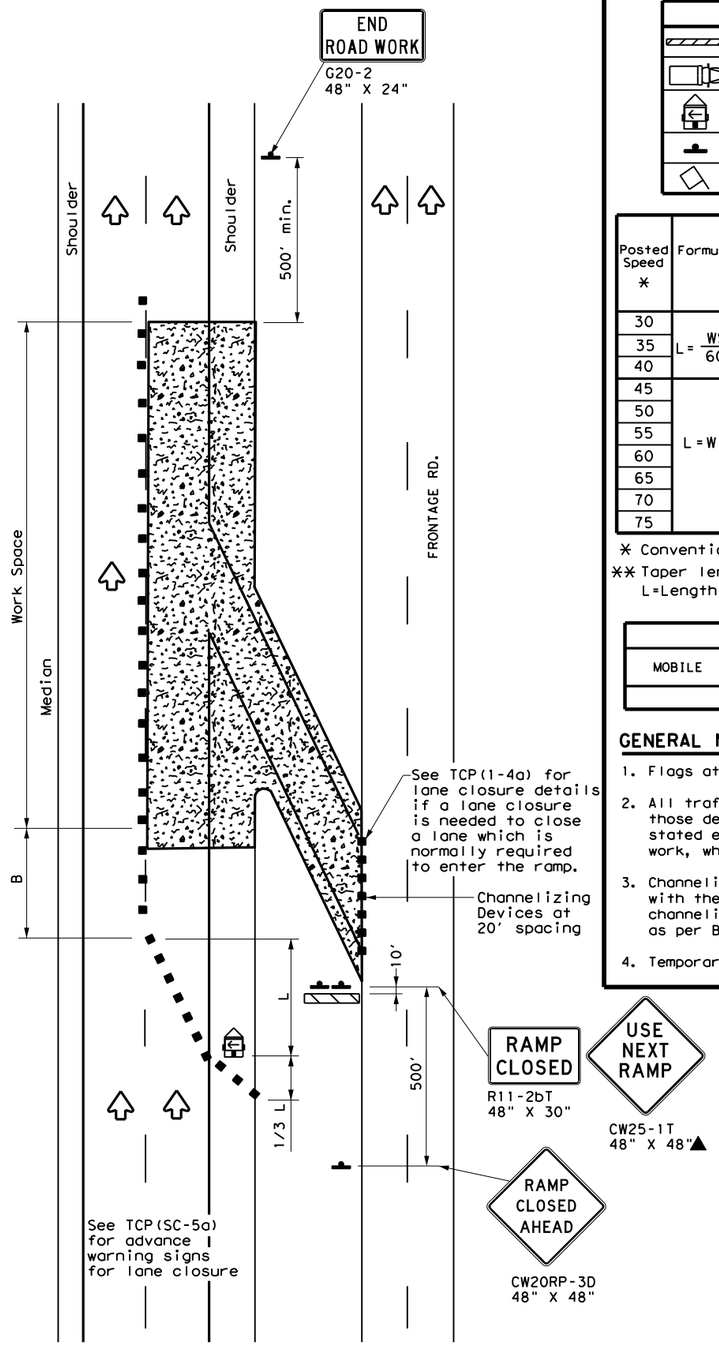
TCP (SC-5a)

ONE LANE CLOSURE



TCP (SC-5b)

LANE AND RAMP CLOSURE AT EXIT RAMPS



TCP (SC-5c)

LANE AND RAMP CLOSURE AT ENTRANCE RAMPS

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

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	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

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

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

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Channelizing devices used to close lanes may be supplemented with the Chevron Alignment Sign placed on every other channelizing device. Chevrons may be attached to plastic drums as per BC Standards.
4. Temporary rumble strips are not required on seal coat operations.

Texas Department of Transportation

Traffic Safety Division Standard

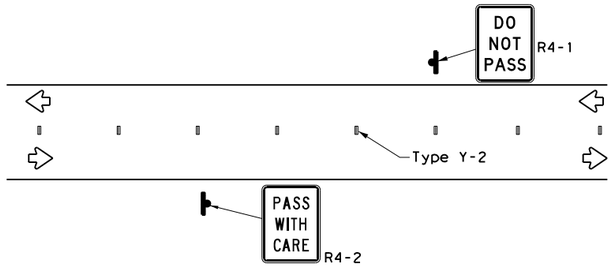
TRAFFIC CONTROL PLAN LANE CLOSURES FOR DIVIDED HIGHWAYS

TCP(SC-5)-21

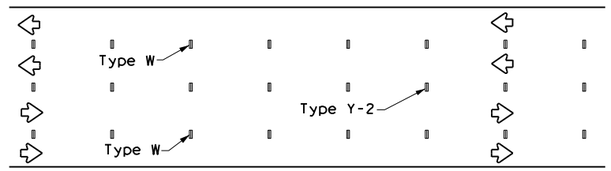
FILE: tcpsc-5-21.dgn	DN:	CK:	DW:	CK:
©TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		158

DATE: $DATE$ $TIME$
FILE: $FILE$

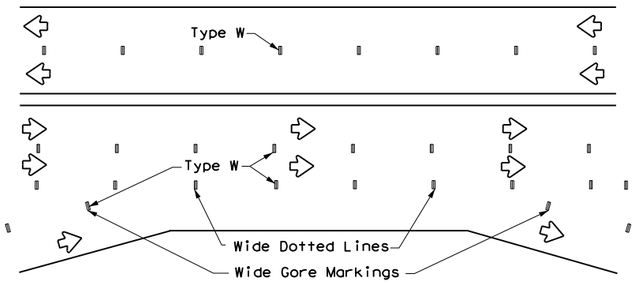
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS (TABS)



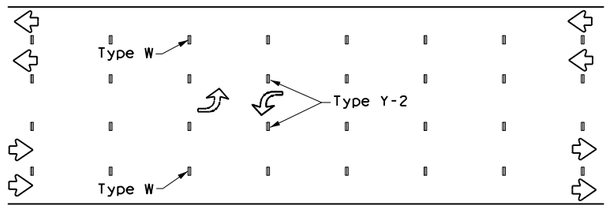
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS

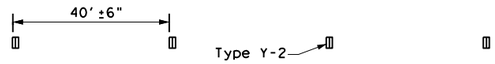


LANE LINES FOR DIVIDED HIGHWAY



TWO-WAY LEFT TURN LANE

WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS (TABS)

SOLID LINES	DOUBLE NO-PASSING LINE	
	SINGLE NO-PASSING LINE or CHANNELIZATION LINE	
BROKEN LINES (FOR CENTER LINE OR LANE LINE)		
WIDE DOTTED LINES (FOR LANE DROP LINES)		
WIDE GORE MARKINGS		

NOTES:

1. Short term pavement markings shall be temporary flexible-reflective roadway marker tabs with protective cover unless otherwise specified elsewhere in plans.
2. Short term pavement markings shall NOT be used to simulate edge lines.
3. Dimensions indicated on this sheet are typical and approximate. Variations in size and height may occur between markers or devices made by manufacturers, by as much as 1/4 inch, unless otherwise noted.
4. Temporary flexible-reflective roadway marker tabs will require normal maintenance replacement when used on roadways with an ADT per lane of up to 7500 vehicles with no more than 10% truck mix. When roadways exceed these values, additional maintenance replacement of devices should be planned.
5. No segment of roadway open to traffic shall remain without permanent pavement markings for a period greater than 14 calendar days. The Contractor will be responsible for maintaining short term pavement markings until permanent pavement markings are in place. When the Contractor is responsible for placement of permanent pavement markings, no segment of roadway shall remain without permanent pavement markings for a period greater than 14 calendar days unless weather conditions prohibit placement. Permanent pavement markings shall be placed as soon as weather permits.
6. For exit gores where a lane is being dropped place wide gore markings or retroreflective channelizing devices to guide motorist through the exit. If channelizing devices are to be used it should be noted elsewhere in the plans. One piece cones are not allowed for this purpose.

TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS (TABS)

1. Temporary flexible-reflective roadway marker tabs detailed on this sheet will be designated Type Y-2 (two amber reflective surfaces with yellow body); Type Y (one amber reflective surface with yellow body); and Type W (one white or silver reflective surface with white body). Additional details may be found on BC(11).
2. Tabs shall meet requirements of Departmental Material Specification DMS-8242.
3. When dry, tabs shall be visible for a minimum distance of 200 feet during normal daylight hours and when illuminated by automobile low-beam head light at night, unless sight distance is restricted by roadway geometrics.
4. No two consecutive tabs nor four tabs per 1000 feet of line shall be missing or fail to meet the visual performance requirements of Note 3.

DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS) & MATERIAL PRODUCER LISTS (MPL)

1. DMSs referenced above can be found along with embedded links to their respective MPLs at the following website:

   http://www.txdot.gov

Texas Department of Transportation

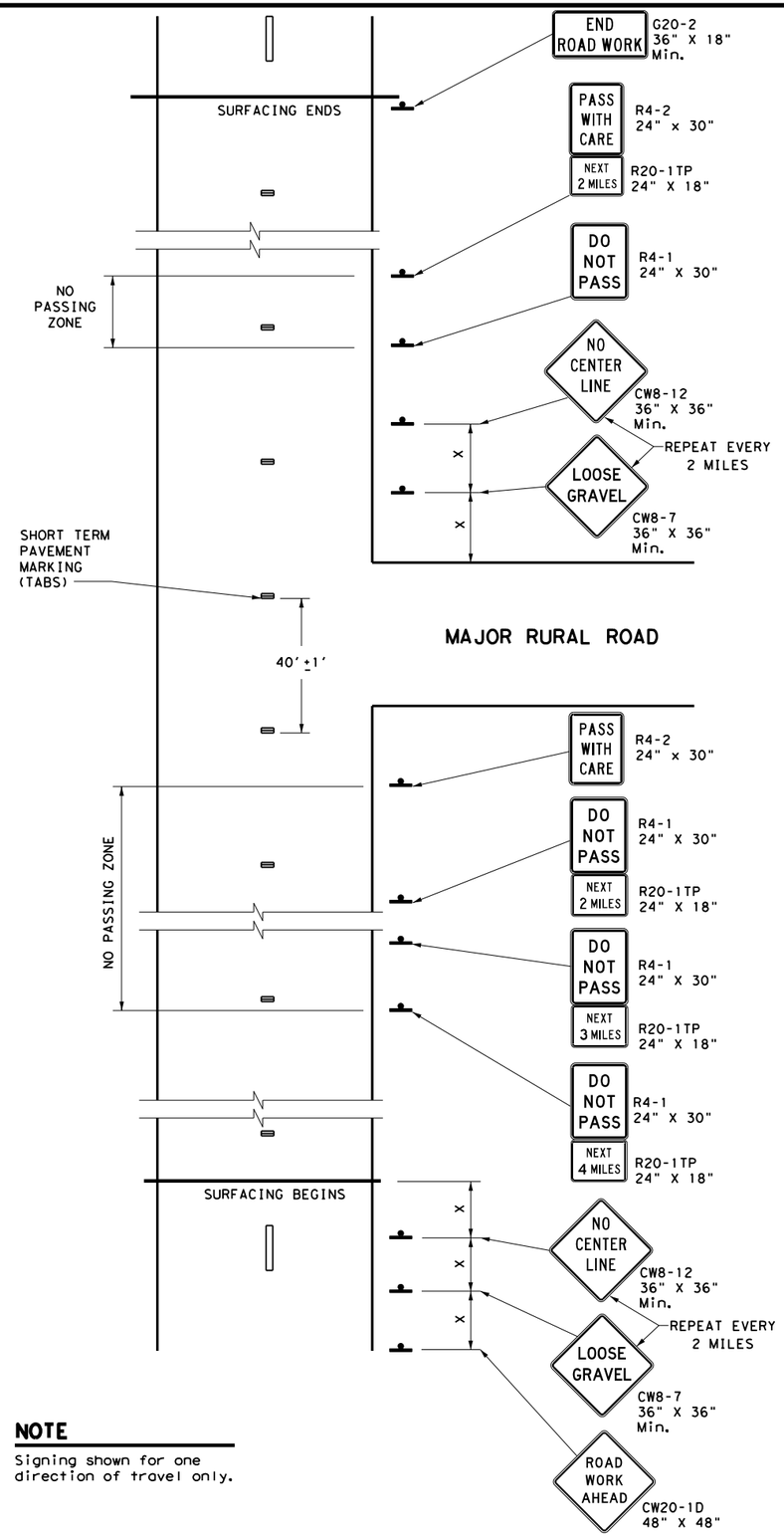
Traffic Safety Division Standard

WORK ZONE SHORT TERM PAVEMENT MARKINGS FOR SEAL COAT OPERATIONS

TCP(SC-6)-21

FILE: tcpsc-6-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		159

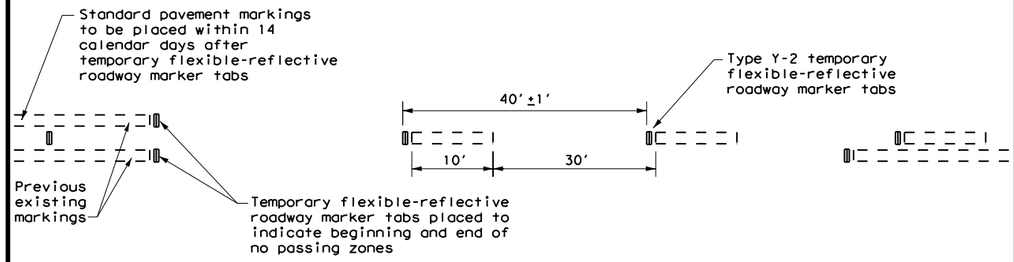
$DATE$
$FILE$



NOTE

Signing shown for one direction of travel only.

NO PASSING ZONES ON TWO-LANE TWO-WAY ROADS



TABS ON CENTERLINES OF TWO-LANE TWO-WAY ROADS

For seal coat operations

"DO NOT PASS" SIGN (R4-1) and NO-PASSING ZONES

A. Prior to the beginning of construction, all currently striped no-passing zones shall be signed with the DO NOT PASS (R4-1) signs and PASS WITH CARE (R4-2) signs placed at the beginning and end of each zone for each direction of travel except as otherwise provided herein. Signs marking these individual no-passing zones need not be covered prior to construction if the signs supplement the existing pavement markings.

B. At the discretion of the Engineer, in areas of numerous no-passing zones, several zones may be combined as a single zone. If passing is to be prohibited over one or more lengthy sections, a DO NOT PASS sign and a NEXT XX MILES (R20-1TP) plaque may be used at the beginning of such zones. The DO NOT PASS sign and the NEXT XX MILES plaque should be repeated every mile to the end of the no-passing zone. In areas where there is considerable distance between no-passing zones, the end of the no-passing zone may be signed with a PASS WITH CARE sign and a NEXT XX MILES plaque.

C. Depending on traffic volumes and length of sections, it may be desirable to prohibit passing throughout the project to prevent damage to windshield and lights. The DO NOT PASS sign and NEXT XX MILES plaque should be used and repeated as often as necessary for this purpose. Where several existing zones are to be combined into one individual no-passing zone, the sign at the beginning of the zone should be covered until the surfacing operation has passed this location so as not to have the DO NOT PASS sign conflict with the existing pavement markings. Also, unless one days operation completes the entire length of such combined zones, appropriate DO NOT PASS and PASS WITH CARE signs should be placed at the beginning and end of the no-passing zones where the surfacing operation has stopped for the day.

D. R4-1 and R4-2 are to remain in place until standard pavement markings are installed.

"NO CENTER LINE" SIGN (CW8-12)

A. Center line markings are yellow pavement markings that delineate the separation of travel lanes that have opposite directions of travel on a roadway. Divided highways do not typically have center line markings.

B. At the time construction activity obliterates the existing center line markings(low volume roads may not have an existing centerline), a NO CENTER LINE (CW8-12) sign should be erected at the beginning of the work area, at approximately 2 mile intervals within the work area, beyond major intersections and other locations deemed necessary by the Engineer.

C. The NO CENTER LINE signs are to remain in place until standard pavement markings are installed.

"LOOSE GRAVEL" SIGN (CW8-7)

A. When construction begins, a LOOSE GRAVEL (CW8-7) sign should be erected at each end of the work area and repeated at intervals of approximately 2 miles in rural areas and closer in urban areas.

B. The LOOSE GRAVEL signs are to remain in place until the condition no longer exists.

PAVEMENT MARKINGS

A. Temporary markings for surfacing projects shall be Temporary Flexible-reflective Roadway Marker Tabs unless otherwise approved by the Engineer. Tabs are to be installed to provide true alignment for striping crews or as directed by the Engineer. Tabs will be placed at the spacing indicated. Tabs should be applied to the pavement
no more than two (2) days before the surfacing is applied. After the surfacing is rolled and swept, the cover over the reflective strip shall be removed.

B. Tabs shall not be used to simulate edge lines.

COORDINATION OF SIGN LOCATIONS

A. The location of warning signs at the beginning and end of a work area are to be coordinated with other signing typically shown on the Barricade and Construction Standards for project limits to ensure adequate sign spacing.

B. Where possible the ROAD WORK AHEAD (CW20-1D), LOOSE GRAVEL (CW8-7), and NO CENTER LINE (CW8-12) signs should be placed in the sequence shown following the OBEY WARNING SIGNS STATE LAW (R20-3T) and the TRAFFIC FINES DOUBLE (R20-5T) sign, and one "X" sign spacing prior to the CONTRACTOR (G20-6T)sign typically located at or near the limits of surfacing. LOOSE GRAVEL and NO CENTER LINE signs will then be repeated as described above.

Posted Speed *	Minimum Sign Spacing "X" Distance
30	120'
35	160'
40	240'
45	320'
50	400'
55	500'
60	600'
65	700'
70	800'
75	900'

*** Conventional Roads Only**

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

GENERAL NOTES

1. The traffic control devices detailed on this sheet will be furnished and erected as directed by the Engineer on sections of roadway where tabs must be placed prior to the surfacing operation which will cover or obliterate the existing pavement markings.
2. The devices shown on this sheet are to be used to supplement those required by the BC Standards or others required elsewhere in the plans.
3. Signs shall be erected as detailed on the BC Standards or the Compliant Work Zone Traffic Control Devices List (CWZTCD) on supports approved for Short Duration / Short Term Stantionary Work Zone Sign Supports.
4. When surfacing operations take place on divided highways, freeways or expressways, the size of diamond shaped construction warning signs shall be 48" x 48".
5. Signs on divided highways, freeways and expressways will be placed on both right and left sides of the roadway based on roadway conditions as directed by the Engineer.

Texas Department of Transportation | Traffic Safety Division Standard

TRAFFIC CONTROL DETAILS FOR SEAL COAT OPERATIONS

TCP(SC-7)-21

FILE: tcpsc-7-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 2021	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		160

DATE: $DATE$ $TIME$
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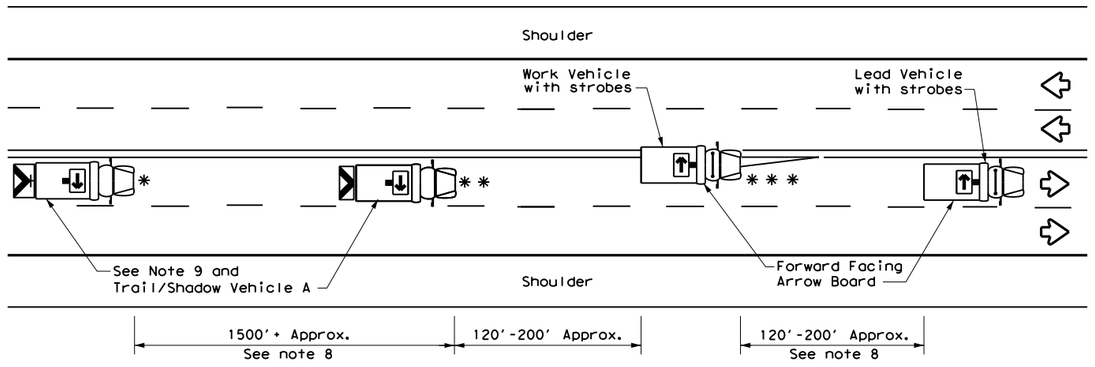
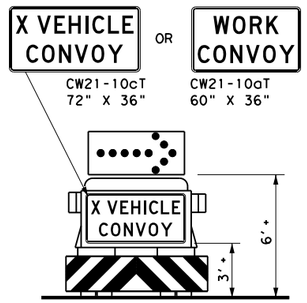


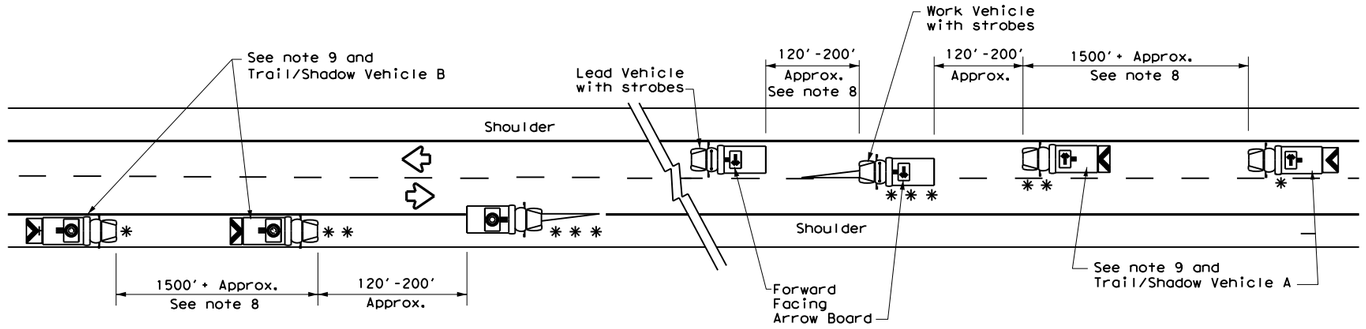
TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY



TRAIL/SHADOW VEHICLE A

with RIGHT Directional display Flashing Arrow Board

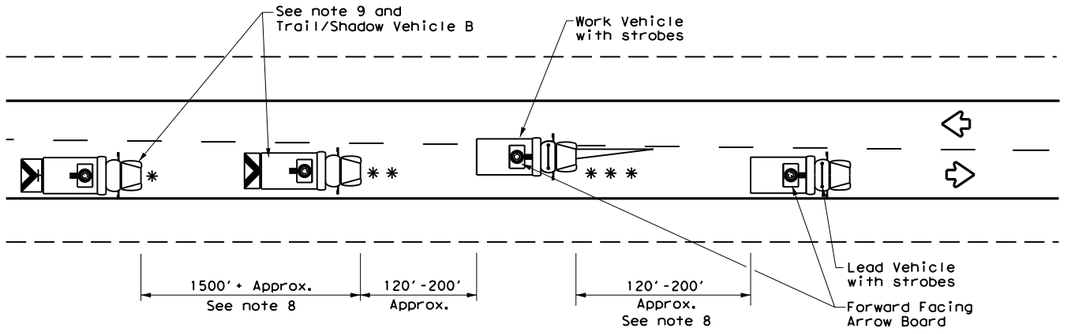


WORK ON SHOULDER

WORK ON TRAVEL LANE

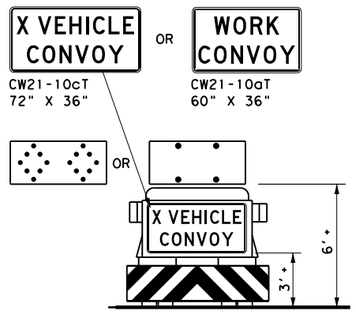
TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS



TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

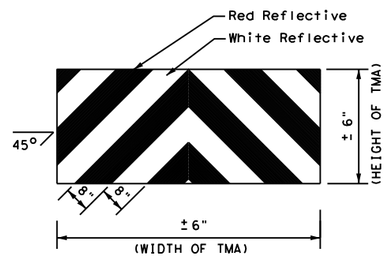
with Flashing Arrow Board in CAUTION display

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used the WORK vehicle must be equipped with an arrow board. The Engineer will determine if the LEAD VEHICLE and/or TRAIL VEHICLE are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. "X VEHICLE CONVOY" (CW21-10cT) or "WORK CONVOY" (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" X 48" diamond shaped "WORK CONVOY"(CW21-10T) or "X VEHICLE CONVOY" (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The "X VEHICLE CONVOY" sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a "DO NOT PASS" (R4-1) sign should be placed on the back of the rearmost protection vehicle.



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS UNDIVIDED HIGHWAYS

TCP(3-1)-13

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©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 7-13 1-97	0025	05	024, ETC	UA 90, ETC
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	YKM	GONZALES, ETC		161

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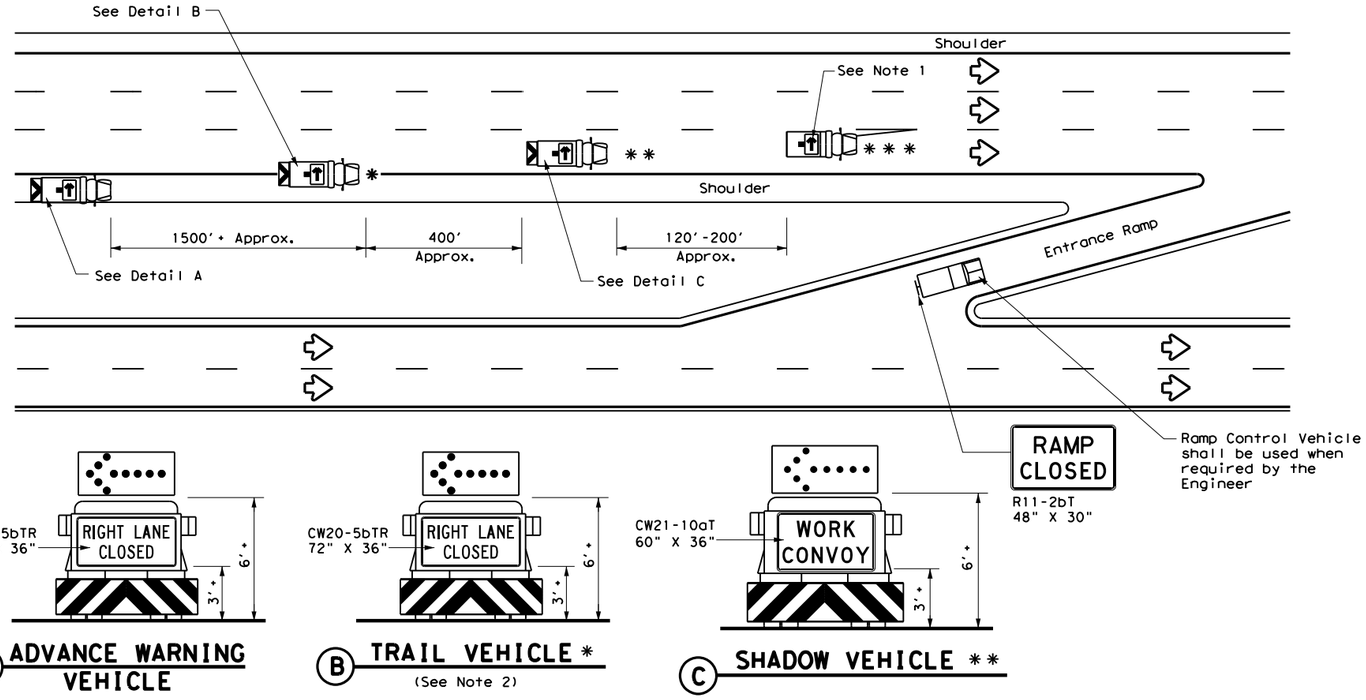
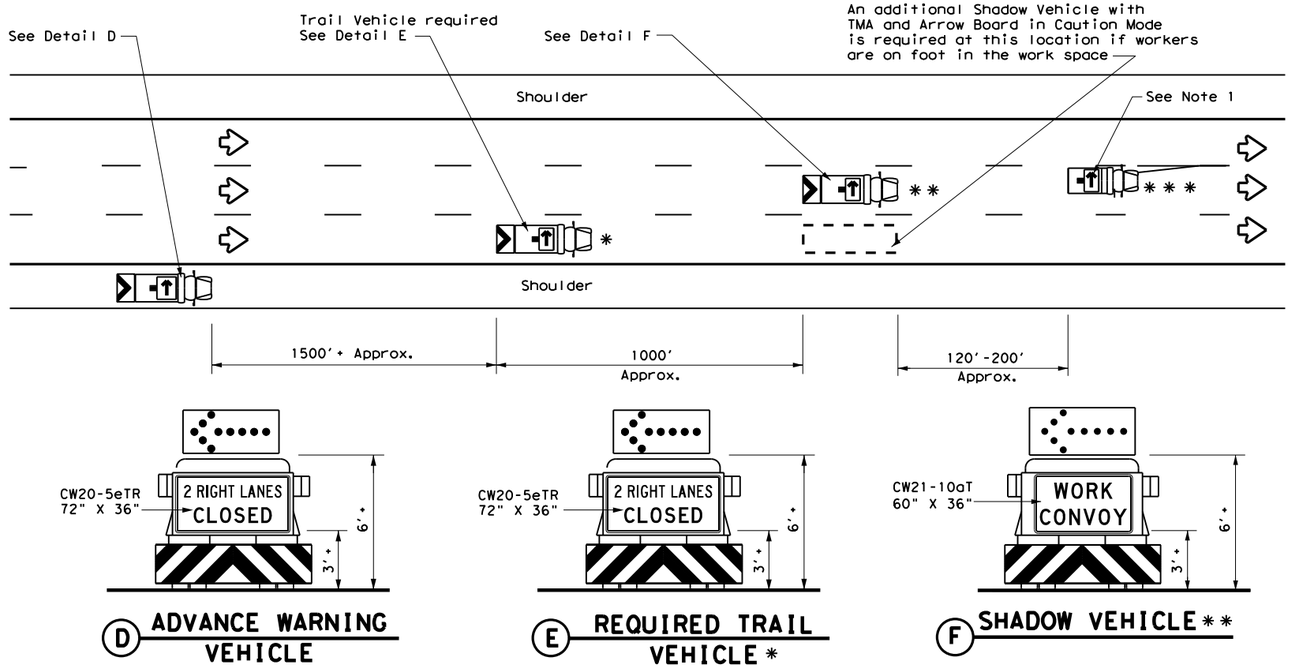


RIGHT LANE CLOSURE ON DIVIDED HIGHWAY - TCP(3-2a)



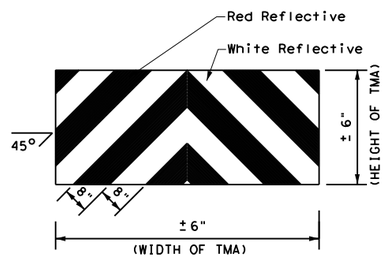
INTERIOR LANE CLOSURE ON MULTI-LANE DIVIDED HIGHWAY - TCP(3-2b)

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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

GENERAL NOTES

1. ADVANCE WARNING, TRAIL and SHADOW vehicles shall be equipped with Type B or Type C flashing arrow boards as per the Barricade and Construction (BC) standards. Arrow boards on WORK vehicles will be optional based on the type of work being performed. The arrow boards shall be operated from inside the vehicle.
2. For TCP(3-2a) the Engineer will determine if the TRAIL VEHICLE is required based on prevailing roadway conditions, traffic volume, and sight distance restrictions. All other vehicles shown for both TCP(3-2a) and TCP(3-2b) are required.
3. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
4. The use of truck mounted attenuators (TMA) on the ADVANCE WARNING, SHADOW, and TRAIL vehicles are required.
5. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DMS 8300, Type A.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE may vary according to terrain, work activity and other factors.
9. Standard 48" X 48" diamond shaped warning signs with the same message as those shown may be used where adequate mounting space exists.
10. The signs shown should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or a truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board, must be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
12. The principles on this sheet may be used to close lanes from the left side of the roadway considering the number of lanes, shoulder width, sight distance, and ramp frequency.
13. Signs and flashing arrow board modes shall be appropriately altered when implementing left lane closures or interior closures which close the left lanes.
14. The Advance Warning Vehicle may straddle the edgeline when shoulder width makes it necessary.



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS DIVIDED HIGHWAYS

TCP(3-2)-13

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©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
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176

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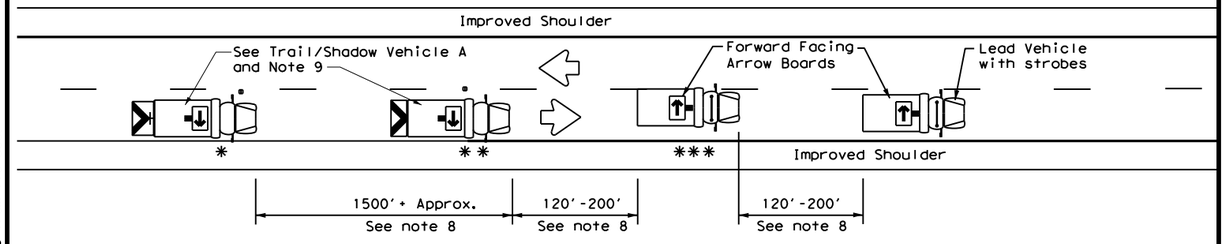
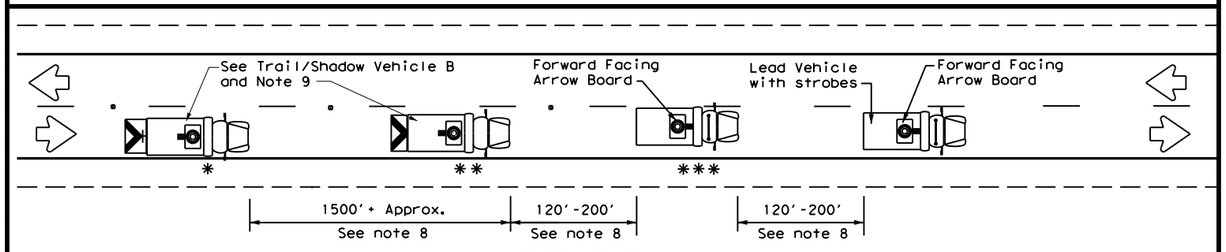


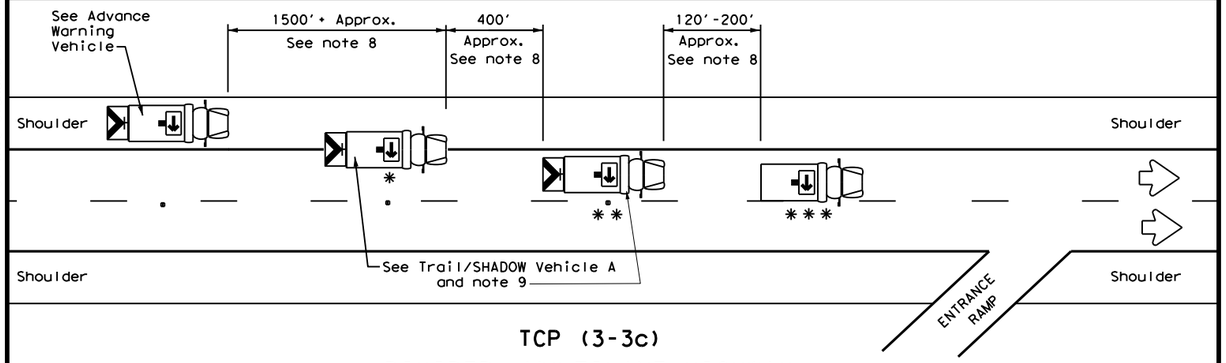
TCP (3-3a)

TWO LANE HIGHWAY WITH PAVED SHOULDERS
(WORK ON TRAVEL LANE)



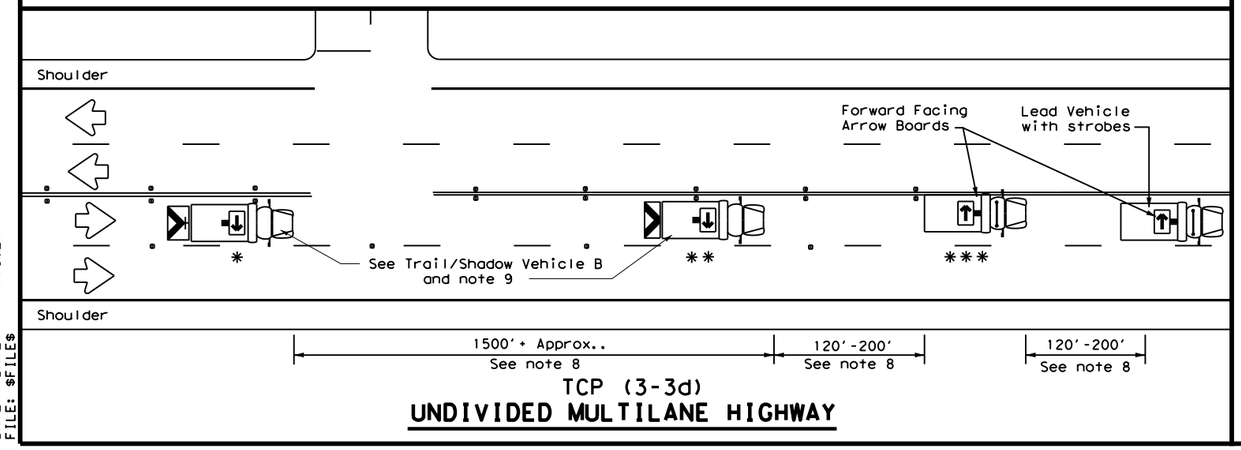
TCP (3-3b)

TWO LANE HIGHWAY WITHOUT PAVED SHOULDERS
(WORK ON TRAVEL LANE)



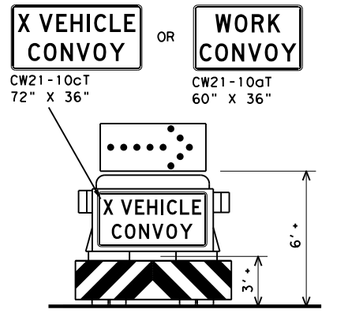
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY



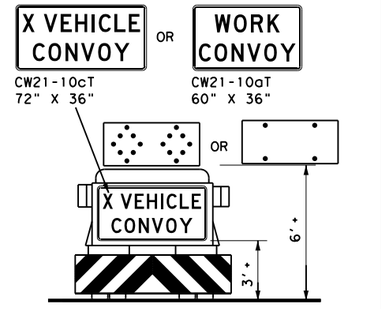
TCP (3-3d)

UNDIVIDED MULTILANE HIGHWAY



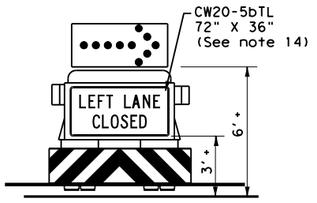
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display
Flashing Arrow Board

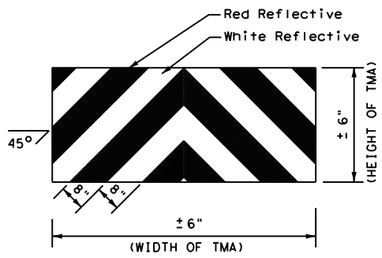


TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board
in Caution Mode



ADVANCE WARNING VEHICLE



STRIPING FOR TMA

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used on two way roads the WORK vehicle must have an arrow board. For divided roadways, the arrow board on the WORK vehicle is optional based on the type of work being performed. The Engineer will determine if the LEAD vehicle and/or TRAIL vehicle are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating, or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE, ADVANCE WARNING and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. X VEHICLE CONVOY (CW21-10cT) or WORK CONVOY (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" x 48" diamond shaped WORK CONVOY (CW21-10T) or X VEHICLE CONVOY (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The X VEHICLE CONVOY sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. For divided highways with two or three lanes in one direction, the appropriate LEFT LANE CLOSED (CW20-5bTL), RIGHT LANE CLOSED (CW20-5bTR), or CENTER LANE CLOSED (CW20-5dT) sign should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board may be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. A double arrow shall not be displayed on the arrow board on the Advance Warning Vehicle.
12. For divided highways with three or four lanes in each direction, use TCP(3-2).
13. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
14. The Advance Warning Vehicle may straddle the edgeline when Shoulder width makes it necessary.
15. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a DO NOT PASS (R4-1) sign should be placed on the back of the rearmost protection vehicle.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
MOBILE OPERATIONS
RAISED PAVEMENT MARKER INSTALLATION/ REMOVAL
TCP(3-3)-14

FILE: tcp3-3.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT September 1987	CONT	SECT	JOB	HIGHWAY
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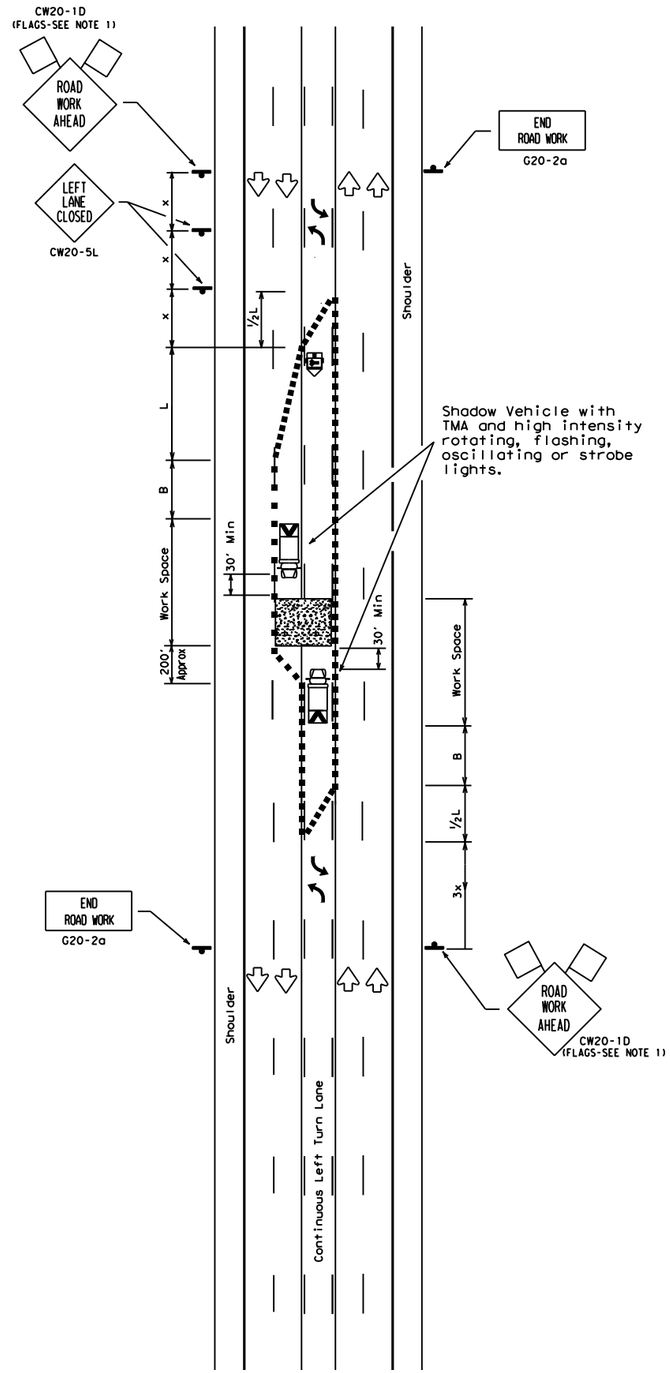
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13	YKM	GONZALES, ETC		163
1-97 7-14				

$TIME$
DATE: $DATE$
FILE: $FILE$



Left Turn
Lane Closed

SEE BC(2) FOR CONSTRUCTION
WARNING SIGN SIZES

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

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	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

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

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

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. For short term applications, when post mounted signs are not used, the distance legend may be shown on the sign face rather than on a CW16-3aP supplemental plaque.
3. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
4. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

The requirement for shadow vehicles will be listed in the project GENERAL NOTES, Item 502, Barricades, Signs and Traffic Handling.

DATE TIME
DOCUMENT NAME

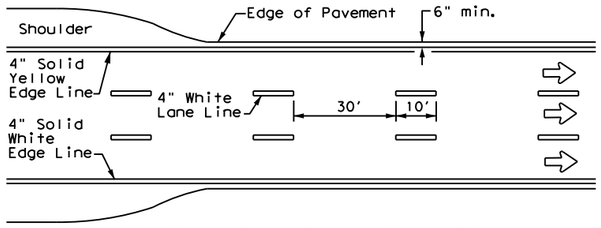
STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION

(YKM DISTRICT)

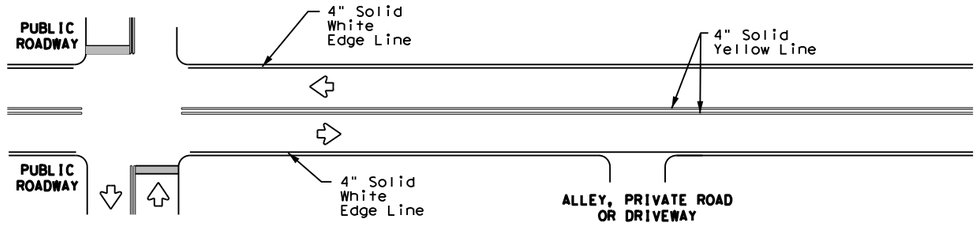
TRAFFIC CONTROL PLAN

Left Turn
Lane Closed

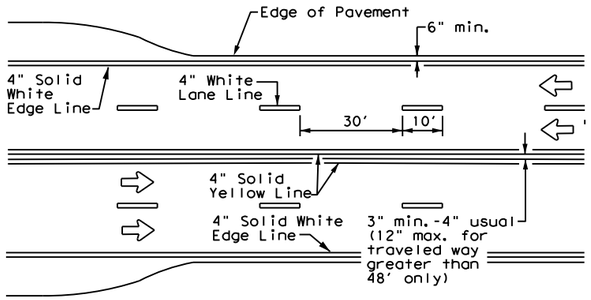
FILE:	DN: TxDOT	CK:	DW:	CK:
© TxDOT	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		164



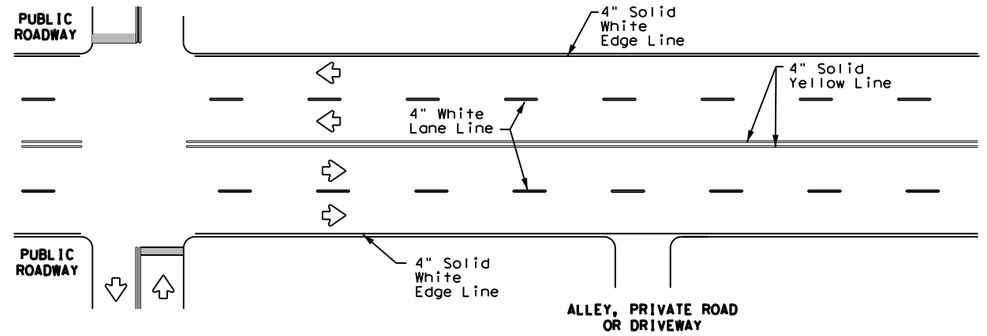
EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



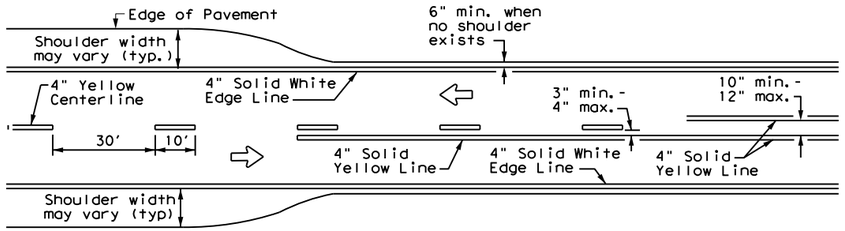
TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



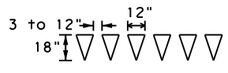
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



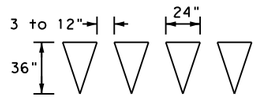
TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

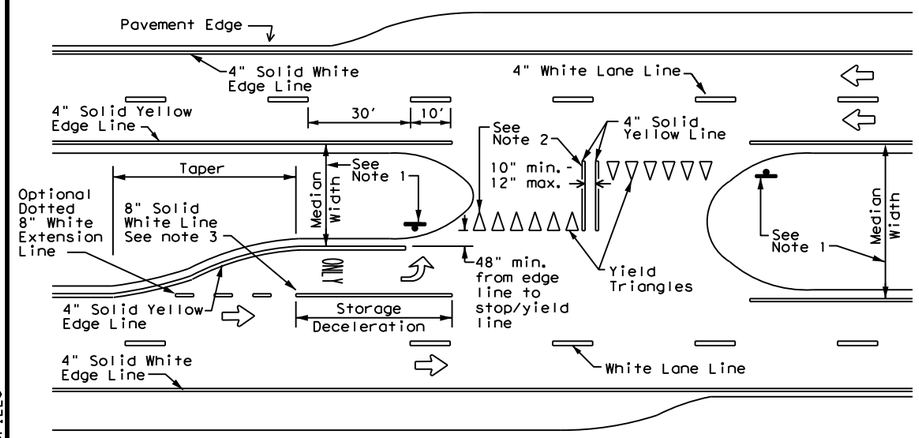


For posted speed on road being marked equal to or less than 40 MPH.



For posted speed on road being marked equal to or greater than 45 MPH.

YIELD LINES



FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs are optional as determined by the Engineer.

2. Install median striping (double yellow centerlines and stop bars/yield triangles) when a 50' or greater median centerline can be placed. Stop bars shall only be used with stop signs. Yield traingles shall only be used with yield signs.

3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

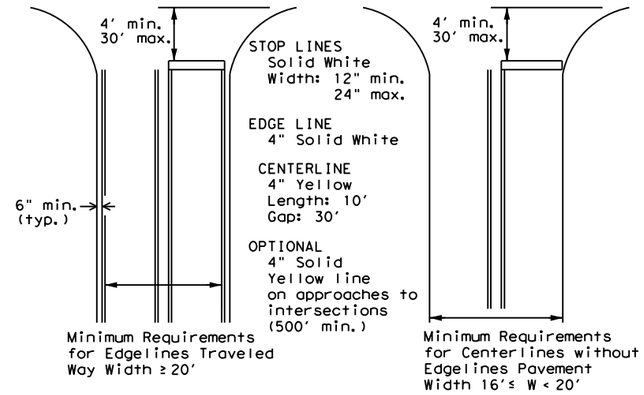
GENERAL NOTES

1. Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should not be placed less less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.

2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to the inside of edgeline of a two lane roadway.

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

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



GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Highways

Texas Department of Transportation

Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

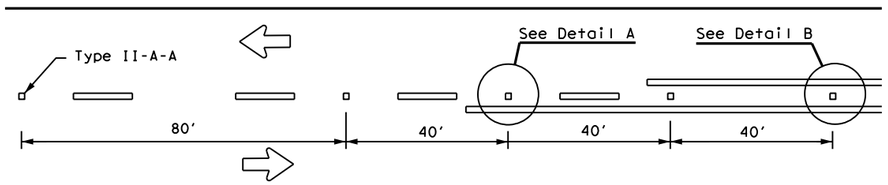
PM(1)-20

FILE: pm1-20.dgn	DN:	CK:	DW:	CK:
© TxDOT November 1978	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03	0025	05	024, ETC	UA 90, ETC
5-00 2-12	DIST	COUNTY		SHEET NO.
8-00 6-20	YKM	GONZALES, ETC		165

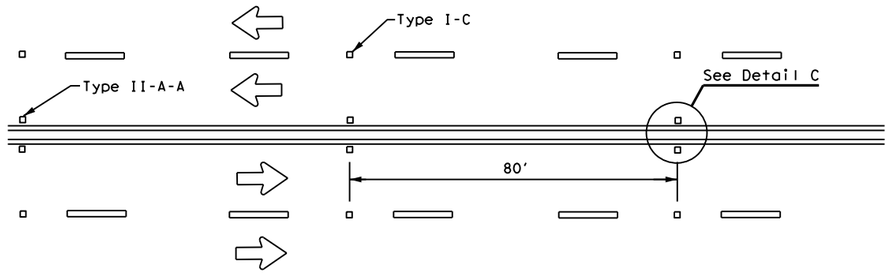
22A

DATE: $DATE$ $TIME$
FILE: $FILE$

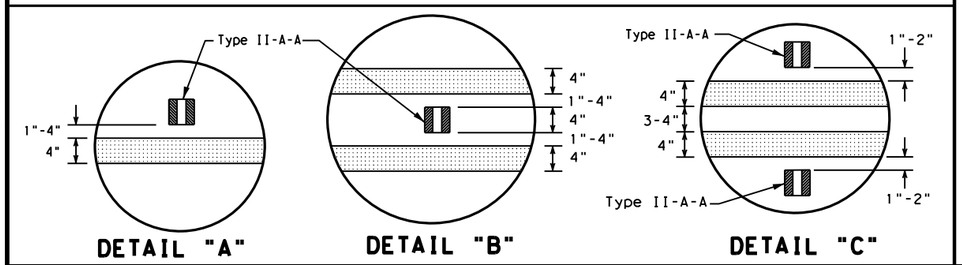
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE



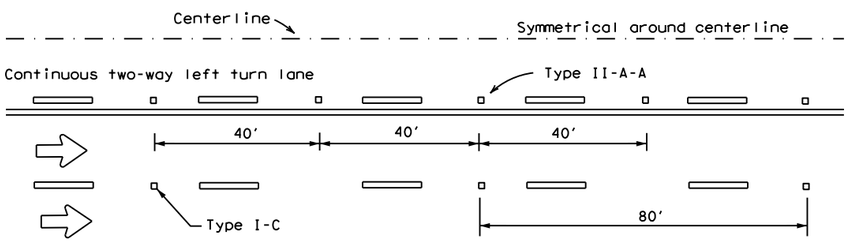
CENTERLINE FOR ALL TWO LANE ROADWAYS



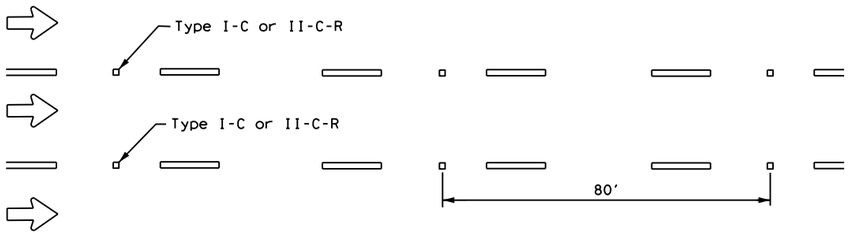
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS



DETAIL "A" **DETAIL "B"** **DETAIL "C"**

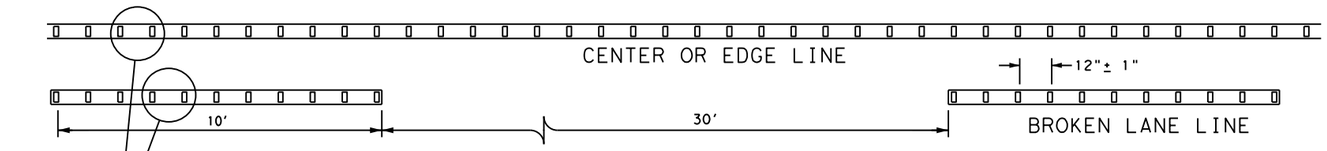


CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



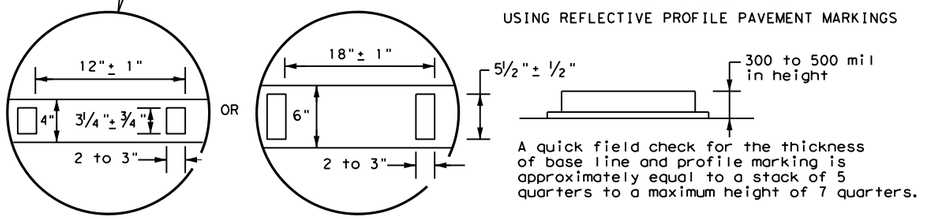
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

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



REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS



4" EDGE LINE, CENTER LINE OR LANE LINE

OPTIONAL 6" EDGE LINE, CENTER LINE OR LANE LINE

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTE

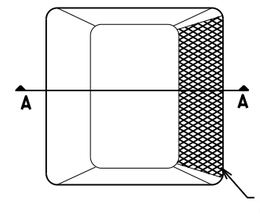
Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

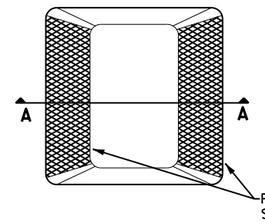
1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.

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

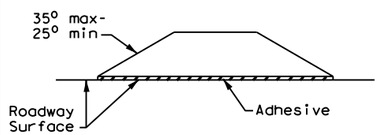
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)



Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS

Texas Department of Transportation

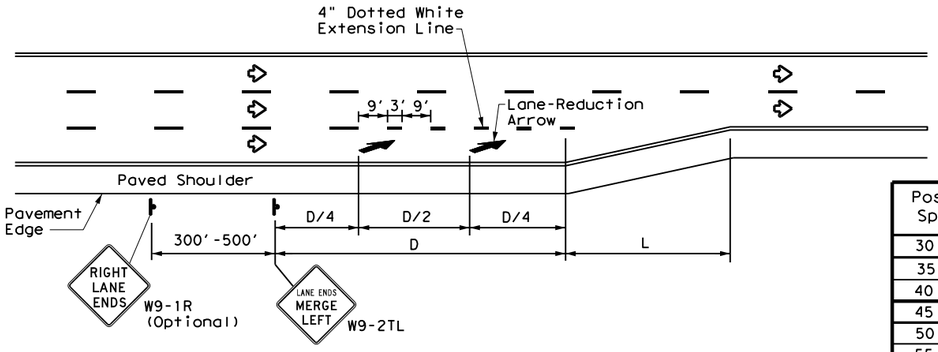
Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS PM(2)-20

FILE: pm2-20.dgn	DN:	CK:	DW:	CK:
©TxDOT April 1977	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-92 2-10, 5-00 2-12, 8-00 6-20	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		166

22B

DATE: $DATE$ $TIME$
FILE: $FILE$

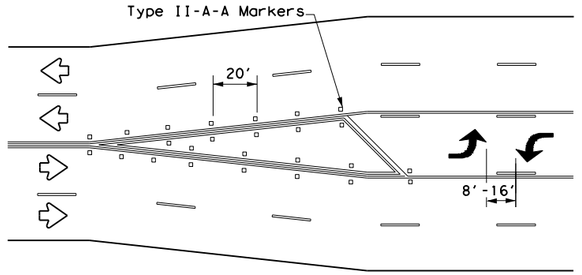


LANE REDUCTION

Posted Speed	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L=WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

NOTES

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



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

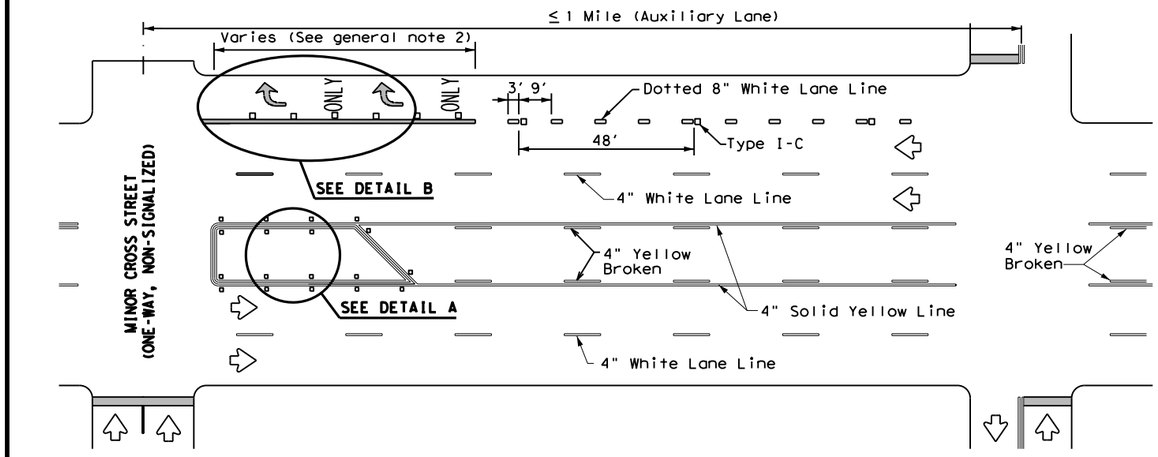
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

GENERAL NOTES

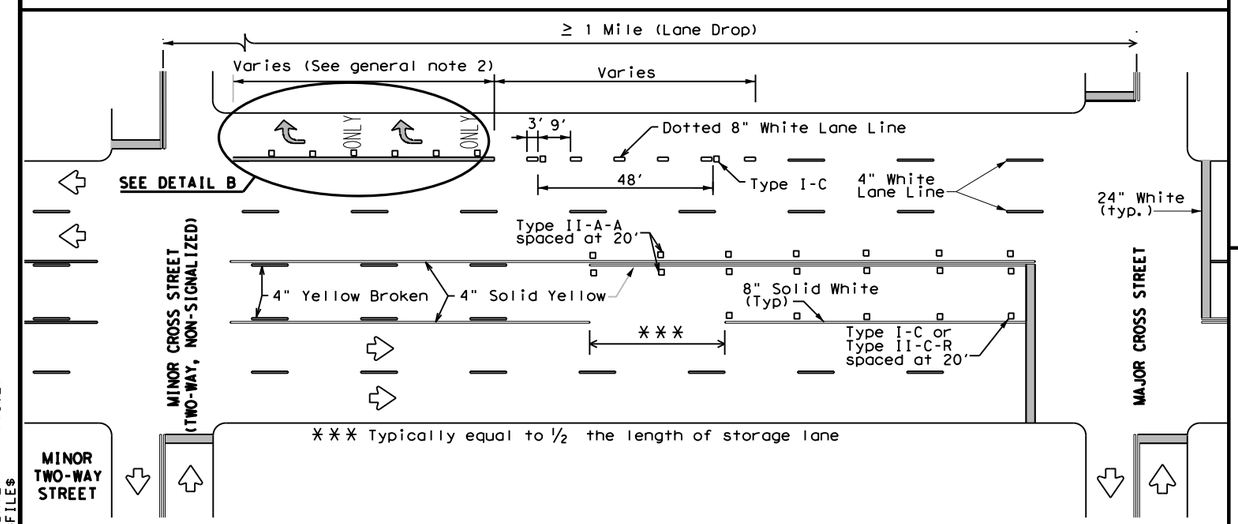
1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn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

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

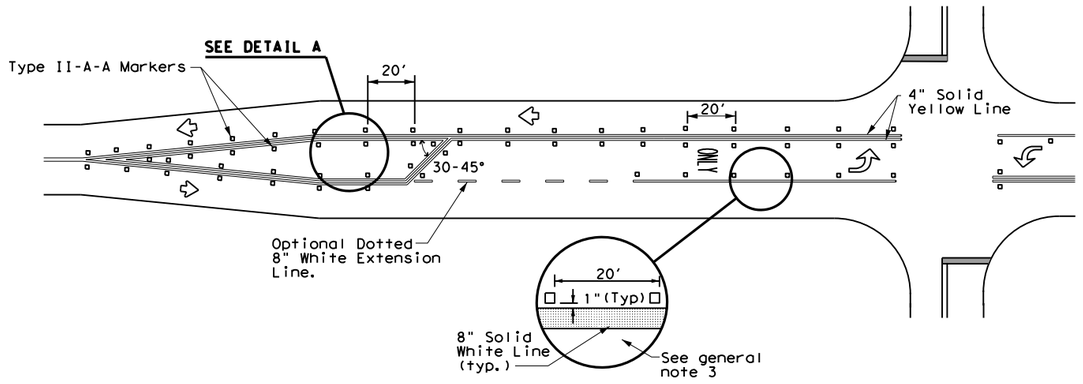
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



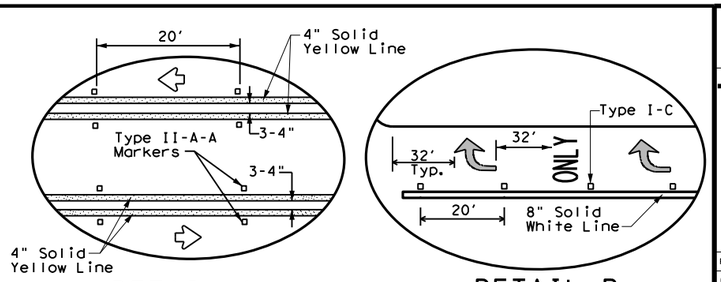
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



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



TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS



DETAIL A DETAIL B

Texas Department of Transportation — Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS PM(3)-20

FILE: pm3-20.dgn	DN:	CK:	DW:	CK:
© TxDOT April 1998	CONT	SECT	JOB	HIGHWAY
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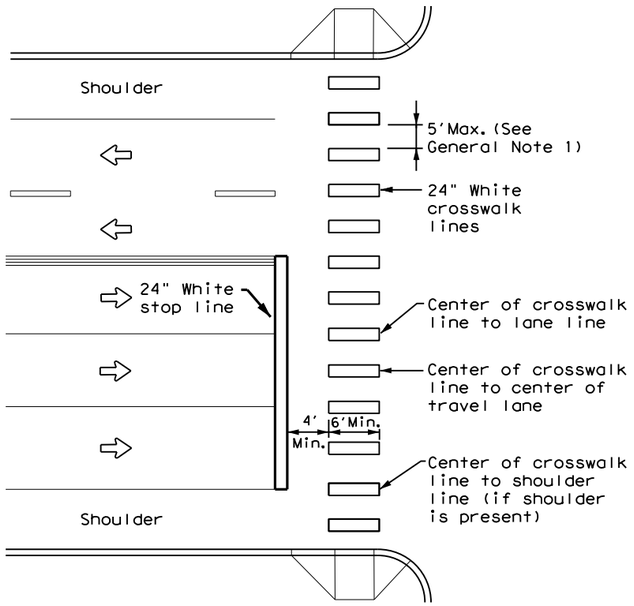
5-00 2-10	DIST	COUNTY		SHEET NO.
8-00 2-12	YKM	GONZALES, ETC		167
3-03 6-20				

220

DATE: $DATE$ $TIME$
FILE: $FILE$



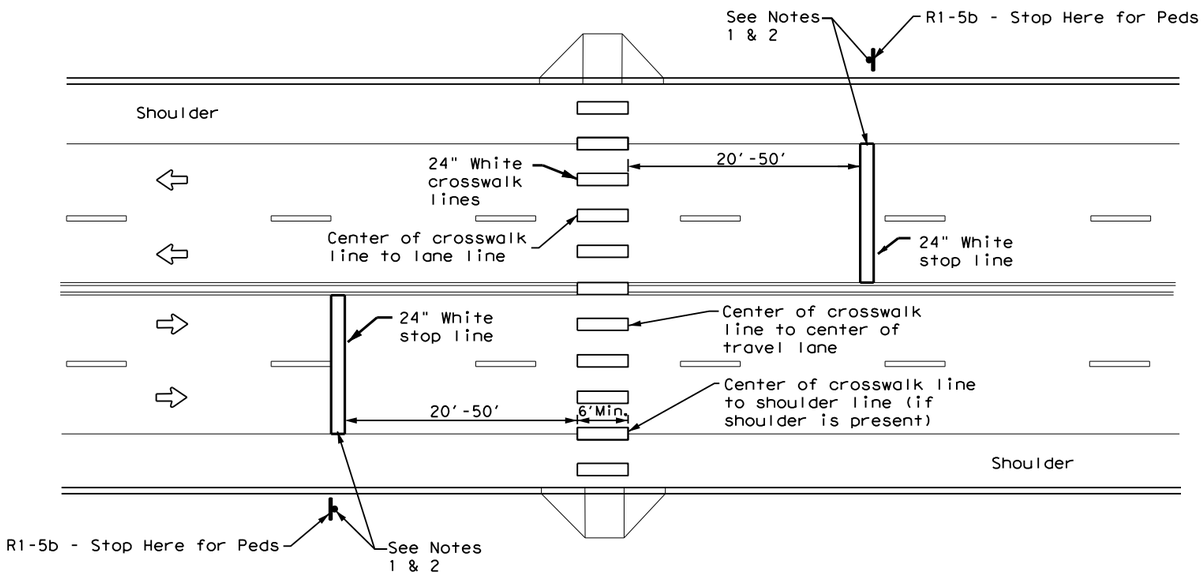
HIGH-VISIBILITY LONGITUDINAL CROSSWALK AT CONTROLLED APPROACH

GENERAL NOTES

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).
2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted.
3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are maintained in their proper location across the travel portion of the roadway.
4. At skewed crosswalks, the crosswalk lines are to remain parallel to the lane lines.
5. Each crosswalk shall be a minimum of 6' wide.
6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."
7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

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

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



UNSIGNALIZED MID BLOCK HIGH-VISIBILITY LONGITUDINAL CROSSWALK

NOTES:

1. Use stop bars with "Stop Here for Pedestrians" signs at unsignalized mid block cross walks.
2. Use stop bars with "Stop Here on Red" signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

Texas Department of Transportation

Traffic Safety Division Standard

CROSSWALK PAVEMENT MARKINGS

PM(4)-22

FILE: pm4-22.dgn	DN:	CK:	DW:	CK:
© TxDOT June 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS 3-22	0025	05	024, ETC	UA 90, ETC
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	YKM	GONZALES, ETC		168

22D

DATE: $DATE$ $TIME$
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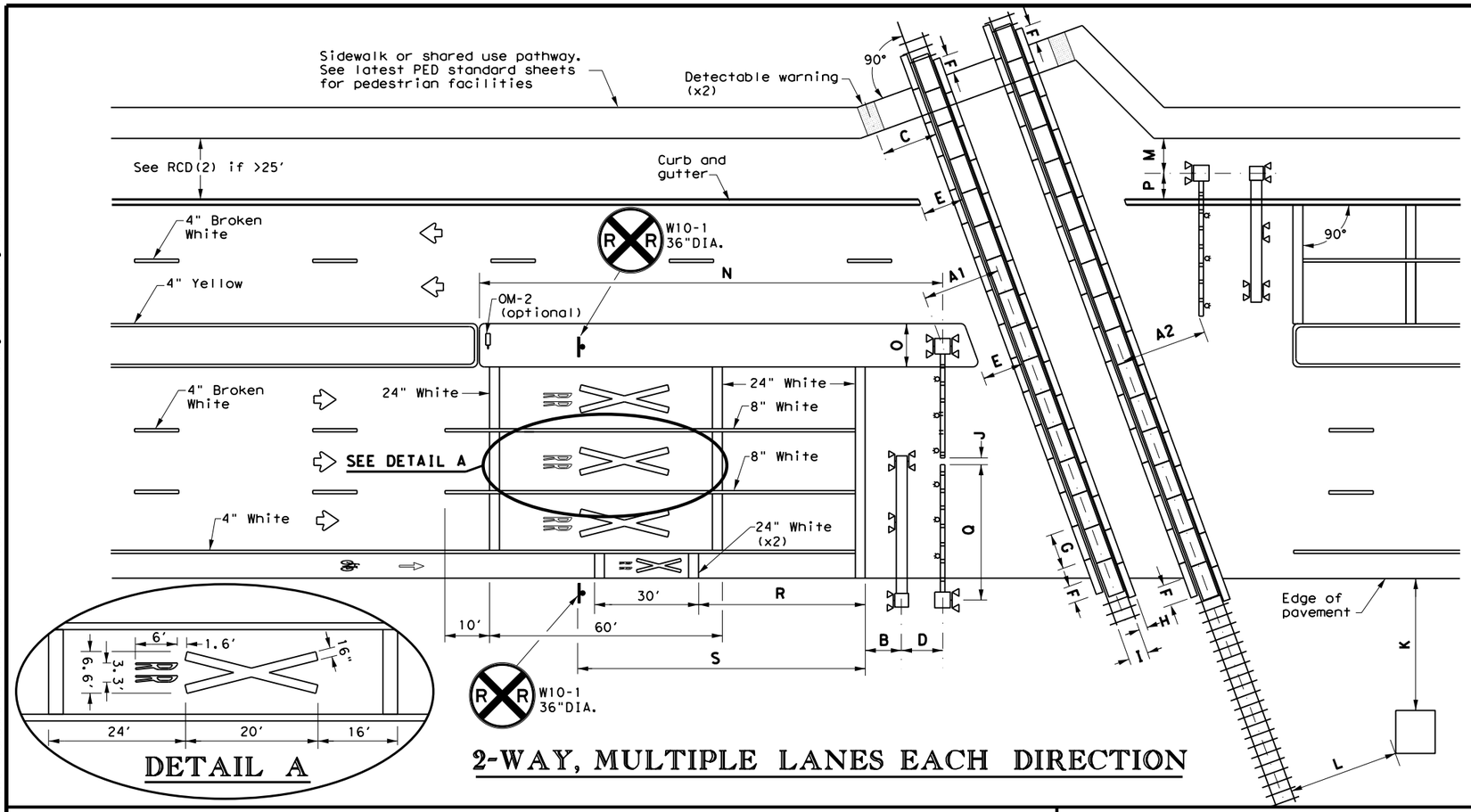
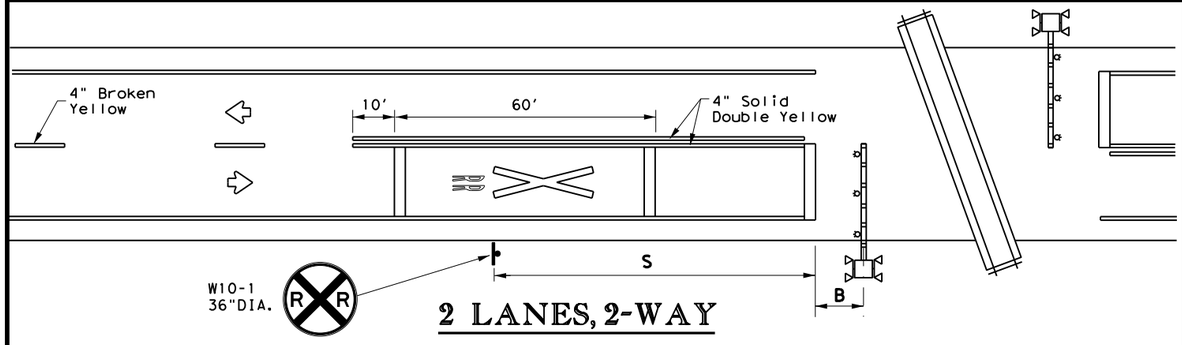
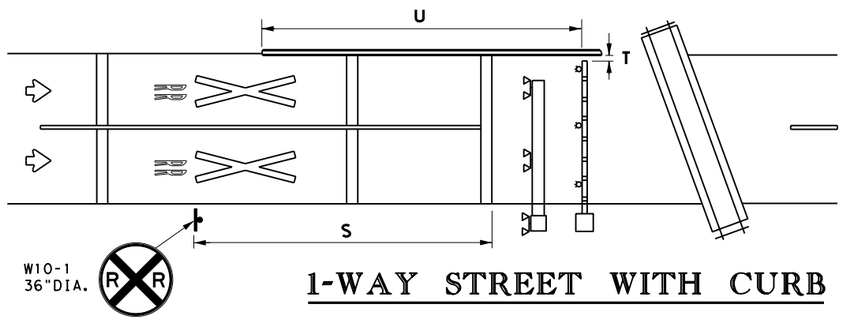


DETAIL A

2-WAY, MULTIPLE LANES EACH DIRECTION



2 LANES, 2-WAY



1-WAY STREET WITH CURB

NOTES

T: Tip of gate to edge of curb: 1' max for Quiet Zone SSM, 90% of traveled way covered by gates for all other locations

U: Non-traversable curb length from gate: 100' min. for a Quiet Zone SSM, 10' min for all other locations.

TABLE 1	
Approach Speed (mph)	Desirable Placement (feet)
20	100
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550
75	650

LEGEND	
	Sign
	Object Marker
	Traffic Flow
	Cantilever
	Gate Assembly
	Mast Flasher Pair

NOTES

A1: Center of RR mast to center of rail: 12' minimum, 15' typical.

A2: Tip of gate to center of rail: 12' minimum, 15' typical.

B: Center of mast (cantilever, gate, or mast flasher) of nearest active traffic control device to stop line: 8' (NOTE: Stop line may be moved as needed, but should be at least 8' back from gates, if present).

C: Center of detectable warning device to nearest rail: 6' minimum

D: Center of gate mast to center of cantilever mast: 6' typical. NOTE: Cantilever may be located in front or behind gates.

E: Edge of median or curb to nearest rail: 10' typical. NOTE: Design median edge to be parallel with rail.

F: Edge of planking panel from edge of pavement or sidewalk: 3' minimum. NOTE: Field panels need not be in line with gauge panels.

G: Length of panels along rail: 8' typical.

H: Width of field panel: 2' typical (check with railroad company).

I: Distance between rails: 4'-8.5".

J: Tip of gate to tip of gate: 2' maximum for Quiet Zone SSM or 90% of traveled way covered by gates for all other locations.

K: Nearest edge of RR cabin from edge of pavement: 30' typical. NOTE: Cabinet not required to be parallel to edge of pavement.

L: Nearest edge of RR cabin from nearest rail: 25' typical.

M: Center of RR mast to edge of sidewalk: 6' minimum.

N: Center of gate mast to leading edge of non-traversable median: 100' minimum to qualify as a Quiet Zone SSM. NOTE: 60' will suffice if there is a street intersection within the 100' and all street intersections within 60' are closed.

O: Width of median: 8'-6" minimum, 10' typical when using median gates. NOTE: Center of gate mast minimum 4'-3" from face of curb.

P: Center of RR mast to face of curb: 4'-3" minimum.
Center of RR mast to edge of pavement (with shoulder): 6' minimum
Center of RR mast to edge of pavement (no shoulder): 8'-3" minimum
NOTE: BNSF prefers 5'-3", 7', and 9'-3" minimums, respectively.

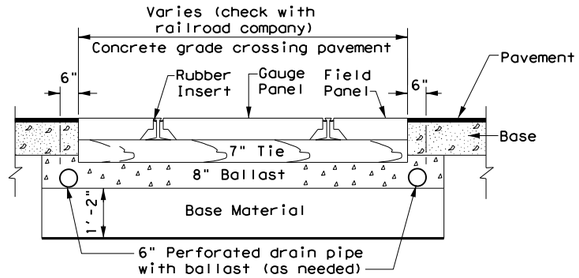
Q: Gate length: 28' or less typical, but railroad company may allow up to 32' under special circumstances.

R: Stop line to first RR Crossing transverse line (bike lane): 50' typical.

S: Stop line to GRADE CROSSING ADVANCE WARNING (W10-1) sign and adjacent RR Crossing pavement markings. See Table 1. See RCD(2) for other signs.

GENERAL NOTES

1. Medians and curbs must be non-traversable to qualify as a Quiet Zone Supplementary Safety Measure (SSM). Non-traversable curbs in Quiet Zones are 6" tall minimum and used on roadways where speed does not exceed 40 mph.
2. Raised pavement markers may be used to supplement striping. See PM(2) and PM(3) standard sheets.
3. Medians preferred whenever possible to prevent vehicles from driving around gates.
4. Longitudinal edge striping may be continued thru crossing as needed. Illumination may also be considered for nighttime visibility.
5. See SMD standard sheets for sign mounting details.
6. See the Standard Highway Sign Design for Texas (SHSD) manual for sign and pavement marking details.



CROSSING SURFACE CROSS SECTION

Texas Department of Transportation

Traffic Operations Division Standard

RAILROAD CROSSING DETAILS SIGNING, STRIPING, AND DEVICE PLACEMENT RCD(1)-16

FILE: rcd1-16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT FEBRUARY 2016	CONT	SECT	JOB	HIGHWAY
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	YKM	GONZALES, ETC		169

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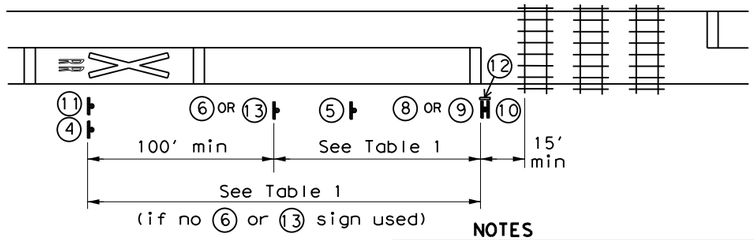
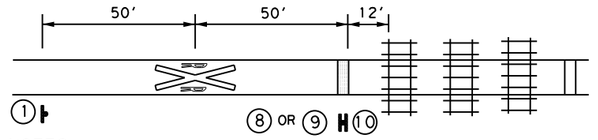


PASSIVE CROSSING

NOTES

1. Stop or yield sign may also be installed to the left of the crossbuck sign, rather than below it.
2. A 2" white retroreflective strip shall be installed on front and back of crossbuck sign post.



NOTES

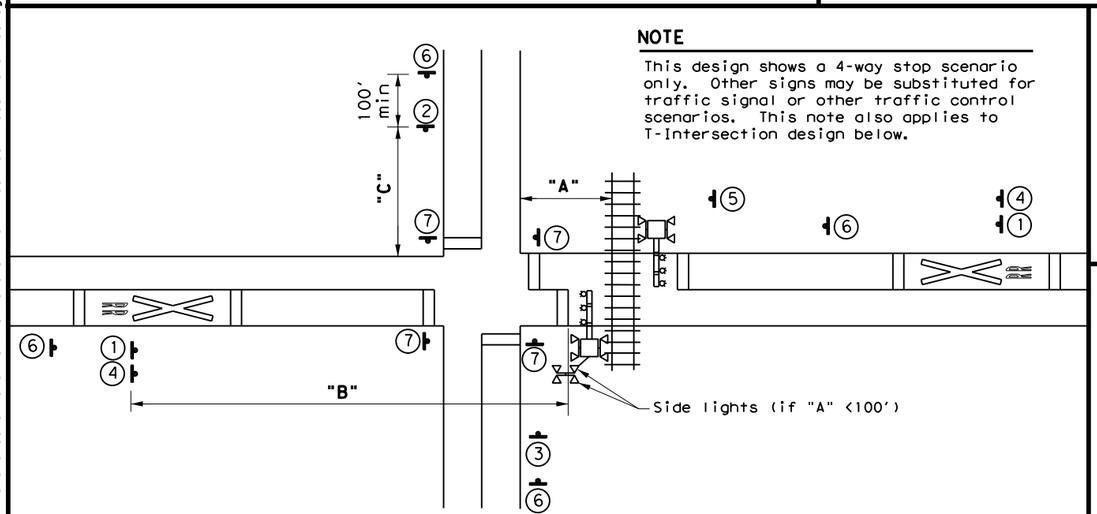
1. A shared use pathway is considered a separate pathway crossing when more than 25′ from traveled way of adjacent roadway.
2. Detectable warning used at stop bar.
3. Smaller sign sizes preferred than shown to the right on this sheet.

PATHWAY CROSSING

TABLE 1	
Approach Speed (mph)	Desirable Placement (feet)
20	100
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550
75	650

GENERAL NOTES

1. Railroad company to provide active traffic control devices, CROSSBUCK (R15-1), NUMBER OF TRACKS Plaque (R15-2P) (if more than 1 track), and EMERGENCY NOTIFICATION (I-13) signs.
2. LOW GROUND CLEARANCE (W10-5) signs may be relocated further upstream of crossing to provide advance warning of alternate route.
3. GRADE CROSSING AND INTERSECTION ADVANCE WARNING (W10-2) signs may be modified as needed to fit roadway geometry.
4. Table 1 placement distances may vary per Sect. 2C.05 of the TMUTCD.
5. See Table 1 to determine placement of STOP AHEAD (W3-1) and YIELD AHEAD (W3-2) signs unless shown otherwise.
6. DO NOT STOP ON TRACKS (R8-8) signs installed when potential for vehicles stopping on tracks is significant as determined by sealing engineer. Install so sign does not block view of RR mast.
7. See the Standard Highway Sign Design for Texas (SHSD) manual for sign and pavement marking details.

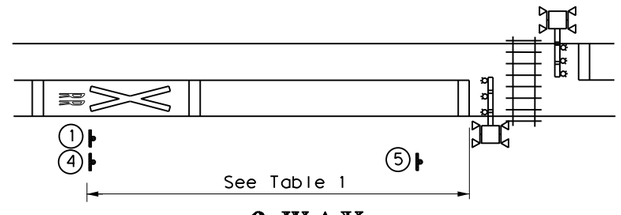


NOTE

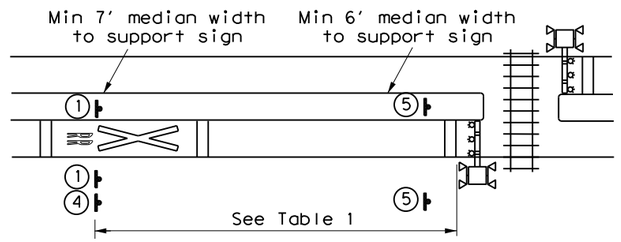
This design shows a 4-way stop scenario only. Other signs may be substituted for traffic signal or other traffic control scenarios. This note also applies to T-Intersection design below.

	"A" <100′	"A" ≥100′
"B"	See Table 1. Place pavement markings and signs on opposite side of intersection from rail if spacing from Table 1 would put markings within intersection.	See Table 1. Place pavement markings and signs between rail and intersection if spacing from Table 1 would put markings within intersection.
"C"	See Table 1.	GRADE CROSSING AND INTERSECTION ADVANCE WARNING (W10-2, W10-3, W10-4) signs should only be installed if W10-1 sign is not between intersection and railroad crossing. If needed, see Table 1.

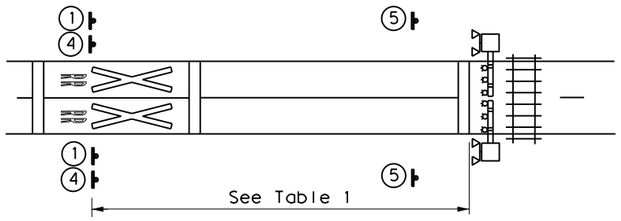
GRADE CROSSING NEAR A PARALLEL STREET



2-WAY



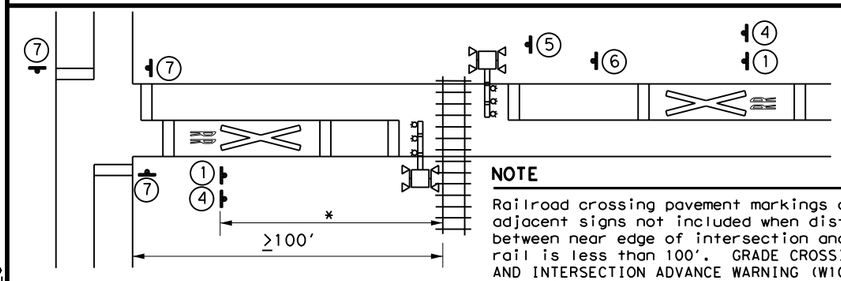
2-WAY WITH MEDIAN



1-WAY

SIGNS

** ① W10-1 36"DIA.	** ② W10-2L 36"X36"	** ③ W10-2R 36"X36"	IF NEEDED ④ W10-5 36"X36" / LOW GROUND CLEARANCE W10-5P 30"x24"
IF NEEDED ⑤ R8-8 24"X30" (DO NOT STOP ON TRACKS)	IF NEEDED ⑥ W3-1 30"X30"	⑦ STOP R1-1 36"X36" / ALL WAY R1-3P 18"X6"	⑧ RAIL CROSSING ROAD 3 TRACKS R15-1 48"X9" / R15-2P 27"X18" / STOP R1-1 36"X36"
⑨ RAIL CROSSING ROAD 3 TRACKS R15-1 48"X9" / R15-2P 27"X18" / YIELD R1-2 48"X48"X48"	⑩ RAIL CROSSING ROAD 3 TRACKS R15-1 48"X9" / R15-2P 27"X18"	⑪ ** R W10-1 36"DIA. / NO GATES OR LIGHTS W10-13P 30"X24"	⑫ REPORT EMERGENCY OR PROBLEM 1-800-555-5555 CROSSING 836 597 H — Sign may be placed perpend. to travel lanes. I-13 15"X9"
IF NEEDED ⑬ W3-2 30"X30"	** Includes a NO TRAIN HORN Plaque (W10-9P) if crossing is in a Quiet Zone. LOW GROUND CLEARANCE Plaque (W10-5P) if needed is mounted below W10-2/W10-3/W10-4 signs.		
NO TRAIN HORN W10-9P 30"X24"	LOW GROUND CLEARANCE W10-5P 30"X24"		

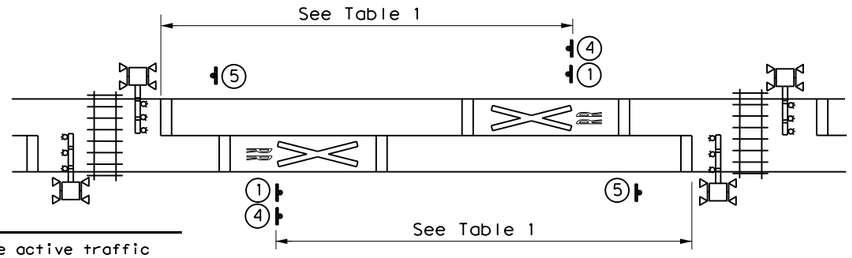


*Use Table 1 if sufficient space exists.

NOTE

Railroad crossing pavement markings and adjacent signs not included when distance between near edge of intersection and near rail is less than 100′. GRADE CROSSING AND INTERSECTION ADVANCE WARNING (W10-3) signs installed on roadway parallel with rail in this case.

T-INTERSECTION



NOTE

Separate active traffic control devices, railroad crossing pavement markings, and adjacent signs required when tracks are more than 100′ apart.

2 ADJACENT CROSSINGS

Texas Department of Transportation

Traffic Operations Division Standard

RAILROAD CROSSING DETAILS SIGNING & STRIPING

RCD(2)-16

FILE: rcd2-16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT FEBRUARY 2016	CONT	SECT	JOB	HIGHWAY
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	YKM	GONZALES, ETC		170

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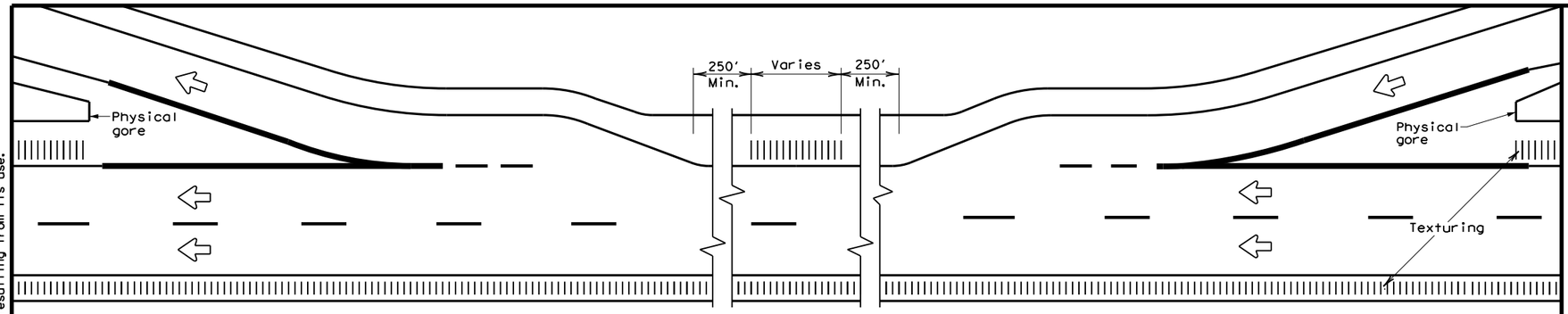
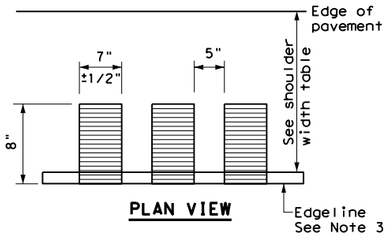
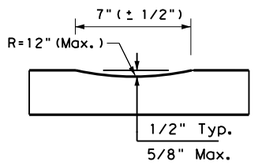


TYPICAL RUMBLE STRIP PLACEMENT AT EXIT AND ENTRANCE RAMPS

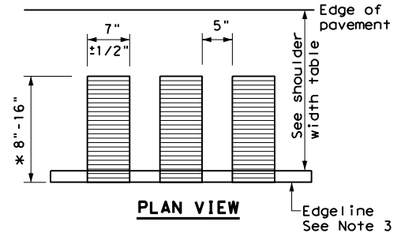


PLAN VIEW



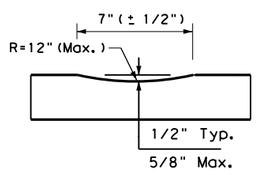
PROFILE VIEW
OPTION 1

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



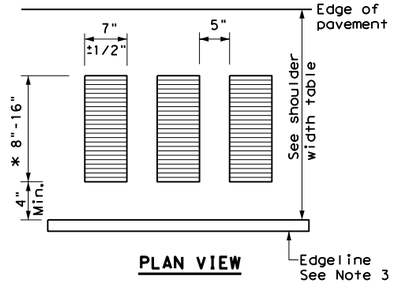
PLAN VIEW

* This distance may vary based on width of shoulder



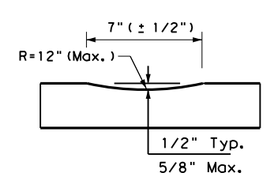
PROFILE VIEW
OPTION 2

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



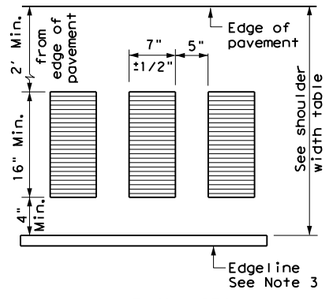
PLAN VIEW

* This distance may vary based on width of shoulder

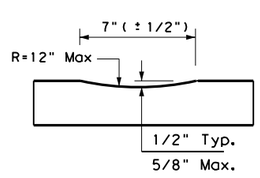


PROFILE VIEW
OPTION 3

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)



PLAN VIEW



PROFILE VIEW
OPTION 4

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)

GENERAL NOTES

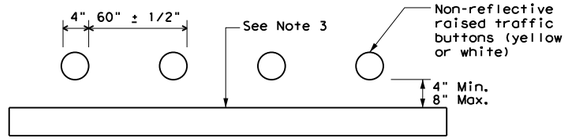
1. Rumble strips and profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
2. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall not be milled or depressed into bridge decks.
3. Use Standard Sheet PM(2) for positioning, dimensioning, and spacing of all reflective raised pavement markers, pavement markings, and profile markings.
4. See the table below for determining what options may be used for edgeline rumble strips.

WHEN INSTALLING MILLED DEPRESSION EDGELINE RUMBLE STRIPS:

5. See dimensions for milled rumble strips. Other shapes and dimensions may be used if approved by the Traffic Operations Division.
6. Pavement markings can be applied over milled shoulder rumble strips to create an edgeline rumble stripe.
7. Breaks in edgeline rumble strips shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossings, intersections and driveways with high usage of large trucks when installed on conventional highways.
8. Rumble strips shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways.
9. Consideration should be given to noise levels when edgeline rumble strips are installed near residential areas, schools, churches, etc. A minimum of 3/8 inches depth of milled rumble strip may be considered in these areas.
10. On roadways with high bicycle activity, consideration should be given before the installation of edgeline rumble strips. Things to consider include size of rumble strips, rumble strip material and location of rumble strips on the shoulder. If the designer determines that gaps are needed in the rumble strips due to bicycle use of the road, then follow the requirement shown in FHWA Technical Advisory T5040.39, or latest version. A detail of the spacing shall be included in the plans.

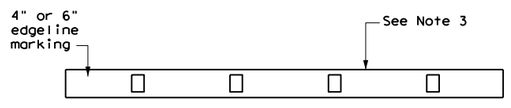
WHEN INSTALLING RAISED OR PROFILE EDGELINE RUMBLE STRIPS:

11. Raised rumble strips consisting of non-reflective raised traffic buttons may be used. Non-reflective raised traffic buttons can be affixed to asphalt or concrete with bitumen or adhesives, as per the manufacturer's recommendations.
12. Non-reflective traffic buttons shall be placed adjacent to the pavement marking delineating the edgeline when used as a rumble strip. The color of the button should match the color of the adjacent edgeline marking (white or yellow). The buttons will be paid for under Item 672, "Raised Pavement Markers." Non-reflective traffic buttons must meet the requirements of DMS-4300.
13. Non-reflective traffic buttons shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways.
14. Breaks in edgeline rumble strips using raised traffic buttons shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossing, intersections and driveways with high usage of large trucks when installed on conventional highways.
15. The minimum distance between the edgeline and the buttons should be used if the shoulder is less than 8 feet in width.
16. Raised profile thermoplastic markings used as edgelines may substitute for buttons.



PLAN VIEW
OPTION 5

RAISED EDGELINE RUMBLE STRIPS



PLAN VIEW
OPTION 6

PROFILE EDGELINE MARKINGS

SHOULDER WIDTH TABLE		
EQUAL TO OR LESS THAN 2 FEET	GREATER THAN 2 FEET LESS THAN 4 FEET	EQUAL TO OR GREATER THAN 4 FEET
Option 1, 5 OR 6	Option 1, 2, 3, 5 or 6	Option 2, 4, 5 OR 6

Texas Department of Transportation

Traffic Operations Division Standard

EDGELINE RUMBLE STRIPS ON FREEWAYS AND DIVIDED HIGHWAYS

RS(1)-13

FILE: rs(1)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 2006	CONT	SECT	JOB	HIGHWAY
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	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		171

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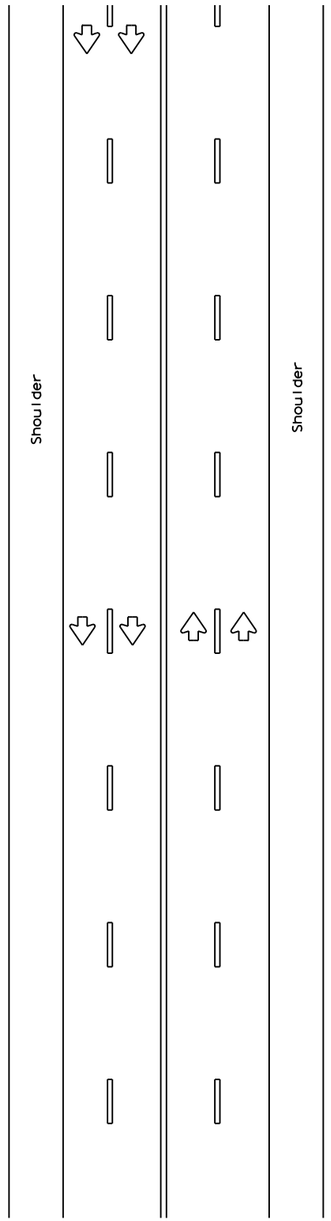
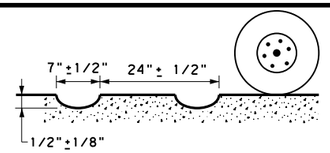
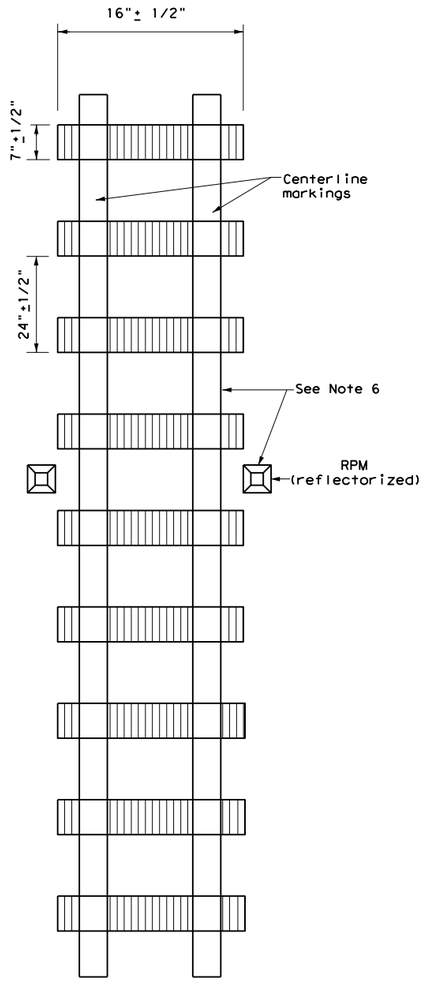
CENTERLINE RUMBLE STRIPS



MULTILANE UNDIVIDED HIGHWAY WITH SHOULDER

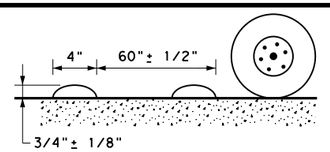


PROFILE VIEW

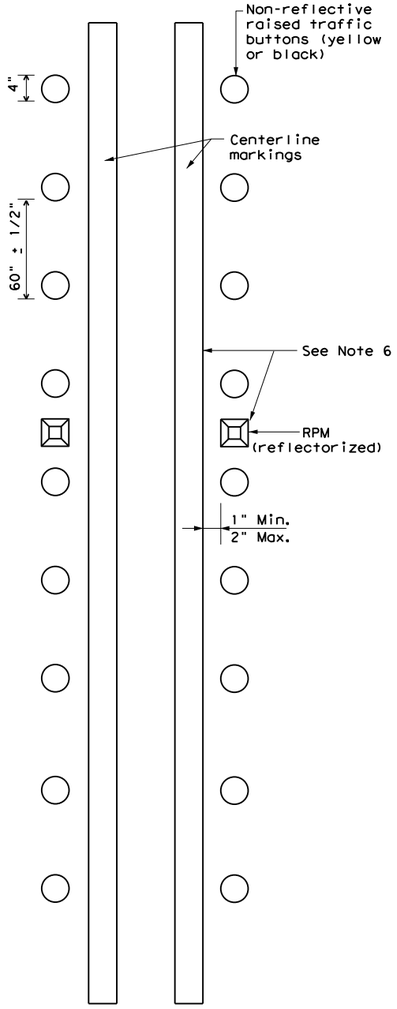


PLAN VIEW
OPTION 1

MILLED CENTERLINE RUMBLE STRIPS

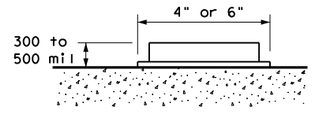


PROFILE VIEW

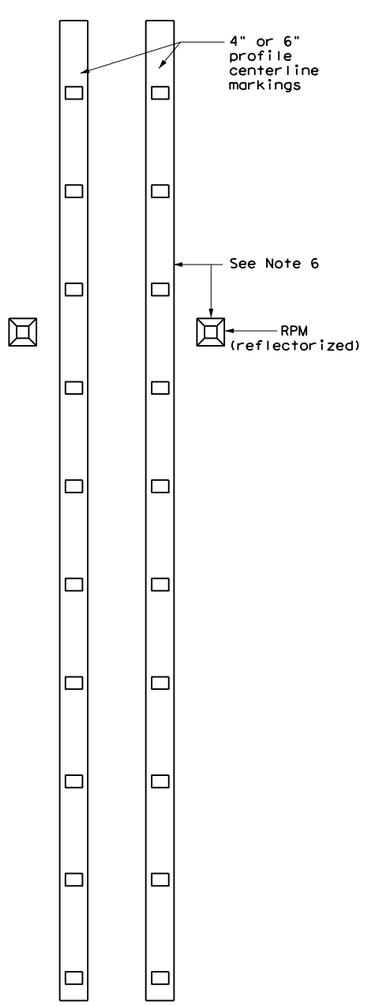


PLAN VIEW
OPTION 2

RAISED CENTERLINE RUMBLE STRIPS



PROFILE VIEW



PLAN VIEW
OPTION 3

PROFILE CENTERLINE MARKINGS

GENERAL NOTES

1. This standard sheet provides guidelines for installing centerline rumble strips on multilane undivided highways.
2. Centerline and edgeline rumble strips or profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
3. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall not be milled or depressed into bridge decks.
4. See dimensions for milled rumble strips. Other shapes and dimensions may be used if approved by the Traffic Operations Division.
5. Breaks in milled centerline rumble strips shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossing, intersections and driveways with high usage of large trucks.
6. Use Standard Sheet PM(2) for positioning, dimensioning, and spacing of all reflective raised pavement markers, pavement markings and profile markings.
7. Consideration should be given to noise levels when centerline rumble strips are installed near residential areas, schools, churches, etc. A minimum of 3/8 inch depth of milled rumble strip may be considered in these areas.
8. Pavement markings must be applied over milled centerline rumble strips for normal centerline spacing. For wider medians, specify in the plans the exact placement of the rumble strips. Place the rumble strips under each centerline marking or centered in the middle of the median.

WHEN INSTALLING CENTERLINE RUMBLE STRIPS:

9. Raised rumble strips consisting of non-reflective raised traffic buttons may be used. Non-reflective raised traffic buttons can be affixed to asphalt or concrete with bitumen or adhesives, as per manufacturer's recommendations.
10. When using non-reflective raised traffic buttons as a centerline rumble strip, the button shall be placed adjacent to the pavement marking delineating the centerline. The color of the button should be yellow for a continuous no passing roadway. The button will be paid for under Item 672, "Raised Pavement Markers." Non-reflective traffic buttons must meet the requirements of DMS-4300.

WHEN INSTALLING EDGELINE RUMBLE STRIPS WITH OR WITHOUT CENTERLINE RUMBLE STRIPS ON UNDIVIDED HIGHWAYS:

11. See standard sheet RS(4).

Texas Department of Transportation®

Traffic Operations Division Standard

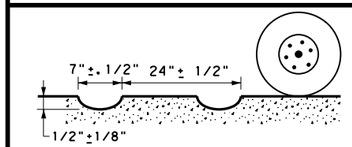
CENTERLINE RUMBLE STRIPS ON MULTILANE UNDIVIDED HIGHWAYS

RS(2)-13

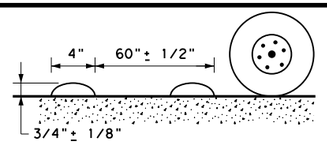
FILE: rs(2)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2013	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		172

DATE: $DATE$ $TIME$
FILE: $FILE$

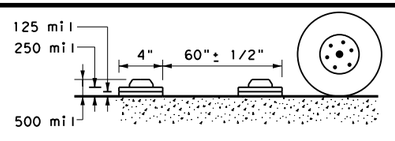
CENTERLINE RUMBLE STRIPS



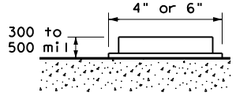
MILLED RUMBLE STRIPS



RAISED TRAFFIC BUTTONS

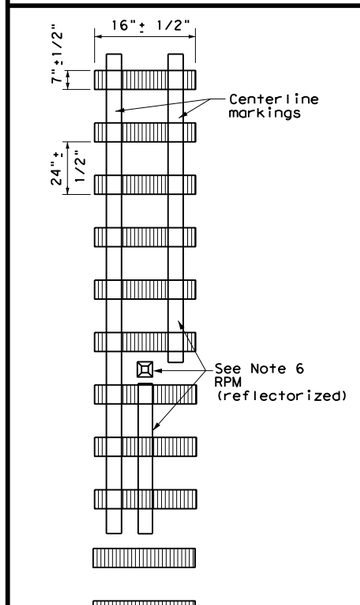


PREFORMED THERMOPLASTIC STRIPS



PROFILE MARKINGS

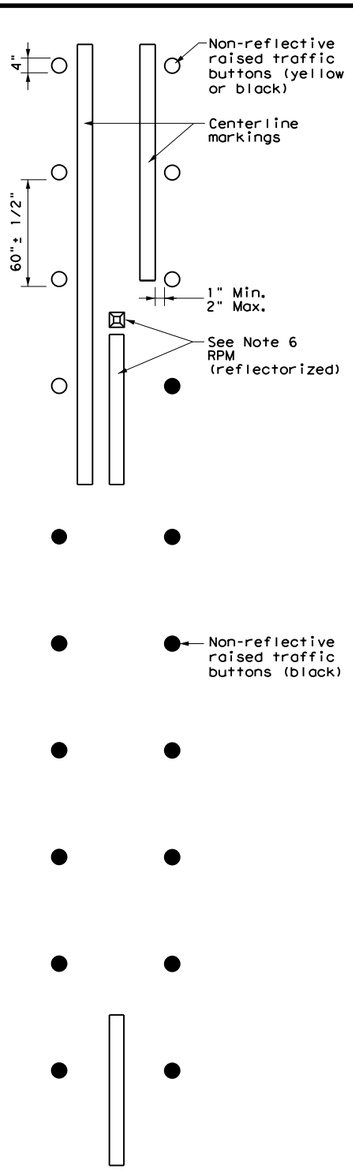
PROFILE VIEW



PLAN VIEW
OPTION 1

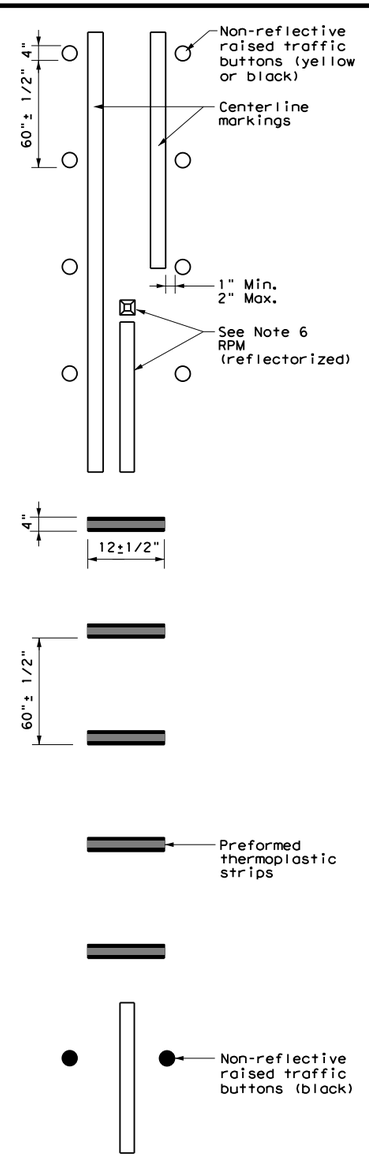
TWO LANE TWO-WAY ROADWAYS

MILLED CENTERLINE RUMBLE STRIPS



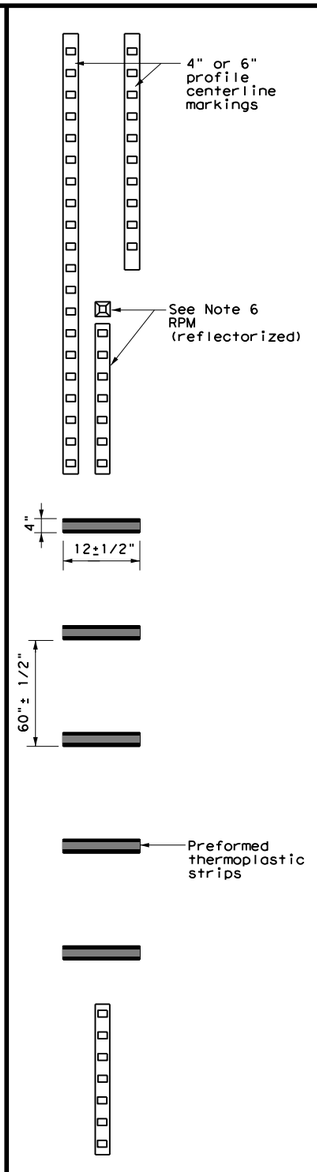
PLAN VIEW
OPTION 2

RAISED CENTERLINE RUMBLE STRIPS



PLAN VIEW
OPTION 3

RAISED CENTERLINE RUMBLE STRIPS AND PREFORMED THERMOPLASTIC STRIPS



PLAN VIEW
OPTION 4

PROFILE CENTERLINE MARKINGS AND PREFORMED THERMOPLASTIC STRIPS

GENERAL NOTES

1. This standard sheet provides guidelines for installing centerline rumble strips on two-lane highways with or without shoulders.
2. Centerline and edgeline rumble strips or profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
3. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall not be milled or depressed into bridge decks.
4. See dimensions for milled rumble strips. Other shapes and dimensions may be used if approved by the Traffic Operations Division.
5. Breaks in milled centerline rumble strips shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossings, intersections and driveways with high usage of large trucks.
6. Use Standard Sheet PM(2) for positioning, dimensioning, and spacing of all reflective raised pavement markers, and dimensions pavement markings and profile markings.
7. Consideration should be given to noise levels when centerline rumble strips are installed near residential areas, schools, churches, etc. A minimum of 3/8 inch depth of milled rumble strip may be considered in these areas.
8. Pavement markings must be applied over milled centerline rumble strips.

WHEN INSTALLING CENTERLINE RUMBLE STRIPS:

9. Raised rumble strips consisting of non-reflective raised traffic buttons may be used. Non-reflective raised traffic buttons can be affixed to asphalt or concrete with bitumen or adhesives, as per manufacturer's recommendations.
10. When using non-reflective raised traffic buttons as a centerline rumble strip, the button shall be placed adjacent to the pavement marking delineating the centerline. The buttons will be paid for under Item 672, "Raised Pavement Markers." Non-reflective traffic buttons must meet the requirements of DMS-4300.
11. The color of the button should be yellow for a continuous no passing roadway. Black buttons should be used in areas where passing is allowed.

WHEN INSTALLING EDGELINE RUMBLE STRIPS WITH OR WITHOUT CENTERLINE RUMBLE STRIPS ON UNDIVIDED HIGHWAYS:

12. See standard sheet RS(4).

Texas Department of Transportation®
Traffic Operations Division Standard

CENTERLINE RUMBLE STRIPS ON TWO LANE TWO-WAY HIGHWAYS

RS(3)-13

FILE: rs(3)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2013	CONT	SECT	JOB	HIGHWAY
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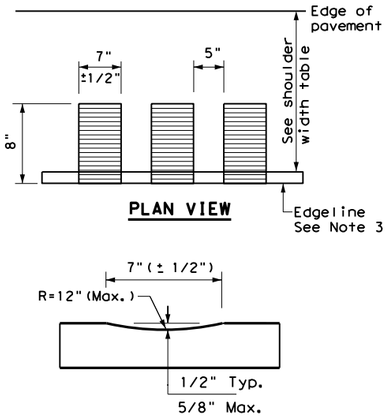
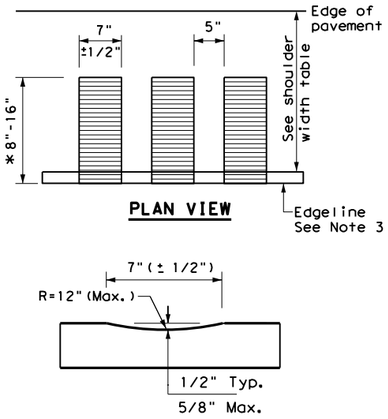
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		173



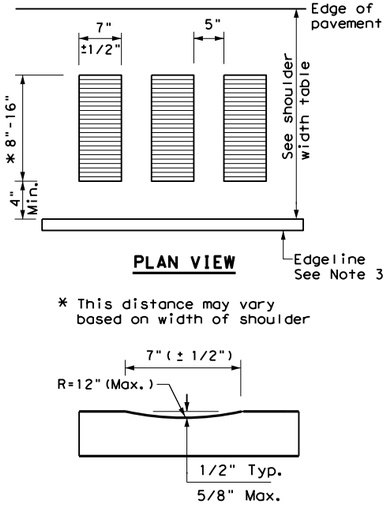
OPTION 1

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



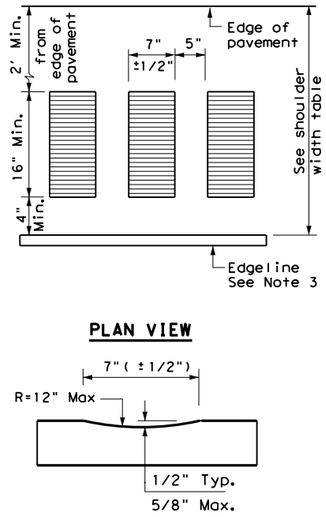
OPTION 2

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



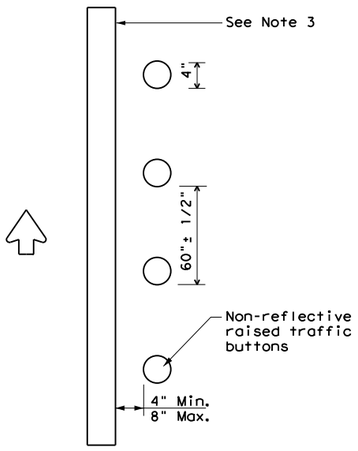
OPTION 3

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)



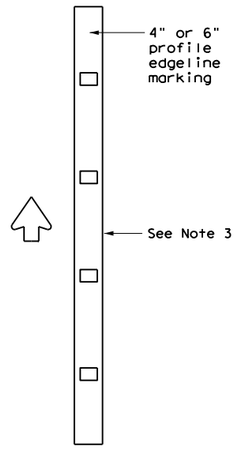
OPTION 4

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)



OPTION 5

RAISED EDGELINE RUMBLE STRIPS



OPTION 6

PROFILE EDGELINE MARKINGS

SHOULDER WIDTH TABLE		
EQUAL TO OR LESS THAN 2 FEET	GREATER THAN 2 FEET LESS THAN 4 FEET	EQUAL TO OR GREATER THAN 4 FEET
Option 1, 5 OR 6	Option 1, 2, 3 5 OR 6	Option 2, 4, 5 OR 6

GENERAL NOTES

1. Rumble strips and profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
2. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall not be milled or depressed into bridge decks.
3. Use Standard Sheet PM(2) for positioning, dimensioning, and spacing of all reflective raised pavement markers, pavement markings, and profile markings.
4. See the table below for determining what options may be used for edgeline rumble strips.

WHEN INSTALLING MILLED DEPRESSION EDGELINE RUMBLE STRIPS:

5. See dimensions for milled rumble strips. Other shapes and dimensions may be used if approved by the Traffic Operations Division.
6. Pavement markings can be applied over milled shoulder rumble strips to create an edgeline rumble stripe.
7. Breaks in edgeline rumble strips shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossings, intersections and driveways with high usage of large trucks when installed on conventional highways.
8. Rumble strips shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways.
9. Consideration should be given to noise levels when edgeline rumble strips are installed near residential areas, schools, churches, etc. A minimum of 3/8 inches depth of milled rumble strip may be considered in these areas.
10. On roadways with high bicycle activity, consideration should be given before the installation of edgeline rumble strips. Things to consider include size of rumble strips, rumble strip material and location of rumble strips on the shoulder. If the designer determines that gaps are needed in the rumble strips due to bicycle use of the road, then follow the requirement shown in FHWA Technical Advisory T5040.39, or latest version. A detail of the spacing shall be included in the plans.

WHEN INSTALLING RAISED OR PROFILE EDGELINE RUMBLE STRIPS:

11. Raised rumble strips consisting of non-reflective raised traffic buttons may be used. Non-reflective raised traffic buttons can be affixed to asphalt or concrete with bitumen or adhesives, as per the manufacturer's recommendations.
12. Non-reflective traffic buttons shall be placed adjacent to the pavement marking delineating the edgeline when used as a rumble strip. The color of the button should match the color of the adjacent edgeline marking (white or yellow). The buttons will be paid for under Item 672, "Raised Pavement Markers." Non-reflective traffic buttons must meet the requirements of DMS-4300.
13. Non-reflective traffic buttons shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways.
14. Breaks in edgeline rumble strips using raised traffic buttons shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossing, intersections and driveways with high usage of large trucks when installed on conventional highways.
15. The minimum distance between the edgeline and the buttons should be used if the shoulder is less than 8 feet in width.
16. Raised profile thermoplastic markings used as edgelines may substitute for buttons.

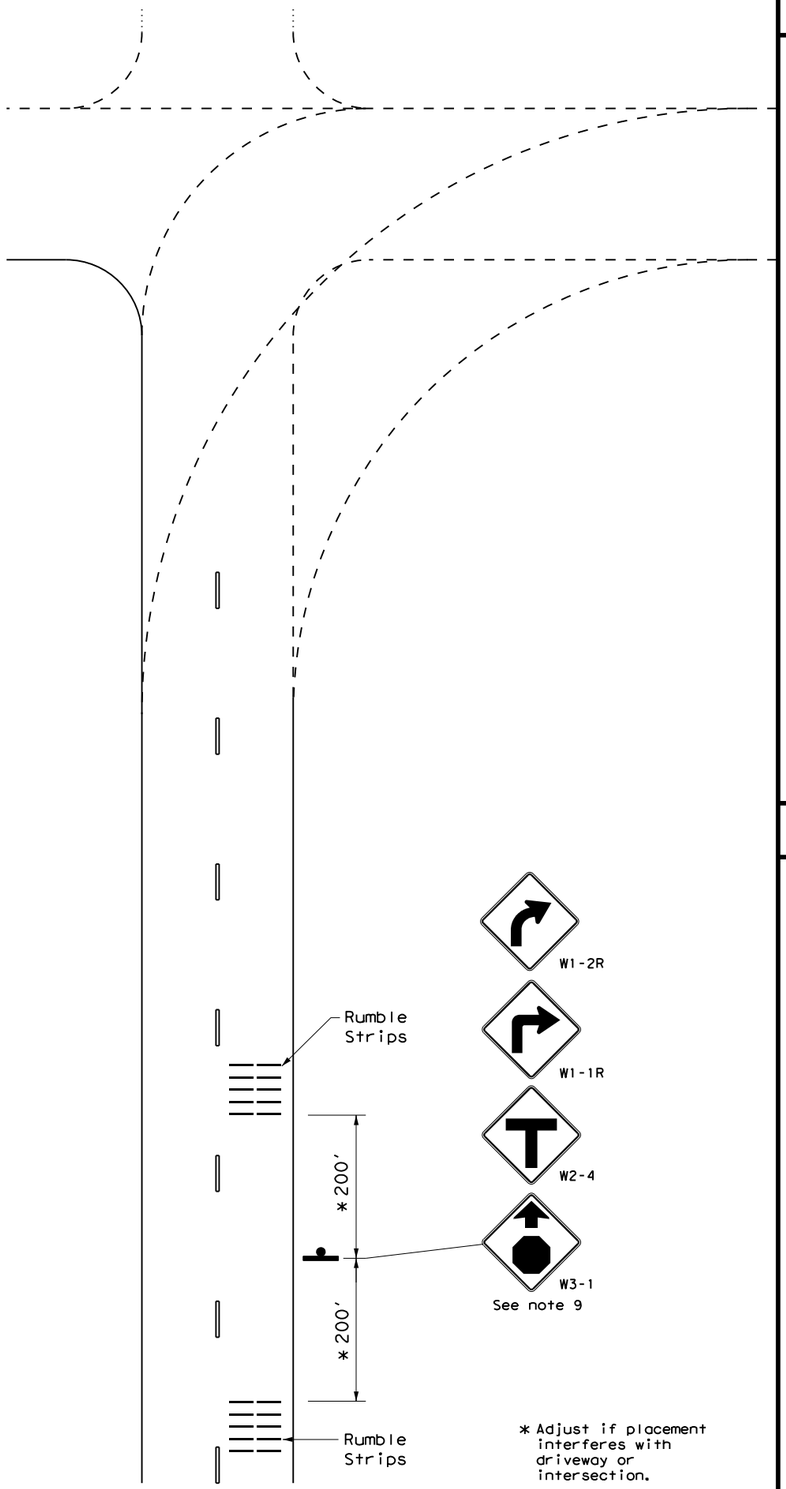
Texas Department of Transportation

Traffic Operations Division Standard

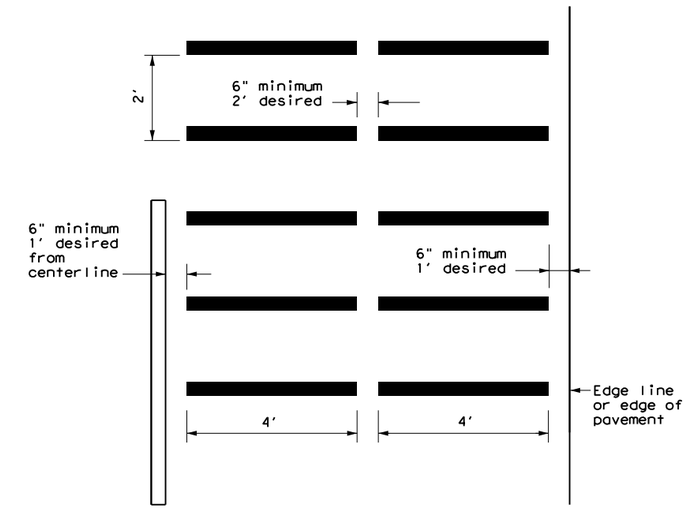
EDGELINE RUMBLE STRIPS ON UNDIVIDED OR TWO LANE HIGHWAYS
RS(4)-13

FILE: rs(4)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2013	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		174

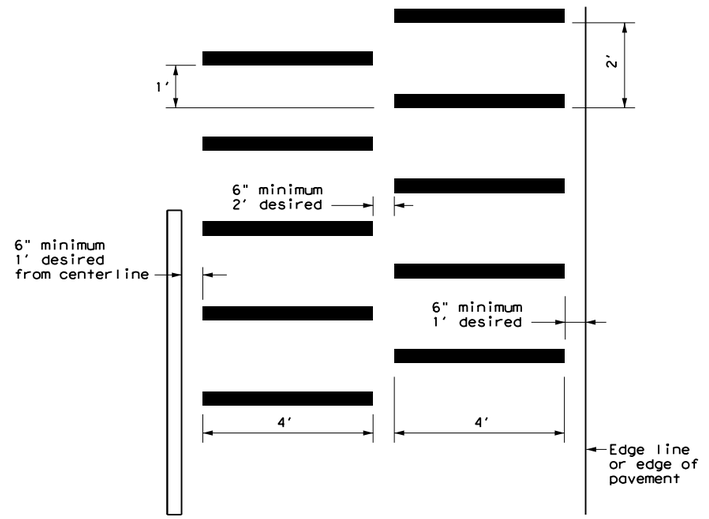
DATE: $DATE$ $TIME$
FILE: $FILE$



STANDARD PATTERN



ALTERNATIVE PATTERN



GENERAL NOTES

1. Transverse or in-lane rumble strips should only be used at high incident and special geometric locations. These special geometric locations may include: approaches to rural, high speed signalized or Stop -controlled intersections with sight restrictions and/or high crash rates, approaches to unexpected urban intersections, approaches to newly installed Stop or signalized controlled intersections, approaches to toll plazas, approaches to hazardous horizontal curves, and approaches to railroad grade crossings.

2. When used, the rumble strips shall be placed 200 feet prior to and after the placement of the warning device.

3. The use of rumble strips should not be widespread or used indiscriminately.

4. Preformed black raised rumble strips should be used. They should be installed in accordance with the manufacturer's recommendations.

5. A list of approved, preformed raised rumble strips can be obtained from the Traffic Operations Division.

6. Consideration should be given to noise levels when in -lane or transverse rumble strips are installed near residential areas, schools, churches, etc.

7. The use of the "Rumble Strips Ahead" sign may be used in advance of in -lane or transverse rumble strips, based on engineering judgement. This sign is typically not necessary for rumble strip installations built to the guidelines on this standard sheet. When used, this sign should be spaced in advance of the rumble strips based on the guidelines for advance placement of warning sign included in the "Texas Manual on Uniform Traffic Control Devices".

8. Consideration should be given to bicyclists. A 12 inch gap from the edge line may be used to accommodate bicyclists when a usable shoulder is not available. Additional gaps in the in -lane or transverse rumble strips are not recommended since they could cause motorists to swerve to avoid the rumble strips.

9. Other signs can be used as conditions warrant.

Texas Department of Transportation

Traffic Operations Division Standard

TRANSVERSE OR IN-LANE RUMBLE STRIPS

RS(5)-13

FILE: rs(5)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT April 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
2-10	DIST	COUNTY		SHEET NO.
10-13	YKM	GONZALES, ETC		175

DATE: $DATE$ $TIME$
FILE: $FILE$

I. STORMWATER POLLUTION PREVENTION

Texas Pollutant Discharge Elimination System (TPDES) TXR 150000: Stormwater Discharge Permit or Construction General Permit is required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506. If applicable list MS4 operator that may receive discharges from this project. MS4 operator should be notified prior to construction activities.

- ☐ Prevent stormwater pollution erosion and sedimentation in accordance with TPDES Permit TXR 150000.
- ☐ Comply with the SW3P and revise when necessary to control pollution or as required by the Engineer.
- ☐ Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and TCEQ, EPA, or other inspectors.
- ☐ When Contractor project specific locations (PSL) increase disturbed soil area to 5 acres or more, sumbit Notice of Intent (NOI) to TCEQ and Engineer.
- ☐ MS4 Operator(s):

No Additional Comments

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS

United States Army Corps of Engineers (USACE) Permit is required for filling, dredging, excavating or other work in water bodies, rivers, creeks, streams, wetlands or wet areas. The Contractor must adhere to all of the terms and general conditions associated with the following permit(s). If additional work not represented in the plans is required, contact the Engineer immediately.

- ☒ No USACE Permit Required
- ☐ Work is authorized by the USACE under a Nationwide Permit _____ without a Pre-Construction Notification (PCN). Project specific permit was not issued by USACE, therefore is not in the plan set.
- ☐ Work is authorized by the USACE under a Nationwide Permit _____ with a Pre-Construction Notification (PCN). The project specific permit issued by the USACE is included in the plan set.
- ☐ Work is authorized by the USACE under a Individual Permit (IP). The project specific permit issued by the USACE is included in the plan set.
- ☐ Work would be authorized by the USACE. The project specific permit issued by the USACE or Nationwide Permit will be provided to the contractor.

United States Coast Guard (USCG) Permit is required for projects that involve the construction or modification (including changes to lighting) of a bridge or causeway across a water body determined to be navigable by the United States Coast Guard (USCG) under Section 9 of the Rivers and Harbors Act. If additional work not represented in the plans is required, contact the Engineer immediately.

- ☒ No United States Coast Guard (USCG) Coordination Required
- ☐ United States Coast Guard (USCG) Permit
- ☐ United States Coast Guard (USCG) Exemption

Best Management Practices

Erosion	Sedimentation	Post Construction TSS
☐ Temporary Vegetation	☐ Silt Fence	☐ Vegetative Filter Strips
☐ Vegetation Lined Ditches	☐ Rock Filter Dam	☐ Vegetation Lined Ditches
☐ Sodding	☐ Sand Bag Berm	☐ Grassy Swales

No Additional Comments

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the area and contact the Engineer immediately.

No Additional Comments

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical. Refer to TxDOT Standard Specifications 162, 164, 192, 193, 506, 730, 751, and 752 in order to comply with requirements for invasive species, beneficial landscaping and tree/brush removal.

No Additional Comments

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS

If any of the listed species below are observed, cease work in the area, do not disturb species or habitat and contact the Engineer immediately.

The work may not remove active nests (from bridges, structures, or vegetation adjacent to the roadway, etc.) during nesting season (February 15 to October 1). If removal of structures or vegetation is necessary during the nesting season, the Contractor shall conduct a bird survey no more than 3 days in advance of the clearing/demolish start date. All bird surveys shall be conducted by a Field Biologist and adhere to the guidance document “Avoiding Migratory Birds and Handling Potential Violations” found in the TxDOT Environmental Compliance Toolkits at the time of the survey. (See below for Field Biologist and Ornithologist qualifications)

No Additional Comments

Field Biologist, Ornithologist – a field biologist is defined as an individual qualified to perform field investigations, presence/absence surveys and habitat surveys for protected avian species or species of concern. A mandatory bachelor’s degree in biology or a related science is required. At a minimum, the Field Biologist, Ornithologist, shall have completed and reported a minimum of three presence/absence and habitat surveys for protected avian species in the past five years. A minimum of three projects must have been conducted in Texas. Surveys shall have been performed for documentation of species in accordance with a protocol approved by USFWS or TPWD, or following generally accepted methodologies.

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

Refer to TxDOT Standard Specifications in the event potentially contaminated materials are observed, such as dead or distressed vegetation, trash disposal areas, drums, canisters, barrels, leaching or seepage of substances, unusual smells or odors, or stained soil, cease work in the area and contact the Engineer immediately.

Does the project involve any bridge class structure rehabilitation or replacements (bridge class structutres not including box culverts)? Yes ☐ No ☒

No further action required.

No Additional Comments

VII. GENERAL NOTES

TxDOT has determined that a USACE Nationwide or Individual Permit is not necessary for the project since all work shall be conducted outside the USACE jurisdictional areas. Any impacts to these jurisdictioanl areas by the contractor without a USACE permit will be the responsibility of the contrator. If the contractor deems it necessary to impact the USACE jurisdcitional areas, then it becomes the contractor's entire responsibility to consult with the USACE pertaining to the need for a Nationwide or Individual Permit. TxDOT will then hold the contractor responsible for following all conditions of the approved Permit.

DATE:
FILE:

Version 13.1

Texas Department of Transportation

TxDOT Yoakum District

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS

EPIC

FILE: EPIC Sheet.dgn	DN:	CK:	DW:	CK:
© TxDOT: March 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC.	UA 90, ETC.
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC.		176

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: from 69.700 to 72.840
RR Subdivision: GIDDINGS
City: WINCHESTER
County: FAYETTE
CSJ at this Crossing: 0334-07-007
Highway/Roadway name crossing the railroad: FM 448
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PARALLEL TO THE RAILROAD. ALL WORK, EQUIPMENT & TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: Parallel to various crossings, near DOT 744737C
RR Milepost: from 69.700 to 72.840
Subdivision: GIDDINGS

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		177

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 416429T
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 101.250
RR Subdivision: SMITHVILLE
City: FAYETTEVILLE
County: FAYETTE
CSJ at this Crossing: 1264-01-016
Highway/Roadway name crossing the railroad: FM 955
# of regularly scheduled trains per day at this crossing: 4
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.
DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER AND CONSTRUCTION FLAGGER MUST BE PRESENT FOR THE DURATION OF THE WORK THROUGH UPRR RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [X] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS _____

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [ ] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [X] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies: _____

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 416429T
RR Milepost: 101.250
Subdivision: SMITHVILLE

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS 9/2021	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		178

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: NEAR 72.310
RR Subdivision: CUERO
City: YOAKUM
County: DEWITT
CSJ at this Crossing: 0346-11-009
Highway/Roadway name crossing the railroad: SH 111
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PERPENDICULAR TO THE RAILROAD. ALL WORK, & EQUIPMENT WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY. BUT DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER & CONSTRUCTION FLAGGER MUST BE PRESENT FOR DURATION OF THE WORK THROUGH UPRR ROW.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

☐ Expected
☒ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☒ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☒ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☐	Not Required	
☒	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☐ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☒ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☐ Not Required
☒ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: Perpendicular & near DOT 746757V
RR Milepost: near 72.310
Subdivision: CUERO

Texas Department of Transportation — Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		179

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 743307N
Crossing Type: ** HIGHWAY UNDERPASS
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 95.390
RR Subdivision: GLIDDEN
City: WEIMAR
County: COLORADO
CSJ at this Crossing: 0026-04-049
Highway/Roadway name crossing the railroad: US 90
# of regularly scheduled trains per day at this crossing: 8
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UNDER THE RAILROAD CROSSING. WORK ALSO RUNS PARALLEL FROM MP 97.190 TO 99.140. BUT DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER & CONSTRUCTION FLAGGER MUST BE PRESENT FOR THE DURATION OF TCP THROUGH UPRR RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

☐ Expected
☒ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☒ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☒ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

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Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☐	Not Required	
☒	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☐ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☒ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

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With the following railroad companies:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☐ Not Required
☒ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 743307N
RR Milepost: 95.390
Subdivision: GLIDDEN

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		180	

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

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: from 85.770 to 87.490
RR Subdivision: GLIDDEN
City: COLUMBUS
County: COLORADO
CSJ at this Crossing: 0026-06-037
Highway/Roadway name crossing the railroad: US 90
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PARALLEL TO THE RAILROAD. ALL WORK, EQUIPMENT & TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

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Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

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Railroad reference number shall be provided by TxDOT CST or DO.

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Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: Parallel to various crossings, near DOT 743293H
RR Milepost: from 85.770 to 87.490
Subdivision: GLIDDEN

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		181	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 743277Y
Crossing Type: ** HIGHWAY OVERPASS
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 82.850
RR Subdivision: GLIDDEN
City: COLUMBUS
County: COLORADO
CSJ at this Crossing: 0027-01-048
Highway/Roadway name crossing the railroad: US 90
# of regularly scheduled trains per day at this crossing: 16
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY OVER THE RAILROAD CROSSING.
NO CONTRA-FLOW OPERATIONS WILL BE USED.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [X] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [ ] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [X] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 743277Y
RR Milepost: 82.850
Subdivision: GLIDDEN

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		182

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 67.580
RR Subdivision: GLIDDEN
City: EAGLE LAKE
County: COLORADO
CSJ at this Crossing: 3205-03-014
Highway/Roadway name crossing the railroad: FM 3013
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PERPENDICULAR TO THE RAILROAD. NO WORK OR EQUIPMENT IN RAILROAD RIGHT OF WAY. BUT THE TCP WILL EXTEND THROUGH THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
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Contact Information for Flagging:

- [X] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [ ] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [X] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies:

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Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: PERPENDICULAR TO DOT 743818Y
RR Milepost: 67.580
Subdivision: GLIDDEN

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		183	

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DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 023270N
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: BNSF RAILWAY COMPANY
Operating RR Company at Track: BNSF RAILWAY COMPANY
RR MP: 94.683
RR Subdivision: SEALY YD TX
City: SEALY
County: AUSTIN
CSJ at this Crossing: 0187-03-074
Highway/Roadway name crossing the railroad: SH 36
# of regularly scheduled trains per day at this crossing: 38
# of switching movements per day at this crossing: 4
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

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Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [X] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [X] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
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  With the following railroad companies:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: BNSF RAILWAY COMPANY
Railroad Emergency Line at 800-832-5452
Location: DOT: 023270N
RR Milepost: 94.683
Subdivision: SEALY YD TX

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		184

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 416479W
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 133.500
RR Subdivision: SMITHVILLE
City: SEALY
County: AUSTIN
CSJ at this Crossing: 2894-01-014
Highway/Roadway name crossing the railroad: FM 2187
# of regularly scheduled trains per day at this crossing: 4
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.
DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER AND CONSTRUCTION FLAGGER MUST BE PRESENT FOR THE DURATION OF THE WORK THROUGH UPRR RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

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  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
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  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

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Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

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In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 416479W
RR Milepost: 133.500
Subdivision: SMITHVILLE

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		185

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 743435W
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: KCS RAILWAY
Operating RR Company at Track: TEXAS MEXICAN RAILWAY
RR MP: 931.190
RR Subdivision: ROSENBERG
City: EL CAMPO
County: WHARTON
CSJ at this Crossing: 0266-06-049
Highway/Roadway name crossing the railroad: SH 71
# of regularly scheduled trains per day at this crossing: 10
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:
SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:
FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

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  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
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  Call Center 877-315-0513, Select #1 for flagging
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  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS _____

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

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Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

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  With the following railroad companies: _____

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: KCS RAILWAY
Railroad Emergency Line at 877-527-9464
Location: DOT: 743435W
RR Milepost: 931.190
Subdivision: ROSENBERG

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		186

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DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 743461L
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: KCS RAILWAY
Operating RR Company at Track: TEXAS MEXICAN RAILWAY
RR MP: 942.600
RR Subdivision: ROSENBERG
City: LOUISE
County: WHARTON
CSJ at this Crossing: 1302-02-014
Highway/Roadway name crossing the railroad: FM 647
# of regularly scheduled trains per day at this crossing: 10
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

☐ Expected
☒ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☒ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☒ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☐	Not Required	
☒	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: KCS RAILWAY
Railroad Emergency Line at 877-527-9464
Location: DOT: 743461L
RR Milepost: 942.600
Subdivision: ROSENBERG

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		187

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: KCS RAILWAY
Operating RR Company at Track: TEXAS MEXICAN RAILWAY
RR MP: from 941.970 to 942.020
RR Subdivision: ROSENBERG
City: LOUISE
County: WHARTON
CSJ at this Crossing: 3014-02-005
Highway/Roadway name crossing the railroad: FM 647
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:
SEALCOAT THE ROADWAY RUNNING PERPENDICULAR TO THE RAILROAD. ALL WORK, EQUIPMENT AND TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:
NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

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Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: KCS RAILWAY
Railroad Emergency Line at 877-527-9464
Location: Perpendicular and near DOT 743459K
RR Milepost: from 941.970 to 942.020
Subdivision: ROSENBERG

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		188	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: BNSF RAILWAY COMPANY
Operating RR Company at Track: BNSF RAILWAY COMPANY
RR MP: from 80.980 to 81.640
RR Subdivision: BAY CITY
City: WADSWORTH
County: MATAGORDA
CSJ at this Crossing: 0241-04-024
Highway/Roadway name crossing the railroad: SH 60
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PARALLEL TO THE RAILROAD.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: BNSF RAILWAY COMPANY
Railroad Emergency Line at 800-832-5452
Location: Parallel and near DOT 023409U
RR Milepost: from 80.980 to 81.640
Subdivision: BAY CITY

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		189

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 023482S (SPUR PERMIT)
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: BNSF RAILWAY COMPANY
Operating RR Company at Track: BNSF RAILWAY COMPANY
RR MP: 82.120
RR Subdivision: BAY CITY - CEL
City: BAY CITY
County: MATAGORDA
CSJ at this Crossing: 0241-05-013
Highway/Roadway name crossing the railroad: SH 60
# of regularly scheduled trains per day at this crossing: 6
# of switching movements per day at this crossing: 2
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [X] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [ ] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [X] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [X] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [ ] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

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Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: BNSF RAILWAY COMPANY
Railroad Emergency Line at 800-832-5452
Location: DOT: 023482S
RR Milepost: 82.120
Subdivision: BAY CITY - CEL

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:		
© TxDOT June 2014	CONT	SECT	JOB		HIGHWAY	
REVISIONS	0025	05	024, ETC		UA 90, ETC	
9/2021	DIST	COUNTY			SHEET NO.	
	YKM	GONZALES, ETC			190	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: BNSF RAILWAY COMPANY
Operating RR Company at Track: BNSF RAILWAY COMPANY
RR MP: 79.870
RR Subdivision: BAY CITY
City: BAY CITY
County: MATAGORDA
CSJ at this Crossing: 0847-04-008
Highway/Roadway name crossing the railroad: FM 2078
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PERPENDICULAR TO THE RAILROAD. ALL WORK, EQUIPMENT AND TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
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Contact Information for Flagging:

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Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

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Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

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Call: BNSF RAILWAY COMPANY
Railroad Emergency Line at 800-832-5452
Location: Perpendicular to DOT 023406Y
RR Milepost: 79.870
SubdivisioN: BAY CITY

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		191

DISCLAIMER:
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DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 448724L
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 269.650
RR Subdivision: ANGLETON
City: ELMATON
County: MATAGORDA
CSJ at this Crossing: 1321-01-023
Highway/Roadway name crossing the railroad: FM 1095
# of regularly scheduled trains per day at this crossing: 10
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.
DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER AND CONSTRUCTION FLAGGER MUST BE PRESENT FOR THE DURATION OF THE WORK THROUGH UPRR RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [X] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS _____

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [ ] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [X] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies: _____

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 448724L
RR Milepost: 269.650
Subdivision: ANGLETON

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		192

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DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 023399R
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: BNSF RAILWAY COMPANY
Operating RR Company at Track: BNSF RAILWAY COMPANY
RR MP: 79.137
RR Subdivision: BAY CITY - CELA
City: BAY CITY
County: MATAGORDA
CSJ at this Crossing: 2697-01-036
Highway/Roadway name crossing the railroad: FM 2668
# of regularly scheduled trains per day at this crossing: 2
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [X] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

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Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [X] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [ ] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)

With the following railroad companies:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: BNSF RAILWAY COMPANY
Railroad Emergency Line at 800-832-5452
Location: DOT: 023399R
RR Milepost: 79.137
Subdivision: BAY CITY - CELA

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS 9/2021	0025	05	024, ETC	UA 90, ETC
	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		193

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DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 023477V
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: BNSF RAILWAY COMPANY
Operating RR Company at Track: BNSF RAILWAY COMPANY
RR MP: 79.600
RR Subdivision: BAY CITY
City: BAY CITY
County: MATAGORDA
CSJ at this Crossing: 3087-01-009
Highway/Roadway name crossing the railroad: FM 3057
# of regularly scheduled trains per day at this crossing: 4
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [X] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

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Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

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Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [X] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [ ] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

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Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: BSNF RAILWAY COMPANY
Railroad Emergency Line at 800-832-5452
Location: DOT: 023477V
RR Milepost: 79.600
Subdivision: BAY CITY

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		194

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 746746H (SPUR PERMIT)
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: SAFETY RAILWAY SERVICES, L.P.
Operating RR Company at Track: SAFETY RAILWAY SERVICES, L.P.
RR MP: 5.980
RR Subdivision: COLETO CREEK
City: VICTORIA
County: VICTORIA
CSJ at this Crossing: 0088-06-006
Highway/Roadway name crossing the railroad: BU 59T
# of regularly scheduled trains per day at this crossing: 4
# of switching movements per day at this crossing: 2
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [X] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
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Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [X] OTHERS SAFETY RAILWAY SERVICES, L.P.
  ATTN: DENNIS McREYNOLDS (361) 576-2141
  EMAIL: Dennis.McReynolds@safetyrailway.com

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

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Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

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- [X] Not Required
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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

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In Case of Railroad Emergency
Call: SAFETY RAILWAY SERVICES, L.P.
Railroad Emergency Line at 361-576-2141
Location: DOT: 746746H
RR Milepost: 5.980
Subdivision: COLETO CREEK

Texas Department of Transportation — Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		195

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: from 1.640 to 2.290, 2.850 to 3.390 & 4.610 to 6.350
RR Subdivision: COLETO CREEK
City: VICTORIA
County: VICTORIA
CSJ at this Crossing: 0088-06-006
Highway/Roadway name crossing the railroad: BU 59T
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PARALLEL TO THE RAILROAD. ALL WORK, EQUIPMENT AND TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

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Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

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Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: Parallel to various crossings, near DOT 746740S
RR Milepost: from 1.640 to 6.350
Subdivision: COLETO CREEK

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
©TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		196	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 746743M
Crossing Type: ** HIGHWAY OVERPASS
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 3.680
RR Subdivision: COLETO CREEK
City: VICTORIA
County: VICTORIA
CSJ at this Crossing: 0371-01-092
Highway/Roadway name crossing the railroad: BU 77S
# of regularly scheduled trains per day at this crossing: 0
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY OVER THE RAILROAD CROSSING.
DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER AND CONSTRUCTION FLAGGER MUST BE PRESENT FOR THE DURATION OF THE WORK THROUGH UPRR RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [X] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [ ] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [X] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 746743M
RR Milepost: 3.680
Subdivision: COLETO CREEK

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		197

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

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 746541P
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: 22.710
RR Subdivision: CUERO
City: VICTORIA
County: VICTORIA
CSJ at this Crossing: 2601-01-016
Highway/Roadway name crossing the railroad: FM 2615
# of regularly scheduled trains per day at this crossing: 8
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.
DURING THE ONE LANE TWO-WAY TRAFFIC CONTROL OPERATIONS A RAILROAD FLAGGER AND CONSTRUCTION FLAGGER MUST BE PRESENT FOR THE DURATION OF THE WORK THROUGH UPRR RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [X] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [X] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS _____

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [ ] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [X] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies: _____

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Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [ ] Not Required
- [X] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: DOT: 746541P
RR Milepost: 22.710
Subdivision: CUERO

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		198	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: from 243.830 to 244.960
RR Subdivision: ANGLETON
City: LOLITA
County: JACKSON
CSJ at this Crossing: 0497-02-044
Highway/Roadway name crossing the railroad: FM 616
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PARALLEL TO THE RAILROAD. ALL WORK, EQUIPMENT AND TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

- [ ] Expected
- [ ] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [ ] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [ ] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [ ] OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

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No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[X]	Not Required	
[ ]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [X] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [ ] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
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  With the following railroad companies:

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VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: Parallel to various crossings, near DOT 448697S
RR Milepost: from 243.830 to 244.960
Subdivision: ANGLETON

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		199

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DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 841156V (SPUR PERMIT)
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: GENESEE & WYOMING
Operating RR Company at Track: POINT COMFORT & NORTHERN RAILWAY
RR MP: 0.100
RR Subdivision: POINT COMFORT
City: LOLITA
County: JACKSON
CSJ at this Crossing: 0497-02-044
Highway/Roadway name crossing the railroad: FM 616
# of regularly scheduled trains per day at this crossing: 16
# of switching movements per day at this crossing: 8
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

- [ ] Expected
- [X] Not Expected

Flagging services will be provided by:

- [ ] Railroad Company: TxDOT will pay flagging invoices
- [X] Railroad Company at no cost, because this railroad exists via TxDOT spur permit
- [ ] Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

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Contact Information for Flagging:

- [ ] UPRR - UP.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - UP.request@nrssinc.net
  Call Center 877-984-6777
- [ ] BNSF - BNSF.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
- [ ] KCS - KCS.info@railpros.com
  Call Center 877-315-0513, Select #1 for flagging
  - Bottom Line On-Track Safety Services
  bottomline076@aol.com, 903-767-7630
- [X] OTHERS POINT COMFORT & NORTHERN RAILWAY
  ATTN: ROBERT "ROB" MYER, GENERAL ROADMASTER
  CALL: (904) 524-6003, EMAIL: robert.myer@gwrr.com

Contractor must incorporate Construction Inspection into anticipated construction schedule.

- [X] Not Required
- [ ] Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

- [ ] Required
- [X] Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

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Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
[ ]	Not Required	
[X]	Non - Bridge Projects	$2,000,000 / $6,000,000
[ ]	Bridge Projects	$5,000,000 / $10,000,000
[ ]	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

- [X] Not Required
- [ ] Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)
- [ ] Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.
- [ ] Required: Contractor to obtain (see Item 5, Article 8.4)
  With the following railroad companies: _____

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

- [X] Not Required
- [ ] Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: POINT COMFORT & NORTHERN RAILWAY
Railroad Emergency Line at 800-800-3490
Location: DOT: 841156V
RR Milepost: 0.100
Subdivision: POINT COMFORT

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		200	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: UNION PACIFIC RAILROAD
Operating RR Company at Track: UNION PACIFIC RAILROAD
RR MP: from 253.250 to 258.990
RR Subdivision: ANGLETON
City: FRANCITAS
County: JACKSON
CSJ at this Crossing: 0497-03-011
Highway/Roadway name crossing the railroad: FM 616
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PARALLEL TO THE RAILROAD. ALL WORK, EQUIPMENT AND TCP WILL BE OUTSIDE OF RAILROAD RIGHT OF WAY.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

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☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UNION PACIFIC RAILROAD
Railroad Emergency Line at 888-877-7267
Location: Parallel to various crossings, near DOT 448707V
RR Milepost: from 253.250 to 258.990
Subdivision: ANGLETON

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		201

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: NONE
Crossing Type: ** NONE
RR Company Owning Track at Crossing: KCS RAILWAY
Operating RR Company at Track: TEXAS MEXICAN RAILWAY
RR MP: from 955.070 to 955.350
RR Subdivision: ROSENBERG
City: EDNA
County: JACKSON
CSJ at this Crossing: 1090-01-028
Highway/Roadway name crossing the railroad: FM 530
# of regularly scheduled trains per day at this crossing: N/A
# of switching movements per day at this crossing: N/A
% of estimated contract cost of work within railroad ROW: N/A

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY RUNNING PERPENDICULAR TO THE RAILROAD.

Scope of Work at this Crossing to Be Performed by Railroad Company:

NONE

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: N/A

On this project, night or weekend flagging is:

☐ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☐ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☐ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

V. RAILROAD INSURANCE REQUIREMENTS

Railroad reference number shall be provided by TxDOT CST or DO.

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies must be issued for and on behalf of the Railroad. Where more than one Railroad Company is operating on the same right of way or where several Railroad Companies are involved and operate on their own separate rights of way, provide separate insurance policies in the name of each Railroad Company.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☒	Not Required	
☐	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

☐ Required: TxDOT CST to assist in obtaining with the UPRR (see Item 5, Article 8.3)

☐ Required: UPRR Maintenance Consent Letter. TxDOT CST to assist.

☐ Required: Contractor to obtain (see Item 5, Article 8.4)
With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

http://www.txdot.gov/inside-txdot/division/rail/samples.html

Approved ROE Agreement templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: KCS RAILWAY
Railroad Emergency Line at 877-527-9464
Location: Perpendicular to various crossings, near DOT 927037D
RR Milepost: from 955.070 to 955.350
Subdivision: ROSENBERG

Texas Department of Transportation — Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:	
©TxDOT June 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0025	05	024, ETC	UA 90, ETC	
9/2021	DIST	COUNTY		SHEET NO.	
	YKM	GONZALES, ETC		202	

DATE:
FILE:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

DOT #: 746643H
Crossing Type: ** AT GRADE
RR Company Owning Track at Crossing: KCS RAILWAY
Operating RR Company at Track: TEXAS MEXICAN RAILWAY
RR MP: 959.410
RR Subdivision: ROSENBERG
City: EDNA
County: JACKSON
CSJ at this Crossing: 1945-01-023
Highway/Roadway name crossing the railroad: FM 1822
# of regularly scheduled trains per day at this crossing: 10
# of switching movements per day at this crossing: 0
% of estimated contract cost of work within railroad ROW: 1%

Scope of Work at this Crossing to Be Performed by State Contractor:

SEALCOAT THE ROADWAY UP TO THE RAILROAD CROSSING.

Scope of Work at this Crossing to Be Performed by Railroad Company:

FLAGGING

** Choose: Highway Overpass, Highway Underpass, At Grade, Pedestrian, or Closed/Abandoned

II. OTHER PROJECT WORK WITHIN RAILROAD RIGHTS-OF-WAY (ROW)

NONE

III. FLAGGING & INSPECTION

of Days of Railroad Flagging Expected: 3

On this project, night or weekend flagging is:

☐ Expected
☒ Not Expected

Flagging services will be provided by:

☐ Railroad Company: TxDOT will pay flagging invoices
☐ Railroad Company at no cost, because this railroad exists via TxDOT spur permit
☒ Outside Party: Contractor will pay flagging invoices, to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30 day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ UPRR - UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- UP.request@nrssinc.net
Call Center 877-984-6777

☐ BNSF - BNSF.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging

☒ KCS - KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
- Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS

Contractor must incorporate Construction Inspection into anticipated construction schedule.

☒ Not Required

☐ Required: Contact Information for Construction Inspection:

IV. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

On this project, construction work to be performed by a railroad company is:

☐ Required
☒ Not Required

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

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No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
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Business Automobile	$2,000,000 combined single limit

Railroad Protective Liability		
☐	Not Required	
☒	Non - Bridge Projects	$2,000,000 / $6,000,000
☐	Bridge Projects	$5,000,000 / $10,000,000
☐	Other	

VI. CONTRACTOR'S RIGHT OF ENTRY (ROE) AGREEMENT

On this project, an ROE agreement is:

☒ Not Required

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With the following railroad companies:

To view previously approved ROE Agreement templates agreed upon between the State and Railroad, see:

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Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed ROE agreement between the Contractor and the Railroad if required on project.

VII. RAILROAD COORDINATION MEETING

On this project, a Railroad Coordination Meeting is:

☒ Not Required
☐ Required

See Item 5, Article 8.1 for more details.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are required to maintain the same insurance coverage as required of the Contractor.

IX. EMERGENCY NOTIFICATION

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Call: KCS RAILWAY
Railroad Emergency Line at 877-527-9464
Location: DOT: 746643H
RR Milepost: 959.410
Subdivision: ROSENBERG

Texas Department of Transportation | Rail Division

RAILROAD SCOPE OF WORK

PROJECT SPECIFIC DETAILS

FILE: RR Scope of Work.dgn	DN: TxDOT	CK:	DW:	CK:
© TxDOT June 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0025	05	024, ETC	UA 90, ETC
9/2021	DIST	COUNTY		SHEET NO.
	YKM	GONZALES, ETC		203

PART 1 - GENERAL

1.01 DESCRIPTION

This project includes construction work within the right of way and/or properties of the Railroad and adjacent to its tracks, wire lines and other facilities. These sheets describe the minimum special requirements for coordination with the Railroad when working upon, over or under Railroad Right of Way or when impacting current or future Railroad operations. Coordinate with the Railroad while performing the work outlined herein, and afford the same cooperation with the Railroad as with TxDOT. Complete all submittals and work in accordance with TxDOT Standard Specifications, Railroad Guidelines and AREMA recommendations as modified by these minimum special requirements or as directed in writing by the Railroad Designated Representative.

For purposes of this project, the Railroad Designated Representative is the person or persons designated by the Railroad Manager of Industry and Public Projects to handle specific tasks related to the project.

1.02 REQUEST FOR INFORMATION / CLARIFICATION

Submit Requests for Information ("RFI") involving work within any Railroad Right of Way to the TxDOT Engineer. The TxDOT Engineer will submit the RFI to the Railroad Designated Representative for review and approval for RFI's corresponding to work within Railroad Right of Way. Allow six (6) weeks total time for review and approval, which includes four (4) weeks for review and approval by the Railroad.

1.03 PLANS / SPECIFICATIONS

TxDOT has received written Railroad approval of the plans and specifications for this project. Any revisions or changes in the plans after award of the Contract must have the approval of TxDOT and the Railroad.

PART 2 - UTILITIES AND FIBER OPTIC

Construct all utility installations in accordance with current AREMA recommendations, Railroad, TxDOT and owning utility specifications and requirements. Railroad general guidelines can be found on the Railroad website or by contacting the Railroad Designated Representative.

PART 3 - CONSTRUCTION

3.01 GENERAL

A. Perform all work in compliance with all applicable Railroad, Federal Railroad Administration (FRA), and TxDOT rules and regulations. Arrange and conduct work in a manner that does not endanger or interfere with the safe operation of the tracks and property of the Railroad and the traffic moving on such tracks, or the wires, signals and other property of the Railroad, its tenants or licensees, at or in the vicinity of the Work. The safe operation of railroad train movements takes precedence over any work to be performed by the Contractor. The Contractor is responsible for train delay cost and lost revenue claims due to any delays or interruption of train operations resulting from Contractor's construction or other activities.

B. Construction activities within 15 feet of the operational tracks will only be allowed if absolutely necessary and the Railroad's Designated Representative grants approval. Construction activities within 15 feet of the operational track(s) preferably allow the tracks to stay operational. In such cases, coordination and approval by the Railroad Track Manager is required with regard to schedule, flagging, and slow orders. See Sections 3.07 and 3.08 for additional information.

C. Provide track protection for all work equipment (including rubber tired equipment) operating within 25 feet from nearest rail. When not in use, keep Contractor machinery and materials at least 50 feet from the Railroad's nearest track.

D. Vehicular crossings of railroad track are allowed only at existing crossings, or haul road crossings developed with Railroad approval.

E. The Contractor is also advised that new railroad facilities within the project may be built by the Railroad. If applicable, these facilities are delineated in the plans. Be aware of the limits of responsibilities and coordinate efforts with the Railroad and TxDOT.

F. Railroad requirements do not allow work within 50 feet of track centers when a train passes the work site and all personnel must clear the area within 50 feet of the track centerline and secure all equipment. Additional allowances may be pursued as outlined in 3.02 and 3.03.

G. All permanent clearances shall be verified before project closing.

3.02 RAILROAD OPERATIONS

A. Trains and/or equipment are expected on any track, at any time, in either direction. Become familiar with the train schedules in this location and structure bid assuming intermittent track windows in this period, as defined in Paragraph B that follows.

B. All railroad tracks within and adjacent to the contract site are active, and rail traffic over these facilities shall be maintained throughout the Project. Activities may include both through moves and switching moves to local customers. railroad traffic and operations will occur continuously throughout the day and night on these tracks and shall be maintained at all times as defined herein. Coordinate and schedule the work so that construction activities do not interfere with railroad operations.

C. Coordinate work windows with TxDOT and the Railroad's Designated Representative. Types of work windows include Conditional Work Windows and Absolute Work Windows, as defined below:

1. Conditional Work Window: A Conditional Work Window is a period of time that railroad operations have priority over construction activities. When construction activities may occur on and/or adjacent to the railroad tracks within 25 feet of the nearest track, a railroad flag person will be required. At the direction of the railroad flag person, upon approach of a train, and when trains are present on the tracks, the tracks must be cleared (i.e., no construction equipment, materials or personnel within 25 feet, or as directed by the Railroad Designated Representative, from the tracks). Conditional Work Windows are available for the Project.

2. Absolute Work Window: An Absolute Work Window is a period of time that construction activities are given priority over railroad operations. During this time frame, the designated railroad track(s) will be inactive for train movements and may be fouled by the Contractor. At the end of an Absolute Work Window, the railroad tracks and/or signals must be completely operational for train operations and all Railroad, Public Utilities Commission (PUC) and FRA requirements, codes and regulations for operational tracks must be satisfied. In the situation where the operating tracks and/or signals have been affected, the Railroad will perform inspections of the work prior to placing that track back into service. Railroad flag persons will be required for construction activities requiring an Absolute Work Window. Absolute Work Windows will not generally be granted. Any request will require a detailed explanation for Railroad review.

3.03 RIGHT OF ENTRY, ADVANCE NOTICE AND WORK STOPPAGES

A. Do not perform any work within Railroad Right of Way without a valid executed Right of Entry Agreement if required on this project.

B. Give advance notice to the Railroad as required in the "Contractor's Right of Entry Agreement" before commencing work in connection with construction upon or over Railroad Right of Way and observe the Railroad's rules and regulations with respect thereto.

C. Perform all work upon Railroad Right of Way in a manner to avoid interference with or endanger the operations of the Railroad. Whenever work may affect the operations or safety of trains, submit the work method to the Railroad Designated Representative for approval. Approval does not relieve the Contractor from liability. Do not commence any work which requires flagging service or inspection service until the flagging protection required by the Railroad is available at the job site. See Section 3.15 for railroad flagging requirements.

D. Make requests in writing for both Absolute and Conditional Work Windows, at least 30 days in advance of any work. Include in the written request:
1. Exactly what the work entails.
2. The days and hours that work will be performed.
3. The exact location of work, and proximity to the tracks.
4. The type of window requested and the amount of time requested.
5. The designated contact person.

Provide a written confirmation notice to the Railroad at least 48 hours before commencing work in connection with approved work windows when work is within 25 feet of nearest rail. Perform all work in accordance with previously approved work plans.

E. Make provisions to protect operations and property of the Railroad should a condition arising from, or in connection with the work, require immediate and unusual action. If in the judgment of the Railroad Designated Representative such provisions are insufficient, the Railroad Designated Representative may require or provide such provisions as deemed necessary. In any event, such provisions shall be at the Contractor's expense and without cost to the Railroad or TxDOT. The Railroad or TxDOT shall have the right to order the Contractor to temporarily cease operations in the event of an emergency or, if in the opinion of the Railroad Designated Representative, the Contractor's operations could endanger railroad operations. In the event of such an order, immediately notify TxDOT of the order.

3.04 INSURANCE

Do not begin work upon or over Railroad Right of Way until furnishing the Railroad with the insurance policies, binders, certificates and endorsements required by the "Contractor's Right of Entry Agreement", and until the Railroad Designated Representative has advised TxDOT that such insurance is in accordance with the Agreement.

3.05 RAILROAD SAFETY ORIENTATION

A. Complete the railroad course "Orientation for Contractor's Safety", and maintain current registration prior to working on railroad property. This course is required to be completed annually by Contractor and Subcontractor personnel working on site.

"UPRR, BNSF, KCS/TEXMEX will not accept on-track safety training certificates from other railroads. Refer to Railroad specific contractor right of entry for training information."

B. Know and follow the "Contractor's Right of Entry Agreement" EXHIBIT D, MINIMUM SAFETY REQUIREMENTS regarding clothing, personal protective equipment, and general safety requirements.

3.06 COOPERATION

The Railroad will cooperate with Contractor so that work may be conducted in an efficient manner, and will cooperate with Contractor in enabling use of Railroad Right of Way in performing the work.

3.07 MINIMUM CONSTRUCTION CLEARANCES FOR FALSEWORK AND OTHER TEMPORARY STRUCTURES

Abide by the following minimum temporary clearances during the course of construction:
A. 15' - 0" (BNSF)(UPRR)and 14'-0" (KCS) horizontal from centerline of track
B. 22' (KCS) and 21' - 6" (UPRR & BNSF) vertically above top of rail.

For construction clearance less than listed above, obtain local Railroad Operating Unit review and approval.

3.08 APPROVAL OF REDUCED CLEARANCES

A. Maintain minimum track clearances during construction as specified in Section 3.07.

B. Submit any proposed infringement on the specified minimum clearances to the Railroad Designated Representative through TxDOT at least 30 days in advance of the work. Do not proceed with such infringement without written approval by the Railroad Designated Representative.

C. Do not commence work involving an approved infringement without receiving written assurance from the Railroad Designated Representative that arrangements have been made for any necessary flagging service.

DATE: $DATE$ $TIME$
FILE: $FILE$

SHEET 1 OF 2

Texas Department of Transportation | Rail Division

RAILROAD REQUIREMENTS FOR NON-BRIDGE CONSTRUCTION PROJECTS

FILE:	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS March 2020	C	S	J	HWY
	DIST	COUNTY		SHEET NO.
	DST	CTY		204

3.09 MAINTENANCE OF RAILROAD FACILITIES

A. Maintain all ditches and drainage structures free of silt or other obstructions resulting from Contractor's operations. Repair eroded areas and any other damage within Railroad Right of Way and repair any other damage to the property of the Railroad, or its tenants.

B. Perform all such maintenance and repair of damages due to the Contractors's operations at Contractor's expense.

C. Submit a proposed method of erosion control for review by the Railroad prior to beginning any grading on the project site. Comply with all applicable local, state and federal regulations when developing and implementing such erosion control.

3.10 SITE INSPECTIONS BY RAILROAD's DESIGNATED REPRESENTATIVE

A. In addition to the office reviews of construction submittals, site inspections may be performed by the Railroad Designated Representative at significant points during construction, including the following if applicable:
   1. Pre-construction meetings.
   2. Pile driving/drilling of caissons or drilled shafts.
   3. Reinforcement and concrete placement for railroad bridge substructure and/or superstructure.
   4. Erection of precast concrete or steel bridge superstructure.
   5. Placement of waterproofing (prior to placing ballast on bridge deck).
   6. Completion of the bridge structure.

B. Site inspection is not limited to the milestone events listed above. Site visits to check progress of the work may be performed at any time throughout the construction as deemed necessary by the Railroad.

C. Provide a detailed construction schedule, including the proposed temporary horizontal and vertical clearances and construction sequence for all work to TxDOT for submittal to the Railroad Designated Representative for review prior to commencement of work. Include the anticipated dates when the above listed events will occur. Update this schedule for the above listed events as necessary and each month at a minimum to allow the Railroad to schedule site inspections.

3.11 RAILROAD REPRESENTATIVES

Railroad representatives, conductors, flag person or watch person will be provided by the Railroad at expense of TxDOT to protect Railroad facilities, property and movements of its trains or engines. In general, the Railroad will furnish such personnel or other protective services as follows:

A. When any part of any equipment is standing or being operated within 25 feet, measured horizontally, from nearest rail of any track on which trains may operate, or when any object is off the ground and any dimension thereof could extend inside the 25 foot limit, or when any erection or construction activities are in progress within such limits, regardless of elevation above or below track.

B. For any excavation below elevation of track subgrade if, in the opinion of the Railroad Designated Representative, track or other railroad facilities may be subject to settlement or movement.

C. During any clearing, grubbing, excavation or grading in proximity to railroad facilities, which, in the opinion of the Railroad Designated Representative, may endanger railroad facilities or operations.

D. During any Contractor's operations when, in the opinion of the Railroad Designated Representative, railroad facilities, including, but not limited to, tracks, buildings, signals, wire lines, or pipe lines, may be endangered.

E. Arrange with the Railroad Designated Representative to provide the adequate number of flag persons to accomplish the work.

3.12 COMMUNICATIONS AND SIGNAL LINES

If required, the Railroad will rearrange its communications and signal lines, its grade crossing warning devices, train signals and tracks, and facilities that are in use and maintained by the Railroad's forces in connection with its operation at expense of TxDOT. This work by the Railroad will be done by its own forces and it is not a part of the Work under this Contract.

3.13 TRAFFIC CONTROL

Coordinate any operations that control traffic across or around railroad facilities with the Railroad Designated Representative.

3.14 CONSTRUCTION EXCAVATIONS AND BORING ACTIVITIES UNDER TRACK

A. Take special precaution and care in connection with excavating and shoring. Excavations for construction of footings, piers, columns, walls or other facilities that require shoring shall comply with requirements of TxDOT, OSHA, AREMA and Railroad "Guidelines for Temporary Shoring".

B. The project plans indicate whether there are fiber optic lines or other such telecommunications systems that require consideration. Regardless, contact the necessary call center to determine if such cable systems are present:

   UPRR 1-800-336-9193
   7:00 AM to 9:00 PM CST Monday-Friday except holidays,
   staffed 24 hrs/day for emergencies
   48 hrs notice required

   BNSF 1-800-533-2891
   24 hour number
   5 working days notice required

   KCS 1-800-344-8377
   Texas One Call, a 24 hour number
   48 hrs notice required, excluding weekends and holidays

   If a telecommunications system is buried anywhere on or near railroad property, coordinate with TxDOT, the Railroad and the Telecommunication Company(ies) to arrange for relocation or protective measures prior to beginning work on or near railroad property. Refer to the project General Notes for additional information.

C. Projects involving a boring or jack and bore operation under track such as drainage pipes or culverts and utilities require an installation plan reviewed and approved by the Railroad and TxDOT prior to proceeding with such construction. A railroad inspector and contractor assisted monitoring of ground and track movement is required to maintain safe passage of rail traffic. Stop installation and do not allow passage of trains if movements in excess of 1/4 inch vertical or horizontal is detected in the tracks. Immediately repair the damage to the satisfaction of TxDOT and the Railroad before proceeding.

3.15 RAILROAD FLAGGING

Per the Right of Entry Agreement for flagging, notify the Railroad Representative at least 10 working days in advance of Contractor's work and at least 30 working days in advance of any Contractor's work in which any person or equipment will be within 25 feet of nearest rail or as specified in the Contractor Right of Entry (CROE).

3.16 CLEANING OF RIGHT-OF-WAY

When work is complete, remove all tools, implements, and other materials brought into Railroad Right of Way and leave the right of Way in a clean and presentable condition to the satisfaction of TxDOT and the Railroad.

Texas Department of Transportation | Rail Division

RAILROAD REQUIREMENTS FOR NON-BRIDGE CONSTRUCTION PROJECTS

FILE:	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT October 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS March 2020	C	S	J	HWY
	DIST	COUNTY		SHEET NO.
	DST	CTY		205

DATE: $DATE$ $TIME$
FILE: $FILE$